Making Dollars & Sense of Transit Finance

Texas A&M Transportation Institute

In Partnership with:

TEXAS TRANSIT ASSOCIATION

Celebrating 30 Years

March 21 - 23, 2018

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To provide comments or
To ask questions

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Making Dollars and Sense of Transit Finance

Workshop Overview

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Coursebook Overview

Making Dollars and Sense of Transit Finance aims to accomplish two main goals for attendees:

- To know and understand the sources of funds for transit and the rules that apply to using those funds for transit projects and programs.
- To know and understand how to make the most effective use of available funds.

This coursebook, PowerPoint slides, and handouts (plus your gained knowledge) are your take-aways for attending the *Making Dollars and Sense of Transit Finance* workshop March 21 to 23, 2018 at the Texas Transit Association 2018 Conference, Roadeo, and Expo.

The coursebook contains all narratives, tables, figures, and other material that will be discussed in class and is a stand-alone document—readable and interpretable without the instructor's narration.

The coursebook is divided into 8 modules, covering topics from basic transit funding sources to more complex issues like transit service cost allocation, handling indirect costs, and reporting data to PTN-128 and the National Transit Database. Workshop instructors will reference the modules as they present on the topic and will follow the flow of material as provided in the coursebook.

You may write in, highlight, or otherwise notate your coursebook. It is yours to keep.

Instructor Contact Information

Two instructors will be leading the workshop from the Texas A&M Transportation Institute's Transit Mobility Program (http://tti.tamu.edu/group/transit-mobility/). The instructors' contact information is presented below:

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Agenda and Schedule[1]

Title:	**Day 1 - Transit Funding Basics**
Date:	Wednesday, March 21, 2018

Start	End	Time	Item
8:30 AM	9:30 AM	1:00	Overview of Course & Introductions
9:30 AM	10:30 AM	1:00	Module 1 - Funding Transit in Texas
10:30 AM	10:45 AM	0:15	Break
10:45 AM	12:00 PM	1:15	Module 2 - Federal Funding Programs for Transit
12:00 PM	1:30 PM	1:30	Lunch
1:30 PM	1:45 PM	0:15	Review of morning content
1:45 PM	2:45 PM	1:00	Module 3 - State Funding for Transit
2:45 PM	3:00 PM	0:15	Break
3:00 PM	4:30 PM	1:30	Module 4 - Local Revenue Sources and Local Match
4:30 PM	5:00 PM	0:30	Daily wrap-up

Title:	**Day 2 - Budgets and Financial Management**
Date:	Thursday, March 22, 2018

Start	End	Time	Item
8:30 AM	9:00 AM	0:30	Introductions and Review
9:00 AM	10:15 AM	1:15	Module 5 - Accounting, Budgeting, and Financial Management
10:15 AM	10:30 AM	0:15	Break
10:30 AM	12:00 PM	1:30	Module 6 - Allocating Costs to Transit Services
12:00 PM	1:30 PM	1:30	Lunch
1:30 PM	2:30 PM	1:00	Module 6 - Allocating Costs to Transit Services (cont'd)
2:30 PM	2:45 PM	0:15	Break
2:45 PM	3:45 PM	1:00	Module 7 - Reporting Financial Data to PTN-128 & NTD
3:45 PM	4:00 PM	0:15	Break
4:00 PM	4:45 PM	0:45	Module 7 - Reporting Financial Data to PTN-128 & NTD (cont'd)
4:45 PM	5:00 PM	0:15	Daily wrap-up

[1] *Note: the timing and ordering of modules is subject to change at the instructors' discretion.*

Title:	**Day 3 - Cost Control and Capstone**
Date:	Friday, March 23, 2018

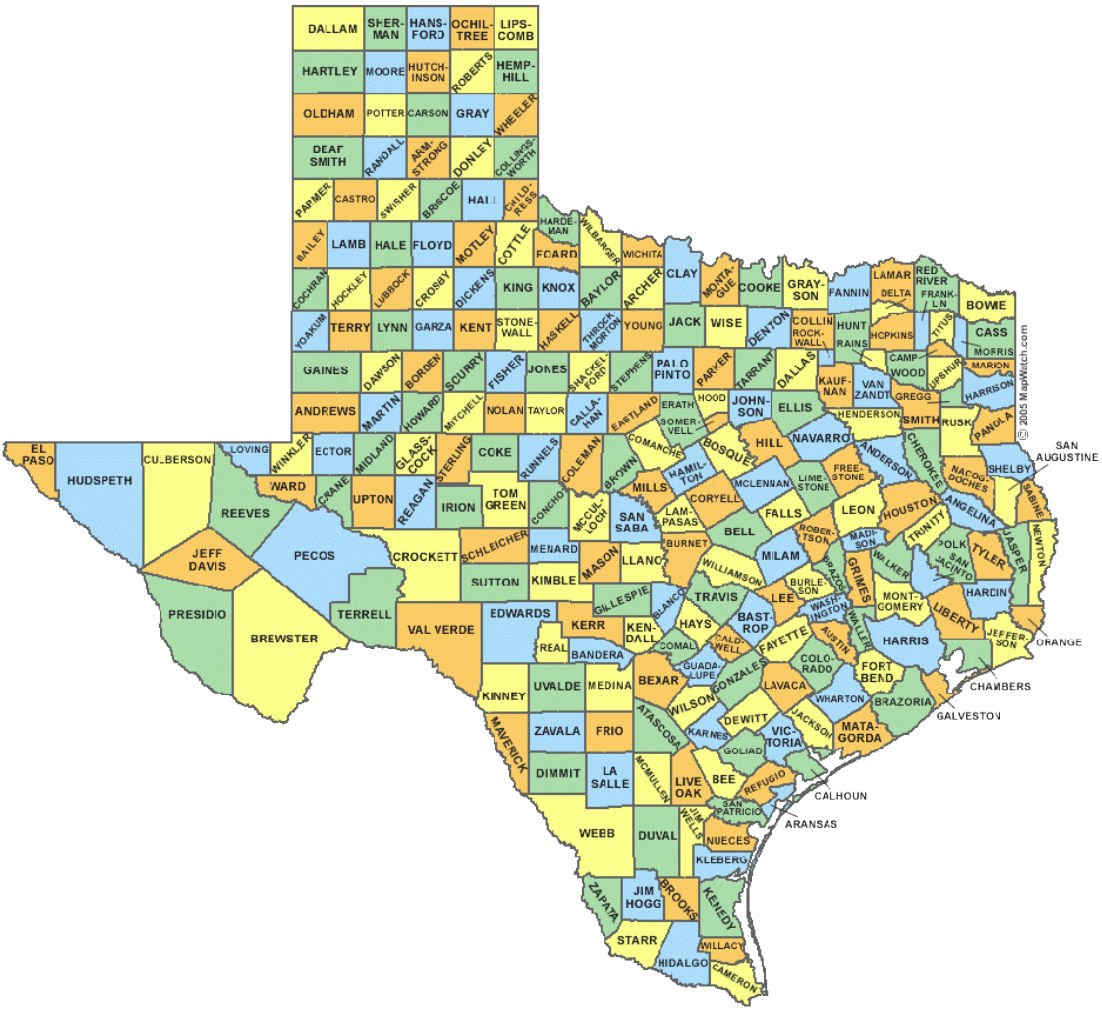
Start	End	Time	Item
8:30 AM	9:00 AM	0:30	Introduction to the Day
9:00 AM	10:30 AM	1:30	Module 8 - Managing Operating Costs
10:30 AM	12:00 PM	1:30	In-Class Exercise, Course Wrap Up, and Evaluations

Table of Abbreviations

Many abbreviations will be used throughout this coursebook. Although some may be defined in text, the table below provides several of the most important abbreviations necessary for understanding coursebook material.

Abbreviation	Meaning
APTA	American Public Transit Association
CFR	Code of Federal Regulations. References to the CFR will be made using the title number and section (e.g., 2 CFR 200 refers to Title 2 of the CFR, section 200).
FAST Act	The Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HTF	Highway Trust Fund
MPO	Metropolitan Planning Organization
NTD	National Transit Database
PTN	TxDOT Public Transportation Division
RPO	Rural Planning Organization
TxDOT	Texas Department of Transportation
TTI	Texas A&M Transportation Institute
USC	United States Code. References to the USC will be made using title number and section (e.g., 49 CFR 5311 refers to Title 49 of the USC, section 5311).
USDOT	The U.S. Department of Transportation
USOA	Uniform System of Accounts
UZA	Urbanized Area

Module 1
Funding Transit in Texas



By the end of this module, you should be able to:

1. **Explain the categories of public transportation systems in Texas.**
2. **Recall the state laws establishing and governing transit in Texas.**
3. **Describe some key facts regarding public transportation in Texas.**
4. **List the main sources of funding for transit.**

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Introduction

In the U.S., states have significant authority over what happens within their borders. Public transportation is no exception to this rule. In Texas, there are several different types of public transportation agencies, authorized and governed by different parts of Texas law.

This module will discuss:

- Categories of transit systems authorized in Texas.
- Key facts and figures about public transit in Texas.
- Sources of funding for transit.

Most of this module is based on existing TTI publications (*1*).

Transit Systems in Texas

There are three categories of transit systems in Texas:

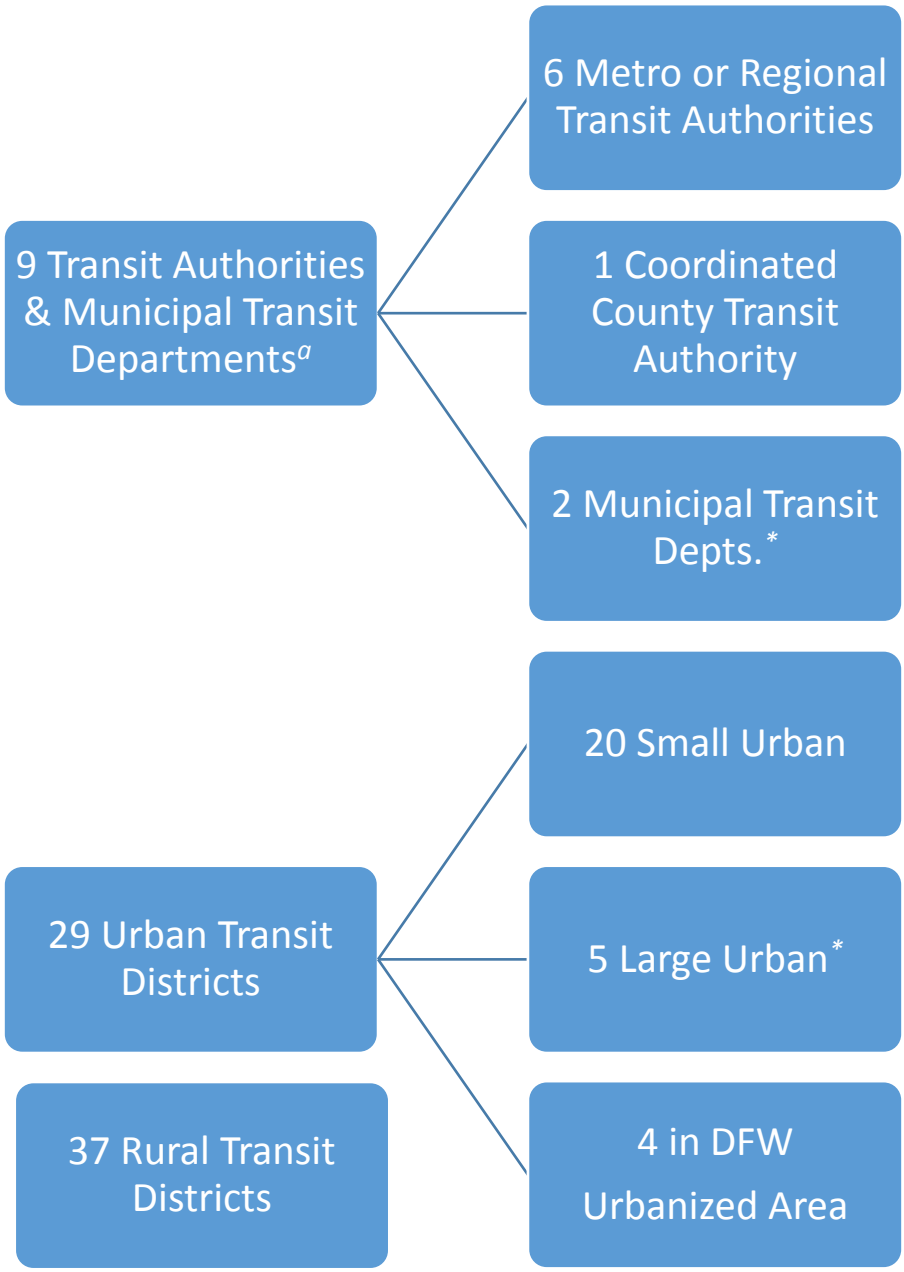
- **Transit authorities and municipal transit departments—**Texas has six metropolitan (regional) transit authorities, two municipal transit departments, and one county transit authority. Each authority or municipal transit department is authorized by voters to impose a sales tax dedicated to transit. The transit authorities and one municipal transit department are not eligible to receive state public transportation funds. The second municipal transit department is eligible to receive state funds; see discussion about the Laredo municipal transit department below (*2, 3, 4, 5*).
- **Urban transit districts—**An urban transit district is a local governmental body or political subdivision of the state that operates a public transportation system in an urbanized area. There are 29 urban transit districts in Texas[1]. There are three types of urban transit districts: large urban, small urban, and Dallas-Fort Worth-Area districts. Urban transit districts receive state public transportation funds, but do not have a local tax dedicated to transit as a source of local funds (*6, 7*).
- **Rural transit districts—**A rural transit district is a political subdivision of the state that provides and coordinates rural public transportation in its territory. There are 37 rural transit districts in Texas. Rural transit districts receive state public transportation funds but do not have a local tax dedicated to transit as a source of local funds (*6, 7*).

Laredo is both an urban transit district that receives state public transportation funds and a municipal transit department with a local sales tax dedicated to transit. Laredo was a small urban area (eligible for state funds) when voters approved the municipal transit department and a

[1] This number does not include Laredo, which is classified as a municipal transit department, and this number considers the Midland and Odessa urban areas as a single transit district.

0.25 percent sales tax dedicated to transit in 1991. By statute, Laredo is eligible to continue receiving state public transportation funds (*8*, *9*).

Figure 1-1 illustrates the different categories of transit systems in Texas.



**Note: Laredo is counted as a Municipal Transit Department in this illustration. Laredo is also eligible to receive state public transportation funds as a large urban transit district in a large urbanized area.*

Figure 1-1. Categorization of Texas Transit Systems

Transit Authorities and Municipal Transit Departments

In Texas, large urban areas are eligible under state statute to ask voter approval for a local option general sales tax dedicated for transit. The Texas state sales and use tax rate is 6.25 percent, but local taxing jurisdictions (cities, counties, special purpose districts, and transit authorities) may also impose local sales and use taxes up to 2 percent for a total maximum combined rate of 8.25 percent.

Voters in nine urban areas in Texas have approved a local option sales tax for a transit authority or municipal transit department. Table 1-1 shows the metropolitan area or county and the tax rate for the local sales tax dedicated to transit. The references to the Texas Transportation Code identify the statutory authority for each local government entity.

Table 1-1. Texas Metropolitan Areas with Approved Local Option Sales Tax for Transit

Type of Authority or Governmental Entity	Principal City or County	Agency	Sales Tax Rate (Percent)
Metropolitan Rapid Transit Authorities (Texas Transportation Code, Chapter 451)	Houston	Metropolitan Transit Authority of Harris County	1.00%
	San Antonio	VIA Metropolitan Transit San Antonio Advanced Transportation District*	0.50% 0.25%
	Austin	Capital Metropolitan Transportation Authority	1.00%
	Corpus Christi	Regional Transportation Authority	0.50%
Regional Transportation Authorities (Texas Transportation Code, Chapter 452)	Dallas	Dallas Area Rapid Transit	1.00%
	Fort Worth**	Fort Worth Transportation Authority	0.50%
Municipal Transit Departments (Texas Transportation Code, Chapter 453)	El Paso	El Paso Mass Transit Department	0.50%
	Laredo	Laredo Transit Management, Inc.	0.25%
Coordinated County Transportation Authority (Texas Transportation Code, Chapter 460)	Denton County–Denton, Lewisville	Denton County Transportation Authority	0.50%

Source: Texas State Comptroller of Public Accounts (10).
** Revenues generated from the 0.25 percent sales tax in the city of San Antonio dedicated to advanced transportation projects.*
*** The City of Grapevine dedicates a part of the municipal sales tax (0.375 percent) to fund the TEX Rail commuter rail service in Grapevine. The City of North Richland Hills provides funding from available sources equal to 0.375 percent municipal sales tax to fund TEX Rail commuter rail service in that city.*

Urban Transit Districts

An urban transit district is a local governmental body or political subdivision of the state that operates a public transportation system in an urbanized area with a population of more than 50,000 but less than 200,000. An urban transit district also includes a small urban transportation provider under Texas Transportation Code, Chapter 456 that on September 1, 1994, received

public transportation money through the department (TxDOT) (*11*). This statutory provision means that urban transit districts that were small urbanized areas with a population of more than 50,000 but less than 200,000 in 1994 but exceeded 200,000 population in a later decennial census continue to be eligible to receive state funds.

Of the 29 urban transit districts that receive state public transportation funds:

- 20 are in small urban areas (population of 50,000 to 199,999).
- 5 are in large urban areas (population 200,000 or more), authorized to receive state public transportation funds. These urban transit districts are eligible to receive state funds because each was a small urban transportation provider on September 1, 1994 that received public transportation money through TxDOT (*11*).
- 4 are in the Dallas-Fort Worth (DFW) area, are authorized to receive state public transportation funds, but are not part of the formula-based allocation process. These urban transit districts are eligible to receive state funds pursuant to provisions of Texas Transportation Code, Chapter 456, Section 456.006, which authorizes state transit funding for "recipients not included in a transit authority but located in an urbanized area that includes one or more transit authorities and that received state transit funding during the biennium ending August 31, 1997" (*12*).

Table 1-2 lists the 29 urban transit districts that receive state public transportation funds. Laredo is counted as a Municipal Transit Department in Table 1-1. Laredo is also eligible to receive public transportation funds as an urban transit district; however, Laredo is not listed in Table 1-2.

Table 1-2. Texas Urban Transit Districts That Receive State Funding

Type of Authority or Governmental Entity	**Small Urban Transit Districts (20)**		
Urban Transit Districts (Texas Transportation Code, Chapter 458)	Abilene	McKinney	Texarkana, Texas
	Amarillo	Midland–Odessa	Texas City
	Beaumont	Port Arthur	Tyler
	College Station–Bryan	San Angelo	Victoria
	Harlingen	San Marcos	Waco
	Lake Jackson–Angleton	Sherman	Wichita Falls
	Longview	Temple	
	Large Urban Transit Districts (5)*		
	Brownsville	Killeen	McAllen
	Conroe-The Woodlands	Lubbock	
	DFW-Area Transit Districts (4)		
(Texas Transportation Code, Chapter 456)	Arlington	Mesquite	
	Grand Prairie	NETS in Tarrant County	

Source: Texas Department of Transportation.

* *Laredo is not listed here as a Large Urban Transit District, even though it receives state funds for public transit. In this course, we generally classify Laredo as a municipal transit department.*

Harris County in the Houston urbanized area (which includes a transit authority) also provides public transit services; however, Harris County was not a transit district that received state transit funding during the biennium ending August 31, 1997 and is therefore not eligible to receive state transit funds and is not classified as an urban transit district.

Figure 1-2 illustrates transit authorities and urban transit districts in Texas.

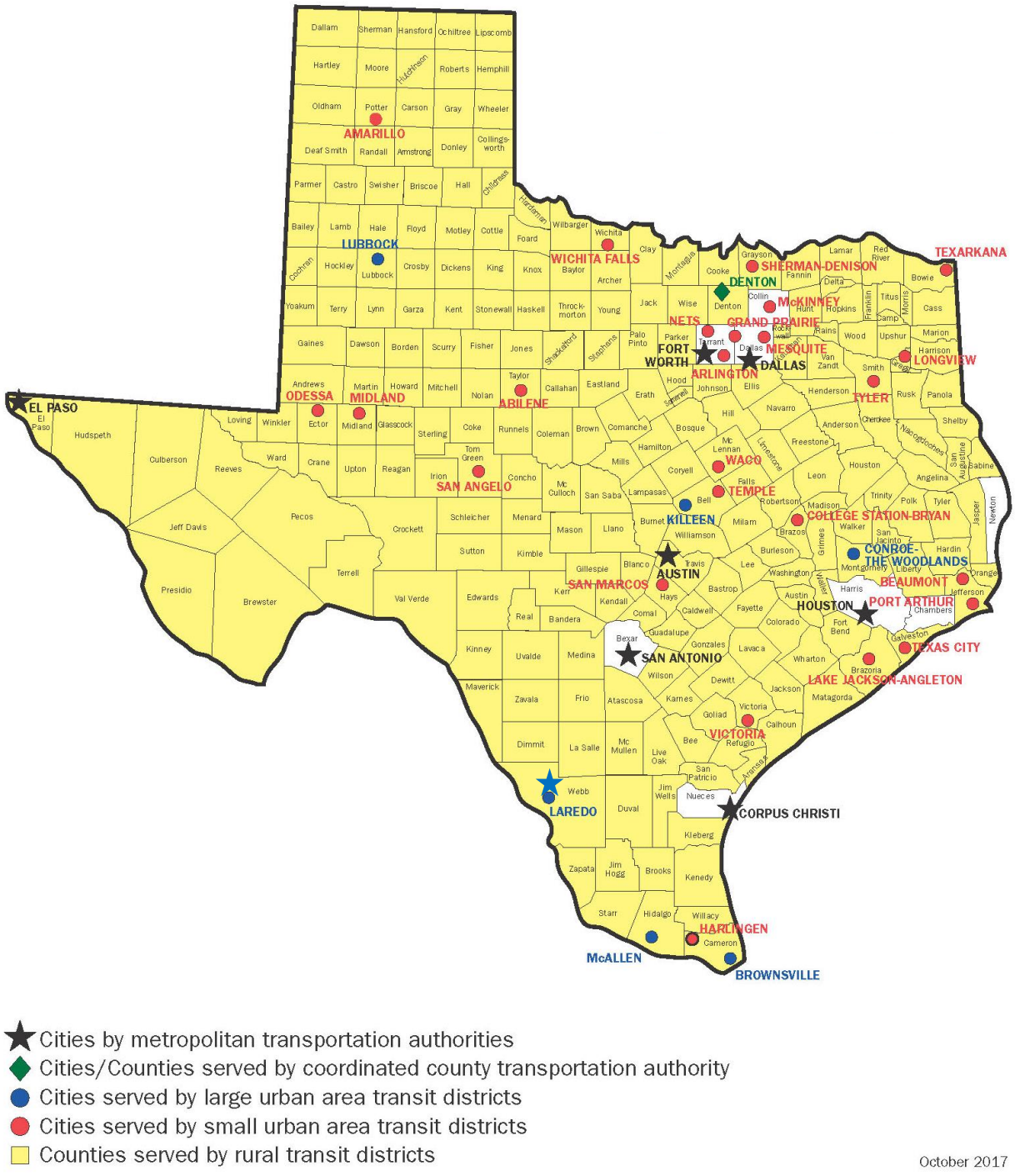


Figure 1-2. Map of Transit Authorities and Urban Transit Districts in Texas
Source: Texas Department of Transportation (13).

Rural Transit Districts

A rural transit district is a political subdivision created pursuant to the provisions of Texas Transportation Code, Chapter 458 to provide and coordinate rural public transportation in a rural area. A rural transit district also includes a rural public transportation provider within the meaning of Texas Transportation Code, Chapter 456 that on August 31, 1995, received public transportation money through the department (TxDOT) (*14*). Table 1-3 lists the 37 rural transit districts.

Table 1-3. Texas Rural Transit Districts That Receive State Funding

Type of Authority or Governmental Entity	Rural Transit District	
Rural Transit Districts (Texas Transportation Code, Chapter 458)	Alamo Area Council of Governments	Kleberg County Human Services
	Ark-Tex Council of Governments	Lower Rio Grande Valley Development Council
	Aspermont Small Business Development Center, Inc.	McLennan County Rural Transit District
	Brazos Transit District	Panhandle Community Services
	Capital Area Rural Transportation System (CARTS)	Public Transit Services
	Central Texas Rural Transit District	Rolling Plains Management Corporation
	Cleburne, City of	Rural Economic Assistance League, Inc.
	Colorado Valley Transit District, Inc.	Senior Center Resources & Public Transit, Inc.
	Community Services, Inc.	South East Texas Regional Planning Commission
	Concho Valley Transit District	South Padre Island, City of
	Del Rio, City of	South Plains Community Action Association
	East Texas Council of Governments	South West Regional Transit District
	El Paso, County of	SPAN Inc.
	Fort Bend, County of	STAR Transit
	Galveston County Transit District	Texoma Area Paratransit System, Inc. (TAPS)
	Golden Crescent Regional Planning Commission	The Transit System, Inc.
	Gulf Coast Center	Webb County Community Action Agency
	Heart of Texas Council of Governments	West Texas Opportunities, Inc.
	Hill Country Transit District	

Figure 1-3. Map of Rural Transit Districts in Texas shows counties served by each of the 37 rural transit districts.

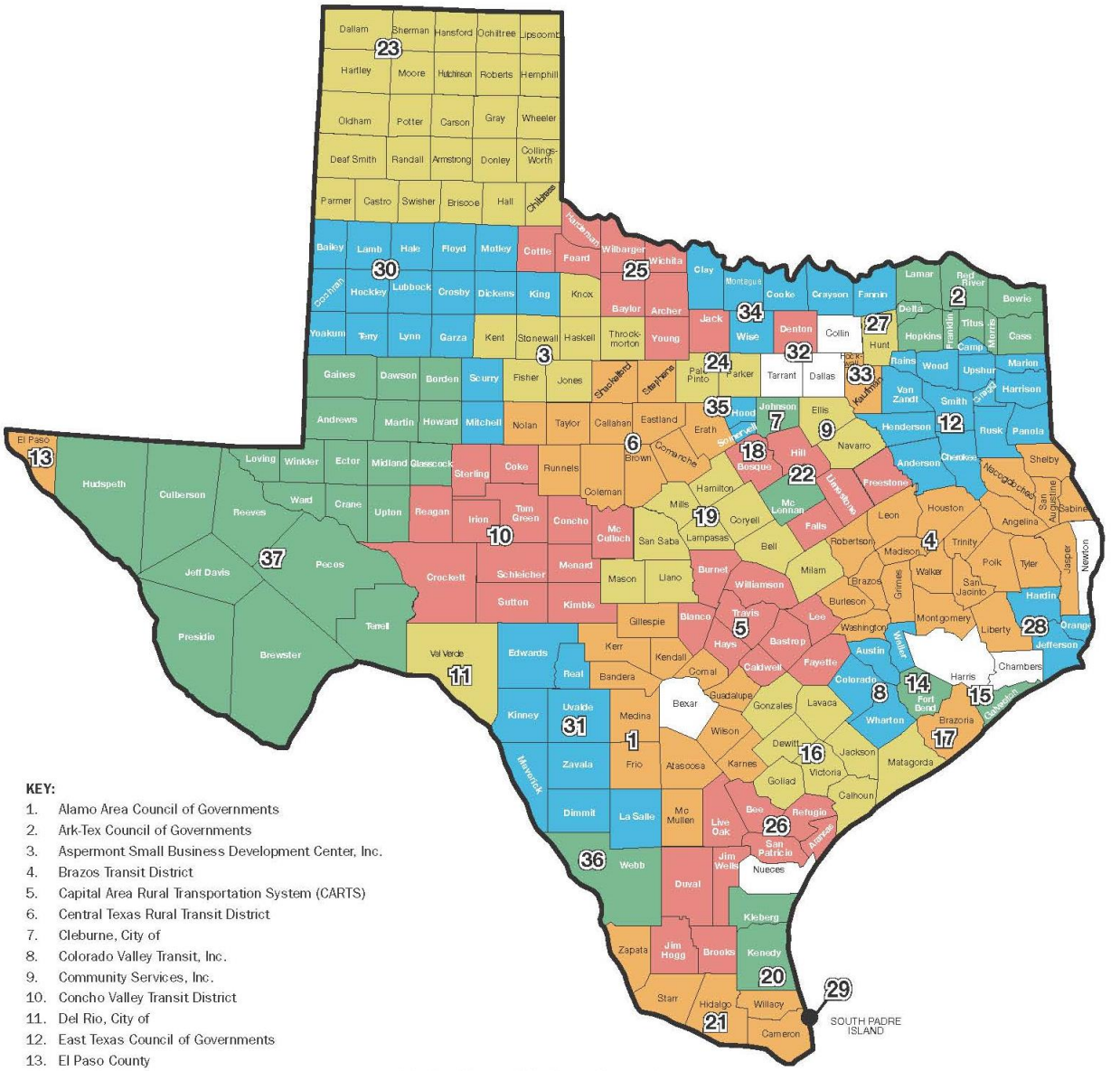


Figure 1-3. Map of Rural Transit Districts in Texas
Source: Texas Department of Transportation (15).

Several public transportation providers in rural transit districts also provide service for the urban transit district(s) within the rural service area or by contract to an urban transit district outside the rural service area. Table 1-4 lists the transit providers that operate service in both rural and urban transit districts. In the case of McLennan County Rural Transit District, the urban transit district for Waco provides transit in the rural area.

Table 1-4. Transit Providers that Operate Service in both Urban and Rural Transit Districts

Transit Provider (Rural Transit District)	Urban Transit District
Ark-Tex Council of Governments	Texarkana, Texas
Brazos Transit District	College Station–Bryan
	The Woodlands (Trolley Service in The Woodlands Town Center)
Capital Area Rural Transportation System (CARTS)	San Marcos
Concho Valley Transit District	San Angelo
Golden Crescent Regional Planning Commission	Victoria
Gulf Coast Center	Texas City
	Lake Jackson–Angleton
Hill Country Transit District	Killeen
	Temple
Lower Rio Grande Valley Development Council	McAllen
	Harlingen
STAR Transit	Mesquite
Texoma Area Paratransit System, Inc. (TAPS)	Sherman
Transit Provider (Urban Transit District)	**Rural Transit District**
Waco Transit	McLennan County Rural Transit District

Source: Texas Department of Transportation, Public Transportation Division.

Key Facts and Figures

This section contains some useful information regarding Texas public transportation[2].

283.6 million unlinked passenger trips provided by Texas transit systems in FY2017.

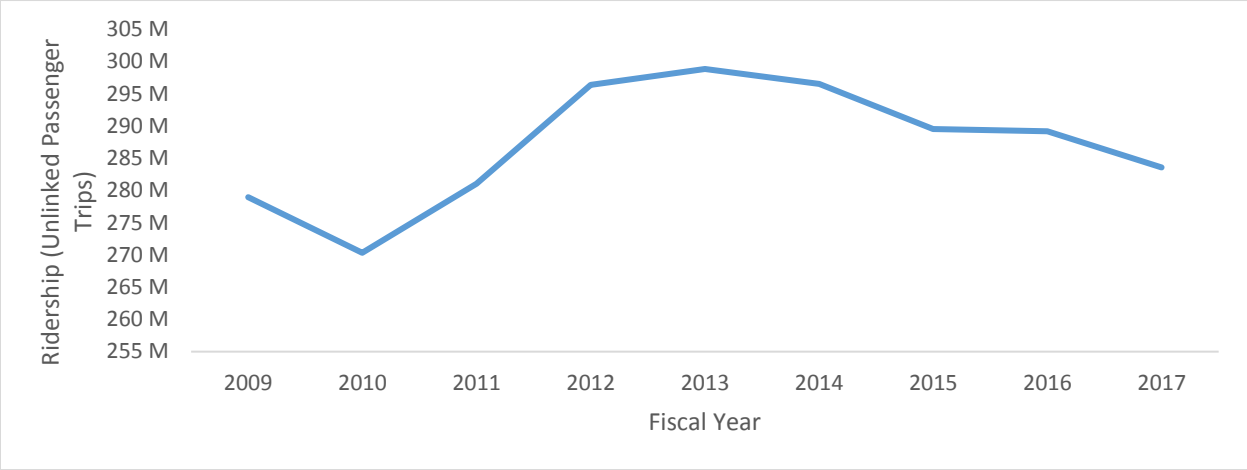


Figure 1-4. Total Annual Unlinked Passenger Trips in Texas Transit Systems
Source: PTN-128 data.

29.8 million unlinked passenger trips provided by state-funded transit districts in FY2017.

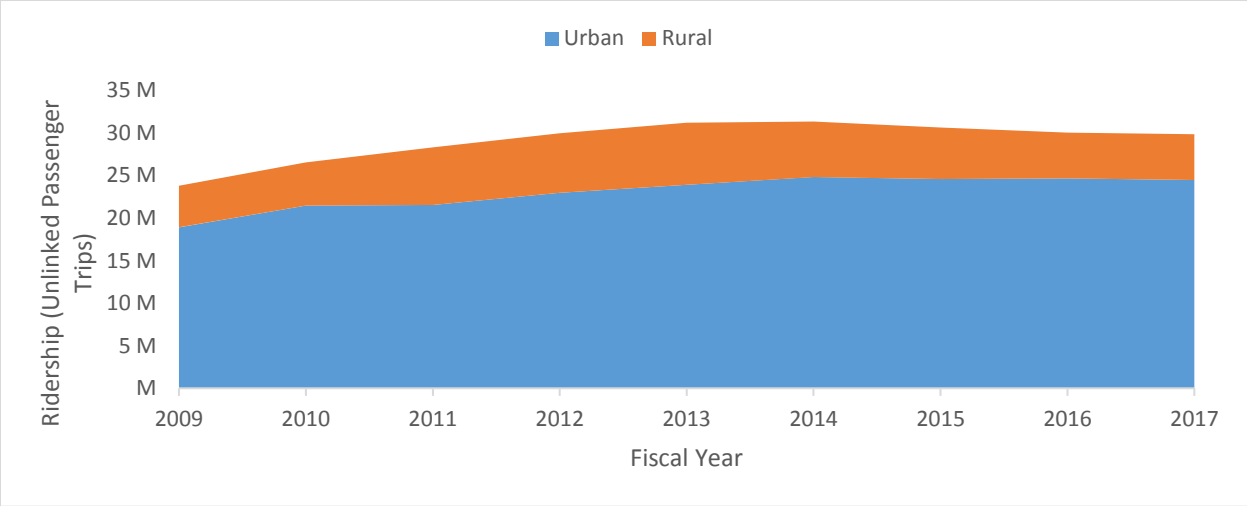


Figure 1-5. Annual Unlinked Passenger Trips at State-Funded Transit Districts
Source: PTN-128 data.

[2] The values in the Key Facts and Figures section count Laredo as a state-funded urban transit district, not as a municipal transit department.

247.4 million revenue miles delivered by Texas transit systems in FY2017.

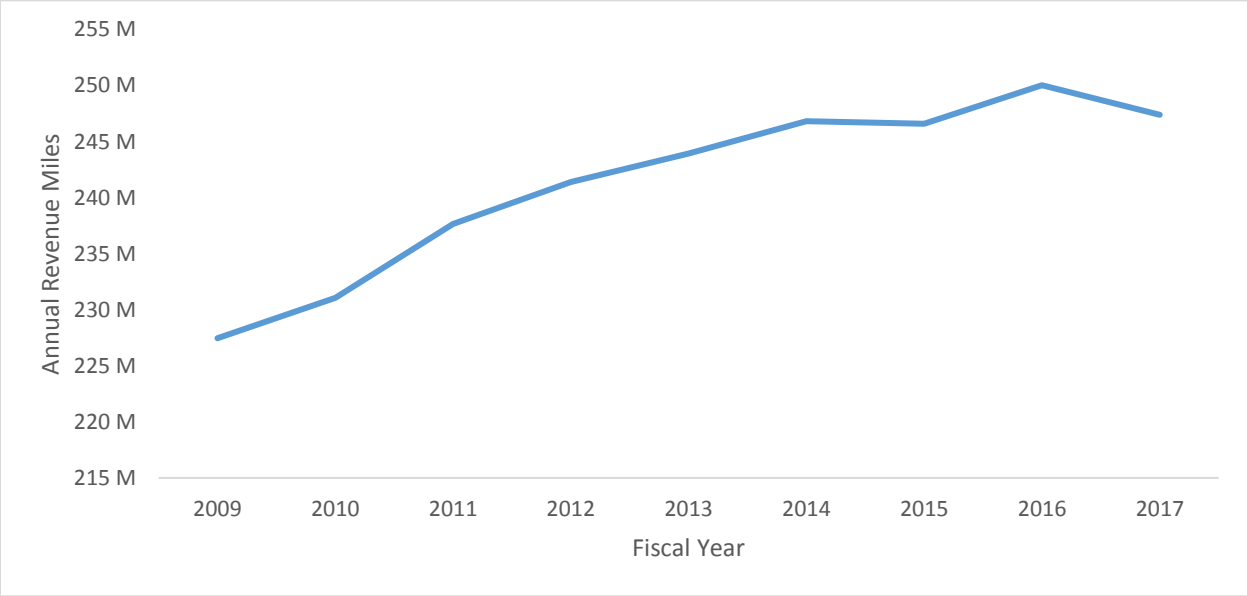


Figure 1-6. Total Revenue Miles at Texas Transit Systems
Source: PTN-128 data.

56.2 million revenue miles delivered by state-funded transit districts in FY2017.

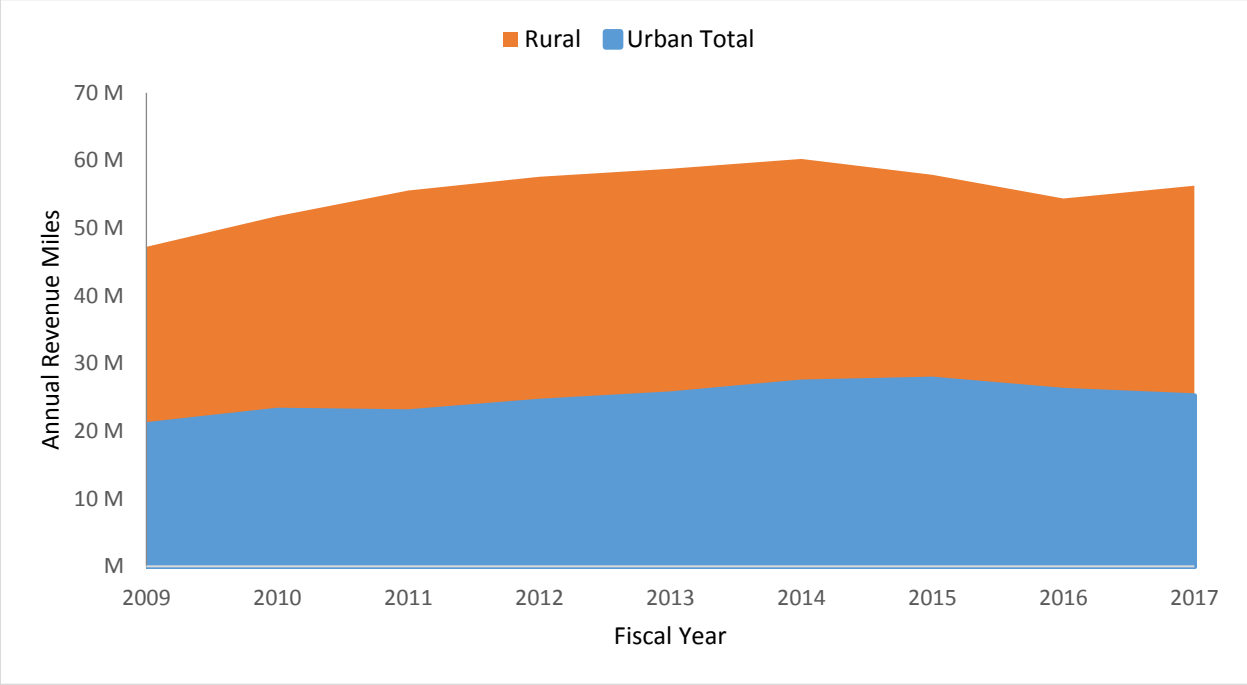


Figure 1-7. Revenue Miles at Texas State-Funded Transit Systems
Source: PTN-128 data.

Funding for Transit

It is important to understand not only where funds come from but also how those funds are generated in the first place. Funding for transit is available from three main sources: federal, state, and local. This section provides an overview of each of these sources, including:

- How revenues are generated at each source.
- How funds are typically distributed.
- What factors or variables influence available funding levels.

To give you an idea of the relative size of the available funds, Table 1-5 provides a breakdown of revenues applied to public transportation in Texas across urban and rural transit districts as well as transit authorities.

Table 1-5. FY2017 Sources of Applied Revenues at Texas Urban Transit Districts, Rural Transit Districts, and Transit Authorities

Sources of Applied Revenues	Transit Authorities* (8)		Urban Transit Districts* (30)		Rural Transit Districts (37)	
	Revenues	% Total Revenues	Revenues	% Total Revenues	Revenues	% Total Revenues
Federal FTA	$286,594,324	11%	$69,249,427	47%	$62,845,624	52%
Other Federal	$0	0%	$5,542,063	4%	$10,476,224	9%
State	$43,485,059	2%	$9,942,131	7%	$21,259,188	18%
Local Including Fares	$2,299,792,358	87%	$63,524,383	43%	$26,302,056	22%
Total Revenue	$2,629,871,741	100%	$148,258,004	100%	$120,883,092	100%
% State Total	91%		5%		4%	

Source: PTN-128.

**In this table, Laredo is counted as an urban transit district and not as a transit authority.*

Federal Funding

The federal government has been financially supporting transportation since the creation of the transcontinental railroad in the 19th century (*16*). The structure and size of that support has gradually changed over time, with the most recent change being the 2015 approval of the FAST Act, which is the latest in a series of bills authorizing federal spending on surface transportation. The FAST Act, like its predecessors, amends various parts of Title 23 (Highways) and Title 49 (Transportation) of the U.S. Code. The FAST Act covers fiscal years 2016 through 2020. Funding programs under the FAST Act must be authorized annually by Congress through an appropriations bill(s).

Annual federal funding levels for public transit under the authorization bills has continued to increase at a relatively regular pace since 1998 (see Figure 1-8).

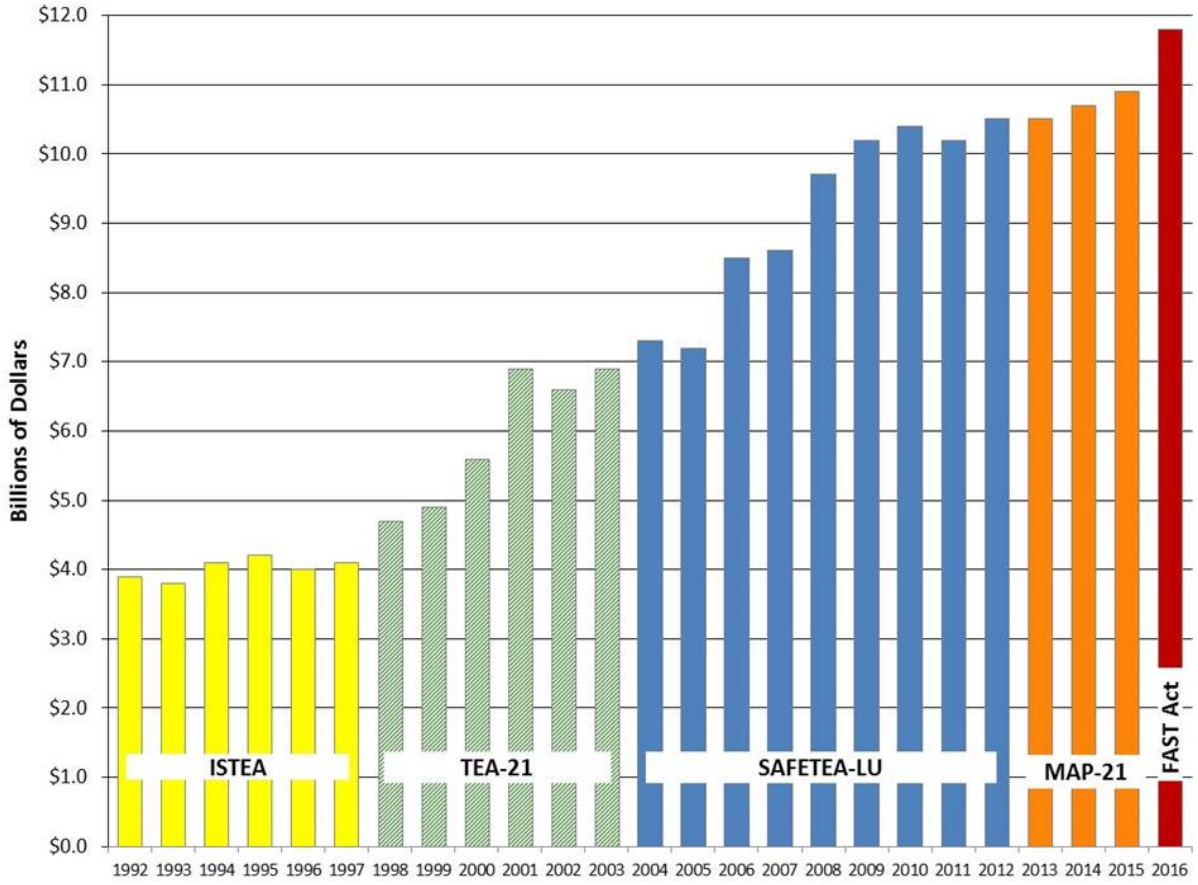


Figure 1-8. Annual Federal Funding Levels for Public Transit
Source: Federal Transit Administration.

Federal funding makes up a significant portion of public transportation funding sources. In FY2017, federal funds made up 14 percent of all revenue for Texas transit systems and 49 percent of revenue for Texas urban and rural transit districts[3].

Compared to other states and Washington, D.C., Texas ranked 20th in federal funding per capita in FY2015 (see Table 1-6).

[3] *Source:* PTN-128 FY2017 data. Laredo is counted as an urban transit district in these percentages.

Table 1-6. Federal Funding for Transit 2015 per Capita by State

State	Federal Funding Per Capita	State	Federal Funding Per Capita
Alabama	$10.88	Montana	$19.13
Alaska	$60.37	Nebraska	$13.86
Arizona	$18.96	Nevada	$19.98
Arkansas	$10.32	New Hampshire	$11.78
California	$44.57	New Jersey	$64.14
Colorado	$49.78	New Mexico	$21.23
Connecticut	$60.76	New York	$80.31
Delaware	$26.05	North Carolina	$21.68
D.C.	$262.27	North Dakota	$17.98
Florida	$20.44	Ohio	$15.02
Georgia	$17.05	Oklahoma	$13.17
Hawaii	$209.12	Oregon	$55.54
Idaho	$14.06	Pennsylvania	$30.23
Illinois	$44.79	Rhode Island	$33.85
Indiana	$13.24	South Carolina	$9.61
Iowa	$13.18	South Dakota	$18.61
Kansas	$12.07	Tennessee	$12.94
Kentucky	$13.61	**Texas**	**$23.13**
Louisiana	$12.77	Utah	$23.43
Maine	$22.75	Vermont	$13.62
Maryland	$38.39	Virginia	$32.31
Massachusetts	$50.07	Washington	$59.18
Michigan	$16.35	West Virginia	$13.47
Minnesota	$37.71	Wisconsin	$14.03
Mississippi	$9.73	Wyoming	$18.64
Missouri	$15.59		

Source: AASHTO Survey of State Funding for Public Transportation–FY 2015 Data (17).

Federal funding programs for transit are discussed in depth in Module 2.

State Funding Overview

Like many states in the U.S., Texas provides financial support for transit systems within its borders. State financial support of public transit systems in Texas is limited to rural and urban transit districts that do not have a local sales tax (with the exception of Laredo).

Authority for the Texas Transportation Commission to allocate state and federal funds is provided in the Texas Transportation Code, Chapter 456. Eligible recipients for Texas state transit funds are urban and rural transit districts, as provided in the Texas Transportation Code, Chapter 458. The administrative procedures for the allocation of funds are described in the Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation,

Chapter 31 Public Transportation. In FY2017, state funding accounted for 7 percent and 18 percent of applied revenues at Texas urban and rural transit districts, respectively[4].

Compared to other states and Washington, D.C., Texas ranked 35th in state funding per capita in FY2015 (see Table 1-7).

Table 1-7. State Funding for Transit 2015 per Capita by State

State	State Funding per Capita	State	State Funding per Capita
Alabama	$0.00	Montana	$0.32
Alaska	$251.94	Nebraska	$2.57
Arizona	$0.00	Nevada	$0.00
Arkansas	$1.19	New Hampshire	$0.75
California	$74.33	New Jersey	$40.04
Colorado	$2.57	New Mexico	$3.19
Connecticut	$143.74	New York	$242.37
Delaware	$123.71	North Carolina	$8.45
D.C.	$814.66	North Dakota	$8.52
Florida	$13.39	Ohio	$0.63
Georgia	$0.30	Oklahoma	$1.47
Hawaii	$0.00	Oregon	$9.30
Idaho	$0.19	Pennsylvania	$119.78
Illinois	$275.45	Rhode Island	$47.95
Indiana	$8.94	South Carolina	$1.23
Iowa	$4.57	South Dakota	$0.90
Kansas	$3.78	Tennessee	$7.16
Kentucky	$0.39	**Texas**	**$1.11**
Louisiana	$1.06	Utah	$0.00
Maine	$0.86	Vermont	$13.57
Maryland	$136.03	Virginia	$35.72
Massachusetts	$243.19	Washington	$11.95
Michigan	$26.60	West Virginia	$1.35
Minnesota	$73.65	Wisconsin	$19.20
Mississippi	$0.54	Wyoming	$4.43
Missouri	$0.25		

Source: AASHTO Survey of State Funding for Public Transportation–FY 2015 Data (17).

State funding for transit in Texas is discussed in depth in Module 3.

[4] *Source:* PTN-128 FY2017 data. Laredo is counted as an urban transit district in these values.

Local Funding Overview

In most cases, federal and state funds are not enough to meet operating and capital requirements of transit systems, and state funds are not enough to meet the local match requirements to enable Texas transit systems to draw down on FTA apportionments.

Therefore, transit systems also turn to local funding. Local funds could come from many sources across different types of government and non-government entities. Here are some examples of local funds for transit:

- Transit fares.
- Revenue from contracts for service.
- A local sales tax or property tax.
- Advertising revenue.
- Donations.

Local funding varies by region, municipality, and transit system, and the details of how local funds are generated and applied become very important—especially in the context of providing local match for federal funds. Table 1-8 displays the value and proportion of local revenues applied in FY2017 by Texas transit systems.

Table 1-8. Summary of Local Revenues by Source in Texas Transit Systems in FY2017

	Transit Authorities* (8)		Urban Transit Districts* (30)		Rural Transit Districts (37)	
Sources of Local Revenues	**Revenues**	**% Local Revenues**	**Revenues**	**% Local Revenues**	**Revenues**	**% Local Revenues**
Fares	$187,035,220	8%	$13,649,919	21%	$4,703,447	18%
Local Contributions (Cash)	$19,577,903	1%	$23,872,060	38%	$9,347,483	36%
Contributed Services (Non-Cash)	$0	0%	$9,256,186	15%	$1,874,323	7%
Sales Tax Dedicated to Transit	$1,983,843,962	86%	$7,287,381	11%	$0	0%
Auxiliary Transit Revenues	$24,278,699	1%	$1,227,419	2%	$95,169	0%
Other Transportation Revenues	$5,149,834	0%	$634,196	1%	$6,902	0%
Non-Transit-Related Revenues	$69,375,385	3%	$1,873,357	3%	$203,509	1%
Other Contracts	$10,531,355	0%	$5,723,865	9%	$10,071,223	38%
Total Revenues	**$2,299,792,358**	**100%**	**$63,524,383**	**100%**	**$26,302,056**	**100%**

Source: PTN-128 FY2017 data.
Note: *Laredo is counted as an urban transit district in this table.

Local revenues—the types and the rules governing their use—are discussed in depth in Module 4.

Helpful Resources

- *TxDOT Public Transportation Division website*: https://www.txdot.gov/inside-txdot/division/public-transportation.html
- *TxDOT Regionally Coordinated Transportation Planning website: http://regionalserviceplanning.org/*
- *TTI Transit Mobility Program website*: https://tti.tamu.edu/group/transit-mobility/
- FTA Financing Techniques for Public Transit: http://www.fta.dot.gov/12868_3532.html
- FTA Grant Programs: https://www.transit.dot.gov/grants
- APTA FAST Act Guide: http://www.apta.com/gap/legissues/authorization/Pages/default.aspx
- APTA Primer on Transit Funding: http://www.apta.com/resources/reportsandpublications/Documents/APTA-Primer-FAST-Act.pdf
- TxDOT PTN Public Transportation Programs: https://www.txdot.gov/inside-txdot/division/public-transportation/local-assistance.html
- TxDOT Texas Transit Statistics (2016): http://ftp.dot.state.tx.us/pub/txdot-info/ptn/transit_stats/2016.pdf

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Module 2
Federal Funding Programs for Transit

Source: https://www.transportation.gov/

By the end of this module, you should be able to:

1. **State the responsibilities of a designated recipient for FTA grant programs and describe differences in the responsibilities of a direct recipient and a subrecipient.**
2. **Identify the eight primary FTA federal grant programs that fund transit in Texas and describe the purpose and eligible recipients for each.**
3. **Locate additional information for each FTA federal grant program.**
4. **Identify the sources of USDOT and non-USDOT funds for transit and describe possible eligible projects.**
5. **Understand FTA funding for transit systems in Texas.**

TABLE OF CONTENTS

Introduction

There are multiple federal funding programs that support public transit, most of which comes from USDOT through the FTA. Federal funding is a significant source of revenue for Texas transit systems. Federal funds made up 14 percent of all FY2017 revenue for Texas transit systems and 49 percent of FY2017 revenue for Texas urban and rural transit districts[1]. FTA funding is authorized under Title 49, Chapter 53 of the USC. Transit systems need to fully understand USDOT (mostly FTA) programs to most effectively utilize the available resources and to ensure compliance with federal rules and regulations.

This module will:

- Discuss the Highway Trust Fund and the federal transit funding process.
- Describe the details of each FTA grant program.
- Provide highlights from changes in the FAST Act.
- Discuss the designated recipients, direct recipients, and subrecipients.
- Briefly discuss the USDOT flexible sources of funding for transit.
- Describe FTA funding in Texas.

This module is not a replacement for FTA circulars or other official guidance but will provide critical information to increase your understanding of FTA grant programs.

The Highway Trust Fund (HTF) and FTA Funding Process

Although there are additional complexities, in general, federal monies to support transportation funding come from the federal HTF, which has two accounts: highways and mass transit (*1*). Approximately 90 percent of HTF revenue comes from taxes on motor fuels—the 18.4 cents per gallon tax on gasoline is mainly split between the highway and transit accounts. Of the tax per gallon, 15.44 cents is allocated to the highway account; 2.86 cents is allocated to the mass transit account (0.1 cent per gallon is deposited into the Leaking Underground Storage Tank Trust Fund). The federal gasoline tax has not changed since 1993. Figure 2-1 displays an overview of the path of the federal gasoline tax through the HTF and eventually to states and designated recipients of federal transportation funds.

[1] *Source:* PTN-128 FY2017 Data. Values count Laredo as a state-funded urban transit district.

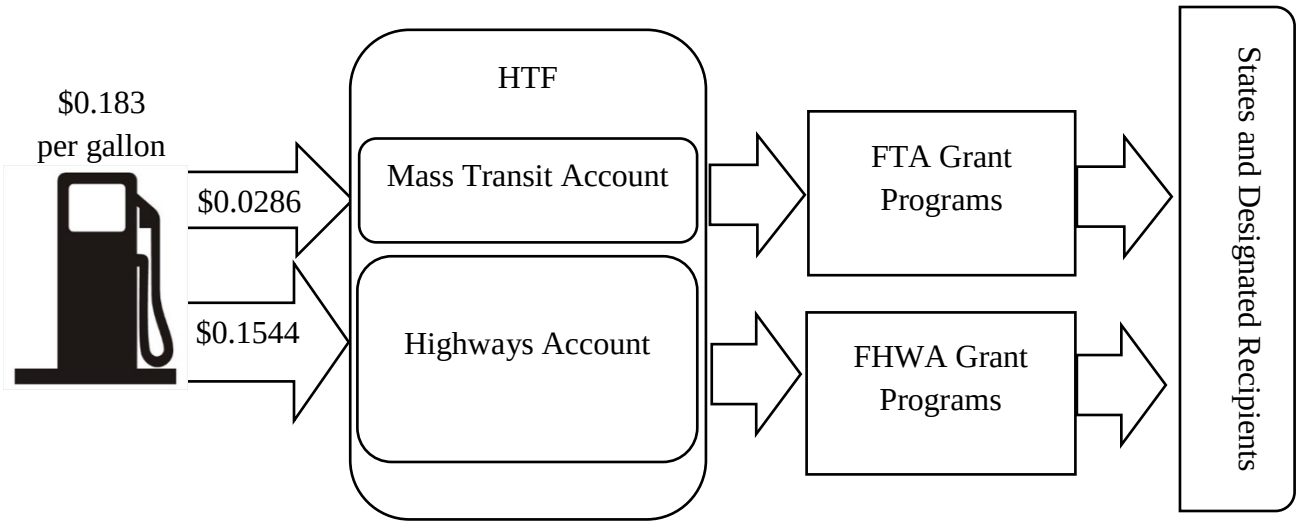

Figure 2-1. Path of the Federal Gas Tax to States and Designated Recipients of Federal Grant Programs

The revenue in the HTF's highway and mass transit accounts is managed and distributed by two main government agencies that are part of the USDOT: FHWA and FTA. FHWA manages the funds from the HTF highway account; FTA manages the funds from the HTF mass transit account.

The federal funding machine may seem like a "black box." However, in the case of the core FTA formula and discretionary grant programs funded by the HTF, the basic process is relatively straightforward and consists of four main steps. Figure 2-2 displays the four main steps, which are also described below.

❶ Authorization.

No federal expenditures are allowed without authorization. Federal financial support for public transit is authorized under 49 USC Chapter 53, which dictates the annual amount of authorized funds for each FTA grant program for every year included in the last surface transportation bill.

About every three to six years, a new surface transportation bill is passed that amends 49 USC 53 by revising the grant programs available and the amounts in each program for each year covered under the bill. Years beyond the current authorization under 49 USC 53 are essentially "unknowns"; the grant programs and amounts will likely be similar to past authorizations, but technically, major changes are possible.

❷ Revenue collection and availability.

As discussed previously, the main source of federal financial support for public transportation is the mass transit account of the HTF. The HTF is mainly supported by the federal tax on gasoline and diesel fuels. The amount of taxes and fees and their allowed uses are dictated by 26 USC 4081. The HTF is established by 26 USC 9503.

The collected revenue is only available for expenditure and award if there is *authorization* and *annual appropriation*.

❸ Annual appropriation.

Even though funds are authorized under 49 USC Chapter 53 across several years, these funds are only actually available for expenditure after Congress passes an annual appropriations bill and the president signs that bill into law. The appropriations bills cover only one federal fiscal year.

❹ Annual apportionments and allocations.

Once Congress appropriates the HTF funds to USDOT (and therefore FTA), FTA can then make apportionments and allocations to recipients of FTA grant programs. The recipients of and process for obtaining FTA grant funds vary across FTA grant programs and will is discussed in more detail later in this module.

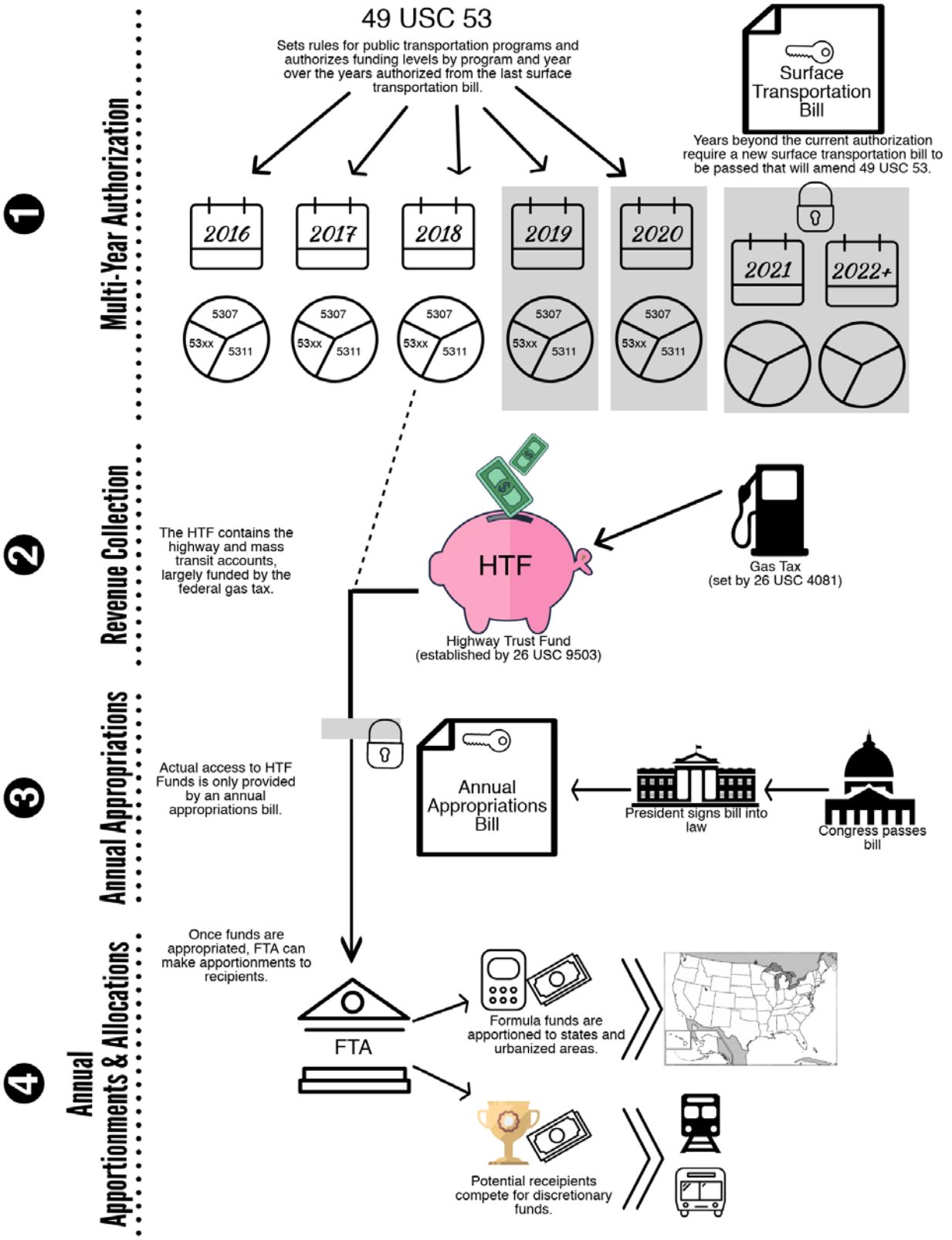

Figure 2-2. Diagram of the Federal Transit Funding Process

FTA Fund Recipients

There are several different types entities eligible to receive FTA funds, and what entity receives FTA funds depends on the particular FTA grant program. FTA grant usually go either to urbanized areas or to states, but states and urbanized areas can influence who receives FTA funds directly or under pass-through arrangements. Different FTA programs have unique requirements about who is eligible to receive funds. (This coursebook will use the section symbol, §, in place of the word *section* when referring to sections of statutes and regulations.) There are three important names used for recipients for FTA grant funding:

- *Designated recipient*. An entity, usually selected by the governor (or local officials), that receives FTA funds. For example, *TxDOT* is the designated recipient of §5311 funds. The governor has designated TxDOT as the recipient.
- *Direct recipient*. An entity that receives FTA funds directly from FTA (i.e., the entity applies to FTA to receive funds). Unless that entity is a state or a nationally recognized tribe, the entity *has to be given permission by the grant program's designated recipient* to be a direct recipient. For example, §5307 funds for large urbanized areas can be applied for directly by large urban transit districts and by Texas transit authorities *as designated* by the governor.
- *Subrecipient*. An entity that receives FTA funds from a pass-through entity. For example, Texas rural transit districts are subrecipients of §5311 funds, because those funds are passed through TxDOT.

A **designated recipient** may authorize another public agency to be the direct applicant for §5307. This authorization may be made on a one-time basis or at the time of each application submission, at the option of the designated recipient. Under the FAST Act, a state or local governmental entity that operates a public transportation service and is eligible to receive direct grants under §5307 or §5311 is eligible to be a direct recipient for §5339 funds. TxDOT acts as the designated recipient of §5339 funds for small urban and rural transit districts (but authorizes the urban transit districts as direct recipients). TxDOT elects to serve as the §5310 designated recipient for all areas under 200,000 in population.

A designated recipient or direct recipient may choose to pass its grant funds through to another entity (a subrecipient) to carry out the purposes of the grantee's agreement with FTA. To do this, the grantee must enter into a written agreement with the subrecipient that assures FTA that the grantee will be able to comply with its obligation to satisfy the requirements of the grant agreement. A pass-through arrangement does not relieve the grantee of its responsibilities to carry out the terms and conditions of the grant agreement.

In those urbanized areas with more than one designated recipient, FTA expects local officials, operating through the MPO, and designated recipients to determine the allocations together. The

subarea allocation should be determined fairly and rationally through a process agreeable to the designated recipients. FTA may request a written agreement signed by a representative of each entity involved. In North Central Texas, for example, NCTCOG administers the allocation process, and the fund allocation is subject to approval by the Regional Transportation Council.

Large Urbanized Areas

For urbanized areas with 200,000 or more in population, §5307, §5310, §5337 (if eligible for state-of-good-repair grants), and §5339 funds are apportioned and flow directly to a **designated recipient(s)** selected locally to apply for and receive federal funds. The governor, responsible local officials, and publicly owned operators of transit services jointly designate the recipient to apply for, receive, and dispense funds.

The designated recipient (or recipients) in each urbanized area must be a public body and have the legal authority to receive and dispense federal funds in the urbanized area. For example, the Dallas–Fort Worth–Arlington urbanized area has three designated recipients:

- Dallas Area Rapid Transit (DART).
- Fort Worth Transportation Authority (FWTA).
- North Central Texas Council of Governments (NCTCOG) (for all cities and unincorporated areas in the urbanized area but not part of DART or FWTA).

Other large urbanized areas in Texas have only one designated recipient. For example, VIA Metropolitan Transit is the single designated recipient for the San Antonio urbanized area. The Metropolitan Transit Authority of Harris County (Houston METRO) is the single designated recipient for the Houston urbanized area.

Small Urbanized Areas

For urbanized areas with a population between 50,000 and 200,000, §5307 funds are apportioned to the governor of each state for distribution. The governor or the governor's designee(s) is the designated recipient(s) for small urbanized areas. TxDOT is the designated recipient in Texas. TxDOT allocates funds to the 20 urban transit districts with a population between 50,000 and 200,000 and names each district as the FTA direct recipient for §5307 grants. Under MAP-21, TxDOT retained designated recipient status for §5339 Buses and Bus Facilities grants for small urbanized areas. Under the FAST Act, a local governmental entity that operates fixed-route bus service and is eligible to receive direct grants under §5307 is also eligible to be a direct recipient for §5339 formula funds.

TxDOT is the §5310 designated recipient for all areas under 200,000 in population.

Rural Areas

Funds are apportioned to the state's designated recipient to allocate to providers of public transportation in non-urbanized (rural) areas. In Texas, TxDOT is the designated recipient. TxDOT allocates §5311 and §5339 funds to rural transit districts and to operators of intercity bus service for eligible §5311 funds.

PTN allocates a portion (no more than $20,104,352) of §5311 funds to rural transit districts using the same formula as the rural state formula (*2*). (More information about the state funding formula is available in Module 3.) A portion of the remaining §5311 funds can be allocated to discretionary awards. Then, PTN allocates any remaining funds to rural transit districts based on the transit district's proportion of vehicle miles out of the total vehicle miles operated by rural transit districts.

TxDOT is the §5310 designated recipient for all areas under 200,000 in population.

FAST Act Highlights

The FAST Act is the current federal authorizing legislation for surface transportation. FAST Act authorizes federal programs that fund public transportation.

This section describes:

- FAST Act key facts.
- FAST Act funding details by program and year.
- Significant changes in the FAST Act related to public transportation finance.

Fast Facts for the FAST Act

This section provides key information to know regarding the FAST Act.

What Is the FAST Act?

- FAST Act stands for the **F**ixing **A**merica's **S**urface **T**ransportation Act and was signed into law by the President on December 4, 2015.
- The FAST Act amends various parts of Title 23 (Highways) and Title 49 (Transportation) of the U.S. Code (USC).
- The FAST Act covers fiscal years 2016 through 2020 (i.e., through September 30, 2020). Funding programs authorized by FACT Act must be funded annually through an appropriations bill(s).

How Much Money?

- The FAST Act contains an increase in transportation funding when compared to the previous transportation funding bill, Moving Ahead for Progress in the 21st Century

(MAP-21). MAP-21 authorized $10.85 billion in public transportation (and related) funding in FY2015; FAST authorized $11.79 billion in FY2016 (an 8.6 percent increase) and $12.18 billion in FY2017 (a 3.3 percent increase).

- Public transportation funding levels increase by about $1 billion every year of the FAST Act.
- The FAST Act represents $61.11 billion in authorized federal funds for public transportation over five years (FY2016–FY2020).

FAST Act Funding Details

The main source of federal revenue for public transportation is from the Mass Transit Account of the federal Highway Trust Fund (HTF). However, additional revenue is needed from federal general funds to fully support the authorized funding levels in several programs under 49 USC—particularly the Capital Investment Grant Program (§5309). Figure 2-3 displays the distribution of funds by major program area and source of funds (mass transit account or general funds) over the five-year life of the FAST Act.

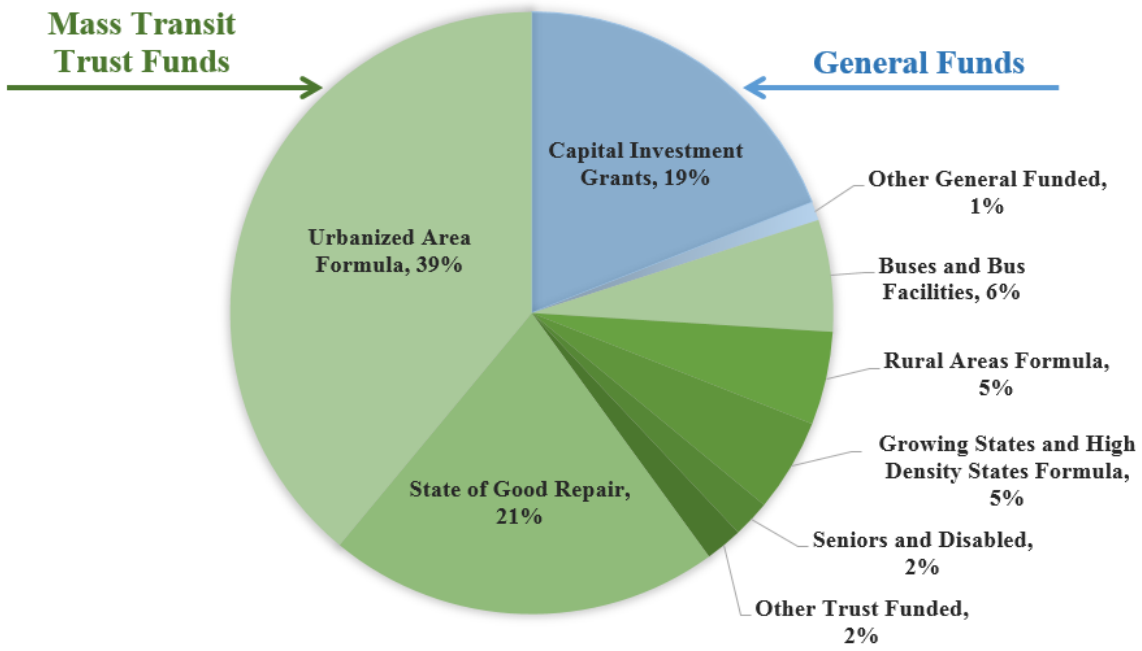

Figure 2-3. Distribution (and Source) of FTA Funds by Program FY2016–FY2020 under the FAST Act

Source: Federal Transit Administration as presented by the Congressional Research Office (3).

Table 2-1 displays the annual funding levels for each FTA program.

Table 2-1. FAST Act Authorization Levels by Program (in Millions of Dollars)

Programs under Section (§) of 49 USC	MAP-21	FAST Act					
	FY 2015 Enacted	FY 2016 Authorized	FY 2017 Authorized	FY 2018 Authorized	FY 2019 Authorized	FY 2020 Authorized	2016-2020 Total
Total All Programs	**$10,858.43**	**$11,789.40**	**$12,175.51**	**$12,175.15**	**$12,381.18**	**$12,592.15**	**$61,113.40**
Programs Funded from the Mass Transit Account	**8,595.00**	**9,347.60**	**9,733.71**	**9,733.35**	**9,939.38**	**10,150.35**	**48,904.39**
§ 5305 Planning Programs	128.80	130.73	133.40	136.20	139.09	142.04	681.46
§ 5307 Urbanized Area Formula	4,458.65	4,538.91	4,629.68	4,726.91	4,827.12	4,929.45	23,652.07
§ 5310 Seniors and Individuals with Disabilities	258.30	262.95	268.21	273.84	279.65	285.57	1,370.22
§ 5311 Rural Areas Total	607.80	619.96	632.36	645.63	659.32	673.30	3,230.57
§ 5312 Public Transportation Innovation**	**	28.00	28.00	28.00	28.00	28.00	140.00
§ 5314 Technical Assistance and Workforce Development**	5.0	9.00	9.00	9.00	9.00	9.00	45.00
§ 5318 Bus Testing Facility	3.0	3.00	3.00	3.00	3.00	3.00	15.00
§ 5335 National Transit Database	3.85	4.00	4.00	4.00	4.00	4.00	20.00
§ 5337 State of Good Repair	2,165.90	2,507.00	2,549.67	2,593.70	2,638.37	2,683.80	12,972.54
§ 5339 Buses and Bus Facilities Formula Grants	427.80	427.80	436.36	445.52	454.96	464.61	2,229.25
§ 5339 Buses and Bus Facilities Competitive Grant*	*	268.00	283.60	301.51	322.06	344.04	1,519.22
§ 5340 Growing States	262.95	272.30	279.13	286.13	293.31	300.67	1,431.54
§ 5340 High Density States	262.95	263.96	265.30	266.65	268.00	269.36	1,333.29
§ 3006(b) Coordinated Access and Mobility*	*	2.00	3.00	3.25	3.50	3.50	15.25
§ 3028(a) Positive Train Control*	*		199.00				199.00
§ 20005(b) Program for Transit Oriented Development Planning	10.000	10.00	10.00	10.00	10.00	10.00	50.00
Programs Funded from General Revenues	**2,263.43**	**2,441.80**	**2,441.80**	**2,441.80**	**2,441.80**	**2,441.80**	**12,209.01**
§ 5309 Fixed Guideway Capital Investment	2,120.00	2,301.78	2,301.78	2,301.78	2,301.78	2,301.78	11,508.91
§ 5312 Transit Research**	33.00	20.00	20.00	20.00	20.00	20.00	100.00
§ 5314 Technical Assistance and Workforce Development**	4.00	5.00	5.00	5.00	5.00	5.00	25.00
§ 5322 Human Resources and Training** (included in §5314)	.50						
§ 5324 Emergency Relief	(a)	(a)	(a)	(a)	(a)	(a)	(a)
§ 5327 Project Management Oversight	(b)	(b)	(b)	(b)	(b)	(b)	(b)
§ 5334 FTA Administration	105.93	115.02	115.02	115.02	115.02	115.02	575.10

Source: Federal Transit Administration, FAST Act Estimated Program Totals.

* New program under FAST Act.

** Modified under FAST Act

(a) Such sums as are necessary in the case of an emergency.

(b) Project Management Oversight funds are a percentage takedown from capital grant programs.

How Is the FAST Act Different from MAP-21?

This section discusses the most relevant changes that were included in the FAST Act (*4*, *5*). Changes are discussed in three sections:

- New programs.
- Repealed programs.
- Consolidated programs.

Modifications to existing programs are discussed in more detail later in this module.

New Programs

- Bus and Bus Facilities Discretionary Grants §5339(b)

  The Bus and Bus Facilities Program (§5339) is now two parts: part (a) is the formula distribution and part (b) is the discretionary program.

  The Bus Discretionary Program, §5339(b), was reestablished under FAST and contains $283M in FY2017 funding ($55M is set aside for Low or No Emission Bus Deployment competitive grants). The remaining $228M is competitively distributed based on age and condition of assets. More details about §5339 is provided later in this module.

- Expedited Project Delivery for Capital Investment Grants Pilot Program (subsection of 3005[b] of FAST Act)

  FAST repealed MAP-21's Expedited Project Delivery Program in section 20008(b) and replaced it with section 3005(b) of FAST. The pilot program creates a fast-track approval process for capital construction grants, with a maximum 25 percent federal share (*6*).

  This program will award up to eight New Starts, Small Starts, or Core Capacity projects that are at least in part supported by a public-private partnership and operated and maintained by employees of an existing provider of public transportation. More details about the Capital Investment Grants Program is available later in this module.

  Like typical Capital Investment Grants, funding is contingent on annual appropriations.

  As of February 2018, **FTA has not recommended any projects for funding** under this grant program (*7*).

- Pilot Program for Innovative Coordinated Access and Mobility (subsection of 3006[b] of FAST Act)

  This new pilot program is a competitive grant program for innovative projects that improve the coordination of transportation services with non-emergency medical

transportation (NEMT) services. Funding is $2M in FY2016, with small increases programmed for each fiscal year to $3.5M in FY2019 and FY2020 (*8*).

Repealed Programs

Two grant programs were repealed under the FAST Act:

- Bicycle Facilities (previously §5319).
- Pilot Program for Expedited Project Delivery (subsection of 20008[b] of MAP-21). Note: this program was replaced with Subsection 3005(b) of the FAST Act, the Expedited Project Delivery for Capital Investment Grants Pilot Program (discussed above).

Consolidated Programs

A grant program is considered "consolidated" when the program was a stand-alone grant program under MAP-21, but was absorbed into some other grant program under the FAST Act. The activities supported by the consolidated program continue to be funded, but are funded under a different section of 49 USC.

- Public Transportation Innovation (§5312)

  §5312 was previously named *Research, Development, Demonstration, and Deployment Projects* under MAP-21. Under the FAST Act, this program was renamed *Public Transportation Innovation*.

  The §5312 program funds demonstration, deployment, and evaluation research projects. Also, §5312 includes a Low/No Emissions Vehicle Component Testing Program (not to be confused with the Low/No Emissions Bus and Bus Facilities grants under §5339).

  The Transit Cooperative Research Program (TCRP; http://www.tcrponline.org/) was moved from §5313 and is now funded under §5312.

- Technical Assistance and Workforce Development (§5314)

  Under MAP-21, §5314 was named *Technical Assistance and Standards Development*. Under the FAST Act, §5314 was renamed *Technical Assistance and Workforce Development*.

  §5322 (*Human Resources and Training*) was consolidated into §5314 and no longer exists as a separate program under the FAST Act.

  §5314 also funds the National Transit Institute (NTI; https://www.ntionline.com/), supports a competitive workforce development program, and allows use of up to 0.5 percent of 5307 funds for workforce development.

FTA Grant Programs

FTA has many grant programs, some of which are formula-based and others that are competitive. Formula grants use a consistent methodology and set of variables to calculate the funds apportioned to each recipient. In formula grants, each recipient in good standing with the administering federal agency is assured of a consistent funding stream through the formula grant, year after year, assuming no significant issues or delays in either the funding agency or the recipient and assuming Congress approves the annual appropriations bill(s). Competitive grants are usually awarded through an application process. FTA releases a call for projects or applications, and eligible recipients must submit applications and be selected by FTA to receive the grant. Figure 2-4 displays the estimated value and proportion of FTA's FY2017 grant programs that are either discretionary or formula programs.

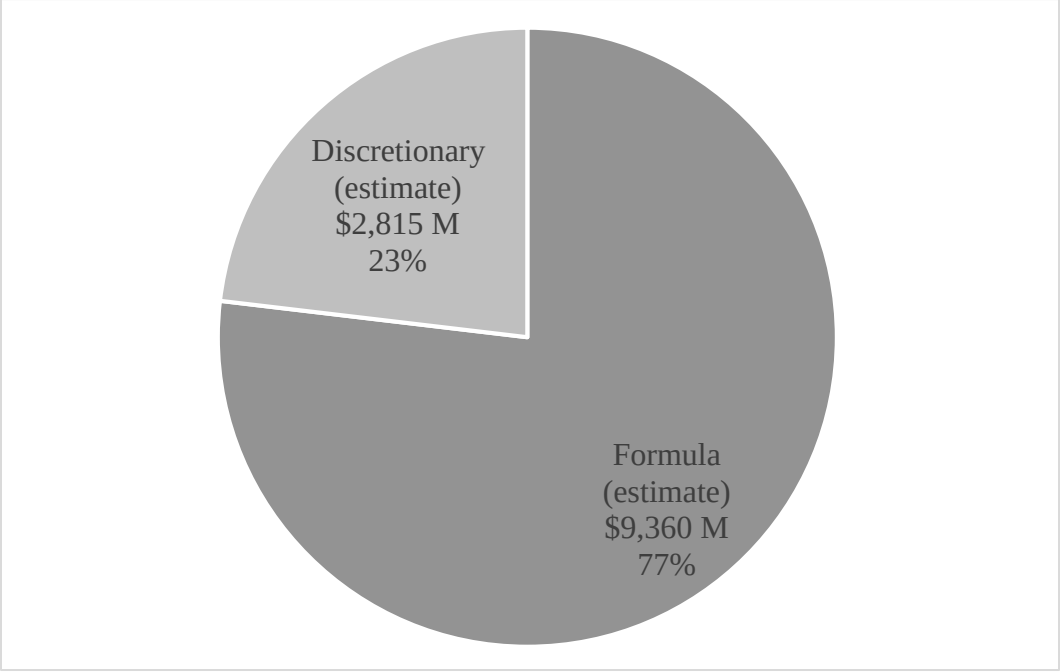

Figure 2-4. FY2017 FTA Grant Program Funding by Program Type

Source: Adapted from FAST Act Estimated Program Totals (9).

Although there are many different grant programs, the most consistent sources of FTA funding are formula funds under the §5307 Urbanized Area Formula Program and §5311 Rural Area Formula Program. There are other FTA grant programs, each with a specific purpose. FTA grant programs require some form of local match from state, local, or non-USDOT federal funds. The complexity and details of FTA grant programs are discussed in the following sections.

All transit districts, transit authorities, and municipal transit departments receive funds from FTA federal funding programs. FTA federal funds require match from state and/or local funds. Local funds are local government revenues and other funds generated from transit and non-transportation sources. Transit agencies may use revenues from non-USDOT federal programs as match for FTA federal funds.

Under the FAST Act, FTA administers the following programs that provide funding for transit in Texas:

- **Sections 5303-5305 Metropolitan, Statewide, or Nonmetropolitan Transportation Planning:** Provides formula funding and procedural requirements for multimodal transportation planning in metropolitan areas and states.
- **Section 5307 Urbanized Area Formula Program:** Provides formula funding to public transit systems in urbanized areas with populations 50,000 and more for public transportation capital, planning, and job access and reverse commute (JARC) projects, as well as operating expenses for public transit systems that meet specific criteria.
- **Section 5309 Capital Investment Grants:** Provides discretionary funds for major capital investments for new and expanded rail, bus rapid transit (BRT), and streetcars. The law requires that transit systems seeking CIG funding for a project must complete a series of planning steps over several years to be eligible for funding.
- **Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities:** Formula funds provided to states and large urbanized areas for the purpose of meeting transportation needs of seniors and people with disabilities.
- **Section 5311 Rural Areas Formula Program:** Provides formula funds to states to provide capital, planning, and operating assistance to support public transportation in rural areas with populations less than 50,000.
- **Section 5337 State of Good Repair:** A formula-based program for maintenance, replacement, and rehabilitation of the nation's rail transit systems and high-intensity motorbus systems that use high-occupancy vehicle (HOV) lanes, including BRT.
- **Section 5339 Buses and Bus Facilities:** Provides funding through a formula-based program and competitive grant programs to fund bus-related projects. The formula program is to replace, rehabilitate, and purchase buses and related equipment as well as to construct bus-related facilities. The competitive allocation provides funds for major improvements to bus transit systems that would not be achievable through formula allocations.
- **Section 5340 Growing States and High-Density States Formula Program:** Apportions additional funds by formula to §5307 and §5311 programs in growing states and high-density states. Eligible grant recipients in Texas receive funds for growing states.

The following sections describe the FTA programs under the FAST Act. Most of the details of each grant program are available at FTA's grant programs website (*10*) and in FTA circulars (a table of FTA circulars is provided in the Helpful Resources section of this module).

Sections 5303, 5404, 5305 Metropolitan, Statewide, or Nonmetropolitan Planning Programs

FTA and the Federal Highway Administration (FHWA) jointly administer planning programs that provide funding and procedural requirements for multimodal transportation planning in states and metropolitan areas (*11*).

Eligible Recipients

Eligible recipients of funds for planning include state DOTs and MPOs. Federal planning funds are first apportioned to state DOTs (in Texas, TxDOT), which are direct recipients of funds. State DOTs then allocate planning funding to MPOs.

Eligible Activities

Funds are available for planning activities that (a) support the economic vitality of the metropolitan area; (b) increase the safety of the transportation system; (c) increase the security of the transportation system; (d) increase the accessibility and mobility of people; (e) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns; (f) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight; (g) promote efficient system management and operation; and (h) emphasize the preservation of the existing transportation system.

Apportionment of Funds

Of the funds authorized in §5305, 83 percent is made available to the §5303 Metropolitan Planning Program, and 17 percent is apportioned to the §5304 State Planning and Research Program.

Eighty percent of the §5303 funds are apportioned on a statutory basis to the states based on each state's urbanized area population. The remaining 20 percent is provided to the states based on an FTA administrative formula to address planning needs in larger, more complex urbanized areas. Federal planning funds are first apportioned to state DOTs. State DOTs then allocate planning funding to MPOs.

FTA apportions the §5304 funds to states based on the state's urbanized area population as compared to the urbanized area population of all states.

Funding Availability

Funds are available for four years.

Federal Share

The federal share is not to exceed 80 percent of the cost of the projects funded under the program, with a required 20 percent match.

Changes under the FAST Act

The performance-based planning process established in MAP-21 continues in the FAST Act. The FAST Act requires MPOs and states to establish performance targets that address national performance measures based on goals outlined in law. These performance targets should be established by MPOs in coordination with states and transit providers. Transportation improvement programs (TIPs) must include a description of the anticipated progress toward achieving the targets brought about by implementing the TIP. MPOs in urbanized areas designated as transportation management areas (populations 200,000 and over) must include transit officials on policy boards. Additionally, MPOs may undertake scenario development exercises in preparing the long-range transportation plans that consider alternative demographic growth, revenue options, and other factors.

Section 5307 Urbanized Area Formula Program

The largest of FTA's grant programs, the Urbanized Area Formula Program, provides grants to urbanized areas to support public transportation. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the Bureau of the Census after each decennial census. FTA apportions urbanized area formula funds to designated recipients, which then sub-allocate funds to state and local governmental authorities, including public transit providers (*12*).

Eligible Recipients

Section 5307 funding is available to designated recipients that must be public bodies with the legal authority to receive and dispense federal funds. Governors, responsible local officials, and publicly owned operators of transit services are responsible for designating a recipient to apply for, receive, and dispense funds for urbanized areas with population over 200,000. For urbanized areas with a population over 200,000, FTA apportions §5307 funds directly to the designated recipient(s) in each urbanized area.

For urbanized areas with a population between 50,000 and 200,000, FTA apportions §5307 to the governor or governor's designee as the designated recipient. In Texas, the governor's designee is TxDOT. TxDOT allocates funds to urban transit districts and names each district as the FTA direct recipient.

Eligible Activities

Eligible activities include planning, engineering, design, and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement, overhaul, and rebuilding of buses, crime prevention and security equipment, and construction of maintenance and passenger facilities; and capital investments in new and existing fixed-guideway systems including rolling stock, overhaul, and rebuilding of vehicles, track, signals, communications, and computer hardware and software. In addition, associated transit improvements and certain expenses associated with JARC and mobility management programs are eligible under the program. All preventive maintenance and some complementary paratransit to meet requirements of the Americans with Disabilities Act of 1990 (ADA) are considered capital costs.

For urbanized areas with populations less than 200,000, operating assistance is an eligible expense. Urbanized areas of 200,000 or more may not use funds for operating assistance unless identified by FTA as eligible under the Special Rule.

Apportionment of Funds

The formula for apportionment of funding is based on the following:

- For areas of 50,000 to 199,999 in population (small urban), the formula is based on population and population density.
- For areas with populations of 200,000 and more (large urban), the formula is based on a combination of bus revenue vehicle miles, bus passenger miles, bus operating cost, fixed-guideway revenue vehicle miles, and fixed-guideway route miles, as well as population and population density.
- FTA apportions 3.07 percent of the §5307 funds to urbanized areas based on the ratio of the number of low-income individuals in each urbanized area to the total number of low-income individuals in all urbanized areas of that state.
- FTA apportions funds for small transit intensive cities (STIC) to small urban transit systems (in urbanized areas under 200,000 population) that operate at a level of service equal to or above the industry average level of service for all urbanized areas with a population of at least 200,000 but not more than 999,999. FTA allocates STIC funds (1.5 percent of total §5307 in FY2016, increasing to 2 percent in FY2019) based on level of service and performance in one or more of six categories: passenger miles traveled per vehicle revenue mile, passenger miles traveled per vehicle revenue hour, vehicle revenue miles per capita, vehicle revenue hours per capita, passenger miles traveled per capita, and passengers per capita.

Special Rule under the FAST Act

MAP-21 introduced the Special Rule for operating assistance in large urbanized areas. A transit system in a large urbanized area (population 200,000 or more) that operated 100 or fewer buses in fixed-route services during peak period was eligible to use §5307 funds for operating within

certain specifications. The FAST Act expanded the eligible modes to include fixed-route and demand-responsive transit. Demand-responsive transit excludes ADA complementary paratransit. Transit systems operating between 76 and 100 buses in fixed-route or demand-responsive service during peak service hours may use up to 50 percent of the attributable share of funding for operating expenses. Systems operating 75 or fewer buses in fixed-route or demand-response service during peak service hours may use up to 75 percent of the attributable share of funding for operating expenses. Attributable share refers to the share of the urbanized area's apportionment that is attributable to a transit system based on the transit system's share of vehicle revenue hours in the urbanized area.[1] Federal operating assistance requires a 50 percent local match.

Funding Availability

Funds are available the year appropriated plus five years.

Federal Share

The federal share is not to exceed 80 percent of eligible capital costs. The federal share may be 90 percent for the cost of vehicle-related equipment attributable to compliance with the ADA and the Clean Air Act (CAA). The federal share may also be 90 percent for projects or portions of projects related to bicycles.

The federal share may not exceed 50 percent of the net project cost of operating assistance.

Changes under the FAST Act

Designated recipients in urbanized areas with populations of 200,000 or more are no longer required to expend 1 percent of the §5307 funds apportioned to the urbanized area for associated transit improvements.

The FAST Act increases the spending cap for ADA paratransit service to 20 percent of a recipient's annual formula apportionment under certain conditions (previously up to 10 percent under MAP-21).

The FAST Act allows up to 0.5 percent of §5307 funds to be used for workforce development.

The FAST Act increases funding in the Small Transit Intensive Cities (STIC) tier starting in FY2019.

[1] Public transportation systems may execute a written agreement with one or more other public transportation systems within the urbanized area to allocate funds by method other than by measuring vehicle revenue hours.

The **STIC tier** is an apportionment of §5307 funds to small urban transit systems (systems in urbanized areas under 200,000 in population) that operate at a level of service equal to or above the industry average level of service for all urbanized areas with a population of at least 200,000 but not more than 999,999. FTA allocates STIC funds (1.5 percent of total §5307 in FY2016, increasing to 2 percent in FY2019) based on level of service and performance in one or more of six categories: passenger miles traveled per vehicle revenue mile, passenger miles traveled per vehicle revenue hour, vehicle revenue miles per capita, vehicle revenue hours per capita, passenger miles traveled per capita, and passengers per capita.

Section 5309 Capital Investment Grants

The §5309 program provides competitive grants for new and expanded rail, streetcars, BRT, and ferry systems that reflect local priorities (*13*).

Eligible Recipients

State and local government agencies, including transit agencies, are the eligible recipients of §5309 funds.

Eligible Activities

Under the FAST Act, this program now includes four types of eligible projects:

- New Starts: projects with a total estimated capital cost of $300 million or greater or that are seeking $100 million or more in §5309 funds.
- Small Starts: projects with a total estimated capital cost of less than $300 million and that are seeking less than $100 million in §5309 funds.
- Core Capacity: projects that expand capacity by at least 10 percent in existing fixed-guideway transit corridors that are already at or above capacity today, or are expected to be at or above capacity within five years.
- Programs of Interrelated Projects: any combination of two or more New Starts, Small Starts, or Core Capacity projects. The projects in the program must have logical connectivity to one another.

Each type of project has a unique set of requirements under the FAST Act. Funds are allocated on a discretionary basis. All projects must successfully complete steps in the process defined in the §5309 Final Interim Policy Guidance and obtain a satisfactory rating under the statutorily defined criteria to become candidates (*14*).

The FAST Act specifies that proposed New Starts projects must be new fixed-guideway projects or extensions to existing fixed-guideway systems. The FAST Act defines fixed guideway as projects “using and occupying a separate right-of-way for the exclusive use of public transportation; using rail; using a fixed catenary system; for a passenger ferry system; or for a bus rapid transit system” (*14*).

This definition eliminates bus service operating on HOV lanes or high occupancy toll (HOT) lanes from qualifying as fixed-guideway service. Under the definition in law, eligible New Starts projects can include heavy rail, light rail, commuter rail, streetcars, trolleybus, fixed-guideway BRT, and ferries.

The FAST Act does not allow corridor-based BRT projects without a separated right-of-way dedicated for public transportation along the majority of the route to be eligible as New Starts projects. To qualify as a fixed-guideway BRT project, FAST specifies that the BRT service must include the following elements (*14*):

- The majority of the project operates in a separated right-of-way dedicated for public transportation use during peak periods;
- The project represents a substantial investment in a single route in a defined corridor or subarea; and
- The project includes features that emulate the services provided by rail fixed guideway public transportation systems including: defined stations; traffic signal priority for public transportation vehicles; and short headway bidirectional services for a substantial part of weekdays.

Funding Availability

The FAST Act changes the period of funding availability for §5309 from five years to four years.

Federal Share

The FAST Act specifies that New Starts projects are limited to a maximum federal §5309 CIG program share of 60 percent. Small Starts projects are limited to a maximum federal §5309 CIG program share of 80 percent. The maximum contribution from all federal sources to a New Starts or Small Starts project is 80 percent.

Changes under the FAST Act

The FAST Act made noticeable changes to the §5309 program.

- Under the FAST Act, New Starts projects are defined as projects with a total capital cost of $300 million or greater or that are seeking $100 million or more in §5309 funding, and Small Starts projects are defined as projects with a total capital cost less than $300 million and that are seeking less than $100 million in §5309 funding. Previously, these thresholds were $250 million and $75 million, respectively.
- Joint public transportation and intercity passenger rail projects qualify as New Starts or Core Capacity projects.
- The FAST Act removed the requirement on providing substantial, bidirectional service on weekends for corridor-based BRT projects.
- Small Starts projects now qualify for the Program of Interrelated Projects. The FAST Act amends §5309 to define a Program of Interrelated Projects as the simultaneous development of two or more New Starts projects, Small Starts projects, or Core Capacity

projects, or any combination thereof. The projects in the program must have logical connectivity to one another, and construction must begin on the projects in the program in a reasonable time frame. FTA is required to evaluate and rate a Program of Interrelated Projects as a whole rather than rating the individual projects in the program.

Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities

The §5310 program provides formula funding to increase the mobility of seniors and individuals with disabilities. Section 5310 funds can be used for both capital and operating assistance (*15*).

Eligible Recipients

Eligible recipients include designated recipients in large urbanized areas (population 200,000 or more), states, and a state or local governmental entity that operates a public transportation service and is a direct recipient under §5307 or §5311.

In Texas, TxDOT is the §5310 recipient for all areas under 200,000 in population. Subrecipients may be local government authorities, private nonprofits, or private operators of public transportation receiving the grant indirectly.

Eligible Activities

At least 55 percent of §5310 funds must be used on capital or "traditional" projects such as buses and vans; wheelchair lifts, ramps, and securement devices; transit-related information technology systems including scheduling/routing/one-call systems; and mobility management programs. The remaining is for additional "traditional" or other "nontraditional" projects, such as a project eligible under the former 5317 New Freedom Program.

Projects selected for funding under the §5310 program must be included in a locally developed, coordinated public transit–human services transportation plan.

Allocation of Funds

Section 5310 funds are apportioned on the following basis for the targeted population:

- Sixty percent are apportioned among designated recipients for urbanized areas with 200,000 or more population.
- Twenty percent are apportioned among the states for their urbanized areas with a population between 50,000 and 200,000.
- Twenty percent are apportioned among the states for their rural areas with populations less than 50,000.

Funding Availability

Section 5310 funds are available to the states during the fiscal year of apportionment plus two additional years.

Federal Share

The federal share of eligible capital costs may not exceed 80 percent, and 50 percent for operating assistance. The 10 percent that is eligible to fund program administrative costs including administration, planning, and technical assistance may be funded at 100 percent federal share.

Changes under the FAST Act

The FAST Act made the following changes to the §5310 program.

- Under the FAST Act, a state or local governmental entity that operates a public transportation service and is eligible to receive direct grants under §5307 or §5311 is eligible to be a direct recipient for §5310 funds.
- Section 3006(b) of the FAST Act creates a new discretionary pilot program for innovative coordinated access and mobility. The pilot program is open to all §5310 recipients and subrecipients to improve the coordination of transportation services and non-emergency medical transportation services.
- Section 3006(c) of the FAST Act includes coordinated mobility, which requires FTA to implement the Interagency Transportation Coordinating Council on Access and Mobility's (CCAM's) recommendations including creating an updated strategic plan on transportation coordination across federal agencies and developing a cost-sharing policy.

The **Coordinating Council on Access and Mobility** (CCAM) was created by executive order in 2004. CCAM "is a partnership of federal agencies working to improve the availability, quality, and efficient delivery of transportation services to people with disabilities, older adults, and people with low incomes" (*16*).
https://www.transit.dot.gov/ccam

Section 5311 Non-urbanized Area (Rural) Formula Program

Section 5311 provides capital, planning, and operating assistance to support public transportation in rural areas (defined as areas with fewer than 50,000 residents). Section 5311 also provides funding for state and national training and technical assistance through the Rural Transportation Assistance Program (*17*).

Eligible Recipients

Eligible recipients include states and federally recognized Indian tribes. Subrecipients may include state or local government authorities, nonprofit organizations, and operators of public transportation or intercity bus service that receive funds indirectly through a designated recipient.

Funds are apportioned to the state's designated recipient to allocate to providers of public transportation in non-urbanized (rural) areas. In Texas, TxDOT is the designated recipient. TxDOT allocates funds to rural transit districts and operators of public transportation or intercity bus service.

Eligible Activities

Activities eligible for funding are planning, capital, operating, and JARC projects, as well as the acquisition of public transportation services. JARC projects provide transportation to jobs and employment opportunities for welfare recipients and low-income workers.

Apportionment of Funds

Each state must spend no less than 15 percent of its annual apportionment for the development and support of intercity bus transportation, unless it can certify, after consultation with affected intercity bus service providers, that the intercity bus service needs of the state are being met adequately (§5311[f]).

FTA apportions the remaining §5311 funds by a statutory formula in two tiers:

- Tier 1: 83.15 percent of rural formula funds are apportioned based on land area and population.
- Tier 2: 16.85 percent of remaining rural formula funds are apportioned based on land area, vehicle revenue miles, and low-income individuals.

Funding Availability

Section 5311 funds are available to the states during the fiscal year of apportionment plus two additional years.

Federal Share

The federal share is 80 percent for capital projects, 50 percent for operating assistance, and 80 percent for ADA paratransit service (up to 20 percent of a recipient's apportionment).

Changes under the FAST Act

The FAST Act made the following changes to the §5311 program.

- Revenue from the sale of advertising and concessions may be used as local match.
- All operating and capital costs, with no revenue offset, of an unsubsidized portion of privately provided intercity bus service that connects feeder service can be used as in-kind local match for the intercity bus projects.
- Under MAP-21, recipients in compliance with the requirements of the ADA may use 10 percent of their annual formula apportionment for ADA paratransit service, funded at 80 percent federal share. The FAST Act increases the spending cap for ADA paratransit service to 20 percent of a recipient's annual formula apportionment.

Section 5337 State of Good Repair Program

Section 5337 State of Good Repair (SGR) Program provides capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed-guideway and high-intensity motorbus systems (including BRT) to maintain a state of good repair (*18*).

Eligible Recipients

State and local government authorities in urbanized areas with fixed-guideway public transportation facilities operating for at least seven years are eligible to receive §5337 funds. SGR projects need to be included in recipients' transit asset management plans.

Eligible Activities

State of Good Repair Grants are available for capital projects that maintain a fixed guideway or a high-intensity motorbus system in a state of good repair, including projects to replace and rehabilitate:

- Rolling stock.
- Track.
- Line equipment and structures.
- Signals and communications.
- Power equipment and substations.
- Passenger stations and terminals.
- Security equipment and systems.
- Maintenance facilities and equipment.
- Operational support equipment, including computer hardware and software.
- Implementation of transit asset management plans.

Apportionment of Funds

Of the funds appropriated to the SGR grant program by Congress, 97.15 percent is apportioned among urbanized areas with fixed-guideway systems, and 2.85 percent is apportioned among urbanized areas with high-intensity motorbus systems.[1] Fifty percent of the high-intensity fixed-guideway funds are allocated based on the revenue miles and route miles reported by the transit system to the National Transit Database (NTD). The other 50 percent of the apportionment is determined by using the current fixed-guideway definition in the calculation of what the urbanized areas would have received in FY2011. The high-intensity motorbus funds are allocated based on the revenue miles and route miles reported to the NTD.

[1] Transit systems that use highway lanes that are exclusive to transit vehicles at some, but not all, times and lanes that are restricted to transit vehicles and HOVs or HOTs.

Funding Availability

Section 5337 SGR program funds are available to FTA for obligation during the fiscal year of appropriation plus three additional years. Any SGT funds that remain unobligated at the end of the period of availability are added to the next year's program apportionment and are reapportioned under the SGR program's statutory formula.

Federal Share

The federal share is 80 percent for SGR projects.

Changes under the FAST Act

Under the FAST Act, high-intensity motorbus funds are to be used only for vehicle state-of-good-repair costs, and may not be used for roadway state-of-good-repair costs.

> **High-intensity motorbus** systems are those transit systems that use highway lanes that are exclusive to transit vehicles at some, but not all, times, and lanes that are restricted to transit vehicles and HOV or HOT lanes.

Section 5339 Buses and Bus Facilities Program

The §5339 program provides funding to replace, rehabilitate, and purchase buses and bus-related equipment, and to construct bus-related facilities. This program renames the former Section 5319 Bus and Bus Facilities Program to Section 5339(a) Buses and Bus Facilities Formula Program, and includes two discretionary programs—the Section 5339(b) Buses and Bus Facilities Competitive Grant Program and the Section 5339(c) Low or No Emission Bus Competitive Grant Program (*19*).

Eligible Recipients

Eligible recipients include direct recipients that operate fixed-route bus service or that allocate funding to fixed-route bus operators; state or local governmental entities; and federally recognized Indian tribes that operate fixed-route bus services that are eligible to receive direct grants under §5307 and §5311.

Eligible recipients that receive grant funding under the formula or discretionary programs may allocate amounts from the grant to subrecipients that are public agencies or private nonprofit organizations engaged in public transportation.

Eligible Activities

Eligible activities include projects that maintain, rehabilitate, and replace capital assets, as well as projects that implement transit asset management plans.

Allocation of Funding

FTA apportions the 5339(a) formula funds to states, territories, and designated recipients based on a statutory formula, with each state receiving $1.25 million and each territory (including the District of Columbia and Puerto Rico) receiving $500,000. The remaining funds are distributed by formula based on population, vehicle revenue miles, and passenger miles.

Federal Share

The federal share of eligible capital costs is 80 percent of the net capital project cost, unless the grant recipient requests a lower percentage. The federal share may exceed 80 percent for certain projects related to the ADA, the Clean Air Act, and certain bicycle projects.

Changes under the FAST Act

The FAST Act made major changes to the Buses and Bus Facilities Program:

- Under MAP-21, transit agencies and states did not have the ability to pursue discretionary funding for specific projects. The FAST Act amends §5339 to include two discretionary program for buses and bus facilities, and low- or no-emissions vehicle and related facilities.
- Under MAP-21, FTA apportioned §5339 formula funds directly to large urbanized areas with populations of 200,000 or more and to states for all areas with populations less than 200,000. Under the FAST Act, a local governmental entity that operates fixed-route bus service and is eligible to receive direct grants under §5307 is also eligible to be a direct recipient for §5339 formula funds.
- FTA establishes a pilot program to allow designated recipients in urbanized areas between 200,000 and 1 million in population to elect to pool their §5339(a) formula allocations with other designated recipients within their respective states.
- Under the FAST Act, designated recipients are no longer required to obligate grants on behalf of entities that are eligible direct recipients of §5307 funds.

Section 5340 Growing States and High-Density States Formula Program

SAFETEA-LU established the Growing States and High-Density States Formula Program to apportion additional funds by formula to §5307 and §5311 grant recipients. The program continued in MAP-21 and now the FAST Act.

Under the §5340 formula, funds are made available under the Growing States factors and under the High-Density States factors. The funds are apportioned as follows:

- The Growing States funds are apportioned based on state population forecasts for 15 years beyond the most recent decennial census (2025). Each state receives a share of Growing States funds based on the ratio of projected 2025 population to the nationwide projected 2025 population. Amounts apportioned for each state are then allocated to urbanized and rural areas based on the state's urban/rural population ratio.
- The High-Density States factors distribute funds to states with population densities equal to or greater than 370 people per square mile.

Texas is eligible for the Growing States factors. As required by statute, FTA apportions §5340 funds with the Section 5307 Urbanized Area and Section 5311 Non-urbanized Area Programs.

USDOT Flexible Sources of Funding for Transit

In addition to FTA grant programs, USDOT sponsors a discretionary grant program, and FHWA administers programs that provide the flexibility to transfer funds to FTA for transit projects. This section highlights four of these programs, each discussed in detail in the following sections:

- **Transportation Investment Generating Economic Recovery (TIGER) Program**: provides a unique opportunity for USDOT to invest in road, rail, transit, and port projects that promise to achieve national objectives (*20*).
- **National Highway Performance Program (23 USC 119):** used for transit capital projects that will reduce delays or produce travel time savings on certain highways (*21*).
- **Surface Transportation Program (23 USC 133):** provides flexibility in the use of funds (as capital funding) for public transportation capital improvements (*22*).
- **Congestion Mitigation and Air Quality Improvement (CMAQ) Program (23 USC 149):** provides federal funding for projects that improve air quality and reduce congestion in areas that are in nonattainment of air quality standards (*23*).

TIGER Grants

The TIGER discretionary grant program provides a unique opportunity for USDOT to invest in road, rail, transit, and port projects that promise to achieve national objectives. Since 2009, Congress has dedicated nearly $5.6 billion for nine rounds of TIGER to fund projects that have a significant impact on the nation, a region, or a metropolitan area (20).

In each round of TIGER, USDOT receives hundreds of applications. Applicants must detail the benefits their project would deliver for five long-term outcomes: safety, economic competitiveness, state of good repair, quality of life, and environmental sustainability. USDOT also evaluates projects on innovation, partnerships, project readiness, benefit-cost analysis, and cost share.

The eligibility requirements of TIGER allow project sponsors at the state and local levels to obtain funding for multimodal, multijurisdictional projects that are more difficult to support through traditional USDOT programs. TIGER can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional federal programs, which provide funding to very specific groups of applicants (mostly state DOTs and transit agencies).

In 2015, the TxDOT Public Transportation Division won a TIGER award for $20.8 million to fund the Texas Rural Transit Asset Replacement Project (R-TARP). R-TARP replaces transit vehicles and assists in funding maintenance and passenger facilities for rural transit districts throughout Texas. In 2016, the City of Brownsville won a TIGER award for $10 million to rehabilitate a regional bus maintenance facility that will also serve as a new passenger transfer station, purchase eight hybrid transit replacement buses, and renovate bus stops to include sidewalks, curb ramps, and benches. The grant will also fund an innovative 2.4-mile-long causeway that will be one of the longest dedicated pedestrian/bike bridge facilities of its kind in the United States and the first of its kind in Texas (*24*).

National Highway Performance Program

The FAST Act continues to allow funding from the National Highway Performance Program to be used for transit capital projects if the following criteria are met: (*21*)

(a) A transit project is in the same corridor as, and in proximity to, a fully access-controlled highway designated as a part of the National Highway System.
(b) The transit construction or improvements will reduce delays or produce travel time savings on the fully access-controlled highway described in (a) and improve regional traffic flow.
(c) The construction or improvements are more cost-effective, as determined by benefit-cost analysis, than an improvement to the fully access-controlled highway described in (a).

Surface Transportation Program

The Surface Transportation Program (STP) provides the greatest flexibility in the use of federal funds (*22*). These funds may be used as:

- Capital funding for public transportation capital improvements, carpool and vanpool projects, fringe and corridor parking facilities, bicycle and pedestrian facilities, public

sidewalk improvement to comply with the American with Disabilities Act, and intercity or intracity bus terminals and bus facilities.
- Funding for planning for surface transportation planning activities, wetland mitigation, transit research and development and technology transfer, and environmental analysis.
- Funding for other eligible projects, including transit safety improvements and most transportation control measures. Transportation control measures are strategies intended to reduce vehicle use or improve traffic flow and include, but are not limited to, improved public transit, traffic flow improvements and high-occupancy vehicle lanes, shared ride services, pedestrian/bicycle facilities, and flexible work schedules.

STP funds are distributed among various population and programmatic categories within a state. In Texas, STP Metropolitan Mobility funds are made available to transportation management areas (metropolitan planning areas containing urbanized areas over 200,000 in population). TxDOT programs the STP funds that are set aside for areas with a population under 200,000 (small urban areas and rural areas).

Congestion Mitigation and Air Quality Improvement Program

Areas that do not meet National Ambient Air Quality Standards for selected air pollutants (carbon monoxide, ozone, and particulate matter) are called nonattainment areas. The U.S. Environmental Protection Agency designates these areas as having air pollution levels that are at times unhealthy for human beings according to standards set by the Clean Air Act. When air quality in a nonattainment area improves and meets these federal air quality health standards, the area is no longer designated as nonattainment and becomes a maintenance area. Maintenance areas must continue to take actions to ensure that measured air quality does not become worse and the area continues to meet federal clean air standards.

Eligible Recipients and Activities

The CMAQ Program provides federal funding to state departments of transportation for projects that improve air quality and reduce congestion. (*23, 25*) The CMAQ Program improves air quality by funding transportation projects and programs that reduce air emissions from cars, trucks, and buses (mobile sources) in air quality nonattainment and maintenance areas, which are the only areas eligible for CMAQ funding. Congress authorizes and appropriates funding for the CMAQ Program, and FHWA then distributes CMAQ funds to state departments of transportation based on populations living in air quality nonattainment and maintenance areas. The distribution formula takes into account the severity of regional air quality problems. State departments of transportation are responsible for distributing CMAQ funds.

In Texas, various transit authorities and transit districts in non-attainment areas receive CMAQ funds for transit projects. For example, El Paso County initiated a vanpool program supported by CMAQ funds. Other transit agencies use CMAQ dollars to fund the purchase of clean-fuel vehicles and to demonstrate the air quality benefits of commuter bus routes.

Changes under the FAST Act

The FAST Act reauthorized the CMAQ Program. The FAST Act continues eligibility for electric vehicle and natural gas vehicle infrastructure and adds priority for infrastructure located on the designated corridors. The reauthorization adds eligibility for verified technologies for non-road vehicles and non-road engines that are used in port-related freight operations located in ozone, PM10, or PM2.5 nonattainment or maintenance areas funded in whole or in part under 23 USC or Chapter 53 of 49 USC. The act also specifically makes eligible the installation of vehicle-to-infrastructure communications equipment. The FAST Act adds the new exemption from PM 2.5 set aside for states with low population density.

Non-USDOT Federal Funds

Federal agencies besides USDOT also sometimes fund transit. In most cases, the funding is only available for transit to the extent that transportation is supportive of the primary purpose of the federal agency. Some examples include:

- Food Stamp Employment and Training Program, Food and Nutrition Service, U.S. Department of Agriculture.
- Vocational Rehabilitation Grants, Rehabilitation Services Administration, U.S. Department of Education.
- Medical Transportation Program (Medicaid) for Non-Emergency Medical Transportation, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services.
- Grants for Supportive Services and Senior Centers (Title III B), Administration on Aging, U.S. Department of Health and Human Services.
- Community Development Block Grants, Office of Community Planning and Development, U.S. Department of Housing and Urban Development.
- Workforce Investment Act Programs, Employment and Training Administration, U.S. Department of Labor.
- Veterans Medical Care Benefits, Veterans Heath Administration, U.S. Department of Veterans Affairs.

Most of these funds flow from the federal department to a Texas state agency for allocation to programs to fund public transportation services.

Under the FAST Act, federal funds from non-USDOT agencies are eligible as local match for §5307, §5311, and §5310 funds.

FTA Funding in Texas

In general, FTA funding has consistently increased for Texas transit systems under both the §5307 and §5311 programs (as well as other programs). Figure 2-5 displays the FTA funding apportioned to Texas from fiscal years 2000 to 2017. Although there have been several changes to the §5311 program over these 17 years and some funding programs were consolidated under §5311 that were previously available through other stand-alone programs, the increase in §5311 funding is significant—amounting to a 260 percent increase.

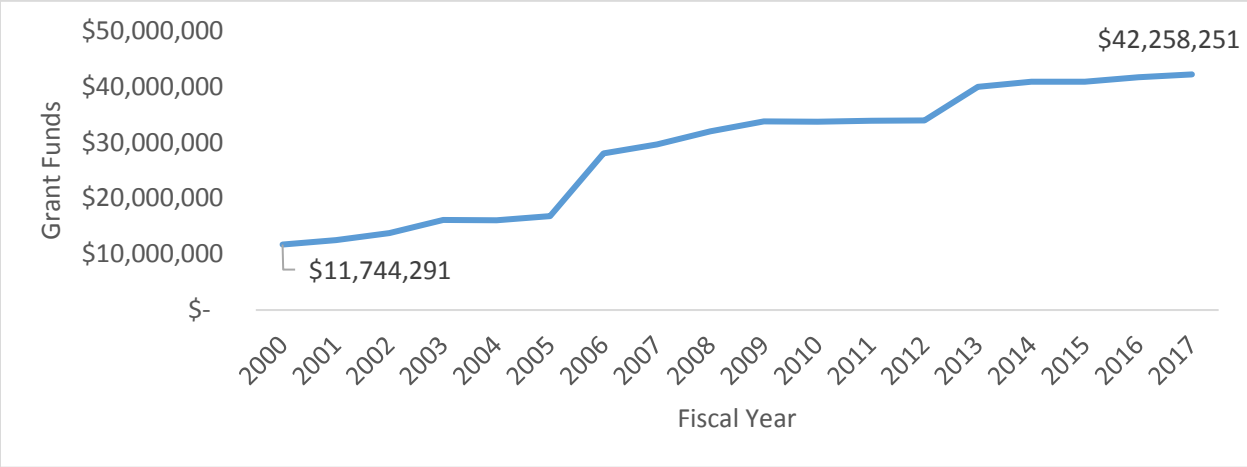

Figure 2-5. Federal §5311 Rural Formula Funds for Texas Transit
Source: FTA Allocations for Formula and Discretionary Programs by State 1998–2017 (26).

Funding for Texas urbanized areas under §5307 has also increased significantly since 2000 from $146.8M in 2000 to $297.8M in 2017, a 103 percent increase (see Figure 2-6).

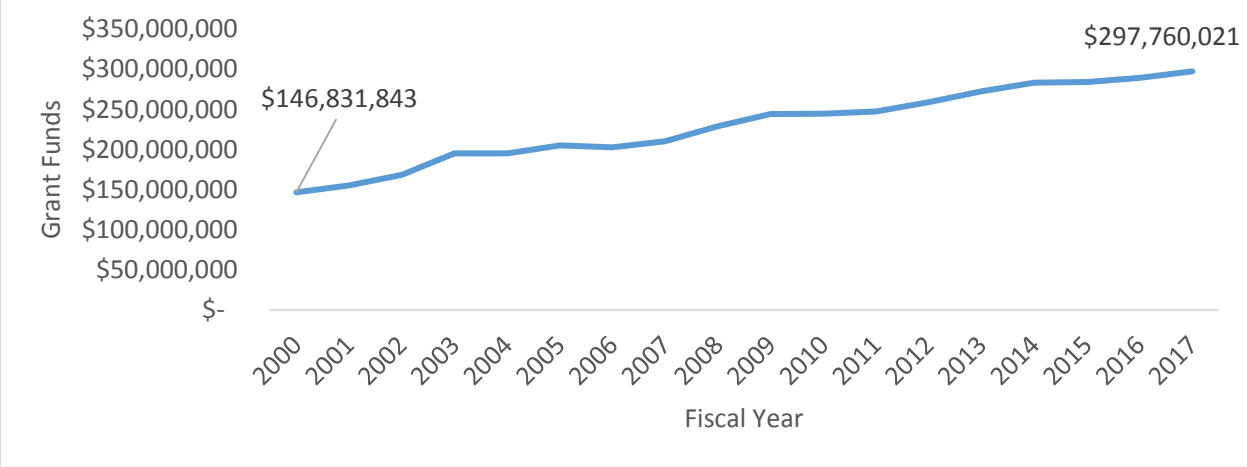

Figure 2-6. Federal §5307 Urban Formula Funds for Texas Transit
Source: FTA Allocations for Formula and Discretionary Programs by State 1998–2017 (26).

The remaining FTA programs are more volatile—partly due to their specialized nature and due to the unreliability of discretionary awards. As shown in Figure 2-7, other FTA grant programs have made and continue to make up a significant portion of FTA funding for transit in Texas.

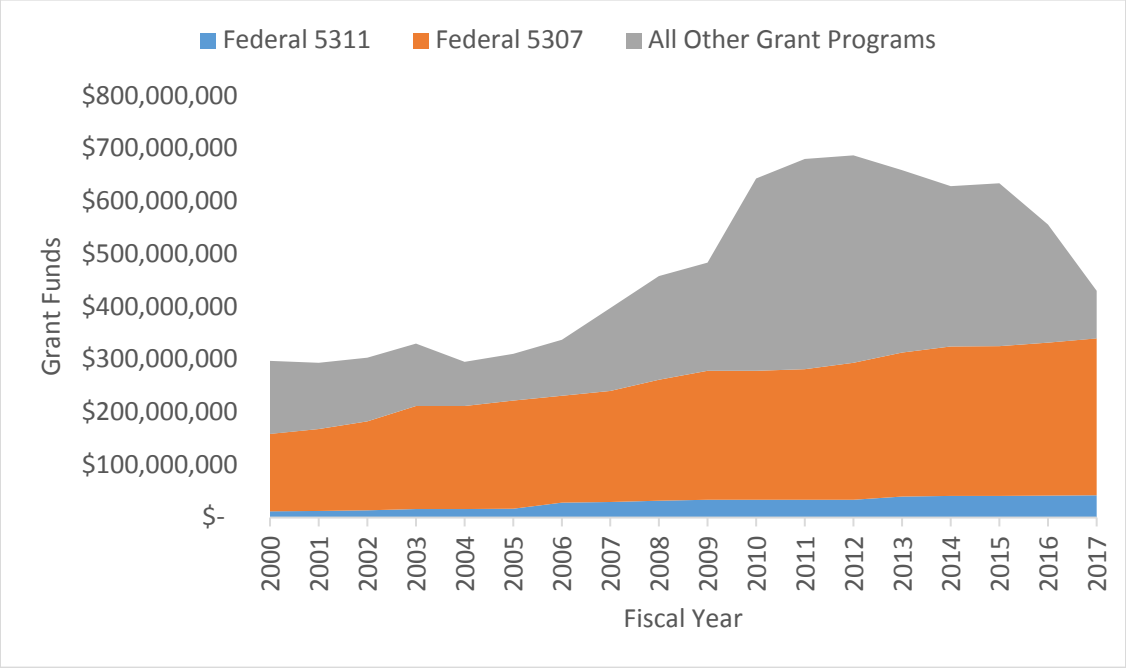

Figure 2-7. FTA Grant Funds Apportioned to Texas (§5311, §5307, Other FTA Programs)

Source: FTA Allocations for Formula and Discretionary Programs by State 1998–2017 (26).

Helpful Resources

- The State Management Plan covers how TxDOT administers the flow of §5310, §5311, and §5339 funds to Texas transit districts (available from http://ftp.dot.state.tx.us/pub/txdot-info/ptn/programs/grant-smp.pdf).
- FTA provides fact sheets for many of its grant programs. These fact sheets are easy-to-understand, straightforward information about each grant program. The fact sheets are available on each grant program's page, accessed through FTA's main grant programs webpage at https://www.transit.dot.gov/grants.
- FTA Circulars are listed below in Table 3-2 and are available for download from FTA's Final Circulars webpage: https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/final-circulars
- FTA's FAST Act Website: https://www.transit.dot.gov/FAST
- Listing of FTA Grant Programs: https://www.transit.dot.gov/grants
- FTA Presentation on FAST Act Changes: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/2015_FAST_Act_Presentation.pdf
- CCAM Website: https://www.transit.dot.gov/ccam
- APTA FAST Act Guide: http://www.apta.com/gap/legissues/authorization/Pages/default.aspx

Table 3-2. List of FTA Circulars Providing Guidance for Grant Programs

Grant Program	Circular Number	Circular Title
§5303–5305	8100.1C	Program Guidance for Metropolitan Planning and State Planning and Research Program Grants
§5307	9030.1E	Urbanized Area Formula Program: Program Guidance and Application Instructions
§5309	9300.1B	Capital Investment Program Guidance and Application Instructions
§5310	9070.1G	Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions
§5311	9040.1G	Formula Grants for Rural Areas: Program Guidance and Application Instructions
§5337	5300.1	State of Good Repair Grant Program: Guidance and Application Instructions
§5339	5100.1	Bus and Bus Facilities Program: Guidance and Application Instructions
All Grants	5010.1E	Award Management Requirements

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3. Congressional Research Service. 2016. *Public Transportation Capital Investment Grant (New Starts) Program: Background and Issues for Congress*.
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13. Fact Sheet for Fixed Guideway Capital Investment Grants, Chapter 53, Section 5309, 49 USC Section 5309. Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5309_Capital_Investment_Grant_Fact_Sheet.pdf. Accessed various dates December 11, 2015, through February 26, 2017.

14. *Final Interim Policy Guidance, Federal Transit Administration, Capital Investment Grant Program.* June 2016. Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FAST_Updated_Interim_Policy_Guidance_June%20_2016.pdf. Accessed February 20, 2017.

15. Fact Sheet for Enhanced Mobility of Seniors and Individuals with Disabilities, Chapter 53, Section 5310, 49 USC Section 5310. Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5310%20Enhanced%20Mobility%20of%20Seniors%20%26%20Disabled%20Fact%20Sheet.pdf. Accessed various dates December 11, 2015, through February 26, 2017.

16. FTA. n.d. *Coordinating Council on Access and Mobility*. https://www.transit.dot.gov/ccam, accessed March 13, 2018.

17. Fact Sheet for Formula Grants for Rural Areas, Chapter 53 Section 5311, 49 USC Section 5311. Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5311%20Rural%20Program%20Fact%20Sheet%20FAST.pdf. Accessed various dates December 11, 2015, through February 26, 2017.

18. Fact Sheet for State of Good Repair Grants, 49 USC Chapter 53, Section 5337. Federal Transit Administration. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5337_State_of_Good_Repair_Fact_Sheet.pdf. Accessed March 16, 2017.

19. Buses and Bus Facilities Grant Program–5339, 49 USC Section 5339. Federal Transit Administration. https://www.transit.dot.gov/funding/grants/buses-and-bus-facilities-grants-program-5339. Accessed various dates December 11, 2015, through February 26, 2017.

20. USDOT. March 2018. *About TIGER Grants.* https://www.transportation.gov/tiger/about. Accessed March 13, 2018.

21. Title 23, United States Code, Section 119 National Highway Performance Program.

22. Title 23, United States Code, Section 133 Surface Transportation Program.

23. Title 23, United States Code, Section 149 Congestion Mitigation and Air Quality Improvement Program (CMAQ).

24. USDOT. *TIGER 2016 Awards.* https://www.transportation.gov/sites/dot.gov/files/docs/TIGER%20Fact%20Sheets%20-%207-28.pdf. Accessed March 13, 2018.

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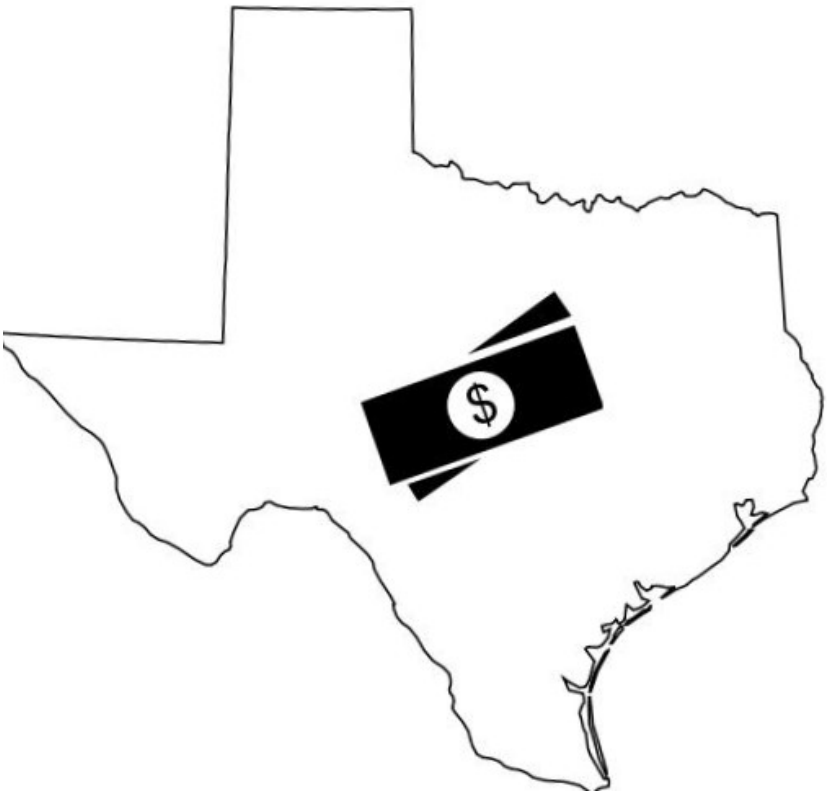
26. FTA. 2017. *FTA Allocations for Formula and Discretionary Programs by State FY1998–2017 (Excel)*. https://www.transit.dot.gov/funding/grants/fta-allocations-formula-and-discretionary-programs-state-fy-1998-2017-excel, accessed March 13, 2018.

Module 3
State Funding for Transit



By the end of this module, you should be able to:

1. **Know and understand sources of state funds for transportation and transit.**
2. **Describe the steps in the state funding process.**
3. **Discuss the Texas transit funding formula for urban and rural transit**

TABLE OF CONTENTS

NOTE: The contents of this module reflect the administrative procedures for the allocation of state public transportation funds as described in the Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation, Chapter 31 Public Transportation effective FY2018.

Introduction

State funding for transit is particularly important to Texas urban and rural transit districts without a dedicated source of local revenue from a local sales tax. In FY2017, state funding accounted for 7 percent and 18 percent of applied revenues at Texas urban and rural transit districts, respectively. In Texas, there are 67 urban and rural transit districts authorized to receive state funds to support public transportation, as provided in the Texas Transportation Code, Chapter 458. State funding is an important source of revenue for operating and capital expenses that can also serve as local match for obtaining federal funds.

It is important for transit managers to understand how state funding for transit works in Texas so transit systems can best utilize available funds, adhere to state requirements and regulations, and anticipate the impacts on state allocations when there are changes in the state and local operating and policy environment. *Note this module is not a replacement for official TxDOT guidance or policy.*

This module will cover:

1. Sources of state funds for transit.
2. The process used to obtain and allocate state revenues to transit systems in Texas.
3. The Texas transit funding formula.
4. Measures of need and performance related to transit funding.

Sources of State Funds for Transit

TxDOT's legislative appropriations request (not the same as the budget) for the FY2018–FY2019 biennium contains $30.1B for transportation projects and expenses. Figure 3-1 displays the distribution of revenue sources.

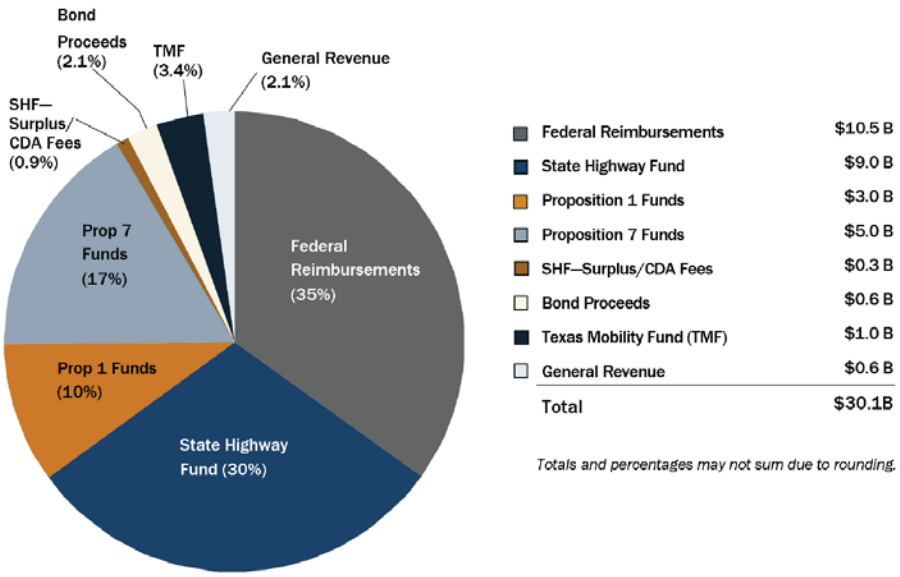


Figure 3-1. Sources of Funding for TxDOT FY2018–FY2019 Biennium

Source: Transportation Funding in Texas (1).

Figure 3-2 displays TxDOT's uses of funding in the same FY2018–2019 biennium. The public transportation fund is included in the category *Other Modes and Services*, which makes up 2 percent of the planned biennium expenditures.

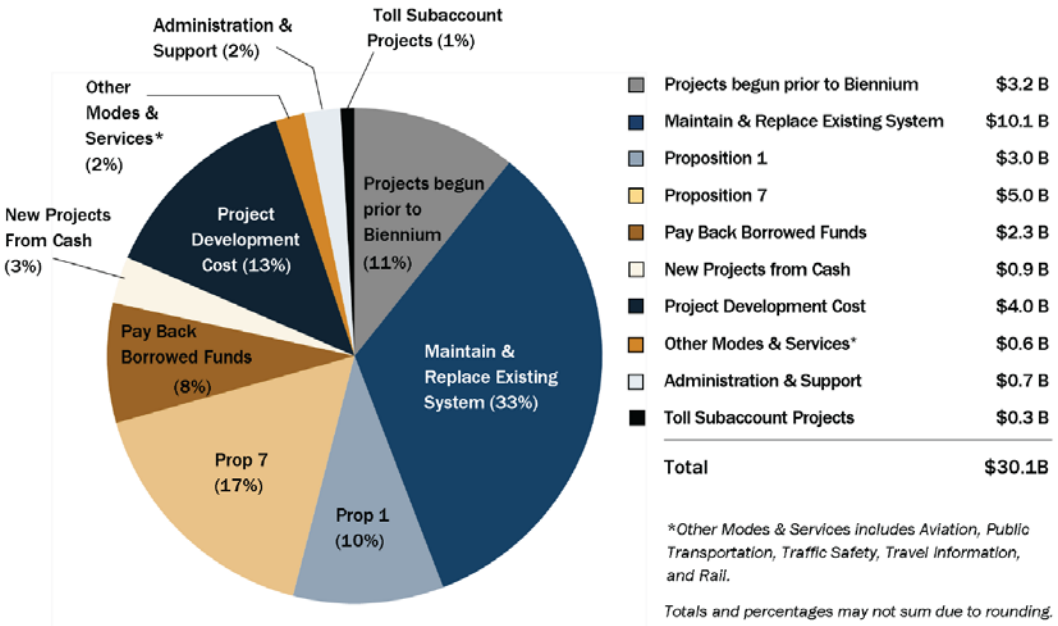


Figure 3-2. Uses of Funding for TxDOT FY2018–FY2019 Biennium

Source: Transportation Funding in Texas (1).

Although there are many different sources of revenue, Texas holds funds for transportation projects in two main accounts: the State Highway Fund (SHF) and the Texas Mobility Fund (TMF) (*2*), each discussed in detail in the following sections.

State Highway Fund

The SHF has been the longest-standing state fund in Texas for supporting transportation projects. The SHF is also called *Fund 6*. Much of the funds available in the SHF are from federal reimbursements; however, the main local sources include:

- Motor vehicle registration fees.
- Sales tax on motor lubricants.
- Motor fuel tax ($0.20 per gallon of gasoline and diesel) (*2*).

There are many other sources of state revenue for the SHF, but most sources (including the three main sources listed above) are constitutionally guaranteed to fund highway projects or to pay down the debt from highway construction financing (see the Texas Constitution, Article VIII, Section 7-a) and cannot be used for public transportation. The different revenue streams for the SHF have unique statutory restrictions on their use, described in Table 3-1.

Table 3-1. Sources of Revenue for the State Highway Fund

Revenue Source	Description	Eligible Uses
Motor Fuel Tax[a]	• The most significant source of state transportation revenue except for federal funds. • Currently set at $0.20 per gallon of gasoline and diesel. • 25% deposited to Available School Fund; 75% deposited to SHF.	• Acquiring rights-of-way. • Constructing, maintaining, and policing public roadways. • The payment of principal and interest on certain road district bonds or warrants.
Bonds and Borrowing	• Texas Transportation Commission (TTC) is authorized to issue bonds and enter into credit agreements secured by the SHF. • Provide approximately 9% of TxDOT's revenue.	• Uses of funds are bond-specific.
Motor Vehicle Registration Fees[a]	• The fee for most vehicles is $50.75, paid annually. • Other fees are in place for specialty and oversized vehicles.	• Acquiring rights-of-way. • Constructing, maintaining, and policing public roadways. • Administration of traffic and safety laws on public roadways.
Sales Tax on Lubricants[a]	• The Comptroller of Public Accounts estimates the sales tax revenues generated from the sale, storage, or use of lubricating and motor oils used for motor vehicles on public roadways.	• Acquiring rights-of-way. • Constructing, maintaining, and policing public roadways. • Administration of traffic and safety on public roadways.
Toll Revenues	• Only SHF funds from sources other than Proposition 1 and Proposition 7 can be used to develop and operate toll roads.	• Usually to pay for the cost of constructing the toll road.
Proposition 1: General Fund Transfers	• Requires 50% of funds previously set aside for the Economic Stabilization Fund[b] to be transferred to the SHF.	For non-tolled roads ONLY: • Acquiring rights-of-way. • Construction. • Maintenance.
Proposition 7: State Sales Tax & Motor Vehicle Sales Tax	• First $2.5 billion of state sales tax collected in excess of $28.0 billion is transferred to the SHF. • 35% of motor vehicle sales and rental taxes in excess of $5.0 billion is transferred to the SHF.	For non-tolled roads ONLY: • Acquiring rights-of-way. • Construction. • Maintenance. • Repay principal/interest on debts.

[a] *Eligible uses are determined by the Texas Constitution, Article VIII, Section 7-a.*
[b] *The Economic Stabilization Fund (ESF) is essentially the Texas rainy day fund, meant to ensure the State of Texas is fiscally sound. The ESF is funded when oil and natural gas tax collections exceed 1987 collection levels. The 50 percent requirement may be waived if a special committee determines that more money is needed in the ESF.*
Source: Texas Department of Transportation (2).

There are other sources of revenue for the SHF not listed in the table above due to their complexity or limited and specialized uses. Some examples include comprehensive development agreements, certificate of title fees, highway beautification fees, etc. (*2*). The revenue sources listed in Table 3-1 are dedicated to highways by the Texas Constitution, and none of these revenue sources can be used for public transportation. The sources of revenue for state public transportation funding are usually from *other revenues* that are not constitutionally obligated for other purposes.

In addition to the revenue generated for transportation from Texas taxes, fees, and other state-level sources, Texas receives funds from both FHWA and FTA for transportation projects (as previously discussed). Federal funds are added into the SHF. Most of these federal funds require local match up to 20 percent of the project cost (up to 50 percent for FTA funds used for public transportation operations), and the eligible uses of these funds are administered by the federal funding agency.

Texas Mobility Fund

The TMF was established in 2001 and is a way to finance the construction, reconstruction, acquisition, and expansion of state highways. Revenue in the TMF may also be used to provide participation by TxDOT in the payment of all, or a portion of, costs of constructing and providing publically owned toll roads and other public transportation (*3*). The TMF is largely funded by the issuance of bonds; however, there are other revenue sources that have particular purposes, including the Driver Responsibility Program, state traffic fines, certain fees collected by the Texas Department of Public Safety, and certificate of title fees (*2*).

State Funds to Support Texas Transit Districts

As was discussed in Module 1, transit agencies that provide or coordinate public transportation services in Texas are generally categorized into three groups:

- **Transit authorities or municipal transit departments** in large urbanized areas (UZAs) with a voter-approved local sales tax (ranging from 0.25 percent to 1 percent) dedicated to transit.
- **Urban transit districts**, which are further categorized as:
  - Large urban transit districts: Transit districts in UZAs with 200,000 or more population without a locally dedicated sales tax.[1]
  - Small urban transit districts: Transit districts in UZAs with less than 200,000 population without a locally dedicated sales tax.
- **Rural transit districts** in rural areas (population under 50,000).

Chapters 456 and 458 of the Texas Transportation Code authorize urban and rural transit districts and provide for state funds in support of transit. PTN administers the funding formula established by the Texas Transportation Commission. Table 3-2 summarizes the number of transit districts by category.

[1] There is one exception. Laredo voters approved a municipal transit department and a local sales tax dedicated to transit, and Laredo is also an urban transit district eligible to receive state transit funds.

Table 3-2. Classification of Texas Transit Authorities and Transit Districts

Category	Number	Eligible for State Transit Funds?	Dedicated Local Sales Tax for Transit?
Transit Authority or Municipal Transit Department[a]	9, includes Laredo	No (8) Yes—Laredo	Yes
Urban Transit District - Large[b]	5, excluding Laredo	Yes	No
Urban Transit District - Small[b]	24[c]	Yes	No
Rural Transit District[b]	37	Yes	No

[a] *Texas Transportation Code, Chapter 451 (Houston, San Antonio, Austin, Corpus Christi), Chapter 452 (Dallas and Fort Worth), Chapter 453 (El Paso and Laredo), and Chapter 460 (Denton County).*
[b] *Texas Transportation Code, Chapter 458.*
[c] *Includes four transit districts in the Dallas-Fort Worth Area whose state funds are statutorily limited to the value they received in FY1997.*

Texas Transit Funding Process

State funding for transit is part of the Texas state budgeting process. This section provides an overview of the Texas state budgeting process. Figure 3-3 provides a graphical representation of the state budgeting process.

The Texas Legislature sets the Texas budget every two years (this two-year period is also called a biennium). Texas follows a September through August fiscal year.

Prior to the legislative session, TxDOT develops a legislative appropriations request (LAR) to establish the TxDOT budget for the upcoming biennium. LARs are required of all agencies in the state's budget. TxDOT's LAR must be approved by the Texas Transportation Commission (a five-member board that oversees TxDOT) and submitted to the Legislative Budget Board (LBB). In TxDOT's case, this typically occurs at the end of August each even-numbered year.

The LBB uses the LAR as a guide, along with discussions with state departments and agencies, to prepare a draft budget to submit to the legislature. One or more bills are then drafted and submitted by senators or state representatives that use the information provided by the LBB. After both houses pass a bill, the bills usually go to a conference committee to reconcile the differences between each version of the bill.

The appropriations bill, once signed by the governor, is the basis for authority for TxDOT to encumber and expend funds. TxDOT's Financial Management Division prepares the budget for PTN.

Once the PTN budget is finalized, PTN can begin allocating state formula funds using the Texas Transit Funding Formula (discussed in more detail later in this module). Once allocations are calculated, the Texas Transportation Commission can issue a minute order (prepared by TxDOT)

that specifies the amount of state funding allocated to Texas transit districts. The minute order authorizes PTN to execute agreements with Texas transit districts for the drawdown of state funds for transit. Minute orders are usually issued each fiscal year for funds associated with the state funding formula. Minute orders are stored and can be searched at https://publicdocs.txdot.gov/minord/mosearch/Pages/Minute-Order-Search-Results.aspx.

Texas Administrative Code allows for two types of state funding for public transportation: formula and discretionary (*4*).

Overall, state formula funding for public transportation is a small portion of the TxDOT budget, currently equal to $34,991,067 per fiscal year, which is 0.49 percent of TxDOT's approximately $7.2 billion[2] annual budget (*5*). If less than $34,991,067 of state funds is appropriated in a fiscal year, TxDOT will prorate all recipients of state formula funds.

When more than the state formula funds of $34,991,067 is appropriated for public transportation, TxDOT may also administer a discretionary grant program for the balance of state funds (*6*).

[2] The $7.2 billion approximation of annual state revenues to be expended on transportation in FY2018 was obtained on page 6, *Total Agency* line, *Other Funds* 2018 column of the TxDOT FY2018 Operating Budget.

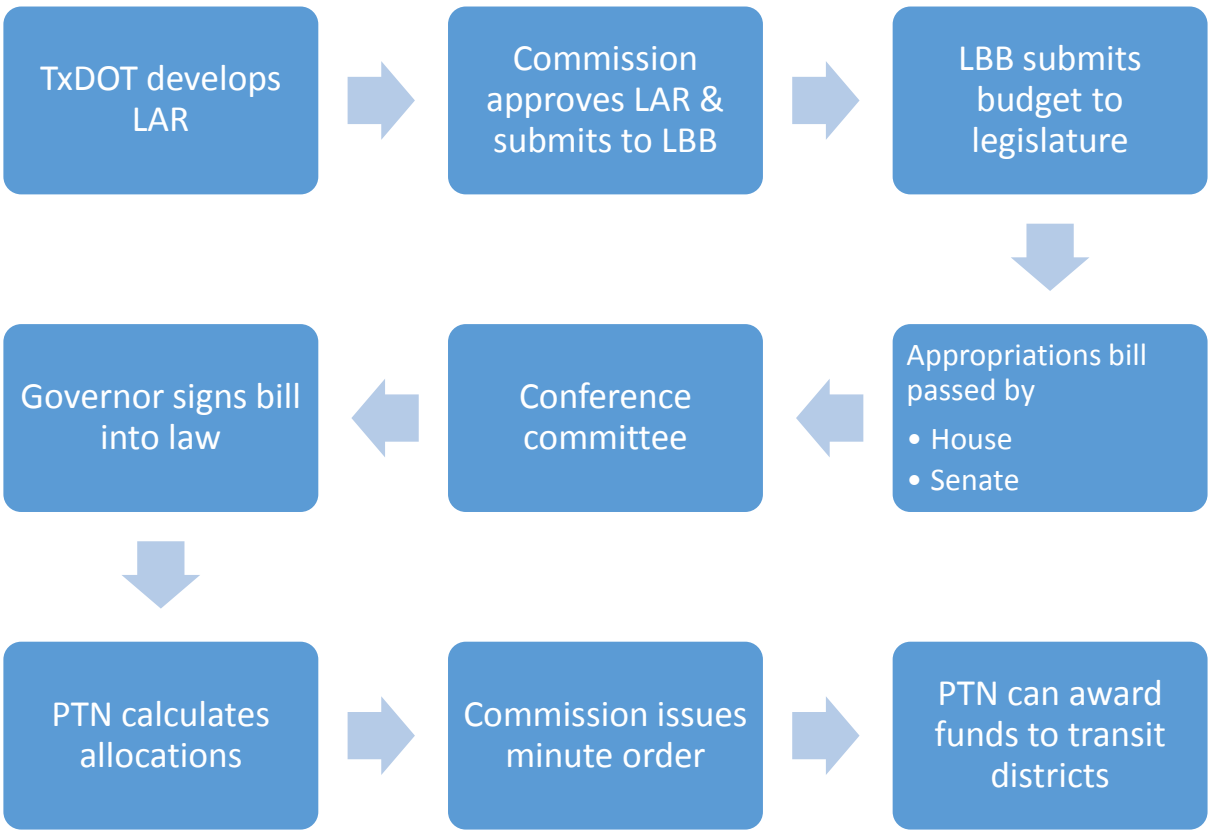


Figure 3-3. Process for Texas State Funding of Transit Districts

Texas Transit Funding Formula

Authority for the Texas Transportation Commission to allocate state and federal funds is provided in the Texas Transportation Code, Chapter 456, which was most recently amended in 2017 by H.B. 1140 to differentiate small urban and large urban transit districts (*7*). Eligible recipients for Texas state transit funds are urban and rural transit districts, as provided in the Texas Transportation Code, Chapter 458. The administrative procedures for the allocation of funds are described in the Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation, Chapter 31 Public Transportation (*4*). Texas has three categories of transit districts eligible to receive state funds: rural, small urban (urban areas less than 200,000 population), and large urban (urban areas with at least 200,000 population).

The Texas Legislature appropriates state funding levels each biennium, and the level of legislatively appropriated funds for public transportation is $69,982,134 or less per biennium (or $34,991,067 per fiscal year). (See Table 3-3 for details the values available for each transit district category.) TxDOT then allocates these funds according to the Texas transit funding formula, illustrated in Figure 3-4. State funding is allocates $42,863,386 to rural transit districts ($21,431,693 per fiscal year), $20,118,748 to small urban transit districts ($10,059,374 per year), and $7,000,000 to large urban transit districts ($3,500,000 per fiscal year). Fixed amounts from small urban funds are allocated to the four Dallas-Fort Worth-Area (DFW-Area) transit districts, totaling to $1,541,672 ($770,836 per fiscal year).

Table 3-3. Texas State Formula Funding per Biennium and Fiscal Year

Transit District Category	Per Biennium	Per Fiscal Year
Rural	**$42,863,386**	**$21,431,693**
Small Urban	**$20,118,748**	**$10,059,374**
DFW	$1,541,672	$770,836
Arlington	$683,326	$341,663
Grand	$341,168	$170,584
Mesquite	$284,910	$142,455
NETS	$232,268	$116,134
Remaining Small Urban	$18,577,076	$9,288,538
Large Urban	**$7,000,000**	**$3,500,000**
Total	**$69,982,134**	**$34,991,067**

Source: Texas Administrative Code, State Financing of Public Transportation (4).

PTN allocates a portion of §5311 funds to rural transit districts using the same formula as the rural state formula. The remaining §5311 funds are allocated based on the transit district's proportion of vehicle miles out of the total vehicle miles operated by rural transit districts.

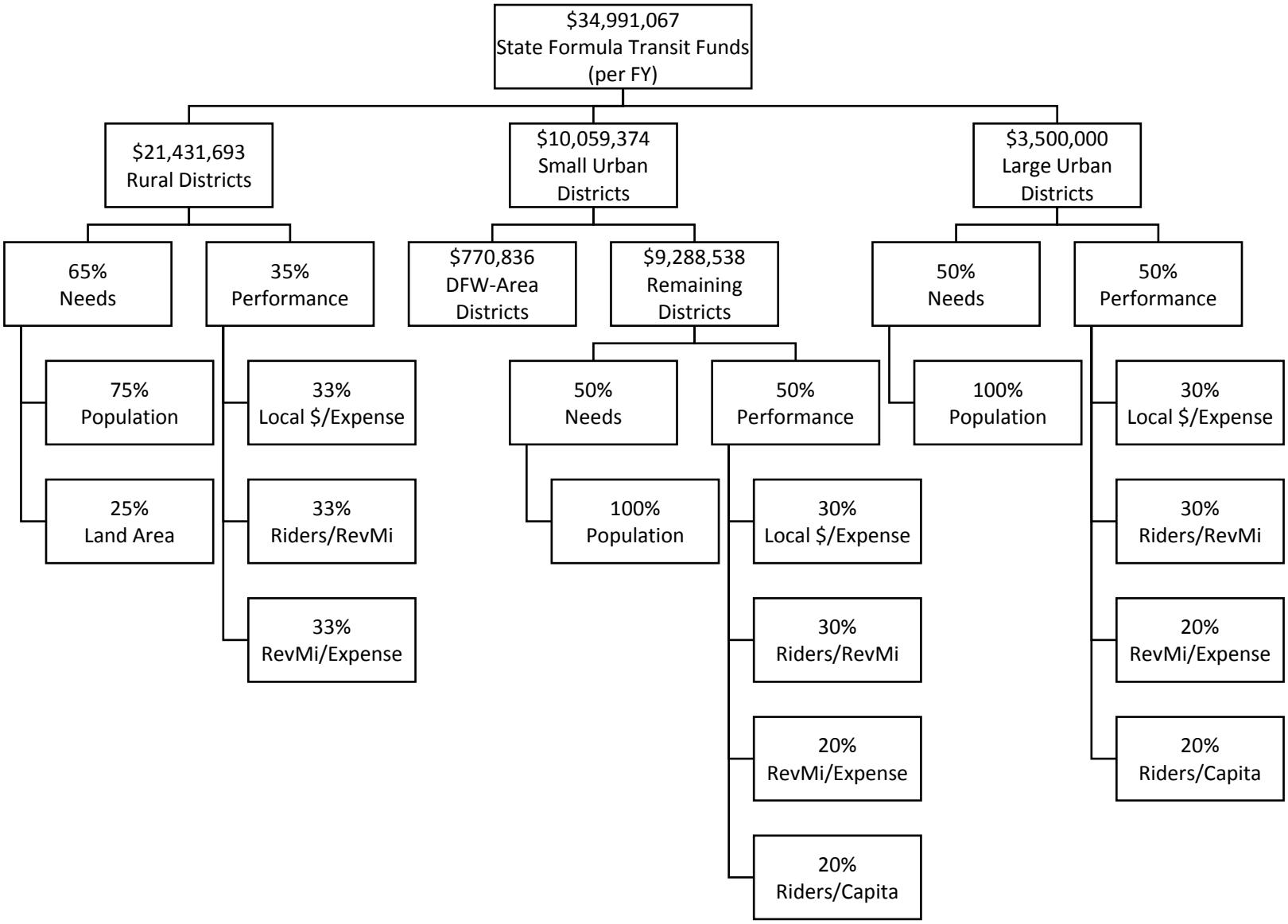


Figure 3-4. Texas Transit Funding Formula
Source: Texas Administrative Code, State Financing of Public Transportation (4).

If the biennium appropriation exceeds $69,982,134, TxDOT has the discretionary authority to award the remaining funds.

Measures of Need and Performance

The transit funding formula allocates funds to each transit district according to need and performance. For large and small urban transit districts, the allocation is 50 percent for need and 50 percent for performance. For rural transit districts, the allocation is 65 percent for need and 35 percent for performance (*8*). Need and performance allocations are based on a transit district's *relative need* and *relative* performance when compared to the other transit districts in the same category. If a transit district's performance or need increases relative to other districts in the same district category, a transit district's formula funds will increase. The measures of need and measures of performance are discussed in the following sections.

Measures of Need

The portion of the formula attributed to need is allocated based on population for urban transit districts and based on population and land area for rural transit districts:

- Large and small urban transit districts based on population as of the last decennial census in each urbanized area (100 percent).
- Rural transit districts based on population as of the last decennial census (75 percent) and land area (25 percent) for each rural transit district.

For any large urban transit district that operates in an urbanized area with a population equal to or greater than 300,000, the maximum population of 299,999 is used for allocation of funding for need. For all other transit districts, actual population is used.

Measures of Performance

Funds for performance are allocated based on how well a transit district performs according to specific criteria.

There are three performance measures for rural districts, each weighted equally:

- Passengers per revenue mile—33.3 percent.
- Revenue miles per operating expense—33.3 percent.
- Local investment per operating expense—33.3 percent.

The same three performance measures apply to urban transit districts, plus a fourth measure for passengers per capita. The four performance measures for urban transit districts are weighted differently:

- Passengers per revenue mile—30 percent.
- Revenue miles per operating expense—20 percent.
- Local investment per operating expense—30 percent.
- Passengers per capita—20 percent.

The total urban transit district population is used for the passengers-per-capita measure.

Formula Funding Stability

Transit districts are guaranteed that their formula funding will be at least 90 percent of what they received last fiscal year. If a transit district's calculated formula funding falls below 90 percent of its funding last year, it will receive 90 percent of last year's funding. However, this will result in adjustments to the rest of the transit districts in the same category to offset the difference between the formula-based allocation and the 90 percent guarantee.

This funding stability rule also applies to §5311 funds allocated to rural transit districts per the funding formula.

Helpful Resources

- Cherrington, L., S. Tan, and T. Hansen. 2017. *Sources of Funding Transit in Texas*. https://tti.tamu.edu/policy/finance/prc-report-sources-of-funding-for-funding-transit-in-texas/.
- American Association of State Highway and Transportation Officials. 2017. *Survey of State Funding for Public Transportation–FY2015 Data*. https://bookstore.transportation.org/item_details.aspx?ID=3743
- Texas Administrative Code, Title 43 Transportation, Chapter 31 Public Transportation. http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=43&pt=1&ch=31.

References

1. TxDOT. 2016. *Transportation Funding in Texas*. http://ftp.dot.state.tx.us/pub/txdot-info/fin/funding-sources.pdf, accessed March 14, 2017.
2. Legislative Budget Board. 2016. *Texas Highway Funding: Legislative Primer*. http://www.lbb.state.tx.us/Documents/Publications/Primer/3143_HighwayFundingPrimer_2016.pdf, accessed March 14, 2017.
3. TxDOT. 2016. *Texas Mobility Fund Bonds.* http://www.txdot.gov/business/investors/tmf-bond.html, accessed September 1, 2016.
4. Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation, Chapter 31 Public Transportation.
5. TxDOT. December 2017. *Operating Budget for Fiscal Year 2018.* http://ftp.dot.state.tx.us/pub/txdot-info/fin/op-budget-fy18.pdf, accessed March 14, 2018.
6. Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation, Chapter 31 Public Transportation, Section 31.13 Discretionary Program.
7. H.B. 1140. 85th Regular Session of the Texas Legislature. http://www.legis.state.tx.us/tlodocs/85R/billtext/html/HB01140F.htm accessed March 14, 2018.
8. Texas Administrative Code, Title 43 Transportation, Part 1 Texas Department of Transportation, Chapter 31 Public Transportation, Section 31.11 Formula Program.

Module 4
Local Revenue Sources and Local Match

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By the end of this module, you should be able to:

1. **List and define the main categories of local funding for transit.**
2. **Discuss the use of local revenue as local match for FTA grants.**
3. **Locate additional resources concerning sources of local revenue for transit.**

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Introduction

Local revenue is important to the success of most transit systems because, although substantial, federal and state funds usually do not cover 100 percent of operating and capital expenses and federal grants require some non-federal share of costs (also known as *local match*).

In Texas, local funds (including fares) accounted for between 87 percent (for transit authorities) and 22 percent (for rural transit districts) of applied revenues in FY2017. In addition, local funds allow transit systems to leverage federal grant dollars.

This module will:

- Discuss the various types of local revenue sources and their relative use in Texas.
- Discuss the concept of local match and why it is important to Texas transit systems.
- Provide detailed explanation for each category of local revenue source.
- Provide examples of applied local revenues in urban and rural transit districts.

Variety of Local Revenue Sources

Local revenue can be categorized into eight main categories, listed in Table 4-1. In most cases, all the revenue sources listed below can be used as local match for federal grants *except* for fares, which are to be used to reduce the operating deficit. In other words, fares are treated as income to lower the cost of providing transit and therefore the amount of federal operating assistance available.

Table 4-1. Local Revenue Sources for Texas Transit Systems FY2017

	Transit Authorities* (8)		Urban Transit Districts* (30)		Rural Transit Districts (37)	
Sources of Local Revenues	**Revenues**	**% Local Revenues**	**Revenues**	**% Local Revenues**	**Revenues**	**% Local Revenues**
Fares	$187,035,220	8%	$13,649,919	21%	$4,703,447	18%
Local Contributions (Cash)	$19,577,903	1%	$23,872,060	38%	$9,347,483	36%
Contributed Services (Non-Cash)	$0	0%	$9,256,186	15%	$1,874,323	7%
Sales Tax Dedicated to Transit	$1,983,843,962	86%	$7,287,381	11%	$0	0%
Auxiliary Transit Revenues	$24,278,699	1%	$1,227,419	2%	$95,169	0%
Other Transportation Revenues	$5,149,834	0%	$634,196	1%	$6,902	0%
Non-Transit-Related Revenues	$69,375,385	3%	$1,873,357	3%	$203,509	1%
Other Contracts	$10,531,355	0%	$5,723,865	9%	$10,071,223	38%
Total Revenues	**$2,299,792,358**	**100%**	**$63,524,383**	**100%**	**$26,302,056**	**100%**

Source: PTN-128 FY2017 data.
**Laredo is counted as an urban transit district in this table.*

Even though an important source of local revenue, fares actually make up a very small portion of **total** revenue for transit in Texas—between 4 percent and 9 percent. The most significant source

of local (and total) revenue for transit authorities is a sales tax dedicated to transit—making up 86 percent of local revenue and providing 75 percent of total transit authority revenue. There are significant differences between urban and rural transit districts in terms of which categories of local revenue contribute the most to total revenue. For example, local contributions and fares are the most significant local revenue sources for urban transit districts, while other contracts and local contributions are the most significant sources for rural districts.

Some transit systems are exploring additional innovative ways to generate local revenues through sponsorships, partnerships, and local grants. For example, Scenic Mississippi Regional Transit (SMRT) obtained sponsorships from local foundations and health providers (see Figure 4-1).

Figure 4-1. SMRT Local Sponsors
Source: http://www.ridesmrt.com/sponsors.html

Also, Paris Metro is a recently-started fixed-route service in Paris, TX, operated by the Ark-Tex Council of Governments. Paris Metro secured local revenue by partnering with United Way, Texas Oncology, the Paris Regional Medical Center, and other local entities—both public and private (*1*).

Local Match

Why is local match so important? Local match is like a key that unlocks a bank of federal funds that are waiting to be used. When the FTA apportions funds to urbanized areas and states for distribution to transit systems, these funds come with a requirement: that the transit system is able to share in the expenses. If a transit system has $1 million of apportioned FTA funds at its disposal for a §5307-funded capital project (requiring a local/federal split of 20/80), the transit system needs to put in $250,000 for a project costing $1,250,000. If the transit system cannot contribute its 20 percent share ($250,000), it will not be able fully to utilize the federal dollars at its disposal. FTA provides guidance about using local revenue as match in each of the program-specific FTA circulars (e.g., FTA Circular 9030.1E provides guidance for §5307) and in its *Award Management Requirements* circular (5010.1E).

This module will discuss some details concerning the use of local revenue as local match for FTA grants; however, readers are encouraged to consult the latest program-specific circulars and official FTA guidance. FTA circulars can be found at https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/final-circulars.

Categories of Local Revenue Sources

This section provides the details for each of the local revenue categories in Table 4-1 by providing a definition, discussion of local match use, and important details for each revenue category. Module 7 will discuss in detail how to report local revenues in PTN-128 and, if applicable, the National Transit Database (NTD).

Fares

Definition

Fare revenues are revenues earned from carrying passengers, reflecting the amount of fare the passengers pay on their own behalf. Passenger fares include special programs such as reduced passes or ticket prices for students, the elderly, or individuals with disabilities.

Passenger fares do not include subsidies or passenger fare assistance from other entities, such as local governments, to provide a reduced fare or free fare. Subsidies are provided to support the general provision of transit service. Passenger fare assistance is targeted to help specific classes of users (e.g., senior citizens and students) and helps to offset the reduced or free fares offered to these users. Subsidies and fare assistance are reported in the appropriate state and local government source of funds.

Special Transit Fares

The Uniform System of Accounts (USOA) defines special transit fares as fare revenues earned for rides given in regular transit service but paid for by some organization instead of by the rider

(*2*). Special transit fare contracts are not a contract for service but a contract for fares based on the rides provided. One example is a public transit provider contracting with a social service agency to provide trips from client homes to a nutrition center. As passengers board the vehicle, the social service agency clients show the driver an identification (ID) card from the social service agency. The driver with the transit provider counts, records, and reports the number of passengers flashing the ID. The social service agency pays a fixed amount per client transit trip, and payment from the social service agency is reported as fare revenues by the transit agency.

Contracts for Fares

Contracts for fares are agreements to pay fares for trips provided to specific passengers or groups of passengers. For example, if a transit agency receives revenues from a contract with a social service agency, and the social service agency buys clients a fare-free pass or pays the transit agency based on how many clients ride transit, the contract revenues received are treated as fares. On the other hand, a *contract for service* is a contractual arrangement to pay the transit provider for transit service and is not based on the number of rides provided. For example, if a public transit provider contracts with a university to provide transit service and the university pays the full cost of the transit service based on the hours of service provided, the contract agreement for service is reported as contract revenue.

Use as Local Match

Fares (including contracts for fares) CANNOT be used as local match. Fare revenues are subtracted from operating costs to calculate the operating deficit (also called the net operating cost). The net operating cost is eligible for partial reimbursement under FTA grant programs. An example of how fare revenue is used to reduce operating costs is provided in Figure 4-2.

1	**Operating Costs**	$100,000
	Income to Reduce Operating Cost	
2	Fare Revenue	($25,000)
3	**Net Operating Cost**	$75,000
	Sources of Revenue	
4	Maximum FTA Operating Assistance (50%)	($37,500)
5	*Required Local Match*	*$37,500*

Figure 4-2. Example of Using Fare Revenue to Decrease Operating Cost

However, FTA Circular 9030.1E specifically says a voluntary or mandatory fee that a college, university, or similar institution imposes on all its students for free or discounted transit service is not farebox revenue (*3*). If a university uses student fees to pay for transit services, those funds are non-farebox revenue and can be used for local match.

See the Matching Funds Resource Guide from TxDOT PTN for more information on the treatment of fares: http://ftp.dot.state.tx.us/pub/txdot-info/ptn/matching-funds-resource-guide.pdf.

Local Contributions (Cash)

Definition

Local contributions are funds allocated to transit out of general revenues of another entity. These funds are often part of the government's annual budgeting process from general revenues rather than dedicated funds for transit. These funds assist with paying the operating and capital costs of providing transit. There are three types of local contribution revenues: general funds, specified contributions, and reserve capital funds.

- General funds—transfers from the general fund of local governments to cover the local share portion of the transit system operating and capital budget.
- Specified contributions—contributions from city, county, or other municipal government toward the local share portion of the transit system operating and capital budget.
- Reserve capital funds—transfers from a capital reserve fund of local governments expressly established to be used to cover the local share portion of transit system capital costs.

Use as Local Match

Local contributions can be used as local match.

Contributed Services (Non-Cash)

Definition

Contributed services are receipt of non-cash assets or services from another entity that benefits the transit operator. In-kind services are a type of contributed service, reported as contributed services only if there is no obligation to pay for the services. Contributed services include physical assets or services that the agency has objective control of and that have value that benefits people outside the contributor's organization, such as building space or staff time.

Central services (services provided by a parent entity of which the transit system is a department or member—for example, a municipal transit department using the city's centralized human resources and IT services) should be reported as contributed services revenue if the parent agency has no expectation of reimbursement.

When documenting the value of contributed services, transit agencies should report the fair market value of the physical asset at the date the asset was received. Any in-kind services reported and valued as contributed services must pass a set of standards: the service is significant and essential, the transit provider has reasonably good control over the services, there is an

objective basis to value services, and the service benefits people outside the contributor's organization. Examples of contributed services include utility services, marketing provided, maintenance service, or office space provided without charge.

The transit provider should keep a record of the financial value of any contributed services and in-kind services. A cost allocation plan may be required for centralized services to the transit agency. Contributed services are reported as both expenses and revenues. If the value of contributed services is not reported, the cost of providing service reported by the transit agency and reflected in PTN-128 is not accurate.

Use as Local Match

The law recognizes the value of in-kind contributions as local match, but not all contributions are eligible as local match. The Office of Budget and Management (OMB) and FTA policy determines what is eligible. For example, the FTA regional office that oversees a grant determines whether the equipment or services are acceptable as an in-kind match.

The Super Circular (2 CFR 200) defines third-party in-kind contributions as follows: "Third-party in-kind contributions means the value of non-cash contributions (i.e., property or services) that—(a) Benefit a federally assisted project or program; and (b) Are contributed by non-Federal third parties, without charge, to a non-Federal entity under a Federal award" (2 CFR 200.96). Additional definitions and guidance concerning contributions are provided in 2 CFR 200.306 and 200.434 (*4*). FTA grant recipients may apply in-kind contributions toward local share provided that:

- The recipient formally documents the value of each non-cash contribution.
- The value of the contribution represents a cost that would otherwise be eligible under the project.
- The contribution is a necessary and reasonable service for accomplishing the project.
- The contribution is not counted toward satisfying a matching requirement of another federal grant agreement, federal procurement contract, or any other award of federal funds.

The contribution must be a service or asset that would otherwise be part of the project expenses. In fact, the cost of the project for which the contribution is credited must include the value of the contribution to the extent the contribution is used as local match (*5*). For example, a donated desk could only be used as in-kind local match if the project's original budgeted cost included the purchase of a desk as a necessary and allowable expense. The desk's value must be listed as part of the project cost and as a revenue (part of the local share).

There are many complexities and nuances surrounding contributions. State DOTs and transit agencies are encouraged to read the full text of the relevant sections of the Super Circular, read the full text of program-specific circulars, and contact their FTA regional representative for further assistance.

Sales Tax Dedicated to Transit

Definition

If a transit agency is an independent political entity and has the legal authority to impose a dedicated tax, this tax is called a directly levied tax. If the tax is levied by the legal authority of the local or state government for transit use, it is reported under local or state government sources of funds.

As discussed in Module 1, there are nine transit systems in Texas that are supported by a local sales tax (see Table 4-2). The Texas state sales and use tax rate is 6.25 percent, but local taxing jurisdictions (cities, counties, special purpose districts, and transit authorities) may also impose local sales and use taxes up to 2 percent for a total maximum combined rate of 8.25 percent.

Table 4-2. Texas Metropolitan Areas with Approved Local Option Sales Tax for Transit

Type of Authority or Governmental Entity	Principal City or County	Agency	Sales Tax Rate (Percent)
Metropolitan Rapid Transit Authorities (Texas Transportation Code, Chapter 451)	Houston	Metropolitan Transit Authority of Harris County	1.00%
	San Antonio	VIA Metropolitan Transit San Antonio Advanced Transportation District*	0.50% 0.25%
	Austin	Capital Metropolitan Transportation Authority	1.00%
	Corpus Christi	Regional Transportation Authority	0.50%
Regional Transportation Authorities (Texas Transportation Code, Chapter 452)	Dallas	Dallas Area Rapid Transit	1.00%
	Fort Worth**	Fort Worth Transportation Authority	0.50%
Municipal Transit Departments (Texas Transportation Code, Chapter 453)	El Paso	El Paso Mass Transit Department	0.50%
	Laredo	Laredo Transit Management, Inc.	0.25%
Coordinated County Transportation Authority (Texas Transportation Code, Chapter 460)	Denton County–Denton, Lewisville	Denton County Transportation Authority	0.50%

Source: Texas State Comptroller of Public Accounts (6).
** Revenues generated from the 0.25 percent sales tax in the city of San Antonio dedicated to advanced transportation projects.*
*** The City of Grapevine dedicates a part of the municipal sales tax (0.375 percent) to fund the TEX Rail commuter rail service in Grapevine. The City of North Richland Hills provides funding from available sources equal to 0.375 percent municipal sales tax to fund TEX Rail commuter rail service in that city.*

Use as Local Match

Local sales taxes (or other types of local taxes) dedicated to transit can be used as local match.

Auxiliary Transit Revenues

Definition

Auxiliary transit revenues are generated from the byproducts of the transit service, such as advertisements on vehicles, concessions in station areas, fees paid for transit identification cards, or fines paid for fare evasion.

Use as Local Match

Auxiliary transit revenues can be used as local match.

Other Transportation Revenues

Definition

Other transportation revenues include transportation services that are not open to the general public, for example:

- **Charter service** is a vehicle hired for exclusive use that does not operate over a regular route or on a regular schedule and is not available to the general public.
- **Exclusive school bus service** is the use of buses to carry children and school personnel to and from their schools or school-related activities.
- **Freight tariffs** are revenues earned from carrying freight on runs whose primary purpose is passenger operations.

FTA prohibits transit agencies to operate these services unless they receive a waiver in accordance with regulation. FTA regulations can be found at the following links:

- Charter Service: https://www.transit.dot.gov/regulations-and-guidance/access/charter-bus-service/charter-bus-service.
- School Bus Operation: https://www.transit.dot.gov/regulations-guidance/rulemaking/E8-21601.

Specific FTA approvals are required if a public transit agency seeks to provide transportation services not open to the general public. *Handout – Dollars and Sense Questions* contains a more detailed discussion of the process for obtaining permission to operate charter or exclusive school bus service.

Use as Local Match

In most cases, revenue received from other transportation services (that are not open to the general public) are only eligible to be used as local match if the transit system has been granted an exemption to operate the service (or the charter service meets the defined exceptions in the FTA's charter rule—for example, when the charter service is for a qualified human service).

TxDOT PTN has published a guide to charter compliance: http://ftp.dot.state.tx.us/pub/txdot-info/ptn/charter_compliance.pdf. When in doubt, consult PTN or your FTA representative.

Non-Transit-Related Revenues

Definition

Non-transit-related revenues are funds earned from activities not associated with the provision of transit service. The sources of these funds can include investment earnings, sales of maintenance services, rentals of revenue vehicles, rentals of transit agency buildings and property, parking fees, non-specified donations or grants, development fees, or rental car fees.

Use as Local Match

Unless otherwise restricted, revenue from non-transit-related activities can be used as local match.

Other Contracts

Definition

Other contracts include funds earned from non-federal or state contracts. The contracts are typically from a local governmental authority such as a city, county, or other transit agency. Contracts can also be from a privately funded source. As opposed to charter or special service provided through other transportation revenues, other contracts include revenues from a regularly provided transit service or route(s).

How to report contract revenues will be covered in more detail in Module 7; however, NTD has requirements for reporting purchased services as a contract for service:

- There is a written agreement between the buyer and seller of transportation.
- The buyer pays the fully allocated costs of operating the service, including all costs that fares do not cover (*7*).

Use as Local Match

As long as the contract is not a contract for fares, revenue from contracts can be used as local match.

Additional Details: Public Transit–Human Services Coordination

Significant attention has been given to the topic of public transit–human services coordination for good cause. Transit agencies may obtain revenue from contracts for coordinated transportation (e.g., a contract to provide Medicaid non-emergency medical transportation [NEMT]), and that revenue may be used, in most cases, as local match for FTA grants.

In fact, FTA gives transit systems that receive §5311 and §5310 funds a choice of how to apply revenue received from contracts for coordinated transportation. Transit systems may apply the revenue as contract revenue (eligible to be used as local match) or use the revenue to decrease the net project cost (*8*, *9*). If a transit agency treats contract service revenue as local match, the agency will decrease the need for other sources of local match for FTA grants. If a transit agency uses contract revenue to decrease the project cost (similarly to how farebox revenue must be treated), the agency will lower the net project cost and therefore lower the amount eligible for up to 50 percent federal operating assistance.

§5307 recipients do not have an option for how to apply revenue from contracts for service; contract revenue must be applied as local match.

Figure 4-3 provides a simplified comparison of how treating revenue from contracts for coordinated transportation as either local match or revenue to decrease project costs can affect the transit agency's net project cost eligible for up to 50 percent federal operating assistance.

In Figure 4-3, the transit agency has annual operating costs of $100,000 and collected $25,000 in revenue from passenger fares and $30,000 in revenue from its contract to provide coordinated transportation. The FTA grant program provides a maximum of 50 percent of the net operating cost as federal operating assistance. The different ways to report coordinated transportation contract revenue can have a significant impact on the FTA local match requirements (see the difference between the values calculated in Line 8 of Figure 4-3).

		Option 1: Apply Contract Revenue as Local Match	Option 2: Use Contract Revenue to Decrease Project Costs	Comments
1	**Operating Costs**	$100,000	$100,000	
	Income to Reduce Operating Cost			
2	Fare Revenue	($25,000)	($25,000)	
3	Coordinated Service Contract (used to reduce project costs)	—	($30,000)	Only applied under Option #2
4	**Net Operating Cost**	$75,000	$45,000	Line 1 + 2 + 3
	Sources of Revenue			
5	Maximum FTA Operating Assistance (50%)	($37,500)	($22,500)	50% of net operating cost
6	*Required Local Match*	*$37,500*	*$22,500*	Equal to FTA operating assistance
7	Coordinated Service Contract (used as local match)	$30,000	—	Only applied under Option #1
8	Additional Local Match Needed	$7,500	$22,500	

Figure 4-3. Comparison of Reporting Contract Revenue as Local Match or to Decrease Project Costs

Examples of Applied Local Revenues

This section documents significant sources of applied revenue other than fares and local government and non-government cash contributions.

Urban Transit Districts

Table 4-3 illustrates the sources of revenue applied to operating and capital expenses by Texas urban transit districts in state FY2017. Urban transit districts reported 43 percent of all revenues applied from local sources, including fares. Below are some examples for sources of revenue other than fares and local government and non-government cash contributions. These examples were collected prior to 2017, and some may no longer be valid. In addition, transit agencies may have additional examples that could be added to the list.

Brownsville

Non-Transit-Related Revenues

Brownsville generated revenues from leasing space in the international/intermodal terminal.

Other Contracts

A contract for service with The University of Texas Rio Grande Valley–Brownsville and Texas Southmost College brought in other contract revenue.

Longview

Non-Transit-Related Revenues

Longview generated revenues from maintenance services performed through its regional maintenance agreement with the rural transit district in East Texas.

Lubbock

Auxiliary Transit Revenues

Lubbock Citibus earned revenues from advertisements on vehicles.

Other Contracts

Citibus reported revenues for contracted services for Texas Tech University.

McAllen

Non-Transit-Related Revenues

The City of McAllen generated revenues from leasing space in the international/intermodal terminal.

Other Contracts

The Lower Rio Grande Valley Development Council (LRGVDC) reported receiving funds from Community Development Block Grants (CDBG). Both the City of McAllen and LRGVDC reported receiving funds from the United Way.

Waco

Auxiliary Transit Revenues

Waco Transit reported revenues from advertisements on vehicles.

Other Contracts

Waco Transit reported revenues from contract services for the Baylor University Shuttle.

Wichita Falls

Auxiliary Transit Revenues

Wichita Falls reported revenues from advertising on buses.

Other Transportation Revenues

Wichita Falls received revenues from Midwestern State University to operate a shuttle route transporting students from apartment complexes to the campus.

Table 4-3. Revenues for Urban Transit Districts—Applied for Operating and Capital Expenses (State FY2017)

				Local Sources								
Urban Transit District	**FTA Total Revenues**	**Other Federal Total Revenues**	**State Total Revenues**	Fares	Local Cash Contributions	Contributed Non-Cash	Sales Tax	Auxiliary Transit	Other Transp	Non-Transit	Other Contracts	**Yearly Total Revenues**
Abilene - Citylink	$ 2,265,903	$ -	$ 328,215	$ 433,828	$ 1,384,841	$ -	$ -	$ -	$ 21,608	$ 40,906	$ 113,781	$ 4,589,082
Amarillo - Amarillo Transit Company	$ 2,456,167	$ -	$ 384,464	$ 187,301	$ 1,585,327	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,613,259
Beaumont - Beaumont Transit System	$ 3,596,679	$ -	$ 361,084	$ 455,364	$ 2,661,961	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,075,088
Brownsville - Brownsville Urban System	$ 2,997,889	$ -	$ 512,659	$ 1,121,778	$ 2,272,915	$ 154,394	$ -	$ 162,649	$ -	$ 607,111	$ 350,627	$ 8,180,022
College Station--Bryan - Brazos Transit District	$ 3,457,672	$ 219,392	$ 1,198,343	$ 270,444	$ 84,989	$ 9,005,737	$ -	$ -	$ -	$ 38,860	$ 107,053	$ 14,382,490
Conroe-The Woodlands	$ 7,180,209	$ -	$ 96,429	$ 3,326,389	$ 1,904,687	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,507,714
Harlingen - San Benito - LRGVDC	$ 551,328	$ -	$ 272,397	$ 17,615	$ 216,941	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,058,281
Killeen (Copperas Cove & Harker Heights)	$ 3,122,620	$ 1,554,964	$ 397,548	$ 326,945	$ 296,701	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,698,778
Lake Jackson-Angleton	$ 1,037,470	$ -	$ 240,887	$ 59,884	$ 255,510	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,593,751
Laredo - El Metro	$ 4,627,244	$ -	$ 576,518	$ 3,153,832	$ -	$ -	$ 7,287,381	$ 101,567	$ -	$ 646,123	$ -	$ 16,392,665
Longview - COLT	$ 1,345,206	$ -	$ 274,635	$ 177,123	$ 295,162	$ -	$ -	$ -	$ -	$ 62,033	$ 13,258	$ 2,167,417
Lubbock - Citibus	$ 5,552,146	$ 506,789	$ 620,972	$ 903,645	$ 4,382,796	$ -	$ -	$ 465,129	$ 151,237	$ -	$ 3,727,958	$ 16,310,672
McAllen Express - LRGVDC	$ 2,757,727	$ -	$ 300,055	$ 401,869	$ 1,484,798	$ 24,957	$ -	$ -	$ -	$ 338,140	$ 159,076	$ 5,466,622
McKinney	$ -	$ -	$ -	$ 28	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,186	$ 16,214
Mesquite - MTED	$ 184,323	$ -	$ 160,163	$ -	$ 244,579	$ -	$ -	$ -	$ -	$ -	$ -	$ 589,065
Midland-Odessa - EZ Rider	$ 4,064,573	$ -	$ 412,038	$ 353,827	$ 734,352	$ -	$ -	$ 87,209	$ -	$ 61,494	$ 88,500	$ 5,801,993
Port Arthur - Port Arthur Transit	$ 1,058,895	$ -	$ 304,897	$ 123,395	$ 863,743	$ -	$ -	$ 4,915	$ -	$ 10,327	$ -	$ 2,366,172
San Angelo - Concho Valley Transit District	$ 1,798,720	$ 146,424	$ 212,672	$ 130,612	$ 246,982	$ -	$ -	$ 60	$ 20,640	$ 4,948	$ 256,448	$ 2,817,506
San Marcos	$ 2,142,904	$ 16,175	$ 323,104	$ 57,680	$ 450,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,989,863
Sherman-Denison	$ 447,744	$ -	$ 251,382	$ 17,166	$ 272,339	$ -	$ -	$ -	$ -	$ -	$ -	$ 988,631
Temple - Hill Country Transit District - The HOP	$ 1,572,624	$ 1,045,698	$ 245,477	$ 152,099	$ 204,412	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,220,310
Texarkana Urban Transit District -T Line	$ 1,051,882	$ -	$ 232,846	$ 126,517	$ 387,190	$ 68,609	$ -	$ -	$ -	$ -	$ 71,144	$ 1,938,188
Texas City LaMarque	$ 2,304,368	$ -	$ 281,304	$ 307,328	$ 720,968	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,613,968
Tyler - Tyler Transit System	$ 2,259,207	$ -	$ 376,577	$ 165,259	$ 576,189	$ 2,489	$ -	$ 280	$ -	$ -	$ -	$ 3,380,001
Victoria	$ 1,361,164	$ 287,792	$ 246,147	$ 145,242	$ 209,000	$ -	$ -	$ -	$ 24,332	$ -	$ 26,787	$ 2,300,464
Waco - Waco Transit System	$ 6,484,252	$ 1,746,829	$ 426,298	$ 676,574	$ 76,495	$ -	$ -	$ 270,215	$ 355,154	$ 63,415	$ 793,047	$ 10,892,279
Wichita Falls - Wichita Falls Transit System	$ 1,303,070	$ -	$ 335,511	$ 275,740	$ 471,111	$ -	$ -	$ 135,395	$ 61,225	$ -	$ -	$ 2,582,052
Arlington	$ 1,218,270	$ -	$ 262,945	$ 189,322	$ 1,085,322	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,755,859
Grand Prairie	$ 261,996	$ 18,000	$ 190,430	$ 2,069	$ 345,483	$ -	$ -	$ -	$ -	$ -	$ -	$ 817,978
North East Transportation Service	$ 787,175	$ -	$ 116,134	$ 91,044	$ 157,267	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,151,620
Total Urban Districts	$69,249,427	$ 5,542,063	$ 9,942,131	$ 13,649,919	$ 23,872,060	$ 9,256,186	$ 7,287,381	$ 1,227,419	$ 634,196	$ 1,873,357	$ 5,723,865	$ 148,258,004
	47%	4%	7%	9%	16%	6%	5%	1%	0%	1%	4%	100%

Source: PTN-128 data reported by each transit district for FY2017.

Rural Transit Districts

Table 4-4 illustrates the sources of revenue applied to operating and capital expenses by Texas rural transit districts in state FY2017. Rural transit districts reported 22 percent of all revenues applied from local sources, including fares. Below are some examples for sources of revenue other than fares and local government and non-government cash contributions. These examples were collected prior to 2017, and some may no longer be valid. In addition, transit agencies may have additional examples that could be added to the list.

Alamo Area Council of Governments

Auxiliary Transit Revenues

The Alamo Area Council of Governments earned auxiliary revenue from Kerrville Greyhound.

Other Transportation Revenues

The Alamo Area Council of Governments earned revenue for approved charter service.

Other Contracts

The cities of Cibolo, Garden Ridge, Marion, New Braunfels, Selma, and the McQueeney area wholly or partially became a part of the San Antonio urbanized area in Census 2010. The Alamo Area Council of Governments continues to provide demand-response service to these cities through agreements with VIA Metropolitan Transit, and the cities provide the local share match.

Southwest Area Regional Transit District

Auxiliary Transit Revenues

Southwest Area Regional Transit District earned auxiliary revenue from the auction of vehicles, bus advertisements, etc.

Non-Transit-Related Revenues

Southwest Area Regional Transit District received non-transit-related revenue from leasing office space.

STAR Transit

Other Contracts

STAR Transit entered into interlocal agreements with three cities in eastern Dallas County—Balch Springs, Seagoville, and Mesquite—to provide transit services. STAR Transit also contracts with Kaufman County Senior Citizens Services, Terrell State Hospital, and other private organizations.

Table 4-4. Revenues for Rural Transit Districts—Applied for Operating and Capital Expenses (State FY2017)

				Local Sources								
Rural Transit District	**FTA Total Revenues**	**Other Federal Total Revenues**	**State Total Revenues**	Fares	Local Cash Contributions	Contributed Non-Cash	Sales Tax	Auxiliary Transit	Other Transp	Non-Transit	Other Contracts	**Yearly Total Revenues**
Alamo Area Council of Governments	$ 1,745,873	$ 479,929	$ 886,574	$ 199,900	$ 611,001	$ -	$ -	$ 3,579	$ 4,282	$ -	$ 309,171	$ 4,240,309
Ark-Tex Council of Governments	$ 1,830,836	$ 130,174	$ 592,667	$ 73,439	$ 117,072	$ 528,099	$ -	$ 9,880	$ -	$ -	$ 2,539	$ 3,284,706
Aspermont Small Business Development Center	$ 449,461	$ 210,505	$ 275,339	$ 16,250	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 951,555
Brazos Transit - The District	$ 3,039,325	$ 762,512	$ 1,725,262	$ 114,890	$ 254,208	$ 122,820	$ -	$ -	$ -	$ -	$ 41,041	$ 6,060,058
Capital Area Rural Transportation System	$ 7,284,732	$ 57,352	$ 1,418,302	$ 226,668	$ 108,216	$ -	$ -	$ -	$ -	$ -	$ 3,323,893	$ 12,419,163
Central Texas Rural Transit District	$ 2,889,487	$ 1,440,524	$ 829,599	$ 113,949	$ 357,635	$ -	$ -	$ 31,384	$ 2,620	$ 960	$ 187,690	$ 5,853,848
City/County Transportation	$ 692,192	$ 18,772	$ 298,195	$ 86,933	$ 170,077	$ -	$ -	$ -	$ -	$ -	$ 10,120	$ 1,276,289
Colorado Valley Transit	$ 1,224,491	$ 123,730	$ 449,327	$ 65,526	$ 234,026	$ 9,000	$ -	$ -	$ -	$ 12,793	$ -	$ 2,118,893
Community Services, Inc.	$ 438,082	$ 3,540	$ 462,418	$ 66,777	$ 122,235	$ -	$ -	$ 4,600	$ -	$ -	$ 1,228	$ 1,098,880
Concho Valley Transit District (Rural)	$ 1,197,417	$ -	$ 468,210	$ 25,578	$ 256,296	$ -	$ -	$ -	$ -	$ 9,289	$ 57,882	$ 2,014,672
Del Rio, City of	$ 501,090	$ 338,443	$ 278,077	$ 84,524	$ 252,943	$ -	$ -	$ -	$ -	$ 12,000	$ -	$ 1,467,077
East Texas Council of Governments	$ 1,931,033	$ -	$ 1,131,736	$ 173,682	$ -	$ -	$ -	$ -	$ -	$ -	$ 23,406	$ 3,259,857
El Paso, County of	$ 866,959	$ -	$ 407,287	$ 833,297	$ 830,675	$ 10,056	$ -	$ -	$ -	$ -	$ 1,279,263	$ 4,227,537
Fort Bend County	$ 6,252,936	$ -	$ 163,731	$ 741,883	$ 1,179,122	$ -	$ -	$ -	$ -	$ -	$ 141,583	$ 8,479,255
Galveston County Rural	$ 4,826,442	$ -	$ 784,684	$ 251,403	$ 1,733,602	$ -	$ -	$ -	$ -	$ -	$ 1,326,785	$ 8,922,916
Golden Crescent RPC	$ 1,527,398	$ 386,799	$ 588,992	$ 67,825	$ 845,295	$ 18,300	$ -	$ -	$ -	$ -	$ -	$ 3,434,609
Gulf Coast Center (Brazoria)	$ 352,313	$ -	$ 320,603	$ 14,452	$ 59,266	$ -	$ -	$ -	$ -	$ -	$ -	$ 746,634
Heart of Texas Council of Governments	$ 908,242	$ -	$ 336,353	$ 39,226	$ -	$ -	$ -	$ -	$ -	$ -	$ 709,478	$ 1,993,299
Hill Country Rural Transit District	$ 2,187,863	$ 1,240,333	$ 613,515	$ 69,148	$ 40,021	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,150,880
Kleberg County Human Services	$ 324,144	$ -	$ 289,624	$ 25,077	$ 6,672	$ -	$ -	$ -	$ -	$ -	$ 213,368	$ 858,885
Lower Rio Grande Valley Develop. Council	$ 743,974	$ -	$ 542,971	$ 10,703	$ 221,157	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,518,805
McLennan County Rural	$ 904,310	$ 42,968	$ 312,796	$ 89,952	$ 121,365	$ -	$ -	$ 28,179	$ -	$ 5,430	$ 146,749	$ 1,651,749
Panhandle Community Services	$ 1,410,630	$ 2	$ 867,485	$ 137,220	$ -	$ -	$ -	$ -	$ -	$ -	$ 610,839	$ 3,026,176
Public Transit Services	$ 1,836,348	$ 238,075	$ 408,864	$ 68,441	$ 223,253	$ -	$ -	$ -	$ -	$ -	$ 4,276	$ 2,779,257
Rolling Plains Management Corp.	$ 867,469	$ 765,433	$ 409,210	$ 30,530	$ -	$ -	$ -	$ -	$ -	$ -	$ 90,968	$ 2,163,610
Rural Economic Assistance League, Inc.	$ 1,564,667	$ -	$ 878,353	$ 98,080	$ 37,500	$ 20,290	$ -	$ -	$ -	$ -	$ 75,520	$ 2,674,410
Senior Center Resources and Public Transit Service	$ 625,166	$ 169,482	$ 347,936	$ 94,656	$ 78,466	$ 286,942	$ -	$ -	$ -	$ -	$ -	$ 1,602,648
South East Texas Regional Planning Comm.	$ 872,444	$ -	$ 376,173	$ 71,059	$ 292,242	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,611,918
South Padre Island, Town of	$ 756,797	$ -	$ 519,239	$ -	$ 163,987	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,440,023
South Plains Community Action Assoc.	$ 1,134,116	$ 834,206	$ 827,211	$ 184,569	$ -	$ -	$ -	$ -	$ -	$ -	$ 112,560	$ 3,092,662
Southwest Area Regional Transit District	$ 1,171,516	$ 642,101	$ 488,354	$ 186,073	$ -	$ -	$ -	$ 15,343	$ -	$ 130,153	$ 88,081	$ 2,721,621
SPAN, Inc.	$ 1,124,487	$ 356,640	$ 277,508	$ 77,518	$ 74,000	$ -	$ -	$ 1,200	$ -	$ -	$ 227,342	$ 2,138,695
STAR Transit	$ 4,637,847	$ 1,301,606	$ 418,358	$ 144,441	$ 825,498	$ -	$ -	$ -	$ -	$ 12,851	$ 535,648	$ 7,876,249
Texoma Area Paratransit System	$ 989,138	$ -	$ 614,274	$ 29,429	$ 2,461	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,635,302
The Transit System, Inc.	$ 465,562	$ 186,513	$ 237,857	$ 45,713	$ 89,998	$ 12,000	$ -	$ -	$ -	$ -	$ 16,793	$ 1,054,436
Webb Co. CAA	$ 377,549	$ -	$ 308,352	$ 89,272	$ 39,194	$ 61,896	$ -	$ 1,004	$ -	$ -	$ -	$ 877,267
West Texas Opportunities, Inc.	$ 2,893,288	$ 746,585	$ 1,103,752	$ 55,364	$ -	$ 804,920	$ -	$ -	$ -	$ 20,033	$ 535,000	$ 6,158,942
Total Rural Districts	$62,845,624	$ 10,476,224	$ 21,259,188	$ 4,703,447	$ 9,347,483	$ 1,874,323	$ -	$ 95,169	$ 6,902	$ 203,509	$ 10,071,223	$ 120,883,092
	52%	9%	18%	4%	8%	2%	0%	0%	0%	0%	8%	100%

Source: PTN-128 data reported by each transit district for FY2017.

Helpful Resources

- NCHRP Research Results Digest 353: *Identification of Local Matching Fund Requirements for State-Administered Federal and Non-Federal Public Transportation Programs*: http://www.trb.org/Main/Blurbs/165476.aspx
- TxDOT PTN *Guide to Charter Compliance*: http://ftp.dot.state.tx.us/pub/txdot-info/ptn/charter_compliance.pdf
- TxDOT *A Study of Sources Used for Local Revenue for Transit*: https://ftp.dot.state.tx.us/pub/txdot-info/ptn/matching-funds-resource-guide.pdf
- *PTN-128 FY16 Reporting Manual*: https://ptn128.tti.tamu.edu/

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Module 5
Accounting, Budgeting, and Financial Management

By the end of this module, you should be able to:

1. **Compare cash-based and accrual-based accounting**
2. **Explain the use and value of a good chart of accounts.**
3. **Explain variable and fixed costs.**
4. **Explain the importance of matching revenues to expenses.**
5. **Explain the difference between a cost allocation plan and an indirect cost rate proposal.**
6. **Describe the FTA's basic financial management requirements.**

TABLE OF CONTENTS

Introduction

It all comes down to bottom line: successful, sustainable transit agencies not only provide good transit service but also manage their finances well using best practices in accounting and budgeting and ensuring finances are managed well and in compliance with federal and state requirements.

This module is divided into two parts:

- Part 1: Accounting and Budgeting.
- Part 2: Financial Management.

Accounting and budgeting focuses on the activities of dealing with financial transactions and budgeting for (and monitoring) expenses and revenues. Financial management discusses the FTA requirements for financial management that are outlined in FTA Circular 5010.1E Award Management Requirements.

Part 1: Accounting and Budgeting

Good accounting and budgeting processes are essential to any public transit agency. Accounting activities involve documenting records for financial transactions that have already happened. Budgeting activities involve predicting how the financial picture will look in the future.

Accounting	**Budgeting**
Deals with financial transactions that have already happened.	Aims to predict what will happen financially in the future.
	
Looks backwards in time	**Looks forward in time**

This module is organized to cover the fundamentals of accounting and budgeting. The section on accounting covers generally accepted account principles, accounting concepts, financial statements, the use of a chart of accounts. The accounting section also includes a discussion of operating and capital expenses, including requirements for transit asset management. The section on budgeting addresses budgeting strategies and provides an outline for a business plan.

Accounting

This section is a brief overview of the fundamentals of accounting. This explanation of accounting will introduce generally accepted accounting principles, important accounting concepts, financial statements, and the uniform system of accounts. A glossary of accounting terms and helpful resources are included at the end of the module.

Generally Accepted Accounting Principles

There are general rules and concepts that govern the field of accounting. These general rules are referred to as basic accounting principles and guidelines and form the groundwork on which more detailed and complicated accounting rules are based (*1*).

The phrase generally accepted accounting principles (or GAAP) consists of three important sets of rules: (a) the basic accounting principles and guidelines, (b) the detailed rules and standards issued by the Financial Accounting Standards Board (FASB) and its counterpart for state and local governments, the Governmental Accounting Standards Board (GASB), and (c) the generally accepted industry practices.

Guidance for the generally accepted transit industry practices can be found in regulations issued in the Code of Federal Regulations (CFR) and circulars (regulations) issued by FTA:

- 2 CFR 200 - Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2013).
- FTA Circular 5010.1E Award Management Requirements (2017).
- FTA Circular 9030.1E Urbanized Area Formula Program (2014).
- FTA Circular 9040.1G Formula Grants for Rural Areas (2014).
- FTA Circular C 9070.1G Enhanced Mobility of Seniors and Individuals with Disabilities Program (2014).

A transit agency must follow generally accepted accounting principles in the preparation of financial records. Federal regulations require the transit agency's financial records be audited by an independent public accountant. Both the transit agency's management and the independent accountants must certify that the financial statements and the related notes to the financial statements have been prepared in accordance with GAAP.

GAAP are rules and guidelines that help transit agencies prepare financial reports. GAAP is exceedingly useful because it attempts to standardize and regulate accounting definitions, assumptions, and methods.

If all transit agencies do not prepare their financial reports according to the same basic principles the results can be tough to sort through and fairly compare. Requiring that financial records from all transit agencies comply with a standardized set of general assumptions, rules, and restrictions can be one way to improve transparency as well as to streamline reporting. (*1*)

Key Assumptions

The key assumptions of generally accepted accounting principles are broken down into four subsets: (*1*)

Business Entity

The business entity assumption presumes all of the business transactions of a transit agency are separate from any other businesses of the organization, if any.

Going Concern

A going concern is the assumption that the business will operate for the foreseeable future. This is important when calculating the values for assets, depreciation, and amortization.

Monetary Unit

The monetary unit assumption is that all the amounts listed use one stable currency, the U.S. dollars, and only transactions that can be expressed in U.S. dollars are recorded. Because of this basic accounting principle, it is assumed that the dollar's purchasing power has not changed over time. As a result accountants ignore the effect of inflation on recorded amounts. For example, dollars from a 2007 transaction are combined (or shown) with dollars from a 2017 transaction.

Time Period

Time period assumes all the transactions reported did in fact occur within the time period as listed. It is imperative that the time interval (or period of time) be shown in the heading of any financial report. Labeling one of these financial statements with "December 31" is not good enough. The reader needs to know if the statement covers the one week ended December 31, 2016, the month ended December 31, 2016, the quarter ended December 31, 2016, or the year ended December 31, 2016.

Basic Principles

There are four basic accounting principles. (*1)*

Cost Principle

From an accountant's point of view, the term "cost" refers to the amount spent (cash or the cash equivalent) when an item was originally obtained, whether that purchase happened last year or thirty years ago. For this reason, the cost principle refers to the notion that all values listed and reported are the costs to obtain or acquire the asset and not the fair market value.

Because of this accounting principle asset amounts are not adjusted upward for inflation. In fact, as a general rule, asset amounts are not adjusted to reflect any type of increase in value.

Revenue Recognition Principle

The revenue recognition principle states that all revenue must be reported when it is realized and earned, not necessarily when the actual cash is received. This is also known as accrual accounting.

Matching Principle

This accounting principle requires transit agencies to use the accrual basis of accounting. The matching principle requires that expenses be matched with revenues. Wages to employees are reported as an expense in the week when the employees worked and not in the week when the employees are paid.

Because we cannot measure the future economic benefit of things such as advertisements (and thereby we cannot match the ad expense with related future revenues), the accountant charges the ad amount to expense in the period that the ad is run.

Full Disclosure Principle

If certain information is important to using the financial statements, that information should be disclosed within the statement or in the notes to the statement. The disclosure principle holds that information pertinent to make a reasonable judgment on the transit agency's finances must be included, so long as the cost to obtain that information is reasonable.

Main Constraints

When it comes to constraints, the GAAP covers objectivity, materiality, consistency, and prudence. (*1)*

Objectivity

In addition to the basic accounting principles and guidelines listed above, accounting information should be reliable, verifiable, and objective.

Materiality

Significance of the item must be considered under the materiality constraint when deciding whether it should be included on the financial statements. In general, if this information would be significant to a reasonable third party, it must be included.

Because of materiality, financial statements usually show amounts rounded to the nearest dollar, to the nearest thousand, or to the nearest million dollars depending on the size of the company.

Consistency

Accountants are expected to be consistent when applying accounting principles, procedures, and practices. The transit agency is required to use the same accounting methods and principles each year under the consistency constraint and any variance must be reported in the financial statement notes.

Prudence

Under the constraint of prudence, accountants are required to choose a solution that reduces the likelihood of overstating assets and income. Accountants are expected to be unbiased and objective.

Accounting Concepts

This section is a brief overview of fundamental accounting concepts (*2*).

The Accounting Equation

The accounting equation is the basis of all accounting practice:

Assets = Liabilities + Capital

Assets

Assets are economic resources that can provide potential future benefit. Assets are divided into current assets, fixed assets, and long-term assets. Current assets represent resources which are expected to be consumed or converted to cash within one year. Fixed assets represent property, buildings, and equipment which are used in the production of a good or the performance of a service. For transportation providers, any vehicles, property, or facilities which are owned would be classified as fixed assets. Other long-term assets represent any other asset that does not fit into a current asset or fixed asset.

Liabilities

Liabilities are obligations of the transit agency which result in the probable future outlay of an asset. Liabilities are divided into current liabilities, long-term debt, and other long-term liabilities. Current liabilities represent obligations which will become due within one year. Long-term debt is money that has been borrowed and will need to be paid after one year. Other long-term liabilities represent any other liability that does not fit into a current liability or long-term debt categories.

Capital

Capital accounts represent the ownership accounts of the organization. The capital accounts of a transit agency include the accumulated earnings or losses of the organization, along with the current year's revenue and expense accounts.

Double Entry Bookkeeping

Financial transactions are recorded in the accounting records using double entry system in which each transaction affects at least two accounts. At least one account is debited and at least one other account is credited in every transaction. (*2*)

A debit is used to record:

Increases in:	Decreases in:
Asset accounts	Liability accounts
Expense accounts	Capital accounts
	Revenue accounts

A credit is used to record:

Increases in:	Decreases in:
Liability accounts	Asset accounts
Capital accounts	Expense accounts
Revenue accounts	

Regardless of the number of accounts involved in any transaction, the total dollar amount of the debits must always equal the total dollar amount of the credits.

A transit agency accumulates or records transportation accounting transactions by making entries in the organization's accounting journals. A journal is a book where all original entries of the organization's transactions are recorded (typically recorded in accounting software). The entries are expressed as debits and credits. Typically, accounting entries are made on a monthly basis.

Total debits must equal total credits.

- A debit is an entry on the left side of a double-entry bookkeeping system that represents the addition of an asset or expense or the reduction to a liability or revenue.
- A credit is an entry on the right side of a double-entry bookkeeping system that represents the reduction of an asset or expense or the addition to a liability or revenue.

The accounting cycle begins when a transaction occurs. The transaction is then recorded in one of the journals. At the end of the month (or more often), the journals are posted to the ledgers and the amounts from the ledgers are used to prepare the financial statements. If a transit agency uses accounting software, then the computer will perform the posting and summarizing that are necessary to go from the transactions that are input to the financial statements. Figure 5-1 is an example of a series of journal entries and resulting ledger card for a transit agency's cash account.

Cash Receipts Journal

Date	Revenue Account and Explanation	Debit	Credit		
		Cash	Fare Revenue	Sale of Tickets	Contract Revenue
January 3	Cash	$5,000			
	Revenue from Sale of Tickets			$1,000	
	Revenue from Farebox		$2,000		
	Revenue from Route Sponsor				$2,000

Cash Disbursements Journal

Date	Explanation	Debit			Credit
		Labor Expense	Fuel	Rent	Cash
January 2	Pay Rent			$2,500	$2,500
January 15	Payroll	$1,200			$1,200
January 15	Pay Fuel Bill		$600		$600

Cash Ledger

Date	Explanation	Transaction		Ending Balance	
		Debit	Credit	Debit	Credit
January 1	Beginning Balance			$3,000	
January 2	Cash Disbursements Journal		$2,500	$500	
January 3	Cash Receipts Journal	$5,000		$5,500	
January 15	Cash Disbursements Journal		$1,800	$3,700	

Figure 5-1. Example of a Series of Journal Entries and Resulting Ledger Card

In double-entry bookkeeping, each financial transaction is entered in two or more accounts and involves two-way, self-balancing posting. Asset and expense accounts will have debit balances and liability, capital, and revenue accounts will have credit balances.

Basis of Accounting

Transactions can be recorded on either a cash basis or an accrual basis. (*2*)

Cash Basis

Under the cash basis, revenues and expenses are not recorded until cash is received or paid out. The advantage of the cash basis is that it is easier.

Accrual Basis

Using the accrual basis, expenditures are recorded as soon as they result in liabilities for benefits received, regardless of whether or not payment of the expenditure is made in the same

accounting period. Similarly, revenues are recorded when earned, regardless of whether or not receipt of revenue takes place in the same reporting period. An element of accrual accounting is that the bookkeeper needs support that events have actually occurred that will result in the accrual of revenues or expenses.

When a transit agency receives a contribution, grant, appropriation, or contract, whose use is limited to a specified purpose, it has not earned revenue until the funds have been spent for that purpose.

Differences between Cash and Accrual Accounting

Cash-basis accounting does not recognize promises to pay or expectations to receive money or service in the future, such as payables, receivables, and prepaid expenses.

Generally, the cash basis of accounting is simpler for organizations that do not have significant amounts of these transactions, or when the time lag between the initiation of the transaction and the cash flow is very short.

The accrual basis of accounting, however, will give a much more accurate and complete picture of an organization's financial condition. Accrual-basis accounting is more costly to maintain, because it requires the bookkeeper to record a lot more transactions; with accounting software, this disadvantage is less significant.

The accrual basis of accounting is used for financial reporting to the National Transit Database (NTD).

Adjusting Entries

If the cash basis of accounting is being used, then adjusting entries need to be prepared. The adjusting entries are recorded in the general journal and then posted to the ledger. The adjustments would be for items such as:

- Expenses incurred but not yet paid.
- Expenses paid but benefit not yet incurred.
- Revenue earned but not yet received.
- Revenue received but not yet earned.
- Depreciation expense.

Expenses Incurred but Not Yet Paid

An expense that has been incurred (i.e., the transit agency has received the benefit from the item), but has not yet been paid, needs to be accrued. An example would be fuel purchased on credit. If $100 fuel was purchased in March and the bill will be paid in April, the $100 should be accrued in March. The accounting entries would be to debit gasoline expense and credit accounts payable.

Expenses Paid but Benefit Not Yet Incurred

A transit agency may make a payment for which the benefit has not been received. In this case, an asset is recorded for the unused portion of the payment. An example would be an insurance payment. Assume that on February 1st, a premium of $3,000 is paid for a 6-month insurance policy. At the end of February, only one-sixth of that insurance policy has been used, or a value of $500 of the $3,000 premium. When the $3,000 was made on February, the accounting entry would be to debit prepaid insurance (a current asset account) and credit cash for $3,000. At the end of February, an adjusting entry would be made to debit insurance expense and credit prepaid insurance for $500 (one-sixth of $3,000). The balance for prepaid insurance at the end of February would be $2,500.

Revenue Earned but Not Yet Received

A transit agency may provide a service under a contract for services and receive payment for the service at a later time. For example, assume a transit agency is providing service to transport residents from a senior citizens center to a local grocery store on Friday of every week for $250 per day of service. The service is provided under contract to the local county government and payment is due within 30 days of invoice. The month of June includes four Fridays, so the service expense in June is $1,000. An adjusting entry would be made at the end of June to record a debit for an increase in accounts receivable from a local government (a current asset) and a credit for $1,000 of revenue. When payment is received in July, cash revenue is debited and accounts receivable is credited.

Revenue Received but Not Yet Earned

Occasionally, a transit agency may receive funding in advance of the actual service being performed. For example, assume the same facts as in the previous example, but in this case the local government pays in advance by May 25 for the service to be performed in June. An adjusting entry would be made at the end of May to record a debit for $1,000 cash and a credit for deferred revenue from a local government (a current liability). When the service is provided in June, the deferred revenue account is debited and revenue is credited.

Depreciation

Depreciation represents the process of allocating the cost of a fixed asset over its estimated useful life. Depreciation attempts to match the cost of the asset to the revenues that are generated using the asset. Generally accepted accounting principles require that both for-profit and non-for-profit organizations (including local governments) record depreciation. (*2*)

To record depreciation, an adjusting entry is made at the end of each month to debit depreciation expense and credit accumulated depreciation (an account that reduces the fixed asset balance). The most common methods of depreciation in the transit industry are straight-line and units of service.

Straight-Line Method

Assume purchase of a mid-size bus at a cost of $280,000 in May 2017. The bus is expected to be in service for 7 years or 200,000 miles. The entry to record the purchase would be to debit a fixed asset account and credit cash for $280,000. The annual depreciation amount would be $40,000 per year (total cost $280,000 divided by 7 years), and useful monthly depreciation would be $3,333. In the year the asset is acquired in May, one-half of one year's depreciation can be taken. The fixed asset cost, accumulated depreciation, net book value (cost minus accumulated depreciation) and current year's depreciation at the end of the year are shown in Table 5-1.

Table 5-1. Straight-Line Depreciation: Small Bus Example

End of Year	Cost	Accumulated Depreciation	Net Book Value	Current Year's Depreciation
Purchase	$140,000	$0	$140,000	
2017	$140,000	$10,000	$130,000	$10,000
2018	$140,000	$30,000	$110,000	$20,000
2019	$140,000	$50,000	$90,000	$20,000
2020	$140,000	$70,000	$70,000	$20,000
2021	$140,000	$90,000	$50,000	$20,000
2022	$140,000	$110,000	$30,000	$20,000
2023	$140,000	$130,000	$10,000	$20,000
2024	$140,000	$140,000	$0	$10,000

Units of Output Method

The units of output method allocates the cost of the vehicle based on the units of output in the period. For transportation vehicles, the most common unit of output is vehicle miles. A depreciation rate is determined by dividing the cost of the vehicle by the estimated number of miles the vehicle is expected to travel before it has to be replaced. The depreciation for a month is then calculated by multiplying this depreciation rate by the actual number of miles the vehicle traveled during the month and accumulated for the year. Assume the following as an example:

Original cost of vehicle	$280,000
Total estimated FTA service life miles	200,000
Depreciation rate per vehicle mile	$1.40

The entry to record the purchase would be to debit a fixed asset account and credit cash for $280,000. The annual depreciation is $1.40 per mile times the actual vehicles miles for the period. The plan for fixed asset cost, accumulated depreciation, net book value (cost minus accumulated depreciation), and current year's depreciation are shown in Table 5-2.

Table 5-2. Units of Output (Vehicle Miles) Depreciation: Small Bus Example

End of Year	Cost	Accumulated Depreciation	Net Book Value	Current Year's Depreciation @ $1.40/mile	Vehicle Miles of Service Recorded
Purchase	$280,000	$0	$280,000		
2017	$280,000	$19,950	$260,050	$19,950	14,250
2018	$280,000	$59,850	$220,150	$39,900	28,500
2019	$280,000	$99,750	$180,250	$39,900	28,500
2020	$280,000	$139,650	$140,350	$39,900	28,500
2021	$280,000	$179,550	$100,450	$39,900	28,500
2022	$280,000	$219,450	$60,550	$39,900	28,500
2023	$280,000	$259,350	$20,650	$39,900	28,500
2024	$280,000	$280,000	$0	$20,650	14,750

Financial Statements

Four financial statements should be prepared for a transit agency at the end of each fiscal year:

- Balance sheet.
- Income statement.
- Statement of changes in retained earnings (reserves).
- Cash flow statement. (*2*)

The following discussion will address the balance sheet and the income statement (including the calculation of a change in reserves). The cash flow statement requires a level of accounting competency beyond the scope of this module. Transit agencies should consult a skilled accountant to prepare a cash flow statement.

Balance Sheet

The balance sheet shows the financial status of the transit agency at a particular point in time. All the assets, liabilities, and capital accounts of the transit agency are included in the balance sheet. Table 5-3 is an example balance sheet.

Table 5-3. Balance Sheet

Year Ending August 31, 2016

ASSETS	
Current Assets	
Cash	$25,000
Accounts Receivable	$25,000
Prepaid Expenses	$30,000
Fixed Assets	
Revenue Vehicles	$1,680,000
Service Vehicles	$65,000
Office Equipment	$55,000
Repair Equipment	$121,000
Less Accumulated Depreciation	($1,015,386)
TOTAL ASSETS	$985,614
LIABILITIES AND CAPITAL	
Current Liabilities	
Accounts Payable	$245,130
Accrued Expenses	$155,000
Line-of-Credit Due	$85,000
Long-Term Debt	
None	$0
Capital	
Local Government Investment	$56,926
Federal Capital Grant	$275,844
State Capital Grant	$144,000
Accumulated Reserves	$23,714
TOTAL LIABILITIES AND CAPITAL	$985,614

Income Statement

An income statement summarizes the financial results of the transit agency over a period of time (monthly, quarterly, annually). All the revenues are listed first, then all the expense items. Total revenues less total expenses (operating and capital) is the transit agency's net income or loss. Table 5-4 is an example income statement.

Table 5-4. Statement of Income and Accumulated Reserves

Fiscal Year 2016 (September 1, 2015 through August 31, 2016)

REVENUES	
Fares	$147,129
Local Government Funds	$56,926
State Transit Funds	$274,227
Federal 5311	$723,803
Federal 5310	$275,844
Contract Revenues	$548,617
Total Revenues	**$2,026,546**
OPERATING EXPENSES	
Labor & Salaries	$926,649
Fringe Benefits	$199,409
Services	$153,879
Materials & Supplies	$400,180
Utilities	$23,966
Casualty & Liability	$65,671
Miscellaneous Expenses	
Travel	$1,100
Advertising	$3,905
Other Miscellaneous	$2,449
Leases & Rentals	$1,179
Total Operating Expenses	$1,778,387
CAPITAL EXPENSES	
Vehicles	$229,445
Total Expenses	**$2,007,832**
Net Income (Loss)	$18,714
Accumulated Reserves	
Beginning of Year	$5,000
End of Year	$23,714

The accumulated reserves appear on the balance sheet as a capital account.

Because the revenues applied must equal the expenses incurred in accrual based accounting, any net income will contribute to the transit agency's reserve and any shortfall will require drawing on accumulated reserves or some other source of revenue (for example, local government general revenues).

	Adjusted for Revenues Applied		
Revenues Applied	*to match Expenses Incurred*		
Fares	$147,129		
Local Government Funds	$56,926		
State Transit Funds	$274,227		
Federal 5311	$723,803		
Federal 5310	$275,844		
Contract Revenues	$529,903	$18,714	*Placed in Reserves*
Total Revenues Applied	**$2,007,832**		

Uniform System of Accounts

The Uniform System of Accounts (USOA) is the basic reference document for the National Transit Database. The USOA contains the accounting structure required by Federal Transit laws. This document is the current USOA and should be used for NTD reporting through FY2017. (*3*)

FTA implemented minor structural changes to the accounting requirements and reporting system in a Federal Register notice published on October 11, 2016. The changes reflected in that notice will become effective in FY2018. The notice described various proposed changes to the USOA to better align with today's NTD and accounting practices and to address FTA data needs and common questions among NTD reporters. FTA proposed the following changes:

- Separation of passenger-paid fares and organization-paid fares.
- Separation of paid absences from fringe benefits.
- Consolidation of casualty and liability costs under general administration.
- Expansion of assets and liabilities object classes.
- Addition of sale and disposal of assets.
- Simplification of State fund reporting.

An account is a way to sort accounting information into similar groupings. The chart of accounts is the complete listing of account titles to be used by the organization.

The transit agency should establish its chart of accounts to suit the needs of management, the governing board, and government funding. Table 5-5 is an example chart of accounts for a transit agency's operating expenses. The accounts are based on the USOA reference. The complete Uniform System of Accounts can be found in the instructions for the National Transit Database: https://www.transit.dot.gov/ntd/uniform-system-accounts-usoa. The chart of accounts is meant to

be flexible and adaptable. The chart of accounts can be truncated or expanded but not materially altered.

Table 5-5. Example Chart of Accounts for Operating Expenses

Object Class Expenses	Total
Total Operating Expenses	**$1,778,387**
501. LABOR (Salaries & Wages)	**$926,649**
01. Operator Salaries and Wages	$533,986
02. Other Salaries and Wages	
Transportation Supervision	$175,666
Shop Administration	$41,514
Mechanics	$42,919
General Administration	$132,563
502. FRINGE BENEFITS	**$199,409**
FICA & SUI Tax	$80,360
Workers Comp Insurance	
Drivers/ Mech Workers Comp	$17,874
Clerical Office Workers Comp	$446
Employer Share of Medical & Life	$86,513
Employer Share of Retirement	$9,796
Uniform and Work Clothing Allowance	$4,421
503. SERVICES	**$153,879**
01. Management Services (General OH)	$17,266
02. Advertising Fees	
03. Professional and Technical Services	
Planning Consultants	$25,443
Bank Service Fees	$399
Legal and Accounting	$7,927
05. Contract Maintenance Services	
Vehicle Maintenance	$66,219
Building Maintenance	$2,223
Grounds Maintenance	$4,057
Scheduling Software Maintenance	$21,254
Accounting Software Maintenance	$2,000
Office Equipment Repairs	$239
06. Custodial	$1,989
99. Other Services	
Training	$2,495
Printing Services	$127
Drug and Alcohol Testing	$2,245

Table 5-5. Example Chart of Accounts for Expenses (continued)

Object Class Expenses	Total
504. MATERIALS AND SUPPLIES CONSUMED	**$400,180**
01. Fuel and Lubricants	$317,345
02. Tires and Tubes	$32,024
99. Other Materials and Supplies	
Vehicle Equip. and Parts Supplies	$45,749
Other Equipment and Supplies	$4,062
Office Equipment	$1,001
505. UTILITIES	**$23,966**
Telecommunication	$15,155
Utilities	$8,812
506. CASUALTY AND LIABILITY COSTS	**$65,671**
General Liability	$8,437
Auto Liability	$35,484
Veh. Ins. Claims	$14,561
Licensing	$7,189
509. MISCELLANEOUS EXPENSES	**$7,454**
02. Travel and Meetings	$875
Mileage	$225
08. Advertising/Promotion Media	$3,905
99. Other Miscellaneous Expenses	
Dues & Memberships	$444
Postage	$1,861
Fees & Permits	$144
512. LEASES AND RENTALS	**$1,179**
12. Other General Administration Facilities	$1,179

Differences in totals due to rounding

Operating Expenses

Operating expenses are the expenses associated with the operation of the transit agency and goods and services purchased for system operation. (*4*) Operating expenses are the sum the object classes listed below.

Operating Expenses by Object Class

An operating expense object class is a grouping of expenses on the basis of goods and services purchased. Ten example object classes are described as follows:

- **Salaries and Wages** are the pay and allowances due employees in exchange for the labor services they render on behalf of the transit agency. The allowances include payments direct to the employee arising from the performance of work tasks.

- **Fringe Benefits** are the payments or accruals to others (insurance companies, governments, etc.) on behalf of an employee and payments and accruals direct to an employee arising from something other than work tasks.

- **Employee Compensation** is the sum of Salaries and Wages and Fringe Benefits.

- **Services** include the labor and other work provided by outside organizations for fees and related expenses. Services include management service fees, advertising fees, professional and technical services, temporary help, contract maintenance services, custodial services, and security services.

- **Materials and Supplies** are the tangible products obtained from outside suppliers or manufactured internally. These materials and supplies include tires, fuel, and lubricants. Freight, purchase discounts, cash discounts, eligible sales and excise taxes (except on fuel and lubricants) are included in the cost of the material or supply.

- **Utilities** include the payments made to various utilities for utilization of resources (e.g., electric, gas, water, telephone, etc.). Utilities include propulsion power purchased from an outside utility company and used for propelling electrically driven vehicles, and other utilities such as electrical power for purposes other than for electrically driven vehicles, water and sewer, gas, garbage collection, and telephone.

- **Casualty and Liability Costs** are the cost elements covering protection of the transit agency from loss through insurance programs, compensation of others for their losses due to acts for which the transit agency is liable, and recognition of the cost of a miscellaneous category of corporate losses.

- **Leases and Rentals** include all leases of real property and equipment.

- **Purchased Transportation** is transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. Purchased transportation does not include franchising, licensing operation, management services, cooperative agreements or private conventional bus service.

- **Other Operating Expenses** is the sum of taxes, miscellaneous expenses, and expense transfers:

Total operating expense is the sum of all the object classes.

Operating Expense Cost Drivers

Typically, the largest share of operating expense is employee compensation (a transit agency that contracts for most of all transit services may report purchased transportation as the largest operating expense). Figure 5-2 reflects the average annual share of operating expenses reported by state-funded urban transit agencies in Texas for the period 2007-2014. The sample set of transit agencies directly operate transit services.

The employee compensation is 58 percent of all expenses. Services and fuel each represent 14 percent of expenses. These three expense object classes represent 86 percent of all expenses. Materials (including parts, supplies, and tires) represent 6 percent of expenses; casualty and liability costs represent 3 percent, and all other expenses are 5 percent of the total. Fuel costs may vary as a percent of all operating expenses from year to year depending on the market price for fuel in a given year.

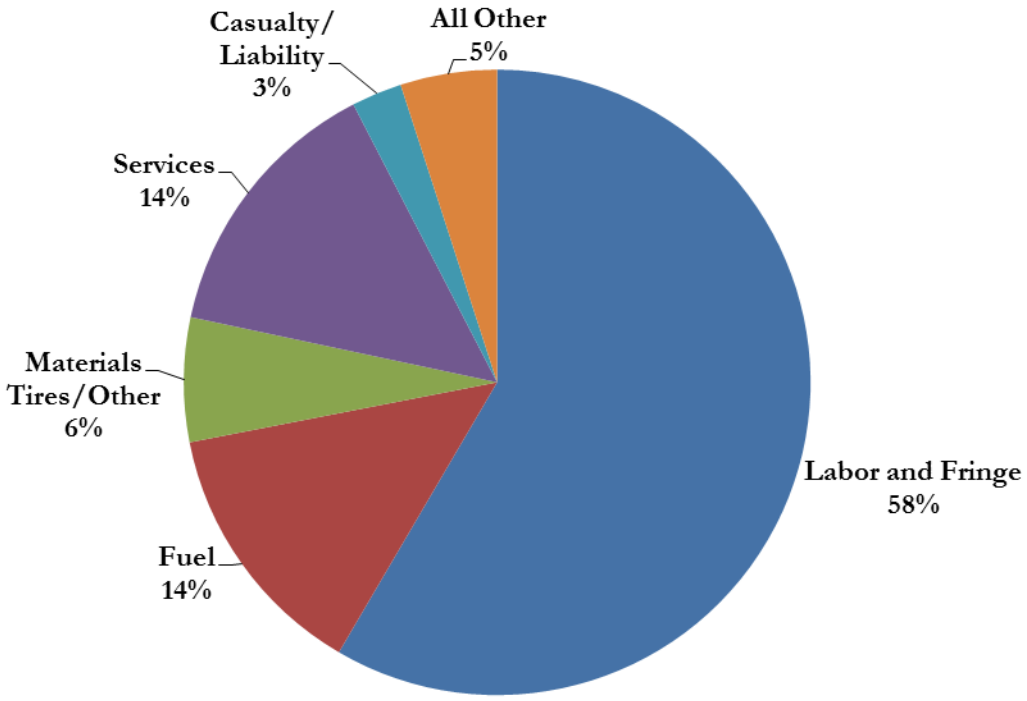

Figure 5-2. Texas State-Funded Urban Transit Operating Expenses by Object Class from 2007-2014
(Directly Operated Services Only)
Source: National Transit Database.

Operating Expenses by Function

An operating expense function for a transit agency is a cost center defined by the type of activities performed. Transit agencies are required to report operating expenses to NTD by function. The four basic functions are:

- **Vehicle Operations** includes all activities associated with the subcategories of the vehicle operations function: transportation administration and support; revenue vehicle operation; ticketing and fare collection; and system security.
- **Vehicle Maintenance** includes all activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles.
- **Non-Vehicle Maintenance** includes all activities associated with facility maintenance, including: maintenance of vehicle movement control systems; fare collection and counting equipment; structures, tunnels and subways; roadway and track; passenger stations, operating station buildings, grounds and equipment; communication systems; general administration buildings, grounds and equipment; and electric power facilities.
- **General Administration** includes all activities associated with the general administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning. Some transit agencies identify **Planning** as a separate function.
- If a transit agency purchases transportation from another public transit agency or from a private provider, **Purchased Transportation** should be reported as a separate function.

Chart of Accounts for Operating Expenses Assigned by Function

The transit agency can use a chart of accounts by object class to allocate expenses by function for NTD reporting. See an example as Table 5-6.

Table 5-6. Chart of Accounts for Operating Expenses Allocated by Function for NTD

Object Class Expenses	Total	Operating	Vehicle Maintenance	Non-Vehicle Maintenance	Admin
Total Operating Expenses	**$1,778,387**	**$1,208,470**	**$310,094**	**$9,448**	**$250,375**
501. LABOR (Salaries & Wages)	**$926,649**	**$709,653**	**$84,433**	**$0**	**$132,563**
01. Operator Salaries and Wages	$533,987	$533,987			
02. Other Salaries and Wages	$0				
Transportation Supervision	$175,666	$175,666			
Shop Administration	$41,514		$41,514		
Mechanics	$42,919		$42,919		
Planning Staff	$26,513				$26,513
General Administration	$106,050				$106,050
502. FRINGE BENEFITS	**$199,409**	**$93,206**	**$78,209**	**$0**	**$27,994**
FICA & SUI Tax	$80,358	$61,540	$7,322		$11,496
Workers Comp Insurance	$0				
Drivers/ Mech Workers Comp	$17,874	$16,544	$1,330		
Clerical Office Workers Comp	$446				$446
Employer Share of Medical & Life	$86,514	$9,613	$62,482		$14,419
Employer Share of Retirement	$9,796	$1,088	$7,075		$1,633
13. Uniform and Work Clothing Allowance	$4,421	$4,421			
503. SERVICES	**$153,879**	**$25,993**	**$66,219**	**$8,269**	**$53,398**
01. Management Services (General OH)	$17,266				$17,266
02. Advertising Fees	$0				
03. Professional and Technical Services	$0				
Planning Consultants	$25,440				$25,440
Bank Service Fees	$399				$399
Legal and Accounting	$7,927				$7,927
05. Contract Maintenance Services	$0				
Vehicle Maintenance	$66,219		$66,219		
Building Maintenance	$2,223			$2,223	
Grounds Maintenance	$4,057			$4,057	
Scheduling Software Maintenance	$21,254	$21,254			
Accounting Software Maintenance	$2,000				$2,000
Office Equipment Repairs	$239				$239
06. Custodial	$1,989			$1,989	
99. Other Services	$0				
Training	$2,494	$2,494			
Printing Services	$127				$127
Drug and Alcohol Testing	$2,245	$2,245			
504. MATERIALS AND SUPPLIES CONSUMED	**$400,180**	**$349,368**	**$45,749**	**$0**	**$5,063**
01. Fuel and Lubricants	$317,344	$317,344			
02. Tires and Tubes	$32,024	$32,024			
99. Other Materials and Supplies	$0				
Vehicle Equip. and Parts Supplies	$45,749		$45,749		
Other Equipment and Supplies	$4,062				$4,062
Office Equipment	$1,001				$1,001
505. UTILITIES	**$23,966**	**$8,500**	**$0**	**$0**	**$15,466**
Telecommunication	$15,155	$8,500			$6,655
Utilities	$8,811				$8,811

Table 5-6. Chart of Accounts for Operating Expenses Allocated by Function for NTD (continued)

Object Class Expenses	Total	Operating	Vehicle Maintenance	Non-Vehicle Maintenance	Admin
506. CASUALTY AND LIABILITY COSTS	**$65,671**	**$21,750**	**$35,484**	**$0**	**$8,437**
General Liability	$8,437				$8,437
Auto Liability	$35,484		$35,484		
Veh. Ins. Claims	$14,561	$14,561			
Licensing	$7,189	$7,189			
509. MISCELLANEOUS EXPENSES	**$7,454**	**$0**	**$0**	**$0**	**$7,454**
02. Travel and Meetings	$875				$875
Mileage	$225				$225
08. Advertising/Promotion Media	$3,905				$3,905
99. Other Miscellaneous Expenses	$0				$0
Dues & Memberships	$444				$444
Postage	$1,861				$1,861
Fees & Permits	$144				$144
512. LEASES AND RENTALS	**$1,179**	**$0**	**$0**	**$1,179**	**$0**
12. Other General Administration Facilities	$1,179			$1,179	

Differences in totals due to rounding

Variable and Fixed Operating Expenses

Variable expenses vary with the amount of service provided on a daily basis. Fixed expenses are expenses that do not fluctuate based on amount of service provided on a daily basis.

Variable expenses are assigned as either "miles-driven" variable expense or "hours-driven" variable expense. Miles-driven variable expenses are typically maintenance and fuel/lubricant expenditures because they correlate with the number of miles driven by transit vehicles. Hours-driven variable expenses typically involve operating expenditures excluding fuel/lubricants. For example, driver labor is an hours-driven expense.

Fixed expenses typically include administrative and planning costs.

Chart of Accounts for Operating Expenses Assigned by Variable and Fixed Costs

To assign costs to variable and fixed, determine how and why costs vary or do not vary. There is no rule for assigning costs to variable and fixed. The key is to be consistent. The transit agency can use a chart of accounts by object class to allocate expenses by variable and fixed costs. See an example as Table 5-7.

In the example, total miles-driven variable costs are $639,698, and total hours-driven variable costs are $816,098. Total variable costs are $1,455,796. Total fixed costs are $322,591, or 22.16 percent of total variable costs.

Table 5-7. Chart of Accounts for Operating Expenses Allocated by Variable/Fixed

		22.16%	Variable Costs	
Object Class Expenses	**Total**	**Fixed Cost**	**Miles-Driven Costs**	**Hours-Driven Costs**
Total Operating Costs	**$1,778,387**	**$322,591**	**$639,698**	**$816,098**
501. LABOR (Salaries & Wages)	**$926,649**	**$174,077**	**$42,919**	**$709,653**
01. Operator Salaries and Wages	$533,987			$533,987
02. Other Salaries and Wages	$0			
Transportation Supervision	$175,666			$175,666
Shop Administration	$41,514	$41,514		
Mechanics	$42,919		$42,919	
Planning Staff	$26,513	$26,513		
General Administration	$106,050	$106,050		
502. FRINGE BENEFITS	**$199,409**	**$27,994**	**$78,209**	**$93,206**
FICA & SUI Tax	$80,358	$11,496	$7,322	$61,540
Workers Comp Insurance	$0			
Drivers/ Mech Workers Comp	$17,874		$1,330	$16,544
Clerical Office Workers Comp	$446	$446		
Employer Share of Medical & Life	$86,514	$14,419	$62,482	$9,613
Employer Share of Retirement	$9,796	$1,633	$7,075	$1,088
13. Uniform and Work Clothing Allowance	$4,421			$4,421
503. SERVICES	**$153,879**	**$82,921**	**$66,219**	**$4,739**
01. Management Services (General OH)	$17,266	$17,266		
02. Advertising Fees	$0			
03. Professional and Technical Services	$0			
Planning Consultants	$25,440	$25,440		
Bank Service Fees	$399	$399		
Legal and Accounting	$7,927	$7,927		
05. Contract Maintenance Services	$0			
Vehicle Maintenance	$66,219		$66,219	
Building Maintenance	$2,223	$2,223		
Grounds Maintenance	$4,057	$4,057		
Scheduling Software Maintenance	$21,254	$21,254		
Accounting Software Maintenance	$2,000	$2,000		
Office Equipment Repairs	$239	$239		
06. Custodial	$1,989	$1,989		
99. Other Services	$0			
Training	$2,494			$2,494
Printing Services	$127	$127		
Drug and Alcohol Testing	$2,245			$2,245
504. MATERIALS AND SUPPLIES CONSUMED	**$400,180**	**$5,063**	**$395,117**	**$0**
01. Fuel and Lubricants	$317,344		$317,344	
02. Tires and Tubes	$32,024		$32,024	
99. Other Materials and Supplies	$0			
Vehicle Equip. and Parts Supplies	$45,749		$45,749	
Other Equipment and Supplies	$4,062	$4,062		$0
Office Equipment	$1,001	$1,001		
505. UTILITIES	**$23,966**	**$15,466**	**$0**	**$8,500**
Telecommunication	$15,155	$6,655		$8,500
Utilities	$8,811	$8,811		

Table 5-7. Chart of Accounts for Operating Expenses Allocated by Variable/Fixed (continued)

		22.16%	Variable Costs	
Object Class Expenses	**Total**	**Fixed Cost**	**Miles-Driven Costs**	**Hours-Driven Costs**
506. CASUALTY AND LIABILITY COSTS	**$65,671**	**$8,437**	**$57,234**	**$0**
General Liability	$8,437	$8,437		
Auto Liability	$35,484		$35,484	
Veh. Ins. Claims	$14,561		$14,561	
Licensing	$7,189		$7,189	
509. MISCELLANEOUS EXPENSES	**$7,454**	**$7,454**	**$0**	**$0**
02. Travel and Meetings	$875	$875		
Mileage	$225	$225		
08. Advertising/Promotion Media	$3,905	$3,905		
99. Other Miscellaneous Expenses	$0	$0		
Dues & Memberships	$444	$444		
Postage	$1,861	$1,861		
Fees & Permits	$144	$144		
512. LEASES AND RENTALS	**$1,179**	**$1,179**	**$0**	**$0**
12. Other General Administration Facilities	$1,179	$1,179		

Differences in totals due to rounding

Capital Expenses

Capital expenses are expenses related to the purchase of equipment (including vehicles) or property having a useful life of more than one year and an acquisition cost which equals the *lesser* of the capitalization level established by the government unit (state, local government, or transit agency) for financial statement purposes or $5,000. (*2*)

Capital Expenses

Capital costs are those expenses related to purchasing capital equipment or property and financing capital projects. They are large, non-annually recurring expenditures that have long-range impact on the transit agency.

For the Uniform System of Accounts, capital purchases are defined as long-term assets that are depreciated over a number of years. A capital purchase would be accounted for as a long-term asset using basic accrual accounting. The capital purchase is booked as a long-term asset in its entirety at one point in time (i.e., at the time of physical delivery), if, except for a down payment, it is paid for entirely at one time.

In a long-term construction project in which the transit agency makes progress payments, the fraction of the asset being constructed that corresponds to the fraction of the total payment being paid through the progress payment would be booked as a long-term asset at the time the operator makes the progress payment.

Major classifications for capital expenses are identified as follows:

- **Facilities** is a capital expense that includes administration, central/overhaul maintenance facilities, light maintenance and storage facilities, and equipment of any of these items.
- **Guideway** is capital expense for right-of-way facilities for rail or the exclusive use of buses including the buildings and structures dedicated for the operation of transit vehicles including elevated and subway structures, tunnels, bridges, track and power systems for rail, and paved highway lanes dedicated to bus. Guideway does not include passenger stations and transfer facilities.
- **Passenger Stations** is capital expense for passenger boarding and alighting areas with platforms including transportation centers and park-and-ride facilities but excluding transit stops on streets.
- **Administration Buildings** is capital expense for buildings which house management and support activities.
- **Operations and Maintenance Facilities** is capital expense for building used for operations administration and maintenance activities such as garages and shops.
- **Rolling Stock** capital expense is expense for vehicles, including boats, used by transit agencies. Categories of Rolling Stock capital expense are:
    - Revenue Vehicles is capital expense for vehicles used to transport passengers.
    - Service Vehicles is capital expense for vehicles used to support transit activities such as tow trucks, supervisor cars, and police cars
- **Fare Revenue Collection Equipment** is capital expense for equipment used to collect fares such as fare boxes, turnstiles, and ticket machines.
- **Communications and Information Systems** is capital expense for equipment for communicating such as radios and for information management such as computers and software.
- **Other Capital Expense** is a capital expense that does not fall in the categories defined above. Other Capital Expense may include furniture, equipment that is not an integral part of buildings and structures, shelters, signs, and passenger amenities (e.g., benches) not in passenger stations).

Capital Expense Does Not Include Operating Expenses Eligible for Capital Funding Assistance

Capital expenses in the NTD accounting system do not include all expenses which are eligible uses for federal capital funding assistance (80 percent federal funds); some of those expenses are included with operating expenses in the NTD accounting system (for example, preventive maintenance expenses, some expenses associated with Americans with Disabilities complementary paratransit service, and other categories of operating expenses eligible for capital funding assistance).

Typical Capital Expense

For state-funded urban and rural transit districts, the largest share of capital expense is to purchase revenue vehicles (buses and vans). Figure 5-3 reflects the capital expenses reported by state-funded and rural transit districts in Texas to NTD for 2015. Documentation was not available to identify the purpose of Other capital expenses.

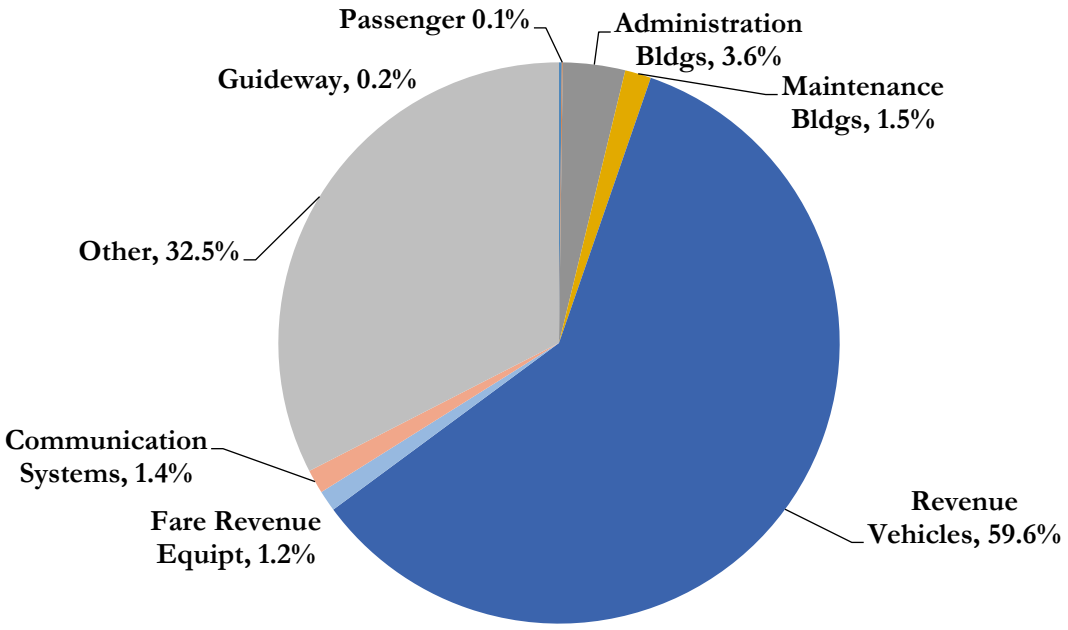

Figure 5-3. Texas State-Funded and Rural Transit Capital Expenses 2015 by Object Class

Source: National Transit Database.

State of Good Repair (SGR) for Capital Assets

The state of good repair "is a condition in which assets are fit for the purpose for which they were intended" (*5*). FTA further defines SGR as: The condition in which a capital asset is able to operate at a full level of performance. (*6*) This means the asset meets the following three criteria:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk.
3. Its life-cycle investments have been met or recovered.

When transit agency assets (e.g., vehicles and facilities) are not maintained well, condition deteriorates, maintenance backlogs grow, and asset conditions become poor or marginal. The result is decreased safety and reliability, increased maintenance costs, and the potential for having to replace assets sooner than would have otherwise been necessary.

Transit Asset Management

FTA issued its Final Rule for Transit Asset Management (TAM) (49 Code of Federal Regulations Part 625) in July 2016. This section discusses the FTA TAM rule and some of its basic applications for transit agencies. Transit agencies must conduct an asset inventory and condition assessment and report asset conditions to FTA. However, this section is not a TAM guidebook and should not be construed as providing exhaustive TAM guidance for all transit agencies and transit assets.

Tier Definition

The TAM rule's requirements vary slightly, depending on whether a transit agency is classified as a Tier I or Tier II provider. Figure 5-4 provides the definition of Tier I and Tier II providers.

TAM Plan Requirements

The TAM rule requires public transportation providers to develop a TAM plan. Tier I providers must develop their own TAM plans, and Tier II providers may either develop their own TAM plans or participate in a group plan.

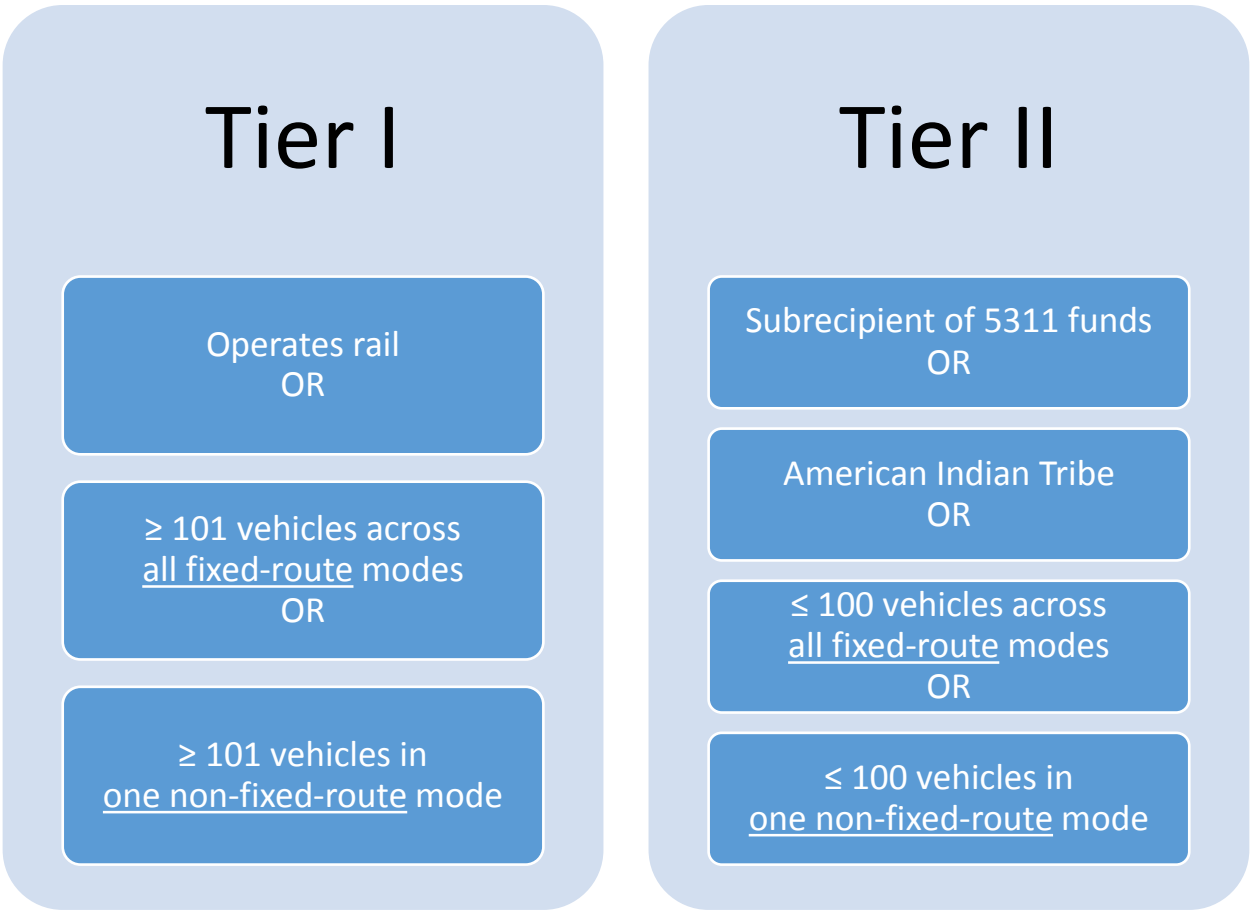

Figure 5-4. Definition of Tier I and Tier II Public Transportation Providers under TAM Rule

Source: Federal Transit Administration (7).

Requirements for Both Tiers

The contents of the TAM plan are different for Tier I and Tier II providers. However, both Tier I and Tier II providers must include the following four components in TAM plans:

- Inventory of capital assets.
- Condition assessment.
- Decision support tools.
- Investment prioritization.

Inventory of Capital Assets

Transit agencies must inventory assets and then assess the condition of each asset. Transit assets fall into asset categories and classes. When creating an asset inventory, the transit agency should decide the level of detail for inventorying assets. (*5*)

Condition Assessment

Once a transit agency has a complete inventory of its assets, the transit agency must next assess the condition of each component. The transit agency is required to prepare a condition assessment for any asset for which the transit agency has direct responsibility for capital maintenance.

FTA released the *Proposed Facility Condition Assessment Guidebook* in July 2016. (*8*) The guidebook provides an in-depth description of conducting facility condition assessments. In the guidebook, FTA recommends using the Transit Economic Requirements Model (TERM) 5-point scale for assessments.

After assessing the condition of facility components, transit agencies should calculate the condition of the entire facility. FTA recommends that a transit agency use a consistent, repeatable method for this calculation and suggests several alternative approaches in the TAM guidebook to aggregating system-level condition data into a single overall value for facility condition. (*5*)

Decision Support Tools

Transit agencies must be able to describe and display analytical tools and processes used to make investment prioritization decisions to best maintain the SGR. (*9*) These tools may be as simple as a spreadsheet or as complex as a transit-agency-wide asset management database.

Investment Prioritization

A TAM plan must include a ranked listing of proposed projects and programs ordered by year of planned implementation. (*9*) Transit agencies are allowed to prioritize projects using local policies and needs. However, investment prioritization must adequately consider identified unacceptable safety risks and accessibility requirements. The listing of projects should be fiscally constrained based on estimated funding levels.

Additional Requirements for Tier I

Tier I transit agencies have five additional requirements in TAM plans, including:

- A TAM and SGR policy.
- Implementation strategies.
- A list of key annual activities.
- Identification of resources.
- An evaluation plan.

Because these requirements are more general in nature, this section does not discuss them. However, FTA's Transit Asset Management website, www.transit.dot.gov/TAM provides more information.

Setting SGR Targets and Reporting to NTD

In addition to the TAM plan, which documents the transit agency's assets and how it plans to achieve or maintain a SGR, transit agencies must also set SGR targets for each asset class and report the targets and current performance to the NTD.

Each year, transit agencies must update SGR performance measures and next year's SGR targets in the NTD's Asset Inventory Module. In addition, transit agencies need to provide a narrative about:

- Changes in the transit agency's conditions since the previous year.
- Progress toward the current fiscal year's targets.
- Targets for the next fiscal year.

Asset management is the process to achieve or maintain a SGR. FTA's TAM rule establishes industry-wide TAM procedures and requirements for recipients of FTA funds. The main requirements are for transit agencies to develop a TAM plan and to report SGR performance and targets to the NTD.

TAM plans must include an inventory of all transit agency assets. TAM plans must also contain a condition assessment of all assets, a list of decision support tools used by the transit agency to prioritize investments, and a fiscally constrained list of all planned SGR projects ordered by anticipated year of implementation. Large transit agencies and transit agencies that operate rail (Tier I transit agencies) have additional TAM plan requirements that are outside the scope of this module.

Budgeting

This section is a brief overview of the fundamentals of budgeting. A budget can be a very useful planning tool. Simply stated, a budget is a forecast of revenues and expenses for the future (typically for one-year but often local governments require budgets for three or five years into the future). An effective budget process creates the opportunity for a transit agency's key management staff and board to look ahead and forecast how the organization is expected to look in the future. Once a budget is prepared, the budget provides a way to measure actual performance.

Preparing for the Budget Process

Typical activities to prepare for the budget process consist of three main components:

1. Define transit agency goals and objectives.
2. Establish a timeframe for the budget document (i.e. 1-year, 3-years, or 5-years).
3. Seek feedback from stakeholders.

Goals and Objectives

Goals and objectives inform the development of a transit agency budget by outlining what the transit agency intends to achieve such as expanded service or reduce expenses. Acknowledging goals and objectives help maintain perspective when forecasting presumed revenues and expenses. For example, if the transit agency's goal is to increase service to rural areas, the budget should not remove funding for a rural maintenance facility.

Timeline

Budgets can be established for any time-period. Typically, transit agencies develop a year-long budget for each fiscal year with sub-budgets for each month of the year. Monthly budgets allow administrative staff to monitor progress and help to ensure expenditures match revenues. Transit agencies typically generate less-detailed budget documents to complement planning efforts, such as a three or five year master planning document.

Stakeholder Involvement

Feedback from stakeholders helps a transit agency learn about the priorities of key transit beneficiaries (e.g. riders, local governments, non-profits, and others). Understanding local priorities is important when developing a transit budget because some revenue is generated locally and, depending on conditions, may become unavailable and should not be planned for when developing a budget. Additionally, the priorities of a transit agency's customers directly affect transit planning and evolution of such priorities may suggest that changes are needed in order to achieve service/revenue goals. Additionally, feedback from stakeholders such as local

government elected officials helps to generate local buy-in so that a transit agency's budget is more likely to be supported by constituents.

Budget Process

The budget process is summarized as follows and is generally applicable for both operating and capital budgets: (*2*)

1. Analyze the goals and objectives of the organization:
    a. Analyze each current program and service.
    b. Identify new programs and services.
    c. Analyze administrative costs.
    d. Document cost drivers and identify cost savings opportunities.
2. Explicitly list major assumptions used to prepare the budget.
3. Estimate revenues and expenses for the budget timeframe:
    a. Estimate revenues and direct expenses for each program and service.
    b. Estimate administrative costs.
    c. Identify revenue to balance with estimates of expenses.
4. Balance estimated expenses to identified sources of revenue.
5. Compile findings into a complete budget document.

Operating Budget

An operating budget forecasts revenues and expenses related to the provision of transit service such as labor, services, materials/supplies, and administrative costs.

Develop the operating budget using the chart of accounts by line item and by functional areas like operating, maintenance (vehicle and non-vehicle), administration, and planning. For a transit agency that purchases transportation, purchased transportation in another important line function separate from operating functions and within the operating budget. Figure 5-5 provides an easy reference for operating expenses by function.

Differentiate between variable costs (e.g., driver wages, fuel costs, and maintenance costs) and fixed costs (e.g., administrative salaries, insurance, and professional services). Cost categories enable budget staff to document and analyze cost drivers to identify cost savings opportunities.

Operating
- Transportation Administration & Support
  - Garage & Station Supervision
  - Safety & Training
  - Field Supervision
  - Accident Investigation
- Revenue Vehicle Movement Control
  - Starters
  - Dispatching
  - Technology Support (AVL, Signal Priority)
- Scheduling of Transportation Operations
  - Data Collection Activities (Ride/Time Checks)
  - Scheduling & Runcutting
  - Development of Schedule Summaries
- Revenue Vehicle Operation
  - Operators
  - Fuels & Lubricants (& related taxes)
  - Tires
  - Vehicle Licensing & Registration
  - Lease & Rental Costs (Facilities, Vehicles)
- Ticketing & Fare Collection
  - Producing Fare Media
  - Distributing Fare Media
  - Pulling Vaults
  - Counting Cash
  - Processing Debit/Credit Card Transactions
- System Security
  - Patrolling Buses & Stations
  - Securing Operating Facilities
  - Monitoring Closed Circuit TV
  - Court Appearances

Maintenance
- Vehicle Maintenance (including Service Vehicles)
  - Maintenance Administration
    - Maintaining Vehicle Databases
    - Accumulating Performance Data
    - Providing Technical Training
    - Scheduling & Recording Maintenance Activities
    - Engineering Maintenance Activities
  - Vehicle Servicing
    - Interior & Exterior Washing/Cleaning
    - Refueling
    - Adding Engine Oil or Water
    - Movement of Vehicles for Servicing
  - Vehicle Inspection & Maintenance
    - Schedule preventive maintenance
    - Minor Repairs & Fluid Changes
    - Road Calls/Towing
    - Component Rebuild/Overhaul
    - Major Repairs
    - Major Unit Replacement
    - Accident Repair
    - Vandalism Repair
- Non-Vehicle Maintenance
  - Vehicle Movement Control Systems
  - Fare Collection & Counting Systems
  - Structures, Tunnels, Subway; Roadway & Track
  - Passenger Stations
  - Operating Stations (Garages), Grounds & Equipment
  - Vandalsim & Accident Repair of Buildings, Grounds & Equip.
  - Operations & Maintenance of Electrical Power Towers
  - Administrative Supervision & Clerical Support

Purchased Transportation
- Expenses that are billed by the seller of service (invoiced)
- Does not include:
  - Seller's expenses that are not billed
  - Expenses in support of purchased transportation

Administrative
- Finance & Procurement
  - Accounting
  - Payroll
  - Budgeting & Financial Reporting
  - Purchasing
  - Storing & Issuing Materials
  - Inventory Management
  - Real Estate Management
- Marketing & Customer Service
  - Telephone Information
  - Complaint Lines
  - Distributing Information to Facilities
  - Promotions
  - Media Relations
  - Market Research
- Risk Management
  - Claims Management
  - Payments for Injuries & Damages
  - Defending Liability Cases
  - System Safety Planning
- General Activities
  - Personnel
  - Legal Services
  - Insurance
  - Information Technology
  - Office Management
  - General Management

Planning
- Service Development
  - Researching Demographics & Technology
  - Identifying Route Configurations
  - Identifying Service Levels
  - Regional Planning
  - Long-Range Planning
  - Coordination Planning

Figure 5-5. Operating Expenses by Function

Capital Budget

A capital budget forecasts revenues and expenses related to a transit agency's capital assets such as transit vehicles, facilities, support equipment, and right of way. Capital assets have life expectancies beyond one year; however, all assets have a finite life expectancy. Therefore, transit agency's capital assets are typically incorporated into capital programs which outline maintenance and replacement plans. A capital budget is typically at least five years, to enable the transit agency to anticipate capital revenue requirements sufficiently in advance to program the funds from FTA programs and to identify required local match.

Fleet Replacement for State of Good Repair

For state-funded and rural transit districts, the largest share of capital expense is to purchase revenue vehicles (buses and vans). FTA developed the state of good repair initiative in order to promote and encourage transit agencies to maintain and protect assets. The main goal of the SGR is for transit agencies to provide consistently safe and reliable transit service. FTA encourages each transit agency to assess fleet condition, practice industry standard preventive maintenance, and develop a sustainable fleet replacement plan.

FTA establishes a minimum service-life for vehicles by vehicle category. The minimum service-life is the expected miles or years an agency must use a vehicle before the vehicle is retired without financial penalty (financial obligation to return funds to the FTA). The purpose of the minimum service-life policy is to ensure that federal taxpayers obtain an adequate return on investment. Table 5-8 provides details on vehicle categories and the FTA minimum service-life schedules. The FTA service-life schedule varies by vehicle category.

Table 5-8. FTA Transit Vehicle Minimum Service Life Schedule

	Typical Characteristics			Minimum Life Whichever occurs first	
Category	**Length**	**Approx. GVW**	**Seats**	**Years**	**Miles**
Heavy-Duty Large Bus	35 to 48ft, 60ft artic	33,000 to 40,000	27 to 40	12	500,000
Heavy-Duty Small Bus	30ft	26,000 to 33,000	26 to 35	7	200,000
Medium-Duty and Purpose-Built Bus	30ft	16,000 to 26,000	22 to 30	7	200,000
Light-Duty Mid-Sized Bus	25 to 30ft	10,000 to 16,000	16 to 25	5	150,000
Light-Duty Small Bus, Cutaways, and Modified Van	16 to 28ft	6,000 to 14,000	10 to 22	4	100,000

Methodology for Fleet Replacement and Expansion Plan

A vehicle replacement plan provides for regular retirement of vehicles that have served past the useful life (in service years, service life miles, or both), and can be used to forecast financial requirements for capital investment. A vehicle replacement plan and a regular preventive maintenance program will help to ensure a state of good repair for the vehicle revenue fleet. A vehicle fleet in good repair will ensure comfortable, reliable, and safe service for customers.

A transit agency will also need to purchase additional vehicles for the fleet to accommodate projected ridership growth and new services. Possible objectives for a fleet replacement and expansion plan are as follows:

- Replace existing vehicles consistent with a state of good repair.
- Plan for a regular vehicle replacement schedule.
- Provide for fleet expansion consistent with the growth in ridership and new services.
- Plan for a predictable capital budget.

Problem Solving by Analyzing Budget Variances

Budgets help transit agencies control expenditures and identify financial situations that require quick action. A budget variance occurs when actual revenues or expenditures differ from those forecast in a transit agency's budget. Depending on the situation, some variances are favorable (lower expenses than forecast) and others present challenges (lower revenues than forecasted). Documenting budget variances in the current or previous budget period may help to identify a situation that requires assessment to determine the cause of the variance and how to best address the situation. Such assessment should include the following steps: (*2*)

1. Define the problem.
2. Work with staff to brainstorm solutions.
3. Narrow solutions to those that are feasible.
4. Evaluate potential solutions and reach consensus.
5. Implement a re-evaluation timeline.

Some budget variances may require revision of the proposed or future budget. If the cause of the budget is not addressed, the situation cannot be remedied and will result in repeated variances.

Anyone that contributed to the initial budget (staff and stakeholders) should be included in budget revisions for consistency and asked for feedback and approval of the revised version. Revised budgets should highlight all changes and present comparisons between the original budget and the revised budget to document the changes and reasoning.

Business Plan

Short range planning and the budget process are complementary efforts. Business plans present short range planning outcomes supported by budget summaries, assessment of current transit conditions, observed trends, and recommendations for future service and initiatives.

Approximately half of a typical business plan (presented below) documents budgeting and evaluation. Business plans are helpful to communicate a transit agency's intent through goals, objectives, and performance measures and generating inputs for the development of operating and capital budget documents. Please refer to the Dallas Area Rapid Transit (DART) 2017 business plan for a comprehensive example of this type of documentation: https://www.dart.org/ShareRoot/debtdocuments/FY17BusinessPlan.pdf.

A typical business plan is outlined as follows:

1. Introduction and scope.
    a. The nature and purpose of the business plan.
    b. Brief history of the transit agency.
    c. Financial and operating trends over the previous [three] years.
    d. Overview of the rest of the business plan.
2. Description of the transit agency's organization and governance.
    a. Legal structure and purpose.
    b. Make up of board and suggested changes.
    c. The role of the agency in the region.
    d. The organization chart for the system including all positions from the board of directors to operators.
    e. Evaluation of current governance and organizational structure.
3. Market for public transportation in the system's service area.
    a. Demographic information on counties and cities within the transit agency's service area.
    b. Estimate of current ridership by geographic area.
    c. Per capita projections of possible ridership level as service is developed.
4. Description of existing services and facilities.
    a. Description of current services.
    b. Description of functional areas of operation:
        i. Call taking/dispatching.
        ii. Maintenance.
        iii. Personnel.
        iv. Management information systems (client records, ridership, and operating data).
        v. Accounting/finance.

   c. Description of vehicles
      i. Vehicle roster.
      ii. General assessment of conditions.
   d. Description of maintenance/administrative facilities.
   e. Performance evaluation using key measures.
      i. Time series for system.
      ii. Peer group comparison with other systems.
5. System mission, vision, goals, and specific objectives to guide next [five] years.
   a. A vision for the system and its relationship to regional goals.
   b. Transit-specific objectives with measurable outcomes.
   c. Specific performance measures and future goals.
6. Discussion of future expansion/service options.
   a. Description of options (e.g. more commuter routes or more late-night service).
   b. Quantification of the miles/hours and potential ridership associated with each possible improvement.
   c. Estimated capital and operating costs for each possible improvement.
   d. Ranking of the relative priority of each improvement and timing of the improvement's implementation.
7. Proposed short-term performance objectives for each of the following [three] years.
8. Capital budget for [five] years.
   a. Vehicle replacement needs and timing.
   b. Vehicles for expansion.
   c. Facility expansions.
   d. Computers, information systems, maintenance equipment, other small capital items.
9. Operating budget and plan for next [budget term].
   a. Operating revenue, expense, and deficit projections for [budget term] for base service and proposed expansions.
   b. Analysis of income options for state, federal, and local match.
   c. Proposed changes in staffing levels or other management changes needed to support future service.
10. Recommendations for on-going performance monitoring and future plan updates.
   a. Suggested performance measures.
   b. Suggested information systems to track performance.
   c. Possible triggers to suggest plan update.

Part 2: Financial Management

We've discussed sources of funds, budgeting, and accounting. However, to ensure that all these practices occur in a way that minimizes financial risk, transit agencies need to employ financial management techniques. Financial management is a collection of policies, practices, and decisions designed to achieve agency objectives effectively and efficiently by planning, organizing, directing, and controlling the financial activities of an organization (*10*).

Financial management guides and oversees the financial operations of an organization, including all budgeting, procurement, accounting, investments, etc.

This module will discuss FTA's financial management requirements outlined in Chapter VI of FTA Circular 5010.1E Award Management Requirements (*11*). This module is organized in the same way as Chapter VI of the circular, including discussion of:

- Internal controls.
- Local match.
- Financial plans.
- Allowable costs.
- Indirect costs.
- Program income.
- Annual audit.
- Payment procedures.

FTA's Expectation of Financial Management

The federal government, including FTA, has a vested interest in ensuring that grant recipients are financially capable and have appropriate financial management practices in place. Federal funds support a large portion of public transit's capital and operational needs throughout the nation, so it is in everyone's interest—including each and every taxpayer—that transit agencies and other recipients of FTA awards employ good financial management.

FTA has published a circular solely dedicated to the requirements associated with handling FTA award funds: FTA Circular 5010.1E Award Management Requirements. The circular was recently revised to include changes related to the FAST Act, FTA's new electronic award management system (called TrAMS), and OMB's guidance contained in 2 CFR 200. The circular's effective date is March 21, 2017.

From FTA's website (*11*):

> These requirements are intended to assist recipients in administering FTA-funded projects and in meeting award responsibilities and reporting requirements. Recipients have a responsibility to comply with regulatory requirements and to be aware of all pertinent material to assist in the management of federally assisted awards.

Internal Controls

FTA expects that all award recipients and subrecipients have internal controls in place. These internal controls should help protect the federal government's interest and investment.

Definition of Internal Controls

An internal control is a process, implemented by a recipient or subrecipient, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations.
- Reliability of reporting for internal and external use.
- Compliance with applicable laws and regulations.

Why Have Internal Controls?

- Operate efficiently and economically.
- Keep obligations and costs within limits and legal requirements.
- Safeguard assets against waste, loss, and misuse.
- Ensure timely collection and accounting for operating and other revenues.
- Ensure accuracy and reliability in financial, statistics, and other reports.

What are the Elements of Internal Controls?

- Assurance that internal controls are an integral part of management systems.
- Positive and supportive attitude among managers and employees.
- Assignment of control functions to experienced employees – duties must be clearly defined!
- Identify specific internal control objects; ensure needs are identified and valid controls are implemented.
- Adoption of internal control policies, plans, and procedures (e.g., organizational separation of duties and physical arrangements).
- Regular program of testing to identify vulnerabilities in the internal control system.

Self-Assessment

Recipients must evaluate their internal controls and financial management systems to ensure they are effective. FTA developed an internal controls self-assessment form.

Financial Management Systems

States

Financial management systems of a state, recipient, and subrecipient, including records documenting compliance with federal statutes, regulations, and the terms and conditions applicable to the grant award must be sufficient to:

- Permit preparation of reports required by general and program-specific terms and conditions.
- Permit the tracing of federal assistance to a level of expenditures adequate to establish that such federal assistance has been used according to the federal statutes, regulations, and the terms and conditions of the Award.

Non-States

Entities other than a state have many requirements listed in the circular. Readers are encouraged to review the circular on pages VI-4 through VI-5. A bulleted list is provided:

- Financial reporting.
- Accounting records.
- Internal control.
- Budget control.
- Allowable cost.
- Source documentation.
- Cash management.

Non-Federal Share

FTA awards require some level of non-federal share (also called *local match*). Local match is discussed in more detail in Module 4. The requirements for a non-federal share are summarized:

- Grant recipients must certify to the FTA that the grant recipient has or will have available local match for the federal grant.
- Recipients may not use the local match amount as the local match for *more than one federal award*.

- The circular gives some specific examples of sources of local share:
    - Cash from nongovernmental sources other than revenues from providing public transportation services.
    - Non-farebox revenues…such as the sale of advertising and concession revenues (a voluntary or mandatory fee that a college, university, or similar institution imposes on all its students for free or discounted transit service is not farebox revenue).
    - Assets from other federal sources if authorized by federal law.
    - Amounts received under a service agreement with a state or local social service agency or private social service organization.
    - Undistributed cash surpluses, replacement or depreciation cash funds, reserves available in cash, or new capital.

Grant recipients should consult the applicable *program circular* to determine what sources of local match are permitted for any particular activity.

Financial Plan

Recipients must have a financial plan available to the FTA upon request. The plan must:

- Be a multi-year plan (3-5 years) for operating and capital revenues and expenses.
- Demonstrate the source(s) of local match, the amounts of match from each source, and the time frame for acquiring local match funds.
- Indicate adequate revenues to maintain and operate the existing system and to complete the annual program of projects.

Allowable Costs

Generally speaking, not all costs of all activities are eligible for federal financial support. Although the specifics of which costs are allowable and not allowable may differ across different grant programs, the circular provides some general principles and guidance that are worth summarizing. More information and guidance is available in program-specific circulars as well as OMB guidance regulation contained in 2 CFR 200.

Criteria for Allowable Costs

To be allowable under a federal assistance program, costs must meet the following general criteria (Chapter VI, Section 5.b).

- Be necessary and reasonable for proper and efficient administration of the federal assistance program, be allowable under OMB principles and circulars, and NOT be general expenses required to carry out the overall responsibilities of state or local governments.
- Be authorized or not prohibited under state or local laws or regulations and must conform to limitations or exclusions in laws, regulations, policies, etc.

- Be consistent with policies, regulations, and procedures that apply uniformly to both federally assisted and other activities of the unit of government of which recipient is a part.
- Be treated consistently. (For example, the same cost should not be treated as a direct cost if the same cost has been allocated to the award as an indirect cost.)
- Be determined in accordance with the relevant and appropriate generally accepted accounting principles.
- Not be allocable to or included as a cost of any other federally assisted program in either current or prior periods.
- Be net of all applicable credits.
- Be adequately documented.
- Not be incurred before its award is made unless specific permission is given otherwise.

Disallowed Costs

FTA will exclude:

- Any cost to implement the award incurred before the date of the award unless specific permission is given otherwise.
- Any cost attributable to property or services received under a contract or other arrangement that is required to be, but has not been, concurred in or approved in writing by FTA.

Notes:

- Just because the FTA pays for it, doesn't mean the cost was allowed.
- Just because the project is closed doesn't mean the FTA might not want its money back if it was used for non-allowable costs.

Indirect Costs

This section of the module will discuss the topic of indirect costs. Indirect costs are part of the cost of delivering transit service; therefore, it is important to understand both how to capture and report indirect costs and what FTA requirements exist if a grantee intends to seek payment for indirect costs.

What is an Indirect Cost?

First, we need to recognize that at some point, every *indirect cost* was once a *direct cost* for the entity or organization in which the expense originated. Whether a cost is *indirect* or *direct* is relative to the program, entity, or organization and its relationship to the cost's origination and to the federal grant. Although possible to give examples of typical indirect costs (e.g., centralized accounting, procurement, or human resources), the nature of the cost or work done does not define direct or indirect—whether the work can be identified with the federal award is the best determining factor. For example, a transit agency that is a department of county government may

utilize the county's human resources staff instead of having its own transit-agency-specific staff. The transit agency is using resources (staff time, materials, etc.) of the county human resources office. Assuming that the county does not bill the transit agency for human resources services, the county government's human resources services are an indirect cost for the transit agency. **Note: an agency whose sole purpose is to provide public transportation usually does not have indirect costs**.

Indirect costs are:

- Incurred for a common or joint purpose benefiting more than one cost objective.
- Not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved.
- Originating in the recipient department as well as those incurred by other departments in supplying goods, services, and facilities to the recipient department.

FTA Requirements for Indirect Costs

If a grant recipient intends to seek payment for indirect costs, the recipient must have either an approved:

- Cost Allocation Plan (CAP) and/or
- Indirect Cost Rate Proposal (ICRP).

The indirect costs must be on a separate line item in a project budget to be eligible for reimbursement.

CAPs and ICRPs must be approved by the recipient's assigned cognizant federal agency[1]. Also, reviews of CAPs and ICRPs and their use are a standard part of FTA comprehensive reviews (*12*).

Cost Allocation Plans (CAP)

The CAP is a plan that distributes the costs of a state or local government's executive and central level support functions to those operating organizations (usually at a lower tier level) within the government that benefit from them. A CAP is used in the case when transit is a unit or sub-unit of a parent agency (e.g., a city or county government), and the transit department benefits from the services provided by the parent agency (e.g., legal, maintenance, or personnel). The CAP answers the question of how the share of the parent agency services utilized by the transit agency will be valued or priced.

[1] A federal agency assigned responsibility for reviewing and approving CAPs and ICRPs for grant recipients on behalf of all other federal agencies. The cognizant agency for states is DHHS. Most FTA grantees submit CAPS and ICRPs to the U.S. Department of Housing and Urban Development (*3*). The USDOT is the cognizant agency for state and local airport and port authorities and transit districts.

There are two types of CAPs:

- Indirect cost allocation plan: when a parent organization administers several programs (from a variety of grant funding sources) and transit is one of the programs. The goal of an indirect cost allocation plan is to allocate a proportion of administrative and facilities costs to transit that represents transit's fair share of those costs.
- Central services cost allocation plan: when a parent organization is local (usually city or county) government of which transit is a department run independently within the parent organization.

If the parent agency requests cost reimbursement from federal/state grants, central services must be reported as accrued expenses. If the parent agency does not expect reimbursement, central services can be reported as contributed expenses (and are therefore eligible for use as local match).

General requirements of CAPs:

- Must be updated annually and made available for review at the state's or local government's single audit. States and major governments[1] have to submit their CAPs to their cognizant agencies annually.
- Must be approved in accordance with the requirements of the federal cognizant agency for indirect costs.
- All costs in the plan must be supported by formal accounting records.

Indirect Cost Rate Proposals (ICRP)

The ICRP is a financial document, updated annually at the operating agency level, which distributes the administrative support and/or overhead costs of that agency to the programs (and the grants/agreements thereunder) that benefit from them. The ICRP is submitted by an FTA recipient or subrecipient to substantiate its request for the establishment of an indirect cost rate. The indirect cost rate is a percentage applied to modified total direct costs that represents the amount of "overhead" or "administration" resources spent by the agency to implement the activities under the award.

Individual operating agencies and non-profit recipients normally charge federal awards for indirect costs through an indirect cost rate. Each operating agency usually must submit its own ICRP. The indirect costs included in the indirect cost rate can include:

- The indirect costs originating in each department or agency of the recipient carrying out federal awards.
- The costs of central government services distributed through the central cost allocation plan and not otherwise treated as direct costs.

[1] A major local government is one that receives more than $100 million in direct federal awards.

If a recipient has *never negotiated* an indirect cost rate, it can choose the de minimus rate of 10 percent of the modified total direct cost—and does not have to submit a ICRP.

General requirements of ICRPs:

- Must be updated annually and must be made available for review at the recipient's annual single audit.
- The initial ICRP must be approved by FTA or the relevant cognizant federal agency.
- All costs in the ICRP must be supported by formal accounting records to substantiate the ICRP charges.
- A new ICRP must be submitted for approval when there are any substantial changes (more than 20% change) in the indirect cost rate, a change in accounting methodologies, or a change in organizational structure that may impact the indirect cost rate.

Each local government or agency that receives $35 million or more in direct federal funding is required to submit a proposal to its cognizant agency for indirect costs within six months prior to the beginning of the recipient's fiscal year. All other entities must develop a plan and keep it on file for audit.

Notwithstanding program-specific exclusions, indirect costs as calculated by an approved indirect cost rate are eligible for federal reimbursement.

Overview of Cost Allocation Scenarios and Approaches

All of this discussion of allocation might be difficult to keep track of. Module 6 discusses allocating costs to transit services. This module discusses cost allocation plans and indirect cost rates. Table 5-9 should help clear up the various real-life scenarios that lead to different types of allocation approaches.

Table 5-9. Summary of Cost Allocation Questions and Recommended Approach

Type of Organization	Cost Allocation Question	Recommended Approach
Municipal Government County Government	A city or county government asks the appropriate methodology to recover its costs for various central service departments (purchasing, audit, human resources/personnel, legal, etc.) under its various Federal awards.	Central Services Cost Allocation Plan
Municipal Government County Government	A city or county government operates transit services as a function of a larger department, for example the Department of Public Services and Transit. The city or county government asks the appropriate methodology to claim the costs of departmental overhead and shared costs under its Federal transit grants.	Indirect Cost Allocation Plan
Non-profit Organization for example Council of Government or Planning Commission	A non-profit organization operates several major programs or activities, including transit services. The agency asks the most appropriate methodology to claim the costs of agency overhead costs under its various Federal awards.	Indirect Cost Rate Approved by Cognizant Agency
Transit Provider	A transit provider asks the most appropriate methodology to include certain transit administrative direct costs in its cost analysis of individual services. These costs include salary and personnel costs, facility related costs, and other expenses that cannot by directly accounted for as variable costs.	Transit Service Cost Allocation Plan
Transit Provider	A transit provider receives funding under both Section 5307 Urban and Section 5311 Rural grant programs. FTA requires a methodology to allocate costs between the two programs.	Urban/Rural Cost Allocation Plan
Transit Provider	A transit provider receives local funding from multiple local jurisdictions (for example, city/county governments). The transit provider asks the appropriate methodology to allocate costs by jurisdiction.	Jurisdictional or Service Area Cost Allocation Plan
Transit Provider approved to operate Charter Services	An FTA grantee asks the most appropriate methodology to document eligible charter service pursuant to 49 CFR Part 604.	Charter Services Cost Allocation Plan

Program Income

Program income is "gross income earned by the recipient, or subrecipient, that is directly generated by a supported activity, or earned only as a result of the federal award during the period of performance" (*11*).

FTA Recipients are encouraged to earn income to defray program costs where appropriate.

Examples of Program Income

- Fees for services performed.
- Use or rental of real or personal property acquired under an award.
- Sale of commodities or items fabricated under an award.
- License fees and royalties on patents/copyrights.
- Advertising/concessions.
- Payments of principal and interest on loans made with federal assistance.

Costs incident to earning program income that have not been charged to the award may be deducted from the recipient's gross income.

Government revenues (e.g., taxes, fines, and other fees) are not program income. Also, the sale of real property or equipment is not program income.

Uses of Program Income

Program income can be used by grant recipients in many ways:

- Use the income for capital or operating public transportation expenses.
- Use the income as the local match for *future public transportation projects*.

However, the specifics about the use of program income change across some of FTA's programs. For example, "income from a service agreement with a State or local social service agency or a private social service organization to provide transportation may be used as the non-federal share for the award in which the income is earned" (*11*, Chapter VI, Section 7). Note that the explicit provision allows for use of program income as local match *in the period of performance* for a given FTA grant ONLY IF that income is from a human services coordinated transportation contract. Otherwise, program income may only be used as local match in *future* grant agreements.

Annual Audit

- All recipients that expend $750,000 or more in a year in federal assistance from all sources must have a single audit conducted.
- The audit must be conducted by an independent, outside auditor.

The purpose of the single audit is to protect the federal interest and investment and ensure:

- Financial statements fairly present the recipient's financial position in accordance with generally-accepted accounting principles.
- The recipient has internal accounting and control systems to provide assurance of management of grants in compliance with applicable federal, state, and local laws and regulations.
- The recipient has complied with laws and regulations related to financial transactions and to FTA grant programs.

Recipients must determine whether subrecipients spend the federal assistance received in accordance with applicable laws and regulations.

Payment Procedures

The *Payment Procedures* section of the *Award Management* circular describes various timelines, thresholds, and logistics for orchestrating the specific payments from the federal government to the recipient. The details of those procedures are beyond the scope of this workshop; however, here are a couple of important points:

- FTA does not usually make advance payments.
- Recipients may have to repay funds (with interest) back to FTA if:
    - The recipient has insufficient local match.
    - The equipment acquired or improved using the FTA award is sold (e.g., selling a bus too soon).
    - If the recipient has drawn down federal funds but has not actually spent them.

Helpful Resources

Here is a list of links or resources with more information or help with this module's content.

- Committee of Sponsoring Organizations of the Treadway Commission (COSO) – Internal Control Guidance and Thought Papers: https://www.coso.org/Pages/ic.aspx
- A Guide for State, Local, and Indian Tribal Governments – Cost Principles and Procedures for Developing Cost Allocation Plans and Indirect Cost Rats for Agreements with the Federal Government: https://www.dol.gov/oasam/boc/ASMB_C-10.pdf
- 2 CFR 200
- FTA Financial Management Oversight web page: https://www.transit.dot.gov/regulations-and-guidance/safety/financial-management-oversight
- FTA Enhanced Review Worksheet – Financial Management: https://www.transit.dot.gov/funding/grantee-resources/triennial-reviews/enhanced-review-module-worksheet-1-financial-management
- National Transit Database Policy Manual 2017.

Glossary of Accounting Terms

Account – Formal record that represents, in words, money or other unit of measurement, certain resources, claims to such resources, transactions or other events that result in changes to those resources and claims.

Account Payable – Amount owed to a creditor for delivered goods or completed services.

Account Receivable – Claim against a debtor for an uncollected amount, generally from a completed transaction of sales or services rendered.

Accounting – The set of rules and methods by which financial and economic data are collected, processed, and summarized into reports that can be used in making decisions.

Accrual Accounting – A method of bookkeeping where revenues are recorded when earned; the revenue does not have to be received in the same reporting period. Similarly, expenditures are recorded as soon as they result in liabilities for benefits received: the payment of the expenditure does not have to be made in the same reporting period.

Auditor's Report – Written communication issued by an independent Certified Public Accountant (CPA) describing the character of his or her work and the degree of responsibility taken. An auditors' report includes a statement that the audit was conducted in accordance with generally accepted auditing standards (GAAS), which require that the auditor plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, as well as a statement that the auditor believes the audit provides a reasonable basis for his or her opinion.

Balance Sheet – Basic financial statement, usually accompanied by appropriate disclosures that describe the basis of accounting used in its preparation and presentation of a specified date the entity's assets, liabilities and the equity of its owners. Also known as a statement of financial condition.

Capital – Residual interest in the assets of an entity that remains after deducting its liabilities; the amount of a transit agency's total assets less total liabilities; and the third section of a balance sheet, the other two being assets and liabilities.

Capital Expenses – Expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of: the capitalization level established by the government unit for financial statement purposes or $5,000. Capital expenses do not include operating expenses that are eligible to use capital funds.

Cash Accounting – A method of bookkeeping by which revenues and expenditures are recorded when they are received and paid.

Central Service Cost Allocation Plan – The documentation identifying, accumulating, and allocating or developing billing rates based on the allowable costs of services provided by a governmental unit on a centralized basis to its departments and agencies. The costs of these services may be allocated or billed to users.

Certified Public Accountant (CPA) – An accountant who has satisfied the education, experience, and examination requirements of his or her jurisdiction necessary to be certified as a public accountant

Chart of Accounts – A system of accounts and records for classifying financial data. The chart of accounts contains object classes by type (expense, revenue, assets, property, and liability) and functions (activity performed).

Compliance Audit – Review of financial records to determine whether the entity is complying with specific procedures or rules.

Contributed Services – The receipt of services (not cash) from another entity where such services benefit transit operations and the transit agency is under no obligation to pay for the services.

Credits – Credits are reductions of an asset or expense or additions to a liability or revenue.

Cognizant Agency – The Federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed under this Circular on behalf of all Federal agencies.

Cost Allocation – The process used to equitably assign an incurred cost, on a proportional basis, to benefitting programs, functions, modes of service, or Federal awards.

Debits – Entry on the left side of a double entry bookkeeping system that represents the addition of an asset or expense or the reduction to a liability or revenue.

Depreciation – Expense allowance made for wear and tear on an asset over its estimated useful life.

Direct Costs – An object class cost (e.g., labor, services, materials, and supplies) that is incurred exclusively for a particular function, mode, and type of service.

Double-Entry Bookkeeping – Method of recording financial transactions in which each transaction is entered in two or more accounts and involves two- way, self-balancing posting. Total debits must equal total credits.

Expenditure – Payment, either in cash, by assuming a liability, or by surrendering asset.

Facilities – Includes administration, central/overhaul maintenance facilities, light maintenance and storage facilities, and equipment of any of these items.

Financial Accounting Standards Board (FASB) - This board has authority to establish standards of accounting and financial reporting for businesses.

Financial Statements – Presentation of financial data including balance sheets, income statements, and statements of cash flow, or any supporting statement that is intended to communicate an entity's financial position at a point in time and its results of operations for a period then ended.

Fiscal Year – A consecutive 12 month period at the end of which a transit agency, government, firm, or nonprofit organization, etc. determines its financial condition. A fiscal year is not necessarily the calendar year.

Fully Allocated Costs – The distribution of operating (operations, maintenance, non-vehicle maintenance) and project administration expenses to each mode by type of service and function. For directly operated service, expenses are also distributed by object class. Fully allocated costs account for all direct costs plus the allocable portion of indirect expenses. Shared expenses are distributed based on a logical basis of assignment, generally using variables associated with service supply, such as miles and hours of service (demand response) or miles, hours and maximum service vehicle requirements (fixed route).

Function – Function is an activity performed or cost center of a transit agency. The four basic functions are: Operations, Vehicle Maintenance, Non-Vehicle Maintenance, and Project Administration.

Fund Accounting – Method of Accounting and presentation whereby assets and liabilities are grouped according to the purpose for which they are to be used. Generally used by government entities and not-for-profits.

General Ledger – Collection of all assets, liability, owner's equity, revenue, and expense accounts.

Generally Accepted Accounting Principles (GAAP) – A widely accepted set of rules, conventions, standards, and procedures for reporting financial information, as established by the Financial Accounting Standards Board, an independent agency that establishes audit guidelines

Government Accounting Standards Board (GASB) – Affiliated with Financial Accounting Standards Board (FASB), this board has authority to establish standards of financial reporting for all units of state and local government.

Income Statement – Summary of the effect of revenues and expenses over a period of time.

Independent Auditor – A person (or firm) appointed and authorized to examine accounts and accounting records, make comparisons with vouchers, invoices and other documents, and state the result. The auditor must meet the independence criteria contained in the Government Auditing Standards

Indirect Costs – Cost incurred for a common or joint purpose benefiting more than one cost objective and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved.

Indirect Cost Rate Proposal – The documentation prepared by a governmental unit or component thereof to substantiate its request for the establishment of an indirect cost rate.

Interest Expense – The charges for the use of borrowed capital incurred by the transit agency, including interest on long term and short term debt obligations.

Journal – Any book containing original entries of daily financial transactions.

Liability – Debts or obligations owed by one entity (debtor) to another entity (creditor) payable in money, goods, or services.

National Transit Database (NTD) – The system through which the Federal Transit Administration collects uniform data needed by the Secretary of Transportation to administer Department programs.

Non-Vehicle Maintenance – Includes all activities associated with facility maintenance, including: administration; repair of buildings, grounds and equipment as a result of accidents or vandalism; operation of electric power facilities; and maintenance of vehicle movement control systems; fare collection and counting equipment; structures, tunnels and subways; roadway and track; passenger stations, operating station buildings, grounds and equipment; communication systems; general administration buildings, grounds and equipment; and electric power facilities.

Object Class – A grouping of expenses on the basis of goods and services purchased.

OMB – Office of Management and Budget, a Federal agency under the auspices of the President that works cooperatively with the grant-making agencies of the Federal government and the grantee community. OMB leads development of government wide policy to assure that grants are managed properly and that Federal dollars are spent in accordance with applicable laws and regulations.

Operating Expenses – Expenses associated with the operation of the transit agency, and classified by function or activity and the goods and services purchased. It is the sum of vehicle operations, vehicle maintenance, and non-vehicle maintenance. In some states, general project administration will be treated as an additional component of operating expenses.

Other Vehicles – Includes service, supervisory and other vehicles other than rolling stock.

Passenger Fares – The revenue earned from carrying passengers in regularly scheduled and demand response services. Passenger fares include: the base fare; zone premiums; express service premiums; extra cost transfers; and quantity purchase discounts applicable to the passenger's ride.

Project Administration – Includes all activities associated with the general administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning. Project administration expenses may be classified as a non-operating expense eligible for Federal reimbursement on an 80 percent basis.

Revenue Vehicles or Rolling Stock – Vehicles used in providing transit service for passengers.

Service Agreements – A contract or other agreement between a grantee and a government entity or a private, non-profit organization exempt from taxation under subsection 501(c)(1), 501(c)(3), 501(c)(4), or 501(c)(19) of the Internal Revenue Code that is a recipient of funds either directly or indirectly, under one or more of the Federal programs, and wherein the transportation is consistent with the function and purpose of organization.

Special Transit Fares – The revenues earned for rides given in regular transit revenue service, but paid for by some organization rather than by the rider, and for rides given along special routes for which revenue may be guaranteed by a beneficiary of the service.

Unaudited Financial Statements – Financial statements which have not undergone a detailed audit examination by an independent Certified Public Accountant (CPA).

User Side Subsidy – A transportation arrangement where the rider's cost of transportation is partially subsidized by the transit agency. The user is the rider who pays a reduced fare. A typical user-side subsidy program is operated through taxicab operators or a brokerage system who may charge a per ride fee for handling the rider's transportation arrangements.

Vehicle Operations – Includes all activities associated with the subcategories of the vehicle operations function: transportation administration and support; revenue vehicle operation; ticketing and fare collection; and system security.

Vehicle Maintenance – Includes all activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection, and maintenance, and servicing (cleaning, fueling, etc.) vehicles. In addition, vehicle maintenance includes repairs due to vandalism and accident repairs of revenue vehicles.

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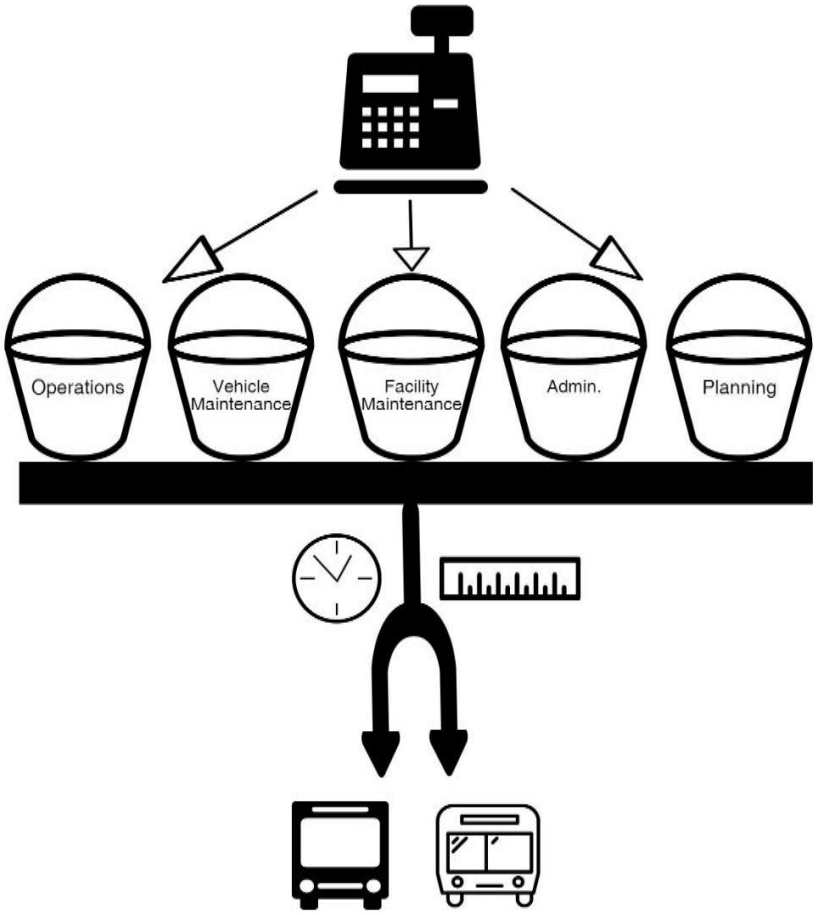
Module 6
Allocating Costs to Transit Services



By the end of this module, you should be able to:

1. **Discuss the purpose of allocating costs to services, modes, and jurisdictions.**
2. **List and describe the four steps in the cost allocation methodology.**
3. **Define important cost allocation terms.**
4. **Complete your own basic cost allocation example.**

TABLE OF CONTENTS

Introduction

How much does bus route *Y* cost per year? This seems like a relatively straightforward question. However, answering this question with absolute precision is nearly impossible, and the effort to do so would be enormous. Imagine trying to track down every hour of every different driver (they all have different salaries), every hour of every mechanic who worked on any bus that operated that route, every drop of fuel that specifically was consumed by buses that operated the route, the cost of every customer service complaint on that route that was handled by customer service staff, etc.

Because transit's operation involves multiple people and multiple vehicles in a complex daily operating environment, we turn to cost allocation to *estimate* the cost of a bus route (or other groups of service), rather than trying to capture the exact, precise cost.

Service cost allocation is the act of distributing costs across modes, services, jurisdictions, routes, etc. for purposes of analysis, planning, performance monitoring, and reporting. Service cost allocation is a very useful tool for transit systems that operate multiple transit routes and/or services. With the help of service cost allocation, transit agencies can also check the trend and reasonableness of costs of services over time.

This module will:

- Define important terms regarding cost allocation.
- Explain FTA, NTD, and other federal requirements for allocating costs.
- Discuss different types of cost allocation models.
- Explain how to perform the cost allocation methodology.

Important Definitions

Terms important to understanding cost allocation are defined here:

- *Cost Allocation:* the act of taking a sum of operating costs and distributing that sum to individual transit routes, transit services, or jurisdictions.
- *Fully Allocated Cost:* a fully allocated cost means a cost that represents the full cost of a transit route or service, including all costs incurred by the transit agency—both variable and fixed. For example, if a transit system calculates the cost of a route using only average fuel consumption and driver wages, the cost estimate ignores other costs (e.g., administration, planning, maintenance, etc.) and therefore is NOT fully allocated. Estimating the fully allocated cost of the route will apportion a relative share of all agency operating costs to the route using a consistent methodology.
- *Variable Costs:* costs that are mainly a function of the amount of service provided. For example, the cost of fuel, parts, and driver wages are variable costs. They change with the amount of service provided.

- *Fixed Costs:* costs that do not change with the amount of service provided (in the short run). For example, the cost of facility maintenance, administration salaries, or management computers do not change with the amount of service provided. There are two main types of fixed costs:
    - Direct Costs: direct fixed costs are those costs associated with assets and functions owned by the transit agency. For example, a transit agency that has its own human resources, IT, and facilities has direct fixed costs associated with these functions. The transit agency incurs and pays for these functions directly.
    - Indirect Costs: indirect fixed costs are those associated with functions or assets utilized (but not directly managed by) the transit agency. For example, a transit agency may be part of a city government and thus utilizes the city's human resources, IT, and facilities. Because these resources are also used by other departments of city government, the costs to the transit agency are indirect (and it may be difficult to quantify the exact portion of city staff time spent on transit agency needs). There is more discussion about indirect costs in Module 6.

FTA and Federal Circular Requirements

To ensure that the cost allocation methodology meets federal requirements, this section outlines the FTA and NTD requirements, and the Office of Management and Budget's Final Guidance for Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards—known as the Super Circular (*1*). The Super Circular, 2 CFR 200 supersedes and streamlines requirements from OMB Circulars A-21, A-87, A-110, A-122, A-89, A-102, A-133, and A-50 guidance. This section also references FTA grant circulars—FTA C 9030.1E (*2*), FTA C 9040.1G (*3*), FTA C 9070.1G (*4*), and FTA C 5010.1E (*5*)—and the NTD reporting manual (*6*).

FTA NTD Financial Reporting Requirements

FTA requires transit agencies to report to the NTD by the Uniform System of Accounting (USOA) object class and by expense function for each mode and type of service and by urbanized/non-urbanized area (*7*). Transit agencies can structure and code accounting systems to follow the USOA/NTD reporting requirements. The NTD may issue a Failure to Report notice to a transit agency if it does not fully allocate costs between all modes and types of service and does not provide a sufficient explanation (*6*).

For example, a transit agency may receive §5307 Urbanized Area Formula Grant funds and §5311 Rural Area Formula Grant funds to support direct operations of fixed-route local bus, commuter bus, and demand-response service in both urbanized and nonurbanized (rural areas). An accounting methodology and system is needed to assign and report financial data by object class and function for each mode—MB, CB, and DR—and by jurisdiction—§5307 UZA and §5311 Non-UZA.

OMB 2 CFR 200 Circular Cost Allocation Requirements

The cost allocation methodology is consistent with OMB 2 CFR 200 Final Rule Objectives (*1*), which include:

1. Eliminating duplicative and conflicting guidance.
2. Focus on performance over compliance for accountability.
3. Encourage efficient use of information technology and shared services.
4. Provide for consistent and transparent treatment of costs.
5. Limit allowable costs to make best use of federal resources.
6. Set standard business processes using data definitions.
7. Encourage non-federal entities to have family-friendly policies.
8. Strengthen oversight.
9. Target audit requirements on risk of waste, fraud, and abuse.

2 CFR 200 provides guidance on allocation of costs to particular federal awards (such §5311 and §5307) or other cost objectives. Section 200.28 defines cost objectives as a program, function, activity, award, organizational subdivision, contract, or work unit for which cost data are desired and for which provision is made to accumulate and measure the cost of processes, products, jobs, capital projects, etc. A cost objective may be a major function of the non-federal entity, a particular service or project, a federal award, or an indirect (facilities and administrative [F&A]) cost activity, as described in 2 CFR 200 Subpart E—Cost Principles. See also §200.44 Final Cost Objective and §200.60 Intermediate Cost Objective.

2 CFR 200 provides for allocation of costs as follows:

- §200.405 Allocable Costs.

  (a) A cost is allocable to a particular Federal award or other cost objective if the goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received. This standard is met if the cost: (1) Is incurred specifically for the Federal award; (2) Benefits both the Federal award and other work of the non-Federal entity and can be distributed in proportions that may be approximated using reasonable methods; and (3) Is necessary to the overall operation of the non-Federal entity and is assignable in part to the Federal award in accordance with the principles in this subpart.

  (b) All activities which benefit from the non-Federal entity's indirect (F&A) cost, including unallowable activities and donated services by the non-Federal entity or third parties, will receive an appropriate allocation of indirect costs.

  (c) Any cost allocable to a particular Federal award under the principles provided for in this Part may not be charged to other Federal awards to overcome fund deficiencies, to avoid restrictions imposed by Federal statutes, regulations, or terms and conditions of the Federal awards, or for other reasons. However, this prohibition would not preclude the non-Federal entity from shifting costs that are allowable under two or more Federal

awards in accordance with existing Federal statutes, regulations, or the terms and conditions of the Federal awards.

(d) Direct cost allocation principles. If cost benefits two or more projects or activities in proportions that can be determined without undue effort or cost, the cost should be allocated to the projects based on the proportional benefit. If a cost benefits two or more projects or activities in proportions that cannot be determined because of the interrelationship of the work involved, then, notwithstanding paragraph (c) of this section, the costs may be allocated or transferred to benefitted projects on any reasonable documented basis. Where the purchase of equipment or other capital asset is specifically authorized under a Federal award, the costs are assignable to the Federal award regardless of the use that may be made of the equipment or other capital asset involved when no longer needed for the purpose for which it was originally required. See also §§ 200.310 Insurance coverage through 200.316 Property trust relationship and 200.439 Equipment and other capital expenditures.

2 CFR 200 requires prior written approval as follows:

- §200.407 Prior Written Approval (prior approval).

  Under any given Federal award, the reasonableness and allocability of certain items of costs may be difficult to determine. In order to avoid subsequent disallowance or dispute based on unreasonableness or nonallocability, the non-Federal entity may seek the prior written approval of the cognizant agency for indirect costs or the Federal awarding agency in advance of the incurrence of special or unusual costs. Prior written approval should include the timeframe or scope of the agreement. The absence of prior written approval on any element of cost will not, in itself, affect the reasonableness or allocability of that element, unless prior approval is specifically required for allowability as described under certain circumstances in the following sections of this Part:

  - § 200.201 Use of grant agreements (including fixed amount awards), cooperative agreements, and contracts, paragraph (b)(5);
  - § 200.306 Cost sharing or matching;
  - § 200.307 Program income;
  - § 200.308 Revision of budget and program plans;
  - § 200.332 Fixed amount subawards;
  - § 200.413 Direct costs, paragraph (c);
  - § 200.430 Compensation—personal services, paragraph (h);
  - § 200.431 Compensation—fringe benefits;
  - § 200.438 Entertainment costs;
  - § 200.439 Equipment and other capital expenditures;
  - § 200.440 Exchange rates;
  - § 200.441 Fines, penalties, damages and other settlements;
  - § 200.442 Fund raising and investment management costs;
  - § 200.445 Goods or services for personal use;
  - § 200.447 Insurance and indemnification;

- § 200.454 Memberships, subscriptions, and professional activity costs, paragraph (c);
- § 200.455 Organization costs;
- § 200.456 Participant support costs;
- § 200.458 Pre-award costs;
- § 200.462 Rearrangement and reconversion costs;
- § 200.467 Selling and marketing costs; and
- § 200.474 Travel costs.

FTA C 9040.1G: Allocation Expectation

FTA Circulars 9030.1E Urbanized Area Formula Program (*2*), 9040.1G Formula Grants for Rural Areas (*3*), and 9070.1G Enhanced Mobility of Seniors and Individuals with Disabilities (*4*) provide program management and administrative requirements including financial management. In particular, FTA Circular 9040.1G provides expectations on cost allocation when transit agencies receive both §5307 and §5311 funding:

- In some localities, a subrecipient receives both §5307 and §5311 funding to provide public transportation to urbanized and surrounding nonurbanized areas. These subrecipients should use §5311 funds only to assist the nonurbanized portion of those localities.
- Because of the wide range of circumstances under which an operator may provide services in both urbanized and nonurbanized areas, FTA expects
  - The subrecipient to develop a reasonable basis related to the service provided, for allocating operating costs between the two FTA funding sources.
  - The subrecipient should also apply this procedure to "joint" capital projects.
  - Similarly, subrecipients that purchase vehicles under either the Section 5307 or 5311 program for use in any part of a combined urbanized and nonurbanized service area should ensure that it has capital replacement policies in place to ensure that it is using program funds according to Federal eligibility requirements.
  - When there is a question as to the reasonableness of the subrecipient's cost allocation methodology, FTA looks to the State to make a determination.

Types of Cost Allocation Models

Generally speaking, transit cost allocation procedures fall into three categories:

- Single variable.
- Two variable.
- Multi-variable.

Single-Variable Model

Single-variable models estimate costs of transit services using one unit cost, for example, average cost per hour. Single-variable models are easy to create: simply take the total operating cost and divide it by the total vehicle hours (or miles). Then, use that cost per hour and multiply it by the number of hours associated with a given service.

Here's an example for the *Awesome Transit Agency* (the ATA):

- Annual operating cost: $100,000.
- Annual hours of service: 1,000.
- Operating cost per hour: $100.

The ATA has an existing bus route with 250 hours of service, so the ATA would estimate the route cost by multiplying the hours of service times the cost per hour.

$100 per hour x 250 hours = $25,000

However, this estimate might be inaccurate, depending on the configuration of the route, including its average speed. Also, if the transit agency used cost per mile instead of cost per hour, it would get a different cost estimate for the route. Single-variable models also do not capture the operational and cost nuances of route types (e.g., express vs. local bus).

To overcome this problem with a single-variable model, we'll add another variable: miles.

Two-Variable Model

Two-variable models estimate costs of transit services using two unit costs, for example, average cost per hour and average cost per mile. Because there are two variables, we have to figure out which costs are associated with hours and which are associated with miles. The process for associating costs to hours and miles is discussed later in this module.

Here's an example for the ATA:

- Annual operating cost: $100,000.
- Costs associated with hours of service: $70,000.
    - Annual hours of service: 1,000.

    - Cost per hour: $70.
- Costs associated with miles of service: $30,000.
    - Annual miles of service: 10,000.
    - Cost per mile: $3.

The ATA has an existing route with 250 hours and 3,000 miles of service. The cost estimate for this route is the sum of the hours cost and the mileage cost:

- Hours cost: 250 hours x $70 per hour = $17,500.
- Mileage cost: 3,000 miles x $3 per mile = $9,000.

Route cost = $17,500 + $9,000 = $26,500

The $1,500 difference between the one-variable and two-variable models may not seem like a lot, but the one-variable cost model *underestimated* the route's cost by almost 6 percent.

Multi-Variable Models

There are other ways to allocate costs to services. For example, a transit agency could use additional variables in a cost model. Or a transit agency could use data from actual run cuts, fuel management systems, etc. However, the significant increase in effort is disproportionate to any increase in accuracy. Most of a transit agency's costs are a function of miles and hours of service, so a two-variable cost model is the most efficient and effective way to allocate costs to services.

Cost Allocation Methodology—Two-Variable Model

The purpose of this cost allocation methodology for transit systems is to distribute transit system operating costs by individual routes, programs, modes, service types, sponsored service, and jurisdictions (§5307 and §5311). The methodology is based on a two-variable model using hours and miles of service. The purpose of the methodology is to better achieve:

- Consistent and robust documentation for federal grant reimbursement requests.
- Regular and consistent reporting of data to meet FTA requirements for NTD reporting and TxDOT requirements for the PTN-128 reporting.
- Consistent and transparent treatment of costs.
- Elimination of duplicative or misallocation of costs.
- More accurate and equitable cost by transit program, mode, service type, and jurisdiction.
- Effective use of accounting software for financial reporting.
- Reliable cost by transit function—operations, maintenance, administration, planning.

- Accurate reporting and evaluation of performance by route, program, mode, service type, and jurisdiction.
- Basis for budgeting and projecting transit service.

The cost allocation methodology described provides a mechanism to meet the NTD, FTA, and OMB reporting requirements. The cost allocation methodology distributes transit system operating costs by individual routes, service types, modes, sponsored services, and jurisdictions. The methodology is based on the following reports:

- AASHTO Multi-State Technical Assistance Program (MTAP): *Comprehensive Financial Management Guidelines for Rural and Small Urban Public Transportation Providers* (*8*).
- *TCRP Report 144: Sharing the Costs of Human Services Transportation* (*9*).
- *TCRP Report 101: Toolkit for Rural Community Coordinated Transportation Services* (*10*).

Cost Allocation Methodology Steps

The cost allocation methodology requires four steps:

1. Assembly of operations data to include total vehicle hours, total vehicle miles, and passenger trips.
2. Assembly of expenses into a common chart of accounts (by line item "object class") so that expenses can be assigned to functions.
3. Assignment of line-item expense to transit functions.
4. Allocation of variable- and fixed-cost expenses to service modes, types, sponsored services, and jurisdictions.

Definition of Terms:

- **Object class (line-item) expenses** include salaries and wages, fringe benefits, services, materials and supplies, and other expenses—chart-of-accounts structure (see USOA Chapter 5).
- **Expense functions** include vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration (see USOA Chapter 6).
- **Modes** of service include motorbus (MB), commuter bus (CB), bus rapid transit (BR), trolleybus, rail (nine categories), demand response (DR), demand response–taxi, ferryboat, vanpool, aerial tramway, and jitney.
- **Types of service** include directly operated and purchased transportation.
- **Sponsored services** are paid, in whole or in part, directly to the transit provider by a third party and may be a part of a coordinated human services transportation plan (e.g., Veterans Administration, Medicare, Assisted Living Centers, and Head Start programs) (*6*).
- **Jurisdictions** may include but are not limited to §5307 urbanized/§5311 nonurbanized, county/municipality, and ADA-required service area.

The cost allocation methodology is based on a full year of operating data and operations expenses to capture the *total* operating cost of transit services, and should be revised annually or when a significant service change occurs.

Simple, Graphical Example

To demonstrate a simple example, the ATA operates two fixed routes, accumulating the following operating statistics in a year:

- Total Operating Expenses: $150,000
- Total Vehicle Miles: 10,000
- Total Vehicle Hours: 1,000.

To determine the operating cost of each route, ATA must allocate its operating costs (variable and fixed) to each route. A diagram of what this process entails is shown in Figure 6-1.

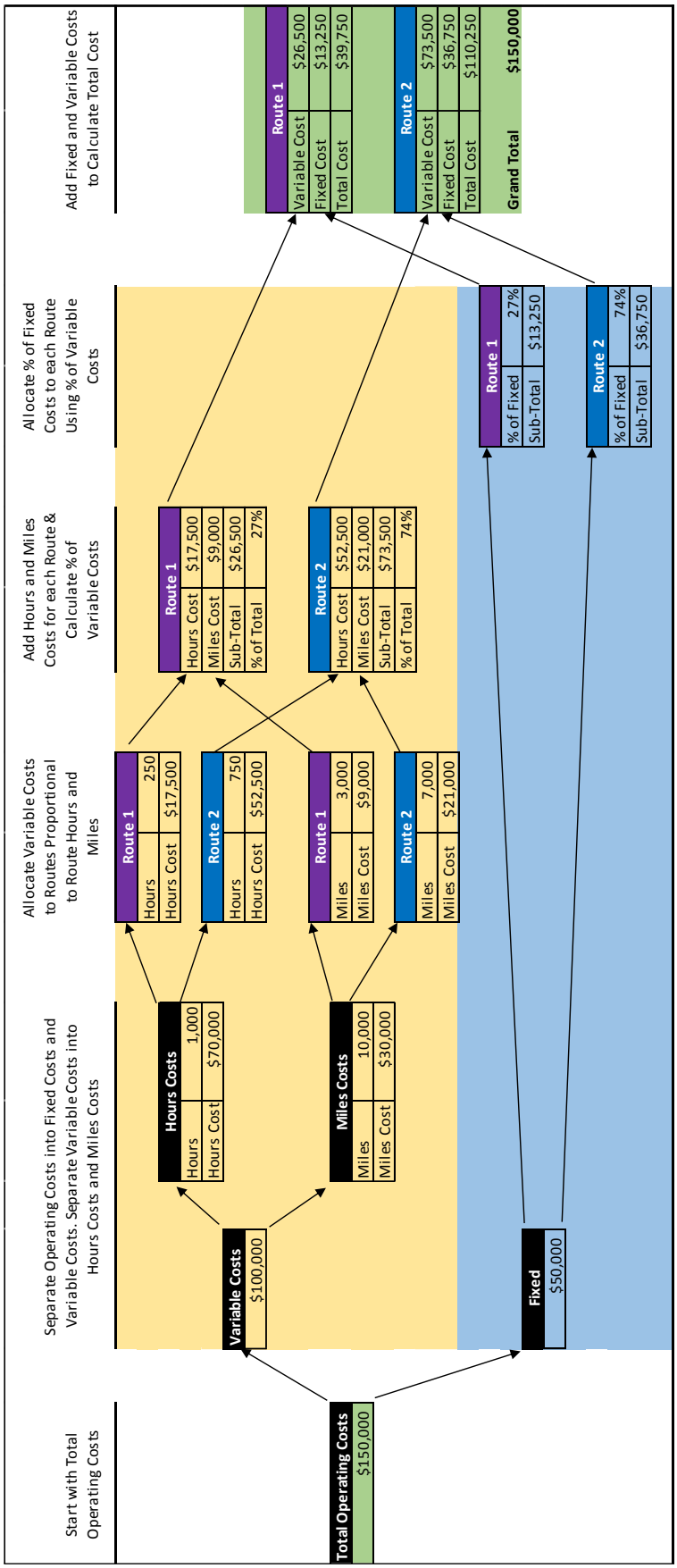


Figure 6-1. Diagram of Two-Variable Cost Allocation

Complex Example

To illustrate a more complex cost allocation procedure, an example transit agency is created to provide the outcomes for each step in the methodology. Below describes the example transit agency service characteristics for reporting.

The example transit agency receives §5307 (urbanized) and §5311 (rural) funding and operates a variety of modes, sponsored services, and jurisdictions as follows:

- Modes: fixed-route motorbus to operate route-deviation service, commuter bus, and demand response
- Type of Service: directly operated (DO)
- Sponsored Service: veterans and adult day care
- Jurisdictions: §5307 small urban, § 5307 large urban, and § 5311 rural

Step 1. Assembly of Operations Data

Operations data include total vehicle hours, total vehicle miles, and passenger trips. Operations data are needed by route, program, and/or jurisdiction. If demand response is a shared-ride service, then passenger hours and passenger miles may be used to allocate costs by program (or contract). Passenger hours and passenger miles are documented based on a sample of demand-response service. (See the discussion under *Shared-Ride Demand Response* in this module.) Table 6-1 provides the example agency operating data to include total vehicle hours, total vehicle miles, and passenger trips by mode, sponsored service, and jurisdiction (funding source).

Table 6-1. Example Agency Operating Data

Route	Funding Source	Mode	Total Vehicle Hours	% Total Vehicle Hours	Total Vehicle Miles	% Total Vehicle Miles	Total Passenger Trips	% Total Passenger Trips
FIXED ROUTE			**67,596**	**93.2%**	**1,531,531**	**95.3%**	**383,619**	**97.8%**
Route 1	Section 5307 Small Urban	MB	3,591	4.9%	57,276	3.6%	29,488	7.5%
Route 2	Section 5307 Small Urban	MB	1,935	2.7%	34,314	2.1%	4,327	1.1%
Route 3	Section 5307 Small Urban	MB	2,473	3.4%	36,765	2.3%	19,293	4.9%
Route 4	Section 5307 Small Urban	MB	600	0.8%	7,850	0.5%	1,000	0.3%
Route 5	Section 5307 Small Urban	MB	3,462	4.8%	50,568	3.1%	32,595	8.3%
Route 6	Section 5311 Rural	MB	1,258	1.7%	22,575	1.4%	1,257	0.3%
Route 7	Section 5307 Small Urban	MB	3,591	4.9%	69,144	4.3%	14,631	3.7%
Route 8	Section 5307 Small Urban	CB	3,741	5.2%	89,268	5.6%	35,651	9.1%
Route 9	Section 5307 Small Urban	CB	3,655	5.0%	83,334	5.2%	35,651	9.1%
Route 10	Section 5307 Large Urban	MB	2,652	3.7%	27,735	1.7%	11,477	2.9%
Route 11	Section 5307 Large Urban	MB	3,182	4.4%	27,864	1.7%	13,615	3.5%
Route 12	Section 5307 Large Urban	MB	2,383	3.3%	37,840	2.4%	9,607	2.4%
Route 13	Section 5311 Rural	MB	1,290	1.8%	35,346	2.2%	1,273	0.3%
Route 14	Section 5307 Large Urban	MB	2,473	3.4%	53,965	3.4%	8,163	2.1%
Route 15	Section 5307 Large Urban	MB	2,508	3.5%	58,910	3.7%	24,879	6.3%
Route 16	Section 5307 Large Urban	MB	3,243	4.5%	78,905	4.9%	24,879	6.3%
Route 17	Section 5311 Rural	MB	3,591	4.9%	80,238	5.0%	28,298	7.2%
Route 18	Section 5311 Rural	MB	3,806	5.2%	85,914	5.3%	28,298	7.2%
Yellow	Section 5307 Small Urban	CB	3,010	4.1%	62,565	3.9%	6,076	1.5%
Purple	Section 5307 Small Urban	CB	2,580	3.6%	50,740	3.2%	6,076	1.5%
Green	Section 5307 Small Urban	CB	3,028	4.2%	61,705	3.8%	5,673	1.4%
Red	Section 5307 Small Urban	CB	2,394	3.3%	134,470	8.4%	3,663	0.9%
Blue	Section 5307 Small Urban	CB	2,394	3.3%	134,470	8.4%	3,663	0.9%
Orange	Section 5307 Small Urban	MB	2,380	3.3%	134,470	8.4%	17,043	4.3%
Maroon	Section 5307 Small Urban	MB	2,380	3.3%	15,300	1.0%	17,043	4.3%
DEMAND RESPONSE			**4,964**	**6.8%**	**75,660**	**4.7%**	**8,759**	**2.2%**
General Public	Section 5311 Rural	DR	2,300	3.2%	22,200	1.4%	3,021	0.8%
Sponsored Services:								
Veterans	Section 5311 Rural	DR	675	0.9%	12,180	0.8%	501	0.1%
Adult Day Care	Section 5311 Rural	DR	1,989	2.7%	41,280	2.6%	5,237	1.3%
GRAND TOTAL			**72,560**	**100.0%**	**1,607,191**	**100.0%**	**392,378**	**100.0%**
Summary by Urban and Rural								
Section 5307 Small Urban			41,212	57%	1,022,239	64%	231,872	59.1%
Section 5307 Large Urban			16,440	23%	285,219	18%	92,620	23.6%
Section 5311 Rural			14,908	21%	299,733	19%	67,886	17.3%
Summary by Mode								
MB			46,794	64%	914,979	57%	287,167	73.2%
CB			20,802	29%	616,552	38%	96,452	24.6%
DR			4,964	7%	75,660	5%	8,759	2.2%

Step 2. Assembly of Operating Expenses

Establishing a common chart of accounts (COA) is necessary to effectively track and report *total* expenses. Reporting total expenses is important to capture all resources used to provide transit services. Not including total expenses yields incomplete data for capturing the real cost of doing business, leads to inaccurate calculation of cost-effectiveness measures, and can result in negotiating inaccurate rates and lead to financial shortfalls.

The NTD requires that agencies report using the Uniform System of Accounts (USOA) COA (*7*). The USOA contains the accounting structure required by federal transit laws and requires the accrual method of accounting. A COA brings uniformity to expense tracking for a transit agency. A COA's key strength lies in establishing expense classes, typically in line with USOA classes. Detailed operating expense classes typically include the following:

- Labor.
- Fringe benefits.
- Services.
- Materials and supplies.
- General administrative expenses (allocated central services, if applicable).
- Utilities.
- Casualty and liability costs.
- Taxes.
- Purchased transportation.
- Miscellaneous expenses.
- Interest expenses.
- Leases and rentals.

Each expense class may contain detailed subcategories. For example, the category "labor" could have separate entries for drivers, administrators, dispatchers, and mechanics. Some transportation agencies have separate expense categories for salaries paid for training or overtime. Other useful expense categories include indirect expenses (for multi-service agencies providing transportation and other services), expense transfers, and interest expenses. A full 12-month period of all costs associated with transit is needed to ensure all costs are represented.

Step 3. Assignment of Line-Item Expenses to Functions

The COA can be assigned to transit functions—operations, operations-fuel, vehicle maintenance, non-vehicle maintenance, administration, and planning. FTA reports operating expenses by function with different types of expenses classified in the USOA (see Appendix A). Fuel is a part of the operations function but is broken out in the methodology for the purpose of allocating the expense by miles operated.

Table 6-2 provides the example transit agency chart of accounts with $3.8 million in system-wide annual expenses assigned to the transit functions operations, operations-fuel, vehicle maintenance, non-vehicle (facility) maintenance, administration, and planning for each line-item expense.

Table 6-2. Example Agency Assignment of Annual Costs to Functions

Account Description	Annual Total Operating Expense	Operations	Operations-Fuel	Vehicle Maintenance	Facility Maintenance	Administration	Planning
Total Operating Costs	**$3,799,051**	**$1,730,086**	**$456,130**	**$570,679**	**$18,662**	**$1,013,494**	**$10,000**
Salaries	**$1,329,261**	**$928,549**		**$179,144**		**$221,567**	
Drivers	$837,984	$837,984					
Dispatch	$90,565	$90,565					
Maintenance	$179,144			$179,144			
Office Staff	$221,567					$221,567	
Fringe	**$699,920**	**$488,926**		**$94,328**		**$116,666**	
Drivers	$441,239	$441,239					
Dispatch	$47,687	$47,687					
Maintenance	$94,328			$94,328			
Office Staff	$116,666					$116,666	
Indirect	**$637,415**					**$637,415**	
Professional Services	**$10,000**						**$10,000**
Temporary Services	**$140,726**	**$119,710**		**$21,015**		**$0**	
Operations	$119,710	$119,710					
Maintenance	$21,015			$21,015			
Travel	**$31,122**	**$6,224**				**$24,898**	
Operations	$6,224	$6,224					
Administration	$24,898					$24,898	
Facility Maintenance	**$18,662**				**$18,662**		
Maintenance (Regular)	**$13,135**				$13,135		
Building Maintenance (Repair)	**$5,527**				$5,527		
Supplies (Operations)	**$15,611**	**$15,611**					
Printing (Operations)	**$7,368**	**$7,368**					
Uniforms	**$11,985**	**$11,985**					
Operations	$9,588	$9,588					
Administration	$2,397					$2,397	
Communications Internet	**$23,991**	**$19,193**				**$4,798**	
Operations	$19,193	$19,193					
Administration	$4,798					$4,798	
Communications Phone	**$34,178**	**$34,178**					
Classified Ads	**$3,357**					**$3,357**	
Drug & Alcohol	**$4,772**	**$3,334**		**$643**		**$795**	
Drivers	**$3,009**	**$3,009**					
Dispatch	**$325**	**$325**					
Maintenance	**$643**			**$643**			
Office Staff	**$795**					**$795**	
Radio Fees	**$15,792**	**$15,792**					
Repairs/ Maintenance	**$220,549**			**$220,549**			
Insurance	**$50,785**	**$50,785**					
Small Tools	**$1,255**			**$1,255**			
Assets under $5000	**$10,047**			**$10,047**			
Utilities	**$23,515**	**$16,461**		**$3,057**		**$3,998**	
Operations	$16,461	$16,461					
Admin	$3,998					$3,998	
Maintenance	$3,057			$3,057			
Computer Supplies	**$561**	**$561**					
Program Costs (Physicals)	**$11,409**	**$11,409**					
Fuel/ Oil	**$456,130**		**$456,130**				
Tires	**$39,518**			**$39,518**			
Training	**$1,123**			**$1,123**			

Step 4. Allocation of Costs

In this two-variable model for allocation, expense functions are classified as either variable costs that vary with hours and miles of service or fixed costs that do not vary with service changes.

Variable Costs

Operations, operations-fuel, and vehicle maintenance functions can be considered variable costs because they vary with the total vehicle miles or hours of service.

Variable Costs Allocated by Total Vehicle Miles.

Vehicle maintenance and operations-fuel costs are allocated by miles because they correlate with the number of miles operated by transit vehicles. Vehicle maintenance is driven by mileage thresholds, and fuel is purchased based on miles per unit.

Variable Costs Allocated by Total Vehicle Hours.

Operating costs excluding fuel are allocated by hours because operating expenses are mostly driver and dispatch labor costs that correlate to vehicle hours operated.

Total vehicle hours and total vehicle miles are used rather than revenue vehicle hours and revenue vehicle miles to capture the differences in deadhead time and miles (time and miles to move the vehicle into and out of revenue service).

Fixed Costs

Non-vehicle (facility) maintenance, administration, and planning costs can be considered fixed costs that do not vary when service changes. To equitably distribute administration and non-vehicle maintenance costs across services, fixed costs are allocated using the proportion of variable cost. Planning costs are directly assigned to the route, program, service type, or jurisdiction that the planning benefited.

Cost Allocation Summary

Variable costs include:

- Fuel costs—allocate by percent of total vehicle miles.
- Vehicle maintenance costs—allocate by percent total vehicle miles.
- Operating costs (without fuel)—allocate by percent of total vehicle hours.

Fixed costs include:

- Administrative costs—allocate using the proportion of variable cost.
- Non-vehicle maintenance costs—allocate using the proportion of variable cost.
- Planning costs—allocate depending on the planning activity. If the planning benefited the system as a whole, then allocating by vehicle hours is reasonable. If the planning benefited a certain route or program, then allocate directly to the route or program.

Table 6-3 provides the example transit agency allocation of costs by fixed route motorbus/commuter bus, demand response, and program, and across §5307 small urban, §5307 large urban, §5311 rural transit services.

Table 6-3. Example Outcome: Cost by Route, Mode, Sponsored Service, and Jurisdiction

					Variable Costs					Fixed Costs			
Route	Funding Source	Mode	% Total Vehicle Hours	% Total Vehicle Miles	Operations	Fuel	Maint.	Sub-Total Operations & Maint.	% Sub-Total Variable Cost	Facility Maint.	Admin.	Planning	Total Cost
Allocation Variable					% of Vehicle Hours	% Vehicle Miles	% Vehicle Miles			% Sub-Total Variable Cost	% Sub-Total Variable Cost	Direct	
GRAND TOTAL			**100.0%**	**100.0%**	**$1,730,086**	**$456,130**	**$570,679**	**$2,756,895**	**100.0%**	**$18,662**	**$1,013,494**	**$10,000**	**$3,799,051**
FIXED ROUTE			**93.2%**	**95.3%**	**$1,611,733**	**$434,657**	**$543,814**	**$2,155,547**	**94.0%**	**$17,533**	**$949,525**	**$10,000**	**$3,569,952**
Route 1	Section 5307 Small Urban	MB	4.9%	3.6%	$85,610	$16,255	$20,337	$122,203	4.4%	$827	$44,924	$10,000	**$177,954**
Route 2	Section 5307 Small Urban	MB	2.7%	2.1%	$46,137	$9,738	$12,184	$68,060	2.5%	$461	$25,020		**$93,541**
Route 3	Section 5307 Small Urban	MB	3.4%	2.3%	$58,953	$10,434	$13,054	$82,442	3.0%	$558	$30,307		**$113,307**
Route 4	Section 5307 Small Urban	MB	0.8%	0.5%	$14,306	$2,228	$2,787	$19,321	0.7%	$131	$7,103		**$26,555**
Route 5	Section 5307 Small Urban	MB	4.8%	3.1%	$82,534	$14,351	$17,956	$114,841	4.2%	$777	$42,218		**$157,837**
Route 6	Section 5311 Rural	MB	1.7%	1.4%	$29,989	$6,407	$8,016	$44,412	1.6%	$301	$16,327		**$61,039**
Route 7	Section 5307 Small Urban	MB	4.9%	4.3%	$85,610	$19,623	$24,552	$129,785	4.7%	$879	$47,712		**$178,375**
Route 8	Section 5307 Small Urban	CB	5.2%	5.6%	$89,199	$25,335	$31,697	$146,230	5.3%	$990	$53,757		**$200,978**
Route 9	Section 5307 Small Urban	CB	5.0%	5.2%	$87,148	$23,651	$29,590	$140,389	5.1%	$950	$51,610		**$192,949**
Route 10	Section 5307 Large Urban	MB	3.7%	1.7%	$63,225	$7,871	$9,848	$80,944	2.9%	$548	$29,757		**$111,249**
Route 11	Section 5307 Large Urban	MB	4.4%	1.7%	$75,870	$7,908	$9,894	$93,672	3.4%	$634	$34,436		**$128,742**
Route 12	Section 5307 Large Urban	MB	3.3%	2.4%	$56,817	$10,739	$13,436	$80,992	2.9%	$548	$29,775		**$111,315**
Route 13	Section 5311 Rural	MB	1.8%	2.2%	$30,758	$10,031	$12,551	$53,340	1.9%	$361	$19,609		**$73,310**
Route 14	Section 5307 Large Urban	MB	3.4%	3.4%	$58,953	$15,316	$19,162	$93,430	3.4%	$632	$34,347		**$128,410**
Route 15	Section 5307 Large Urban	MB	3.5%	3.7%	$59,807	$16,719	$20,918	$97,444	3.5%	$660	$35,823		**$133,926**
Route 16	Section 5307 Large Urban	MB	4.5%	4.9%	$77,322	$22,394	$28,017	$127,734	4.6%	$865	$46,958		**$175,556**
Route 17	Section 5311 Rural	MB	4.9%	5.0%	$85,610	$22,772	$28,491	$136,873	5.0%	$927	$50,317		**$188,117**
Route 18	Section 5311 Rural	MB	5.2%	5.3%	$90,736	$24,383	$30,506	$145,626	5.3%	$986	$53,535		**$200,146**
Yellow	Section 5307 Small Urban	CB	4.1%	3.9%	$71,769	$17,756	$22,216	$111,74	4.1%	$756	$41,078		**$153,575**
Purple	Section 5307 Small Urban	CB	3.6%	3.2%	$61,516	$14,400	$18,017	$93,933	3.4%	$636	$34,532		**$129,101**
Green	Section 5307 Small Urban	CB	4.2%	3.8%	$72,196	$17,512	$21,910	$111,61	4.0%	$756	$41,033		**$153,407**
Red	Section 5307 Small Urban	CB	3.3%	8.4%	$57,085	$38,163	$47,747	$142,996	5.2%	$968	$52,568		**$196,532**
Blue	Section 5307 Small Urban	CB	3.3%	8.4%	$57,085	$38,163	$47,747	$142,996	5.2%	$968	$52,568		**$196,532**
Orange	Section 5307 Small Urban	MB	3.3%	8.4%	$56,748	$38,163	$47,747	$142,658	5.2%	$966	$52,444		**$196,068**
Maroon	Section 5307 Small Urban	MB	3.3%	1.0%	$56,748	$4,342	$5,433	$66,522	2.4%	$450	$24,455		**$91,428**
Note: allocating costs to different demand response services (e.g., general public, veterans, etc.) only works if the services are not shared ride (i.e., passengers from different services do not share the same vehicle).													
DEMAND RESPONSE			**6.8%**	**4.7%**	**$118,353**	**$21,473**	**$26,865**	**$166,691**	**6.0%**	**$1,128**	**$61,279**	**$0**	**$229,099**
General Public	Section 5311 Rural	DR	3.2%	1.4%	$54,840	$6,300	$7,883	$69,023	2.5%	$467	$25,374		**$94,865**
Sponsored Services:													
Veterans	Section 5311 Rural	DR	0.9%	0.8%	$16,094	$3,457	$4,325	$23,876	0.9%	$162	$8,777		**$32,815**
Adult Day Care	Section 5311 Rural	DR	2.7%	2.6%	$47,419	$11,715	$14,658	$73,792	2.7%	$500	$27,127		**$101,419**
Summary by Funding Source													
Section 5307 Small Urban			57%	64%	$982,644	$290,117	$362,975	$1,635,736	58.5%	$11,072	$601,332	$10,000	**$2,258,141**
Section 5307 Large Urban			23%	18%	$391,995	$80,947	$101,275	$574,217	21.4%	$3,887	$211,095	$0	**$789,198**
Section 5311 Rural			21%	19%	$355,447	$85,066	$106,429	$546,942	20.1%	$3,702	$201,068	$0	**$751,711**
GRAND TOTAL			100%	**100%**	**$1,730,086**	**$456,130**	**$570,679**	**$2,756,895**	**100.0%**	**$18,662**	**$1,013,494**	**$10,000**	**$3,799,051**

Shared-Ride Demand-Response Cost Allocation

In the above example, demand response received 6 percent of the variable and fixed costs based on the two-variable (vehicle miles and hours) cost allocation methodology. Then, demand response was further broken down into types of demand-response service (general public, veterans, etc.) using the same vehicle hours and miles methodology.

However, using vehicle miles and hours to allocate demand-response costs to different demand-response programs *is only valid if customers from different programs do not share vehicles.* If the example transit agency has customers from different sponsored programs sharing vehicles, then costs cannot be accurately allocated to programs using vehicle miles and hours because a single vehicle hour and mile may be shared.

Therefore, in the case of **shared-ride** demand response, demand-response costs should be allocated to demand-response programs or services according to *passenger miles* and *passenger hours* instead of vehicle miles and hours. Passenger miles/hours describe how far/long *customers* ride in the vehicle. Thus, passenger miles/hours per trip provide the average trip distance *each consumer* traveled on average in a shared-ride service. This service-based cost allocation model apportions costs based on the proportion of passenger miles and passenger hours by trip type.

Transit agencies should use passenger miles and passenger hours to account for the differences in resources used by trip type in a shared-ride demand-responsive service. Table 6-4 shows the methodology steps.

Table 6-4. Methodology to Allocate Costs in a Shared-Ride Demand-Response Service

Step	Description
1	Take a sample of driver manifests to determine average trip length by service area or type. For example, general public trips may average 10 miles and veterans' trips may average 20 miles.
2	Estimate total annual passenger miles and passenger hours by multiplying total annual passenger trips times average trip lengths.
3	Calculate the percent of passenger miles and passenger hours by area or trip type.
4	Multiply the percent of passenger hours times the total hours-based cost of demand response. Multiply the percent of passenger miles times the miles-based cost of demand response. Then allocate the fixed costs relative to the proportion of variable costs associated with each trip type.

Step 1. Take Manifest Sample to Determine Average Trip Length

Take a sample of manifests from demand-response service (preferably from a typical month like October or use data from NTD sampling days). Calculate the average passenger trip length in hours and miles for each trip type.

The results of the sample average trip length analysis are provided in Table 6-5.

Table 6-5. Average Trip Lengths by Service Type

Service Type	Avg. Trip Length (Hours)	Avg. Trip Length (Miles)
General Public	1.32	21.52
Sponsored Service		
Veterans	1.00	17.96
Adult Day Care	0.57	7.88
Grand Total	0.85	13.16

Step 2. Estimate Total Annual Passenger Hours and Passenger Miles

Estimate the total annual passenger hours and passenger miles by multiplying total annual passenger trips for each trip type time the average trip lengths. Table 6-6 provides the total annual passenger miles and passenger hours by trip type.

Table 6-6. Passenger Hours and Miles by Trip Type

Trip Type	Passenger Trips	Avg. Trip Length (Hours)	Avg. Trip Length (Miles)	Total Passenger Hours	Total Passenger Miles
General Public	3,021	1.32	21.52	4,000	65,000
Sponsored Service					
Veterans	501	1.00	17.96	500	9,000
Adult Day Care	5,237	0.57	7.88	2,984	41,280
Grand Total	**8,759**	0.85	13.16	7,484	115,280

Differences in totals due to rounding.

Step 3. Determine Percent of Passenger Hours and Passenger Miles per Trip Type

Using passenger miles and passenger hours from Step 2, determine percent by trip type. Table 6-7 provides the percent of passenger miles and passenger hours by trip type.

Table 6-7. Percent Passenger Hours and Passenger Miles by Trip Type

Percent by Trip Type	Passenger Trips	Passenger Hours	Passenger Miles
General Public	34.5%	53.5%	56.4%
Sponsored Service			
Veterans	5.7%	6.7%	7.8%
Adult Day Care	59.8%	39.9%	35.8%

Differences in totals due to rounding.

Step 4. Allocate Hours-Based Costs, Miles-Based Costs, and Fixed Costs Using Percentages

The proportion of passenger miles and passenger hours of service is used to allocate demand-response costs. For the example agency, we allocated $229,099 in operating costs to demand response based on the two-variable cost allocation model. To further allocate demand-response costs to different demand-response programs (i.e., trip types), take the percent of passenger miles and passenger hours for each program and multiply the percentages times the hours-based and miles-based demand-response costs. That is, allocate a portion of demand-response operating costs to each demand-response program based on each program's passenger miles and passenger hours (see Table 6-8).

After calculating the variable costs for each program, assign each program a proportion of demand-response fixed costs equal to the program's proportion of demand-response variable costs.

In the example provided in Table 6-8, adult day care was allocated 38.7 percent of demand-response variable costs. Adult day care was allocated 38.7 percent of the demand-response fixed costs as well. By the cost allocation model, the adult day care service costs $88,640 to operate.

Table 6-8. Allocating Demand-Response Costs to Demand-Response Programs Using Passenger Hours and Miles

Route	DR Passenger Hours	% DR Passenger Hours	DR Passenger Miles	% DR Passenger Miles	Operations	Fuel	Maint.	Sub-Total Variable	% DR Variable Cost	Facility Maint.	Admin.	Planning	Total Cost
DEMAND RESPONSE	**7,484**		**115,280**		**$118,353**	**$21,473**	**$26,865**	**$166,691**		**$1,128**	**$61,279**	**$0**	**$229,099**
General Public	4,000	53.5%	65,000	56.4%	$63,261	$12,107	$15,148	$90,516	54.3%	$613	$33,276		**$124,404**
Sponsored Services													
Veterans	500	6.7%	9,000	7.8%	$7,908	$1,676	$2,097	$11,681	7.0%	$79	$4,294		**$16,055**
Adult Day Care	2,984	39.9%	41,280	35.8%	$47,185	$7,689	$9,620	$64,494	38.7%	$437	$23,709		**$88,640**

Methodology Uses

The cost allocation methodology provides transit systems a means to equitably distribute transit system operating expenses by individual routes, programs, modes, service types, and jurisdictions. The resulting cost allocation outcome provides information that can be used to:

- Report expenses by federal funding source, service type, function, and mode to meet FTA, NTD, and PTN-128 reporting requirements.
- Request FTA grant and sponsored services reimbursement.
- Measure and manage effectiveness and efficiency.

The methodology can also be used to budget and project funding needs and to calculate unit pricing for contract negotiation. The methodology achieves the goal of providing:

- Consistent and transparent treatment of costs.
- Elimination of duplicative or misallocation of costs.
- More accurate and equitable cost by transit program, mode, service type, and jurisdiction.
- Effective use of accounting software for financial reporting.

Report Expenses by Federal Funding Source

The results can be used to allocate operating expenses by federal funding source and by function for required reports. The example transit agency results provide the operating expense by function for §5307 small urban, §5307 large urban, and §5311 rural (Table 6-9).

Table 6-9. Example Outcome—Federal Grant Cost by Function

Funding Source	Operations	Fuel	Maint.	Facility Maint.	Admin.	Planning	Total Cost
Section 5307 Small Urban	$982,644	$290,117	$362,975	$11,072	$601,332	$10,000	**$2,258,141**
Section 5307 Large Urban	$391,995	$80,947	$101,275	$3,887	$211,095	$0	**$789,198**
Section 5311 Rural	$355,447	$85,066	$106,429	$3,702	$201,068	$0	**$751,711**
GRAND TOTAL	**$1,730,086**	**$456,130**	**$570,679**	**$18,662**	**$1,013,494**	**$10,000**	**$3,799,051**

Request for Reimbursement

The methodology can be used to allocate incurred costs by funding source to request reimbursement for FTA grants and sponsored services. The methodology provides a means for the monthly incurred line-item expense (such as driver wages, fuel, administration salaries, etc.) to be equitably distributed to §5307 large urban, §5307 small urban, and §5311 rural and sponsored services (if applicable). The transit agency can opt to code the accounting system with the proportion of the line-item costs that is assigned to §5307 large urban, §5307 small urban,

and §5311 rural to automate the process. Table 6-10 provides the total system-wide expenses incurred by line item and the amount attributed to §5307 large urban. For example, the transit agency paid a total fuel bill of $38,011 during the month. Eighteen percent of the fuel cost can be attributed to §5307 large urban service (recall that fuel cost is distributed based on vehicle miles)—or a total of $6,746 to §5307 large urban. The line-item cost distribution can be tracked to the proportion provided by §5307 large urban service.

Table 6-10. Example Agency—Section 5307 Large Urban Monthly Line-Item Expenses Incurred

Account Description	Month Expense	Section 5307 Large Urban							Section 5307 Large Urban (Month Expense Incurred * Line-Item %)						
		Operations	Fuel	Vehicle Maint.	Facility Maint.	Admin.	Planning	Total	Operations	Fuel	Vehicle Maint.	Facility Maint.	Admin.	Planning	Total
Total Operating Costs	**$316,588**	**10%**	**2%**	**3%**	**0%**	**6%**	**0%**	**21%**	**$32,621**	**$6,746**	**$8,440**	**$324**	**$17,633**	**$0**	**$65,763**
Salaries	**$110,772**	**16%**		**2%**		**3%**		**22%**	**$17,532**	**$0**	**$2,649**	**$0**	**$3,846**	**$0**	**$24,027**
Drivers	$69,832	23%						23%	$15,822	$0	$0	$0	$0	$0	$15,822
Dispatch	$7,547	23%						23%	$1,710	$0	$0	$0	$0	$0	$1,710
Maintenance	$14,929			18%				18%	$0	$0	$2,649	$0	$0	$0	$2,649
Office Staff	$18,464					21%		21%	$0	$0	$0	$0	$3,846	$0	$3,846
Fringe	**$58,327**	**16%**		**2%**		**3%**		**22%**	**$9,232**	**$0**	**$1,395**	**$0**	**$2,025**	**$0**	**$12,652**
Drivers	$36,770	23%						23%	$8,331	$0	$0	$0	$0	$0	$8,331
Dispatch	$3,974	23%						23%	$900	$0	$0	$0	$0	$0	$900
Maintenance	$7,861			18%				18%	$0	$0	$1,395	$0	$0	$0	$1,395
Office Staff	$9,722					21%		21%	$0	$0	$0	$0	$2,025	$0	$2,025
Indirect	**$53,118**					**21%**		**21%**	**$0**	**$0**	**$0**	**$0**	**$11,064**	**$0**	**$11,064**
Professional Services	**$833**						**0%**	**0%**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Temporary Services	**$11,727**	**19%**		**3%**				**22%**	**$2,260**	**$0**	**$311**	**$0**	**$0**	**$0**	**$2,571**
Operations	$9,976	23%						23%	$2,260	$0	$0	$0	$0	$0	$2,260
Maintenance	$1,751			18%				18%	$0	$0	$311	$0	$0	$0	$311
Travel	**$2,594**	**5%**				**17%**		**21%**	**$118**	**$0**	**$0**	**$0**	**$432**	**$0**	**$550**
Operations	$519	23%						23%	$118	$0	$0	$0	$0	$0	$118
Administration	$2,075					21%		21%	$0	$0	$0	$0	$432	$0	$432
Facility Maint.	**$1,555**				**21%**			**21%**	**$0**	**$0**	**$0**	**$324**	**$0**	**$0**	**$324**
Maint. (Regular)	**$1,095**				21%			21%	$0	$0	$0	$228	$0	$0	$228
Building Maint. (Repair)	**$461**				21%			21%	$0	$0	$0	$96	$0	$0	$96
Supplies (Operations)	**$1,301**	**23%**						**23%**	**$295**	**$0**	**$0**	**$0**	**$0**	**$0**	**$295**
Printing (Operations)	**$614**	**23%**						**23%**	**$139**	**$0**	**$0**	**$0**	**$0**	**$0**	**$139**
Marketing	**$0**														

Account Description	Month Expense	Section 5307 Large Urban							Section 5307 Large Urban (Month Expense Incurred * Line-Item %)						
		Operations	Fuel	Vehicle Maint.	Facility Maint.	Admin.	Planning	Total	Operations	Fuel	Vehicle Maint.	Facility Maint.	Admin.	Planning	Total
Uniforms	**$999**	**23%**						**23%**	**$181**	**$0**	**$0**	**$0**	**$42**	**$0**	**$223**
Operations	$799	23%						23%	$181	$0	$0	$0	$0	$0	$181
Administration	$200					21%		21%	$0	$0	$0	$0	$42	$0	$42
Communications Internet	**$1,999**	**18%**				**4%**		**22%**	**$362**	**$0**	**$0**	**$0**	**$83**	**$0**	**$446**
Operations	$1,599	23%						23%	$362	$0	$0	$0	$0	$0	$362
Administration	$400					21%		21%	$0	$0	$0	$0	$83	$0	$83
Communications Phone	**$2,848**	**23%**						**23%**	**$645**	**$0**	**$0**	**$0**	**$0**	**$0**	**$645**
Classified Ads	**$280**					**21%**		**21%**	**$0**	**$0**	**$0**	**$0**	**$58**	**$0**	**$58**
Drug & Alcohol	**$398**	**16%**		**2%**		**3%**		**22%**	**$63**	**$0**	**$10**	**$0**	**$14**	**$0**	**$86**
Drivers	**$251**	**23%**						**23%**	**$57**	**$0**	**$0**	**$0**	**$0**	**$0**	**$57**
Dispatch	**$27**	**23%**						**23%**	**$6**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6**
Maintenance	**$54**			**18%**				**18%**	**$0**	**$0**	**$10**	**$0**	**$0**	**$0**	**$10**
Office Staff	**$66**					**21%**		**21%**	**$0**	**$0**	**$0**	**$0**	**$14**	**$0**	**$14**
Radio Fees	**$1,316**	**23%**						**23%**	**$298**	**$0**	**$0**	**$0**	**$0**	**$0**	**$298**
Repairs/Maintenance	**$18,379**			**18%**				**18%**	**$0**	**$0**	**$3,262**	**$0**	**$0**	**$0**	**$3,262**
Insurance	**$4,232**	**23%**						**23%**	**$959**	**$0**	**$0**	**$0**	**$0**	**$0**	**$959**
Small Tools	**$105**			**18%**				**18%**	**$0**	**$0**	**$19**	**$0**	**$0**	**$0**	**$19**
Assets under $5000	**$837**			**18%**				**18%**	**$0**	**$0**	**$149**	**$0**	**$0**	**$0**	**$149**
Utilities	**$1,960**	**16%**		**2%**		**4%**		**22%**	**$311**	**$0**	**$45**	**$0**	**$69**	**$0**	**$425**
Operations	$1,372	23%						23%	$311	$0	$0	$0	$0	$0	$311
Admin	$333					21%		21%	$0	$0	$0	$0	$69	$0	$69
Maintenance	$255			18%				18%	$0	$0	$45	$0	$0	$0	$45
Computer Supplies	**$47**	**23%**						**23%**	**$11**	**$0**	**$0**	**$0**	**$0**	**$0**	**$11**
Program Costs (Physicals)	**$951**	**23%**						**23%**	**$215**	**$0**	**$0**	**$0**	**$0**	**$0**	**$215**
Fuel/Oil	**$38,011**		**18%**					**18%**	**$0**	**$6,746**	**$0**	**$0**	**$0**	**$0**	**$6,746**
Tires	**$3,293**			**18%**				**18%**	**$0**	**$0**	**$584**	**$0**	**$0**	**$0**	**$584**
Training	**$94**			**18%**				**18%**	**$0**	**$0**	**$17**	**$0**	**$0**	**$0**	**$17**

Measure and Manage Effectiveness and Efficiency

The results can be used for measuring and managing performance by route, mode, service type, sponsored service, and jurisdiction. Understanding cost effectiveness by route can be important in making service change decisions.

The outcome of the cost allocation methodology provides the example agency cost-effectiveness and efficiency performance results (see Table 6-11). In the example, routes that are cost effective in terms of having a low cost per passenger trip are driven by higher route productivity (passenger trips per vehicle hour). Fixed-route motorbus service operates at a lower cost per passenger trip than demand-response service—often the case because of the door-to-door nature of demand response. Note that for shared-ride demand response, cost per passenger hour and cost per passenger mile are better measures of the cost effectiveness of different demand-response programs (*not depicted in Table 6-11*).

Table 6-11. Example Outcome—Cost-Effectiveness and Efficiency Performance

Route	Funding Source	Mode	Total Vehicle Hours	Total Vehicle Miles	Total Passenger Trips	Total Cost	Passenger Trips per Vehicle Hour	Cost per Total Vehicle Hour	Cost per Total Vehicle Mile	Cost per Passenger Trip
FIXED ROUTE			**67,596**	**1,531,531**	**383,619**	**$3,567,213**	**5.68**	**$52.77**	**$2.33**	**$9.30**
Route 1	Section 5307 Small Urban	MB	3,591	57,276	29,488	$179,732	8.21	$50.06	$3.14	$6.10
Route 2	Section 5307 Small Urban	MB	1,935	34,314	4,327	$94,224	2.24	$48.69	$2.75	$21.78
Route 3	Section 5307 Small Urban	MB	2,473	36,765	19,293	$114,745	7.80	$46.41	$3.12	$5.95
Route 4	Section 5307 Small Urban	MB	600	7,850	1,000	$26,990	1.67	$44.98	$3.44	$26.99
Route 5	Section 5307 Small Urban	MB	3,462	50,568	32,595	$159,923	9.42	$46.20	$3.16	$4.91
Route 6	Section 5311 Rural	MB	1,258	22,575	1,257	$61,462	1.00	$48.87	$2.72	$48.88
Route 7	Section 5307 Small Urban	MB	3,591	69,144	14,631	$179,205	4.07	$49.91	$2.59	$12.25
Route 8	Section 5307 Small Urban	CB	3,741	89,268	35,651	$200,466	9.53	$53.59	$2.25	$5.62
Route 9	Section 5307 Small Urban	CB	3,655	83,334	35,651	$192,759	9.75	$52.74	$2.31	$5.41
Route 10	Section 5307 Large Urban	MB	2,652	27,735	11,477	$113,726	4.33	$42.89	$4.10	$9.91
Route 11	Section 5307 Large Urban	MB	3,182	27,864	13,615	$132,147	4.28	$41.53	$4.74	$9.71
Route 12	Section 5307 Large Urban	MB	2,383	37,840	9,607	$112,509	4.03	$47.21	$2.97	$11.71
Route 13	Section 5311 Rural	MB	1,290	35,346	1,273	$72,769	0.99	$56.41	$2.06	$57.15
Route 14	Section 5307 Large Urban	MB	2,473	53,965	8,163	$128,474	3.30	$51.96	$2.38	$15.74
Route 15	Section 5307 Large Urban	MB	2,508	58,910	24,879	$133,659	9.92	$53.29	$2.27	$5.37
Route 16	Section 5307 Large Urban	MB	3,243	78,905	24,879	$174,991	7.67	$53.96	$2.22	$7.03
Route 17	Section 5311 Rural	MB	3,591	80,238	28,298	$188,060	7.88	$52.38	$2.34	$6.65
Route 18	Section 5311 Rural	MB	3,806	85,914	28,298	$200,017	7.44	$52.56	$2.33	$7.07
Yellow	Section 5307 Small Urban	CB	3,010	62,565	6,076	$153,903	2.02	$51.13	$2.46	$25.33
Purple	Section 5307 Small Urban	CB	2,580	50,740	6,076	$129,613	2.36	$50.24	$2.55	$21.33
Green	Section 5307 Small Urban	CB	3,028	61,705	5,673	$153,836	1.87	$50.81	$2.49	$27.12
Red	Section 5307 Small Urban	CB	2,394	134,470	3,663	$190,026	1.53	$79.37	$1.41	$51.88
Blue	Section 5307 Small Urban	CB	2,394	134,470	3,663	$190,026	1.53	$79.37	$1.41	$51.88
Orange	Section 5307 Small Urban	MB	2,380	134,470	17,043	$189,536	7.16	$79.64	$1.41	$11.12
Maroon	Section 5307 Small Urban	MB	2,380	15,300	17,043	$94,417	7.16	$39.67	$6.17	$5.54
DEMAND RESPONSE			**4,964**	**75,660**	**8,759**	**$231,838**	**1.76**	**$46.71**	**$3.06**	**$26.47**
General Public	Rural	DR	2,300	22,200	3,021	$97,162	1.31	$42.24	$4.38	$32.16
Sponsored Services:										
Veterans	Rural	DR	675	12,180	501	$33,036	0.74	$48.94	$2.71	$65.94
Adult Day Care	Rural	DR	1,989	41,280	5,237	$101,640	2.63	$51.11	$2.46	$19.41
GRAND TOTAL			**72,560**	**1,607,191**	**392,378**	**$3,799,051**	**5.41**	**$52.36**	**$2.36**	**$9.68**
Summary by Funding Source										
Section 5307 Small Urban			41,212	1,022,239	231,872	$2,249,400	5.63	$54.58	$2.20	$9.70
Section 5307 Large Urban			16,440	285,219	92,620	$795,505	5.63	$48.39	$2.79	$8.59
Section 5311 Rural			14,908	299,733	67,886	$754,146	4.55	$50.59	$2.52	$11.11
Summary by Mode										
MB			46,794	914,979	287,167	$2,356,584	6.14	$50.36	$2.58	$8.21
CB			20,802	616,552	96,452	$1,210,628	4.64	$58.20	$1.96	$12.55
DR			4,964	75,660	8,759	$231,838	1.76	$46.71	$3.06	$26.47

Additional Consideration: Indirect Costs and Central Services

To capture the full cost of providing transit services, indirect and central service costs should be included in the total operating cost. OMB and FTA provide two types of cost allocation plans (CAPs) for indirect and central service costs that require review and/or approval. The two types of plans where overhead/administrative charges are allocated to the transit program are a central service or an indirect cost rate proposal (*11*). More information about indirect and central services costs is discussed in Module 5.

A central service CAP, sometimes referred to as a statewide or local-wide CAP, is used by a state or local government to distribute executive- and central-level support functions to operating units that benefit from them. All statewide central service CAPs must be submitted to the U.S. Department of Health and Human Services (DHHS) annually. Each local government that has been designated a "major local government" by OMB is also required to submit a plan to its cognizant federal agency annually. OMB defines a major local government as a local government that receives more than $100 million in direct federal awards (2 CFR 200, Appendix V). The cognizant agency for all governmental units or agencies not identified by OMB is determined based on the federal agency providing the largest amount of federal funds. Unless required by the cognizant agency, local-wide CAPs do not have to be submitted for review and approval. However, they must be updated annually and maintained for audit. If the cognizant agency does not require the grantee to submit the plan for approval, FTA reserves the right to review the plan. FTA approves plans only for grantees for which it is the cognizant agency.

An indirect cost rate proposal is developed annually at the operating agency level to distribute administrative support and/or overhead costs of that agency to the programs (and the grants and contracts) that benefit from them. An indirect cost rate proposal may include the allocable portion of a central service CAP. A governmental unit for which a federal cognizant agency has been designated must submit its indirect cost rate proposal to its federal cognizant agency annually. Effective December 26, 2014, non-federal entities that have never received a negotiated indirect cost rate—except for those non-federal entities described in Appendix VII of 2 CFR Part 200, States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b—may elect to charge a de minimis rate of 10 percent of the modified total direct costs, which may be used indefinitely. A governmental unit or agency that does not have a cognizant federal agency identified by OMB must develop an indirect cost rate proposal annually and maintain the proposal and related supporting documentation for audit. Unless required by FTA or the cognizant agency, these governmental units are not required to submit their proposals for review and approval.

In addition to initial approval, FTA requires updates to be submitted to it or another cognizant agency when:

- The grantee has made a change in its accounting system, thereby affecting the previously approved CAP/indirect cost rate and its basis of application.
- The grantee's proposed CAP/indirect cost rate exceeds the amounts approved previously by the cognizant agency by more than 20 percent (e.g., if the previously approved rate is 10 percent, approval is needed once the rate exceeds 12 percent).
- The grantee changes the CAP/indirect cost rate proposal methodology.

Effective December 26, 2014, a governmental unit that receives more than $35 million in direct federal awards must submit its indirect cost proposal to its cognizant agency. Other governmental units or agencies must develop an indirect cost proposal and maintain it for audit.

If the local government identifies direct expenses such as time for purchasing or human resources, then report as direct expense; however, if the local government cannot document direct expenses, then those expenses fall within Central Services for indirect cost allocation. For example, a local government might set up a way to charge account for use of human resource time, procurement time, etc. If the local government has a system to track and charge for this time, the transit agency can report these charges as a direct expense.

There are a variety of ways agencies may allocate administrative costs. For example, agencies with a significant peak service may allocate administrative costs by peak vehicle assigned to a route or mode. Certain administrative cost categories may be directly allocated, such as marketing where a marketing campaign occurs for a particular route or mode. Human resource expenses may be allocated by number of staff. The key is to have a documented plan that provides a logical and consistent basis for allocating administrative costs.

Helpful Resources

- *TCRP Report 144: Sharing the Costs of Human Services Transportation*: http://www.trb.org/Main/Blurbs/165015.aspx
- *TCRP Report 101: Toolkit for Rural Community Coordinated Transportation Services*: http://www.trb.org/Main/Blurbs/154971.aspx
- National Transit Database Policy Manual (2017).
- 2 CFR 200.
- FTA Circular 9030.1E Urbanized Area Formula Program (2014).
- FTA Circular 9040.1G Formula Grants for Rural Areas (2014).
- FTA Circular 9070.1G Enhanced Mobility of Seniors and Individuals with Disabilities (2014).
- FTA Circular 5010.1E Grants Management Requirements (2017).

Appendix A. Operating Expense by Function (NTD)

Operating Expense Reference by Function

Operating

- Transportation Administration & Support
  - Garage & Station Supervision
  - Safety & Training
  - Field Supervision
  - Accident Investigation
- Revenue Vehicle Movement Control
  - Starters
  - Dispatching
  - Technology Support (AVL, Signal Priority)
- Scheduling of Transportation Operations
  - Data Collection Activities (Ride/Time Checks)
  - Scheduling & Runcutting
  - Development of Schedule Summaries
- Revenue Vehicle Operation
  - Operators
  - Fuels & Lubricants (& related taxes)
  - Tires
  - Vehicle Licensing & Registration
  - Lease & Rental Costs (Facilities, Vehicles)
- Ticketing & Fare Collection
  - Producing Fare Media
  - Distributing Fare Media
  - Pulling Vaults
  - Counting Cash
  - Processing Debit/Credit Card Transactions
- System Security
  - Patrolling Buses & Stations
  - Securing Operating Facilities
  - Monitoring Closed Circuit TV
  - Court Appearances

Maintenance

- Vehicle Maintenance (including Service Vehicles)
  - Maintenance Administration
    - Maintaining Vehicle Databases
    - Accumulating Performance Data
    - Providing Technical Training
    - Scheduling & Recording Maintenance Activities
    - Engineering Maintenance Activities
  - Vehicle Servicing
    - Interior & Exterior Washing/Cleaning
    - Refueling
    - Adding Engine Oil or Water
    - Movement of Vehicles for Servicing
  - Vehicle Inspection & Maintenance
    - Schedule preventive maintenance
    - Minor Repairs & Fluid Changes
    - Road Calls/Towing
    - Component Rebuild/Overhaul
    - Major Repairs
    - Major Unit Replacement
    - Accident Repair
    - Vandalism Repair
- Non-Vehicle Maintenance
  - Vehicle Movement Control Systems
  - Fare Collection & Counting Systems
  - Structures, Tunnels, Subway; Roadway & Track
  - Passenger Stations
  - Operating Stations (Garages), Grounds & Equipment
  - Vandalism & Accident Repair of Buildings, Grounds & Equip.
  - Operations & Maintenance of Electrical Power Towers
  - Administrative Supervision & Clerical Support

Purchased Transportation

- Expenses that are billed by the seller of service (invoiced)
- Does not include:
  - Seller's expenses that are not billed
  - Expenses in support of purchased transportation

Administrative

- Finance & Procurement
  - Accounting
  - Payroll
  - Budgeting & Financial Reporting
  - Purchasing
  - Storing & Issuing Materials
  - Inventory Management
  - Real Estate Management
- Marketing & Customer Service
  - Telephone Information
  - Complaint Lines
  - Distributing Information to Facilities
  - Promotions
  - Media Relations
  - Market Research
- Risk Management
  - Claims Management
  - Payments for Injuries & Damages
  - Defending Liability Cases
  - System Safety Planning
- General Activities
  - Personnel
  - Legal Services
  - Insurance
  - Information Technology
  - Office Management
  - General Management

Planning

- Service Development
  - Researching Demographics & Technology
  - Identifying Route Configurations
  - Identifying Service Levels
  - Regional Planning
  - Long-Range Planning
  - Coordination Planning

References

1. 2 CFR 200. *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.* http://www.ecfr.gov/cgi-bin/ECFR?page=browse.
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10. Burkhardt, Jon, et al. 2004. *TCRP Report 101: Toolkit for Rural Community Coordinated Transportation Services*. Washington, DC: Transportation Research Board.
11. FTA. 2016. *Triennial Review Workshop Workbook Fiscal Year 2016.* https://www.transit.dot.gov/funding/grantee-resources/triennial-reviews/fiscal-year-2016-triennial-review-workshop-workbook, accessed March 19, 2017.

Module 7
Reporting Financial Data to PTN-128 and NTD

By the end of this module, you should be able to:

1. **Describe collecting and reporting financial data for PTN-128 and NTD.**
2. **Identify the correct classification of revenue sources and types of expenses.**
3. **Describe how to report purchased transportation.**
4. **Use travel modes in PTN-128 worksheets to input data, checking for reasonableness.**

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Introduction

Reports are part of every business, every non-profit, and every government agency. While they may not be fun to complete, they are necessary for keeping accurate records and fulfilling requirements. Transit finance is no different: quarterly and annual reporting of data is required. In Texas, public transit systems are required to report their financial and operating data to the PTN-128 web system, and recipients of §5307 funds are additionally required to report their financial and operating data to the National Transit Database (NTD).

Reporting Data to PTN-128

PTN-128 is the TxDOT PTN automated web-based system for transit agencies to report operational and financial data. The PTN-128 web system has mechanisms for reporting uniform transit data to the state and federal government, performing quality control, providing queries and reports, and managing performance. Prior to the web-based application, transit providers entered information into a Microsoft Excel spreadsheet and emailed the file to the TxDOT public transportation coordinator, who then reviewed the data and emailed the file to the TxDOT PTN. This made the process and data difficult to maintain and keep consistent; changes to spreadsheets were difficult to administer among all the transit providers, and quality control of the data was lacking. Storage of the data was achieved through individual spreadsheets, which made searching and reporting difficult.

Because of the difficulties that the Excel-based system presented, TxDOT determined that a revised data collection system was needed to allow for quality assurance checks, trend analysis, and use of data as a management tool. As a result, the PTN-128 system was developed as a tool used by transit districts to report financial and operating data to the state. Initially, the system hosted 30 small urban and 38 rural transit districts. Currently, the system has expanded to include the addition of 8 large transit authorities and more than 140 specialized transit providers. The web system originally launched for fiscal year 2007 data collection and was rebuilt and launched with a new system platform for fiscal year 2016.

PTN-128 and the National Transit Database

Data from PTN-128 are used to communicate funding needs to the legislature and stakeholders, fulfill state and federal grant recipient reporting requirements as a measure of performance accountability, calculate the Texas Transit Funding Formula for allocation of funds to state-funded urban and rural transit districts, submit §5311 data to the NTD, and manage and

Figure 7-1. National Transit Database Logo
Source: http://www.nashvillempo.org/images/cover_ntd.jpg.

communicate transit performance. The NTD is FTA's primary national database for transit industry statistics. Section 5307 and 5311 recipients are required by statute to submit data to the NTD. The PTN-128 data element definitions and reporting requirements are consistent with those from the NTD. TxDOT reports data for §5311 designated recipients who do not also provide §5307 service.

Direct Service and Purchased Transportation Reporting

Designated recipients of §5307 and 5311 funding report all services, both directly operated and purchased services, to the PTN-128 web system. This includes all transit services regardless of funding source. The goal of the PTN-128 system is for transit agencies to report all services to accurately reflect the true magnitude of transit service provided in Texas.

In cases of purchased transportation, the data from the reporting agency depends on the parties in the agreement (see Figure 7-2). If a transit district purchases service from a private provider, the transit agency reports all data from the purchased transportation agreement. If a transit district purchases from another transit district, then the purchaser of service reports financial data only(grant revenues and offsetting purchased transportation [PT] expenses), while the provider of service reports both financial (contract revenues and operating expenses) and operating data (passengers, miles, hours, vehicles). The purpose of this distinction is to avoid double counting of operating data at the state level.

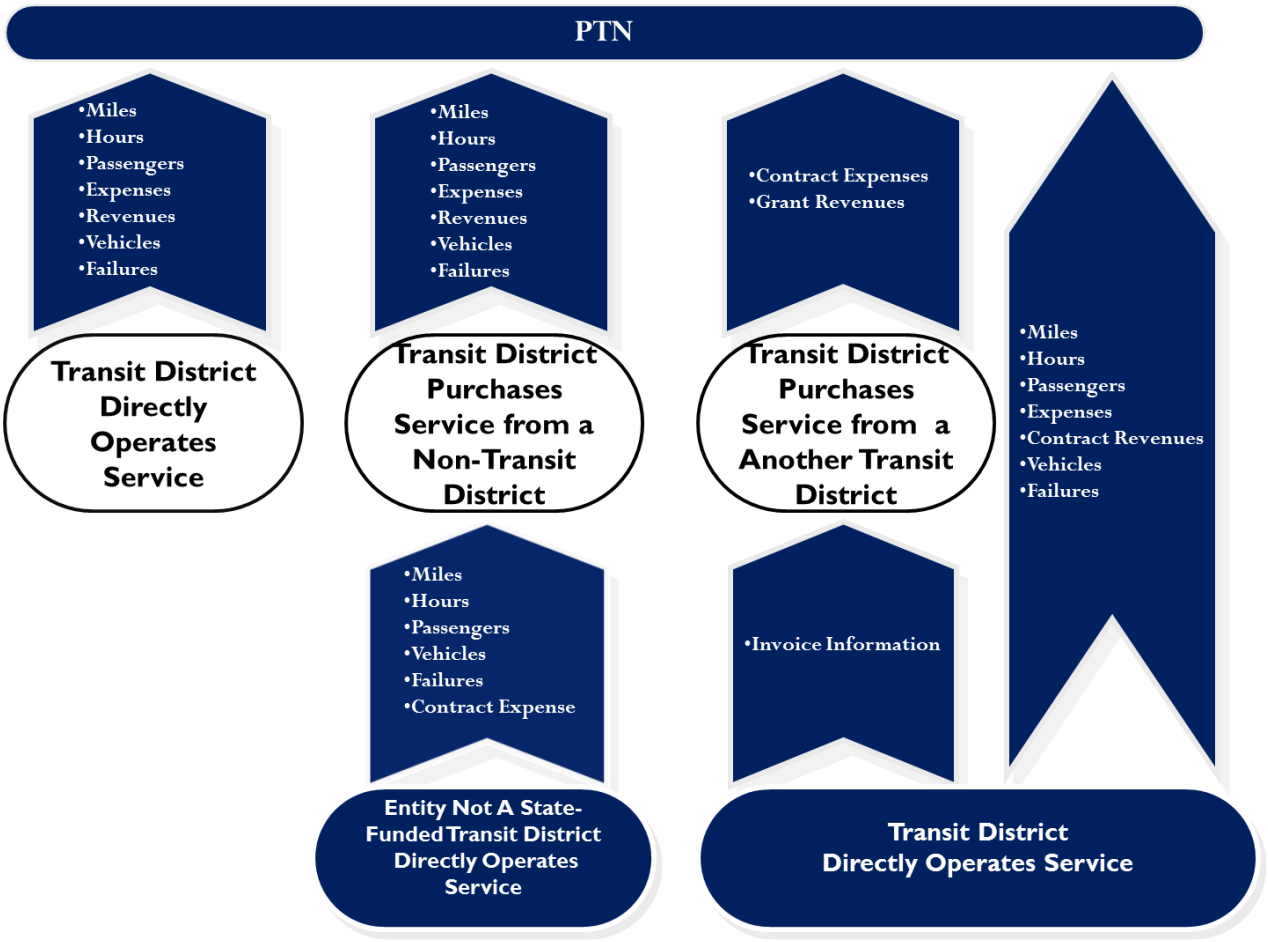

Figure 7-2. Flowchart of Purchased Transportation Data Reporting

Reporting Revenues

In PTN-128, transit districts should report revenues according to the funding source they originate from. Reported revenues should include all funds used for both operating and capital expenditures. Transit districts report only those funds that are (or will be) applied to expenses during the reporting period, consistent with the principles of accrual accounting. Module 6 discusses transit budgeting and accounting methods, including the principles of accrual accounting.

There are four general revenue categories in the PTN-128 system for agencies to report data:

- Federal grant programs.
- State grant programs.
- Local investments.
- Contract revenues.

Federal and state programs include formula-allocated funding and grant funding awarded for specific services or projects. Formula funding and funding for capital and planning projects are considered federal assistance for transit, while other revenue sources are considered as local investment for the transit district. This section will discuss specific revenue sources found in each of the revenue categories.

Federal and State Grant Programs

Small urban and rural transit districts receive annually allocated revenues from both FTA and TxDOT. Small urban agencies are direct recipients of revenues from the §5307 Federal and Urban State Programs. The §5307 Urbanized Area Formula Program provides formula funding to public transit systems in urbanized areas with populations 50,000 and more for public transportation capital, planning, and job access and reverse commute (JARC) projects, as well as operating expenses for public transit systems that meet specific criteria. Rural agencies are subrecipients through TxDOT PTN of §5311 Federal and Rural State Program revenues. The §5311 Rural Areas Formula Program provides formula funds to states to provide capital, planning, and operating assistance to support public transportation in rural areas with populations less than 50,000.

Urban and Rural State Revenues

Urban and rural state revenues are allocated through the Texas Transit Funding Formula as approved by the state legislature. The formula allocates funds to each transit district according to need and performance. For urban transit districts, the allocation is 50 percent for need and 50 percent for performance. For rural transit districts, the allocation is 65 percent for need and 35 percent for performance.

Funds for performance are allocated based on how well a transit district performs according to performance measures calculated by data submitted to PTN-128. Both rural and small urban transit districts have performance measures calculated for passengers per revenue mile, revenue miles per operating expense, and local investment per operating expense. Urban transit districts have a fourth performance measure for passengers per capita. The Texas Transportation Commission also has the discretion to award excess funds to mitigate any negative impacts of Census changes in a service area.

Planning, Capital, and 5307/5311 Contract Revenues

Federal revenues also include programs awarded for specific projects or planning efforts. Sections 5303, 5404, and 5305 Metropolitan, Statewide, or Nonmetropolitan Planning Programs are revenues for planning-related activities. Section 5339 Buses and Bus Facilities Program revenues are for replacement, rehabilitation, and purchases of buses and bus-related equipment, and construction of bus-related facilities.

If a transit district contracts to provide general public transit services for another urban or rural transit district, the revenue should be entered as Section 5307 and 5311 Contract Revenues. These dollars are not eligible to be counted as local investment for funding formula.

Local Investments

This section describes the subcategories of local investment revenue sources, including passenger fares, direct transit funding, and indirect transit funding. More details are provided on each of the types of local investments in Module 4.

Passenger Fares

Passenger fares are the revenues earned from carrying passengers. Passenger fares may be collected in several ways, including:

- Before service is provided (e.g., through the sale of media such as passes, tickets, and tokens sold to passengers).
- Directly at the point of service (e.g., farebox, turnstile).
- After the service is provided (e.g., through weekly or monthly billing).

Passenger fares are usually the amounts paid by the rider to use transit services but may also include special transit fares. Special transit fares are fares from contracts to the transit agency in which an agency or organization pays a set amount in return for unlimited transit service (on an existing service) for the persons covered by the contract. Special transit fares are a contract for fares, not for service.

Passenger fares may include special programs such as reduced passes or ticket prices for students, the elderly, or individuals with disabilities. However, passenger fares should reflect the amount of the fare that the passengers pay on their own behalf.

Passenger fares do not include subsidies or passenger fare assistance from other entities, such as governments, to provide a reduced fare or free fare. Subsidies are provided to support the general provision of transit service. Passenger fare assistance is targeted to help specific classes of users (e.g., senior citizens, students) and helps to offset the reduced or free fares offered to these users. Subsidies and fare assistance are reported in the appropriate state and local government source of funds.

Fares may also include:

- Special Transit Fares: fare revenue paid for by some organization instead of by the rider.
- Contracts for Fares: a contract for revenue where an organization pays a fee in lieu of a passenger fare or pays the transit system per passenger trip.

Direct Transit Funding

Local Contributions

Local contributions are revenues from a local government authority that are given to the transit agency to support transit service. There are three types of local contribution revenues: general funds, specified contributions, and reserve capital funds.

- General funds—transfers from the general fund of local governments to cover the local share portion of the transit system operating and capital budget.
- Specified contributions—contributions from city, county, or other municipal government toward the local share portion of the transit system operating and capital budget.
- Reserve capital funds—transfers from a capital reserve fund of local governments expressly established to be used to cover the local share portion of transit system capital costs.

Contributed Services

Revenues reported for contributed services represent the receipt of non-cash assets or services from another entity that benefits the transit provider. The term "services" is misleading because the monetary amount of contributed services is not for transit service provided but rather the representation of service or asset value. Contributed services include physical assets and in-kind services. In-kind services are a type of contributed service where the transit provider derives a benefit from another entity but is under no obligation to pay for that benefit. Central services should be reported as revenues for contributed services if the parent agency has no expectation of reimbursement.

Auxiliary Transit Revenues

Auxiliary transit revenues are revenues generated from the byproducts of the transit service. The revenues reported should represent revenues not dedicated to the provision of transit service. Examples of auxiliary revenues include advertisements on vehicles, concession stands in station areas, fees paid for transit ID cards, or fines paid for fare evasion.

Indirect Transit Revenues

Other Transportation Revenues

Other transportation revenues are revenues for providing special services not open to the general public or not supported by federal or state funding sources. Examples of sources for other transportation revenues include charter service, exclusive school bus service, and freight tariff revenues associated with the operating and capital cost of these services.

FTA prohibits transit agencies from operating these services unless they receive a waiver in accordance with regulation.

Non-Transit-Related Revenues

Non-transit-related revenues are the revenues earned from activities not associated with the provision of transit service. Sources of non-transit-related revenues may include the sale or rental of assets, investment incomes, revenues generated by a facility, or donations. Donations can be from individuals or organizations to help cover the costs of providing transit service but not related to specific passengers, trips, or coverage of capital costs. Examples of non-transit-related funds include:

- Sale of maintenance services.
- Rental of revenue vehicles.
- Rental of buildings and other property.
- Investment income.
- Parking facility revenue.
- Donations.

Contract Revenues

Contract revenues are generated from contracts to provide transit services for a designated group or purpose. Possible sources of contract revenues may be federal, state, local, or privately funded entities that provide transportation service. The PTN-128 web system lists common contracts for the provision of transit service and has blank fields available to report other contracts not listed. Pre-filled federal and state contracts listed in the PTN-128 web system include:

- Medical Transportation Program (MTP).
- Head Start.
- Department of Aging and Disabilities (DADS).
- Department of Assistive & Rehabilitative Services (DARS).
- FTA Special Needs of Elderly Individuals and Individuals with Disabilities (§5310).
- FTA Job Access and Reverse Commute (§5316).
- FTA New Freedom Program (§5317).
- FHA Congestion Mitigation Air Quality (CMAQ).

Bonds and Loans

Any proceeds from government agency bonds or loans issued during a fiscal year period should be reported as revenues in the appropriate state or local fund category. The transit agency should report the use of funds from bonds and loans as a capital expense (bonds and some loans) or operating expense (loans) for the period when the expense is applied, as well as report the interest from the bond or loan as an operating expenditure under administrative expenses.

For information on accounting practices for bonds and loans, refer to the Uniform System of Accounts (USOA). For more information regarding bonds, refer to the FTA online publication *Financing Techniques for Public Transit*: https://www.transit.dot.gov/funding/funding-finance-resources/options-financing-public-transportation/options-financing-public.

Reporting Expenses

Transit agencies report the total cost of providing transit and making capital purchases during a fiscal year period at the time that the expenses occur, including all direct and indirect costs associated with service. Direct costs are expenses that can be associated on a one-to-one basis with a given service. Common examples of direct costs for transportation services include driver wages, vehicle insurance, and vehicle maintenance costs.

Indirect costs are expenses for goods and services that cannot be associated on a one-to-one basis with a specific program or function. These costs benefit more than one cost objective or program and cannot be readily identified with a final cost objective without effort disproportionate to the results achieved. Indirect costs include the costs of general administrative support functions such as facility rent and administrative salaries. Indirect costs are normally charged to federal awards using an indirect cost rate. A separate indirect cost rate(s) is usually necessary for each department or agency of the governmental unit claiming indirect costs under federal awards. Organizations whose sole purpose is the provision of public transit typically will not incur indirect costs. An operating expense that is eligible for reimbursement as a capital expense is still reported as an operating expense. For example, the portion of ADA paratransit cost is an operating expense that is eligible for capital reimbursement.

Transit agencies should also document and allocate the amounts of in-kind expenses as required to determine the full operating cost of transportation. Additionally, transit agencies must include all costs to provide their service, including the associated expenses fulfilled by donated goods and services within contributed services. The federal requirements for reporting total cost mean that transit agencies must assign values for any contributed services comparable to the value of the asset or service in a competitive market where it would be purchased by the agency.

Table 7-1 provides an example of the importance of reporting total cost.

Table 7-1. Importance of Reporting Total Cost

	Total Cost	Not Total Cost (Excluding In-Kind, indirect or other costs)
Operating Cost	$100,000	$90,000
Miles	40,000	40,000
Cost per Mile	$2.50	$2.25

Chart of Accounts

The agency's chart of accounts is the basic tool used to ensure that all transportation costs are reflected in the agency's accounting system. Using the chart of accounts for expense reporting is a helpful way for transit agencies to organize expenses in the accounts ledger into the particular operational expense categories of PTN-128. For example, salaries can be designated in cost categories according to the position types at the transit agency, with salaries of vehicle drivers going under operating expenses, mechanic salaries going under maintenance, and administrative staff going under administrative. Figure 7-3 is an example chart of accounts.

	Ledger Expenses	Operating	Preventive Maint.	Admin.	POS
Salaries - Driver	$100,000	**$100,000**			
Salaries - Mechanic	$30,000		**$30,000**		
Salaries - Administration	$20,000			**$20,000**	
Payroll Benefits	$45,000	**$30,000**	**$9,000**	**$6,000**	
Purchased Transportation	$10,000				**$10,000**
Building Rent	$5,000			**$5,000**	
Building Maint./Repair	$10,000		**$10,000**		
Utilities	$5,000			**$5,000**	
Insurance - Vehicles	$20,000		**$20,000**		
Insurance – Gen Liability	$10,000			**$10,000**	
Fuel	$40,000	**$40,000**			
Vehicle Parts & Supplies	$30,000		**$30,000**		
Professional Services	$10,000			**$10,000**	
Travel	$1,000			**$1,000**	
Total Expenses	$336,000	$170,000	$99,000	$57,000	$10,000

Figure 7-3. Example Chart of Accounts

The chart of accounts for a transit agency should include all costs incurred to provide service, and those costs should be reported to the state in the appropriate cost category. Transit providers should report all expenses to PTN-128 and NTD, not just expenses that are allowable for grant reimbursement. Reporting expenses based on only allowable grant reimbursable expenses does not capture the total cost of providing transit service. Recipients of grant funds must be familiar with rules and procedures to understand the difference in reporting allowable costs for grant reimbursement and reporting total cost for NTD and other stakeholder reporting requirements. The Office of Management and Budget (OMB) provides guidance for grants and agreements and has consolidated all previous OMB circulars into 2 CFR 200 (Title 2, Part 200 of the Code of Federal Regulations: http://www.ecfr.gov/cgi-bin/text-idx?SID=8a5b4556989a3a449b1e7288125ed159&mc=true&node=pt2.1.200&rgn=div5#_top).

Operational and Capital Costs

This section describes the differences between and types of operational and capital costs that are reported to PTN-128 and NTD. A rule of thumb is that operational costs, such as wages and fuel, are consumed in less than one year and generally have a unit acquisition cost of less than $5,000. Capital costs are expenses for long-term assets such as vehicles and facilities.

Operational Expenses by Function

PTN-128 requires transit agencies to report operational expenses by cost function. The functional areas within operational expenses represent a set of line item expenses, for which transit agency supervisors need to keep track of costs by functional area. An understanding of the factors that drive costs by functional area provides a useful perspective to see the importance and value of reporting expenses accurately. The operational cost functions within PTN-128 are operating, maintenance, administrative, planning, and purchased transportation.

Operating

The operating expenses category includes all expenditures associated with activities to dispatch and operate vehicles in revenue service to carry passengers, including direct supervision and clerical support. Operations expenses are typically the largest expense function due to cost drivers such as labor and fuel expenses.

Maintenance

Maintenance expenses include all expenditures associated with vehicle maintenance and non-vehicle maintenance. Preventive maintenance is included in this expense category even though it is eligible for capital expense rate of reimbursement because it is by definition an operating expense. Basically, all maintenance expenses (vehicle maintenance and non-vehicle maintenance) are eligible for federal reimbursement at the rate of 80 percent from capital funds but are reported as maintenance expenses in the operational category.

Insurance expenses are reported as either a maintenance or operating expense depending on the specific type of insurance. Property insurance where premiums are paid to protect a grantee's own vehicles/property in the event of a collision or theft/damage is eligible for federal reimbursement under maintenance. Casualty or liability insurance, which is the liability a grantee might have to third parties as a result of negligent actions, is an operating expense and thus not eligible under maintenance.

NTD provides a list of maintenance categories: https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

Additional clarity on the definition of "maintenance" can be found in the USOA established by FTA: https://www.transit.dot.gov/ntd/ntd-uniform-system-accounts-usoa-effective-fy-2018 .

Administrative

Administration expenses are expenditures associated with activities (other than operating, maintenance, planning, and purchased transportation expenses) supporting the provision of transit service. This expense category typically includes types of indirect costs such as office staff, customer service, and accounting and finance departments. If a transit provider is part of a larger organization, many of these supporting services may be provided by the larger organization.

Typical examples of indirect administrative costs include:

- Certain central service costs.
- General administration of the organization.
- Salaries not accounted for by another functional activity.
- Accounting and personnel services performed within the organization.
- Telephone/internet services.
- Costs of operating and maintaining facilities.

Planning

Planning expenditures include costs associated with preparing long-range, regional, and coordinated transportation plans and financially feasible transit improvement projects. Examples of planning activities include planning, service development, and market research.

Purchased Transportation (or Purchase of Service)

Purchased transportation costs, also known as purchase of service (POS), occur when the transit agency purchases transit service from either a private transportation provider or another transit agency. Purchased transportation costs are incurred and billed by purchased transportation providers (sellers) in the operation of the contracted transit services by the purchasing agency. Purchased transportation does not include costs that are not a part of the purchased transportation agreement, meaning that if the service costs the seller more than the contract covers, the seller cannot get reimbursed for the additional cost to fulfill service.

Depending on the type of purchased transportation contract, the costs of the contract may exclude specific items used to support the service, such as administration, fuel, and tires if provided to the seller, or vehicle maintenance, marketing, advertising, legal services, and ticket sales if provided by the buyer. Any supporting expenses should be reported in the appropriate operational expense category.

In cases where the seller of purchased transportation charges fares for passengers, the seller should subtract fare revenues retained from the invoiced amount to the purchasing agency. However, the fare revenues should be added back to the invoice to report the full PT expense and report the fares in passenger fare revenues. If the provider has a negotiated contract with an

agreement to retain a set amount for passenger fares, the seller should charge an adjusted rate for the retained fare.

Transit agencies reporting to PTN-128 must also adjust the purchased transportation expenses reported under operational expenses for the capital portion of purchased transportation. The percentage of the capital portion is determined by the type of contract in question, meaning which party is providing the vehicles, maintenance, and service of the contract. There are six general types of contracts: vehicle lease, vehicle maintenance, maintenance/lease, turnkey, service, and vehicle service. Each contract type has an associated capital cost of contracting percentage as determined by FTA guidelines, the exception being if the specific contract has its own language spelling out a different percentage or determination of the capital portion.

The most common type of purchased transportation contract is a turnkey contract, where the contractor provides the entirety of the transit service, maintenance, and vehicles for the purchasing transit agency. In this example, the transit agency reports the total invoiced amount in the purchased transportation contract line in the operational expenses section in its PTN-128 worksheet. Then the capital portion is calculated from the invoiced amount to determine the portion of contract expenses that is capital expense for vehicles. Using the 10 percent capital percent FTA guideline for turnkey contracts, 10 percent of the contract amount is reported as "less capital expenses in purchased transportation." This adjustment moves the 10 percent portion from operational to capital expenses, without changing the total amount of expenses incurred by the purchasing transit agency. Table 7-2 shows the FTA guidelines for determining the capital portion by purchased transportation contract type.

Table 7-2. Capital Portion of Purchased Transportation by Contract Type

				The Part of Capital Cost of Contracting that is Operating	The Part of Capital Cost of Contracting that is Capital
Type of Contract		What the Contractor Does	Capital Cost of Contracting (Grant Purposes)	Operating	Capital
1	Vehicle Lease Contract	Vehicles only	100%	0%	100%
2	Vehicle Maintenance Contract	Maintenance only	100%	100%	0%
3	Maintenance/Lease Contract	Vehicles and Maintenance	100%	80%	20%
4	Turnkey Contract	Transit Service, Maintenance, Vehicles	50%	40%	10%
5	Service Contract	Transit Service and Maintenance	40%	40%	0%
6	Vehicle/Service Contract	Transit Service and Vehicles	10%	0%	10%

Capital Expenses

Capital expenses include expenses related to the purchase of facilities, vehicles, and equipment. Capital items are an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost threshold consistent with federal and local

requirements. The cost threshold by FTA requirements is at least $5,000 OR the capitalization value used by the transit.

Travel Modes and Data Reasonableness

Beginning in FY2016, all urban and rural transit districts are required by TxDOT PTN to report data by travel mode to the PTN-128 web system. The PTN-128 FY16 Reporting Manual includes instructions on how to add and designate travel mode worksheets in the web system.

Types of Travel Modes

The definitions for travel modes come from the NTD glossary (*1*) and are included below.

Aerial Tramway (TR)

Aerial tramway is defined as an electric system of aerial cables with suspended powerless passenger vehicles. The vehicles are propelled by separate cables attached to the vehicle suspension system and powered by engines or motors at a central location not on-board the vehicle.

Bus Rapid Transit (RB)

Bus rapid transit is a fixed-route bus mode:

- In which the majority of each line operates in a separated right-of-way dedicated for public transportation use during peak periods.
- That includes features that emulate the services provided by rail fixed-guideway public transportation systems, including:
    - Defined stations.
    - Traffic signal priority for public transportation vehicles.
    - Short headway bidirectional services for a substantial part of weekdays and weekend days.
    - Pre-board ticketing, platform-level boarding, and separate branding.

Figure 7-4. Bus Rapid Transit
Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/1/17/Linha_Verde_Curitiba_BRT_02_2013_Est_Marechal_Floriano_5978.JPG/220px-Linha_Verde_Curitiba_BRT_02_2013_Est_Marechal_Floriano_5978.JPG.

This mode may include portions of service that are fixed-guideway and non-fixed-guideway.

Commuter Bus (CB)

Commuter bus is a fixed-route bus system primarily connecting outlying areas with a central city through bus service that operates with at least 5 miles of continuous closed-door service. The service may operate motorcoaches (over-the-road buses) and usually features peak scheduling multiple-trip tickets and limited stops in the central city.

Commuter Rail (CR)

Commuter rail is defined as an electric- or diesel-propelled railway for urban passenger train service consisting of local short-distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas.

Such rail service, using either locomotive-hauled or self-propelled railroad passenger cars, is generally characterized by:

- Multi-trip tickets.
- Specific station-to-station fares.
- Railroad employment practices.
- Usually only one or two stations in the central business district.

It does not include:

- Heavy rail (HR) rapid transit.
- Light rail (LR) or streetcar transit service.

Intercity rail service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter service means that for any given trip segment (i.e., distance between any two stations), more than 50 percent of the average daily ridership makes a return trip on the same day. Only the predominantly commuter service portion of an intercity route is eligible for inclusion when determining commuter rail (CR) route miles.

Demand Response (DR)

Demand response is a transit mode comprised of passenger cars, vans, or small buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand-response (DR) operation is characterized by the following:

- The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need.
- Typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed-route basis:
    - Many origins—many destinations.
    - Many origins—one destination.
    - One origin—many destinations.
    - One origin—one destination.

Figure 7-5. Demand Response Transit
Source: http://www.capecodtransit.org/images/bbus-b.jpg.

Demand Response Taxi (DT)

Taxi service is defined as a private for-profit company using passenger vehicles for hire by the riding public. Operationally demand response taxi functions similarly to regular demand

response in that vehicles are dispatched to pick up passengers and transport them to their destinations.

Ferry Boat (FB)

A ferry boat is defined as vessels carrying passengers and/or vehicles over a body of water that are generally steam or diesel powered. Intercity ferry boat service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter service means that for any given trip segment (i.e., distance between any two piers), more than 50 percent of the average daily ridership travels on the ferry boat on the same day. Only the predominantly commuter service portion of an intercity route is eligible for inclusion when determining ferry boat route miles.

Hybrid Rail (YR)

Hybrid rail is a service primarily operating routes on the national system of railroads but not operating with the characteristics of commuter rail. This service typically operates light-rail-type vehicles as diesel multiple-unit trains (DMUs). Hybrid rail trains do not meet Federal Railroad Administration standards and thus must operate with temporal separation from freight rail traffic.

Light Rail (LR)

Light rail service is typically an electric railway with a light-volume traffic capacity compared to heavy rail. It is characterized by:

- Passenger rail cars operating singly (usually two-car trains) on fixed rails in shared or exclusive right-of-way (ROW).
- Low or high platform loading.
- Vehicle power drawn from an overhead electric line via a trolley or a pantograph.

Figure 7-6. Light Rail Transit
Source: http://www.tempe.gov/Home/ShowImage?id=694&t=635323967996830000.

Motor Bus (MB)

Motor bus is defined by rubber-tired passenger vehicles operating on fixed routes and schedules over roadways. Vehicles are powered by:

- Diesel.
- Gasoline.
- Battery.
- Alternative fuel engines contained within the vehicle.

Note: This travel mode is simply called "bus" by the NTD.

Streetcar (SR)

Streetcar service is defined as rail transit systems operating entire routes predominantly on streets in mixed traffic. Streetcars typically operates with single-car trains powered by overhead catenaries and with frequent stops.

Vanpool (VP)

Vanpool service is defined as vans, small buses, and other vehicles operating as a ride-sharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles should have a minimum seating capacity of seven persons, including the driver. For inclusion in the NTD, a vanpool is considered mass transit service if it meets the requirements for public mass transportation and is publicly sponsored.

Public mass transportation for vanpool programs must:

- Be open to the public, and any vans that are restricted a prior to particular employers in the public ride-matching service of the vanpool are excluded from the NTD report.
- Be actively engaged in advertising the vanpool service to the public and in matching interested members of the public to vans with available seats.
- Whether operated by a public or private entity, be operated in compliance with the Americans with Disabilities Act of 1990 and implementing regulations at 49 CFR 37.31.
- Have a record-keeping system in place to meet all NTD reporting requirements, consistent with other modes, including collecting and reporting full-allocated operating and capital costs for the service.

Figure 7-7. Vanpool
Source: http://www.ridemetro.org/SiteImage/star_vanpool_skyline.jpg.

Other

Other services are transit services that do not fit into one of the previous categories.

Note: Please consult with TxDOT PTN for approval before reporting data in the "Other" travel mode category.

Financial Data by Travel Mode

Urban transit service is reported directly to the NTD by the providing transit agencies. For rural districts, TxDOT PTN submits data by travel mode to the NTD for the required reduced reporting forms. In addition to hours, miles, and passenger trip data, transit agencies are required to submit revenue and expense data to PTN-128 by travel mode, either through their own cost allocation plan or by using total vehicle miles per mode as an allocation method. TTI has created a tool to allocate financial data by vehicle miles, available for download on the main PTN-128 page.

Checking Reasonableness of Data

PTN-128 includes calculations and measurements of data reasonableness for each month and in comparison to the transit district's previous fiscal year data submittal. Transit agencies should check vehicle speeds and operational cost measures to ensure that the data submitted are reasonable for the travel mode and consistent with previous years for their district.

Vehicle speeds and deadhead ratios are calculated using revenue and total vehicle hours and miles, speed displayed as miles per hour (mph), and deadhead as the time or mileage difference between revenue and total vehicle service. Vehicle speeds for a transit district should be consistent from month to month as well as realistic for the travel mode they represent. Typical speeds for different modes are listed in Table 7-3.

Table 7-3. Vehicle Speeds by Travel Mode

Travel Mode	Average Speed in Revenue Services (MPH)
Bus	12.5
Bus Rapid Transit	10.5
Commuter Bus	26.0
Demand Response	14.8
Transit Vanpool	40.5
Trolleybus	7.1

Source: APTA 2015.

Operating cost measures are calculated using the total operational expenses with service data submitted for the month or year. The measures include operating cost per passenger, operating cost per revenue hour, and operating cost per revenue mile. While cost functions may vary slightly month to month, there should not be major fluctuations between months and years (see Table 7-4 for typical operating cost metric numbers).

Table 7-4. Operating Costs by Travel Mode for Medium-Sized Cities (2005 Dollars)

	Travel Mode					
Operating Costs	**Commuter Rail**	**Heavy Rail**	**Light Rail**	**Bus**	**Vanpool**	**Demand Response**
Per Passenger Mile	$ 0.45	$ 0.30	$ 1.88	$ 0.82	$ 0.89	$ 2.84
Per Passenger Trip	$ 21.19	$ 1.97	$ 2.51	$ 3.70	$ 11.60	$ 27.83
Per Vehicle Mile	$ 18.86	$ 6.24	$ 16.12	$ 5.43	$ 1.58	$ 3.55
Per Vehicle Hour	$ 694.52	$ 164.09	$ 185.71	$ 76.33	$ 57.54	$ 53.27

Source: Sinha & Labi (2).

Helpful Resources

- Options for Financing Public Transportation: https://www.transit.dot.gov/funding/funding-finance-resources/options-financing-public-transportation/options-financing-public
- Matching Funds Resource Guide from PTN: http://ftp.dot.state.tx.us/pub/txdot-info/ptn/matching-funds-resource-guide.pdf
- NTD Glossary: http://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary
- FTA USOA Standards: https://www.transit.dot.gov/ntd/ntd-uniform-system-accounts-usoa-effective-fy-2018
- PTN-128 Main Page with Reporting Manual and Financial Allocation Tool: http://ptn128.tti.tamu.edu
- PTN-128 Tutorial Videos: http://www.youtube.com/watch?v=2DkczFg4Cms
- NTD Urban and Rural Reporting Manuals: http://www.transit.dot.gov/ntd/manuals
- FTA C 9040.1G Formula Grants for Rural Areas: Program Guidance and Application Instructions: https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/formula-grants-rural-areas-program-guidance-and-application
- FTA C 9070.1G Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions: https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/enhanced-mobility-seniors-and-individuals-disabilities
- FTA C 9030.1E Urbanized Area Formula Program: Program Guidance and Application Instructions: https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/urbanized-area-formula-program-program-guidance-and

References

1. National Transit Database. 2017. *National Transit Database (NTD) Glossary*. http://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

2. Sinha, K. C., & S. Labi. 2007. *Transportation Decision Making: Principles of Project Evaluation and Programming* (1st Edition). Hoboken, New Jersey: Wiley.

Module 8
Managing Operating Costs

By the end of this module, you should be able to:

1. **Understand why vehicle useful life guidelines are important.**
2. **Understand employee turnover and managing staff schedules.**
3. **Manage costs through different means such as reducing fuel consumption and utilizing existing technology.**

TABLE OF CONTENTS

Introduction

Transit agency managers must balance their decisions for how to deliver needed services to consumers with the costs for delivering those services. Service delivery options can include fixed-route, flex-route, commuter service, demand-response, and options such as van pools; influencers on costs include demographics, constructed and natural environments, road configurations, and economic trends. These factors all impact the cost effectiveness of providing transit services. Having a good understanding of what drives costs and market demand can help managers make better decisions when it comes to balancing finite resources with providing the best services possible to their consumers.

This module is intended to discuss ways to control costs and contains direct content from *Guidebook: Managing Operating Costs for Rural and Small Urban Public Transit Systems (1).* All figures and tables are from this primary source unless otherwise noted. Content has been edited for brevity.

Vehicle Replacement Plans and State of Good Repair

Every transit agency owns or leases vehicles to provide its services. This makes vehicle maintenance an unavoidable operating expense. However, maintenance costs—such as most internal agency expenses—can be proactively managed and optimized to avoid waste when possible.

Many factors influence maintenance expenses. Factors internal to your agency are ultimately controllable. These include fleet condition, fleet age, level of transit service provided, preventive maintenance practices, and contracts for maintenance. External factors are not controllable. These include inclement or extreme weather, vehicular accidents (where the agency is not at fault), and roadway conditions.

The key to managing maintenance costs involves:

- Gathering data about your agency's maintenance expenses.
- Using that data to set acceptable performance measures to optimize maintenance expenditures.
- Creating flexible policies and procedures that are easily adaptable when the unexpected happens.

Gather and Use Information to Manage Maintenance Costs

To measure your agency's maintenance program performance and state of good repair, you must first collect information about your vehicle fleet. Transit agency fleets are as varied as their maintenance practices. Some agencies rely on paper records alone, while some use basic

spreadsheet files (e.g., Microsoft Excel). Still others use advanced asset-management and maintenance tracking software.

Whatever your preferred information tracking method, you must keep an accurate record of fleet characteristics in order to deliver safe and reliable transit service. This section provides details in tracking fleet characteristics and conditions.

Determining Your Current Vehicle Fleet Condition

Transit agencies must keep an asset-inventory and condition-monitoring database containing a list of all vehicles owned by the agency. The database should include revenue and non-revenue vehicles and should, at a minimum, contain the categories shown in Table 8-1.

By keeping a database with at least these fields and updating it at least once per week, you can assess each vehicle's age, mileage, and condition easily. Knowing your fleet's condition provides you with a baseline of maintenance information. For example, you can track the rate at which vehicles are accruing mileage and determine the rate at which vehicles might need replacement.

Table 8-1. Fleet Database Categories

Data Captured	**Description**
Vehicle Unit Number	Give all vehicles (revenue and non-revenue) an agency unit number. This makes the vehicle easily identifiable without having to use the vehicle identification number (VIN).
Year Model	Record the vehicle's year model. This allows you to keep track of the vehicle's age.
Vehicle Make/Model	Record the vehicle's manufacturer make and model. This information helps in quickly identifying vehicles when assessing fleet mix and performance.
License Plate	Include the state vehicle license plate number.
VIN	The VIN is the official identification number that stays with the vehicle throughout its life. Maintain full VIN numbers (all 17 digits) in the database.
Number of Seats	Transit vehicles can everything from 4-passenger minivans to 60-passenger articulated buses. To assess fleet mix and capacity, include the number of seats in the database for each vehicle.
Vehicle Length	Capture the vehicle length; useful in assessing fleet mix.

Data Captured	Description
Vehicle In-Service Date	Knowing when the vehicle was put into service helps determine when the vehicle's useful life will end.
Vehicle Condition	Assess periodically (at least once every 6 months) the condition of each vehicle based on criteria defined by your agency.
Revenue/Non-Revenue	Label each vehicle as revenue or non-revenue to separate out support vehicles from revenue-service vehicles.
In-Service/Out-of-Service	Label each vehicle as to whether it is still in-service or if the vehicle has been retired (out-of-service). Retaining these records in the database—even once the vehicle has been retired—helps to create an evolving context in which to judge your existing fleet.

Maintenance Efficiency Performance Measure(s)

The most common and readily calculable performance measure for transit maintenance is maintenance cost per revenue mile (or hour). In Texas, urban and rural transit agencies submit detailed operating expense information to TxDOT via the PTN-128 reporting system. PTN-128 data are then used by TxDOT to report to submit annual reports to the FTA.

This reporting mechanism is valuable for many reasons, one of which is that transit agencies have periodic data readily available to use in calculating maintenance expenses per revenue mile or hour. Simply measuring maintenance expenditures does not speak to quality of maintenance, state of good repair, or agency readiness to provide service.

While you can use performance measures to optimize maintenance, understand that extenuating circumstances sometimes arise that negatively impact maintenance costs. Use performance measures to achieve increased efficiency and organization of your maintenance program rather than rely on across-the-board cuts to your maintenance budget at the expense of your vehicle fleet's condition.

Policies, Procedures, and Strategies to Manage Maintenance Costs

Effective policies and procedures can also help transit agencies control maintenance costs. FTA's "state of good repair" policy helps to assure that transit agencies practice the following:

- State of Good Repair and Vehicle Replacement Planning.
- Preventive Maintenance Practices.
- Maintenance Contractor Oversight.
- Fleet Spare Vehicle Ratio.

State of Good Repair and Vehicle Replacement Planning

Urban and rural transit agencies must have a vehicle replacement plan that provides for regular retirement of vehicles serving past their useful lives (expressed in terms of service years, service life miles, or both). The FTA developed its "state of good repair (SGR)" initiative in order to promote and encourage transit agencies to maintain and protect assets by assessing fleet condition, developing sustainable fleet replacement plans, and practicing industry-standard preventative maintenance. FTA further developed its policies into the Transit Asset Management rule, an overview of which is provided in Module 5.

The FTA establishes a minimum service life for vehicles (by vehicle category) in *Useful Life of Transit Buses and Vans*. The minimum service life is the expected miles or years an agency must use a vehicle before the vehicle is retired without financial penalty (meaning a financial obligation to return funds to the FTA). The minimum service-life policy seeks to ensure that federal taxpayers obtain an adequate return on investment in transit vehicles by local agencies. Figure 8-1 shows the relationship between maintenance expenses and daily vehicle miles.

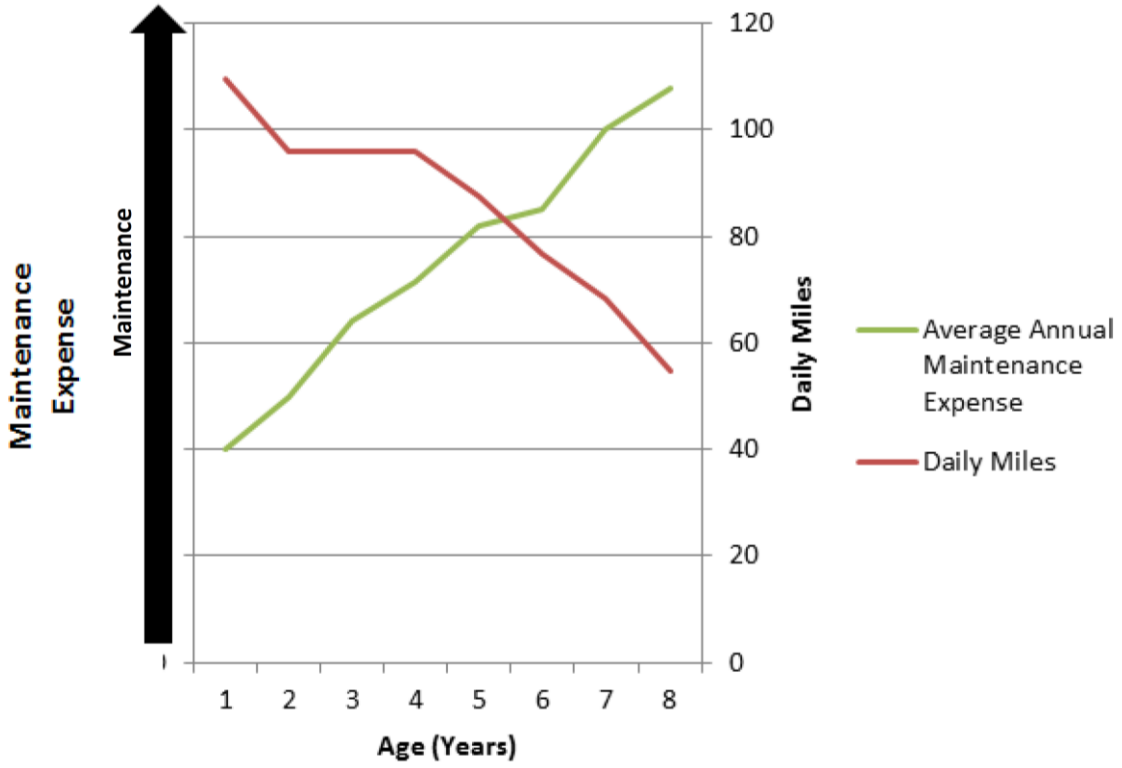

Figure 8-1. Maintenance Expense and Vehicle Usage by Age

Preventive Maintenance Practices

TCRP Synthesis 54, Maintenance Productivity Practices (*2*), is an excellent resource when developing a preventive maintenance (PM) program. PM is essential to an effective and efficient maintenance program. PM involves scheduling certain types of routine maintenance procedures at specified intervals, typically by miles (PM can also be scheduled by time period for certain procedures). By performing systematic, regularly scheduled maintenance procedures at specified intervals, your system can minimize malfunctions.

Design your preventive maintenance program around specific vehicles. It should fit your operating environment and should be adaptable to changing vehicle or operating conditions. *TCRP Synthesis 81*, *Preventive Maintenance Intervals for Transit Buses* (*3*), provides a best practices guide for employing transit PM intervals and tools, such as checklists to use during PM inspections. Table 8-2 shows some examples of how you can tailor standard PM practices to your own agency's needs.

Table 8-2. Preventative Maintenance Considerations and Examples

Consideration	Examples	Benefits
Establish all the service intervals as multiples of a common denominator.	If oil is changed every 3,000 miles, consider doing tire rotations every 6,000 miles and transmission fluid services every 24,000.	• Minimizes vehicle downtime by minimizing the number of times the vehicle has to go in for maintenance. • Improves work and labor efficiency.
Consider seasonal/ environmental conditions that can impact maintenance and the necessary service interval for your PM program.	• If you operate in severe winters, consider changing the oil more frequently than every 3,000 miles because of cold starts/running. • You might need to replace air filters more frequently when driving over salted or sanded roads. • For rural operations, if you drive on unpaved, dusty roads, your vehicles might need more frequent oil changes and shock absorber replacement.	Optimizes vehicle performance by adapting standard maintenance practices to environmental factors.
Include a regular schedule for washing and cleaning your vehicles.	Certain dirt and grime—such as salt from the roads in winter—and chlorine compounds used to control dust on unpaved roads will accelerate rusting and vehicle aging.	• Improves public appearance of vehicles (and, thereby, your agency's public image). • Prevents acceleration of standard vehicular degeneration (e.g., rust).

Maintenance Contractor Oversight

Some agencies contract maintenance to an outside vendor. If you do so, monitor the contractor to ensure their maintenance program is operating efficiently and effectively:

- Ensure the contractor has the most up-to-date vehicle mileage information on a weekly basis. This ensures on-time PM interval performance.
- Store maintenance work orders with maintenance invoices and compare them against each other to make sure work scheduled matches work performed.
- Ensure your maintenance supervisor has sufficient time to oversee maintenance operations.

Fleet Spare Vehicle Ratio

Transit agencies should have a vehicle spares ratio between 10 and 20 percent. Spare vehicles increase your agency's reliability by providing a viable backup vehicle in case your regularly scheduled vehicle must be taken out of service.

$$\text{Spares Ratio} = \frac{\text{Total Active Fleet} - \text{Peak Vehicle Requirement}}{\text{Peak Vehicle Requirement}}$$

Numerous factors influence the number of spare vehicles an agency might need. By understanding the effect each factor has on the number of vehicles needed, you can determine the number of spare vehicles your agency needs to own. By optimizing this number, you can limit unneeded capital expenditures (buying unneeded vehicles) and daily operating expenses (warehousing and maintaining unnecessary vehicles).

To determine the appropriate spare ratio for your agency, consider the following issues (*4*):

- Age of fleet.
- Advanced on-board technology.
- Annual bus mileage.
- Service types.
- Bus operating speeds.
- Ridership fluctuations.
- Planned service/route adjustments.
- Peak-to-base ratio.
- Fleet mix of bus makes and models.
- Road calls.
- Operating environment / climate.
- Vehicles per mechanic.
- Alternative fueling / energy technologies.
- Bus purchase/retirement schedule.
- Inventory management.
- Maintenance training.

No-Shows and Late Cancellations

When a consumer fails to show up for a scheduled demand-response trip (or cancels after it is too late to schedule another consumer in his or her place), your agency has spent its resources on a wasted trip. No-show events negatively impact on-time performance and service productivity.

During a no-show occurrence, the dispatcher and the driver may spend additional time trying to locate the customer, causing the driver to run late for other trips. This couples with additional scheduling burden to reschedule the no-show customer.

Several Transit Cooperative Research Program (TCRP) projects have studied no-show rates for both urban- and rural-transit providers:

- Of the 134 completed surveys in 36 states and the District of Columbia (representing small-, medium-, and large-transit agencies), the average consumer no-show rate reported is 2.9 percent of total consumer trips for ADA paratransit demand-response service (*5*).
- Agencies that implemented and enforced written no-show and late-cancellation policies decreased those rates (as a percentage of total trips) between 1 percent and 10 percent annually, significantly improving productivity and service quality (*6*).
- Rural-system managers stated performance benefits from enforcement of their no-show policies. "While the policies vary, the managers spoke to the critical role of enforcement: it is not enough to just adopt and publish a policy" (*7*).

No-show and late cancellation occurrences should be recorded by the transit agency and further evaluated.

Capturing No-Show and Late Cancellation Data

By tracking no-shows and late cancellations by category, the dispatch and driver staff can determine specific improvements in each category. Table 8-3 shows suggestions for what data to record regarding no-shows and late cancellations.

Table 8-3. No-Show and Late Cancellation Suggestions

Suggestion	Description
1	Record and monitor (monthly) no-shows and late cancellations to resolve problems before they become excessive.
2	Categorize no-shows to help determine responsibility for the no-show (consumer or agency). Use the following categories: 1. consumer no-show and a. driver is on-time b. driver is late 2. consumer cancellation on driver arrival due to a. unpreventable cause (e.g., illness/emergency) b. preventable cause (e.g., consumer forgot to cancel) c. undetermined cause (consumer cannot give a reason) d. address error by • consumer • reservationist • dispatcher • unknown
3	Record cancellations by trip purpose or location (helpful in addressing chronic cancellations). **Example:** workshops for persons with disabilities might be closed on certain holidays, but consumers with subscription trips might forget to cancel trips.
4	Track workshop locations and work with host facilities to provide holiday schedules to consumers. Be proactive in contacting consumers to cancel trips in advance.

Create reports from tracked information that sort no-shows in various ways to identify contributing factors causing the problems and where you might focus your efforts for improvement. Other strategies for reducing no-shows and late cancellations include consistent monitoring through performance measurement and assessment, as well as deliberate, fair enforcement of policies.

Remember, it's not always the consumer's fault; dispatchers and reservationists make errors. To protect consumers, include a method in your policies and procedures for tracking the reason for the missed trip, as well as a process for consumer appeal. To minimize agency costs from no-shows and late cancellations, consider a system for calling consumers who exhibit a pattern or practice of no-show behavior. For example, call to remind consumers about Monday trips if Mondays have the highest no-show rate.

Recommended No-Show and Late Cancellation Policies and Procedures

The transit industry has no one way to manage no-shows and late cancellations, but you can reduce them through positive and negative reinforcement of consumer behavior. To that end, all policies should:

- Define no-shows and late cancellations.
- Determine a value for "the number of excessive events," such as five in a month, as a trigger to identify consumers who may have "a pattern or practice of missed trips."
- Set a percentage of the consumer's trips taken that are no-shows, such as 10 percent, as a threshold before a sanction is imposed.
- Establish progressive sanctions for consumers with a pattern or practice of no-shows and late cancellations.

Recommendations for forming specific policies and procedures include:

- Specifying a number of hours before pick-up time, such as two hours, in which the consumer must call to cancel or be labeled a "late cancellation."
- Calling a no-show or late consumer before infractions reach the sanction threshold to remind him or her of the policy and upcoming sanctions.
- Letting consumers know that your agency is tracking their actions, thereby discouraging abusive behavior.
- Establishing a progressive policy for repeat offenders (e.g., begin with a verbal and advance to a written warning, then enforce a three- or seven-day suspension).
- Notifying the consumer in writing, citing specifically the full reason for the proposed suspension and its length, including the exact no-show dates, times, pickup locations, and destinations on which the proposed suspension is based.
- Beyond suspension, other penalties can discourage habitual no-shows and late cancellations, and incentives can encourage on-time behavior. Some examples of these include:
- Rewarding responsible consumers (proven reliable over a defined period of time) with a free trip or other reward.
- Requiring consumers with a history of no-shows or late cancellations to confirm their trips with dispatch at a specified period of time (e.g., a half hour) before the scheduled trip or the trip is canceled without penalty.
- Contacting consumers with a problem history each night to confirm the next-day trip.

Some circumstances that cause no-shows or late cancellations are beyond the control of the consumer, including:

- Consumer was ill or experienced a sudden emergency.
- Consumer had a mobility aid failure (e.g., wheelchair breakdown).
- Consumer could not get through to your agency by telephone.
- Consumer's transportation connection was late (intercity bus, airline).
- Dispatcher did not record the cancellation.
- Dispatcher recorded an incorrect pick-up location.
- Dispatcher transmitted the wrong information regarding the cancellation.
- Driver canceled the wrong trip.

To account for these, many no-show and late-cancellation policies and procedures include both a method for tracking the reason for the missed trip and a process for consumer appeal.

Creating a Comprehensive No-show/Late Cancellation Program

TCRP Synthesis 60 (*6*) suggests that a comprehensive no-show program requires:

- Realistic expectations of consumers and drivers.
- Consistently applied operating procedures, particularly with respect to dispatch and drivers declaring an apparent consumer no-show.
- A means for consumers to cancel trips as far in advance as possible, including during times when the agency is not open for business.
- Good documentation based on a reliable, consistent method of recording no-shows and late cancellations.
- Effective computer programs that capture accurate information and produce reports that facilitate analysis.
- A system for sending letters to notify consumers about no-shows on a regular—perhaps daily—basis.
- An effective process for determining excused no-shows based on consistently applied criteria.
- A way to monitor no-shows and late cancellations on an ongoing basis and to impose suspensions at the appropriate time.
- Appropriate technological tools, such as computerized scheduling and dispatching, along with AVL and other technologies to manage no-shows and late cancellations.
- Public outreach to solicit input and educate consumers and their caregivers about the negative effects of no-shows and late cancellations.
- A recognition that imposing sanctions must be done with due process and concern for individuals who might rely on paratransit as their only source of transportation.

Contracting for Service

Public transit agencies use different approaches to deliver services, from using their own vehicles and personnel to enlisting outside contractors for some or all services. Transit agencies typically contract out services as a way to increase efficiency and reduce operating costs. Other reasons for contracting include more flexibility, improved customer service, better use of technology, and opportunities for regional coordination (*8*).

Contracting for services does not ensure lower costs. Successful contracting for transit services requires:

- Careful planning.
- A realistic assessment of the market and opportunities to save money.
- An effective procurement process.
- Consistent performance monitoring and contractor oversight.

Transit Services and Contract Providers

Transit agencies enter into contracts for different purposes and scopes of work.

- **Management contract** — Several Texas urban transit districts contract with a private company to serve as the general manager for transit services. The private company provides an experienced general manager, and in some cases additional key staff, to oversee the public transit system. The transit district retains ownership of the vehicles, and public employees operate the transit system. Financial risk remains with the transit district; the public entity directly pays all operating and capital expenses as well as the cost for the management contract.
- **Transit services contract**— A transit agency might contract for services with another public entity, a non-profit organization, or a private company. The contractor is responsible for managing, supervising, and operating transit services with the company's employees. Financial risk is shared with the contractor within the terms of the agreement. The contractor provides the transit services typically for a fixed price (e.g., cost per hour), while the public entity provides the transit vehicles and, often, the operations and maintenance facility.

  Variations on the concept of a contract for services include a contract for operations only or a contract for vehicle maintenance only.

- **Turnkey contract**— *Turnkey* means the contractor is responsible for managing, supervising, and operating the transit services, and also provides the vehicles and the operations and maintenance facility. The contractor assumes the financial risk to operate transit services within the price set by the contractor agreement.

A transit district might contract for transit services with one of several different types of contractors.

- **Another transit agency** — to take advantage of regional resources, focus on core strengths, or reduce administrative overhead.
- **Human service transportation provider/non-profit**— to serve a niche market, improve customer service, or support the goals of regional coordination.
- **Private for profit**— to reduce costs or improve efficiency. The private company might be a national, regional, or local transportation provider, or a private-for-hire transportation company (taxicab operator).

Why Contract for Transit Services?

According to the Transportation Research Board's (TRB's) *Special Report 258: Contracting for Bus and Demand-Responsive Transit Services*, reducing costs and improving operational efficiency are the most often cited reasons for contracting for transit services (8). Private companies are often able to use labor and assets more efficiently with part-time personnel and flexible service scheduling throughout the day. Small public transit systems report reductions in staffing and administrative burdens assumed by the contractor. TCRP's *Research Results Digest 46: Supplemental Analysis of National Survey on Contracting Transit Services* supplements *Special Report 258* with other reasons for contracting transit services include to (*8,9*):

- Start new service or expand services quickly.
- Secure the specialized expertise needed to deliver particular kinds of service.
- Enhance customer service.
- Avoid upfront capital costs by contracting for service and vehicles, especially for new service.

Other agencies may be required to contract for services by a legislative mandate or local governmental policy.

Is Contracting a Good Option for Your Agency?

Whether or not directly operated service or a contractor is more cost effective will depend on a number of factors such as size of your agency, the type of services you provide, and the competitive market in the geographic area.

As shown in Table 8-4, contracting public transit may be more cost-efficient under certain circumstances, but not all (*9,10,11*).

Table 8-4. Contracting Services Comparison for Cost-Effectiveness

Result	Circumstances
More Cost-Efficient to Contract	• There exists a strong need for flexibility (e.g., to implement new services). • The level of service is easy to quantify as the basis for calculating costs. • Your agency has relatively high wages, generous benefit plans, or restrictive work rules; therefore, a contractor can likely reduce costs. • The contractor can provide more expertise than your agency.
Less Cost-Efficient to Contract	• Potential cost savings are not easy to calculate. • Estimated cost savings are minimal after considering transaction costs and contractor oversight. • Lower cost may sacrifice effectiveness. • There is a lack of competition in the procurement of services. • Procurement arrangements are not transparent. • Your agency yields too much policy control to the contractor.

Your Agency's Context for Decision Making Is Important

Political, social, and institutional conditions as well as economic criteria influence the local decision to contract. A contracting strategy is only a viable option to improve cost efficiency in transit services when a transit agency carefully chooses the service level to contract based on an adequate assessment of conditions (*11*). Table 8-5 shows recommended best practices if your transit agency is considering contracting for transit services.

Table 8-5. Best Practices for Considering Contracted Services

Step	Action
1	Clearly state the objectives for contracting transit services. Know what your agency hopes to achieve.
2	Take an open-minded and realistic view of the advantages and disadvantages of contracting. Conduct a full analysis of the likely outcomes, not only by examining budgetary effects, but also by weighing potential effects on service quality, work-force motivation and morale, and flexibility to respond to new and changing service demands (*8*).
3	Consider various approaches to structuring contracts, including the option of the public agency providing vehicles, facilities, and other costly assets or supplying the fuel and insurance required for operations (*8*).
4	Complete an internal cost analysis of providing services directly. Develop a thorough understanding of the actual costs of existing services and any indicated enhancements to services (*10*).

Step	Action
5	Investigate if there is sufficient competition in your market to attract multiple interested companies either from national, regional, or local suppliers of transit services. Competition among providers will benefit your agency in terms of pricing.
6	Establish a competitive procurement process that invites high-quality proposals and screens out unrealistic proposals and unqualified contractors.
7	Compare price proposals to the internal costs of providing the same services to confirm if a contract will result in savings. Take into account savings offsets and indirect costs or savings.

Additional information can be found in Chapter 6: Contracting for Transit Services in the *Guidebook: Managing Operating Costs for Rural and Small Urban Public Transit Systems.*

Staff Turnover

Employee turnover is a complex subject. Employees' decisions to leave a company are often influenced by many factors. And in some cases, an employee leaving might actually be productive for the organization. Organizations may be overwhelmed by the sheer number of possible retention strategies and the mixed evidence of different initiatives' effectiveness.

Not all turnover is bad. In fact, there are many types of turnover in organizations. Some turnover is healthy, and some is not. Figure 8-2 presents a standard turnover classification scheme. The first major classification of turnover is voluntary or involuntary. Voluntary turnover is when an employee leaves the company on his or her own accord—perhaps for a new job, to retire, or due to a negative experience. Involuntary turnover is when an employee is forced to leave the company—for example, due to downsizing, disciplinary action, or failure to perform. Involuntary turnover does deserve further discussion; however, in most cases, companies consider involuntary turnover as unavoidable and necessary to ensure the company continues to be successful.

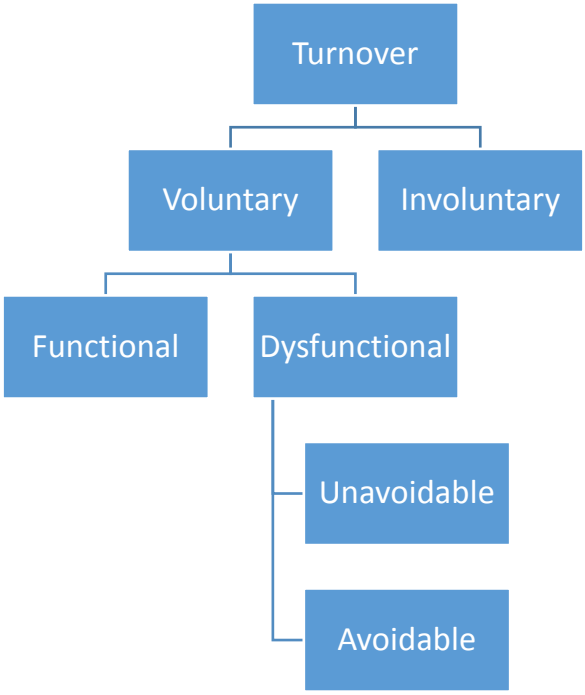

Figure 8-2. Turnover Classification Scheme
Source: A Guide to Analyzing and Managing Employee Turnover (12).

Turnover in Transit

The transit industry has shown particular interest in the subject of retaining bus operators. In fact, there are at least three national research projects within the last 15 years that have specifically focused on recruiting and retaining bus operators:

- TCRP Synthesis 40: A Challenged System: Hiring, Training, Performance Evaluation, and Retention of Bus Drivers (*13*).
- APTA's Standard for Recruiting and Retaining Bus Operations Employees (*14*).
- TCRP Report 142: Vehicle Operator Recruitment, Retention, and Performance in ADA Complementary Paratransit Operations (*15*).

The rate of bus operator turnover varies across transit agencies and regions. Based on a national survey conducted in 2001, the average bus operator turnover at transit agencies was 10.9 percent (*13*). However, this estimate was provided 15 years ago and may have changed. A national survey of paratransit operators conducted in 2010 found an average bus operator turnover rate of 27 percent (*15*). In some cases, the Federal Transit Administration (FTA) has found transit agencies where bus operator turnover exceeds 50 percent (*15*). The Bureau of Labor Statistics (BLS) estimates 2015 total annual turnover in the transportation, warehousing, and utilities industry at 39.5 percent and in the state and local government industry at 18.3 percent (*16*). (BLS does not provide a national turnover analysis specifically for bus operators.)

Efforts to Improve Bus Operator Retention

Figure 8-3, taken directly from *TCRP Synthesis 40*, provides a summary of transit agencies' responses to what strategies they have used to improve retention, how effective those strategies were, and how much they cost. Ninety-six percent of transit agencies reported using competitive benefits as an effective (albeit costly) strategy to improve retention. Although competitive pay also appears in the top three initiatives, there are many other strategies available that agencies have ranked as both highly effective and of relatively low cost, for example:

- Striving for fairness and equity.
- Maintaining a good working environment and working conditions.
- Supporting operator autonomy.
- Keeping operators safe.
- Providing opportunities for recognition, training, and job progression.

Percentage of Respondents Using Strategy	Strategy	Rated Effectiveness	Rated Cost
96	Competitive benefits	4.14	4.05
70	Equity and fairness	3.87	2.62
74	Competitive pay	3.67	3.75
74	Work environment	3.56	3.40
61	Work conditions	3.47	3.07
30	Autonomy	3.43	2.14
83	Safety	3.38	3.19
78	Performance recognition	3.33	2.80
57	Training opportunities	3.23	3.17
39	Job progression/advancement	3.22	3.00
70	Recognition	3.21	2.92
61	Promotion of diversity	3.20	2.46
83	Respect employees	3.20	1.88
57	Opportunities to contribute	3.15	2.58
52	Agency social events	3.08	3.00
57	Mission and values	3.08	2.17
4	Other: automation	3.00	4.00
13	Retention bonuses	3.00	3.33
35	Family friendly	3.00	3.25
22	Schedule	3.00	3.25
57	Wellness	3.00	3.10
35	Opportunities to collaborate	2.88	2.43
22	Opportunities for creativity	2.83	2.40
17	Job enrichment	2.80	3.80
30	Mentoring	2.80	2.00
52	Exit interviews	2.70	1.64

Note: Based on 23 responses.

Figure 8-3. Retention Strategies Ranked by Their Perceived Effectiveness
Source: TCRP Synthesis 40 (13).

Although there are many sources of information available on employee turnover and recommended practices, most of the information boils down to a few specific points:

- Hiring the right employee is the first and necessary step to any retention improvement effort. This means that transit agencies must be able to attract the right employee (with

competitive pay, benefits, hours, and company image) and select the right employee during the recruitment and selection process.

- Once a bus operator is hired, transit agencies must then provide adequate training, support, and tools to ensure that bus operators are able to succeed at their jobs. This means reliable and clean vehicles, facilities, and equipment in addition to job-appropriate training and a supportive and open company culture.

- To the extent possible, transit agencies need to make the working conditions of bus operators positive and desirable. Bus operator work will always be challenging due to work shifts and the nature of the job; however, transit agencies can implement practices, policies, and programs that mitigate and ameliorate the stresses and inconveniences of being a bus operator.

Managing Staff and Shifts

Proactively matching expected service demand with the appropriate amount of service is essential in optimizing agency productivity, typically defined as the number of passenger trips per hour (or mile) revenue vehicles handle (measured in "revenue vehicle hours" or "revenue vehicle miles"). Better managing productivity can decrease resources needed to provide services, increase the level of services you already provide using the same resources, and/or free up resources to provide new services.

Impact of Increased Productivity on Resources and Services

Productivity is a measure of service effectiveness when referring to transit agencies. Typically, productivity is defined as the number of passenger trips per hour or mile that revenue vehicles handle ("revenue vehicle hour" or "revenue vehicle mile"). Passenger trips per revenue vehicle hour are often considered to be the most important measure of demand-response transit productivity. "Productivity captures the ability of demand response transit systems to schedule and serve passenger trips with similar origins, destinations, and time parameters, using the least number of in-service vehicles and revenue hours" (*17*). Increased productivity can:

- **Decrease resources needed to provide service –** Increasing the number of passengers carried per service hour means fewer service hours are needed to serve the same number of passengers. Thus, fewer vehicle and driver resources are used to serve the same number of consumers.
- **Increase the level of service using the same resources** – The efficient use of resources can free up capacity for serving additional consumers during existing service hours, thus generating increased revenue without the need for applying additional resources.

Understanding Factors Influencing Transit Staff Shifts

TCRP Report 124 discusses both controllable and uncontrollable factors that affect a transit agency's overall performance (*17*). Factors that influence productivity include:

- Environmental factors.
- Service design factors.
- Policies/procedures.
- Service delivery strategies.

Since they have minimal control over environmental factors, those factors are particularly challenging to rural and small-urban transit agencies. These factors include:

- Size and geography of the service area.
- Population size and demographics.
- Population density.
- Roadway and sidewalk networks.
- Major generators of service demand (e.g., proximal cities, hospitals, educational institutions).
- The economy (*17*).

In Texas, the average service area of rural-transit agencies exceeds 6,000 square miles, with one transit agency having a 44,000 square-mile service area. Small urban-transit agencies do not typically face challenges related to the sheer size of their service area. They more often face issues associated with providing service to areas with varying population density, employment density, and street connectivity. Agencies with long service routes or that have low-density service areas and indirect routes face a special challenge to ensure service demands are met through the reasonable application of available resources and staff.

Key policies that assist agencies in optimizing the management of staff shifts and employment levels include:

- Attendance and on-time arrival to work standards.
- Dispatcher backup and driver backup, commonly referred to as "extra-board."
- Responsibilities and skills of the dispatcher/scheduler.
- Dispatch calls processed by time of day, average call time, and average hold times.
- Setup of the dispatch office and equipment.
- Staffing according to demand (dispatch call volume, trip requests, and distribution).
- Individual driver productivity.
- The amount of "slack" (downtime that can be potentially productive) in the schedule.

Managing Operations Staff

Delivering public transportation is a team effort. The dispatcher, scheduler, reservationist, driver, and passenger must each understand his or her responsibilities in making the overall system work efficiently. Communicate expectations and delineating responsibilities through, for example, well-written job descriptions and a rider's guide. Dispatch staff have the most impact on a transit agency's productivity, followed closely by the impact of drivers.

Staffing Dispatch by Call Volume

The dispatcher position is responsible for the on-time delivery of service. The dispatcher must maximize productivity while being responsible for all communications responding to passenger and driver requests, balancing vehicle and driver resources, and maintaining on-time performance. In order to maximize productivity while maintaining quality of service standards, the dispatcher/scheduler must be well organized. The dispatch office must have necessary information readily available, electronically or through posted information (or a combination of both).

Staffing in dispatch is the key indicator of productivity in the overall system. A passenger's inability to get through to cancel a trip, check on a driver, or let the dispatcher know the driver is late can push back the entire day's schedule. When drivers cannot get through to dispatch to help find a passenger, authorize a no-show, help with directions, or call in a detour, scheduling can suffer, thereby adversely impacting productivity as well. Determining a cost-effective staffing level that provides quality service and responds quickly when these incidents occur can result in a highly productive transit system.

Operator Shifts: Staff Shifts Based on Service Demand

Most agencies have peak times of service (e.g., lunch time). Unless service demands do not fluctuate throughout the day, using a combination of full- and part-time drivers is most cost-effective.

Schedule drivers based on the service demand throughout the day. If service demand is low during certain times of the day, staffing part-time drivers can yield higher productivity by minimizing slack time. Consider monitoring the productivity or number of passengers carried per hour of service for each driver manifest to determine if each manifest is at its peak productivity level.

Other Recommendations

If possible, assign the same driver to the same manifest (or general geography); drivers will become familiar with both routing and regular passenger needs, which can lead to natural system efficiencies and increased productivity.

Likewise, if possible, assign the same drivers to the same vehicles. Drivers become familiar with vehicle maintenance issues and how equipment on-board their vehicles, such as lift and wheelchair tie-down equipment, operate. Drivers familiar with their vehicles may become aware of maintenance issues and report the vehicle for servicing before service interruptions occur, thereby reducing potential service interruptions.

Familiarity matters for dispatchers too. Service-area familiarity is also critical to effective scheduling and dispatching. This is especially true for agencies with large service areas covering multiple counties.

Monitoring Trend Patterns

Service needs might change. You can most effectively manage productivity and optimize costs by monitoring trends and patterns over time and adjusting staffing levels to meet your agency's targeted service goals. In general, rural and small-urban transit agencies will more effectively manage labor operating costs by scheduling dispatchers and drivers to meet but not exceed demand.

Fuel and Fuel Consumption

Fuel is a significant driver of every transit agency's operating budget. In fact, fuel is the highest transit agency cost after labor and fringe benefits. This section provides strategies and lessons learned for purchasing and managing fuel consumption. Market-driven costs, such as fuel, are difficult and often impossible to control. Costs peaked in July 2008 at $4.03 for Texas retail gasoline and $4.74 for No. 2 Diesel Ultra Low Sulfur fuel.

How you purchase and manage the consumption of fuel can also significantly impact overall costs, however—and those are aspects you *can* control. Efficient purchasing methods, monitoring, service planning, pairing vehicle types with services need (vehicle fleet mix), in-vehicle mapping, efficient scheduling, and quality maintenance are all strategies that can reduce the overall impact of fuel prices on your operational budget.

On-Site Fueling and Maintaining Storage Tanks: Pros and Cons

In Texas, a majority of urban transit providers possess on-site fuel tanks and fueling capabilities. Transit agencies typically use on-site fuel tanks when:

- Operating urban services.
- Providing services in a geographically concentrated service area.
- Utilizing alternative fuels (such as compressed natural gas).
- Operating fixed-route services with complementary paratransit.

A principal advantage of on-site fuel storage is the ability to purchase fuel in bulk. When considering on-site fuel tanks, evaluate the cost, location availability and convenience, billing and payment procedures, usage, tracking capability, and security of the tanks. Examples of on-site fueling in Texas include:

- Brazos Transit District (BTD) has an on-site diesel fuel tank in Bryan to operate the urban College Station-Bryan fixed-route service. BTD uses a private company-issued fuel card for rural-demand response service.
- Capital Area Rural Transit System has an on-site fuel tank to fuel propane vehicles.
- The City of Cleburne and Fort Bend County have fuel tanks to serve relatively small service areas of 689 and 641 square miles, respectively.
- Colorado Valley Transit uses a fuel tank only to serve the area around the city of Columbus.
- The city of South Padre Island has a diesel fuel tank and a gasoline fuel tank to operate transit in a service area of two square miles.

Off-Site Fueling: Pros and Cons

Many Texas transit agencies use off-site fueling resources—such as fuel cards, city/county agreements, or local fuel-station agreements—for various reasons, including:

- A means to manage fuel consumption electronically.
- A backup means to purchase fuel.
- Convenient fueling locations, especially when servicing larger areas.
- Diesel fueling facilities.
- Access to discounted fuel.

Unless rural-transit agencies serve concentrated areas of consumers, storing fuel on site is not practical for the majority of rural transit agencies covering large service areas. The on-site cost savings provided by purchasing in bulk is lost by the long distances vehicles must travel in these areas to be refueled at a single location. Fueling off site provides a convenient means to operate efficiently in the dispersed areas typically serviced by rural agencies. Fueling off site also means relying on third party vendors to maintain fuel supplies and work smoothly with operators to avoid causing your agency downtime.

Examples of off-site fueling in Texas include:

- BTD uses fuel cards throughout its rural service area.
- Golden Crescent Regional Planning Commission uses fuel cards only for backup purposes.
- Longview Transit has a diesel-fuel tank and also contracts with Harrison County to use its private company-fuel card for gasoline purchases.
- CityLink in Abilene decided to purchase gasoline vehicles for demand-response services. Because CityLink has two 10,000-gallon underground diesel tanks and did not want to dedicate a diesel tank for the smaller amount of gasoline, the agency decided to use a private company-issued fuel card. The fuel card provides easy access to fuel at service stations around the city and reasonable pricing.

Considerations for Service Design and Policies in Managing Fuel Consumption

Fixed-route schedulers can reduce fuel costs by minimizing deadhead miles on routes or redesigning routes to reduce total vehicles needed (e.g., reducing trip frequency). Any change in service must be balanced with service quality and market demand.

Rural demand-response systems might design a route to begin near a selected driver's home, allowing the driver to take their assigned transit vehicle home at night. This reduces deadhead miles and their associated fuel and maintenance costs. Other considerations in service design and policies that impact fuel consumption include:

- Providing service over large service areas.
- Serving areas of low-population density.
- Traveling to destinations outside the service area.
- Scheduling practices (e.g., ridesharing) to minimize individualized trip-making.
- Implementing policies to control no-show and late cancellations resulting in unnecessary trips.

Reducing Fuel Consumption by Changing Driver Behavior

Fuel economy is affected by many factors including fleet type and age, driver behavior, and idling policies. You can likely reduce fuel expenditures by improving fuel economy with a program of driver training and oversight. Identifying poor driving habits and rewarding efficient driving habits can improve performance and reduce fuel cost. In fact, driver-training programs can improve fuel economy by 5 to 10 percent for your agency. On-the-road training yields the best results for training drivers to conserve fuel.

Driver training programs typically focus on safe-driving habits and on-time performance. When finalizing your driver-training curriculum, incorporate driving techniques to improve fuel economy. Training might include classroom review, driving simulators, instructional videos, and

on-the-road training with an instructor, which yields the best results for teaching drivers to conserve fuel. Most drivers are aware of good driving practices but might have developed fuel-inefficient habits. Fuel-efficient driving techniques include the following:

- Reducing excess (over 3 to 5 minutes) idling.
- Maintaining consistent vehicle speed (keeping engine RPMs at optimum levels).
- Accelerating and decelerating smoothly.
- Using vehicle momentum to maintain cruise speed.
- Avoiding filling the gas tank to the very top, especially in summer months.
- Avoiding pumping the accelerator pedal.
- Avoiding riding the brakes.
- Avoiding hard turning.

Trainers can spot habits that promote fuel inefficiency and correct drivers on the spot.

Reducing Fuel Consumption by Improving Vehicle Maintenance

According to *TCRP Synthesis 84: Current Practices in Greenhouse Gas Emissions* (*18*), routine vehicle maintenance programs can improve vehicle efficiency. For example, keeping bus tires properly inflated is a simple maintenance measure that improves fuel efficiency.

The Energy Sector Management Assistance Program (ESMAP) Guidance Note *Best Operational and Maintenance Practices for City Bus Fleets to Maximize Fuel Economy* suggests that agencies need the following to maximize fuel economy:

- *Management commitment and ownership.* Management must oversee and implement the fuel oversight program to ensure implementation occurs in a coordinated manner.
- *Data collection and analysis.* Conduct fuel-consumption data collection and analysis consistently. Implement benchmarks, targets, and measurement of fuel economy indicators to take action where improvement is needed.
- *Maintenance directed at low fuel-economy buses.* Focus technical-support interventions on the 10 percent of the fleet showing the lowest fuel economy. Underperforming buses should undergo proper operations and maintenance practices and quality assurance of repairs processes.

Transit agencies that have processes and procedures in place to ensure their vehicles are maintained at optimal levels—where management shows commitment to monitoring fuel efficiency and where benchmarks and targets are set for fuel economy—are most likely to realize fuel-cost savings.

Fleet Mix Considerations

From small sedans (used for ambulatory needs) to vans to a variety of bus sizes, most transit providers use a mix of vehicles types and sizes. The main advantage in using a fleet of mixed vehicles is the cost effectiveness in dealing with variation-in-seating requirements (*19*).

The use of larger vehicles means higher fuel costs (per vehicle) and lower maneuverability. In a shared-ride general-public demand-response service, trips are constrained by travel time as well. Filling the vehicle might be impractical due to passenger travel-times requirements. Smaller, more fuel-efficient vehicles might prove optimal in serving low-density areas with lower demand (*19*) and directly influence the amount of fuel consumed.

Use of Technology and Automation

Future strategies for optimizing agency costs include leveraging technology, adapting service design to changing consumer needs, and creating a more flexible fleet mix. Leveraging technology requires knowing what is available, how it can help your transit agency, and how your agency needs to adapt to use it. For example, schedulers can use software to develop more efficient routes, but only if they understand how to use the software. Mobile technology solutions, like the iPad, can provide low-cost connectivity for drivers. To take advantage of many technological solutions, a good communications infrastructure must support your service area.

GTFS

Developed by Google and others, General Transit Feed Specification (GTFS) provides a layer of map-based information specific to transit. Used by Google Transit and other map-based services, GTFS allows the sharing of real-time online transit route information for fixed-route public transit schedules. GTFS's online mapping option offers passengers a one-stop trip-planning solution for accessing the entire transit network in many urban areas. In fact, your agency might even experience ridership gains and improved customer-service support resulting from better route information availability to those consumers who plan trips online. GTFS has even been shown to increase productivity for those agencies using it. Facebook, Twitter, and blogs can help your agency better communicate with consumers via easier sharing of detailed route and schedule information and by providing timely updates when service changes or disruptions occur.

Placing routes in this format offers passengers a one-stop planning solution. End-users searching sites like Google can plan a trip on public transit across multiple transit agencies (see Figure 8-4 for an example).

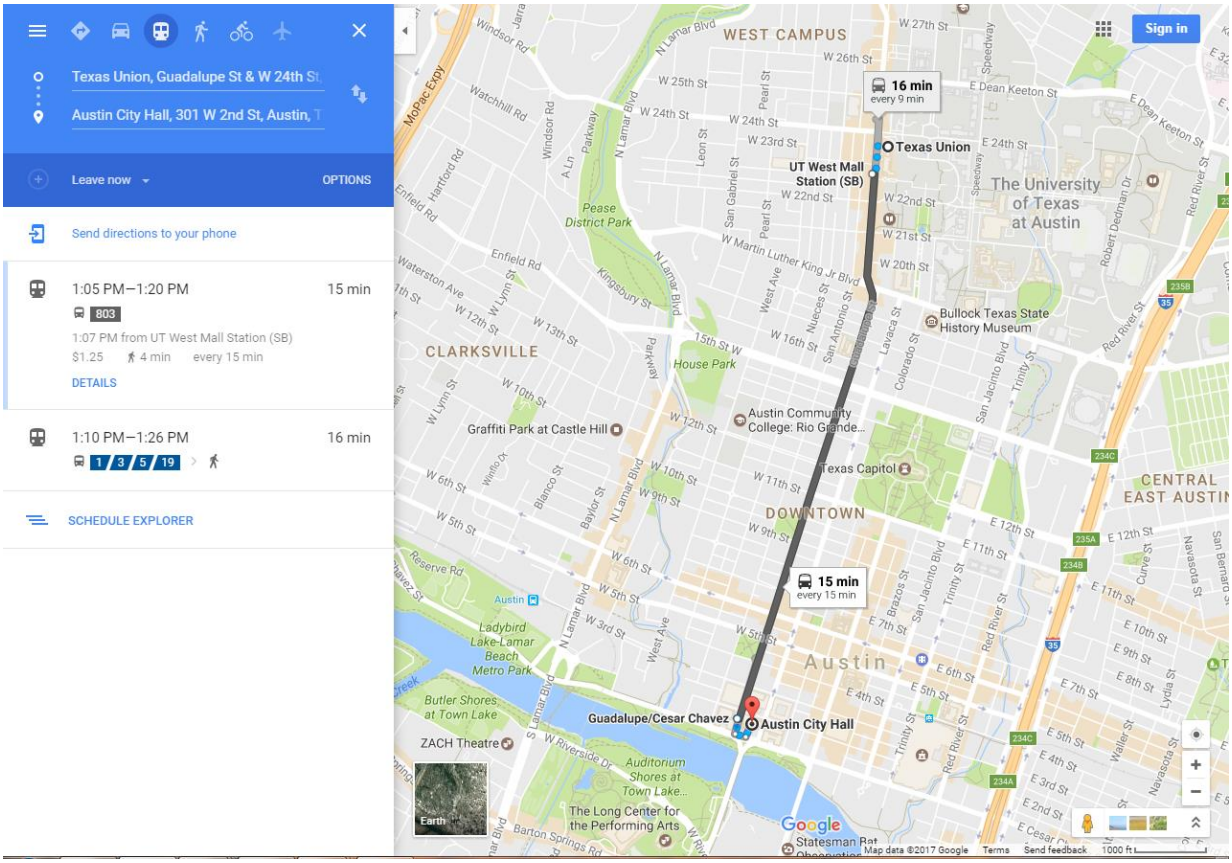

Figure 8-4. Example of Google Maps Pulling GTFS Data in Austin, TX
Source: Google.com

Think about adapting your agency's service design as the multimodal landscape changes. For example, cyclists are beginning to use transit to commute long distances, but only if they can securely store their bikes at the bus's origination point. To be successful in the future, your agency must adapt to meet consumer preferences as they take advantage of a wider variety of transportation modes (e.g., walking and biking).

Tablets

Tablets can be a useful and powerful tool for transit agencies running demand responsive transit. In areas within cell tower zones, tablets can access the internet, just as a smartphone. Similar to cell-phone plans, tablets are being used by dispatch and scheduling software vendors for less than $200 per bus, depending on the length of contract and the number of buses in the plan. Transit software packages and applications can allow tablets to record manifest data and state of good repair information such as maintenance and inspection checks. In addition to recording this data, tablets can also provide GPS data to dispatch centers, bypassing the need to purchase traditional CAD/AVL hardware. Tablets can also be a tool for field data collection, including use by supervisors, bus operators, and safety personnel, to efficiently collect information that

normally gets written onto paper forms. Using tablets can help streamline the data collection process, reduce the amount of data entry required, and help eliminate data transcription errors.

Partnerships with Other Transportation Providers

The growing popularity of mobile applications has allowed for innovative transportation solutions that can be utilized by the public sector. Partnerships with transportation network companies (TNCs) such as Uber and Lyft can provide alternative opportunities for transit agencies to provide service at a relatively low cost. TNCs, such as Liberty, are venturing into rural areas providing a sustainable method of rural transportation that can be beneficial for both riders and transit agencies alike.

Helpful Resources

- Guidebook: Managing Operating Costs for Rural and Small Urban Public Transit Systems - https://tti.tamu.edu/group/transit-mobility/files/2014/05/GUIDEBOOK-REVISED-0415-Final.pdf.
- Venezia, F.W. 2004. TCRP Synthesis 54: Maintenance Productivity Practices: A Synthesis of Transit Practices. Washington, D.C., Transportation Research Board. http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_syn_54.pdf.
- TCRP Synthesis 81: Preventive Maintenance Intervals for Transit Buses.
- FTA Useful Life of Transit Buses and Vans.
- TCRP Synthesis 60: Practices in No-Show and Late Cancellation Policies for ADA Paratransit.
- Transportation Research Board's (TRB's) Special Report 258: Contracting for Bus and Demand-Responsive Transit Services.
- TCRP's Research Results Digest 46: Supplemental Analysis of National Survey on Contracting Transit Services supplements Special Report 258.
- TCRP Report 124: Guidebook for Measuring, Assessing, and Improving Performance of Demand-Response Transportation.
- TCRP Synthesis 84: Current Practices in Greenhouse Gas Emissions.
- ESMAP's Best Operational and Maintenance Practices for City Bus Fleets to Maximize Fuel Economy.

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