

Dallas Area Rapid Transit

# FY 2018 BUSINESS PLAN

Including FY 2018 Annual Budget and  
Twenty-Year Financial Plan





# DART BOARD MEMBERS

---

**Sue Bauman**

Dallas

**Catherine Cuellar**

Dallas and Cockrell Hill

**Mark C. Enoch**

Garland, Rowlett and  
Glenn Heights

**Tim A. Hayden**

Carrollton and Irving

**Ray Jackson**

Dallas

**Jonathan R. Kelly**

Garland

**Patrick Kennedy**

Dallas

**Jon-Bertrell Killen**

Dallas

**Michele Wong Krause**

Dallas

**Amanda Moreno**

Dallas

**Gary Slagel**

Richardson, University Park,  
Addison and Highland Park

**Rick Stopfer**

Irving

**Dominique Torres**

Dallas

**Paul N. Wageman**

Plano

**Faye Moses Wilkins**

Plano and Farmers Branch



## TABLE OF CONTENTS

### FY 2018 BUSINESS PLAN

<b>Section I – Who We Are</b>	<b>Page</b>
Organization	I-1
Governance and Management Structure	I-3
The DART Transportation System	I-10
 <b>Section II –FY 2018 Proposed Twenty-Year Financial Plan</b>	
FY 2017 Highlights	II-5
Sources of Funds	II-12
Uses of Funds	II-20
Capital Projects Listing	II-26
Debt Program	II-34
Supplemental Financial Information	II-39
Major Financial Plan Assumptions	II-45
Potential Risks and Opportunities	II-51
 <b>Section III –FY 2018 Proposed Annual Budget</b>	
Overview	III-1
Strategic Priorities as Framework for Agency Initiatives	III-2
Budget Structure / Financial Summary	III-39
Inside the Numbers	III-40
Operating Expense Assumptions	III-43
Operating Budget Highlights	III-46
Budgeted Positions	III-48
Capital and Non-Operating Budget	III-57
Debt Service Budget	III-58
 <b>Section IV – Organizational Units</b>	
DART Key Performance Indicators	IV-7
Customer Care & Service Delivery	IV-9
Business Solutions & Innovation	IV-44
Workforce & Customer Safety	IV-71
Growth & Development	IV-80
Workforce Leadership & Intergovernmental Relations	IV-104
 <b>Section V – Reference</b>	
Business Planning Process	V-1
Financial Policies	V-12
Sales Tax	V-20
Debt Program	V-23
Fares	V-27
Operational Information	V-39
DART’s Economic Environment	V-53
DART Facts	V-71
Glossary/Acronyms	V-75



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Dallas Area Rapid Transit  
Texas**

For the Fiscal Year Beginning

**October 1, 2016**

A handwritten signature in black ink, reading 'Jeffrey R. Egan'.

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Award to Dallas Area Rapid Transit for its annual budget for the fiscal year beginning October 1, 2016. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

The award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.





## Who We Are

We are Dallas Area Rapid Transit – DART.  
Your preferred choice of transportation for now and in the future.

### Discover more

DART is far more than just "the thing you ride." It is your "trusted guide" to discovering all that North Texas has to offer.

Our extensive network of light rail, Trinity Railway Express commuter rail, bus routes, and paratransit services and vanpools enables more than 220,000 passengers per day get to where they need to go across our 700-square-mile service area.

Explore North Texas and discover something new on DART. From off-the-beaten-path venues to the trendiest spots in town, every trip can be an adventure. Many of these “DARTable” places are an easy walk from a DART rail station or bus stop, and the GoPass<sup>SM</sup> app makes discovering them easy.

If your journey begins or ends in places not easily served by DART, you now can take the train or bus for the longest portion of the trip, and use Uber or Lyft for the short leg. Customers can access the Uber, Lyft, and Zipcar apps through GoPass by selecting “Connect 2 Car” in the Travel Tools section.

Visit [DART.org/DARTable](http://DART.org/DARTable) for a list of possibilities that span arts, culture, sports, recreation, dining, shopping, and special events.

### Organization

Dallas Area Rapid Transit (DART) is a sub-regional transportation authority, created by a voting majority of the citizens on August 13, 1983, to organize and provide public transportation and complementary services to jurisdictions pursuant to Chapter 452 of the Texas Transportation Code (the “Act”). Our service area is comprised of 13 North Texas municipalities (Addison, Carrollton, Cockrell Hill, Dallas, Farmers Branch, Garland, Glenn Heights, Highland Park, Irving, Plano, Richardson, Rowlett, and University Park) as shown in Exhibit I.2 (on page 6). Our headquarters is located in downtown Dallas. Under the Act, we are authorized to collect a 1% sales and use tax on certain transactions.

DART provides bus, light rail, commuter rail, paratransit, vanpool, and other services to our 13 municipalities across a 700-square mile service area with a population of 2.4 million in the Dallas, Texas area. DART has operated bus service since its inception in 1983. The first segment of light rail opened in 1996, and the 20-mile Light Rail Starter System was completed in May 1997. Since then, DART has worked to expand light rail considerably. DART currently operates a total



of 93 miles of light rail, including an extension to UNT-Dallas that opened October 24, 2016. DART operates commuter rail service, which also opened in 1996, jointly with the Fort Worth Transportation Authority (FWTA) along a 34-mile rail corridor between the cities of Dallas and Fort Worth. Exhibit I.6 on page I-13 is the DART System Map.

*Mission Statement* – DART’s mission statement defines the purpose for which the Agency was created:

The mission of Dallas Area Rapid Transit is to build, establish, and operate a safe, efficient, and effective transportation system that, within the DART Service Area, provides mobility, improves the quality of life, and stimulates economic development through the implementation of the DART Service Plan as adopted by the voters on August 13, 1983, and as amended from time to time.

*Vision Statement* – To help achieve the Board's mission and strategic priorities, the Board has approved a vision statement to address DART’s customers and stakeholders.

DART: Your preferred choice of transportation for now and in the future.

*Board Strategic Priorities* – To achieve this mission and ensure Agency alignment, in April 2015 the Board adopted the following six Strategic Priorities:

1. Continually improve service and safety experiences and perceptions
2. Optimize and preserve (state of good repair) the existing transit system
3. Optimize DART’s influence in regional transportation planning
4. Expand DART’s transportation system to serve cities inside and outside the current service area
5. Pursue excellence through employee engagement, development, and well-being
6. Innovate to improve levels of service, business processes, and funding

*DART Organizational Values* – DART’s Five-Year Strategic Plan is grounded in DART’s Values Statement, as follows:

- Focused on Our Customers
  - ✓ We are dedicated to meeting our customers’ needs.
  - ✓ We strive for continuous improvement.
  - ✓ We deliver quality.
- Committed to Safety and Security
  - ✓ We require safety and security to be the responsibility of every employee.
  - ✓ We are committed to ensuring the safety and security of our passengers and employees.
- Dedicated to Excellence
  - ✓ We demonstrate a high regard for each other.
  - ✓ We are committed to innovation and learning from our experiences.
  - ✓ We hold ourselves accountable.
  - ✓ We coach, reinforce, and recognize employees.
  - ✓ We foster an environment promoting diversity of people and ideas.
- Good Stewards of the Public Trust
  - ✓ We responsibly use public funds and property.
  - ✓ We maintain open communication with customers and stakeholders.
  - ✓ We respect the environment.
  - ✓ We strive to mitigate risk.
  - ✓ We demand integrity and honesty.

## **Governance and Management Structure**

### The Board of Directors

DART is governed by a 15-member Board of Directors. The governing bodies of the participating municipalities appoint members to our Board according to the ratio of the population of each participating municipality to the total population within our service area. A participating municipality having a population which entitles it to make a fraction of an appointment may combine that fraction with one or more other participating municipalities to make one appointment; but no participating municipality may appoint more than 65% of the members of the Board. The Board can be restructured whenever there is a change in the participating municipalities or every fifth year after the date census data or population estimates become available.

Each Board member serves at the pleasure of the governing municipal unit(s) that appoints the member. Board members serve staggered two-year terms. Eight of the member terms begin July 1 of odd-numbered years, and seven of the member terms begin on July 1 of even-numbered years. Each member is entitled to receive \$50 for each Board meeting attended and is reimbursed for necessary and reasonable expenses incurred in the discharge of the member's duties. Exhibit I.1 sets forth information regarding our current Board of Directors.

Exhibit I.1  
Members of the Board of Directors

Name	Represents
Sue Bauman	Dallas
Catherine Cuellar	Dallas, Cockrell Hill
Mark C. Enoch	Garland, Rowlett, and Glenn Heights
Tim A. Hayden	Carrollton and Irving
Ray Jackson	Dallas
Johnathan R. Kelley	Garland
Patrick J. Kennedy	Dallas
Jon-Bertrell Killen	Dallas
Michele Wong Krause	Dallas
Amanda Moreno Cross	Dallas
Gary Slagel	Addison, Highland Park, Richardson, and University Park
Rick Stopfer	Irving
Dominique Torres	Dallas
Paul N. Wageman	Plano
Tim A. Hayden	Carrollton and Irving

The Board elects from its members a chair, vice chair, secretary, and assistant secretary as shown in the table. These elections are held in October of each year.



Exhibit I.2 is a map of the DART Service Area.

Exhibit I.2





### DART's Management

The Board appoints our President/Executive Director, who also serves as our Chief Executive Officer. The Chief Executive Officer's duties include:

- Overseeing our daily operations, including the hiring, compensation, and removal of employees.
- Awarding contracts for services, supplies, capital acquisitions, real estate, and construction if the amount of any such contract does not exceed \$100,000, and contracts of up to \$250,000 for standard off-the-shelf commercial products.
- Presiding over the growth of our transit system.
- Providing regional leadership and national visibility regarding the transportation needs in North Central Texas.

Exhibit I.3, on the following page, is a summary of our executive management team.

Exhibit I.3  
DART'S Executive Management

NAME	POSITION	JOINED DART
Gary C. Thomas	President/Executive Director	1998
Jesse Oliver	Deputy Executive Director	2012
David Leininger	Executive Vice President, Chief Financial Officer	2008
Timothy H. McKay	Executive Vice President, Growth/ Regional Development	2001
Carol Wise	Executive Vice President, Chief Operations Officer	2012
John Adler	Vice President, Procurement	2006
Albert Bazis	Director of Internal Audit	2001
Scott Carlson	General Counsel	2012
Joseph G. Costello	Senior Vice President, Finance	2014
Doug Douglas	Vice President, Mobility Management Services	1990
Nicole Fontayne-Bárdowell	Vice President, Chief Information Officer	2014
Garrome Franklin	Vice President, Chief Safety Officer	2015
Nevin Grinnell	Vice President, Chief Marketing Officer	2011
Vacant	Vice President, Maintenance	1995
Nancy Johnson	Director of the Office of Board Support	1999
Vacant	Vice President, Commuter Rail	2014
Michael Miles	Vice President, Government Relations	1982
Michael Muhammad	Vice President, Diversity/Innovative Services	2004
Timothy Newby	Vice President, Transportation	1997
Cheryl D. Orr	Vice President, Chief People Officer	2015
Todd Plesko	Vice President, Planning & Development	2009
John Rhone	Vice President, Capital Design & Construction	2002
Stephen Salin	Vice President, Rail Planning	2000
David Schulze	Vice President, Policy and Strategy	2004
James Spiller	Vice President, DART Chief of Police and Emergency Management	2001
Robert W. Strauss	Vice President, Real Property and Transit Oriented Development	2016

### Employees and Employee Relations

There are 3,816 salaried and hourly positions included in the FY 2018 Annual Budget.

The Amalgamated Transit Union, Local 1338, represents the majority of our operators, mechanics, and call center personnel. As a Texas governmental entity, we are not legally permitted to collectively bargain or sign labor contracts with these employee representatives. We do, however, meet and confer with these representatives on hourly employee issues, compensation, and benefits. DART is organized broadly along the following functional lines (“organizational units”; see Exhibit I.4).

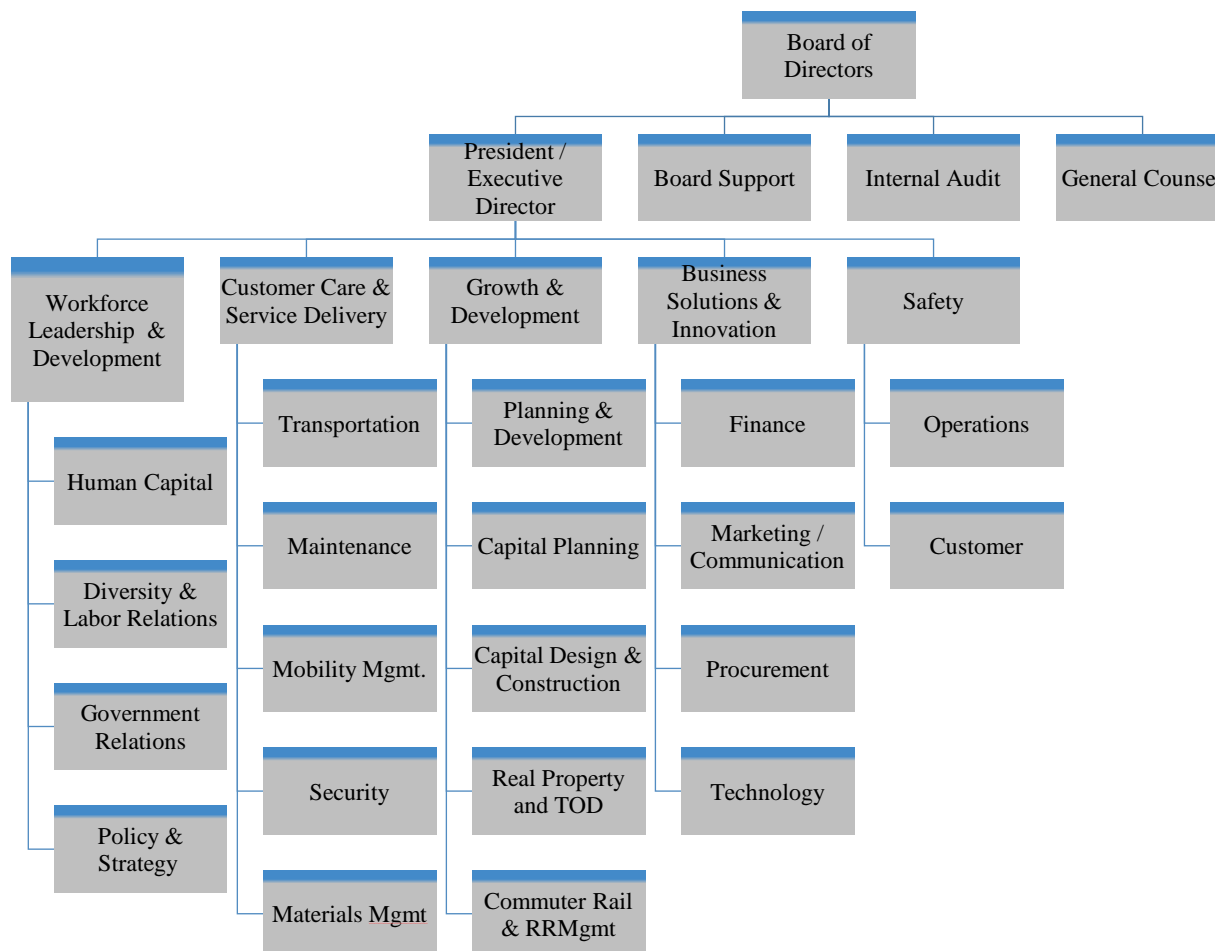
- ***Workforce Leadership and Development*** develops and provides effective leadership.
- ***Customer Care and Service Delivery*** is charged with providing effective, efficient, safe, secure transportation service.
- ***Growth and Development*** oversees the planning and development of the overall system.
- ***Business Solutions and Innovation*** looks to maximize Agency resources through attractive marketing, innovative technology, sound risk management, effective procurement, and astute financial management.
- ***DART Safety Office*** ensure a safe environment for customers, employees, for employees, customers, and people on DART property and construction sites.

Exhibit I.4 also illustrates that staff positions Board Support, Director of Internal Audit, and General Counsel report directly to the Board of Directors.

The Organizational Units section, beginning on page IV-1, provides more detailed information.



# Exhibit I.4 Dallas Area Rapid Transit Functional Organization Chart



## The DART Transportation System

Our current public transportation services include:

- Bus Transit service (including DART On-Call and Flex services);
- Light Rail Transit service;
- Commuter Rail service;
- DART Mobility Management services, including ADA Complementary Paratransit services;
- RideShare matching services for carpools and vanpools; and
- Special event service, provided through the modes listed above.

Exhibit I.5 highlights total system ridership by mode for the last ten years along with budgeted ridership for Fiscal Year FY 2017 and FY 2018.

Exhibit I.5  
Ridership by Mode  
(in Millions)

Fiscal Year	Bus	LRT*	Commuter Rail	Paratransit	Vanpool	Total **
2007	44.5	17.9	2.5	0.7	0.5	66.1
2008	45.0	19.4	2.7	0.7	0.7	68.5
2009	43.1	18.9	2.8	0.8	0.9	66.5
2010	38.0	17.8	2.5	0.8	0.9	60.0
2011	37.2	22.3	2.4	0.8	1.0	63.7
2012	38.7	27.7	2.3	0.8	1.0	70.5
2013	38.0	29.5	2.1	0.8	0.9	71.3
2014	37.4	29.5	2.3	0.8	0.9	70.8
2015	36.5	29.9	2.2	0.8	0.9	70.2
2016	33.7	29.8	2.1	0.8	0.8	67.1
2017B	34.8	30.9	2.2	0.8	0.8	69.7
2018B	33.0	31.0	2.1	0.9	0.7	67.8

\* Streetcar ridership is included in the LRT totals

\* Automatic Passenger Counter (APC) data used beginning in 2012. These counters have proven to be considerably more accurate than our current manual ridership counting methodology. The APCs show that we have been underreporting ridership by approximately 15.5%.

\*\*Reporting of HOV ridership was discontinued effective 10/01/2015. Without HOV, Total Agency Ridership will not match previously reported totals.

*Bus Transit (50.2% of total system ridership in Fiscal Year 2016)*

Our bus system provides local, express, crosstown, on-call, flex, feeder bus routes, and site specific shuttles. Local routes are focused on the Dallas Central Business District and serve the largest and densest concentration of employment in the service area. The routes are characterized by stops at one or two block intervals. Service is generally provided six-to-seven days a week. Express service connects the Dallas Central Business District to regionally located park-and-ride facilities that serve as focal points for commuters to make high speed trips. Crosstown routes traverse the Service Area facilitating intra- and inter-community travel while linking a variety of activity centers. DART On-Call provides our customers personalized demand-responsive weekday neighborhood service within specifically defined areas. Flex Service provides our customers the advantages of a fixed route plus the convenience of curbside service in six Flex Service Areas. Feeder routes connect residential and employment centers to the light rail system and other bus routes at stations and Transit Centers accommodating transfer connections that expand travel opportunities. Site-specific shuttles are operated and funded with partner organizations that offer direct connections for their employees, students, or customers to the DART Rail network.

*Light Rail Transit (44.4% of total system ridership in Fiscal Year 2016)*

Light Rail Transit is an electrically-powered rail system that generally operates at street level. A 20-mile “Starter System” opened in phases from September 1996 through May 1997, with lines from South and West Oak Cliff through downtown Dallas, and along the North Central Expressway corridor to Park Lane in Dallas. In 2001-2002, DART’s light rail was extended to North Dallas, Garland, Richardson, and Plano. In 2009, the first phase of the Green Line opened southeast of downtown Dallas with the remainder opening in 2010. DART also opened its first infill station, Lake Highlands Station, in December 2010 on the Blue Line. The first 5-mile segment of the Orange Line to Irving opened for service in July 2012. The second phase of the Orange Line and the Blue Line extension to Rowlett opened for service in December 2012. Rail service opened to the DFW International Airport in August 2014. The extension of the Blue Line to UNT-Dallas opened in October 2016. We currently operate a 93-mile light rail system.

*Commuter Rail (3.1% of total system ridership in Fiscal Year 2016)*

Our commuter rail system, referred to as the Trinity Railway Express (the “TRE”), provides diesel-powered passenger railroad services on the TRE Corridor between Dallas and Fort Worth, in mixed traffic with freight railroad operations. The 34-mile corridor is jointly owned by DART and the Fort Worth Transportation Authority (FWTA). TRE service is provided pursuant to an interlocal agreement between DART and FWTA. This agreement was originally entered into in 1994 and was restated and adopted by both Boards in 2003. Pursuant to Trackage Rights Agreements, the Burlington Northern Santa Fe, the Dallas Garland and Northeastern, and the Union Pacific railroads pay a fee for the right to operate freight services on the TRE corridor. TRE, through its contractor, Herzog Transit Services, Inc., provides dispatching, maintains the corridor, operates the service, and maintains the rolling stock used in the service.



*Paratransit (1.2% of total system ridership in Fiscal Year 2016)*

DART is responsible for providing complementary paratransit service in accordance with the Americans with Disabilities Act of 1990 (the “ADA”). In Fiscal Year 2013, we transitioned to a new service delivery model and a new contractor, MV Transportation, Inc. (MV), for providing paratransit service. MV provides, operates, and maintains a fleet of 80 Starcraft vehicles in dedicated service. MV also oversees and manages a fleet of 116 Dodge Entervans outfitted by Braun, which are taxi vehicles provided and operated by Irving Holdings.

*Transportation Demand Management (Vanpool is 1.2% of total system ridership in Fiscal Year 2016)*

We work with area employers to develop strategies for reducing employee vehicle trips through such programs as carpools, vanpools, and flexible work schedules. We provide funding for up to 206 vans for our vanpool program, which is operated through a third-party contractor. We also assist customers in forming vanpools. Prospective vanpoolers can call in and provide us with information for our RideShare database. We then work to link-up customers with common trip origins and destinations.

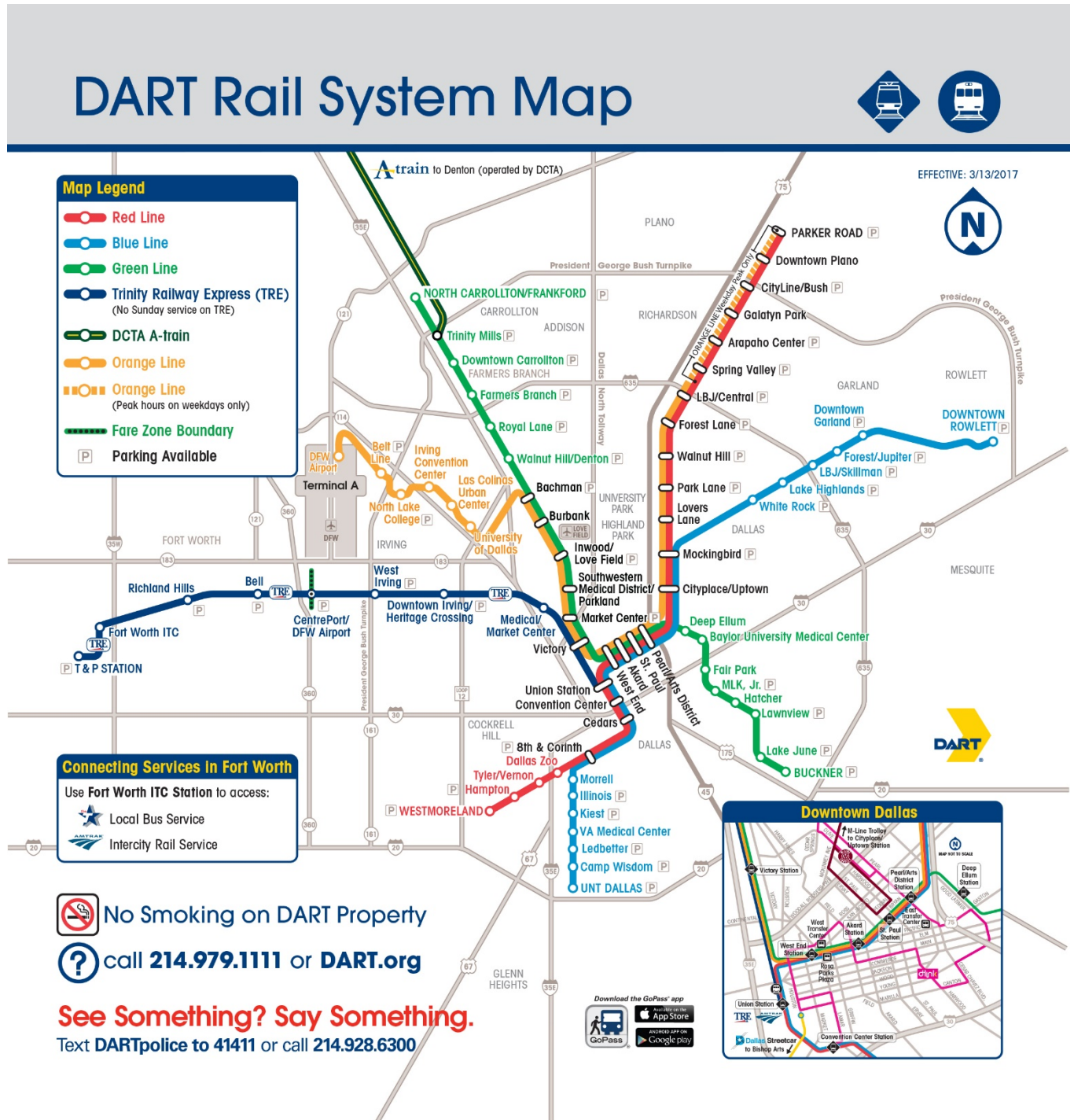
*Special Events Service*

We operate special event services (bus, light rail, and TRE) to the State Fair of Texas, the New Year’s Eve celebration in downtown Dallas, concerts, basketball, hockey games, and a wide variety of other events. Consequently, most special event services are provided on the light rail and commuter rail systems, with bus involvement generally restricted to supplementing the capacity of the rail system during periods of very high usage.

On the following page, listed as Exhibit I.6, is the current DART System Map.



Exhibit I.6



### DART in the Industry

- DART is an established leader within the transit industry. Board members and staff continue to be involved in many significant ways in key transit industry associations. President/Executive Director Gary Thomas served as the Chair of the American Public Transportation Association (APTA) during 2011 and 2012 and, along with other DART staff, continues to serve on APTA's Board of Directors. APTA is a nonprofit international association of more than 1,500 public and private organizations involved in transit. Mr. Thomas is a past chair of the American Public Transportation Association, RailVolution and the South West Transit Association.
- DART has earned many industry awards during 2016-2017, including:
  - APTA's - First place AdWheel, *Best Marketing and Communications to Highlight Transit Needs / Funding, Social Media* (D2) 2017
  - APTA's - First Place, AdWheel, *Best Marketing and Communications Educational Effort, Special Event* (DART Honors Civil Rights Icon Rosa Parks) 2017
  - APTA's Outstanding Public Transportation Manager of the Year for 2016
  - Award for Distinguished Budget Presentation and Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (premier professional organization in governmental finance)
  - Greater Dallas Planning Council – Built Project Award, Orange Line to DFW Airport
  - National Purchasing Institute – 2017 Achievement in Excellence for Procurement
  - National Association of Government Communicators – Award of Excellence, Mobile (GoPass/State Fair ticket bundle)
  - Regional Hispanic Contractor's Association - "Pillar Award," DART Union Station Streetcar Oak Cliff Southern Extension
  - Rowlett Chamber of Commerce – Business of the Year
  - Southwest Transit Association – Social Media, DART Daily
  - Telly Award – Bronze Award for police memorial video
  - Texas Comptroller Leadership Circle – Silver Designation
  - Tramways and Urban Transit Global Light Rail Awards – Outstanding Engineering Achievement – DFW Airport Station



## **FY 2018 Twenty-Year Financial Plan**

DART's Twenty-Year Financial Plan (the "Plan") represents a robust long-term projection of DART revenues, operating expenses, capital expenditures, and other financial information. The Plan validates the affordability of system expansion and maintenance commitments, operating requirements, and debt repayment. An updated Plan is approved each year (and amended, if necessary). Approval of the Plan requires an affirmative vote of two-thirds of the appointed and qualified members of the DART Board. Approval of the Annual Budget (which corresponds to the first year of the Plan) requires a simple majority vote.

The FY 2018 Twenty-Year Financial Plan demonstrates that DART has the financial capacity to meet the Agency Transit System Plan commitments and to provide the programmed levels of bus, rail, and other transportation services, based on current information and assumptions.

### **Our View**

DART has developed a transportation system that provides mobility options to the residents of North Texas. From August of 2009 to August 2014, the light rail system doubled in size, increasing to 90 miles with the connection to the Dallas/Fort Worth International Airport in 2014. An additional 2.6 miles opened in October 2016, bringing the system total to 93 miles.

Despite the completion of the current phase of Light Rail expansion, system expansion continues. The Program of Interrelated Projects is underway to increase the core capacity of DART's Light Rail system. It includes three separate initiatives:

- Platform extensions to the twenty-eight older stations on the Red and Blue lines to accommodate three-car trains;
- The construction of a second rail corridor through downtown Dallas (known as D2) which will both increase throughput and provide a rerouting option in the event of a service disruption. DART is currently pursuing a federal grant to aid in the construction of this line; and
- Expansion of the Dallas Streetcar network through the central business district (CBD), connecting the modern Dallas Streetcar line in Oak Cliff with the McKinney Avenue Streetcar line.

The FY 2018 Financial Plan includes service along the Cotton Belt corridor in the northern part of the DART Service Area. As proposed, this line runs from Plano, through Richardson, North Dallas, Addison, and Carrollton and into DFW International Airport. This line will be designed to link up with the TEX Rail project currently under construction by the Fort Worth Transportation Authority (FWTA), which runs from downtown Fort Worth to DFW Airport. This could potentially allow for a single-seat ride from Plano all the way to Fort Worth. Service along the Cotton Belt is scheduled to begin in 2022. Current plans call for single-track operation with sidings and passing tracks, as opposed to full double-track operation. Headways would be 30-minute in the peak periods. The line will receive funding over the next 20 years from a variety of sources,



some of which will help fund construction and some of which will be used to pay for annual operating and/or debt service costs.

In addition to expansion, the Plan reflects an increasing focus on attracting and retaining customers with responsive service and a sustainable system. The *Annual Budget Section* of this Business Plan document describes several DART customer-facing initiatives, grouped under each DART strategic priority. The capital program, discussed later in this section of this document, includes both expansion programs previously described as well as sufficient funds dedicated to maintaining and replacing our assets; i.e., keeping our entire transportation system in a state of good repair.

The underlying trend in the FY 2018 Twenty-Year Financial Plan is continued economic expansion which includes modest long-term growth in employment, ridership, and sales tax receipts. DART's financial policies structure the Agency's financial condition to weather the inevitable downturns. These policies generate a Plan that reflects conservative revenue forecasts for major sources of funds, including sales taxes (forecasted below local economist projections) and continued federal formula funding at existing levels. The DART policies also promote continual cost containment efforts to achieve a balanced budget throughout the twenty-year planning horizon.

With that as the backdrop, DART's FY 2018 Financial Plan illustrates the affordability of its capital and operating plans, and contains \$3.08 billion over the next 20 years devoted to State of Good Repair capital asset maintenance and replacement, higher service levels, and strong debt service coverage ratios.



## Our Priorities

The DART Board has adopted a set of strategic priorities to guide the agency, and to address external factors that we expect will have an impact on DART over the next twenty years.

1. Continually improve service and safety experiences and perceptions for customers and the public
2. Optimize and preserve (state of good repair) the existing transit system
3. Optimize DART's influence in regional transportation planning
4. Expand DART's transportation system to serve cities inside and outside the current service area
5. Pursue excellence through employee engagement, development and well-being
6. Innovate to improve levels of service, business processes and funding

These priorities guide the development of the FY 2018 Annual Budget and Twenty-Year Financial Plan.

## Board Approvals

The approval of the annual budget requires a simple majority vote of the Board of Directors. Approval of the Twenty-Year Financial Plan requires an affirmative vote of two-thirds of the appointed and qualified members of the Board.

The DART Board of Directors approved the FY 2017 Annual Budget on October 25, 2016. The Board is scheduled to vote on the approval of the FY 2018 Annual Budget and Twenty-Year Financial Plan on September 26, 2017.





## Financial Plan Format

The discussion of the Plan categories follows a Sources and Uses of Funds format.

Each category in the FY 2018 Twenty-Year Financial Plan is described in detail in this portion of the document:

1. Sources of Funds
  - a. Sales Taxes
  - b. Operating Revenues
  - c. Interest Income
  - d. Federal Funding
  - e. Debt Issuance
  - f. Other Sources
2. Uses of Funds
  - a. Operating Expenses
  - b. Capital and Non-Operating Expenditures
  - c. Debt Program
3. Supplemental Financial Information

The following pages also outline the major assumptions used to develop the FY 2018 Financial Plan, discuss changes from prior plans, and illustrate some potential financial risks and opportunities over the life of the Plan.

References are made throughout this section to DART's Financial Standards. The Board's Financial Standards Policy is located at Exhibit V.7, and the approved FY 2018 Financial Standards are located at Exhibit V.8 in the *Reference Section* of this document.

Please Note: Budget schedules are presented and rounded to millions or thousands (as indicated), but are based on actual raw numbers. Consequently, certain schedules may not tie exactly or add properly, due to rounding. In some cases, prior years' numbers have been restated to conform to the current year's format. All schedules are in fiscal years unless otherwise stated.



## **FY 2017 Highlights**

Construction was completed on the final light rail line section in the current system, South Oak Cliff-3 (SOC-3). This line section opened on October 24, 2016, two years ahead of schedule. This 2.6-mile extension of the Blue Line south runs from Ledbetter Station to the University of North Texas Dallas campus. The line includes two stations – the Camp Wisdom Station near the intersection of Camp Wisdom and Lancaster, and the UNT Dallas Station at the end of the line.

DART also continued work toward implementation of the Program of Interrelated Projects (the Core Capacity program) that was initially incorporated into the FY 2015 Financial Plan. The platform extensions and streetcar projects are expected to be completed by 2023, and D2 by 2024.

Planning work also continued on the development of commuter rail service on the Cotton Belt corridor.

DART has completed a Comprehensive Operations Analysis (COA) in conjunction with the development of a new 2040 Transit System Plan. The COA is a thorough examination of all DART services, with particular emphasis on the bus system, that analyzes demographic and travel data, transit service provided, and transit service needs over the next decade and beyond. DART has reviewed the recommendations of the COA and has begun to implement service enhancements and make any service adjustments necessary to improve the service to our riders while ensuring that changes fit within the framework of the budget and affordability. A total of 41 new buses will be added to the fleet by FY 2019 to enable the service improvements, and DART has incorporated \$10 million in the Plan for additional annual bus operating expenses beginning in FY 2019 to start implementation of the recommendations resulting from the COA. While the \$10 million budget placeholder is included in the Plan in FY 2019, the actual service changes may be spread over several years.

The Agency continued the implementation of a multi-year initiative called “5 Star Service.” Led by Customer Care and Service Delivery, the vision statement for the program is, “Each member of DART’s team strives every day to create an extraordinary customer experience when interacting with colleagues, riders, partners, and the community.”

DART completed its five-year bus fleet replacement program with receipt of the final 46 vehicles from North American Bus Industries (NABI) in the first quarter of FY 2017. All of DART’s buses are now fueled by compressed natural gas (CNG), with electric-powered buses to be added during FY 2018. There are no more diesel or liquefied natural gas buses remaining in the fleet.

The mobile ticketing application, *GoPass*<sup>SM</sup>, the first phase of a Comprehensive Payment System (CFPS), was a solid success with sales of over 700,000 passes when it was introduced in FY 2014. That figure is expected to surpass 1.6 million for FY 2017, accounting for 14% of all DART fixed-route pass sales.

The second phase of the CPS will introduce a new state-of-the-art, integrated, electronic fare payment, distribution, collection, and processing system. This system will utilize best practices of



modern technologies in the consumer and fare payment sectors, capable of interfacing with both bank and non-bank financial clearing systems for transaction processing and settlement. This new methodology will be accomplished by creating an electronic payment infrastructure for transportation and other services that is ultimately capable of being deployed region-wide, using prepaid cards and contactless devices such as smart cards, credit and debit cards, Radio Frequency Identification (RFID) tags, secure barcodes, and Near Field Communication (NFC) devices. System deployment is scheduled to be completed in stages starting in the third quarter of FY 2019.

During the second half of FY 2017 DART implemented KRONOS, a powerful and flexible time and attendance system that will encompass the entire Agency, salaried and hourly.

With DART Board approval, DART will introduce new Medical Plan offerings to employees and retirees beginning 2018. Replacing the existing Medical Plan offerings will be an Accountable Care Organization and a Reference Based Reimbursement Plan. A new third party medical claims administrator will also be introduced along with a new life insurance carrier.

DART is in the planning stage for two additional infill stations along the Orange Line in Irving. These stations, at Loop 12 and Carpenter Ranch, are completely funded by external contributions and are expected to generate additional ridership.

DART is in the process of generating the 2040 Transit System Plan. The planning process includes:

- Assessment of mobility needs in the DART Service Area and a larger regional study area, including changes in demographics, travel patterns, and congestion;
- Definition of corridor opportunities and various service strategies to meet the identified mobility needs; and
- Evaluation of alternatives, including a trade-off analysis within financial constraints through 2040.

### Cotton Belt Rail Service

During 2013 and 2014, 41 separate service alternatives were studied for this corridor including different types of service delivery (double-track rail, single-track rail, and Bus Rapid Transit), segments of the corridor being developed (the full DFW-Plano alignment as well as several sub-segment configurations), and vertical profiles through North Dallas (at-grade, shallow trench, or tunnel). They also included two alternatives at the east end of the alignment (a north and a south route) as well as the inclusion or exclusion of a Cypress Waters Station in the Northlake area of Irving. Each of these alternatives was detailed with capital and operating costs as well as ridership and revenue potential. The results of this study and the cost of each option were presented to the service area cities and the DART Board in June 2014.

The FY 2016 Financial Plan included the development of rail service along the Cotton Belt corridor from Plano, through the North Dallas area, to DFW Airport. This service will connect with DART's Green Line in Carrollton and the Red Line in Plano. Service was programmed to



begin in 2035, but several regional sources of funds and scope modifications allowed for the FY 2017 Financial Plan to include revenue service along the Cotton Belt Corridor in 2022. The Plan also included external funding sources and requires environmental clearance.

A combination of the 13-year acceleration (reducing the impact of inflation) and the scope modifications lowered the cost of the line from \$2.9 billion in the FY 2016 Plan to \$1.1 billion in the FY 2017 Plan. Note: This is a preliminary cost estimate based on 5% design documents. As the design is advanced further and the scope of the project becomes better defined, the overall cost may change. While this does have the effect of tightening financial resources over the next 15 years, it opens up significantly more financial capacity for projects that may be recommended in the 2040 Transit System Plan and its subsequent updates.

### Multiple Versions of the Proposed 2018 Financial Plan

For FY 2018, DART is advancing two different versions of the Financial Plan. The only difference between the two plans is the funding for the D2 project. All of the data, tables, and write-ups in this document assume that DART will be able to obtain federal (or other external) funding in the amount of \$300 million and will issue Capital Appreciation Bonds, or CABs, (see page II-35 for a discussion of CABs) in the amount of \$350 million. The alternative plan assumes that DART is able to obtain a Full Funding Grant Agreement for 49.5% of the total project cost (\$653.5 million). DART is advancing the \$350 million CABs version as the primary FY 2018 Financial Plan, because it is the more conservative of the two Plans. Both versions of the Plan are contained at the end of this document.





Exhibit II.1 is a summary of the changes in the sources and uses of funds between the FY 2017 Financial Plan and the FY 2018 Plan, for the 5-year period FY 2018 through FY 2022.

Exhibit II.1  
5-Year Sources and Uses of Funds Comparison (FY 2018 – FY 2022)  
(in Millions)

Line	Description	FY17 Plan	FY18 Proposed Plan	\$ Variance	% Variance
	<b>SOURCES OF FUNDS</b>				
1	Sales Tax Revenues	\$3,102.9	\$3,141.5	\$38.7	1.2%
2	Operating Revenues	470.8	460.4	(10.4)	(2.2%)
3	Interest Income	56.5	65.1	8.6	15.2%
4	Formula Federal Funding	382.8	467.6	84.9	22.2%
5	Discretionary Federal Funding	666.3	448.0	(218.4)	(32.8%)
6	Debt Issuances	1,360.0	1,710.0	350.0	25.7%
7	Other Non-Operating Sources	86.5	87.8	1.3	1.5%
8	Other Capital Sources	89.4	81.8	(7.5)	(8.4%)
9	<b>Total Sources of Funds</b>	<b>\$6,215.1</b>	<b>\$6,462.2</b>	<b>\$247.1</b>	<b>4.0%</b>
	<b>USES OF FUNDS</b>				
	Operating Expenses:				
10	Bus	\$1,434.8	\$1,465.7	\$30.8	2.1%
11	Light Rail Transit	894.0	904.6	10.6	1.2%
12	Streetcar	13.7	13.7	(0.0)	(0.2%)
13	Commuter Rail/RR Management	194.4	190.8	(3.7)	(1.9%)
14	Paratransit	205.3	212.0	6.7	3.2%
15	General Mobility - TDM	10.8	10.8	0.0	0.2%
16	<b>Total Operating Expenses</b>	<b>\$2,753.0</b>	<b>\$2,797.4</b>	<b>\$44.4</b>	<b>1.6%</b>
	Capital and Non-Operating:				
17	Agency-wide	\$99.6	\$119.2	\$19.6	19.7%
18	Bus	117.7	141.4	23.7	20.1%
19	Light Rail Transit	862.6	980.4	117.8	13.7%
20	Streetcar	91.7	101.2	9.5	10.4%
21	Commuter Rail/RR Management	1,314.2	1,304.6	(9.6)	(0.7%)
22	Paratransit	1.6	1.6	0.0	0.0%
23	Capital P & D, Start-Up, Non-Operating	65.6	61.6	(4.0)	(6.1%)
24	General Mobility - Road Impr./ITS	10.1	33.5	23.4	232.1%
25	<b>Total Capital and Non-Operating</b>	<b>\$2,563.1</b>	<b>\$2,743.6</b>	<b>\$180.5</b>	<b>7.0%</b>
	Debt Service				
26	Principal - LT/ST Debt	\$311.2	\$306.9	(4.3)	(1.4%)
27	Interest and Fees - LT/ST Debt	771.3	774.5	3.2	0.4%
28	<b>Total Debt Service</b>	<b>\$1,082.5</b>	<b>\$1,081.4</b>	<b>(\$1.1)</b>	<b>(0.1%)</b>
29	<b>Total Uses of Funds</b>	<b>\$6,398.6</b>	<b>\$6,622.4</b>	<b>\$223.8</b>	<b>3.5%</b>

## Structural Balance of the Budget and Financial Plan

DART maintains a structural balance to its budget. This means that current period revenue inflows available for operating and debt service costs equal or exceed the ongoing cash requirements for the same costs. While DART does not have a policy that requires a balanced budget on an annual basis, the structural balance of the budget and the internal coverage ratio (see page II-37) perform a related control function. Annual sources of funds are sufficient to pay for all ongoing obligations (operating and debt service) in every year of the FY 2018 Financial Plan. This can be seen on line 16 (highlighted in orange) in Exhibit II.2, noting that no existing cash reserves are required for operating expenses during any year of the Plan. For example, FY 2018 operating expenses are \$523.0 million, and debt service requirements are \$193.8 million, for a total of \$716.8 million. These ongoing obligations are funded by annual sources of funds including operating revenues (\$81.9 million), interest income (\$7.5 million), federal formula funds (\$114.0 million), local funding for TRE (from FWTa) and Streetcar (City of Dallas) operations (\$13.6 million), and sales taxes (\$498.9 million). In this manner, Exhibit II.2 illustrates how DART's sources of funds will be applied to uses of funds over the next five years.







Exhibit II.2  
FY 2018 – FY 2022 Structural Budget Balance  
(in Millions)

	Category	2018	2019	2020	2021	2022	5-Year
<b>1</b>	<b>Total Sources of Funds</b>	<b>\$828.5</b>	<b>\$1,288.3</b>	<b>\$1,559.5</b>	<b>\$1,523.0</b>	<b>\$1,262.9</b>	<b>\$6,462.2</b>
2	Sales Tax Revenues	\$593.9	\$593.9	\$617.7	\$648.6	\$687.5	\$3,141.5
3	Operating Revenues	82.2	92.4	92.1	94.0	99.6	460.4
4	Interest Income	7.5	9.0	13.0	17.0	18.6	65.1
5	Formula Federal Funding	125.3	111.8	76.8	76.8	76.8	467.6
6	Discretionary Federal Funding	20.5	102.5	53.0	147.0	125.0	448.0
7	Net Debt Issuances	(30.0)	335.0	670.0	515.0	220.0	1,710.0
8	Other Non-Operating Sources	14.2	14.2	16.6	19.6	23.3	87.8
9	Other Capital Sources	15.0	29.5	20.3	5.0	12.0	81.8
<b>10</b>	<b>Operating Expenses</b>	<b>\$523.0</b>	<b>\$544.3</b>	<b>\$559.8</b>	<b>\$570.7</b>	<b>\$599.6</b>	<b>\$2,797.4</b>
	Funding Sources:						
11	Operating Revenues	\$82.2	\$92.4	\$92.1	\$94.0	\$99.6	\$460.4
12	Interest Income	7.5	9.0	13.0	17.0	18.6	65.1
13	Formula Funds (Capital Preventive Maint.)	114.0	107.4	72.4	72.4	72.4	438.7
14	FWTA TRE Ops / Dallas Streetcar Contributions	13.6	13.7	16.1	19.1	19.6	82.2
14	Other Non-Operating Sources	0.6	0.5	0.5	0.5	3.7	5.7
15	Sales Taxes allocated to Operations	305.1	321.3	365.7	367.7	385.7	1,745.5
16	General Operating Fund (existing cash)	0.0	0.0	0.0	0.0	0.0	0.0
<b>17</b>	<b>Total Funding Sources</b>	<b>\$523.0</b>	<b>\$544.3</b>	<b>\$559.8</b>	<b>\$570.7</b>	<b>\$599.6</b>	<b>\$2,797.4</b>
<b>18</b>	<b>Capital/Non Operating Expenditures</b>	<b>\$265.3</b>	<b>\$507.4</b>	<b>\$662.5</b>	<b>\$794.4</b>	<b>\$513.9</b>	<b>\$2,743.6</b>
	Funding Sources:						
19	Formula Funds	\$11.3	\$4.4	\$4.4	\$4.4	\$4.4	\$28.9
20	Discretionary Grant Funds	20.5	102.5	53.0	147.0	125.0	448.0
21	Current Debt Issuances	0.0	335.0	524.3	548.0	220.0	1,627.3
22	Other Capital Sources	15.0	29.5	20.3	5.0	12.0	81.8
23	Sales Taxes Allocated to Capital	94.9	75.6	60.5	90.1	108.0	429.1
24	General Operating Fund/Prior Debt Issues	123.7	0.0	0.0	0.0	44.4	168.0
<b>25</b>	<b>Total Funding Sources</b>	<b>\$265.3</b>	<b>\$547.1</b>	<b>\$662.5</b>	<b>\$794.4</b>	<b>\$513.9</b>	<b>\$2,783.2</b>
<b>26</b>	<b>Debt Service Costs</b>	<b>\$193.9</b>	<b>\$197.0</b>	<b>\$191.5</b>	<b>\$190.8</b>	<b>\$193.8</b>	<b>\$966.9</b>
	Funding Sources:						
26	Sales Taxes Allocated to Debt Service	\$193.9	\$197.0	\$191.5	\$190.8	\$193.8	\$966.9
<b>27</b>	<b>Total Uses of Funds</b>	<b>\$982.2</b>	<b>\$1,248.7</b>	<b>\$1,413.8</b>	<b>\$1,556.0</b>	<b>\$1,307.3</b>	<b>\$6,507.9</b>
<b>28</b>	<b>Net Differential Between Sources and Uses</b>	<b>(\$153.7)</b>	<b>\$39.6</b>	<b>\$145.7</b>	<b>(\$33.0)</b>	<b>(\$44.4)</b>	<b>(\$45.7)</b>

Exhibit II.3, on the following page, shows the FY 2018 Financial Plan. There is also a full-sized version attached at the back of this document.

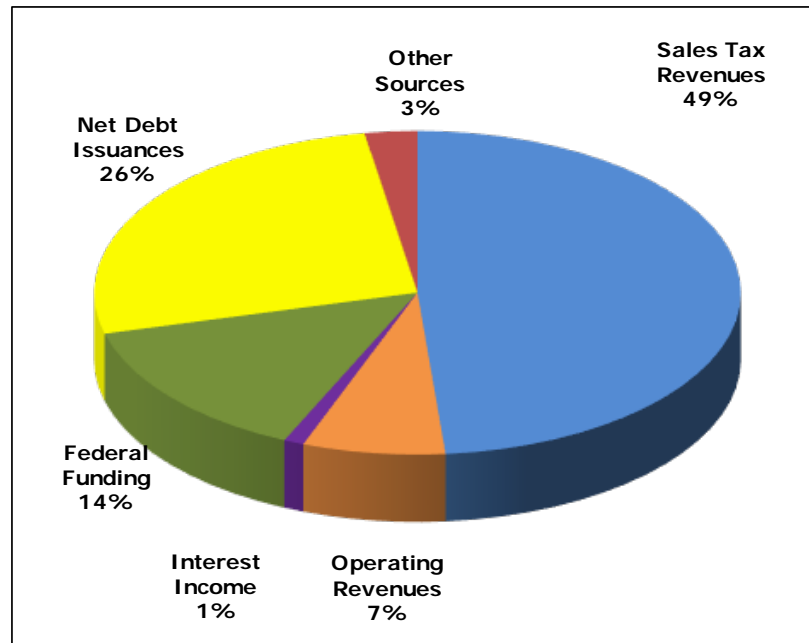
Exhibit II.3  
FY 2018 Twenty-Year Financial Plan

Dallas Area Rapid Transit FY 2018 Proposed Financial Plan - As of August 8, 2017 Twenty Year Sources and Uses of Cash (\$ Millions - Inflated Dollars)																							
Line	Description	2018	2019	2020	2021	2022	5 Year Total	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	20 Year Total	
SOURCES OF FUNDS																							
1	Sales Tax Revenues	\$593.9	\$593.9	\$617.7	\$648.6	\$687.5	\$3,141.5	\$722.0	\$750.9	\$773.4	\$804.9	\$845.5	\$896.2	\$941.0	\$978.7	\$1,008.0	\$1,008.0	\$1,048.3	\$1,100.8	\$1,166.8	\$1,225.2	\$17,184.7	
2	Operating Revenues	82.2	92.4	92.1	94.0	99.6	\$460.4	102.0	111.3	115.3	117.5	119.7	122.5	137.1	138.5	141.1	143.6	163.8	165.3	168.2	173.5	2,528.6	
3	Interest Income	7.5	9.0	13.0	17.0	18.6	\$65.1	18.5	17.8	19.9	23.1	18.1	17.7	17.3	16.7	18.9	20.4	20.7	22.1	24.1	26.7	29.5	376.7
4	Federal Transit Funding	125.3	111.8	76.8	76.8	76.8	\$467.6	76.8	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	1,651.8	
5	Discretionary Federal Funding	20.5	102.5	53.0	147.0	125.0	\$448.0	100.0	0.0	12.4	12.8	6.3	6.1	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	17.7	
6	Net Debt Issuances	(30.0)	335.0	670.0	515.0	220.0	\$17,100.0	200.0	150.0	370.0	120.0	310.0	250.0	50.0	0.0	0.0	(50.0)	(50.0)	(100.0)	(100.0)	(100.0)	2,760.0	
7	Other Non-Operating Sources	14.2	14.2	16.6	19.6	25.3	\$87.8	23.3	24.4	25.5	25.7	26.3	27.0	27.7	28.5	29.1	29.9	30.7	31.5	32.4	33.2	34.1	517.2
8	Other Capital Sources	15.0	29.5	20.3	5.0	12.0	\$81.8	5.6	8.2	17.1	11.5	6.9	6.5	14.7	9.8	14.6	8.8	12.5	12.7	12.7	12.7	253.7	
9	Total Sources of Funds	\$828.5	\$1,288.3	\$1,559.5	\$1,523.0	\$1,262.9	\$6,462.2	\$1,248.3	\$1,144.4	\$1,412.8	\$1,163.1	\$1,373.3	\$1,354.7	\$1,214.0	\$1,218.5	\$1,256.6	\$1,249.0	\$1,243.7	\$1,307.4	\$1,326.4	\$1,386.8	\$1,518.4	\$25,879.5
USES OF FUNDS																							
10	Sales Taxes for Operations	73.0%	74.6%	73.6%	70.9%	70.9%	n/a	68.1%	66.1%	65.7%	66.6%	64.1%	64.4%	60.9%	59.5%	58.4%	57.8%	59.2%	56.7%	55.3%	53.2%	51.5%	n/a
11	Operating Expenses	\$275.2	\$291.5	\$296.9	\$298.6	\$303.5	\$1,465.7	\$310.0	\$316.0	\$322.3	\$328.4	\$334.1	\$340.5	\$347.4	\$353.9	\$361.0	\$367.8	\$375.0	\$381.8	\$389.5	\$396.8	\$404.4	\$6,794.5
12	Light Rail Transit	174.4	177.7	180.8	181.4	187.2	\$904.6	190.9	195.8	199.7	203.4	207.7	211.6	215.8	219.8	224.2	228.4	232.8	237.0	241.7	246.2	250.9	4,210.5
13	Streetcar	1.6	1.6	1.6	4.4	4.5	\$13.7	4.7	4.7	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.9	6.0	92.3
14	Commuter Rail RR Management	30.2	30.5	36.0	37.3	56.8	\$190.8	57.4	60.2	61.0	63.7	65.6	67.5	69.6	71.6	73.7	75.9	78.2	80.4	82.9	85.4	87.9	1,273.7
15	Paratransit	39.6	40.8	42.4	43.8	45.4	\$212.0	47.2	49.1	51.0	53.0	55.2	57.3	59.6	62.0	64.5	67.0	69.7	72.4	75.4	78.3	81.5	1,155.2
16	General Mobility - TDM	2.1	2.1	2.2	2.2	2.2	\$10.8	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.0	50.1
17	Total Operating Expenses	\$523.0	\$544.3	\$559.8	\$570.7	\$599.6	\$2,797.4	\$612.4	\$627.9	\$643.1	\$655.8	\$670.0	\$684.5	\$700.1	\$715.1	\$731.4	\$747.1	\$764.1	\$780.1	\$798.1	\$815.5	\$833.6	\$13,576.2
Operating - F&D - Start-Up																							
18	Capital Projects and Non-Operating	\$531.9	\$533.2	\$559.0	\$585.2	\$609.1	\$2,848.4	\$627.9	\$643.2	\$656.1	\$669.1	\$680.3	\$695.2	\$711.0	\$726.2	\$742.8	\$758.7	\$776.9	\$792.2	\$810.4	\$828.0	\$846.4	\$13,793.8
19	Bus	\$35.8	\$40.4	\$38.6	\$12.9	\$11.5	\$119.2	\$15.8	\$10.1	\$24.6	\$19.2	\$22.0	\$25.1	\$14.8	\$18.8	\$15.9	\$17.5	\$12.9	\$14.0	\$16.6	\$22.5	\$29.9	\$490.0
20	Light Rail Transit	43.5	40.4	26.8	13.9	16.8	\$80.4	22.1	14.5	100.3	129.1	104.9	91.2	30.0	14.6	12.3	46.0	41.2	17.5	9.1	8.1	15.1	94.1
21	Streetcar	9.6	8.5	27.7	37.0	18.4	\$101.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.0	0.0	0.3	0.0	10.2
22	Commuter Rail RR Management	80.0	276.6	385.9	424.3	137.8	\$1,304.6	15.4	15.9	29.5	24.6	24.8	15.0	11.0	23.1	17.8	35.5	27.2	22.3	40.1	33.5	24.7	1,665.1
23	Paratransit	0.4	0.1	0.2	0.0	0.8	\$1.6	0.0	0.2	0.1	0.0	0.0	0.6	0.4	0.5	0.3	0.2	0.2	0.1	0.1	1.2	0.1	5.6
24	Capital P & D, Start-Up, Non-Operating	12.4	10.9	10.2	16.6	11.5	\$61.6	10.6	10.7	10.9	10.5	11.3	11.0	12.4	12.6	12.9	14.3	12.1	13.1	13.3	12.8	13.8	245.6
25	General Mobility - Road Imp/ITS	15.5	7.8	5.4	4.8	0.0	\$33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
26	Total Capital and Non-Operating	\$265.3	\$807.4	\$662.5	\$794.4	\$513.9	\$2,743.6	\$384.2	\$327.2	\$403.2	\$276.0	\$441.8	\$329.5	\$120.2	\$89.1	\$87.9	\$132.9	\$103.9	\$131.6	\$132.8	\$251.6	\$6,107.7	
Debt Service																							
28	Total Debt O/S Beginning of Year	\$1,406.9	\$1,320.9	\$3,597.6	\$4,206.5	\$4,657.6	n/a	\$4,809.9	\$4,935.5	\$5,003.4	\$5,281.6	\$5,295.6	\$5,486.1	\$5,608.5	\$5,522.8	\$5,380.8	\$5,230.6	\$5,021.9	\$4,804.5	\$4,578.5	\$4,295.1	\$3,998.1	n/a
29	Total Debt O/S End of Year	\$3,320.9	\$3,597.6	\$4,206.5	\$4,657.6	\$4,809.9	\$5,281.6	\$4,935.5	\$5,003.4	\$5,281.6	\$5,295.6	\$5,486.1	\$5,608.5	\$5,722.8	\$5,580.8	\$5,430.6	\$5,220.6	\$5,011.9	\$4,804.5	\$4,578.5	\$4,295.1	\$3,998.1	\$5,743.3
30	Principal - LRT Debt	\$55.9	\$58.3	\$61.1	\$63.9	\$67.7	\$306.9	\$74.5	\$82.0	\$85.1	\$91.8	\$106.1	\$119.5	\$127.6	\$135.8	\$142.0	\$150.2	\$158.7	\$167.4	\$176.1	\$185.4	\$195.0	\$2,423.5
31	Cost of Debt (Interest and Fees)	137.9	138.6	156.5	169.2	171.5	\$74.5	178.9	185.0	190.7	202.5	202.5	217.0	222.2	217.2	231.0	232.7	240.0	247.1	254.3	261.5	268.7	\$3,279.0
32	Total Debt Service Costs	\$193.8	\$196.9	\$217.7	\$233.8	\$239.2	\$1,081.4	\$253.4	\$267.1	\$280.5	\$298.6	\$324.9	\$344.5	\$358.2	\$359.2	\$360.2	\$366.4	\$367.4	\$363.8	\$367.8	\$371.0	\$375.3	\$6,152.5
33	External Coverage Ratio	3.10	3.05	2.86	2.79	2.89	n/a	2.86	2.82	2.76	2.57	2.57	2.55	2.62	2.75	2.84	2.89	2.97	3.00	3.10	3.22	3.30	n/a
34	Internal Coverage Ratio	1.28	1.22	1.17	1.21	1.27	n/a	1.29	1.32	1.30	1.18	1.18	1.12	1.32	1.41	1.48	1.51	1.46	1.59	1.68	1.80	1.89	n/a
35	Total Uses of Funds	\$982.1	\$1,248.6	\$1,440.0	\$1,509.0	\$1,352.6	\$6,022.4	\$1,250.0	\$1,222.2	\$1,388.7	\$1,240.4	\$1,436.6	\$1,358.5	\$1,178.5	\$1,163.3	\$1,180.5	\$1,246.4	\$1,244.4	\$1,247.2	\$1,297.6	\$1,309.3	\$1,400.5	\$15,335.5
36	Net Inc (Dec) in cash	(153.6)	\$39.7	\$119.5	(\$76.0)	(\$89.7)	(\$160.2)	(\$31.7)	(\$77.8)	(\$24.0)	(\$77.3)	(\$37.7)	(\$31.5)	(\$55.2)	(\$76.1)	(\$50.7)	(\$60.2)	(\$60.7)	(\$60.2)	(\$60.7)	(\$60.2)	(\$60.7)	\$43.0
37	Change in Balance Sheet Accts	29.6	47.4	48.7	20.0	(55.8)	\$89.9	(41.5)	(11.8)	22.9	(32.5)	24.1	(23.5)	(56.8)	(21.9)	(6.9)	5.1	(1.0)	(9.5)	(4.4)	(9.5)	16.7	(60.8)
38	Cash, Beg of Period	669.1	545.1	632.2	800.3	744.4	800.1	598.8	555.6	466.1	512.9	403.1	368.8	315.3	348.6	417.7	425.4	423.7	425.4	423.7	425.4	423.7	800.1
39	Cash, End of Period	545.1	632.2	800.3	744.4	598.8	598.8	555.6	466.1	512.9	403.1	368.8	315.3	348.6	417.7	425.4	423.7	425.4	423.7	425.4	423.7	425.4	632.2
40	Less: Cash Reserves & Restricted Funds	(72.1)	(71.9)	(71.7)	(71.7)	(71.6)	(71.6)	(71.5)	(71.4)	(71.4)	(71.4)	(71.3)	(71.2)	(71.1)	(71.0)	(70.8)	(70.6)	(70.4)	(70.1)	(69.8)	(69.4)	(69.4)	60.4
41	Less: Adv. Funding Reserve (Curr Capacity)	(65.0)	(40.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	(15.0)	0.0
42	Less: Working Cash Requirement	(130.8)	(126.1)	(140.0)	(142.7)	(149.9)	(149.9)	(153.1)	(157.0)	(160.8)	(163.9)	(167.5)	(171.1)	(175.0)	(178.8)	(182.9)	(186.8)	(191.0)	(195.0)	(199.5)	(203.9)	(208.4)	208.4
43	Less: Capital Reserve	(23.4)	0.0	(1.0)	(2.1)	(3.5)	(3.5)	(5.2)	(7.1)	(9.5)	(12.5)	(15.7)	(18.9)	(22.4)	(26.0)	(29.8)	(33.8)	(38.0)	(42.4)	(47.0)	(51.8)	(56.9)	(208.9)
44	Unrestricted Cash (Net Available Cash)	\$253.8	\$384.2	\$572.7	\$512.9	\$373.9	\$737.9	\$325.9	\$230.5	\$271.1	\$155.2	\$109.3	\$75.2	\$46.6	\$72.7	\$134.1	\$134.0	\$124.0	\$166.5	\$192.1	\$251.3	\$316.6	\$316.6

## Sources of Funds

Total sources of funds for the period FY 2018 through FY 2022 are projected to increase \$247 million (4.0%) from the FY 2017 Plan, with debt issuance, formula funding, and sales tax growth having the greatest effect. Exhibit II.4 illustrates the distribution of DART's sources of funds for the first five years of the FY 2018 Financial Plan. Each source of funding is detailed below.

Exhibit II.4  
FY 2018 – FY 2022 Distribution of Sources of Funds



### Sales Tax Revenues (line 1 of the Financial Plan)

Sales tax revenues comprise 48.6% of DART's total projected sources of funds through FY 2022 (66.1% of total sources excluding debt issuances). This is a \$38.7 million (1.2%) increase over the amount projected in the FY 2017 Financial Plan for the same 5-year period. The increase is a result of the fact that sales tax receipts continue to exceed projections.

The method for estimating sales tax revenue for financial planning purposes is discussed in Financial Standard B-1, which states:

*Sales tax revenue forecasts shall be based on a sales tax model developed specifically for the DART Service Area by an independent economist. In order to ensure a conservative sales tax estimate, the model's projections may be reduced from the forecasted levels, but not increased for years 2-20 of the Twenty-Year Financial Plan. The most current year may be based on management's best estimate. All such modifications shall be approved by the Board during the financial planning process.*

DART currently bases its long-range sales tax growth and inflation factors on a forecast developed by an independent economic analysis firm (The Perryman Group), headed by M. Ray Perryman, Ph.D. DART has used Dr. Perryman's models for many years. For the last several years, DART has also engaged the services of municipal sales tax specialist Lewis McLain, Jr., for additional sales tax research. Sales taxes have trended above forecast for the last five years, with year-over-year growth averaging 5.76% from FY 2013 – FY 2017 (projected).

Beginning in the FY 2016 Financial Plan and continuing into the current Plan, DART has taken a different approach from previous years with regard to incorporating sales taxes into the Financial Plan. Instead of using the straight-line approach to sales tax growth (as is generated by the regression model provided by the Perryman Group), the 2016 Plan incorporated periodic mild recessions in seven-year cycles as an attempt to better match economic reality. As such, the Plan calls for a zero-growth year every seven years (the first such year being 2019) followed by a cyclical rebound for several years after that. This methodology should enable the Financial Plan to better weather the inevitable economic flat spots in the road. If, however, there is another crash and sales taxes decline by 10% over two years similar to what occurred in 2009-2010, that would still require significant adjustments to the Plan. Incorporating that kind of generational event into the Plan seems unwise. With this approach, however, there are certain years in which the Financial Plan assumes higher rates of increase than the Perryman projections, but the overall growth rate over the 20-year life of the Plan is significantly lower and results in total sales tax revenues \$1.38 billion (7.4%) less than if we had strictly used Perryman's growth rates for the next 20 years.

A comparison of sales tax growth rates and receipts from the FY 2017 Plan, the FY 2018 Plan, and the Perryman projections is shown in Exhibit II.5.





**Exhibit II.5**  
**20-Year Cumulative Sales Tax Receipts (2018 – 2037)**  
**(in Millions)**

Year	FY 2017 Financial Plan			FY 2018 Proposed Financial Plan			Perryman 2017**		
	%	\$	5-Yr Total	%	\$	5-Yr Total	%	\$	5-Yr Total
2017*	5.1%	\$563.6		7.3%	\$571.0		4.9%	\$571.0	
2018	0.0%	\$563.6		4.0%	\$593.9		5.1%	\$600.1	
2019	4.0%	586.2		0.0%	593.9		5.0%	630.2	
2020	5.0%	615.5		4.0%	617.7		4.6%	659.3	
2021	6.0%	652.5		5.0%	648.6		4.6%	689.4	
2022	5.0%	685.1	\$3,102.9	6.0%	687.5	\$3,141.5	4.5%	720.5	\$3,299.4
2023	4.0%	712.6		5.0%	722.0		4.5%	752.6	
2024	3.0%	734.0		4.0%	750.9		4.4%	785.7	
2025	0.0%	734.0		3.0%	773.4		4.4%	820.0	
2026	4.0%	763.4		0.0%	773.4		4.3%	855.4	
2027	5.1%	802.1		4.0%	804.9		4.3%	891.9	
2028	6.0%	850.6		5.0%	845.5		4.2%	929.5	
2029	5.0%	893.1		6.0%	896.2		4.2%	968.4	
2030	4.0%	928.8		5.0%	941.0		4.1%	1,008.5	
2031	3.0%	956.7		4.0%	978.7		4.1%	1,049.7	
2032	0.0%	956.7		3.0%	1,008.0		4.1%	1,092.3	
2033	4.0%	994.9		0.0%	1,008.0		4.0%	1,136.1	
2034	5.0%	1,044.7		4.0%	1,048.3		4.0%	1,181.2	
2035	6.0%	1,107.4		5.0%	1,100.8		3.9%	1,227.6	
2036	5.0%	1,162.7		6.0%	1,166.8		3.9%	1,275.4	
2037	4.0%	1,209.3		5.0%	1,225.2		3.8%	1,324.5	
<b>20-Year Total</b>		<b>\$16,953.7</b>			<b>\$17,184.7</b>			<b>\$18,598.0</b>	

**Sales Tax Repayment** – The Texas State Comptroller’s Office periodically conducts audits of entities responsible for the payment of state and local sales taxes. As a result of an audit that was concluded in 2006, the Comptroller determined that DART received an overpayment of sales taxes of approximately \$13.2 million. In an effort to mitigate the effects of this repayment on DART and its stakeholders, the Comptroller agreed to a 16-year interest-free repayment schedule (\$824,000 per year through 2022). An additional audit, completed in 2008, resulted in another repayment obligation of \$3.6 million. The State Comptroller’s Office agreed to extend the \$824,000 repayment plan through 2026, with the balance of this repayment (\$334,588) to be remitted in 2027. These repayment obligations have been incorporated into the Plan, and all reported sales tax revenues in the Plan (and discussed in this document) are net of these repayments.



Operating Revenues (line 2 of the Financial Plan)

Operating revenues are projected to contribute \$460.4 (7.1%) of DART's sources of funds through FY 2022. Exhibit II.6 details projected operating revenues for the next five years.

Exhibit II.6  
Operating Revenues  
(in Millions)

Operating Revenues	2018	2019	2020	2021	2022	5-Year Total	20-Year Total
Fixed Route Passenger Revenues	\$63.5	\$73.5	\$72.8	\$74.2	\$79.1	<b>\$363.0</b>	<b>\$2,029.1</b>
Other Passenger Fares	3.6	4.2	4.3	4.4	4.5	<b>21.1</b>	<b>127.2</b>
<b>Total Passenger Revenues</b>	<b>\$67.1</b>	<b>\$77.7</b>	<b>\$77.1</b>	<b>\$78.6</b>	<b>\$83.6</b>	<b>\$384.1</b>	<b>\$2,156.3</b>
Leases & Rentals	\$6.9	\$7.1	\$7.2	\$7.4	\$7.6	<b>\$36.2</b>	<b>\$172.1</b>
Advertising	3.9	4.0	4.1	4.2	4.3	<b>20.6</b>	<b>107.0</b>
Vanpool (NCTCOG/FHWA)	2.2	2.3	2.3	2.4	2.5	<b>11.7</b>	<b>58.1</b>
DCTA Access & Impact Fees	0.6	0.6	0.6	0.6	0.7	<b>3.1</b>	<b>15.3</b>
Other	1.5	0.7	0.7	0.7	1.0	<b>4.7</b>	<b>19.7</b>
<b>Total Operating Revenues</b>	<b>\$82.2</b>	<b>\$92.4</b>	<b>\$92.1</b>	<b>\$94.0</b>	<b>\$99.6</b>	<b>\$460.4</b>	<b>\$2,528.6</b>

Passenger revenues are the primary component of operating revenues, representing approximately \$384.1 million, or 83.4% of operating revenues. Business Planning Parameter FS-B2 states, "the Board will consider fare modifications from time to time to achieve Service Plan, ridership, and subsidy per passenger targets and to maintain DART's financial viability." The Financial Plan assumes an increase to the average fare of approximately 17% every five years. The most recent fare increase went into effect in December 2012. The next increase was originally scheduled for October 2017. However, to coordinate with the implementation of the new Comprehensive Payment System (CPS), the fare increase was delayed, to be rolled out in stages corresponding to the implementation phases of the CFPS. The current fare structure is included at Exhibit V.16 in the *Reference Section*. Changes that might be included in the new fare structure are being considered, but are being revised over time.

Exhibit II.7 details the projected fixed-route average fares by mode over the life of the Plan.

Exhibit II.7  
Projected Fixed-Route Average Fare

Year	Bus	LRT	CR	Fixed Route
FY18	\$0.81	\$0.94	\$3.34	\$0.96
FY19 - FY23	\$0.95	\$1.10	\$3.91	\$1.12
FY24 - FY28	\$1.11	\$1.29	\$4.57	\$1.30
FY29 - FY33	\$1.30	\$1.51	\$5.35	\$1.53
FY34 - FY37	\$1.52	\$1.76	\$6.26	\$1.79



Operating revenues other than fare revenues include such items as: advertising revenue, lease & rental income, contract service revenues from cities outside the Service Area, shuttle service agreement revenue from UT-Dallas and the Surface Transportation Program/Metropolitan Mobility (STP/MM) vanpool contribution.

#### Interest Income (line 3 of the Financial Plan)

Interest income is projected to contribute \$65.1 million (1.0%) of total sources of funds for the next five years. This is a \$8.6 million (15.2%) increase from the amount contained in the FY 2017 Plan as the Federal Reserve has begun to gradually increase interest rates.

Interest income rates are estimated to average 100 - 135 basis points (1% - 1.35%) throughout the year in 2018. Interest rates have been extremely low from a historical perspective but are now rising, and are expected to continue to increase slowly over the next few years. As rates rise, a larger positive spread is expected to develop (supported by historical data) between interest income and interest expense rates. This spread is projected to reach 100 basis points (1%) by 2024.

#### Federal Funding (lines 4 and 5 of the Financial Plan)

Federal funds are included in two line items of the Plan: Formula Federal Funding and Discretionary Federal Funding.

Formula funds include Urbanized Area Formula program (UAFP), State of Good Repair (§ 5337), Bus and Bus Facilities Formula Grants (§ 5339), and High Density States and Growing States (§ 5340).

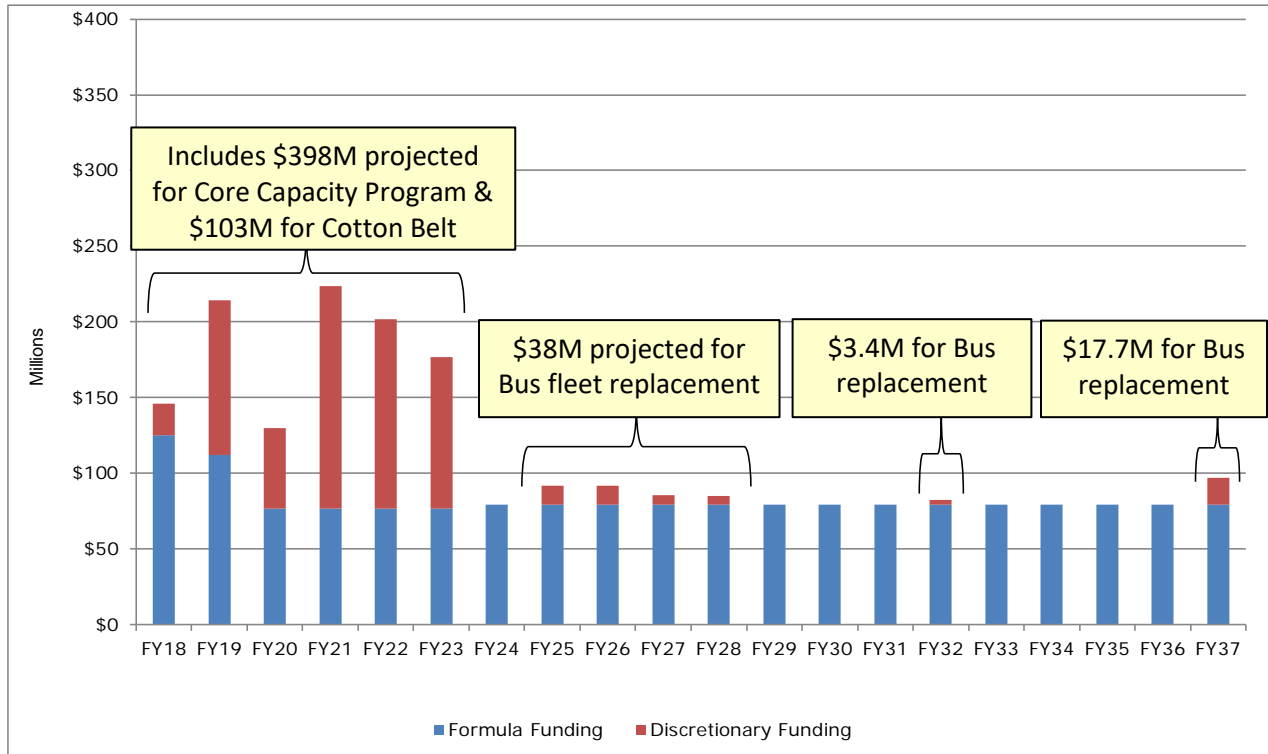
Discretionary funds are authorized under 49 U.S.C. § 5309 (New Starts/Core Capacity/Small Starts) and other programs such as Congestion Mitigation and Air Quality Improvement program (CMAQ) and the State of Texas Mobility Fund (TMF).

In the surface transportation bill enacted in December 2015, known as the Fixing America's Surface Transportation Act, or "FAST Act," Congress provided funding for highways and transit through federal fiscal year 2020. The bill provides slight increases in the near-term over prior funding levels and affords DART an opportunity to develop and finance multi-year projects. Because Congress has chosen not to raise the federal gas tax, this federal transportation program can no longer be called a user-financed program. Instead, Congress transferred approximately \$70 billion from non-transportation sources to the Highway Trust Fund to ensure its solvency. This imbalance will grow during each of the five years of the FAST Act, making the fiscal cliff much steeper and harder to address. The Congressional Budget Office estimates that for the next 5-year bill – from 2021 to 2026 – the Highway Trust Fund will need a transfer of \$121 billion, without any increase in transportation spending. Pressure will build on the President and Congress to develop options that are politically viable to ensure the federal government can remain an effective partner in building and maintaining the nation's transportation infrastructure.



Exhibit II.8 details the anticipated receipt of both discretionary and formula Federal Funds over the life of the Plan.

Exhibit II.8  
Anticipated Capital Grant Funding (FY 2018 – FY 2037)  
(in Millions)





### Formula Federal Funding (line 4 of the Financial Plan)

Formula funds are \$467.6 million (7.2% of total sources of funds) through FY 2022. This represents an increase of \$84.9 million (22.2%) from the FY 2017 Plan. The current annual DART allocation for formula funds is \$76.8 million (previously \$74 million) per year, which totals \$384.0 million (82.1% of the total amount) for the 5-year period.

According to the Board-approved Financial Standard B-10 (shown in Exhibit 102 in the *Reference Section* of this document), “Formula funding for future years shall be forecast at the current year’s funding level in order to ensure a conservative forecast.” There may be some variances from year to year early in the Plan as some funds not spent in the current year may be rolled forward into future years. These levels are adjusted each year based on the most current information available. An exception to that would be for new rail segments. When service begins on the Cotton Belt in 2022, it will generate additional formula funds beginning in 2024. An estimate of \$2.3 million has been made for these additional funds based on current federal apportionment values.

### Discretionary Federal Funding (line 5 of the Financial Plan)

Discretionary federal funding comprises \$448.0 million (6.9% of total sources) through FY 2022. This is a \$218.4 million (32.8%) decrease from the FY 2017 Plan. The decrease is primarily due to reducing the expected grant funding for the D2 project from \$650 million to \$300 million. The Plan assumes \$11.6 million for new bus purchases by 2020, including the Zero Emission Electric Bus (ZEEB) program. Also, up to \$40 million in discretionary funding is assumed for the Dallas Streetcar Central link project.

DART has been very conservative with regard to programming new discretionary federal funding. There is only one assumption for future discretionary funds in the Financial Plan other than the projects just described, and that is for 10% federal participation in future bus replacements, totaling \$62.8 million between 2025 and 2028 and in 2032 and 2037.

### Net Debt Issuance (line 6 of the Financial Plan)

#### *Long-term Debt*

DART plans to issue \$1.85 billion in new long-term debt over the next five years. This, netted against the retirement of \$140 million of commercial paper during the same period results in the \$1.71 billion amount shown in the Plan. The issuances include \$1.05 billion during FY 2018 - FY 2021 for the Core Capacity Program mentioned above and other infrastructure projects, and \$1.1 billion for the Cotton Belt project. DART is currently pursuing a loan from the Federal Railroad Administration’s Railroad Rehabilitation & Improvement Financing (RRIF) program to finance the project. If such a loan can be obtained, it would come at a substantially lower interest rate than conventional tax-exempt debt.

### *Commercial Paper*

DART has a Commercial Paper (CP) Program that has been used as the initial funding mechanism to support DART's capital programs up to a maximum authorized amount of \$650 million, \$200 million of which is backed by self-liquidity. If market conditions and cashflow needs dictate, DART can issue long-term debt to replace the outstanding CP or retire it with cash, as appropriate. The current Financial Plan assumes all CP will be retired with cash.

DART has established a Commercial Paper Self-Liquidity Program. When an investor purchases a commercial paper note, the investor has an expectation that when the note matures the seller will return the par value of the note plus interest. The seller needs to demonstrate that the expectation can be satisfied. One way to do so is through a third-party bank's promise to provide the funds if the seller cannot repay the investor's funds. The bank provides a revolving credit facility or letter of credit dedicated to commercial paper note repayments. Another way to meet the investor's expectation is for the CP seller to identify its own funds that will be used to repay CP notes. This is called a self-liquidity program. The ability to meet this obligation is monitored by rating agencies and is reflected in the seller's short-term debt rating. DART is using self-liquidity for the \$140 million in CP that is currently outstanding.

This balance will be reduced steadily over the next few years. By the end of FY 2022, all commercial paper currently outstanding will be retired. The program will resume in the mid-2020s in support of the next Bus Fleet Replacement project.

### Other Non-Operating Sources (lines 7 & 8 of the Financial Plan)

These line items are predominantly composed of non-grant contributions from other public entities, such as: the FWTB's contribution toward its share of the operating and capital costs for the Trinity Railway Express (TRE), City of Dallas contributions toward Streetcar Operating Expenses, certain non-operating leases, service area city and other funding partner contributions for specific capital projects, and other miscellaneous contributions.

Other sources of funds total \$169.7 million between FY 2018 and FY 2022 and represent 2.6% of total sources of funds for that same period. This category of funds decreased \$6.2 million (3.5%) from the same period in the FY 2017 Plan.



## Uses of Funds

### Operating Expenses (lines 10 – 17 of the Financial Plan)

Many of DART's services underwent significant changes over the last several years. The changes from FY 2013 through FY 2017 included the following major elements:

- Flex Route Bus service changed from contractor-operated to DART-operated;
- The replacement of the entire full-size bus fleet including the introduction of Small Bus service using 123 smaller vehicles (Arbocs) to provide service on lower demand routes at a lower cost;
- Transition from ultra-low sulfur diesel and liquefied natural gas (LNG) fuels to compressed natural gas (CNG) fuel for all new fleets;
- Approval of a new 10-year service contract with Herzog Transit Services, Inc. for the continued provision of Commuter Rail services along the TRE Corridor;
- Transition of HOV operations, maintenance, and enforcement responsibilities to TxDOT during FY 2013 and FY 2014;
- Completing the Orange Line to DFW Airport and the Blue Line north extension from Garland to Rowlett; and
- Opening of the Oak Cliff Streetcar project and its extension to the Bishop Arts District in August 2016;
- Beginning service on the South Oak Cliff-3 (SOC-3) line segment to the University of North Texas, Dallas Campus in October 2016;
- Two bus service changes, in March and August of 2017, which add another roughly 1.3% to DART's bus service designed to address the rapidly growing employment areas of Legacy in Plano and Cypress Waters in Dallas; and
- A restructuring of the TRE schedule which more efficiently utilizes deadhead moves and provides more midday service. These changes add nearly 15% more service.

During FY 2018 the Board will consider additional service improvements including new routes and improved frequency on a series of bus routes anticipated for the second quarter. Looking a little further down the road, the Plan includes even more service enhancements:

- \$10 million of additional bus service as a result of the COA with the service changes intended to be phased in beginning in 2019;
- Two new in-fill stations along the Orange Line in Irving (Loop 12 and Carpenter Ranch, currently in the planning stage);
- The second light rail alignment through downtown Dallas (D2), currently anticipated to begin service in 2023 with a refined subway alignment to be determined in FY 2017 (as of the time this document was drafted);

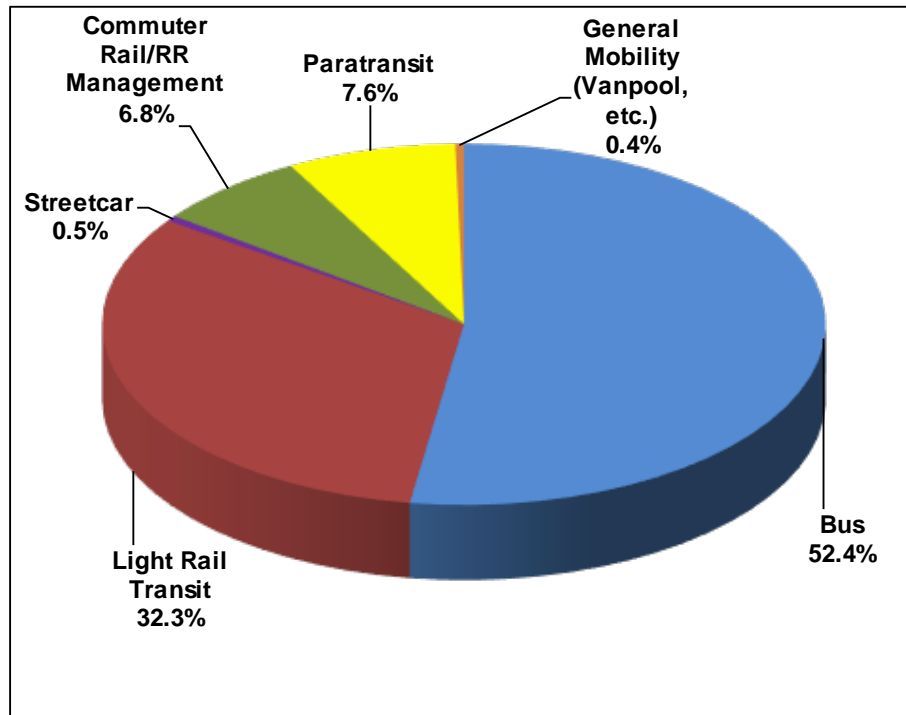
- An expanded Streetcar Rail network by 2023; and
- Commuter Rail service along the Cotton Belt corridor from Plano to DFW Airport in 2022.

Total operating expenses for FY 2018 through FY 2022 are projected to be \$2.80 billion, an increase of \$44.4 million over the amount in the FY 2017 Plan over the same period of time. DART's FY 2018 Operating Budget at \$523.0 million represents an increase of \$9.2 million over the FY 2017 plan for 2018, due to increased healthcare costs and additional transportation services.

Changes in operating expenses that are built into the Financial Plan for future years are controlled from a policy perspective by Financial Standards B-3, B-4, and B-5 (see Exhibit V.8 in the *Reference Section*). Standards B-3 and B-4 relate to fixed-route service, which accounts for approximately 92% of projected operating costs over the next five years. The primary cost drivers for the variable expenses of fixed-route service are the number of miles, hours, and vehicles in service, contract rates for purchased transportation (TRE), and fuel/electricity prices.

Exhibit II.9 shows the modal distribution of total operating expenses for the 5-year period.

Exhibit II.9  
Operating Expenses by Mode (FY 2018 – FY 2022)



Modal Expenses (lines 11 – 16 of the Financial Plan)

Exhibit II.10 compares the projected 5-year modal operating expenses (2018 - 2022) based on the FY 2017 Financial Plan and the FY 2018 Plan.

Exhibit II.10  
5-Year Modal Expense Comparison (2018 – 2022)  
(in Millions)

	FY17 FP	FY18 Proposed FP	\$ Variance FY17 to FY18	% Variance FY17 to FY18
Bus	\$1,434.8	\$1,465.7	\$30.8	2.1%
Light Rail Transit	894.0	904.6	10.6	1.2%
Streetcar	13.7	13.7	(0.0)	(0.2%)
Commuter Rail/RR Management	194.4	190.8	(3.7)	(1.9%)
Paratransit	205.3	212.0	6.7	3.2%
General Mobility (Vanpool, etc.)	10.8	10.8	0.0	0.2%
<b>Total Operating Expenses</b>	<b>\$2,753.0</b>	<b>\$2,797.4</b>	<b>\$44.4</b>	<b>1.6%</b>

The following details relate to the modal expense line items:

Each year, DART management reviews costs allocated to the various modes of service. During this review, estimates are made regarding how much of each functional division's time and resources will be spent in support of each mode, how much will be spent on general and administrative responsibilities, and how much effort will be spent in support of DART's capital programs. This can lead to some minor fluctuations in cost distribution among the modes from year to year as estimates may vary.

Five-year operating expenses have increased \$44.4 million (1.6%) from the FY 2017 Plan, primarily due to healthcare costs and the service increases described above. However, because of the cost reductions and savings initiatives instituted in response to the recession of 2008-2009, operating expenses are still \$265.6 million (8.7%) less than what they were projected to be in the FY 2009 Financial Plan (the last Plan before the recession) over the same five-year period.

Even with the continued light rail expansion, bus expenses still represent the largest portion of DART's operating costs (52.4%) over the next five years. The bus mode includes DART's Innovative Services (On-Call, Flex-Route, and site-specific shuttle services). Five-year bus modal costs have increased by \$30.8 million (2.1%) over the FY 2017 Financial Plan, primarily due to service changes.

Over the last eight years, DART has completed an expansion program that has seen the light rail system grow from 48 miles in the summer of 2009 to 93 miles in FY 2017. As such, light rail

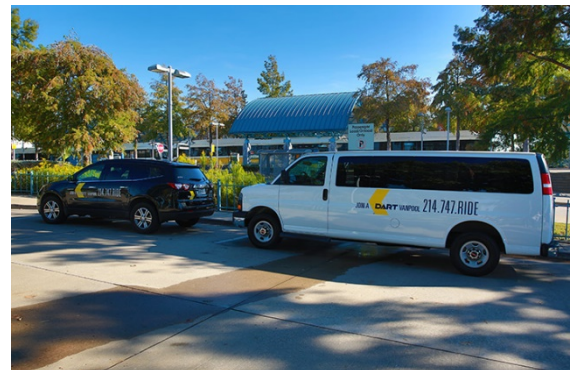


operating costs have continued to represent an increasing percentage of DART's budget. They have increased from 21% of the FY 2009 operating budget to 33.4% of the FY 2018 budget.

As noted earlier, TRE Commuter Rail services are provided by Herzog Transit Services, Inc. The new contract began in FY 2016 and expires at the end of 2025. The contract includes service costs for TRE and the TEX Rail project, which is being advanced by FWTa and is scheduled to open in late 2018.

Mobility Management Services (Paratransit) is operating under a contract with MV Transportation to provide passenger services (please see page IV-29 in the *Organizational Units Section* for specifics of this arrangement). Projected ridership over the next five years is up slightly, by 3,400 (0.1%) from the FY 2017 Plan. Five-year costs are \$5.9 million higher than the FY 2017 Plan due primarily to contractual provisions.

General Mobility programs consist mainly of vanpool services. Participants and the North Central Texas Council of Governments (NCTCOG) will contribute more than 95% of the cost of this program. The maximum authorized number of vanpools is 228 for FY 2018. The contract cost of vanpools has dropped and because of the high rate of cost recovery on this service, much of that savings has been passed on to the customers. Five-year Vanpool costs are unchanged from the FY 2017 Plan. Vanpool utilization has not met expectations over the last several years resulting in a reduced budget allocation for these services. Should demand begin to grow again, the budget may need to be revisited.



For a more detailed explanation of specific programs and information on the cost drivers for each mode, please refer to the *Organizational Units Section* of this document.

#### Capital and Non-Operating Expenditures (lines 18 – 27 of the Financial Plan)

Exhibit II.11 compares capital expenditures by mode for the 5-year period 2018 – 2022 from the FY 2017 Plan to the FY 2018 Plan. Agency-wide is used for projects that benefit more than one mode.



Exhibit II.11  
Comparison of 5-Year Capital Expenditures (2018 – 2022)  
(in Millions)

	FY17 FP	FY18 Proposed FP	\$ Variance FY17 to FY18	% Variance FY17 to FY18
Agency-wide	\$99.6	\$119.2	\$19.6	19.7%
Bus	117.7	141.4	23.7	20.1%
Light Rail Transit	862.6	980.4	117.8	13.7%
Streetcar	91.7	101.2	9.5	10.4%
Commuter Rail/RR Management	1,314.2	1,304.6	(9.6)	(0.7%)
Paratransit	1.6	1.6	0.0	0.0%
General Mobility - Road Impr./ITS	10.1	33.5	23.4	232.1%
Capital P & D, Start-Up, Non-Operating	65.6	61.6	(4.0)	(6.1%)
<b>Total Capital Expenditures</b>	<b>\$2,563.1</b>	<b>\$2,743.6</b>	<b>\$180.5</b>	<b>7.0%</b>

Capital and Non-Operating expenditures are budgeted at \$265.3 million for FY 2018 and \$2.74 billion for the five years through FY 2022. This is a 5-year increase of \$180.5 million (7.0%) over the same period compared to the FY 2017 Plan. The increase is the net result of adding new Technology projects, bus and LRT capital expenditures for upgrades, security and safety upgrades, and the rollover of funds that were budgeted in FY 2017 but will not be spent in FY 2017. The full list of Capital and Non-Operating projects (including all new projects) is shown at Exhibit II-12 beginning on page II-26. Each project listing includes the expenditure in FY 2018 and the five-year and twenty-year totals.

Totals after the first year reflect year-of-expenditure amounts. There is also an Operating Expense/Savings column reflecting the project requestor's assessment of the impact on the Operating Budget. The estimated expense or saving is typically developed by an independent cost estimator ("ICE") and senior staff knowledgeable about the requested project and its expected impact on operations.

Capital Planning, Start-up Costs, and Non-Operating (line 25 of the Financial Plan)

Capital Planning & Development (Capital P&D) and Start-up costs are predominantly internal staff and consulting costs associated with planning, designing, managing, constructing, and opening new capital projects such as the light rail system. Financial Standard B-8 limits capital planning costs to no more than 7% of the total operating budget and start-up costs to no more than 60% of the first year's operating costs.

Capital P&D costs are budgeted at \$8.8 million for 2018.

Non-operating costs relate to projects/programs that do not meet capitalization criteria for accounting purposes, are not operating costs and are not capitalized as a DART asset. Examples

of non-operating costs include: consulting costs for the Transit System Plan revision, the Transit-Oriented Development study, and the Regional On-Board Survey.

General Mobility, Road Improvement, and Intelligent Transportation Systems (ITS) Programs (line 26 of the Financial Plan)

Financial Standard B-7 limits General Mobility Road Improvement Programs to funding allowed under the terms of the approved Interlocal Agreements (ILA). Road improvement programs include the Principal Arterial Street System (PASS), Transportation System Management (TSM), and ITS projects. These programs total \$33.5 million over the next five years. In addition to these programs, there is approximately \$684,930 in funds remaining from the Local Assistance Program (LAP). These funds are disbursed as requested by service area cities which have remaining balances.

## Capital Reserves

A variety of capital reserves exist within the capital program. These reserves represent placeholders within the Financial Plan that are either for known capital asset maintenance and replacement cycles, or for funds that are set aside for projects of a specific type, for which the exact nature, timing, and amount is unknown at the present time. When a project that is to be funded from a specific reserve is requested and approved, the new project is given its own specific line in the capital program, and the balance of the reserve is reduced by the budgeted cost of the new project. Reserve balances are reviewed on an annual basis to ensure they are adequate to cover future needs for each respective mode and expenditure type.

The FY 2018 Financial Plan includes \$3.1 billion in capital reserves (State-of-Good-Repair, or SGR for short) over the next 20 years. These reserves ensure that DART will be able to maintain a state of good repair with regards to capital maintenance and timely replacement of assets. These reserves constitute over 52.3% of the total 20-year capital project expenditures.





## Capital Projects Listing

Exhibit II.12 contains the list of capital and non-operating projects and capital reserves included in the Financial Plan. These projects are indicated as Expansion/Enhancement (increase volume or quality of service), State of Good Repair (timely maintenance and replacement of assets), and Other (regulatory compliance, etc.) and identify the FY 2018, 5-year, and 20-year costs; any external grant funding or partner contributions; and the anticipated operating cost or savings.

Exhibit II.12  
FY 2018 Capital/Non-Operating Project Budget List (in Thousands)

FY 2018 Capital/Non-Operating Project Budget List (in Thousands)									
#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
AGENCY-WIDE									
1	Comprehensive Fare Payment System				\$5,000	\$5,000	\$5,000	\$0	\$0
2	Enterprise FileNet Content Management System				230	230	230		10
3	Project Cashflow Timing Adjustments				-1,121	-73	-89		
4	SGR Reserve - Infrastructure Technology				0	10,057	85,721		
5	SGR Reserve - Communications				0	1,036	72,513		
6	SGR Reserve - Non-Revenue Vehicle/Equipment Replacement				0	9,471	62,485		
7	Total SGR Reserve - Administration				4,046	12,922	57,339		
8	SGR Reserve - Application Technology				0	2,813	46,678		
9	SGR Reserve - Intelligent Transportation Systems (ITS)				0	3,519	21,502		
10	SGR Reserve - Administration HQ				0	2,090	16,063		
11	Enterprise Software Upgrade				0	10,000	10,000		
12	SPEAR/ Project Mgmt. System Replacement				8,000	8,000	8,000		
13	Consolidated Dispatch Facility				7,500	7,500	7,500		
14	Network Upgrade for the Agency				3,000	6,000	6,000		
15	Safety and Security Improvements at Outlying Ligh				0	5,000	5,000		
16	SGR Reserve - Oak Cliff NRV Facility				0	659	4,354		
17	SGR Reserve - Electronic Parts Catalog Reserve				0	1,093	4,283		
18	DART Police Facility				2,246	4,246	4,246		
19	Total SGR Reserve - DART Police				0	947	3,755		
20	Safety and Security Improvements at Downtown Dall				0	3,000	3,000		
21	SGR Reserve - Admin Police HQ				0	370	2,248		
22	SGR Reserve - Police Motorcycles				0	448	2,128		
23	FY18 NRV Replacement Program				0	1,950	1,950		
24	Total SGR Reserve - Marketing				0	448	1,805		
25	FY17 NRV Replacement Program				580	1,693	1,693		
26	S & I Consolidated Dispatch				1,000	1,583	1,583		
27	Radio Systems Replacement				1,300	1,300	1,300		
28	FY16 NRV Replacement Program				700	1,129	1,129		
29	Passenger Facility Accessibility Mods FY14				1,000	1,000	1,000		
30	Pedestrian Barriers at Bush Turnpike Station				0	987	987		
31	Enterprise Talent Mgmt System Select-Phase 2				0	860	860		165
32	SGR Reserve - Material Management Facility				0	626	846		
33	PA - Carpet Replacement DART HQ Building				0	750	750		
34	Escalator Replacement for 1401 Pacific				0	710	710		
35	Artwork Restoration Repairs System-wide				705	705	705		
36	Total SGR Reserve - Finance				0	203	647		
37	Data Warehouse and Reporting Expansion				605	605	605		
38	Desktop PC Replacement				211	571	571		
39	LRT at Grade Rail Platform Rehab Mockingbird				556	556	556		
40	DART.org & DARTnet Redesign				500	500	500		
41	Signalized Crossing at Arapaho Station				0	450	450		
Expansion/ Enhancement Projects									
State of Good Repair									
Other									



**Exhibit II.12**  
**FY 2018 Capital/Non-Operating Project Budget List (in Thousands)**

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>AGENCY-WIDE (continued)</b>									
42	Signalized Crossing at Ledbetter Station				\$0	\$450	\$450	\$0	\$0
43	Connection Protection				450	450	450		
44	DARTnet Modernization				431	431	431		
45	FY17 NRV Transit Police Replacement Program				420	420	420		
46	Oracle Database Hardware Replacement				405	405	405		
47	Web Development Improvement				200	400	400		
48	Replace DART Access system				375	375	375		
49	HVAC/Mech Equip Replacement (PA FY 14)				353	353	353		-17
50	Mobile Medical Services for DART Employees				350	350	350		
51	Total SGR Reserve - Legal				0	34	323		
52	Improvements at Convention Center Station				320	320	320		
53	Comm Two Way Radios Purchase				0	304	304		
54	PA Facility Landscape Replacement/Improvements				0	300	300		
55	Multi Function Printer Replacement				77	288	288		
56	Replacement of Digital In-car Police Video				250	250	250		
57	Enterprise Talent Management System Study-Phase 1				240	240	240		
58	Bike Lids at Light Rail Stations				231	231	231		
59	HVAC Replacement				231	231	231		
60	COMMs Radio Server System Hardware Replacement				212	212	212		
61	Implementation of IBM Cognos TM1				206	206	206		
62	Replacement of Police Mobile Data Computer (MDC)				200	200	200		
63	Showers for the headquarters fitness center				198	198	198		2
64	Purchasing New Insulated Rolling Steel Garage Door				178	178	178		
65	Pedestrian Barriers at Fair Park Station				172	172	172		
66	Maintenance Document Control Record System				169	169	169		-8
67	Equipment Replacement				151	151	151		
68	Improvements at DART HQ Break Room for Fare Enfor				150	150	150		
69	COMM. Fire Wall Upgrade				140	140	140		
70	Ruban Video Integration				120	120	120		
71	Concept of Ops for Transit Systems Integration				100	100	100		
72	Video Intelligence Analytics				95	95	95		14
73	Computer-Based Enterprise Security Awareness Prog				83	83	83		
74	Painting Exterior/Interior 1200 E Jefferson				79	79	79		
75	Transit Centers Workstation Remodeling				75	75	75		
76	PA Monroe Shops Structural Engineering Assessment				50	50	50		
77	Comm Control Center Room Recording System				45	45	45		
78	Additional T-3s (Three-wheeled Vehicles)				45	45	45		2
79	NWROF LRV Exterior Wash Pad Diverter Valve				36	36	36		
80	MDC Office Reconfiguration				35	35	35		
81	PA SCISSOR LIFTS				33	33	33		
82	Emergency Preparedness Guides and Application				32	32	32		3
83	Rail Service Disruption Stop Network				30	30	30		
84	"E-Alert" (Electronic Alert) System				25	25	25		32
85	Dock Levelers at Pioneer Warehouse				24	24	24		
86	Air Assist Mechanical Shear				21	21	21		
87	Support Building				19	19	19		
88	Accordion Wall				18	18	18		
89	PA Parking Lot Striping Machine				11	11	11		
90	Project Cashflow Timing Adjustments				-8,370	-1,595	-7,702		
91	Data Center NOC Relocation				1,070	1,070	1,070		222
92	Additional body cameras				200	200	200		
93	Project Cashflow Timing Adjustments				-272	-18	-22		
	Expansion/ Enhancement Projects				4,109	5,157	5,141	0	10
	State of Good Repair				30,662	112,784	442,630	0	194
	Other				998	1,252	1,248	0	222
	<b>TOTAL AGENCY-WIDE</b>				<b>\$35,768</b>	<b>\$119,193</b>	<b>\$449,018</b>	<b>\$0</b>	<b>\$426</b>



## Exhibit II.12

### FY 2018 Capital/Non-Operating Project Budget List (in Thousands)

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>BUS</b>									
94	CNG-Powered Standard Buses				\$3,150	\$21,475	\$21,475	\$4,000	\$10,000
95	On Street Passenger Facilities - FY2016-FY2019				1,038	7,199	7,199		
96	Equip Bus fleet with APC				750	1,944	1,944		-35
97	Yard Management Automation				1,300	1,300	1,300		-350
98	On-Street Passenger Facilities				1,000	1,000	1,000	2,000	
99	NW Plano Park & Ride				500	1,000	1,000		
100	Auto Passenger Counter on Fixed-Route Buses				667	667	667		
101	Project Cashflow Timing Adjustments				-1,511	-154	-1,611		
102	SGR Reserve - Bus Replacement				0	0	587,867	58,787	
103	SGR Reserve - Innovative Services Vans				0	11,216	134,071		
104	SGR Reserve - Bus Capital Maintenance Program				0	0	33,363		
105	SGR Reserve - Passenger Amenities - Bus				0	4,316	25,356		
106	SGR Reserve - East Dallas Bus Ops Facility				0	2,194	22,620		
107	Bus Repower Program				2,750	18,250	21,000		
108	SGR Reserve - Farebox Replacement				0	0	17,688		
109	SGR Reserve - South Oak Cliff Bus Ops Facility				0	1,238	17,314		
110	ARBOC Vans Replacement				10,162	10,162	10,162		
111	Zero Emission Electric Bus (ZEEB) Project				10,101	10,101	10,101	7,637	100
112	Bus Farebox Replacement				9,000	9,000	9,000	7,557	
113	SGR Reserve - Northwest Bus Ops Facility				0	1,099	7,988		
114	Bus lifts replacement 4127 Elm St.				0	7,000	7,000		
115	BRT Elm & Commerce Bus Lanes Reconstruction				1,200	7,000	7,000		
116	SGR Reserve - Intelligent Transportation Systems (ITS)				0	325	5,738		
117	Cummins ISL-G Near Zero (Nz) CNG Engine				1,436	4,309	4,309	1,900	
118	Mobility on Demand (MOD)				0	3,500	3,500		
119	Underground Storage Tanks at EDBOF and NWBOF				1,000	2,900	2,900		
120	SGR Reserve - Planning Equipment Replacement				0	0	2,644		
121	Bus Operator Crew Rooms				1,960	1,960	1,960		60
122	In-Vehicle Mobile Gateway Router Upgrade				1,287	1,811	1,811		
123	Bus Shelter and Pad Replacements				0	1,627	1,627		
124	2016 Suburban Bus Purchase				1,167	1,167	1,167		
125	PA-LED Lighting Retrofit for DART Bus Facilities				359	1,058	1,058		-353
126	South Oak Cliff Total Roof Replacement				473	946	946		
127	Total SGR Reserve - Transportation				0	257	929		
128	SOC Cooling Tower and Hydronic Boiler Replacement				500	709	709		
129	Replacement of Overhead doors at 4127 Elm St				0	456	456		
130	Electronic Vehicle Pre-Trip Inspection System				439	439	439		98
131	Bus Collision Avoidance Countermeasures Project				0	452	452		-355
132	Bus CNG Fueling Stations				390	390	390		
133	Bus lift replacements bays #13 and #14 at 4209 Ma				0	300	300		
134	Replacement of Overhead doors at 4209 Main St.				0	276	276		
135	PA Bus Facilities Concrete Repair FY 18				0	273	273		
136	Connected/Autonomous VehiclePilot				0	250	250		
137	N Carrollton TC-Electrical and Irrigation Relocation				223	223	223		
138	Bus exhaust fans and reels at 4127				200	200	200		3
139	Transit Signal Priority (TSP) on Route 400				192	192	192		4
140	Decommission and Remove 2 LNG Bus Fuel Stations				180	180	180		
141	Traffic Signal Priority (TSP) on Route 400				165	165	165		
142	TRUCK RACK HD 207				145	145	145		
143	Bus exhaust fans and reels at 4209 Main				100	100	100		2
144	ED & NW Station Office Remodeling				87	87	87		
145	4127 and 4209 Generator replacement				79	79	79		
146	Bus Engine Coolant Exchange				75	75	75		-30
	Expansion/ Enhancement Projects								
	State of Good Repair								
	Other								



**Exhibit II.12**  
**FY 2018 Capital/Non-Operating Project Budget List (in Thousands)**

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>BUS (continued)</b>									
147	ED & SOCBF Secure Pedestrian Walkway				\$66	\$66	\$66	\$0	\$0
148	COMM Bus Service Truck Transilite Laptop Install				53	53	53		5
149	Replace Wheel Paint Blast Machine in Body Support				50	50	50		
150	Relocation of the fitness center at SOC Transport				36	36	36		
151	Body Support Breathable Air Compressor				30	30	30		
152	The addition of equipment at Northwest Maintenan				30	30	30		
153	South Oak Cliff Training Office				22	22	22		
154	Body Shop Shear				20	20	20		
155	Purchase Bus Safety Stands for NWBOF				15	15	15		
156	Replacement of Body Shop Hand Brake				10	10	10		
157	Project Cashflow Timing Adjustments				-7,912	-474	-43,991		
158	Correction of Security Audit Findings by DART Transit Police				550	550	550		203
159	Bus Operator Crew Rooms - DCTA				131	131	131	131	
159	Project Cashflow Timing Adjustments				-122	-3	-32		
	Expansion/ Enhancement Projects				6,893	34,431	32,974	6,000	9,615
	State of Good Repair				36,089	106,284	900,451	75,881	-466
	Other				558	678	649	131	203
	<b>TOTAL BUS</b>				<b>\$43,541</b>	<b>\$141,393</b>	<b>\$934,074</b>	<b>\$82,011</b>	<b>\$9,352</b>
<b>COMMUTER RAIL</b>									
160	Cotton Belt Construction				\$49,131	\$1,126,000	\$1,126,000	\$141,370	\$34,490
161	Positive Train Control				10,201	25,286	25,286	20,643	3,500
162	Valley View to W. Irving Double Tracking				6,100	19,208	19,208	9,926	
163	Locomotive Purchase				0	5,750	5,750	5,175	
164	Cotton Belt Planning & Study				900	900	900		
165	Project Cashflow Timing Adjustments				-2,874	-1,652	-394		
166	SGR Reserve - Vehicle Maintenance				0	9,113	157,090	78,545	
167	SGR Reserve - DFW ROW & Signals Maintenance				0	26,324	126,455	67,021	
168	SGR Reserve - Madill ROW & Signals Maintenance				0	12,841	61,423		
169	Cotton Belt Preventive Maintenance				0	0	35,281		
170	Madill Bridges Replacement				100	30,000	30,000		
171	SGR Reserve - PTC Refurbish / Replacement				0	0	18,268	9,134	
172	BI-Level & Cab Car Overhauls				2,000	16,103	16,103	8,052	
173	SGR Reserve - Intelligent Transportation Systems (ITS)				0	7,075	11,207	5,603	
174	DFW TrackMOW				0	9,478	9,478	5,023	
175	SGR Reserve - Facility Maintenance				0	2,480	6,127	3,064	
176	Obsession Bridge				5,107	5,107	5,107		
177	TRE DFW Track MOW				5,000	5,000	5,000	2,650	
178	FY18 DFW Bridge Panel Replacement				0	1,800	1,800	954	
179	Bi-Level Fleet Overhaul				1,668	1,668	1,668	834	
180	Madill Track MOW - Rail Ties Undercutting				1,500	1,500	1,500		
181	Widen Motor Street - (100% TXDOT)				1,500	1,500	1,500	1,500	
182	MP 640.4 Inwood Bridge				900	900	900		
183	SGR Reserve - TRE Passenger Amenities				0	0	514		
184	FY 18 Madill TO MP 704.2 & MP 700.75				376	376	376		
185	Locomotive Overhaul (2) F59PHI				300	300	300	204	
186	FY18 DFW TO Replacment				280	280	280	148	
187	TRE Fleet Camera Installation				0	250	250	125	
188	Station Signage				125	250	250	125	
189	SGR Reserve - Infrastructure Technology				0	52	195	98	
190	FY 18 Madill Bridge Panel Replacement				190	190	190		
191	TRE EMF Repair and Resurface Yard access road				132	132	132	66	
192	FY 18 Madill Crossing Replacement				116	116	116		
	Expansion/ Enhancement Projects								
	State of Good Repair								
	Other								





**Exhibit II.12**  
**FY 2018 Capital/Non-Operating Project Budget List (in Thousands)**

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>COMMUTER RAIL (continued)</b>									
193	FY 18 DFW Signals and Comm				\$85	\$85	\$85	\$45	\$0
194	Signals and Comm Annual Appropriations				85	85	85	45	
195	PA Medical Market Station Rehab (SGR) Commuter Ra				82	82	82		
196	FY18 DFW Crossing Replacement				65	65	65	34	
197	PA Commuter Rail Station Rehab (SGR)West Irving				56	56	56		
198	PA South Irving Commuter Rail Station Rehab (SGR)				56	56	56		
199	Repairs and Replace IT Equipment @ Union Station				185	185	185		
200	Project Cashflow Timing Adjustments				-3,327	-4,310	-3,788		
	<b>Expansion/ Enhancement Projects</b>				63,457	1,175,492	1,176,750	177,114	37,990
	<b>State of Good Repair</b>				16,581	129,139	488,337	183,271	0
	<b>Other</b>				0	0	0	0	0
	<b>TOTAL COMMUTER RAIL</b>				<b>\$80,038</b>	<b>\$1,304,632</b>	<b>\$1,665,087</b>	<b>\$360,385</b>	<b>\$37,990</b>
<b>LRT</b>									
201	Second Downtown Rail Line (D2)				\$13,998	\$768,773	\$1,317,732	\$300,000	\$1,000
202	Red & Blue Line Platform Extensions				14,658	117,572	117,872	118,590	
203	Carpenter Ranch Station				1,200	12,000	12,000	12,000	
204	Loop 12 Station				1,200	12,000	12,000	12,000	
205	CCTV - 115 LRVs				3,759	7,859	7,859		
206	CCTV - 48 SLRVs				3,000	3,000	3,000		
207	FY16 21 APCs for Fleet 52				1,623	1,623	1,623		
208	Project Cashflow Timing Adjustments				-11,384	-79,191	-3,918		
209	SGR Reserve - LRVs Replacement				0	0	711,436		
210	SGR Reserve - Right-Of-Way & Track				0	4,917	77,559		
211	SGR Reserve - LRV Capital Maintenance Program				0	0	51,853		
212	SGR Reserve - Intelligent Transportation Systems (ITS)				0	18,730	47,049		
213	SGR Reserve - TVM Model Replacement				0	0	44,690		
214	SGR Reserve - LRT Passenger Amenities				0	6,583	41,290		
215	WSA-Central Business District (CBD) Rail Rplcmnt				25,999	32,999	32,999		
216	SGR Reserve - Uninterrupted Wayside Signal Power Systems				0	0	32,445		
217	LRV Capital Programs FY18-FY27				3,275	18,304	25,297		
218	LRV HVAC Upgrade Project - 115 Cars				0	10,256	10,256		11
219	SGR Reserve - Traction Electrification System (TES)				0	1,890	18,926		
220	SGR Reserve - Central Rail Ops Facility				0	4,298	16,287		
221	SGR Reserve - Hi-Rail NRV Replacement				0	2,905	12,365		
222	Uninterrupted Wayside Signal Power Systems				4,650	9,900	9,900		
223	SGR Reserve - Communications				0	740	7,654		
224	SGR Reserve - North West Rail Ops Facility				0	1,567	6,939		
225	SGR Reserve - Anti-Graffiti Window Film, LRVs				0	887	5,696		
226	SGR Reserve - Signals				0	734	5,195		
227	TES - Starter System TPSS Rectifier Replacement				454	4,918	4,918		
228	PA-LED Lighting Retrofit for DART LRT Facilities				1,531	4,477	4,477		-888
229	COMMs SONET System Replacement				1,500	4,300	4,300		
230	Comm SCADA Control System Upgrade				0	3,600	3,600		
231	SGR Reserve - Equipment Replacement - Police				0	999	3,535		
232	Fare Barrier Improvements at West End Station				0	3,000	3,000		
233	TES Overhead Catenary Wire Machine				0	2,770	2,770		
234	TRK Plasser American Tamper Replacement #6019				0	2,765	2,765		
235	Conversion of LRT Signage to Digital				0	2,000	2,000		
236	Pedestrian Connections at Victory Station				0	1,600	1,600		
	<b>Expansion/ Enhancement Projects</b>								
	<b>State of Good Repair</b>								
	<b>Other</b>								





## Exhibit II.12

### FY 2018 Capital/Non-Operating Project Budget List (in Thousands)

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>LRT (continued)</b>									
237	SGR Reserve - Infrastructure Technology				\$0	\$0	\$1,529	\$0	\$0
238	LRV PA Remote Unit Replacement				750	1,500	1,500		
239	SGR Reserve - Emergency Power Upgrade at CROF				0	0	1,445		
240	SGR Reserve - Application Technology				0	261	1,320		
241	LRT Traffic Signal Priority (TSP)				1,015	1,015	1,015		
242	US75 LRT Bridge				0	1,000	1,000		
243	PA Refurbishment of Red Line Elevators				877	877	877		
244	Comms SCADA Front End Processor (FEP) Migration				836	836	836		
245	PAVMB at DFW & Terminals				820	820	820		
246	C-CAR Reconfiguration - Prioritizing for Mobility				663	767	767		63
247	Trk Presidio Cross Over Replacement				0	633	633		
248	PA SGR Refurbishment - LRT Station Lift Equipment				529	529	529		
249	Installation of Fiber Optic Cable in the Starter System.				525	525	525		
250	INIT Vehicle System Communication update to 4GLTE				0	408	408		
251	Storm Drainage Improvements at G-1 Line Section R				0	350	350		1
252	SIG - TWC Interrogator Replacement (SS & Ph 1)				326	326	326		
253	LRV Seat Cover Replacement				295	295	295		
254	TES Tunnel Lights Phase 2				285	285	285		
255	PA Rail Facilities Concrete Replacement FY18				0	281	281		
256	PA Rail Facilities Concrete Replacement				273	273	273		
257	One set of portable LRV 15 Ton Lifts for NWROF				0	259	259		
258	East and West End Elevators CROF S&I Buiding				0	250	250		
259	TRK Highway Grade Crossing Panel Replacement (SS)				242	242	242		
260	PA Southwest Medical Park Station Stair Rehab				230	230	230		
261	SIG Battery Backup Replacement for (Ph 1)				210	210	210		
262	TRK Highway Grade Crossing Panel Replacement (SS)				203	203	203		
263	Mid-Block Crossing at Irving 1 and Carolyn Parkwa				200	200	200		
264	TES Bucket Truck Equipment				195	195	195		
265	TES OCS Section Switches and Switch Rods 74 (SS)				182	182	182		
266	Emergency Operations Center (EOC)				147	147	147		
267	Purchase of boiler for LRV wash NWROF				126	126	126		
268	Trk Trinity River Bridge Expansion Joint Replacem				115	115	115		
269	Comm House Rehab - SS & Ph I				109	109	109		
270	CROF Station Office Remodeling				95	95	95		
271	PA Walnut Hill LRT Station Rehab				84	84	84		
272	PA Forest Lane LRT Station Rehab				84	84	84		
273	Upgrade all (7) kitchenettes at CROF campus				80	80	80		
274	Replace the Carpet at Pioneer Warehouse With Tile				65	65	65		
275	TES Phase I Sectionalizing Switch Rods 50				60	60	60		
276	Comm VMB Replacement Study				60	60	60		
277	Track Rail Tie Pads and E-Clips				55	55	55		
278	TRK Tie Changer Attachment for Geismar 360 Speed				42	42	42		
279	TES 3-Portable Light Trailers				35	35	35		
280	Rowlett Rail Station Camera Replacement				30	30	30		
281	Level Boarding Station Markers 2017				30	30	30		
282	LRV Stanray Wheel Profiling Machine Cutters				24	24	24		
283	TES - 2 DC Dielectric Test Sets (P2)				23	23	23		
284	Trk Ingersoll Rand Air Comp				16	16	16		
285	Trk Diesel Portable Manual Tamper				15	15	15		
286	DFW Airport Station Customer Amenities				9	9	9		
287	Project Cashflow Timing Adjustments				-7,412	-22,582	-2,663		
	Expansion/ Enhancement Projects				28,054	843,637	1,468,169	442,590	1,000
	State of Good Repair				39,958	136,810	1,206,426	0	-813
	Other				0	0	0	0	0
	<b>TOTAL LRT</b>				<b>\$68,013</b>	<b>\$980,447</b>	<b>\$2,674,594</b>	<b>\$442,590</b>	<b>\$187</b>



## Exhibit II.12

### FY 2018 Capital/Non-Operating Project Budget List (in Thousands)

#	PROJECT NAME	Expansion/ Enhancement Projects	State of Good Repair	Other	2018	5 Year Total	20 Year Total	External Funding	Operating Expense/ (Savings)
<b>Streetcar</b>									
288	Dallas Central Streetcar Link				\$500	\$91,928	\$91,928	\$40,000	\$0
289	Dallas TIGER Streetcar Design Build				6,000	6,000	6,000		
290	Urban Circulator Other Expense				1,000	1,000	1,000	1,000	
291	Southern Streetcar Extension				1,000	1,000	1,000	1,000	
292	Streetcar Vehicles - Extension				1,000	1,000	1,000	1,000	
293	Vehicle Maintenance Program SGR - Reserve				93	242	1,304		
	Expansion/ Enhancement Projects				9,500	100,928	100,928	43,000	0
	State of Good Repair				93	242	1,304	0	0
	Other				0	0	0	0	0
	<b>TOTAL STREETCAR</b>				<b>\$9,593</b>	<b>\$101,170</b>	<b>\$102,233</b>	<b>\$43,000</b>	<b>\$0</b>
<b>Paratransit</b>									
	SGR Reserve - Paratransit Ops Facility (Senate St.)				\$361	\$1,569	\$5,566	\$0	\$0
	Expansion/ Enhancement Projects				0	0	0	0	0
	State of Good Repair				361	1,569	5,566	0	0
	Other				0	0	0	0	0
	<b>TOTAL PARATRANSIT</b>				<b>\$361</b>	<b>\$1,569</b>	<b>\$5,566</b>	<b>\$0</b>	<b>\$0</b>
<b>Non-Operating</b>									
294	Transit System Plan Regional Server Replacement - SGR Reserve				\$0	\$3,556	\$11,013	\$0	\$0
295	Asset Studies & Assessment Reserve				0	1,612	7,528		
296	Capital Service Planning Reserve				500	1,500	1,500		
297	2040 Transit System Plan				500	1,326	1,326		
298	Capital Planning FY16				750	750	750		
299	FY17 Capital Planning				500	500	500		
300	Two Restrooms and a Breakroom @ Union Station				189	189	189		
301	Service Planning and Design for Non-DART				500	500	500		
302	Transit-Oriented Development (TOD)				299	299	299		
303	Transit System Plan				200	200	200		
304	2018 Capital Asset Condition Assessment				175	175	175		
	Expansion/ Enhancement Projects				0	0	0	0	0
	State of Good Repair				0	0	0	0	0
	Other				3,613	10,607	23,980	0	0
	<b>TOTAL NON-OPERATING COSTS</b>				<b>\$3,613</b>	<b>\$10,607</b>	<b>\$23,980</b>	<b>\$0</b>	<b>\$0</b>
<b>ROAD IMPROVEMENT</b>									
294	HUP Transit Related Improvement Projects				\$3,263	\$13,484	\$13,484	\$0	\$0
295	TSM Street Repair SGR - Reserve				3,000	9,200	9,200		
296	City of Dallas (TSM Program)				3,374	3,374	3,374		
297	City of Dallas (PASS Program)				3,000	3,000	3,000		
298	TSM Street Repair other Cities				900	2,480	2,480		
299	City of Garland (PASS Program)				2,000	2,000	2,000		
	Expansion/ Enhancement Projects				0	0	0	0	0
	State of Good Repair				15,537	33,538	33,538	0	0
	Other				0	0	0	0	0
	<b>TOTAL ROAD IMPROVEMENT</b>				<b>\$15,537</b>	<b>\$33,538</b>	<b>\$33,538</b>	<b>\$0</b>	<b>\$0</b>
	Expansion/ Enhancement Projects				112,013	2,159,645	2,783,961	668,705	48,615
	State of Good Repair				139,282	520,366	3,078,252	259,151	-1,184
	Other				5,169	12,537	25,877	131	425
	<b>TOTAL CAPITAL &amp; NON-OPERATING</b>				<b>\$256,463</b>	<b>\$2,692,549</b>	<b>\$5,888,090</b>	<b>\$927,987</b>	<b>\$47,856</b>
	<b>CAPITAL PLANNING &amp; DEVELOPMENT &amp; START-UP</b>				<b>\$8,802</b>	<b>\$51,004</b>	<b>\$219,588</b>		
	<b>GRAND TOTAL</b>				<b>\$265,266</b>	<b>\$2,743,552</b>	<b>\$6,107,679</b>	<b>\$927,987</b>	<b>\$47,856</b>

\*Second CBD Light Rail Alignment (D2 Subway) was called Orange Line to Union Station CBD in previous Plan.

## Debt Program

### Background

On January 23, 2001, the Board approved a Master Debt Resolution which authorized DART to pledge its sales tax revenues for Senior Lien Debt (Bonds) and Senior Subordinate Lien Debt (Commercial Paper).

*Bonds* – With the passage of a bond referendum on August 12, 2000, DART received voter authorization to issue up to \$2.9 billion of solely pledged Senior Lien sales tax-backed long-term debt (sales tax bonds). A change to DART’s enabling legislation was enacted during the 2009 Texas legislative session allowing DART to pledge multiple revenue sources as a first lien on Senior Lien Long-Term Bonds (multi-revenue bonds). This change allows DART to issue more than \$2.9 billion in long-term debt, provided that DART issues bonds backed by multiple revenue sources.

The Office of the Attorney General of Texas disagreed with that interpretation and on July 23, 2012, DART filed a Bond Validation Petition in District Court 160 in Dallas County. DART sought a judicial ruling clarifying whether a \$2.9 billion limitation on “solely” pledged Sales Tax Revenue Bonds applies to “combined” Pledged Revenue Bonds. The hearing was conducted on August 13, 2012 and the Court concurred with DART’s position. As a result, DART is no longer limited to \$2.9 billion in long-term debt so long as the debt is backed by a combined pledge of revenues (sales taxes plus another revenue source).

*Commercial Paper* – The Board has authorized the issuance of up to \$200 million in Commercial Paper notes, backed by self-liquidity, for capital acquisition purposes. A requirement of the self-liquidity program is that DART maintains at least 2.0 times the debt service coverage amount for the notes and ensures that no more than \$35 million of the notes mature within five days.

### Debt Program Structure

DART’s two-tiered debt structure program is designed to meet capital funding requirements and to provide flexibility to meet changing debt market conditions. The commercial paper program is issued to meet temporary capital funding requirements and to access variable interest rates when the financial markets dictate that strategy to be advantageous. Long-term bonds are used as the ultimate capital financing instrument for long-lived assets such as buildings and rail lines.

As of September 30, 2017, it is projected that DART will have approximately \$3.27 billion in bonds outstanding, as well as \$140 million in CP.

### Debt Program Implementation

*Commercial Paper* – DART is planning to retire \$30 million in CP in each of the next four years, and the remaining \$20 million in 2022. Additional issuances will begin in 2025 to provide the initial funding for DART’s bus fleet replacement, totaling \$400 million, which will be repaid by 2037.

Short-term interest rates are expected to average just under 1% in 2018, increasing slowly each year until they reach 4.00% by 2026.

*Long-Term Bonds* – DART believes a sound debt program should have a combination of fixed and variable-rate debt. DART plans to have no more than 15% of its debt in variable-rate products. The variable-rate debt can either be short-term or long-term debt. DART has never issued variable rate long-term debt and has no current plans to do so. However, the market will be analyzed for each future debt issuance and either fixed-rate or variable-rate debt may be issued depending on which type of debt is in the best interest of DART at that time.

In the next seven years, DART anticipates issuing \$2.2 billion in support of the Program of Interrelated Projects (Core Capacity Program), the Cotton Belt, and other capital projects. Beyond that, \$700 million of debt is planned between 2025 and 2027 to fund the replacement/refurbishment of the first light rail fleet (95 vehicles).

Exhibit II.13 summarizes the major commercial paper and long-term debt assumptions. The exact timing, nature, and amounts of long-term debt issuances may be adjusted from Financial Plan estimates depending on interest rates and other considerations, as determined at the time of issuance.



### Exhibit II.13 FY 2018 Financial Plan Debt Assumptions

Description	Commercial Paper (CP)		Long-Term Debt (LTD)	
	FY 2018	Future	FY 2018	Future
<b>Term</b>	<b>Rolling for up to 7 years</b>	<b>Rolling for up to 11 years</b>	<b>None</b>	<b>Up to 35 years</b>
Interest rates + fees	1.30%	1.75% - 4.25%	None	4.25% - 6.0% Fixed Rate
Principal Repayment	n/a	All outstanding CP will be retired by 2022	None	Multiple Debt Structures***
Net CP* / Total Long-Term Debt issued**	(\$30M)	(\$110M)	n/a	\$2.9B
End of Year - Maximum debt outstanding	\$110M	\$350M	\$3.21B	\$5.6B
Year of maximum debt outstanding	n/a	FY 2028	n/a	FY 2028
Cash reserves required?	Yes	Yes	No	No
Uninsured Debt Rating assumed	A1+/P1	A1+/P1	n/a	AA+/Aa2

\* The amounts shown on this line related to commercial paper issuance are net numbers and do not include retirement and re-issuance. The long-term debt amounts shown on this line are gross issuances.

\*\* Amounts shown are for issuances between 2018 and 2037 and are shown at par value.

\*\*\* See page II-33 for further discussion.

*Build America Bonds (BABs) and Federal Budget Cuts* – In 2009 and 2010, DART issued a combined \$1.56 billion in taxable Build America Bonds. As a part of this program, the Federal government agreed to subsidize 35% of the interest expense. Unfortunately, as part of the federal budget sequester cuts which took effect on March 1, 2013, the federal government reduced the subsidy to be paid to DART. From 2013 to 2016, the expected subsidy has been reduced by a total of \$7.8 million (7.3%). These reductions are scheduled to last for a total of 12 years. Projecting future reductions based on the 2017 reduction percentage of 6.9%, an additional \$16.8 million of anticipated subsidy will not be received. That results in a total estimated subsidy reduction of \$24.6 million over the 12-year period of the sequester.

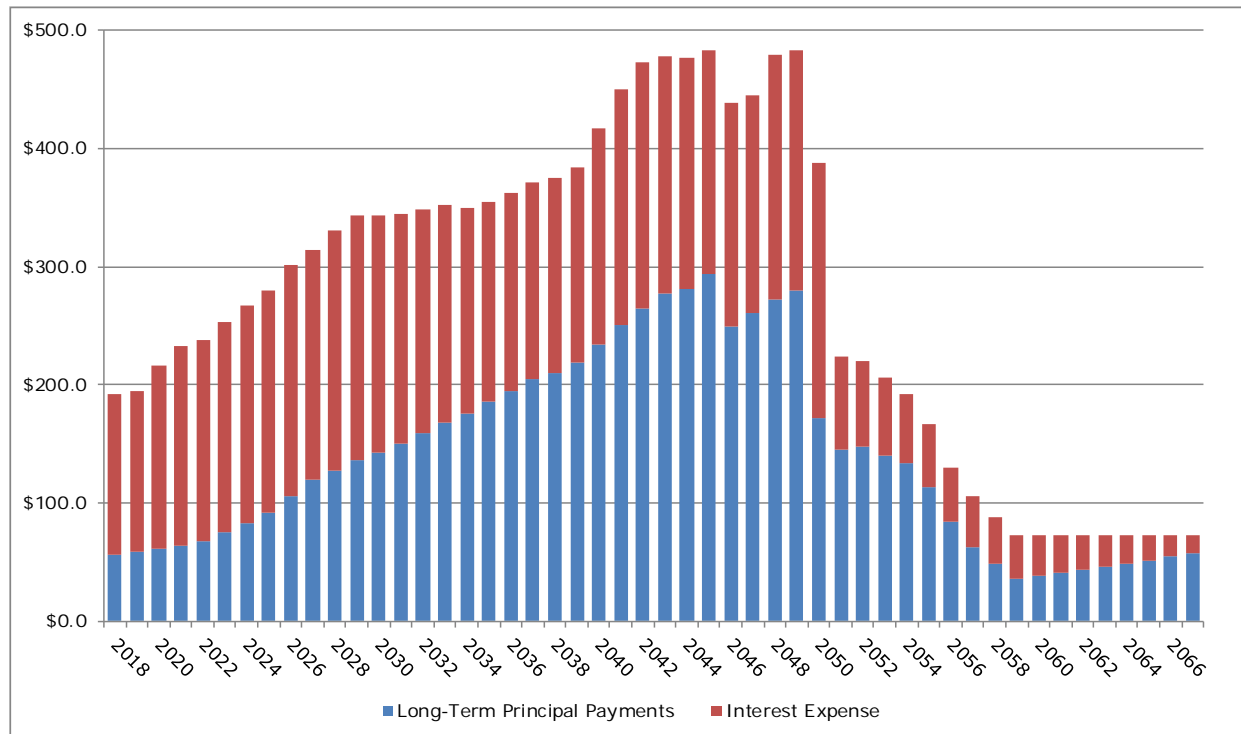


*Capital Appreciation Bonds (CABs)* – In order to complete the second downtown light rail alignment (D2) and the Cotton Belt, DART has assumed the issuance of \$350 million in CABs in 2020. There will be no principal or interest payments on these bonds for 10 years.

### Debt Service Costs (lines 30 - 32 of the Financial Plan)

Exhibit II.14 illustrates debt service costs for all existing and projected debt issuances contained in the FY 2018 Financial Plan. Interest expense payments are shown net of the (BABs) subsidy, thus showing only DART's net interest cost.

Exhibit II.14  
FY 2018 Financial Plan Principal and Interest Payments  
(in Millions)



### Coverage Ratios (lines 33 – 34 of the Financial Plan)

Financial Standard D-7 requires DART maintain a debt coverage ratio (the External Coverage Ratio) such that Gross Sales Tax Revenues must be at least two times the amount of annual Debt Service. This is the standard DART is held to by the financial marketplace and in its own external debt documents. In those documents, DART agrees that it will not issue additional debt when it does not comply with this standard. In the FY 2018 Financial Plan, the lowest external coverage value is 2.55 in 2028.

DART also has a goal stated in the same financial standard to maintain another coverage ratio – the Internal Coverage Ratio. This standard states, “It is a goal of DART that for financial planning purposes, for long-term debt, sales tax revenues plus operating revenues, plus interest income, less operating expenses (excluding debt service and depreciation), for any twelve consecutive months of the prior eighteen months, must be sufficient to cover maximum annual debt service (ratio greater than 1.0). However, the DART Board may choose to grant exceptions to this standard in



the interest of expediting completion of the System Plan.” The FY 2018 Financial Plan meets this standard for all years, with a minimum value of 1.17 in 2020.

Exhibits II.15 and II.16 compare the projected annual values of the internal and external coverage ratios from the FY 2017 Plan to those in the FY 2018 Plan. The reduced coverage ratios in the middle years of the Plan are a result of new debt service for D2.

Exhibit II.15  
Projected Coverage Ratio Comparison

Year	FY17 FP		FY18 DRAFT FP		Variance	
	External Coverage	Internal Coverage	External Coverage	Internal Coverage	External Coverage	Internal Coverage
2018	2.92	1.17	3.10	1.28	0.18	0.11
2019	2.95	1.20	3.05	1.22	0.10	0.02
2020	2.85	1.22	2.86	1.17	0.01	(0.05)
2021	2.84	1.30	2.79	1.21	(0.04)	(0.09)
2022	2.90	1.36	2.89	1.27	(0.01)	(0.09)
2023	2.84	1.35	2.86	1.29	0.02	(0.06)
2024	2.78	1.35	2.82	1.32	0.04	(0.03)
2025	2.63	1.24	2.76	1.30	0.14	0.06
2026	2.54	1.23	2.57	1.18	0.03	(0.04)
2027	2.55	1.27	2.57	1.18	0.01	(0.08)
2028	2.57	1.32	2.55	1.21	(0.01)	(0.11)
2029	2.60	1.39	2.62	1.32	0.01	(0.07)
2030	2.71	1.45	2.75	1.41	0.04	(0.04)
2031	2.79	1.50	2.84	1.48	0.05	(0.02)
2032	2.79	1.46	2.89	1.51	0.10	0.05
2033	2.90	1.54	2.87	1.46	(0.04)	(0.08)
2034	3.05	1.70	2.99	1.59	(0.05)	(0.11)
2035	3.23	1.85	3.10	1.68	(0.13)	(0.17)
2036	3.39	1.99	3.22	1.80	(0.17)	(0.19)
2037	3.69	2.21	3.30	1.89	(0.40)	(0.32)

Exhibit II.16  
Projected Coverage Ratio Comparison

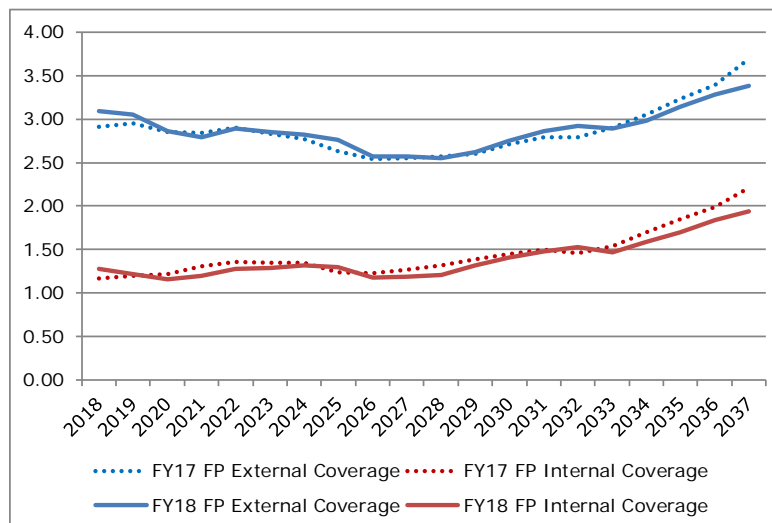


Exhibit II.17 shows the interest rate assumptions contained in the FY 2018 Financial Plan.

Exhibit II.17  
Interest Rate Assumptions 2018 – 2037

Year	Commercial Paper Rate	30-Year Fixed Rate Bonds	Interest Income Rate
2018	1.25%	3.75%	1.35%
2019	1.50%	4.00%	1.65%
2020	1.75%	4.25%	2.00%
2021	2.00%	4.50%	2.30%
2022	2.25%	4.75%	2.70%
2023	2.50%	5.00%	3.15%
2024	2.75%	5.25%	3.50%
2025	3.50%	5.50%	4.25%
2026	3.75%	5.75%	5.00%
2027	4.00%	6.00%	5.00%
2028	4.00%	6.00%	5.00%
2029	4.00%	6.00%	5.00%
2030	4.00%	6.00%	5.00%
2031	4.00%	6.00%	5.00%
2032	4.00%	6.00%	5.00%
2033	4.00%	6.00%	5.00%
2034	4.00%	6.00%	5.00%
2035	4.00%	6.00%	5.00%
2036	4.00%	6.00%	5.00%
2037	4.00%	6.00%	5.00%

### Additional Debt Service Exhibits

A schedule of DART's annual debt service for the life of all existing long-term debt is included in Exhibit V.12. Exhibit V.13 is a history of DART's long-term bond issuance credit ratings. Exhibit V.14 shows DART's weighted average interest rate. These exhibits are in the *Reference Section* of this document.

**SUPPLEMENTAL FINANCIAL INFORMATION****Net Increase (Decrease) in Cash and Change in Balance Sheet Accounts (lines 36-37 of the Financial Plan)**

Based on each year's programmed sources and uses of funds, DART has projected its Balance Sheet for each of the next five years. These line items reflect the net change in cash and non-cash balance sheet accounts. The Change in Balance Sheet Accounts line item is used as a compensating factor for the lag between the occurrence of an accounting transaction, which affects the balance sheet, and the actual receipt or disbursement of cash. DART's projected Balance Sheet for each of the first five years of the Financial Plan is included in Exhibit II.18.

Exhibit II.18  
FY 2018 Financial Plan 5-Year Balance Sheet  
(in Millions – Inflated Dollars)

Description	2018	2019	2020	2021	2022
<b>ASSETS</b>					
<b>CURRENT ASSETS</b>					
Cash and cash equivalents & Investments	\$545.1	\$632.2	\$800.3	\$744.4	\$598.8
Sales taxes receivable	103.3	103.3	107.5	112.9	119.6
Transit revenue receivable, net	2.9	3.2	3.2	3.3	3.5
Due from other governments	14.6	21.4	13.0	22.4	20.2
Material and supplies inventory	39.2	40.4	41.6	42.8	44.1
Prepaid Expenses	3.0	3.0	3.0	3.0	3.0
<b>TOTAL CURRENT ASSETS</b>	<b>\$708.0</b>	<b>\$803.5</b>	<b>\$968.6</b>	<b>\$928.7</b>	<b>\$789.2</b>
Notes Receivable & Investment in Joint Venture	15.2	13.9	12.8	9.4	6.9
Property, Plant & Equipment, Net	4,443.1	4,447.9	4,692.3	5,089.0	5,334.1
Restricted Assets held to pay Capital Lease Liabilities	113.9	116.2	118.7	121.2	123.6
Unamortized debt issuance costs and other	0.3	0.3	0.3	0.3	0.3
Investments in managed HOV lane agreements	13.6	13.6	13.6	13.6	13.6
Deferred Outflows of Resources	42.1	41.0	40.0	38.9	37.9
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS</b>	<b>\$4,628.2</b>	<b>\$4,633.0</b>	<b>\$4,877.6</b>	<b>\$5,272.5</b>	<b>\$5,516.5</b>
<b>LIABILITIES AND EQUITY</b>					
<b>CURRENT LIABILITIES</b>					
Accounts payable and accrued liabilities	\$137.2	\$183.0	\$212.7	\$237.5	\$193.7
Commercial Paper notes payable	110.0	80.0	50.0	20.0	0.0
Current portion of Long-term Debt Payable	55.9	58.3	61.1	63.9	67.7
Local Assistance Program payable	0.0	0.0	0.0	0.0	0.0
Retainage payable	20.2	30.2	46.1	57.3	51.4
Unearned Revenue & Other Liabilities	114.1	114.1	114.1	114.1	114.1
<b>TOTAL CURRENT LIABILITIES</b>	<b>\$437.4</b>	<b>\$465.6</b>	<b>\$484.0</b>	<b>\$492.8</b>	<b>\$426.9</b>
Senior Lien Sales Tax Revenue Bonds Payable	3,315.9	3,622.6	4,261.5	4,742.6	4,914.9
Net Pension Liability	59.1	56.4	53.4	49.9	45.9
Capital Lease Liabilities	113.9	116.2	118.7	121.2	126.0
<b>TOTAL LIABILITIES AND DEFERRED INFLOWS</b>	<b>\$3,488.9</b>	<b>\$3,795.2</b>	<b>\$4,433.6</b>	<b>\$4,913.7</b>	<b>\$5,086.8</b>
<b>NET ASSETS (EQUITY)</b>	<b>\$1,410.0</b>	<b>\$1,175.8</b>	<b>\$928.6</b>	<b>\$794.6</b>	<b>\$792.0</b>
<b>TOTAL LIABILITIES &amp; NET ASSETS</b>	<b>\$4,898.9</b>	<b>\$4,971.0</b>	<b>\$5,362.2</b>	<b>\$5,708.3</b>	<b>\$5,878.8</b>

Cash Reserves and Restricted Funds (line 40 of the Financial Plan)

DART maintains several cash reserves. Financial Standard G-5 requires a Master Insurance Reserve for claims and Board liability exposure. This fund has a projected balance of \$11.0 million on September 30, 2017.

Financial Standard G-7 requires that sales tax collections that exceed budget during a fiscal year be placed in a "Financial Reserve" account. Once this fund balance reaches \$50 million, all additional funds will be placed in a Capital Projects Reserve. The Financial and Capital Projects Reserve may be used for any purpose, subject to an affirmative vote of two-thirds of the appointed and qualified Board members. This line item represents the projected end-of-year value. The Financial Reserve is at \$50 million so all future sales tax excesses will be placed in the Capital Reserve.

DART has pledged up to \$10 million of the Financial Reserve Fund as collateral on a defeased lease transaction with Comerica. This amount will decrease over time until it reaches zero in December 2023.

Less Advance Funding/Reserve (Core Capacity) (line 41 of the Financial Plan)

DART received advance funding in the amount of \$60 million from TxDOT in 2015 in support of the Core Capacity program. These funds are kept as restricted funds until qualifying core capacity expenditures are made. At that time, the general fund is reimbursed for those expenditures and the restricted fund amount is reduced accordingly. DART has also reserved \$15 million of local funds to pay for costs that might be incurred before federal grant approval. Once the grant is approved, any unused funds will be released from this encumbrance.

Working Cash Requirements (line 42 of the Financial Plan)

Financial Standard G-6 states "since sales taxes are received on a monthly basis, the unrestricted cash balance at the end of the year shall not be less than one-twelfth of the difference between the subsequent year's total sources of cash (excluding sales taxes) and total uses of cash as projected in the Financial Plan." For an improved safety margin, the Financial Plan maintains this cash balance to a minimum 90 days' worth of operating expenses (as opposed to 30 days required by policy). This line item represents the projected end-of-year value.

Capital Reserves (line 43 of the Financial Plan)

In accordance with Financial Standard G-7, once the Financial Reserve Fund balance reaches \$50 million, all sales taxes in excess of budget are placed in a Capital Projects Reserve. The balance in that reserve as of September 30, 2017 is projected to be approximately \$23 million. Any excess sales tax revenues over the FY 2017 budget will be added to this reserve on or before December 31, 2017. Note that the approved FY 2018 Financial Plan reflects the use of these funds for capital projects including the acceleration of the Cotton Belt commuter rail project.

Unrestricted Cash (Net Available Cash) (line 44 of the Financial Plan)

This line item represents the projected end-of-year value and is the bottom-line check regarding the long-term affordability of DART's programs. As long as this value is positive, the Financial Plan is affordable, given the assumptions used to build the Plan. In the FY 2018 Financial Plan, the minimum value of Unrestricted Cash is \$46.6 million, occurring in 2029. This amount is in addition to the reserves described in the previous paragraphs and as such, represents DART's unprogrammed cash balance. DART's total cash on hand at the end of 2029 inclusive of all reserves and restricted funds is projected at \$315.3 million.

DART looks at Unrestricted Cash and the internal and external coverage ratios as critical components of affordability analysis. Every decision that is made, as well as every change to a Financial Plan assumption or estimate, is made with consideration of the effect on the overall affordability of the Plan.

**Funds and Fund Balances**

DART's cash balances are contained in the following funds:

General Operating Fund

The primary objective of investment strategies for the operating fund is liquidity achieved by matching investment maturities and income stream with anticipated cash flows. The majority of funds are placed in short-term or readily marketable securities with emphasis on high-grade commercial paper and government agencies. Local government investment pools are used to provide diversity and facilitate daily funding of cash outflows.

The average maturity of this portfolio shall not exceed two years; the maximum maturity for any single holding shall not exceed five years. Yield enhancing techniques applied to a core segment of this portfolio, may include the use of Treasury notes in the two to three-year area which can be purchased for yield and held for possible capital gains and intermediate-term agencies with short-call provisions offering a spread to comparable Treasuries.

DART Commercial Paper System Expansion & Acquisition Fund

Deposits in this fund are generally held less than ninety days between the sale of DART's commercial paper and contract payments for the financed capital projects. To provide the short-term liquidity required, investments are limited to money market instruments, such as money market mutual funds or local government investment pools, commercial paper, discount agencies, or repurchase agreements, with maturities matched to check payment dates where feasible. The average maturity for this fund is up to 90 days, with a maximum maturity of 180 days.

### Financial Reserve Fund

The investment goal of capital preservation is primary for this fund, which will be accessed in the event of a downturn in sales tax receipts, unanticipated capital overruns, or other financial difficulties. The need for liquidity is low. To maximize yield while maintaining a relatively stable market value, this portfolio will use an investment strategy of normally placing securities evenly spaced over a one- to five-year maturity range, commonly referred to as a ladder maturity structure, to ensure consistent availability of current funds for reinvestment or cash flow requirements. Securities will be evaluated on a risk-return basis, with bond swaps used to take advantage of market anomalies while maintaining market quality and structure. The average maturity of this portfolio is four years or less with ten years as the maximum maturity for any single holding.

### Insurance Reserve Fund

DART's self-insurance program for liability and workers' compensation claims requires the preservation of assets to ensure funding capability. The reserve amount required will vary on a yearly basis as new claims offset claims payments. The fund will be adjusted no less frequently than yearly to reflect the appropriate level, upon approval of the Investment Officers, and after consultation with Risk Management. The lack of liquidity requirements in this fund allows for an average maturity of four years or less, with a maximum maturity for any single holding of ten years. Capital preservation is valued above yield, but the stable balance and minimal cash outflow permits a higher level of interim market price volatility than in other DART portfolios.

### Senior Lien Debt Service Funds

The long-term bond program requires the establishment of two reserve funds: an interest fund and a principal fund. These funds will be used to make payments directly to bond investors as needed during the month. The investment objective of these two funds is to provide sufficient liquidity to meet the payment requirements and to minimize market and credit risk. To meet this investment objective, investments will be limited to money market mutual funds that invest in short-term securities that are issued or guaranteed by the U.S. government or U.S. government agencies, or direct obligations of the U.S. government and its agencies with maturities closely matched to specific payment requirements. The average maturity of the interest fund shall not exceed six months, with a maximum maturity of six months. The average maturity of the principal fund shall not exceed one year with a maximum maturity of one year.



### Senior Subordinate Lien Debt Service Funds

The commercial paper program requires the establishment of two reserve funds: an interest fund and a principal fund. These funds will be used to make payments directly to commercial paper investors as needed during the month. The investment objective of the two funds is to provide sufficient liquidity to meet the payment requirements and to minimize market and credit risk. To meet this investment objective, investments will be limited to money market mutual funds that invest in short-term securities that are issued or guaranteed by the U.S. government or U.S. government agencies, or direct obligations of the U.S. government and its agencies with maturities closely matched to specific payment requirements. The average maturity of these funds shall not exceed 90 days, with a maximum maturity of one year.



### Capital Reserve Fund

The investment goal of capital preservation and liquidity is primary for this fund to meet unplanned capital project funding requirements. The liquidity need of this fund is 20%. To maximize yield while maintaining a relatively stable market value and the desired liquidity component, this portfolio will use a two-tiered investment strategy. The liquidity needs will be invested evenly, 50% in the 1 to 6 month and 50% in the 6 to 12-month maturity range. The remainder of the portfolio will be invested by placing securities evenly spaced over a two to five-year maturity range, commonly referred to as a ladder maturity structure, to ensure consistent availability of current funds for reinvestment or cash flow requirements. Securities will be evaluated on a risk-return basis, with bond swaps used to take advantage of market anomalies while maintaining market quality and structure. The average maturity of this portfolio is four years or less with ten years as the maximum maturity for any single holding.

### DART Bond System Expansion & Acquisition Fund

The Bond proceeds in this fund are held up to 36 months between the sale of DART's long-term bonds and contract payments to finance capital projects. The investment goals in this fund will be to provide capital preservation, liquidity needs, and investment return. To meet the investment goals, investments will be in high grade corporate and government/agency instruments and local government investment pools. The investments purchased will have maturities that match forecasted payments. The average maturity for this fund is up to 30 months, with a maximum maturity of 36 months.

### State or Local Government-Provided Funds

The deposits in these funds are provided by State or Local Governments for specific projects. Preservation of capital and liquidity are the paramount investment objectives of these funds. Therefore, the deposits in these funds will be invested in AAA or United States Treasury money market funds. The average maturity will be one day, with a maximum maturity of one day.

### Platform Fund

Amounts in this fund are held between their receipt from the Texas Mobility Fund and contract payments to finance the Platform Extension project in the future. The investment goals in this fund are to provide capital preservation and liquidity needs. To meet the investment goals, investments will be in high-grade corporate and government/agency instruments and money market mutual funds instruments. The investments purchased will have maturities that match forecasted payments. The average maturity for this fund is up to 30 months, with a maximum maturity of 36 months.





Exhibit II.19 summarizes projected cashflows into and out of each fund for FY 2017 and FY 2018.


**Exhibit II.19**  
**Cashflows by Fund**  
**(in Thousands)**

	Operating	Financial Reserve	Capital Reserve	Insurance	Platform	RTR	Streetcar	Toyota	Debt Service	Total
<b>Beginning Balance (10/1/2016)</b>	<b>\$543,402</b>	<b>\$50,000</b>	<b>\$20,222</b>	<b>\$10,100</b>	<b>\$60,408</b>	<b>\$2,553</b>	<b>\$3,152</b>	<b>\$942</b>	<b>\$112,292</b>	<b>\$803,071</b>
<b>Sources of Funds</b>										
Sales Taxes	374,149								189,703	563,852
Operating Revenues	141,171									141,171
Draws from Grants	52,461									52,461
Investment Earnings	5,311	535	249	117	509	1	3	11	589	7,327
BABS Reimbursement									28,360	28,360
Transfers into Fund	18,880	0	3,137	4,498	0	0	1,730	0	60,093	88,339
<b>Total Fund Sources</b>	<b>\$591,972</b>	<b>\$535</b>	<b>\$3,386</b>	<b>\$4,615</b>	<b>\$509</b>	<b>\$1</b>	<b>\$1,734</b>	<b>\$11</b>	<b>\$278,746</b>	<b>\$881,510</b>
<b>Uses of Funds</b>										
Operating Expenses	525,598									525,598
Capital Expenditures	152,314									152,314
Interest Expense (excl BABS)									194,832	194,832
Principal Payment									53,961	53,961
CP Paydown									30,000	30,000
Other Expenditures	409	103	1	6	0	1	0	1		521
Transfers Out	53,251	432	0	3,010	0	831	587	98		58,209
<b>Total Fund Uses</b>	<b>\$731,572</b>	<b>\$535</b>	<b>\$1</b>	<b>\$3,016</b>	<b>\$0</b>	<b>\$832</b>	<b>\$587</b>	<b>\$99</b>	<b>\$278,793</b>	<b>\$1,015,436</b>
<b>Projected Ending Balance (9/30/17)</b>	<b>\$403,802</b>	<b>\$50,000</b>	<b>\$23,607</b>	<b>\$11,699</b>	<b>\$60,917</b>	<b>\$1,722</b>	<b>\$4,299</b>	<b>\$854</b>	<b>\$112,245</b>	<b>\$669,145</b>
<b>Sources of Funds</b>										
Sales Taxes	398,415								195,458	593,873
Operating and Other Revenues	111,410									111,410
Draws from Grants	145,752									145,752
Investment Earnings	4,604	774	282	180	727	0	0	12	897	7,475
BABS Reimbursement									28,360	28,360
Transfers into Fund	180	0	774	0	0	0	0	0	30,000	30,954
<b>Total Fund Sources</b>	<b>\$660,360</b>	<b>\$774</b>	<b>\$1,056</b>	<b>\$180</b>	<b>\$727</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12</b>	<b>\$254,716</b>	<b>\$917,825</b>
<b>Uses of Funds</b>										
Operating Expenses	535,412									535,412
Capital Expenditures	223,821									223,821
Interest Expense (excl BABS)									165,721	165,721
Principal Payment									55,936	55,936
CP Paydown									30,000	30,000
Other Expenditures	0	0	0	0	0	0	0	0		0
Transfers Out	30,000	774	0	180	0	0	0	0		30,954
<b>Total Fund Uses</b>	<b>\$789,233</b>	<b>\$774</b>	<b>\$0</b>	<b>\$180</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$251,657</b>	<b>\$1,041,843</b>
<b>Projected Ending Balance (9/30/18)</b>	<b>\$274,929</b>	<b>\$50,000</b>	<b>\$24,663</b>	<b>\$11,699</b>	<b>\$61,644</b>	<b>\$1,722</b>	<b>\$4,299</b>	<b>\$866</b>	<b>\$115,304</b>	<b>\$545,126</b>

## MAJOR FINANCIAL PLAN ASSUMPTIONS

### Sources of Funds

- The FY 2018 Twenty-Year Financial Plan contains an economic cycles approach to sales tax forecasting instead of a roughly straight-line approach used in financial plans prior to 2016. Actual sales tax revenues have been over budget for each of the last six years since bottoming in FY 2010 and are currently projected to be over budget again in FY 2017. In addition to a rebounding economy during that time period, DART has benefitted from expanded alcohol sales in the City of Dallas (approved by voters in 2011) and the inclusion of sales tax collections from Amazon.com, LLC (the world's largest online retailer), beginning on July 1, 2012, based on a settlement agreement between Amazon and the State Comptroller. DART expects to conclude FY 2017 with \$571 million in sales tax receipts. That would equate to 4.8% growth over FY 2016 receipts and 6.4% average annual growth over the last seven years. The FY 2018 Financial Plan calls for a growth rate of 4.0% (over projected FY 2017 receipts) in FY 2018 and a zero-growth year in FY 2019. These zero-growth years are then incorporated every seven years (FY 2026 and FY 2033). The average annual growth rate of the 20-year life of the Plan is 3.9%. See page II-13 for additional discussion of DART's process for sales tax projections.
- A fare increase was approved by the Board in August 2012 and became effective on December 3, 2012. The current approved fare structure and other information on DART fares can be found in Exhibits V.16 and V.17 in the *Reference Section*. The next fare increase had been programmed in the Financial Plan at the beginning of FY 2018. To coordinate with the implementation of the comprehensive payment system, this fare increase has been delayed and if approved by the Board, will be spread throughout FY 2018. The new AM/PM passes will be implemented in the first quarter 2017 to coordinate with the installation of the new fareboxes. Corporate and Annual Pass changes will go into effect on January 1, 2018 and the remainder of the fare change will be implemented in August 2018. According to the Plan, this fare change is estimated to increase fixed-route average fare by 17%. Future increases to fare revenue are programmed into the Plan in 2024 and at five-year intervals after that and are assumed to be of a similar magnitude. The exact timing and magnitude of the increase and the specifics of the fare structure are subject to public input and Board approval. The incorporation of new fare collection technology may significantly impact how any future changes to fare structure are implemented.
- Fare revenues are based on an estimated average fare and ridership projections for each mode of service. As fare increases are implemented, reductions in fixed-route ridership are programmed into the Plan, netting against the normal projected ridership growth rate for that year to determine the net ridership change. The fare increase affects all fixed-route modes in a similar manner. Future service level decisions on all modes will also impact future ridership projections.
- Ridership over the next few years will be affected by several different factors, including service changes. Over the last several years, bus ridership has been declining and rail ridership has been stagnant once new line segment openings have been factored out. Ridership information for each mode follows:

- Bus Ridership is projected to be relatively flat for 2018 and grow slightly in each of the next four years (average rate of 1.24%). Because of the fare increase scheduled for 2019, a loss in ridership would normally be projected for that year. But as mentioned earlier, DART has built \$10 million in additional annual bus service into the Plan beginning in FY 2019 as a result of the implementation of the recommendations from the Comprehensive Operations Analysis (COA). This represents a 4-5% increase in service so any expected loss in ridership due to the fare increase is expected to be offset by the gains from the additional service.
  - Another factor which might impact ridership totals is the installation of Automatic Passenger Counters (APCs) on the bus fleet over the next several years. There is a strong suspicion that bus ridership is actually higher than we are reporting, but we just aren't capturing it. The use of APCs was found to be much more accurate than manual counting and boosted reported ridership by 15% when they were implemented on the Light Rail system.
  - Light Rail Ridership (including Streetcar) is projected to grow by an average of 0.75% per year over the next five years. This incorporates the negative impact of the fare increase and slow growth thereafter.
  - TRE ridership for 2018 is expected to remain at 2.1 million passengers currently projected for 2017. Beyond that, average annual growth is 0.7% per year once the impact of the 2019 fare increase is factored in.
  - Paratransit ridership is expected to increase by 2.5 – 3.0% over the life of the FY 2017 Financial Plan. FY 2018 ridership levels are projected at 863,400. Paratransit fares were not increased during the FY 2013 fare change and remained at \$3 per trip.
  - Vanpool ridership has been below budget for the last several years due in part to falling gasoline prices and poor service from the prior vanpool contractor. The Vanpool vendor was changed in late 2015 and demand has begun to increase. Ridership is expected to increase 5.7% from a projected 681,200 passenger trips in FY 2017 to 720,350 in FY 2017 and by 1% per year thereafter. Vanpool riders do not pay fares in the traditional sense and therefore ridership is not negatively impacted by future fare increases.
- 
- Advertising income dropped by nearly 50% during the recession. The market has gradually recovered, and with the addition of train wrap advertising and acceptance of ads for alcohol, FY 2018 advertising revenues are budgeted at \$3.9 million, in line with expected 2017 revenues. These revenues are projected to grow by approximately 2.5% per year thereafter.
  - Other miscellaneous operating revenues are generally programmed to grow by inflation each year.
  - The Federal Reserve has started to increase interest rates very slightly. Assuming no recession hits, small upward increases are anticipated each year. DART projects an interest income rate between 1.00% and 1.35% for FY 2018 (varies by fund). As interest rates inevitably increase, it is expected that traditional spreads between commercial paper rates and interest income rates

will also return. Investment portfolio yields are expected to increase slowly until they reach 5% in 2026. They remain at that rate for the remainder of the Financial Plan.

- DART expects to receive \$125.3 million in Federal Formula allocations for Capital Preventive Maintenance, Fixed Guideway Modernization, Bus & Bus Facilities, Transit Enhancement and Security project funds in 2018. This includes DART's annual formula fund allocation plus the rollover of unspent funds that were allocated in prior years. Per Financial Standard B-10, these funds are to be programmed at the most recent known allocation throughout the life of the Plan and not increased, despite a history of growth. The current annual allocation of formula funds is \$76.8 million. An exception is made for formula funds that will be generated by the opening of the Cotton Belt in 2022. Funding lags two years so DART anticipates an increase of \$2.3 million in formula funds for Cotton Belt operations that begin in 2022.
- Congestion Mitigation/Air Quality (CMAQ) or Texas Mobility Funds (TMF) in the amount of \$7.9 million is programmed to be received in FY 2018 and another \$11.5 million in 2019. No additional CMAQ or TMF funds are included in the Financial Plan beyond 2021. As additional funds become available and projects are identified to access these funds, additional CMAQ and/or TMF funds will be programmed into the Plan.
- Over the life of the Financial Plan, CMAQ and federal discretionary funding represents just under 10% of DART's \$6.1 billion 20-year capital program. Beyond already existing discretionary grants, DART has assumed the following federal participation in future programs:
  - \$398.6 million is assumed to be received between 2019 and 2023 for the Program of Interrelated Projects (Core Capacity Program);
  - \$103.3 million for Cotton Belt Rail scheduled to be received between 2018 and 2021;
  - \$11.6 million for bus purchases in 2018 and 2019. All future bus purchases are conservatively assumed to be 10% grant funded. These future grants total \$58.8 million over the life of the Plan; and
  - \$9.1 million on various other capital projects.
- \$81.8 million in other external capital contributions over the next five years, including:
  - \$46.8 million from FWTa for their contribution to TRE capital programs (\$187.0 million over the life of the Plan);
  - \$3.0 million for Downtown Streetcar projects;
  - \$24 million to fund the Loop 12 and Carpenter Ranch in-fill stations on the Orange Line;
  - \$5 million Addison contribution to the Cotton Belt project;
  - \$1.4 million per year in Tax Increment Financing (TIF) and Value Capture revenues along the Cotton Belt corridor beginning in 2022. These sources will be used to support operations, maintenance, and debt service for the Cotton Belt. They are expected to generate \$33.7 million between 2022 and 2035; and
  - \$1.6 million in contributions for other capital projects.





## Uses of Funds

### *Operating Expenses*

- DART's operating budget is \$523.0 million in FY 2018. This represents a 1.8% increase from the FY 2018 projected budget that was included in the approved FY 2017 Financial Plan. Primarily the increase is due to escalating healthcare costs, the addition of new bus services, and an increase in the number of extraboard operators for safety and service reliability.
- Per Financial Standard B-5, operating expenses are planned to grow by 90% of inflation plus new service, new programs, Board-approved contract increases, and adjustments related to fuel prices and actuarial analyses. Projections for rates of inflation are part of the same economic model that is provided by The Perryman Group each year to estimate sales tax revenue growth. Annual local inflation rates are anticipated to be approximately 2.1-2.3% per year over the life of the Plan. This means that DART-allowed inflation per this standard is roughly 1.9% – 2.0% per year.
- Bus service costs have only grown by an average of 2.1% over the last 5 years. This has been accomplished primarily by savings in the following areas:
  - Costs associated with elimination of service duplicated by newly opened light rail service;
  - Conversion of approximately 20% of the bus fleet to smaller vehicles which are less expensive to operate;
  - Conversion of the bus fleet from diesel and LNG fuel to Compressed Natural Gas (CNG); and
  - Selected service reductions on low-performing routes.
- Light Rail service costs have increased from \$79.4 million (21.6% of the total operating budget) in 2009 to \$174.4 million (33.3%) in 2018 as a result of DART more than doubling its Light Rail system from 45 miles at the beginning of FY 2009 to 93 miles early in FY 2017.
- TRE contract costs are programmed at contract rates for current service levels, and therefore total contract costs will be 3% higher in FY 2018 than in FY 2017. Expanded service in FY 2017, providing more frequent, and therefore more convenient service, has caused ridership to trend higher in the Spring and Summer of 2017.
- Upon award of the Paratransit Service contract to MV Transportation beginning in FY 2013, DART anticipated saving \$92 million over the seven-year life contract (~\$13 million per year), including both capital and operating savings. However, concurrent to the start of that contract, a new state contract was awarded to provide Medicare trips. An unforeseen impact of that state program was that demand for DART-provided Paratransit trips dropped by more than 10% from projected levels. In response to this and in fairness to MV, the DART Board approved an adjustment to the contract in 2014 to increase the cost paid per trip. This increase totaled \$23.4 million. However, it was more than offset by the downward adjustment to ridership estimates which lowered estimated contract costs by \$37.2 million, resulting in a net additional \$13.8 million in savings over the life of the contract. As the population continues to age, ridership will continue to rise. DART Mobility Management encourages those passengers that are able to ride fixed route service to do so, providing travel training as necessary as well as free fixed route fares for Paratransit-eligible patrons.





- The number of vanpools in the budget has grown from an allowed maximum of 145 in 2008 to 228 in the current budget. The FY 2018 Financial Plan remains authorized for the same 228 vanpools throughout the life of the Plan. This program has historically covered approximately 95% of its costs with vanpool user fees and support from the NCTCOG. DART's contribution is primarily provided through administration and coordination of the program.
- DART will make \$10.0 million in contributions in FY 2018 to the Defined Benefit Pension Plan. This plan has been closed since 1988 and because of this, DART's investments within the Pension Plan will need to become increasingly conservative, with more fixed income assets and a smaller percentage dedicated to equities. This has the impact of reducing yields and therefore the total contributions required to fully fund the Plan by 2030 (the estimated date that the last eligible DART employee retires. The actual contributions to these plans in future years are dependent on both fund earnings and actuarial analysis of the value of future benefits and may be adjusted annually.
- The long-term impact of the Patient Protection and Affordable Care Act (or its replacement) on DART's Financial Plan still remains to be determined, but rapidly increasing healthcare costs continue to be one of the major challenges to controlling the growth of operating expenses. DART undertook a dependent verification initiative during 2015 and that, combined with changing its policy regarding insuring spouses if other work-provided coverage was available resulted in approximately 800 covered lives (roughly 10%) being taken out of DART's insurance plans. As a result, the healthcare cost increase to the FY 2016 budget was relatively benign but costs have rapidly risen significantly in 2017, with claims costs increasing by 16% over 2016. As a result, the FY 2018 budget includes approximately \$5 million more in healthcare costs than did the FY 2017 budget.

#### *Capital & Non-Operating Expenditures*

- Preliminary engineering for the Cotton Belt project was taken to the 5% level as of Spring 2014, and a cost analysis of 41 different service configurations was performed. The DART Board and officials from the interested cities were briefed on the progress to date in June 2014. The service configuration (and associated cost) selected for inclusion in the FY 2016 Financial Plan was the Full Double-track, DFW-to-Plano (Southern alignment) with a shallow trench across North Dallas and including a station at Cypress Waters. The total construction cost was \$2.9 billion. The project was re-scoped to a predominantly single-track railroad with sidings. This reduced the projected cost to \$1.1 billion. Service was accelerated to FY 2022 in the FY 2017 Financial Plan. The Plan includes approximately \$200 million combined federal funds for construction and other local external contributions and is intended to be financed through a Railroad Rehabilitation & Improvement Financing (RRIF) loan from the FRA.
- DART's process of replacing its entire bus fleet was completed in FY 2017. There will also be a new procurement for 41 buses for service expansion in FY2019. An additional seven No-Lo (battery-powered) buses will be placed into service in the second quarter of FY 2018. The next bus fleet replacement is scheduled to occur during 2025 – 2028.

- In the Capital/Non-Operating Program over the next 20 years, DART has allocated \$3.1 billion to funding state of good repair (SGR) projects and capital reserves. These funds are devoted to capital maintenance and the timely replacement of DART's assets and are critical to DART's long-term sustainability. Programming funds in this manner helps ensure that DART can continue to serve the community with high-quality, reliable vehicles and infrastructure.
- Capital Planning & Development costs (Capital P&D) are costs spent inside the operating departments that are specifically for planning, management, oversight, and administration of capital projects but are costs that cannot be capitalized. As such, they are shown on budget reports as a credit to total departmental expenses and are deducted from that total (along with start-up costs described below) to calculate operating expenses.
- Start-up costs are all operating-type costs that are both: 1) incurred solely as a result of the opening of new service; and 2) incurred prior to the start of revenue service. Upon the commencement of revenue service for each line section, the appropriate portion of these costs is incorporated into the operating budgets. Start-up costs are shown on budget reports as a credit to total departmental expenses and are deducted from that total (along with Capital P&D costs) to calculate operating expenses. The FY 2017 budget included \$750,000 in start-up costs for SOC-3 revenue service. The proposed FY 2018 budget has no start-up costs.

#### *Debt Service*

- DART will retire all currently outstanding commercial paper by 2022. DART will then issue \$350 million in commercial paper between 2025 and 2028 as the initial funding mechanism for our bus fleet replacement program. This will be done through the combined use of a bank-backed liquidity facility and a self-liquidity program. That \$350 million is scheduled to be repaid between 2031 and 2037.
- \$2.2 billion in debt is scheduled to be issued between 2018 and 2024 in support of the Program of Interrelated Projects, the Cotton Belt and other infrastructure projects.
- The FY 2018 Plan includes a type of debt that DART has never used before – Capital Appreciation Bonds. These bonds have no principal or interest payments for a period of time, allowing capital projects to be completed faster than would otherwise be possible. DART plans on issuing \$350 million of CABs in 2020. Payments on this debt would begin in 2031.
- Through the completion of the current Service Plan elements described above, DART is anticipated to have issued \$5.85 billion in long-term bonds (excluding refunding bonds).
- \$700 million in additional long-term debt will be issued between 2025 and 2028 to fund the rehabilitation and replacement of DART's first fleet of Light Rail vehicles.
- The actual amount, type, interest rates and timing of debt issuance may change from the Plan depending on DART's financial needs and market conditions.

## POTENTIAL RISKS AND OPPORTUNITIES

As sales tax receipts represent the largest single source of revenues, sales tax projections are unquestionably the single most important estimate in DART's Twenty-Year Financial Plan. Therefore, they are also the largest single area of risk to DART's ability to meet its goals and objectives. DART's primary economic consultant, Dr. M. Ray Perryman projects annual growth rates near 5% for the next several years before slowly declining to 3.8% by the end of the Plan. Because of the insertion of additional major capital projects over the last several years (Program of Interrelated Projects, Positive Train Control, and the Cotton Belt), DART is in a tightly constrained period of financial resources through the late 2020s before additional financial capacity opens up. As a result, any sizeable revenue shortfall in the next 10-15 years will significantly impact operations.

An area of significant opportunity to increase sales tax receipts relates to sales taxes on residential utilities within the DART Service Area. Our service area cities have the option of receiving sales taxes on residential gas and electricity, but DART does not have that same opportunity. Currently, every city in the service area with the exception of Cockrell Hill does so and as such, the amount each city receives for its one-cent sales tax exceeds what DART receives for its one cent. It is estimated that DART would realize a \$20 to \$25 million annual benefit from such sales taxes, and may pursue this as part of future legislative efforts. Any attempt to pass such a tax increase would surely be met with stiff opposition.

DART may be able to build its sales tax revenue base through the addition of new cities to the service area or through the pursuit of other legislative changes. The nature and timing of such changes would determine the potential financial impact.

Helping to pave the way for possible expansion of regional public transportation beyond borders of the DART service area, on December 8, 2015, the DART Board amended its Policy III.07 DART Services beyond the Service Area Boundary. Under this amended policy, DART or its Local Government Corporation is able to provide contract services to a municipality or county outside the service area, provided that: 1) the entity pays for 100% of the cost of the contracted service (including capital costs, access and impact fees); 2) a full transit system plan is developed within 36 months of the initial contract; and 3) a plan to become a DART member is developed.

DART Financial Standard B-10 states that federal formula funds will be programmed at the current year's level for all future years in the Plan. The FY 2018 Plan includes \$76.8 million in annual allocations for each year and an additional \$2.3 million annually from the Cotton Belt beginning in FY 2024. If funding from the Fixing America's Surface Transportation Act, or "FAST Act," remains funded at the current levels, DART is likely to continue to see increases in formula allocations over the next few years. This will be as a result of: increases in ridership reported based on using Automatic Passenger Counters on the light rail system and the aging of the recent light rail system expansion. An additional allocation is provided for in the federal funding formula for fixed guideway segments which are more than seven years old. None of this likely future funding growth has been included in the Financial Plan. However, if the annual allocations are reduced or significantly delayed, it could have a significant negative impact on DART's cash flows as well as future capital project planning.

DART currently has a significant amount of discretionary federal funding (\$548.0 million) programmed into the Financial Plan through 2023. A substantial amount of this relates to the Program of Interrelated Projects (Core Capacity Program) and the Cotton Belt. If this funding is not received for these projects, they will have to be delayed. The only assumptions of additional discretionary federal funding in the Plan beyond this five-year window are an anticipated 10% contribution for future bus purchases, totaling \$37.7 million in the mid-2020s, \$3.4 million in 2032 and \$17.7 million in 2037.

Inflation is also addressed in DART's financial Standards. According to Financial Standard B-5, DART is constrained to grow operating expenses by no more than 90% of the projected inflation rate, plus new programs, new services, and specific other adjustments. The Perryman projections over the last two years call for continued very low inflation, averaging only 2.2% over the life of the Financial Plan. That means that 90% of those inflation projections fall in the range of 1.9% - 2.0% annual rate. This operating expense target is very difficult to achieve year after year.

Over two-thirds of DART's Operating Budget is composed of salaries, wages, and benefits. In the long term, these costs must at least grow by inflation, or DART's ability to attract and retain quality employees may be adversely impacted. Compounding the challenge is the national trend of nearly double-digit annual increases in healthcare costs. DART will be completely reengineering its healthcare plans for 2018 with an eye toward both cost control and better service for employees and their families. This will be a very challenging task. In addition, the long-term impact of the Patient Protection and Affordable Care Act (or its replacement) on DART's budget and Financial Plan still remains to be determined. Because inflation affects sales tax revenues and both operating and capital expenditures, there are many risks and many potential opportunities associated with it.

Fuel and energy prices have been highly volatile over the last decade. During that time, DART has taken advantages of dips in the market to put both hedges and physical delivery contracts in place to benefit from advantageous forward pricing. As DART has transitioned from diesel and liquefied natural gas buses to compressed natural gas (CNG), the risk associated with that price volatility has been greatly reduced. DART currently has a contract for physical delivery of CNG, with a hedge to cover 2020 - 2023. DART has executed an extension to its contract for electricity with the Texas General Land Office for 2019 through 2023 resulting in a 5-year savings of \$14.8 million compared to what was in the FY 2016 Financial Plan.



DART has attempted to identify all capital projects that can be foreseen, but every year additional new projects are requested. Significant additions to the capital program (and associated operating costs) without concurrent increases in revenues or the deletions of offsetting capital project costs could adversely affect the Financial Plan. As an attempt to mitigate those items, DART's Financial Plan contains multiple capital reserves, which are placeholders for anticipated future expenditures.



As part of the sequestration budget cuts, the federal government reduced the amount of the subsidy that will be paid to DART in support of the Build America Bonds that DART issued in 2009 and 2010 by an estimated 6.9% over the 12-year period of the sequester. This reduction has been incorporated into the Plan. At the time these bonds were issued, this kind of reduction was unthinkable. Further federal budget cuts could result in even more subsidy reductions in the future. DART would have to make up any of this reduction either through expense cuts, enhanced revenues, or by accessing its cash reserves.

Any sustained period of deflation would cause significant financial damage to the Agency. Deflation would undoubtedly result in falling sales tax revenues or at the very least revenues that did not grow as fast as anticipated. Reduced revenues combined with DART's fixed-rate debt obligations already outstanding could result in a significant contraction of Agency services.



## FY 2018 Proposed Annual Budget

In this section of our document, we provide the reader with an overview of the Board-approved Strategic Priorities followed by a description of what we anticipate to accomplish toward achieving those priorities through the use of our resources. This discussion is followed by a breakdown of the FY 2018 Annual Budget. This portion of our document is organized as follows:

- Overview
- Budget Basis and Process (pages III-3 through III-4)
- Strategic Priorities – which frame our budget decisions (pages III.5 through III.38)
- Financial Summary and Discussion (“Inside the Numbers”) – which enumerates the FY 2018 amounts for operating expenses, capital and non-operating costs, and debt service (pages III-39 through III-57)

### Overview

The Annual Budget corresponds to the first year of the DART Twenty-Year Financial Plan (the Plan). We present the Plan beginning on page 15 of this document. The Plan represents a robust long-term projection of DART’s operating revenues, funding, operating expenses, capital expenditures, and other financial information. The Plan validates the affordability of system expansion and maintenance commitments, operating requirements, and debt repayment.

The FY 2018 Twenty-Year Financial Plan demonstrates that DART has the financial capacity to meet the Agency’s Transit System Plan commitments and to continue the programmed levels of bus, rail, and other transportation services, based on current information and assumptions.

The FY 2018 Annual Budget reflects the continued improvement in the efficiency, effectiveness, and quality of the services we deliver. The pages that follow describe many DART’s customer-facing initiatives aimed at attracting and retaining customers, as well as initiatives to address operational improvements. The list of all capital projects can be found in Exhibit II.12 in the *Twenty-Year Financial Plan Section* of this document. The list reflects a key strength in the Plan of funding to keep the system in a state of good repair. Notable capital projects in the FY 2018 Plan include a program of interrelated projects to increase the core capacity of DART’s service, and the development of rail service along the Cotton Belt corridor in the northern part of the DART Service Area.



“We will increase our focus on customer-facing initiatives while responsibly meeting operating cost challenges.”



The FY 2018 budget projects continued economic expansion and therefore growth in employment, ridership, and sales tax receipts. The budget reflects many cost-containment efforts to address cost pressures and achieve a balanced budget.

## **Our Priorities**

The DART Board has adopted strategic priorities to guide Agency initiatives which, in turn, drive the FY 2018 budget.

### **Strategic Priorities**

1. Continually improve service and safety experiences and perceptions
2. Optimize and preserve (state of good repair) the existing transit system
3. Optimize DART's influence in regional transportation planning
4. Expand DART's transportation system to serve cities inside and outside the current service area
5. Pursue excellence through employee engagement, development, and well-being
6. Innovate to improve levels of service, business processes, and funding

These priorities provide guidance to the Agency as it focuses on retaining and attracting customers with responsive service, a sustainable system, and stronger branding. At the same time, the Agency will continue to explore service connection and partnerships regionally. Capital expenditures will increasingly be directed towards maintaining existing assets in a “state of good repair” and capital asset replacement. A program of interrelated projects designed to increase the core capacity of DART's service through the Dallas Central Business District will benefit the entire service area. Accelerated rail service along the Cotton Belt corridor in the northern part of the DART Service Area will provide a much-needed east-west connection between the Red Line and Orange and Green lines.

A full discussion of Agency initiatives in support of the Strategic Priorities can be found on pages III-5 through III-38. Also, see Exhibit IV.1 in the *Organizational Units* Section for an illustration of DART's Strategic Alignment.

Documentation prepared by management for Board briefings and action items include an explanation of the way in which each item supports one or more of these priorities.

## **Strategic Priorities as Framework for Agency Initiatives**

DART's leadership uses the Board-adopted Strategic Priorities as framework for the Agency's initiatives. The following information highlights a number of these initiatives. This discussion is followed, beginning on page III-38, by the amounts for operating expenses, capital and non-operating costs, and debt service, in the FY 2018 budget to accomplish these initiatives.

## **Budget Basis**

The Twenty-Year Financial Plan drives the annual budget. Approval of the Financial Plan requires an affirmative vote of two-thirds of the appointed and qualified members of the Board. The annual budget, which is approved by a majority vote of the Board, corresponds to the first year of the Plan.

DART's Annual Budget is prepared in the same format and organization as DART's financial reports, except the budget does not include depreciation, the offsetting interest income and interest expense from defeased lease transactions, and a small number of other non-system items such as pass-through grants. The activities of DART are accounted for in the same way proprietary funds are accounted for in other local governments and are therefore reported as a single enterprise fund. Enterprise accounting is used to account for entities that operate in a manner similar to a private enterprise. Revenues and expenses are recognized on the full accrual basis of accounting. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred, regardless of when the related cash flows take place.

Certain major repairs and one-time or non-routine projects that are not eligible for capitalization according to Generally Accepted Accounting Principles (GAAP) are budgeted as Capital/Non-Operating projects, but are expensed in the year the expense is incurred.

Unexpended funds included in the operating budget expire at the end of the fiscal year and are not carried over into subsequent years. Conversely, Capital/Non-Operating projects are budgeted for the life of the project and funds are not required to be spent in the current fiscal year. Funds that are not expended for capital and non-operating projects in the current year roll forward into the next budget year until the project is completed.

DART's fiscal year runs from October 1 through September 30. Section 452 of the Texas Transportation Code provides for a 30-day review period of the budget by the governing bodies of each municipality in the Agency and that a majority vote of the DART Board is required for approval of the annual budget.

Please Note: Budget schedules are presented and rounded to millions or thousands (as indicated), but are based on actual raw numbers. Consequently, certain schedules may not tie exactly or add properly, due to rounding. In some cases, prior years' numbers have been restated to conform to the current year's format. All schedules are in fiscal years unless otherwise stated.

## **Structural Balance of the Budget and Financial Plan**

DART strives to maintain structural balance to its budget, meaning current period cash inflows match the outgoing cash requirements for operating and debt service costs. The FY 2018 Budget and Financial Plan meet this test – demonstrating that DART has sufficient income to pay for ongoing operating costs and debt service in all years of the Plan. A more detailed discussion of structural balance can be found beginning on page II-9 of the *Financial Plan Section*.

## **Budget Process**

The budget process begins with Strategic Priorities and Board-approved Financial Standards that establish parameters within which management must operate. Targets are established, maintained, and highlighted throughout this document.

Departmental targets are set based on projections from the approved Twenty-Year Financial Plan and other known factors or programs (e.g., increases in health care, contract rates, or fuel costs). Based on direction from executive management, departments prepare detailed budgets for each of their cost centers within those targets. These budgets are, in turn, reviewed during meetings with the department head, the Deputy Executive Director or Executive Vice President, the President/Executive Director, Chief Financial Officer, and the Budget Office (Business Planning & Analysis unit in the Finance Department) to discuss the respective budgets as well as any changes. All new proposed programs are evaluated for effectiveness and efficiency.

The Budget Office then compiles the numbers, coordinates work programs to achieve strategies, and publishes the Business Plan, including the Annual Budget and Twenty-Year Financial Plan, for the legislatively-required 30-day budget review period by the cities within the DART Service Area. The Board performs additional reviews in August and September, as necessary, before approving the Budget and Twenty-Year Financial Plan in September.

See *Section A (Business Plan Development)* on page V-1 in the *Reference Section* of this document for further explanation of our process.

## **Strategic Priority 1**

### **Continually Improve Service and Safety Experiences and Perceptions for Customers and the Public**

It is DART's goal to provide safe, secure, efficient, and effective services to our customers. The agency works toward improvement in these areas through a variety of strategies including: employee training and development, deployment of new technologies, improved service delivery planning and processes, and enhanced internal communication and coordination. DART utilizes qualitative measures through face-to-face contact, on-site observations, and formal and informal groups coupled with quantitative measures through the Customer Satisfaction Report and periodic customer surveys to monitor the effectiveness of agency programs and services.

#### Efforts to Improve Safety Experiences and Perceptions for Our Customers

The Safety Department has established an aggressive, proactive visible safety program designed to educate and inform both our internal customers (employees) and our external customers (passengers) of efforts undertaken to ensure their safety. We have ongoing campaigns to update these constituents on safety trends and concerns as well as detailed programs and procedures for investigating and mitigating unsafe activities that could lead to accidents. We operate on a covered watch schedule of 24 hours a day, 7 days a week, to ensure someone is available to resolve accidents/incidents without adversely impacting DART's revenue service operations.



#### Customer Satisfaction Survey

The Customer Satisfaction Survey lets us know how customers feel about the DART brand and what they think about using our services. Customer perceptions are driven by six factors:

- timeliness,
- safety and security,
- cleanliness,
- customer service,
- convenience, and
- communication.

DART conducts a full survey every other year. In 2016, we conducted an abbreviated customer satisfaction survey to measure brand health. The goal was to identify any significant shift in brand perception among consumer subgroups from the previous year.

The Agency uses the customer satisfaction survey results to identify factors that influence the rider's relationship with DART. These insights help us know where to make improvements.

### Highlights from the 2016 survey:

- Overall, riders are satisfied with DART and plan to continue using the service.
  - Satisfaction levels increased to 87 percent compared to 84 percent the previous year.
  - Satisfaction among bus riders increased as well, 86 percent vs. 81 percent in 2015.
- Opinions are becoming more positive over time, indicating that efforts to continually improve the riding experience are working.
  - Seventy-one percent of 2016 survey participants indicated their riding experience is getting better compared to 69 percent in 2015.
  - The DART Net Promoter Score, a key measure of brand health, was 30 in 2016 compared to 26 in 2015 (the median score across brands studied is approximately 16).
- Opinions of DART have improved this year among young riders, Hispanics, and choice riders.
  - Overall Satisfaction among 18- to 34-year-olds increased 5 points to 87 percent
  - Overall Satisfaction among Hispanics increased 5 points to 89 percent

### 5 Star Service Program



This initiative is a major cultural transition for DART. The customer focus culture is a significant change in how we approach customer service internally and externally. The 5 Star Service Program has five parts: Culture Change, Center of Excellence, Improved Services, High Performance and Recognition, and Image and Brand. During the last four years there has been a large focus on Culture Change and Improved Services, but a stronger focus will occur in Center for Excellence (training), High Performance and Recognition, and Image and Brand. Focusing on all five parts of the 5 Star Service Program will result in a cultural shift that encompasses individuals, departments, and teams throughout the Agency.

### Some of the key elements of the 5 Star Initiative include:

- Development and delivery of 5 Star training programs for all employees.
- Identification, training, and support for internal champions, known as “Customer Experience Officers,” within each area to communicate and support the 5 Star Initiative.
- Outreach events at rail stations and transit centers involving staff from across the Agency who meet and greet customers as well as receive feedback and work to resolve customer concerns.
- Process reengineering and process improvement projects to improve the internal and external customer experience in identified areas, such as improved customer experience



relative to bus/rail connections and improved response time to operator requests for police or supervisor assistance.

- Distribution of tablet PCs to field supervisors and Station Concierge to facilitate improved customer information delivery in the field.
- Deployment of employees to assist customers during the implementation of new services and route changes as well as during special events and service disruptions.
- Integration of 5 Star Initiative principles and objectives into job descriptions, performance management plans, and recognition/incentive programs to support the institutionalization of the initiative.

### Enhance Customer Satisfaction and Rider Retention

This customer service initiative has a two-pronged approach to increase customer satisfaction and ridership. It includes: 1) employee motivation/satisfaction, and 2) positive customer experiences. Surveys indicate that one-quarter to one-third of customers describe themselves as “new” riders on the system. A customer’s first experience with DART service is a significant factor in building long-term ridership, and employee motivation/ satisfaction impacts the degree to which employees focus on creating a positive first-time customer experience.



During previous years, new rail expansion provided significant opportunities for service quality improvements and additional ridership growth. Market research reveals a significant level of “turnover” in the composition of bus ridership. As new riders are attracted to the system, we also experience attrition among existing riders. The primary causes in the fluctuation of the annual customer base include changes in residence, employer, or employment location, and falling gasoline prices. Apartment tear-downs and redevelopment have also had significant impact upon ridership levels in certain parts of the service area over the last few years. Less significant reasons include changes to the bus network due to the rail expansion or dissatisfaction with service levels or service quality.

Overall, the initiatives put in place in FY 2017 have yielded positive results among riders. Strategies to improve service and safety experiences and perceptions continuing into FY 2018 fall into the following major categories:

- Improved Bus Service
- Improved Service Reliability, Timeliness, and Service Connections
- In-Transit Customer Communication Services
- Mobile Platforms
- Enhancement of the GoPass Mobile Ticketing Solution
- New Marketing and Promotion Initiatives
- Improved Strategies for Responding to Service Disruptions



*Improved Bus Service* – During FY 2016 and into FY 2017, DART completed the Comprehensive Operational Analysis (COA) of all DART fixed routes. This study will be incorporated into the Agency’s 2040 Transit System Plan. The purpose of this planning project is to re-evaluate the effectiveness of all routes to determine if the service correctly meets the needs within the service area. The project will identify a phased strategy for improving the bus network that may be implemented over a 20-year period. In FY 2016 and FY 2017 a series of bus service improvements were implemented based upon research from the COA. During FY 2018, the DART Board will consider additional service improvements including new routes and improved frequency on a series of bus routes anticipated for the second quarter of FY 2018. DART will receive delivery of 41 new transit buses in FY 2019 which will support another major bus service expansion. The annualized cost of the bus improvements in FY 2018 and FY 2019 is anticipated to exceed \$12.5 million.

In 2015, DART tested a prototype enhanced bus shelter. Construction of this shelter was completed in FY 2017, and the shelter will serve as a model for future enhanced bus services and will have additional features normally associated with rail stations, including security cameras and next-bus information.

*Improved Service Reliability, Timeliness, and Service Connections* – During FY 2015 DART implemented a series of bus and rail schedule changes designed to improve average on-time performance. During FY 2018 bus and rail service reliability, schedule timeliness, and improved connections will continue to be one of the most important focuses for service improvement. DART also incorporated \$2.4 million in increased bus service that was implemented in stages during 2017. Additional improvements are included in the financial plan for FY 2018 and FY 2019.



In FY 2018, we will continue to leverage the new Computer Aided Dispatch/ Automatic Vehicle Location (CAD/AVL) System that is part of our new radio system to help us improve on-time performance, as well as transfer connections for our customers. This system provides comprehensive, detailed information to Service Planning and Scheduling staff to assist them in the development of realistic scheduled arrival and departure times during different periods of the day. The system also provides enhanced real-time monitoring and decision support tools to our operations personnel on the street as well as in the operations control centers. The CAD/AVL system also includes tools to enhance the connectivity within the system by monitoring critical transfer connections and alerting staff to the need for intervention to assure that these customer transfer opportunities are preserved. In FY 2017, we expanded the use of these “connection protection” tools for improved bus-to-bus connections and investigated the expansion of their use from bus only, to bus and rail connections. To increase the cross-functional focus of on-time performance, a new Continuous Improvement Team was organized to help ensure improvement in this area.

*In-Transit Customer Communications Program* – This program, co-sponsored by Marketing, External Relations, and Technology, coordinates ten separate projects to ensure there are no overlaps or inconsistencies between initiatives being developed to provide communications to riders during their trip. Projects include: train arrival dynamic signs on station platforms, digital displays at transit centers, and web-based applications for mobile devices. These applications provide real-time bus and train arrival predictions at stops, stop and route location services, and subscription-based messages about service disruptions and changes delivered by email, text, and social media feeds.

*Mobile Platforms* – The ability to send/receive information on mobile platforms (smart phones and tablets) continues to be enhanced. More than 70 percent of all DART website activity occurs on mobile devices. To better support customers, the Agency has developed mobile tools that deliver real-time information on DART bus and light rail services. These apps are: “Where’s My Train? ®”, “Where’s My Bus? ®” and “Where’s My DART Stop? ®”. New mobile tools will be introduced in FY 2018 with Go Pass 2.0 adding Mobility on Demand enhancements.

Customers traveling on the Trinity Railway Express (TRE) or the DCTA A-train benefit from mobile websites developed by DART staff. Riders can plan a region-wide trip on DART, TRE, The Fort Worth Transportation Authority (FWTA), and DCTA routes using the DART mobile website. DART’s mobile site, [m.DART.org](http://m.DART.org), was updated in August 2014 to improve access to rider tools. During FY 2016, DART participated in the launch of a new transit-related mobile application tied to the region’s 511DFW traveler information program. This application includes customer information for transit services, as well as roadway construction that may impact transit travel.

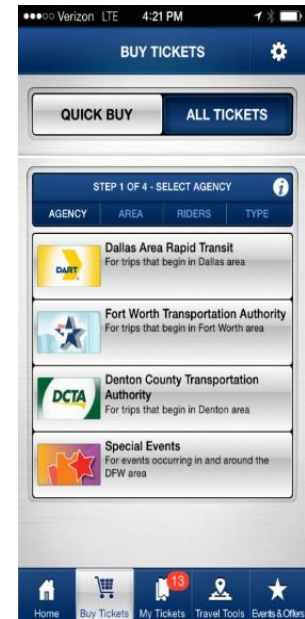
To improve in-transit customer communication, the Agency uses Operations Communications Liaisons who are part of the External Relations Division and work in the Train Control Center where they have access to real-time service information. They are responsible for sending customer notifications on rail, bus, and TRE service disruptions via subscription email, text, Facebook, and Twitter. The liaisons support rail controllers with on-board and platform customer notices via the public address/variable message board system.



*Enhancement of GoPass Mobile Ticketing Solution* – In September 2013, DART introduced GoPass, a mobile ticketing application that enables riders to use smart phones to buy tickets in advance for DART, the Fort Worth Transportation Authority (FWTA), and DCTA. Since the launch, there have been over 730,000 downloads of the app, which have generated 4.9 million ticket sales.

With a vision and goal to reduce the need for customers to hassle with cash and to enable customers to navigate with our system easily and effectively, the GoPass platform will be an integral part to this effort. Additionally, this will allow DART to greatly reduce its cost of handling cash throughout the system.

Go Pass 2.0 will be introduced in FY18 and will offer multi-modal trip planning including options for Taxi, Transportation Network Companies (Uber/Lyft), bike share and even carpooling.



*New Marketing and Promotion Initiatives* – Ridership growth continues to be a key focus for the agency. The Marketing & Communications Department promotes the activities of other groups within the agency to increase awareness and build relevance among current and potential riders.

Marketing & Communications has segmented its target audiences to speak more directly to their lifestyles and needs, versus a broad “catch-all” approach.

*Brand Repositioning* – The DART brand positioning centers around, “Empowering Discovery”. We are now going into year three with a refresh of the DARTable theme. The public will see



DARTable in new and expansive ways that will motivate existing riders to use DART for more occasions and nonriders to consider riding.

In FY 2018, Marketing will also enhance the positioning by highlighting more than just accessibility to social places. Marketing will speak to the breadth of accessibility such as access to the North Texas college and university system, the airport connections, and access to the many employers moving to the region.

Improvements will also be made by branding the various services offered by DART. Currently, the bus schemes look the same for the majority of the buses. DART has found through the differentiated paint schemes of D-Link and Love Link shuttles and the resulting brand awareness, there is an opportunity to bring that awareness to other bus offerings: commuter, BRT, etc.



Marketing is continuing to focus on and to bring transparency to the many events that are hosted around the region. By tying into these events, DART will be able to market the accessibility, and alleviate traffic and parking issues. By working with cities in the service area, the Convention and Visitors Bureau (CVB), hotels, as well as internal functions, Marketing will be able to provide enhanced customer service to riders to events. Examples of events include: the State Fair of Texas, football games held at the Cotton Bowl, the annual Thanksgiving Day Turkey Trot, Adolphus Children's Parade, St. Patrick's Day Parade, New Year's Eve celebrations, the Dallas Marathon, Dallas Mavericks and Dallas Stars home games at the American Airlines Center, and other large events that impact DART ridership. These big events increase our promotional footprint to further increase the brand awareness and enhance the positioning of the DART brand.



*Improved Strategies for Responding to Service Disruptions* – The expansion of the light rail system to 93 miles, together with certain characteristics of the rail system (e.g., having multiple junctions and all rail lines passing through the Dallas Central Business District) have resulted in an increased number of service disruptions over the past few years. In order to deal more effectively with the impact of service disruptions on passengers, a Continuous Improvement Team (CIT) has been established. Its charge is to develop an integrated internal communication process to assure consistent and accurate dissemination of information to all front-line staff regarding operations during service disruptions.

Its deliverables include the following:

- Identify staff requiring information regarding service during disruptions
- Identify communications technology used by each group and data elements required
- Develop mapping of information flow
- Develop specifications for possible tools to disseminate internal communications
- Map the inter-relationship of the internal communication and the customer communication publisher used by the Operations Communication Liaisons

An internal website has been developed by the Technology team based on the needs identified by the Continuous Improvement team and is now in a testing phase. Enhancements have also been identified for DART's Customer Response Team and the Everbridge notification system, that also support communication with customers during service disruptions.

Other efforts to address disruptions include:

- In-Transit Customer Communications – The initiation of the changeable message signs on rail platforms and the introduction of Operations Communication Liaisons (OCL) in the Control Center have been in response to this increase in disruptions and have laid the foundation for improved customer communications during these incidents.



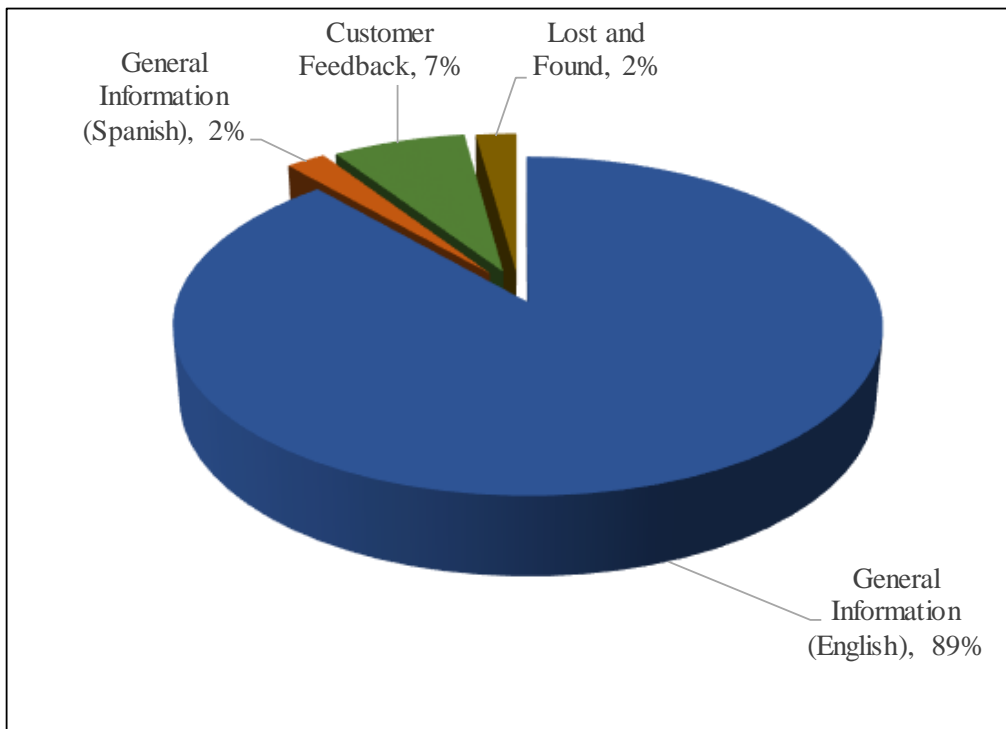
- Customer Response Team – The Customer Response Team (CRT) is comprised of administrative employees who are assigned to various rail stations to assist with customer communications during service disruptions. Procedures for the activation and deployment of the CRT are being reviewed and enhanced.
- Severe Winter Weather Contingency Plan – A contingency plan was developed during the 2014/2015 winter season to allow DART to provide more reliable services during major winter storms and to recover the system more quickly in the wake of a storm. The contingency plan was activated twice, in late February and early March 2015, and provided significant improvements in service reliability as compared to previous severe weather incidents. Management has evaluated the contingency plan and has made adjustments to refine the plan and process.
- CBD Rail Disruption Contingency Plan – DART has experienced a number of rail service disruptions in the Dallas CBD as a result of weather, infrastructure failures, power failures, criminal activity, and other triggering incidents. A new CBD Rail Disruption Contingency Plan will be rolled out in FY 2018 to improve our response to these types of incidents. Four basic response plans have been developed and will be applied depending on the nature and extent of the disruption.
- After-Action Reviews, Table-Top Exercises, and Drills – After every major service disruption incident, After-Action Reviews are held to debrief all aspects of the incident and the response to the incident to identify lessons learned. All findings and recommendations are documented and tracked by Emergency Preparedness staff to assure that recommendations are distributed and appropriate modifications are made to our processes. In addition to the After-Action Reviews, Table-Top exercises and drills are also scheduled to reinforce training and procedures. Often these table-tops and drills include emergency response personnel from cities within the DART Service Area or other entities with whom DART needs to collaborate.

### Providing Customer Service

DART's Customer Service division receives approximately 1.5 million calls annually from riders and potential riders requesting information regarding DART services, primarily bus and rail operations. The DART Call Center is open every day of the year except for Thanksgiving and Christmas Day. Customers may contact Customer Service for lost and found items in person, by phone, or via [DART.org](http://DART.org).

The Customer Service division is responsible for quantifying customer contacts through the development of the Customer Feedback Report. This information allows management to focus on improvement of our services. The customer service call-in and interaction data serves to gain a more granular and immediate understanding of the needs of our customers. Through analysis and aggregation, DART is able to identify the breadth and depth of opportunities. Customer contacts are identified as belonging to one of three categories: general information (trip planning, events, promotions, advertisements, and DART initiatives); customer feedback (commendations, suggestions, and complaints); and lost and found (see Exhibit III-1).

Exhibit III.1  
Customer Service Call Types



## Strategic Priority 2 Optimize and Preserve (State of Good Repair) the Existing Transit System

The Board-approved Strategic Priorities and Goals include initiatives for managing system improvements and maintaining infrastructure. DART uses its annual process to develop a twenty-year financial plan to ensure the Agency identifies the resources necessary to maintain and operate its existing and planned infrastructure.

### Affordability

The Twenty-Year Financial Plan demonstrates DART has the financial capacity to meet the Agency Transit System Plan commitments and to continue the programmed levels of bus, rail, and other transportation services, based on current information and assumptions.

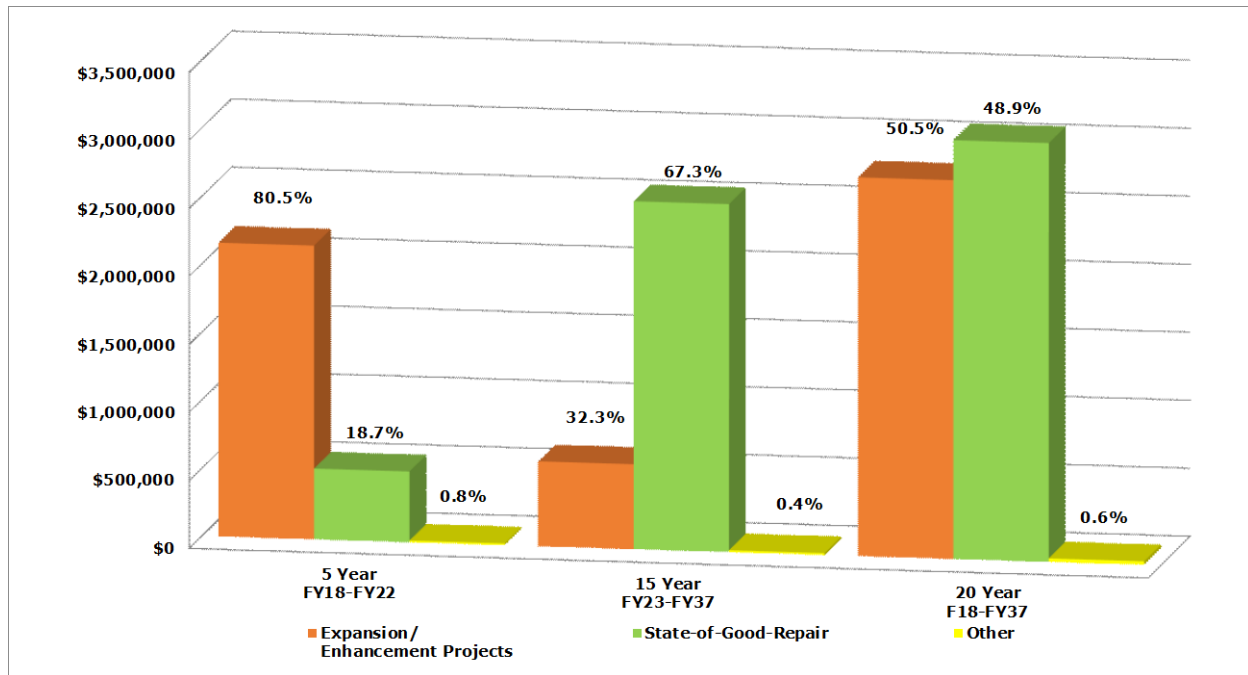
The FY 2018 budget reflects both continued rail construction and system expansion and enhancements to DART's bus service. The Agency continues to concentrate on the core business of getting people where they need to go safely, reliably, and affordably, as well as attracting and retaining customers with responsive service and a sustainable system.

The capital program, the full schedules of which can be found in the *Twenty-Year Financial Plan Section*, reflects a shift from expansion to maintaining and replacing our assets – keeping the system in a state of good repair.



Exhibit III.2 provides an overview of the capital and non-operating projects by category and highlights the increase in funding for state of good repair for DART's system.

Exhibit III.2  
Capital/Non-Operating 20-Year Program by Category  
(in Millions)



The capital expenditures included in the FY 2018 capital/non-operating budget total \$265.3 million as shown on Page III-56 in this section.

## Light Rail Transit (LRT) System

The extension of the Blue Line (SOC-3) to the University of North Texas-Dallas (UNT) Campus opened in October 2016, bringing the LRT system to 93 miles and 64 stations.

The next major LRT investment will be related to core capacity, including a second LRT alignment through downtown Dallas (known as D2) and Red and Blue Line LRT platform modifications. An alternatives analysis for D2 was completed in summer 2015 and culminated with the selection of a Locally Preferred Alternative (LPA). In summer 2016, there were increasing concerns with the mostly at-grade D2 alignment. Based on DART Board of Directors and City Council direction in October 2016, DART initiated refinement of D2 as a mostly subway project. Exhibit III.3 illustrates the refined LPA for the D2 subway.

D2 and Red and Blue Line platform extensions are part of a Program of Interrelated Projects to address capacity needs under the FTA Capital Investment Grant Program. DART's program consists of three significant projects; D2, platform modifications at 28 stations on the Red and Blue lines to accommodate three-car trains, and a Dallas Streetcar central link in downtown Dallas. These three projects will add significant core capacity and enhanced access to the DART system. The FY 2018 Financial Plan reflects funding for D2, platform modifications, and the central streetcar link. The Locally Preferred Alternative (LPA) shown below is subject to change as the project moves forward during the FTA Capital Investment Grant Program. DART will be submitting a refined LPA to FTA in September 2017, and will reinstate preliminary engineering and preparation of a Supplement Draft Environmental Impact Study (EIS) during FY 2018.

### Exhibit III.3

#### Dallas CBD Second Light Rail Alignment (D2) Subway Refined Locally Preferred Alternative (September 2017)

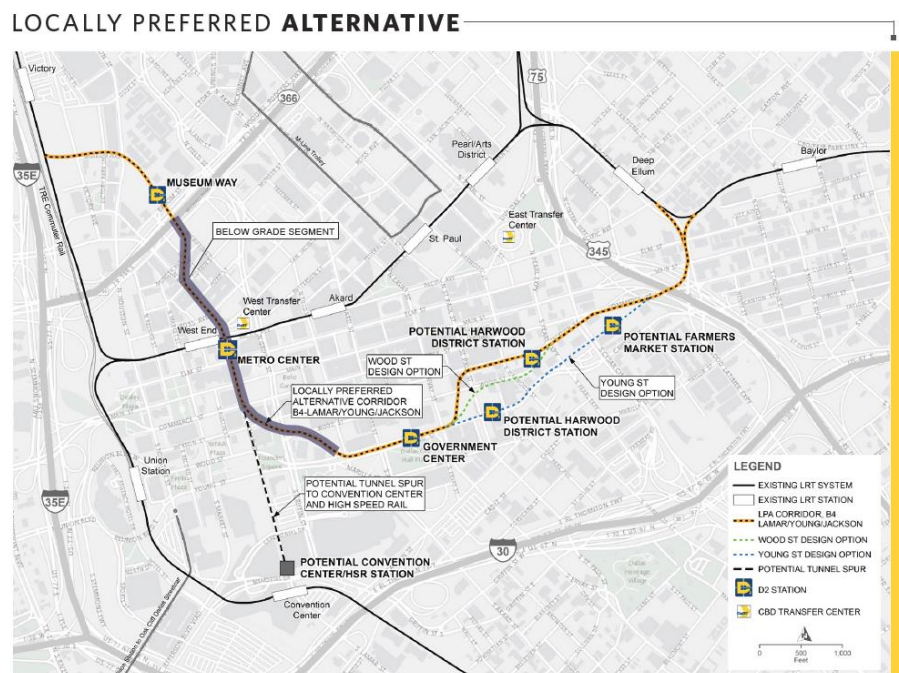


Exhibit III.4 provides historical and prospective data on light rail expansion projects.

### Exhibit III.4 LRT Revenue Service Dates

Corridor	Line	From	To	Miles	Stations	Opening Date
<b>STARTER SYSTEM</b>						
Central Business District	All	West End	Pearl	1.0	4	June 1996
Oak Cliff	Red/Blue	West End	8th & Corinth	3.8	4	June 1996
South Oak Cliff	Blue	8th & Corinth	Ledbetter	4.6	5	June 1996/May 1997
West Oak Cliff	Red	8th & Corinth	Westmoreland	4.6	4	June 1996
North Central	Red	Pearl	Park Lane	6.0	4	Jan 1997
<b>Starter System Subtotal</b>				<b>20.0</b>	<b>21</b>	
<b>RED/BLUE LINE EXTENSIONS</b>						
North Central	Red	Park Lane	Parker Road	12.3	9	July-Dec 2002
Northeast	Blue	Mockingbird	Downtown Garland	11.2	5	Sept 2001-Nov 2002
Northeast	Blue	Downtown Garland	Downtown Rowlett	4.6	1	Dec 2012
South Oak Cliff	Blue	Ledbetter	UNT-Dallas	2.6	2	Oct 2016
<b>Extension Subtotal</b>				<b>30.7</b>	<b>17</b>	
<b>GREEN LINE</b>						
Northwest (NW-1A)	Green	West End	Victory	1.2	1	Nov 2004
Northwest (NW-1B)	Green	Victory	Inwood	2.8	3	Dec 2010
Northwest (NW-2)	Green	Inwood	Bachman	3.2	2	Dec 2010
Northwest (NW-3)	Green	Bachman	Farmers Branch	4.9	3	Dec 2010
Northwest (NW-4)	Green	Farmers Branch	Frankford	5.3	3	Dec 2010
<b>Northwest Subtotal</b>				<b>17.4</b>	<b>12</b>	
Southeast (SE-1A)	Green	Pearl	MLK, Jr.	2.7	4	Sept 2009
Southeast (SE-1B)	Green	MLK, Jr.	Hatcher	1.4	1	Dec 2010
Southeast (SE-2)	Green	Hatcher	Buckner	6.0	3	Dec 2010
<b>Southeast Subtotal</b>				<b>10.1</b>	<b>8</b>	
<b>ORANGE LINE</b>						
Northwest-Irving/DFW (I-1)	Orange	Bachman	Irving Convention Center	5.4	3	July 2012
Northwest-Irving/DFW (I-2)	Orange	Center	Belt Line	3.6	2	Dec 2012
Northwest-Irving/DFW (I-3)	Orange	Belt Line	DFW Airport	5.0	1	Aug 2014
<b>Orange Line Subtotal</b>				<b>14.0</b>	<b>6</b>	
<b>Total Miles/Stations in Operation*</b>				<b>93.0</b>	<b>64</b>	

\*Total miles includes approximately 0.75 miles of pocket track.

### **Strategic Priority 3**

#### **Optimize DART's Influence in Regional Transportation Planning**

The DART Board's Strategic Priorities and Goals include the recognition that DART has an obligation to maintain its leadership of public transportation integration and operation in North Texas – a stakeholder focus.

#### Regional Rail Corridor Strategic Management

Leveraging DART's ownership of 254 miles of regional rail corridors, DART provides management and contract services required for the operation, dispatching, scheduling, and maintenance of the TRE commuter rail line, the Fort Worth Transit Authority's (FWTA) proposed TEX Rail, and various freight lines. At the beginning FY 2016, DART implemented a new ten-year contract for dispatching, operations, and capital maintenance for regional rail services for the TRE and Madill Subdivision with Herzog Transit Service, Inc. This contract included an option for FWTA's proposed TEX Rail commuter rail line.

#### Regional Transit Access Agreements

To support the regional objective to expand opportunities for transit services outside the DART Service Area, DART negotiated an umbrella agreement for access funding with the North Central Texas Council of Governments (NCTCOG). Separate agreements were negotiated with STAR Transit for access to DART's Lawnview and Buckner stations, and Texoma Area Paratransit System (TAPS) for bus access connections at Parker Road Station from McKinney, Allen, and Sherman. TAPS suspended service in January 2016. During FY 2016, DART was asked to provide senior and disabled demand responsive service to parts of Collin County left without transportation following the collapse of the TAPS. The NCTCOG contracted with the DART Bus Service, LGC to provide services in Allen, Wylie, and Fairview. This NCTCOG-funded service began in February 2016 and ended 90 days later in May 2016. This emergency service allowed DART to negotiate funding with Allen, Wylie, and Fairview along with NCTCOG to provide a similar service through FY 2017. DART was able to obtain a major grant from Toyota Motor North America, Inc., as well as NCTCOG for funding to permit the cities to have a longer time to evaluate their needs for public transportation. During FY 2017, DART implemented a program for Collin County like the Plano Ride Program to service seniors and disabled persons and has submitted a proposal to continue the taxi voucher program for FY 2018 and FY 2019. In addition, beginning in FY 2017 and continuing in FY 2018, DART is collaborating with the cities in Collin County to complete a public transportation plan to guide future investments in transit.

DART also negotiated a general agreement with NCTCOG for funding for the TRE from non-service area cities; the method is called the Mid-Cities Fund. This agreement allows access for a commuter bus service called the Arlington MAX between UTA-Downtown Arlington and the TRE at CentrePort Station, which is contracted for through December, 2017.

### Regional Transportation Planning

DART is a voting member of the Regional Transportation Council (RTC) of NCTCOG, which is the public body responsible for the long-range regional planning and programming of Federal and State funding within the region for highways and transit.

DART actively participates on NCTCOG's Surface Transportation Technical Committee (STTC) with two formal members. The STTC provides technical advice and makes recommendations for the RTC policy body on transportation planning and capital funding issues.

DART staff also formally participates on various NCTCOG subcommittees involving bike and pedestrian issues, Intelligent Transportation System issues, Shared Mobility Programs, Vanpool and other clean air initiatives, clean energy and alternative fuels, special event planning, Managed Lanes (known as TEXpress Lanes), elderly and disabled transportation, and transit planning.

In addition, under Policy III.07, DART is in the process of conducting or preparing to conduct studies with non-DART communities to develop service plan opportunities in an effort to expand regional transit. Studies with the City of Arlington and the City of Mesquite were completed in FY 2017. Cities in Collin County will follow during FY 2018. Proposals for future transit services for Arlington and Mesquite will be presented to the DART Board of Directors by the first quarter of FY 2018.

### Regional Integrated Corridor Management-511 Traveler Information

DART has provided primary leadership for the DFW Region in managing and operating the Region's Integrated Corridor Management (ICM) Demonstration within the US 75 Corridor since 2006. In 2013, DART implemented the first 511 system in the State of Texas to provide multi-modal, multi-agency traveler information as an outgrowth to the ICM system. DART continued to manage this system through the second quarter of FY 2017, at which time DART transferred the long-term management and operation of the 511DFW system to NCTCOG. This was a strategic decision supported by DART and the Regional Transportation Council that was designed to reduce the financial risk to DART for maintaining the 511DFW system and help expand the focus of the program to the much larger NCTCOG regional area.

### Community Engagement

Community Engagement involves linking DART to the various communities it serves, ensuring the Agency meets legal and/or government regulations while developing and maintaining relationships with diverse communities throughout the DART Service Area. There are three main areas of focus:

- Provide factual and timely information regarding specific projects to ensure public involvement opportunities in the various stages of the DART project planning, design, and construction phases;

- Support various departments by coordinating and conducting public hearings for such issues as Federal Transit Administration grants and other federal compliance initiatives; and,
- Work with Service Planning and facilitate community meetings and public hearings during the implementation of major bus and rail service changes.

Community Engagement team members continue strengthening and expanding their reach within the cities served by DART by identifying and communicating development and transportation opportunities and working with corporate sales and the local chambers to broker relationships and drive sales with corporations and local businesses.

#### Community and Stakeholder Outreach



Community and stakeholder outreach efforts are focused on educating current and future rider segments about DART and how to use the system safely. An extensive education program aimed at all age groups delivers this message to a diverse audience comprised of students, senior citizens, service area city organizations, civic groups, businesses, and other stakeholder groups. These partnerships with key stakeholder groups allow DART to promote its services, capital expansion initiatives, business opportunities, and employer programs via tours, briefings, speakers' bureau, and chamber events. In turn, the chambers have historically supported DART's various community, legislative, and funding initiatives. The DART Promotions staff partners with more than 125 events each year with DART's presence providing information on DART to prospective riders and community stakeholders.

#### Economic Opportunity for Disadvantaged, Minority, and Woman-Owned Business Enterprises (DMWBEs)

DART's DMWBE Programs are designed to involve disadvantaged, minority, small and emerging, and woman-owned businesses to the maximum extent possible in all facets of DART's contracting and purchasing activities. The Department of Diversity positions itself as a bridge between DART and such businesses. To increase access to DART procurement opportunities, the department offers and conducts various modes of technical assistance, outreach, seminars, goal setting, educational training, and counseling in the understanding of federal, state, and DART procurement regulations. The department aggressively seeks integration of DMWBEs in all DART procurement and contracting opportunities, and ensures that DART complies with all appropriate federal and state laws, regulations, and executive orders.

Over the last five fiscal years, DART has averaged an award of 121 contracts. With the exception of "Transit Vehicle Manufacturer" procurements, the Diversity Department reviews scopes of work, terms, and specifications for all contracts. This is done to assess and identify subcontracting opportunities that will allow DMWBEs an equitable opportunity to compete in the procurement process.



In fiscal years 2015 and 2016, DART established annual Agency goals of 33% and 30% for participation of minority and woman-owned business enterprises (M/WBE), respectively. In those years, D/M/WBE participation on all DART procurement activities exceeded goals, with 34% and 37% participation, respectively. For fiscal year 2014, a Federal Transit Administration (FTA) report recognized DART as having awarded more dollars to Disadvantaged Businesses on a percentage basis than any other transit authority in the country. Additionally, in 2015 the Diversity Department underwent FTA's Triennial Review where the DBE program was rated in full compliance with a rating of "no findings."

On average, 482 active contracts are managed annually for compliance through targeted vendor site visits where applicable, vendor payment reporting, and other forms of communication and correspondence. During site visits, a myriad of topics are discussed with both prime contractors and subcontractors such as:

- Payments reported vs. payments received
- Missing documentation from invoices
- Prompt payment
- Subcontractor utilization
- Working relationship
- Work performed
- Schedule of subcontractors' work

Site visits are essential in identifying and solving any potential non-compliance issues. They also keep the program involved on a frontline level with DART's small business community. DART also works to mediate and resolve any disputes that may arise between primes and subcontractors.

Additionally, DART's ongoing involvement with 26 minority chambers of commerce, minority contractor associations, women and minority supplier development groups has created outreach touch-point opportunities to more than 2,500 individuals. Business community outreach efforts have been expanded to engage the interest of an additional 48 minority organizations. The establishment of DART's Small Business Academy further assists with the development of small businesses to participate and compete for DART procurement opportunities. Some small businesses have established a contracting partnership with DART after participating in the academy.

DART strives to ensure that economic opportunities are available to the whole community.

### Economic Development

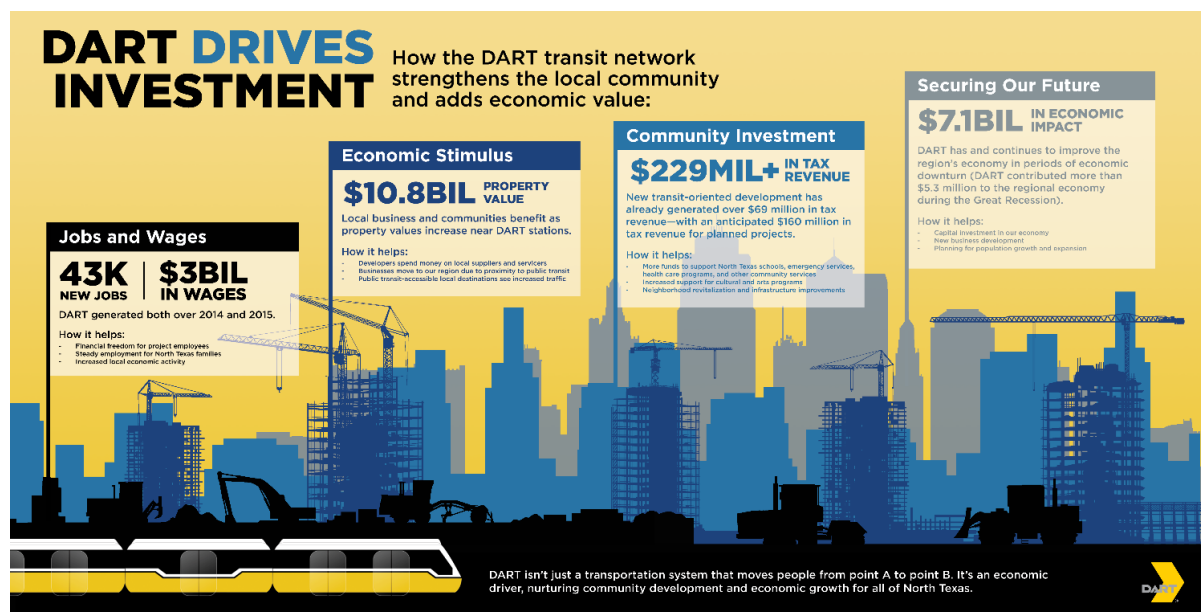
The economic impact of DART on the regional economy has been significant, exceeding \$10.8 billion, according to a study by the University of North Texas (UNT). The study, published in May 2017, looked at public and private transit-oriented development along the light rail corridor from 1999 to 2015. A copy of this study is included in the Section G of the *Reference Section* of this document as well as on the DART website, [www.DART.org](http://www.DART.org).

DART's investment continues to be a catalyst for investment near DART transit facilities to create transit-oriented development opportunities that result in vibrant, livable communities, increasing transit ridership and generating new sources of revenue.

Two of the objectives of the Agency, as stated in the DART mission statement, are to improve the quality of life and to stimulate economic development through the implementation of the Transit System Plan. It has been both surprising and gratifying to see how quickly transit-oriented developments have been constructed along the rail corridors since the launch of DART Rail in 1996. Management continues to support DART's Economic Development staff and continues to monitor, identify, evaluate, and develop opportunities in partnership with service area cities.

As noted above, DART Economic Development staff periodically engages the UNT Economics Research Group to monitor and assess the impact of all DART assets that have the potential for future transit-oriented development (TOD). The latest study presented in May 2017, identified the impact of public and private investment (built, under construction, and planned) in TOD within ¼ mile of rail stations to be over \$10.8 billion over the period of 1999-2015. For the first time, the study has included public projects such as hospitals, educational, and governmental construction. The previous study undertaken in 2014 found that over the period from 2003 through 2013, the average premium on office rents located within the same ¼ mile of a DART station was 14%. Economic Development staff is currently working with the UNT Economics Research Group to initiate the next update to the 2017 study; a final report should be available in late 2019.

To support efforts such as these and provide information to the public and development community, DART has established a transit-oriented development web site ([www.DART.org/economicdevelopment](http://www.DART.org/economicdevelopment)) which provides an overview of DART's transit-oriented development program including its TOD policy, guidelines, and station area fact sheets for each of the rail stations.



### **Strategic Priority 4**

#### **Expand DART's Transportation System to Serve Cities Inside and Outside the Current Service Area**

The DART Board's Strategic Priorities and Goals include major initiatives for expanding service to the cities inside the current service area, as well as improving the connection to, and provision of, service to cities outside the DART cities' limits.

##### Service to Cities Inside the Current Service Area

*Streetcar Service Expansion* – In 2015, DART completed work on two separate streetcar projects. The first phase of a modern electric streetcar line, operating from Union Station to Colorado Boulevard and Beckley Avenue in Oak Cliff opened on April 13, 2015. Construction of the streetcar service was primarily funded by a \$23 million Transportation Investment Generating Economic Recovery (TIGER) grant. The City of Dallas is the owner of the original streetcar line, and of the extension further into Oak Cliff to the Bishop Arts District which opened in August 2016. DART designed and constructed this extension to Zang and Davis on the border of the Bishop Arts District. Construction funding was provided by Texas Mobility Funds (TMF), and operating funding will be provided by the City of Dallas. With funding provided by the City of Dallas, DART will expand the service hours and frequency in October of 2017. Conceptual design is complete for a northern loop extension from Union Station to the Convention Center. DART is coordinating with the City on this extension as well as the central streetcar link that would further extend the line from the Convention Center to the McKinney Avenue Transit Authority (MATA) M-Line, near St. Paul Station.

DART was the project sponsor for the second streetcar project, a 0.65-mile urban streetcar trackway, connecting the Olive Street extension of the M-Line to the existing MATA alignment on St. Paul Street. This project provides direct pedestrian access from the McKinney Trolley to the existing DART St. Paul Station. Revenue service began in May 2015. DART will continue to provide funding for the MATA service in FY18 consistent with the DART Site-Specific Shuttle Policy and our MATA agreement.

*On-Street Passenger Facilities Program* – This federally-funded program continues with the installation of bus stop improvements in a number of locations throughout the DART Service Area. During FY 2017, DART targeted the following improvements:

- 90 new benches, the majority of which are new-style metal benches with backs, arm rests, and lumbar support
- 81 new standard bus shelters with solar lighting and benches
- 23 stand-alone solar lighting improvements at bus stops
- 50 solar-retrofitted shelters

Federal funding was provided for the “on-street bus facility improvement program” which was completed during FY 2017. Total improvements include the testing of three SMART shelters, more than 400 bus shelters and benches, and additional solar lighting.

*New Downtown Light Rail Alignment (D2)* – Please see the discussion of this item on page III-15, earlier in this section.

*Comprehensive Operations Analysis* – Please see the discussion of this item on page III-8, earlier in this section.

*Area Service Reviews and Service Changes* Over the past two years, the Comprehensive Operations Analysis has reviewed the entire bus system as a part of efforts to develop a new 2040 Transit System Plan. This COA reviewed each DART route in detail, culminating in a series of recommendations for bus service changes that can be implemented over the next 10-15 years. A draft Service Plan has now been prepared that details potential service improvements and the DART Board has authorized public hearing and has approved some of these changes. Major improvements began in FY16 through FY17 with additional improvements proposed for FY18 and FY19.

DART conducts periodic detailed service reviews in different sectors of the DART Service Area. These reviews include a careful analysis of the demographics and performance of services in the respective areas, looking for gaps in coverage and other changes that can be implemented in a three to five-year time horizon. During FY 2017, DART continued work on three service reviews: Farmers Branch/Carrollton, West Dallas/Oak Cliff, and Rowlett. Much of the technical work supporting the three reviews was completed during the COA effort, and planners expect to finish remaining work in late FY 2017 and early FY 2018. A Richardson service review is planned in FY 2018 after work on the other three has been completed. Service Planning staff will also focus on implementation of the first elements of the COA Service Plan.

Service Planning staff will also focus on implementation of the first elements of the COA Service Plan. March 2017 service changes addressed service to two rapidly-growing employment areas: Legacy (in Plano) and Cypress Waters (in Dallas). The Legacy improvements included a new express route from Parker Road Station, extension of the existing NW Plano Park & Ride service to major employer sites in Legacy, and changes to feeder service in the area. Changes proposed for Cypress Waters aim to reduce travel time from Belt Line Station. Both March and August 2017 service changes included a series of schedule adjustments targeting improved off-peak and weekend on-time performance.

*Plano Ride Program* – For several years, DART has partnered with the City of Plano to support the Plano Senior Rides program, a program providing taxi vouchers to help fund transportation for Seniors who are unable to use DART fixed-route or Paratransit services. DART has made a key program change that replaced paper vouchers with debit cards, which simplified record-keeping and administrative burdens. The program has been expanded to include the addition of Plano residents who are former customers of the now-defunct Collin County Area Rural Transit (CCART) system, but do not qualify or are unable to use DART fixed-route or Paratransit services.

DART has received requests for similar programs in Carrollton and Rowlett in areas with very limited or no regular fixed-route transit service. The pilot was deployed in Plano in November 2015, which will help determine if the approach has applications in other cities in the service area. This approach was investigated for cities in Collin County outside of DART's Service Area

through the DART Bus Service, LGC, and taxi debit card services started in Wylie, Allen, and Fairview at the beginning of FY 2017. DART anticipates receipt of federal funding to expand the Senior Taxi Voucher program to unserved areas of Rowlett and Carrollton during FY18.

*Cotton Belt Corridor* – DART owns 54 miles of the Cotton Belt rail corridor from north Fort Worth to downtown Wylie. In 2016, the Fort Worth Transportation Authority (FWTA) negotiated and signed a Full Funding Grant Agreement with FTA for the TEX Rail project, which proposes to use the segment of the Cotton Belt west of DFW Airport, and continue south into downtown Fort Worth to the existing TRE Intermodal Transportation Center and the T&P Station. The project is anticipated to initiate service by the end of 2018. Plans include a future extension into southwest Fort Worth.

In support of the Cotton Belt project, DART undertook the early engineering and environmental documentation of the project on the eastern portion of the corridor extending from DFW airport to Plano. Preliminary engineering was taken to the 5% level as of Spring 2014, and a cost analysis of 41 different service configurations was performed. The service configuration (and associated cost) of Full Double-track, DFW-to-Plano (Southern alignment) with a shallow trench (or other appropriate mitigation) across North Dallas and a station at Cypress Waters was included in the FY 2016 Financial Plan. The FY 2017 Twenty-Year Financial Plan included a 13-year acceleration of this project. The FY 2016 planned revenue service date was FY 2035. It is now FY 2022. Preliminary engineering to the 10% level and an Environmental Impact Statement (EIS) were initiated in FY 2017 and will be complete in FY 2018. As currently defined, the project would consist of new single at-grade track with passing sidings and up to eleven new stations. The corridor would be designed and constructed to accommodate a future double track configuration.

#### Service to Cities Outside the Current Service Area

*Regional Service Policies and Operations* – In 2012, the DART Board modified its policy relating to fixed-route service beyond the service area boundary. Board Policy III.07 was modified to authorize providing contract bus service for cities outside the DART Service Area. This resulted in contracts with the City of Mesquite to operate the Compass Route connecting Mesquite, Texas with the Lawnview Station and a contract with the City of Arlington for Arlington MAX service connecting Arlington with CentrePort Station on the TRE commuter rail line.

DART currently works through a Local Government Corporation (LGC) to manage these two out-of-service area contracts: a tri-party service agreement with the City of Arlington and the Fort Worth Transportation Authority for services in Arlington; and an agreement with the City of Mesquite for services between Hanby Stadium and DART Lawnview Station.

The Metro ArlingtonXpress (MAX) service began in August 2013 with a single weekday route connecting College Park in Arlington to CentrePort Station on the TRE line, with one stop in the Arlington Entertainment District. Under the original agreement, DART was to operate service through August 2015; the agreement has been extended through December 2017. This service is carrying 250-300 passengers per day. The City of Arlington approved changing the location of the intermediate stop on the route, originally located at Collins and Andrews, and the change was implemented in FY 2017. DART, FWTA, and the City of Arlington began work in FY16 to

develop a Comprehensive Operations Analysis (COA) for Arlington transit service. Much of the technical work was completed in FY 2017, with a focus on future fixed-route service (including MAX), Arlington's Paratransit program, UT Arlington shuttle service, and Entertainment District service. The City of Arlington and a stakeholder group will make recommendations to the Arlington City Council for a future transit system in late FY17. DART's role with Arlington is anticipated to be determined the first quarter of FY 2018.

Mesquite service began operation in March 2012 with a single weekday route connecting Mesquite's Hanby Stadium to Lawnview Station on the Green Line. This agreement which was anticipated to end at the end of December 2014 was expanded for an additional three years in a unique joint venture between STAR Transit, which will provide the buses and drivers, and DART. During this additional three years, DART will work with Mesquite to complete the required service plan to guide improvements within the City of Mesquite. Mesquite has also expressed some interest in exploring creation of a second route and the possibility of moving forward with an operating plan. An extension was approved in 2015 which extended the service contract through 2017. During FY 2017, DART and Mesquite are working to complete a short- and long-range transit plan for Mesquite with final decisions on DART's role for FY 2018 and beyond anticipated in the first quarter of FY 2018.

In addition to Arlington and Mesquite, the Cities of Allen, Fairview, and Wylie, and the Best Southwest cities are interested in developing service plans to explore potential transit opportunities in the near and long-term. This work is anticipated to begin in FY 2018.



### **Strategic Priority 5**

#### **Pursue Excellence Through Employee Engagement, Development, and Well-Being**

The DART Board's Strategic Priorities and Goals include major initiatives for increasing the Agency's return on its investment in human capital. The Agency has Employee Values and organizational change strategies that balance the expectations and needs of the organization and its employees. During FY 2018, steps will be taken to achieve demonstrable improvement in customer service through the 5 Star Service Program and through improved employee engagement and leadership development.

The commitment has been a guiding principle for the Executive Leadership Team to provide strategic direction in three critical areas:

- Develop and align the organization's Work Force Plan with the Board's strategic priorities
- Implement initiatives to increase employee satisfaction and drive change through employee engagement and development
- Assures the Human Capital function seeks ways to enhance DART employee status as an important investment and to focus on their growth and development within the Agency

The Human Capital (HC) function strives to provide maximum support and responsiveness to employees who are critical to DART's operational needs and programs. The DART Human Capital department embraces contemporary business practices and functions as a business facilitator of efficient and effective delivery systems and programs.

Human Capital has partnered with Southern Methodist University Cox School of Business to provide learning environments for Leadership DART and Management DART. Leadership DART is an accelerated development program for supervisors and managers designed to create a pool of professionals capable of leading DART into the future. Management DART is an introductory program aimed at supporting new supervisors in overcoming the challenges unique to transitioning from an individual contributor role to a supervisory and/or management role.

The DART People Center will continue to play an important role in providing DART employees with information and access to assistance with all matters pertaining to their employment. General questions and assistance with routine matters are answered by staff in the People Center, while more complex issues will be referred to senior staff who have more specialized expertise. Employee communications will continue to be refined and specifically targeted to reach the intended audiences more efficiently. Such refinements will include a continuing focus on communication strategies and tools such as People's Corner (employee newsletter), DARTnet, and email announcements, and opportunities to reach individual employees through other official electronic channels.

### Establish Consistency in DART People Practices

Human Capital's goal is to achieve business partner status with departments by accomplishing the following:

- Implement Human Capital "best-in-class" services in order to implement change management initiatives.
- Identify skills required to manage the pace of change and how this type of change will impact the workforce.
- Compete for the right talent by providing opportunities to attract and retain talent with particular focus on underutilized categories.
- Maintain accurate employee records both electronically and through the use of limited paper files.
- Assure that fair compensation and appropriate benefits (Total Rewards) meet the needs of all DART employees.
- Promote the Agency's goal to achieve improvement in service quality through increasing DART employee engagement with the 5 Star Service Program.
- Strive to promote continuous process improvement, team learning, and personal development.
- Assist in the DART employee engagement process by linking HC activities to Agency priorities and develop an effective and flexible organization that responds to people issues with a culture for results and performance. Secure a high degree of DART employee involvement and participation within a climate that fosters learning and growth.
- Increase development and training programs to focus and build on workforce contributions and commitments to DART by providing opportunities for a worthwhile and satisfying work experience.
- Create partnerships in order to achieve the Agency's objectives and provide excellent Human Capital services. This will be accomplished through the extensive use of partnerships and direct consultation with functional leaders on HC deliverables, such as: succession planning, workforce planning, career development, total compensation, and professional skill-enhancing programs.

### Top Opportunities in Human Capital in FY 2018

Human Capital is committed to organizational effectiveness that requires HC deliverables and programming to be accomplished with a sense of urgency. Human Capital must promote a passionate approach regarding the Agency's business in support of an open work environment in which all DART employees feel personally accountable for meeting business expectations. Human Capital will encourage open, honest dialogue that promotes mutual respect, understanding, conflict resolution, idea sharing, learning, and growth. Human Capital is committed to an atmosphere which motivates DART employees to engage with HC for information, problem solving, and learning opportunities.

- Continue to develop and implement Standard Operating Procedures for all functions and change initiatives to improve effectiveness.
- Lead and support communication in the implementation of the employee engagement strategy.
- Address workforce needs and expectations through an open and honest engagement process in terms of ability to understand and implement change.
- Lead and support enhancements of the benefits function to ensure that benefit plans and programs meet the needs of DART employees.
- Get the right people in the right jobs in a timely manner as well as bring structure and discipline to compensation management.
- Develop continuous improvement programming for HC functions including: through the use of a Classification and Compensation consultant who will update job descriptions and develop a Compensation Plan for DART's administration of compensation and classification, and bottom-up engagement process in order to align task and deliverables with HC functional direction.

During FY 2018 Human Capital will continue to provide and enhance services and deliverables in support of Agency goals.

#### Front-Line Employee Engagement

The Division Level Measurement (DLM) Program targets increasing front-line employee ownership of the goals of the Agency, with the ultimate objective of increasing employee motivation and satisfaction in order to drive improved service and increased ridership. The DLM Program also targets improvements in service quality through enhanced data analysis, communications, and problem solving. Peer groups compete with one another on a number of performance measures. In FY 2018, Human Capital will continue to partner with Transportation to assure that the DLM program is effective and fair. This will include providing facilitators to work with focus groups throughout the Transportation Department to get feedback and reengineer the program.

Each year the peer groups' goals are reviewed and updated. Below is the listing of the current groups.

#### *Peer Group #1*

- Northwest Bus Operating Sections' personnel
- South Oak Cliff Bus Operating Sections' personnel
- East Dallas Bus Operating Sections' personnel

- All LRT Sections' personnel, including Rail Operations, Rail Fleet Services, and Ways, Structures, and Amenities
  - Includes Safety Specialists, Maintenance Training Specialists, Training Supervisors, and Yard Revenue Controllers assigned to specific operating divisions

#### Peer Group #2

- Customer Service personnel
- Transit Operations Sections' personnel (Station Concierges)
- Maintenance Central Support Sections' personnel

#### Peer Group #3

- Non-Revenue Vehicle Maintenance personnel
- TVM Sections' personnel
- Materials Management personnel

Exhibit III.5 is a sample of the DLM scorecard from the Second Quarter, FY 2017, showing performance as a percentage of goals for Peer Group 1.

For example, 100% performance on Complaints/100k Passengers for Northwest indicates that the actual number of complaints per 100k passengers was either at or below the targeted complaints for the quarter.

Exhibit III.5  
Division Level Measurement (DLM) Program  
FY 2017, Second Quarter

Category	Northwest		East Dallas		South Oak Cliff		Rail	
	Actual	Percent to Target	Actual	Percent to Target	Actual	Percent to Target	Actual	Percent to Target
On-Time Performance	79.0%	98.80%	82.5%	100.00%	79.0%	98.80%	92.4%	98.3%
Complaints/100K Passengers <sup>[1]</sup>	27.9	76.70%	23.8	85.90%	24.8	100.00%	1.5	95.55%
Unsched. Absences (Maint.)	8.65	100.00%	8.12	100.00%	9.29	100.00%	7.88	100.00%
Unsched. Absences (Oper.)	15.31	90.70%	15.85	87.50%	18.26	76.00%	18.09	99.80%
Unsched. Absences (WSA)	N/A	N/A	N/A	N/A	N/A	N/A	7.75	100.00%
Late Pullouts	76	31.70%	39	51.70%	34	47.10%	2.67	100.00%
Miles BetweenService Calls	9,353	65.50%	9,549	66.90%	12,820	89.80%	24,562	48.00%
Accidents/100k Miles	2.13	100.00%	1.61	100.00%	2.33	98.60%	N/A	N/A
Sfty Violations/100k Sched. Trn Mi.	N/A	N/A	N/A	N/A	N/A	N/A	0.32	100.00%
Ridership/Average Weekday	30,608	91.20%	37,655	86.60%	29,561	98.70%	78,213	82.50%
Unit Cost Per Hour	\$54.57	88.80%	\$39.36	100.00%	\$41.30	100.00%	\$59.63	100.00%
Unit Cost Per Mile	\$1.537	92.40%	\$1.507	100.00%	\$1.717	93.90%	\$3.443	100.00%
Overall Average for Quarter		83.58%		87.86%		90.29%		93.31%

[1] - Rail Complaints/100K Passengers presented as an average of Rail and WSA.

## **Strategic Priority 6**

### **Innovate to Improve Levels of Service, Business Processes, and Funding**

DART maximizes Agency resources through attractive marketing, innovative technology, and astute financial management.

#### Improve Levels of Service

##### *Timely, Accessible, and Reliable Services and Information to Customers*

Customer transportation services are being optimized by improving the systems used on DART's vehicles to create and adhere to schedules and make operator assignments more efficient and equitable. The Agency continues a focus on business intelligence to provide greater insight into DART services for continuous improvement.

The existing point-to-point rail trip planning application has been modified to provide arrival predictions instead of scheduled times. System enhancements have increased stability and availability of this service.

To address a major customer concern regarding missed connections, connection protection software is being piloted at selected key transfer locations. This system uses automated vehicle location information and bus schedules to temporarily "hold" the departure of a bus if a connecting bus is arriving a few minutes behind schedule.

*Interactive Map* – DART will be deploying an interactive map at the Dallas Love Field Airport as a pilot project. The interactive map will provide those arriving at the airport the ability to better engage the DART system by providing dynamic directions tailored to specific travel requests, directions on how and where to use the system, and the ability to text or email all directions directly to the person using the map. Based on its potential success, we see the possibility of deployment at other locations such as rail stations, bus transit centers, and key locations in downtown Dallas.

*InfoTransit Digital Signage* – The "InfoTransit" digital signage system on all buses displays information on the next and subsequent two stops for passengers. DART is now able to create slideshows onsite, update the "Next Stop" content, and present slideshow content by Stop ID or GPS location. Additionally, this system provides customers with system-wide marketing campaigns relating to current and upcoming DART events.

*Broadband Data Communications to Buses and Surveillance Cameras* – All DART buses are also equipped with surveillance cameras and 4G LTE (Long-Term Evolution) cellular communications for police and other authorized parties to view current video streams from the video cameras on the bus in case of an incident. The video is recorded and tagged and is then offloaded automatically from the vehicle in the operating division garage or by special request. The health of the 4G LTE cellular communications link on the bus is regularly monitored, as is the bus's ability to connect to the wireless network at the garages.

Future systems will have monitoring capabilities so those devices can be monitored. Finally, broadband cellular communications will be used for real-time validation of electronic fare media such as DART propriety smart media, contactless bank cards, and Near Field Communication (NFC) devices for Apple Pay, Android Pay, and Samsung acceptance once the fleet is equipped with validators.

The agency continues to improve the use of technology to provide timely, accessible, and reliable services and information to customers

*Leveraging Technology for Maximum Benefit to the Agency and Stakeholders*

*Traffic Signal Priority (TSP)* – This system continues to serve the Agency well. The City of Dallas is implementing new traffic controller hardware and software and testing the controller system. Installation is scheduled to begin in late 2017. Capital projects are approved to replace the Sensys detection technology with infra-red detection devices. Intelligent Transportation Systems (ITS) is also adding business continuity in the event TSP systems housed at headquarters are unavailable, and can simulate the impact of three-car trains on the transitway mall in the Dallas Central Business District.

*Automatic Passenger Counters (APC)* - The use of APCs on trains and buses supports the collection of real-time ridership as well as schedule performance by stop. To date, APC units have been installed on 175 buses as part of the new radio system implementation and are providing more accurate passenger counts and runtime data to support planning and scheduling decisions. Additional APC equipment will be installed in FY 2018 to permit passenger counts to be estimated from APC counts rather than farebox data.

*TRE Next Train Project* – This system provides “Next Train” information at TRE’s ten stations and went live in the fall of 2015. This system includes Automatic Passenger Counters (APC), which will more accurately provide the Agency with timely ridership data. The system also provides schedule adherence and the ability to make announcements onboard the vehicle and at station platforms.

*Comprehensive Payment System (CPS)* - DART engaged in a multi-year agreement with Vix Technology, a system integration firm, in August 2015 to streamline DART’s fare payment environment by utilizing new innovative technologies. The goal of this project is to find convenient and easy-to-understand methods for customers to obtain and purchase fare media.

This new solution incorporates an account-based back office system which utilizes best practices of modern technologies in the consumer and fare payment sectors, capable of interfacing with both bank and non-bank financial clearing systems for transaction processing and settlement. One goal of this solution is to allow DART to significantly reduce the total amount of physical cash that the agency must process. DART has determined that this can be accomplished by creating an electronic payment infrastructure for transportation and other services that is ultimately capable of



being deployed region-wide, using third-party produced and distributed prepaid cards and contactless devices such as smart cards, contactless bank cards, RFID tags, and Near Field Communication (NFC) enabled devices.

In addition to the system integrator selection, DART awarded a contract to PayNearMe (PNM) in April of 2016 to provide the retail distribution solution. PNM will provide over 900 retail locations within the DART Service Area for customers to purchase and reload smart cards for use in the new account-based system. PNM partners include Blackhawk Network, which provides access to the largest grocery store network in the U.S., and Fidelity Express, which provides access to independent and small grocery operators.

Vix and PNM will implement the state-of-the-art electronic fare payment, distribution, collection and processing system in phases beginning in the fourth quarter of FY 2018.

*GoPass Mobile Ticketing Enhancement (GoPass 2.0)* – DART embraced the concept of mobile payments and introduced a first-generation mobile ticketing and trip planning app in September 2013. In the interest of continuous improvement, DART elected to provide enhanced mobile ticketing capabilities (GoPass 2.0) as part of a larger platform being developed by Vix Technology in conjunction with the mobile ticketing provider. These new mobile ticketing system enhancements will include upgraded interfaces with Uber, Lyft, taxi providers, and other ride-sourcing services, and will further enhance the previous app offerings and improve the way in which customers pay their fares. GoPass 2.0 will introduce a quicker loading speed to the platform as well as deliver real-time trip planning, provide direct customer feedback in the app, set up auto load for pass products, provide system maps, and allow customers to purchase mobile tickets with cash via a retail solution (PayNearMe). The enhanced mobile ticketing platform will be implemented in phases beginning in the second quarter of FY 2018.



*Sandbox Mobility On-Demand (MOD)* – DART received a \$1.2M grant in October 2016 to participate in a technology-driven project through two U.S. Department of Transportation (U.S. DOT) initiatives aimed at promoting the use of advanced technologies in transportation: the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) program run by the Federal Highway Administration (FHWA) and the Mobility on Demand (MOD) Sandbox program overseen by the Federal Transit Administration (FTA).

DART's project will integrate ride-sharing services such as transportation network companies (TNC), microtransit, public on demand, carpooling, taxi and bike sharing into the GoPass mobile ticketing app. The project will create an integrated, multimodal application that leverages ride-sharing services, improve access to DART stations and deliver a "one-touch", single payment transaction for customers through the app. The collaboration with various technology providers will offer transit riders an option to choose first and/or last mile options based upon price, travel time and wait time for arrival of the service while potentially reducing the overwhelming dependency on the single occupant automobile within the North Texas Region. Additionally, the project will provide equitable mobility on demand options for the unbanked, disabled, low income, and smartphone challenged customers. DART's Mobility on Demand pilot will be deployed beginning in the second quarter of FY 2018.

### Challenge, Redefine, and Update the DART Business Model

Over the last several years, DART has undergone significant changes in its operating modes. These items are either in process or have seen successful completion:

- Full replacement of the bus fleet
- Deployment of CNG fueling facilities in all four operating divisions (three bus and one paratransit division)
- Completion of the light rail extensions to DFW Airport and the Dallas UNT Campus (October 2016)
- Implementation of a new delivery model for paratransit services
- Contract bus services for cities outside the service area
- Award of a new 10-year contract for regional commuter rail services
- Introduction of modern, convenient payment systems that will permit the customer to buy tickets, parking passes, event tickets, and other items in a single purchase



Today, DART has an increasingly customer-focused culture and has institutionalized the team-based improvement philosophy and process to increase efficiencies within the organization.

DART currently has more than 20 cross-functional process teams from all levels, actively engaged to identify efficiencies and quality improvements to ensure DART attains the highest level of performance excellence for their customers, employees, and stakeholders. Examples of these teams include:

- *5 Star Continuous Improvement Teams* – These cross-functional teams focus on identifying improvements in five-to-six key process areas each year. Recommendations are focused on enhancing the customer experience for external as well as internal customers.
- *Service Planning Committee* – This committee is chaired by the President/Executive Director and meets to discuss service planning, ridership, and related issues.
- *Route Monitoring Task Force* – This formal staff task force addresses service issues involving planning, scheduling, and transit operations. It meets monthly and offers a forum for operations employees to speak to issues with routes and schedules. Representatives from Service Planning & Scheduling review and report back on progress. The group also reviews major planning initiatives from an operating perspective and includes operators appointed by each operating division, plus representatives from Service Planning & Scheduling, Transportation, and Mobility Management.

- *Division Level Measurement (DLM) Steering Committee* – This committee recommends goals and provides guidance to the Division Level Measurement Program, engaging employees at all levels throughout the operational departments in achieving annual key performance metrics.
- *Employee Communication and Engagement Committee* – This committee was formed in response to previous employee survey findings. The committee is composed of employees from throughout the organization who serve as departmental representatives and the voices to communicate information to their respective groups on a timely basis.
- *On-Time Performance Data and Radio Team* – This team focuses on refinements to the Bus Computer Aided Dispatch/Automatic Vehicle Location System (CAD/AVL system) to enhance DART's ability to monitor and optimize the on-time performance and connectivity of the bus and rail networks. The team includes representatives from Planning, Scheduling, Transportation, Maintenance, and Technology who are charged with developing systems and processes to improve on-time performance.
- *New Fare Technology Committee* – This cross-functional committee will focus on implementing 21st Century fare technology which may dramatically change how people obtain fare media and pay for their transit service.
- *Customer Response Team* – This is a team of DART administrative employees who help communicate with DART customers during major rail service disruptions that affect a significant portion of our ridership group.
- *Service Disruption Committee* – This continuous improvement team focuses on improving the processes and procedures necessary to enhance internal communications and communications with customers during service disruptions and reduce the negative impact on our customers.
- *Business Intelligence* – Considerable progress has been made in the area of Business Intelligence in recent years, including:
  - Creation of a library of reports for On-Time Performance utilizing information from the Transit Master CAD/AVL System.
  - Evaluation of a new, easy-to-use visualization tool for analysis and management reporting of ad-hoc data housed in a cloud-based repository that enables collaboration and sharing of these analyses, and improves technology infrastructure performance.
  - Implementation of analysis tools for schedule optimization and service delivery performance. This environment should enable DART to identify significant operational cost savings and improve customer satisfaction by optimizing the delivery of services to our customers.
  - Upgrade of the Business Intelligence (BI) environment used in the budget planning process to the current software version that allows the use of new BI reporting and data manipulation tools in that process.

### Funding: Federal, State, and Local Government Relations

Government Relations encompasses all interactions between DART and its external political environment. DART's Government Relations staff plans and implements the Agency's advocacy efforts and ensures that the exchange of information between DART, the 13 cities in the service area, the D/FW region, the U.S. Congress, the U.S. Department of Transportation including but not limited to, the Federal Transit Administration and the Federal Railroad Administration, and the Texas Legislature is accurate, consistent, and timely. In addition to providing tours and briefings to elected officials and members of their staff, Government Relations responds to citizens' concerns as they are relayed to the elected officials' offices for resolution. Government Relations actively participates in transportation-related organizations such as the American Public Transportation Association, South West Transit Association, Texas Transit Association, Dallas Regional Mobility Coalition, Transit Coalition of North Texas, and the Regional Transportation Council. Government Relations oversees the day-to-day administration of DART's contracted legislative consultants in Washington, D.C., and Austin to develop appropriate advocacy strategies for securing Agency objectives for both operations and capital projects.

DART Government Relations staff monitors dialogue emanating from stakeholders and transit advocacy groups regarding the implementation of federal transportation policy authorized by the Fixing America's Surface Transportation or FAST Act, as well as annual appropriations items concerning DART's capital projects and federal funding requests. Government Relations staff coordinates with members of the Dallas-area congressional delegation to convey DART's positions on federal policy and seek letters of support on federal grant applications, such as for the TIGER program, when necessary. The staff provides timely updates on the status of any grant applications submitted by DART to the U.S. Department of Transportation. Finally, staff actively monitors the U.S. Congress and the Administration for any developments relating to potential funding for projects identified in DART's Twenty-Year Financial Plan.

### Funding: Rail Right-of-Way

DART owns a total of approximately 254 miles of rail track. The Railroad Management Division of the Commuter Rail Department is responsible for management of DART-owned commuter rail lines (55 miles), active freight lines (155 miles) and non-operated/freight abandoned lines (25 miles), including the administration of trackage rights agreements with freight railroads that are fulfilling DART's common carrier obligations to provide freight rail service along the freight lines. DART jointly owns the Trinity Railway Express (TRE) with the Fort Worth Transportation Authority (FWTA).

The Regional Rail Right-of-Way Company, a wholly-owned subsidiary of DART, holds the common carrier authority and manages the trackage rights agreements and collection of trackage rights fees for the DART-owned active freight rail corridors.

In total, the division manages approximately 2,650 licenses on the TRE Corridor and other active freight lines. Revenues for the TRE corridor are projected at \$3.2 million for FY 2018. The DART/FWTA ILA specifies that revenues generated on the TRE Corridor are joint revenues and are to be applied against TRE operating costs.

The division is also responsible for the property management of the TRE Corridor, which includes the revenue collection from various land licenses, oil and gas leases, signboard rental income, license fees, and trackage rights fees. The potential impact of revenue generated from the oil and gas industry (natural gas wells) is discussed further below.

The non-TRE revenues are allocated to DART's general fund. Exhibit III.6 provides a summary of actual and projected revenue from all activities for FY 2011 through FY 2018 (projected), excluding oil and gas leases, which are shown in Exhibit III.7.

Exhibit III.6  
Railroad Management Revenue  
(in Millions)

Fiscal Year	TRE	DART	Total
2011	\$2.8	\$1.7	\$4.5
2012	2.9	1.9	4.8
2013	2.9	2.0	4.9
2014	2.8	2.2	5.0
2015	2.8	2.2	5.0
2016	3.2	2.7	5.9
2017 (Projected)	3.1	2.4	5.5
2018 (Projected)	3.2	2.6	5.8
<b>Total (Actual &amp; Projected)</b>	<b>\$23.7</b>	<b>\$17.7</b>	<b>\$41.4</b>

## Oil and Gas Lease Agreements

The Commuter Rail and Railroad Management Department strives to increase license and contract revenue through consistent management and enhancement of existing agreements.

Lease royalty and bonus revenues from FY 2011 through FY 2018 are shown in Exhibit III.7. In recent years, oil and gas lease revenues have fallen due to decreases in both well production and a sharp drop in natural gas prices. Oil and gas revenues for FY 2016 were \$50,395, FY 2017 is projected to be \$100,000, and FY 2018 is projected at \$100,000.

Exhibit III.7  
Oil & Gas Lease Agreements  
(in Thousands)

Fiscal Year	Amount
2011	\$295.4
2012	145.5
2013	328.5
2014	455.6
2015	50.4
2016	50.4
2017 (Projected)	100.0
2018 (Projected)	100.0
<b>Total (Actual &amp; Projected)</b>	<b>\$1,525.8</b>



## Budget Structure

Three major components comprise the agency's FY 2018 Annual Budget:

- Operating Expense Budget
- Capital and Non-Operating Budget
- Debt Service Budget

The Operating Expense, Capital and Non-Operating, and Debt Service budgets have been developed to support the Board's Strategic Priorities (discussed starting on page III-2), while retaining a focus on the core strategic objective of maintaining financial stability. The result is a fiscally responsible plan that clearly supports the agency's mission.

## Financial Summary

Exhibit III.8 provides a summary view of the FY 2018 Annual Budget. The Agency's overall budget increased by \$6.6 million (0.7%) from FY 2017. The FY 2018 Operating Expense budget is \$523.0 million, an increase over the FY 2017 Operating Expense budget of \$494.9 million (5.7%). The Capital and Non-Operating budget is decreasing by \$23.8 million (8.2%). The Debt Service budget is increasing by \$2.3 million (1.2%).

Exhibit III.8  
FY 2018 Annual Budget  
(in Millions)

<b>FY16 Actuals</b>	<b>Category</b>	<b>FY17 Budget</b>	<b>FY18 Budget</b>	<b>\$ Variance</b>	<b>% Variance</b>
\$473.9	Operating	\$494.9	\$523.0	\$28.1	5.7%
157.4	Capital	289.1	265.3	(23.8)	(8.2%)
188.7	Debt Service	191.5	193.8	2.3	1.2%
<b>\$820.0</b>	<b>Total Expenditures</b>	<b>\$975.5</b>	<b>\$982.1</b>	<b>\$6.6</b>	<b>0.7%</b>

## Inside the Numbers

### Revenue Factors

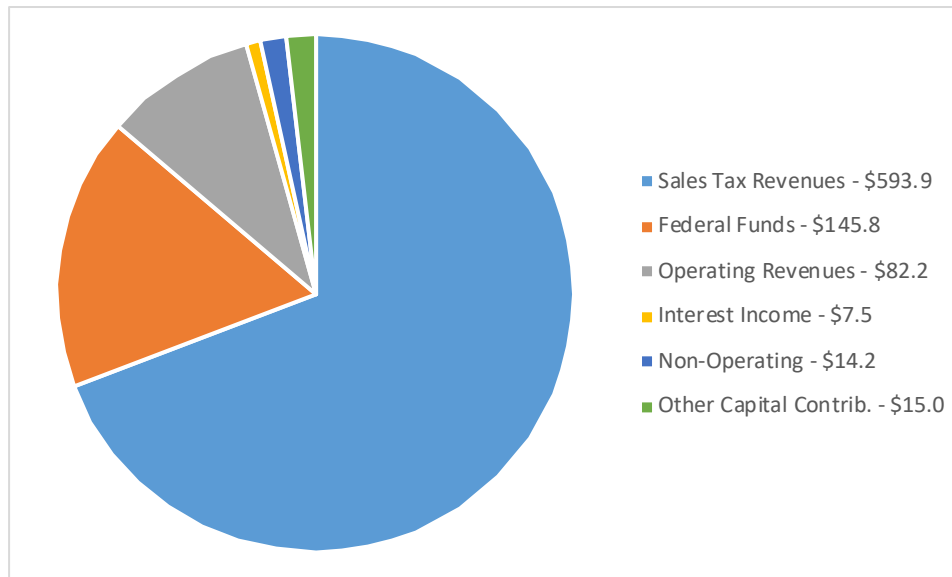
Total sources of funds as shown at Exhibit III.9 are projected at \$828.5 million; \$41.5 million (53%) higher than the FY 2017 Budget. Increases in sales taxes (\$30.3 million) and federal formula funds (\$42.9 million, due to carry-overs) are partially offset by a decrease of \$38.1 million in other non-federal capital, which is primarily a result of timing differences. Additional information about Sources of Funds over the next 20 years can be found in the *Financial Plan Section*.

Exhibit III.9  
Sources of Funds  
(in Millions)

FY16 Actuals	Category	FY17 Budget	FY18 Budget	\$ Variance	% Variance
\$545.1	Sales Tax Revenues	\$563.6	\$593.9	\$30.3	5.4%
79.8	Operating Revenues	85.3	82.2	(3.0)	(3.6%)
5.6	Interest Income	5.7	7.5	1.7	30.1%
42.9	Federal Formula Funds	82.4	125.3	42.9	52.0%
0.8	Federal Discretionary Funds	32.2	20.5	(11.8)	(36.5%)
(30.0)	Net Debt Issuances / (CP Retirements)	(30.0)	(30.0)	0.0	0.0%
6.5	Non-Operating	14.7	14.2	(0.5)	(3.2%)
13.0	Other Non-Federal Capital Contributions	33.1	15.0	(18.1)	(54.8%)
<b>\$663.7</b>	<b>Total Sources of Funds</b>	<b>\$787.0</b>	<b>\$828.5</b>	<b>\$41.5</b>	<b>5.3%</b>

Exhibit III.10 provides a view of the sources of funds and the percentages of the total.

Exhibit III.10  
Breakdown of FY 2018 Sources of Funds  
(\$ in Millions)

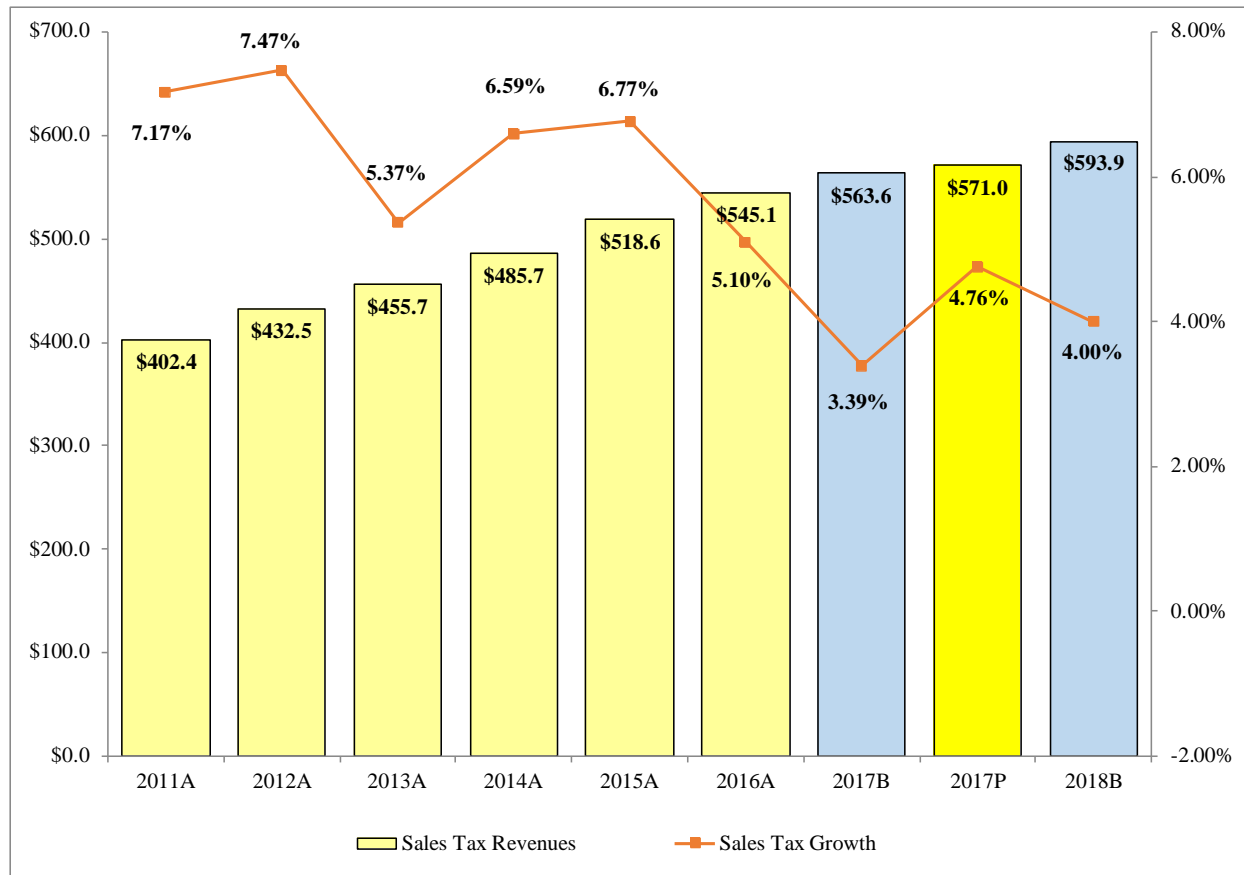


Sales Tax Revenues represent 69% of total sources of funds for FY 2018 and is the largest source of revenue for the Agency. A ten-year history of sales tax receipts by month is included at Exhibit 104 in the *Reference Section*.

The sales tax projections contained in the FY 2018 Budget are \$30.3 million higher than the FY 2017 budget. This represents a 5.4% increase from the FY 2017 budget, and 4.0% from FY 2017 projected receipts.

Exhibit III.11, on the following page, shows the year-over-year growth of sales tax from FY 2011 Actual through FY 2018 Budget in terms of both dollars and percentages. More discussion of future sales taxes is included in the *Financial Plan Section*.

Exhibit III.11  
Sales Tax Data, Historical and Projected  
(in Millions)



DART anticipates no new Debt Issuances during FY 2018, but will retire \$30 million in commercial paper.

The Federal Funds line items are programmed to increase by \$31.1 million, include both formula and discretionary funds, and represent 17.6% of total sources. Formula funds include both the current year's allocation and carry-over of unspent funds from prior years. Changes in discretionary funds are primarily a result of timing of receipt of funds on several federally-funded projects.

The category of Operating Revenues totals \$82.2 million for FY 2018, a \$3.0 million (3.6%) decrease from FY 2017. The primary cause of the decrease is lower projected bus route ridership, and a lower average fixed route fare.

Interest Income is projected to increase by \$1.7 million (30.1%) from the FY 2017 budget as interest rates slowly increase.

Non-Operating Income is projected to be almost flat, decreasing by \$0.5 million (3.2%).

Other Non-Federal Capital Contributions is projected to decrease by \$0.5 million (\$3.2%) due to reduced contributions from capital project partners other than FWTa.

More discussion of the debt program and Federal Funds are included in the *Financial Plan Section*.

### **Operating Expense Assumptions**

The Operating Expense Budget is approved in total by the Board of Directors in late September of each year. The FY 2018 operating budget includes a net increase of 4 salaried positions and 42 bus and light rail operators, and a decrease of 6 hourly maintenance positions (currently vacant).

The following assumptions were used to develop the FY 2018 Operating Budget:

- Salary and Wage Assumptions
  - 3% pool available for adjustments to compensation and related salary-driven benefits.
  - Any funds available for wage increases will be applied across-the-board for hourly personnel and based on performance for salaried personnel.
  - Hourly wage progressions based on tenure and training will continue.
- Benefits Assumptions
  - DART is undergoing healthcare program restructuring to combat rising healthcare costs, focusing on increased accountability of cost and quality of care by providers. This is reflected in the FY 2018 budget.
  - DART is self-insured for health insurance claims with a third-party administrator.

- Fuel and Energy Assumptions

- The majority of DART's CNG fuel costs are fixed-price by contract and result in an average cost of approximately \$0.98 per DGE (diesel gallon equivalent). CNG fuel is also used for all vehicles providing Paratransit service.
- Diesel fuel is budgeted at \$2.27 per gallon for TRE and the remaining diesel bus fleet.
- Electricity rates per kWh are budgeted at \$0.0869 with an assumption of 11.34 kWh/car mile consumption rate for light rail vehicles (LRV).

- Purchased Transportation Contract Rates

- Trinity Railway Express services are provided through a 10-year contract with Herzog Transit Services, Inc. FY 2018 is the third year of that contract.
- FY 2018 is the sixth year of the seven-year contract with MV Transportation for delivery of Paratransit services. Paratransit contract costs have increased by \$0.7 million related to both scheduled contract increases and anticipated growth in trips to be provided.
- DART provides Vanpool services through a third-party contractor (vRide).

- Service Levels

- Bus: DART will see continued bus service enhancements in FY 2018 as a result of our recent Comprehensive Operations Analysis. There will be significant increases in peak hour service in FY 2019 with the addition of 41 buses. Routes during off-peak hours and weekends will witness more frequent service.
- Light Rail: FY 2018 service levels will include the extension of the Blue Line to UNT-Dallas that opened in October 2016.
- Streetcar: A 0.75-mile extension to the Dallas Streetcar System opened in August 2016. The FY 2018 budget reflects a full year of the increased services.
- Commuter Rail: As stated earlier, the Trinity Railway Express Commuter Rail services are provided by Herzog Transit Services, Inc. through a 10-year contract. The contract includes service costs for TRE and TEX Rail project, which is scheduled to open late 2018.
- General Mobility: The General Mobility program consists mainly of vanpool services. The maximum number of vanpools is 228 for FY 2018, which is unchanged from FY 2017.

- Reserves

- Funding in the amount of approximately \$700,000 is included in the FY 2018 Budget for possible cost increases or programs unknown during the budget process. These funds may or may not be used during the fiscal year.



Exhibit III.12 shows DART's operating expenses by department for the fiscal years 2016 – 2018.

Exhibit III.12  
FY 2016 – FY 2018 Departmental Expense Comparison  
(in Thousands)

<b>FY 2016 Actuals</b>	<b>Department</b>	<b>FY 2017 Budget</b>	<b>FY 2017 Projected</b>	<b>FY 2018 DRAFT</b>
\$2,530	Executive Admin & Safety	\$3,459	\$3,392	\$3,651
7,794	Deputy Executive Director	8,812	8,507	9,761
375,561	EVP Customer Care/Svc Delivery	379,705	381,752	391,841
50,832	EVP Business Solutions & Innovations	56,066	55,982	59,916
39,225	EVP Growth & Regional Svcs	42,927	40,761	45,164
4,883	Board Directs	5,639	5,495	5,798
(7,199)	Agency-Wide Benefits Allocation	2	1,029	5,142
7,439	Agency Initiatives	6,913	4,865	10,578
<b>\$481,066</b>	<b>Total Departmental Expenses</b>	<b>\$503,524</b>	<b>\$501,782</b>	<b>\$531,852</b>
( <b>\$6,968</b> )	Capital P&D and Startup	( <b>\$8,580</b> )	( <b>\$8,580</b> )	( <b>\$8,802</b> )
<b>\$474,098</b>	<b>Total Operating Expenses</b>	<b>\$494,944</b>	<b>\$493,203</b>	<b>\$523,049</b>

## Operating Budget Highlights

DART's Operating Expense increased over FY 2017 budget by \$28.1 million, 5.7% to \$523.0 million. Employee compensation, in the form of Salaries and Wages (\$254.1 million) and Benefits (\$117.2 million), comprised of 69.8% of the total operating budget. The third largest element of the operating budget is Purchased Transportation at 10.7% (\$56.9 million).

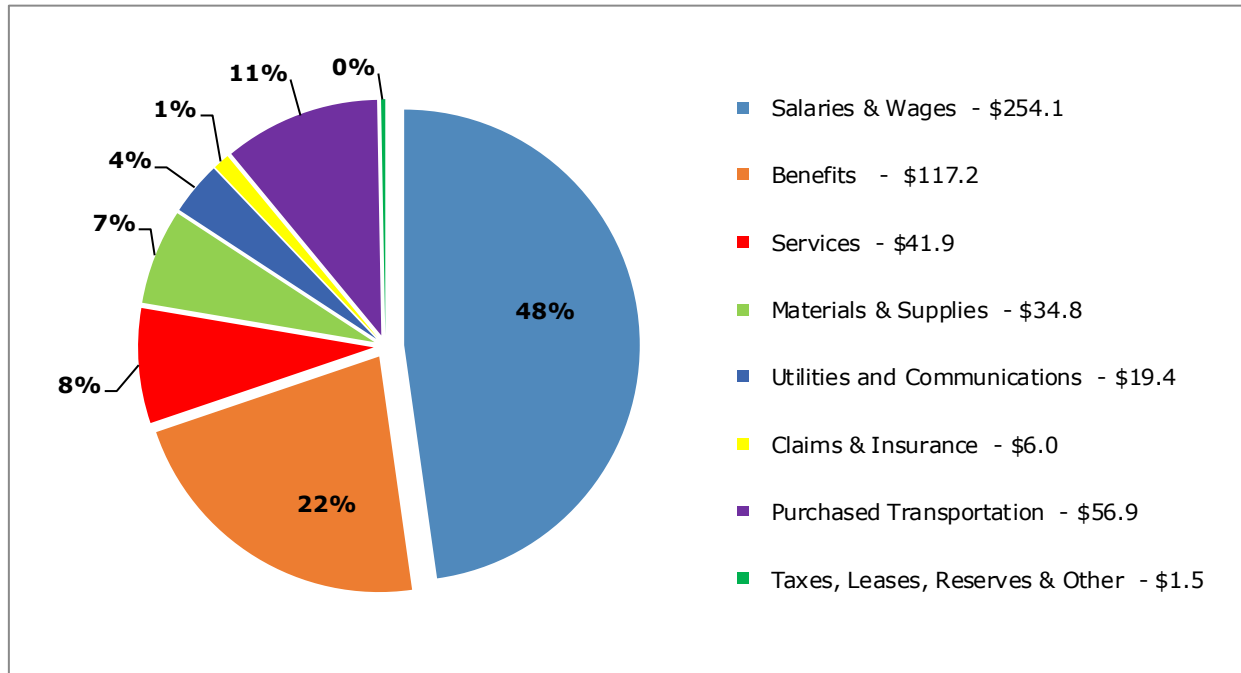
Exhibit III.13 displays the Operating Expense budget by object classification and includes FY 2016 actual amounts, FY 2017 budget, and the FY 2018 budget. More detail by department can be found in the *Organizational Units Section*.

Exhibit III.13  
Operating Expenses by Object Classification  
(in Thousands)

FY16 Actuals	Object Classification	FY17 Budget	FY18 Budget	\$ Variance	% Variance
\$228,596	Salaries & Wages	\$238,384	\$254,057	\$15,673	6.6%
101,675	Benefits	109,519	117,151	7,632	7.0%
32,724	Services	38,990	41,921	2,931	7.5%
38,197	Materials & Supplies	34,633	34,812	179	0.5%
17,985	Utilities and Communications	18,285	19,449	1,165	6.4%
7,537	Claims & Insurance	5,291	5,999	707	13.4%
49,752	Purchased Transportation	54,420	56,935	2,516	4.6%
4,601	Taxes, Leases, Reserves & Other	4,001	1,526	(2,475)	(61.9%)
<b>\$481,066</b>	<b>Sub-Total (All Expenses)</b>	<b>\$503,524</b>	<b>\$531,851</b>	<b>\$28,327</b>	<b>5.6%</b>
<b>(\$6,968)</b>	Capital P&D	<b>(\$8,580)</b>	<b>(\$8,802)</b>	<b>(\$222)</b>	<b>2.6%</b>
<b>\$474,098</b>	<b>Total Operating Expenses</b>	<b>\$494,944</b>	<b>\$523,049</b>	<b>\$28,105</b>	<b>5.7%</b>

Exhibit III.14 illustrates the operating budget, showing the amounts and relative proportions of each component.

Exhibit III.14  
FY 2018 Operating Expenses by Component  
(in Millions)



Please note that the expenses totaled in Exhibit III.14 above exceed the operating budget by \$8.8 million. This is the amount of departmental expenses classified as Capital Planning & Development costs (Capital P&D) and Start-up Costs.

*Salaries and Wages* – The FY 2018 Salaries and Wages budget is \$254.1 million, a \$15.7 million 6.6% increase over the FY 2017 budget.

In the *Salaries and Wages* line item, there is a 3% pool for compensation increases programmed in the FY 2018 budget. Additional headcount in Transportation in support of service level improvements are also reflected in the FY 2018 budget. There is also 100% funding for the bonus programs (Division Level Measurements [DLM] and Reaching Performance Milestones [RPM]), along with the 5 Star Service Program.

Exhibit III.15, on the following page, shows a reconciliation of the positions between FY 2017 and FY 2018. Total authorized positions have increased by a net of 47. The description of these position changes follows the exhibit.

### Exhibit III.15 Budgeted Positions

Full-Time Salaried Employees						
FY 2016	Department	FY 2017	Reorg / Mods	Eliminated	New Positions	Proposed FY 2018
4	Department of the President	4				4
12	Safety Department	12				12
3	Deputy Executive Director	4	1			5
5	Government Relations	5				5
20	Diversity & Economic Opp.	20				20
26	Human Capital	25				25
<b>70</b>	<b>Total President &amp; Deputy ED</b>	<b>70</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>71</b>
95	Finance	95	(1)			94
64	Marketing & Communications	64				64
33	Procurement	33				33
74	Technology	74			2	76
<b>266</b>	<b>Total Business Solutions &amp; Innovation</b>	<b>266</b>	<b>(1)</b>	<b>-</b>	<b>2</b>	<b>267</b>
35	EVP Customer Care/Service Delivery	34	1			35
367	DART Police	367				367
55	Mobility Management Services	55			1	56
213	Maintenance	215				215
232	Transportation	236				236
<b>902</b>	<b>Total EVP Customer Care &amp; Svc. Delivery</b>	<b>907</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>909</b>
15	Commuter Rail	15				15
28	Planning & Development	28				28
37	Rail Program Development	38			1	39
10	Rail Planning	10				10
<b>90</b>	<b>Total EVP Growth &amp; Regional Dev</b>	<b>91</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>92</b>
5	Board Support	5				5
9	Internal Audit	9				9
20	Legal	20				20
<b>34</b>	<b>Total Board Directs</b>	<b>34</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34</b>
	Unassigned Positions	11				11
<b>1,362</b>	<b>Total Salaried</b>	<b>1,379</b>	<b>1</b>	<b>-</b>	<b>4</b>	<b>1,384</b>
Full-Time Hourly Employees						
FY 2016	Department	Approved FY 2017	Reorg / Mods	Eliminated	New Positions	Proposed FY 2018
20	Finance	20				20
58	Marketing & Communications	58				58
<b>78</b>	<b>Total Business Solutions &amp; Innovation</b>	<b>78</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>78</b>
769	Maintenance	762		(7)	1	756
49	Materials Management	49				49
	Transportation Operators					
1,226	Bus	1,261			30	1,291
191	Rail	202			12	214
44	Non Operator	44				44
<b>2,279</b>	<b>Total EVP Customer Care &amp; Svc. Delivery</b>	<b>2,318</b>	<b>-</b>	<b>(7)</b>	<b>43</b>	<b>2,354</b>
<b>2,357</b>	<b>Total Hourly</b>	<b>2,396</b>	<b>-</b>	<b>(7)</b>	<b>43</b>	<b>2,432</b>
<b>3,719</b>	<b>Grand Total Full-Time Employees</b>	<b>3,775</b>	<b>1</b>	<b>(7)</b>	<b>47</b>	<b>3,816</b>

\* Please note these positions have been requested and funding has been included in Agency Initiatives but the President/Executive Director has not given final approval on these positions.

Following is a description of the position changes shown in Exhibit III.15:

- EVP Customer Care/Svc Delivery has a net increase of 42 positions.
  - Transportation added 12 additional Rail Operators to implement APTA Fit-for-Duty standards and 30 additional Bus Operators to fulfill Optimal Operator Calculation aimed at reducing no-pullout instances due to lack of available operators.
  - The Maintenance Department eliminated 7 hourly positions that are currently vacant.

Please note: Funding for 5 new requested positions has been included in the Agency Initiatives line item of the budget, but the President/Executive Director has not given final approval on these positions

Benefits – The Benefits line includes all statutory benefits such as FICA and Workers' Compensation, and the agency discretionary benefits such as Health Insurance, Life Insurance, Retirement Plans (Defined Benefit, Defined Contribution, and 401k), etc. The FY 2018 Benefits budget is \$117.2 million, a \$7.6 million (7.0%) increase from the FY 2017 budget, as shown in Exhibit III.16.

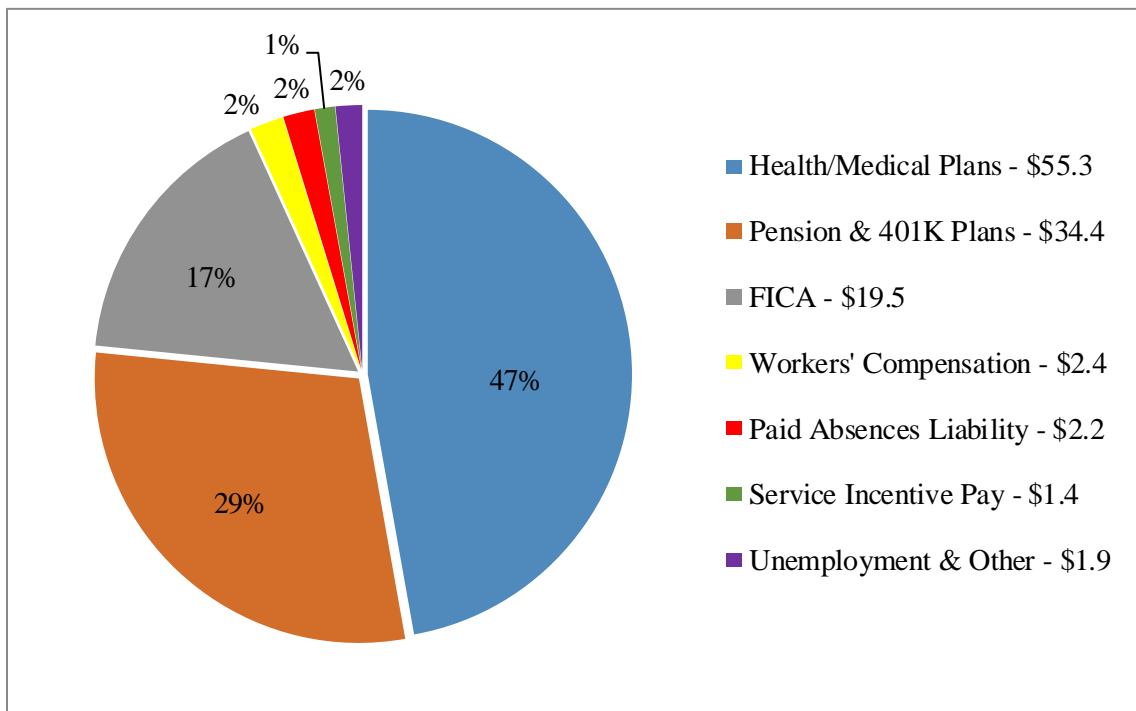
Exhibit III.16  
Benefits Expenses by Type  
(in Thousands)

FY16 Actuals	Object Classification	FY17 Budget	FY18 Proposed Budget	\$ Variance	% Variance
\$46,768	Health/Medical Plans <sup>[1]</sup>	\$50,288	\$55,288	\$5,000	9.9%
29,714	Pension & 401K Plans	32,948	34,421	1,473	4.5%
16,852	FICA	18,313	19,459	1,147	6.3%
4,655	Workers' Compensation	2,400	2,400	(0)	(0.0%)
1,535	Paid Absences Liability	2,242	2,240	(2)	(0.1%)
1,303	Service Incentive Pay	1,448	1,448	(0)	(0.0%)
850	Unemployment & Other	1,881	1,895	15	0.8%
<b>\$101,675</b>	<b>Total Benefits</b>	<b>\$109,519</b>	<b>\$117,151</b>	<b>\$7,632</b>	<b>7.0%</b>

[1] Medical plans include medical, vision, dental claims and employee contributions for active and retirees

Exhibit III.17 is an overview of the percentage of expenditure to major components within the Benefits category for the FY 2018 budget.

Exhibit III.17  
FY 2018 Benefits Budget by Component  
(in Millions)





- Health, Life, and Disability insurance remains the major cost driver of all DART benefits. The increase year-over-year is approximately \$5.0 million (9.9%).
- DART continues to reap benefits in the Workers' Compensation program and has seen success in controlling the rate of increase over the past few years. The FY 2018 budget remains basically the same as in FY 2017 at \$2.4 million, including legal fees associated with workers' compensation claims.

Services – The FY 2018 Services budget of \$41.9 million represents 7.9% of the total agency budget. This is an increase of \$3.3 million (8.4%) over the FY 2017 budget. Computer Services & Software Licenses show the largest dollar value increase at \$2.3 million (34.8%).

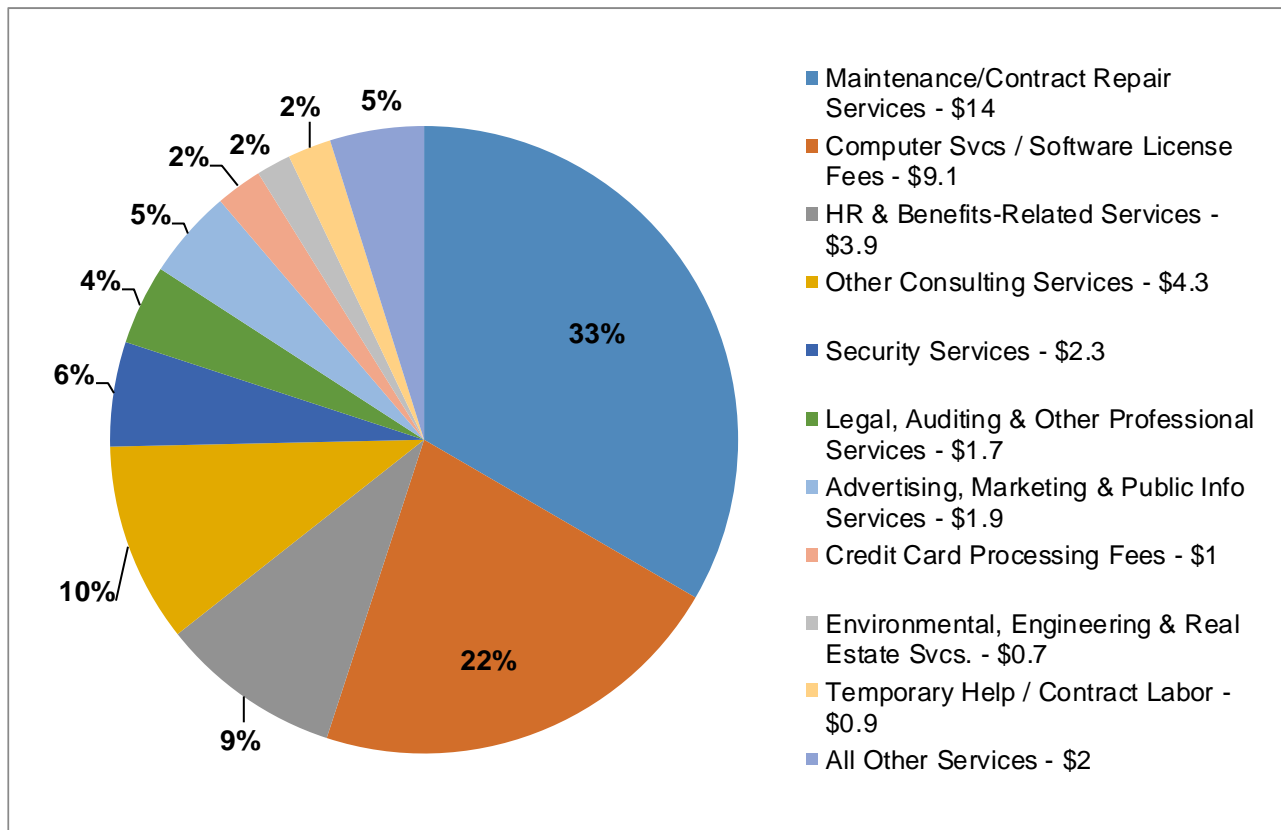
Exhibit III.18 details the Services component of the budget.

Exhibit III.18  
Services Expenses by Type  
(in Thousands)

FY16 Actuals	Object Classification	FY17 Budget	FY18 Budget	\$ Variance	% Variance
\$12,254	Maintenance/Contract Repair Services	\$13,235	\$13,997	\$762	5.8%
4,982	Computer Svcs / Software License Fees	6,727	9,068	2,341	34.8%
3,390	HR & Benefits-Related Services	3,538	3,918	380	10.7%
3,080	Other Consulting Services	4,235	4,312	78	1.8%
1,681	Security Services	2,300	2,260	(40)	(1.8%)
1,100	Legal, Auditing & Other Professional Services	2,230	1,726	(503)	(22.6%)
2,578	Advertising, Marketing & Public Info Services	1,927	1,929	2	0.1%
869	Credit Card Processing Fees	1,240	1,001	(238)	(19.2%)
662	Environmental, Engineering & Real Estate Svcs.	771	744	(26)	(3.4%)
387	Temporary Help / Contract Labor	1,005	938	(68)	(6.7%)
1,740	All Other Services	1,452	2,028	576	39.7%
<b>\$32,724</b>	<b>Total Services</b>	<b>\$38,659</b>	<b>\$41,921</b>	<b>\$3,262</b>	<b>8.4%</b>

Exhibit III.19 illustrates the composition of the Services line item of the budget.

Exhibit III.19  
FY 2018 Services Budget by Component  
(in Millions)



Materials and Supplies – The budget for *Materials and Supplies* decreased year-over-year by 0.4% (\$0.1 million).

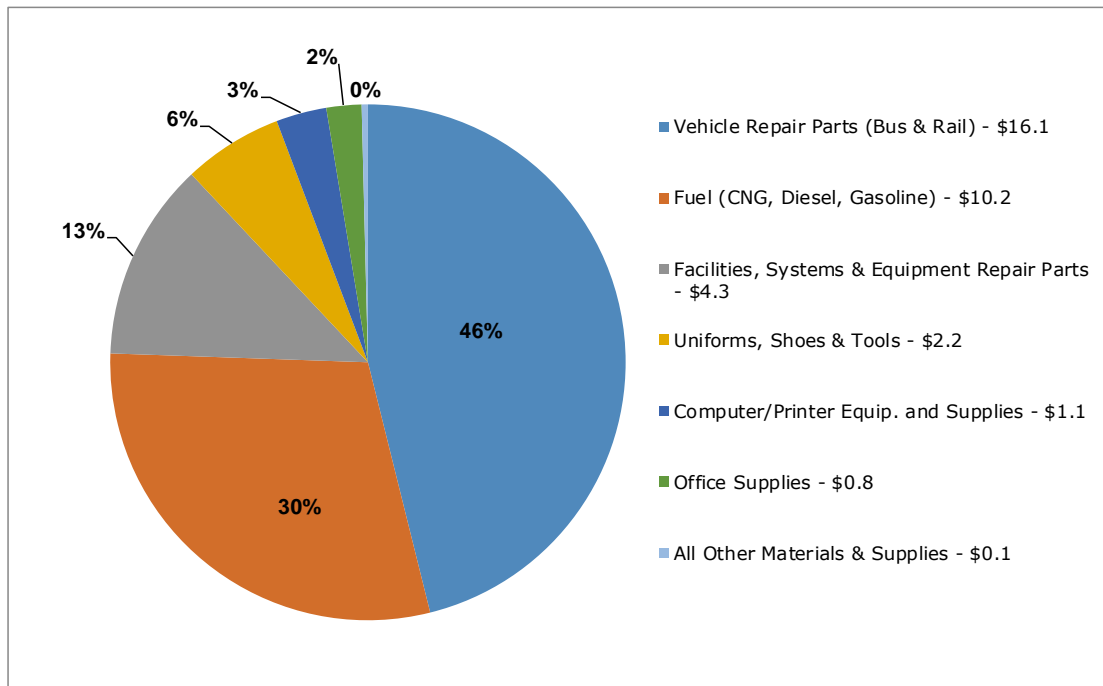
- Vehicle Repair Parts have decreased by \$1.2 million (6.9%).
- The Vehicle Repair Parts decrease was partially offset by increases year-over-year in every other category in Materials & Supplies.

Exhibits III.20 and III.21 provide details about the Materials & Supplies component of the budget.

Exhibit III.20  
Materials & Supplies Expenses by Type  
(in Thousands)

FY16 Actuals	Object Classification	FY17 Budget	FY18 Budget	\$ Variance	% Variance
\$20,152	Vehicle Repair Parts (Bus & Rail)	\$17,240	\$16,054	(\$1,187)	(6.9%)
10,891	Fuel (CNG, Diesel, Gasoline)	9,864	10,246	383	3.9%
4,151	Facilities, Systems & Equipment Repair Parts	4,152	4,332	180	4.3%
1,676	Uniforms, Shoes & Tools	1,850	2,175	326	17.6%
746	Computer/Printer Equip. and Supplies	1,080	1,102	22	2.0%
485	Office Supplies	644	766	122	18.9%
95	All Other Materials & Supplies	126	136	10	7.8%
<b>\$38,197</b>	<b>Total Materials &amp; Supplies</b>	<b>\$34,957</b>	<b>\$34,812</b>	<b>(\$145)</b>	<b>(0.4%)</b>

Exhibit III.21  
FY 2018 Materials & Supplies Budget by Component

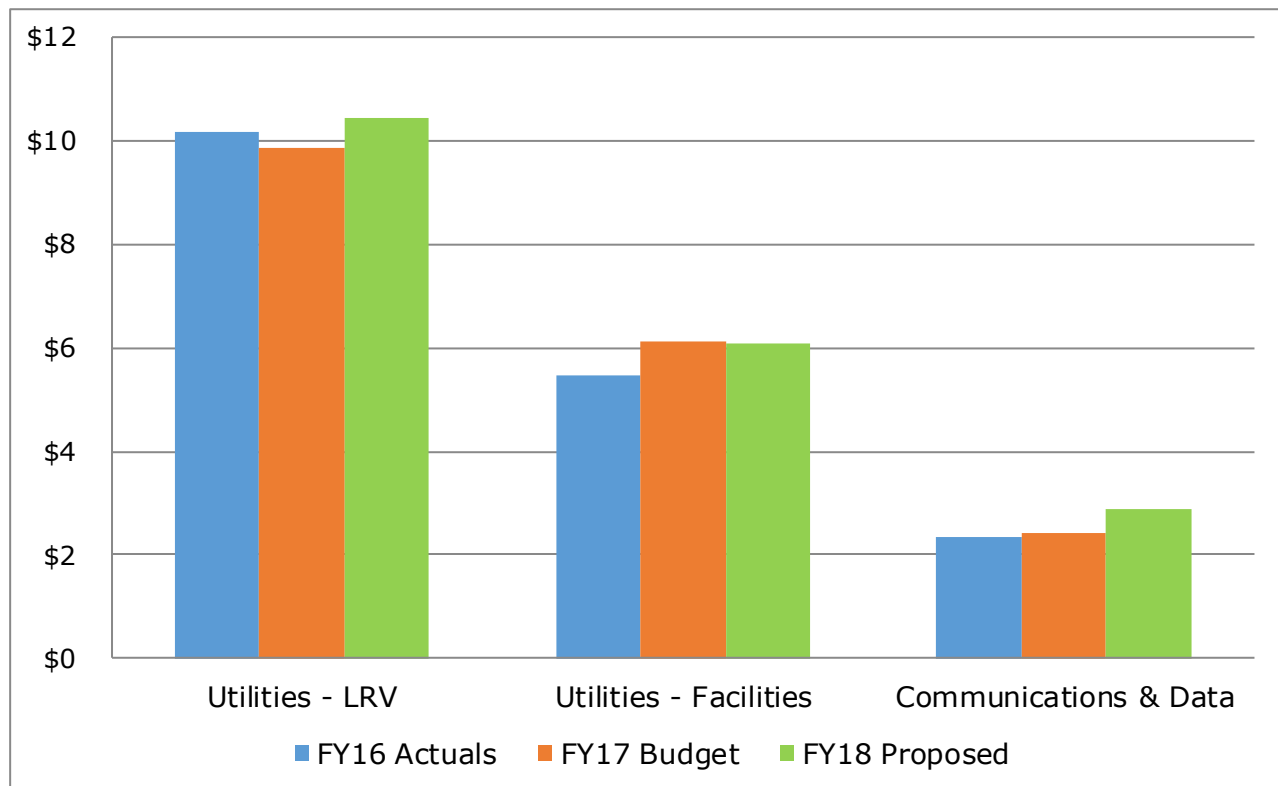


(in Millions)

**Utilities and Communications** – This category includes electricity for the Light Rail system and DART facilities, as well as phone and data services for the agency. The budget for FY 2018 is \$19.4 million a 5.6% increase year over year. This category represents 3.7% of the total Agency’s operating budget.

Exhibit III.22 compares the Utilities & Communications expenses over the last three years.

Exhibit III.22  
FY 2018 Utilities & Communications Expense Comparison  
(in Millions)



**Claims and Insurance** – This category includes DART’s liability claims and property insurance costs. DART is 100% self-insured for liability claims relating to bus accidents and other operations. On rail operations liability, DART is self-insured for the initial \$3 million per occurrence. DART also carries insurance for Errors and Omissions Liability and other coverage. DART carries property insurance with a \$250,000 deductible per occurrence.

The FY 2018 budget for this category increased by \$0.7 million (13.4%) compared to FY 2017.

**Purchased Transportation** – These services are purchased through a third party to provide transportation services for DART. The budget for this category increased by \$2.8 million (5.2%) in the FY 2018 budget over FY 2017 due to increases in contract rates and service levels.

Exhibit III.23 compares Purchased Transportation expenses between FY 2016 and FY 2018.

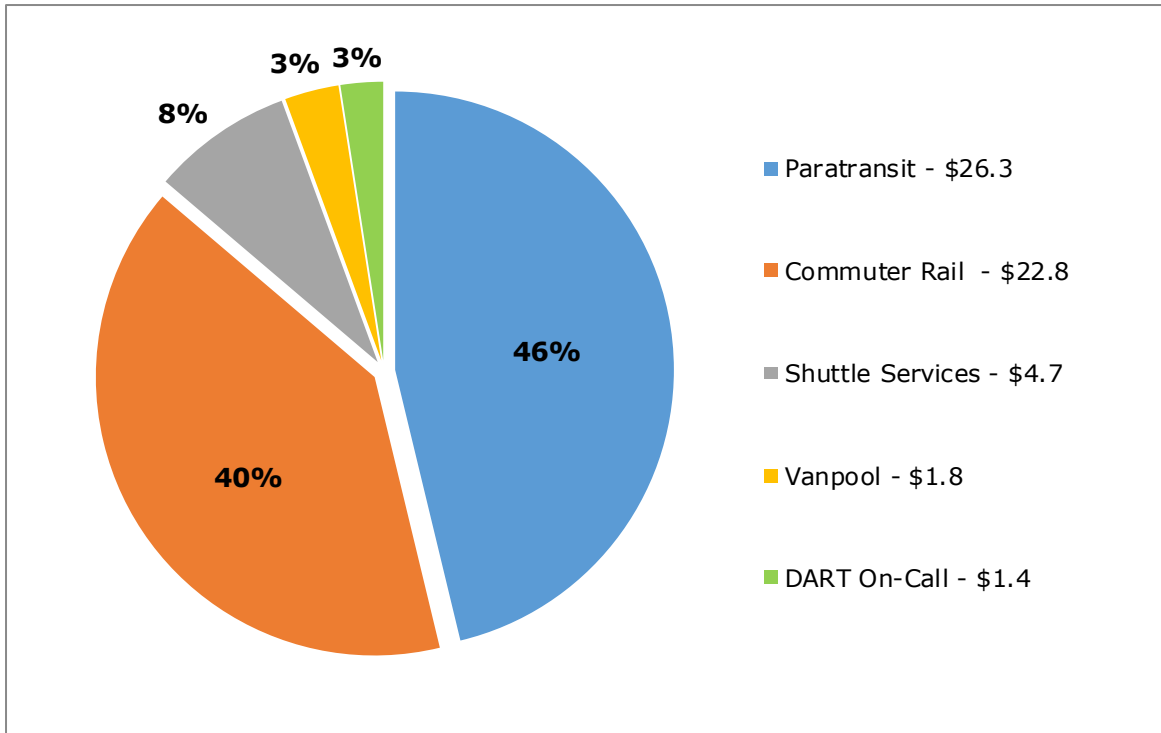
Exhibit III.23  
Purchased Transportation Expenses by Type  
(in Thousands)

<b>FY16 Actuals</b>	<b>Object Classification</b>	<b>FY17 Budget</b>	<b>FY18 Budget</b>	<b>\$ Variance</b>	<b>% Variance</b>
\$24,168	Paratransit	\$25,657	\$26,325	\$668	2.6%
20,061	Commuter Rail	22,333	22,770	437	2.0%
2,402	Shuttle Services	2,982	4,651	1,669	56.0%
1,747	Vanpool	1,789	1,788	(0)	(0.0%)
1,374	DART On-Call	1,382	1,400	18	1.3%
<b>\$49,752</b>	<b>Total Purchased Transportation</b>	<b>\$54,143</b>	<b>\$56,935</b>	<b>\$2,792</b>	<b>100.0%</b>

- Paratransit contract costs increased by \$0.7 million (2.6%) because of both slight contract rate increases and projected increase in demand for trips.
- Trinity Railway Express costs increased slightly by \$0.4 million. This is a combination of a decrease in certain periodic maintenance fees that happen to occur during the first year of the new contract and an increase in service levels.
- Shuttle Services increased by \$1.7 million (56.0%) primarily due to new Mobility On Demand (MOD) service in FY 2018.

Exhibit III.24 highlights the components of the Purchased Transportation category.

Exhibit III.24  
FY 2018 Purchased Budget by Component  
(in Millions)



The FY 2018 Taxes, Leases and Other expense budget is \$1.5 million, a \$2.7 million (63.7%) decrease from FY 2017. This is inclusive of a \$1.7 million agency-credit for savings to be identified during the year.



## Capital and Non-Operating Budget

Exhibit 25 is a summary of the Capital and Non-Operating Project Expenditures from FY 2015-FY 2017, which includes: Light Rail Transit (LRT) expansion; TRE track work; vehicle and facility capital maintenance programs; scheduled replacement of vehicles, facilities, infrastructure; etc. A comprehensive list showing all capital and non-operating projects (and associated reserves) is contained in Exhibit 18 in the *Financial Plan Section*.

### Exhibit III.25 Capital & Non-Operating Project Expenditure Comparison (in Thousands)

FY16 Actuals	Category	FY17 Budget	FY18 Budget	\$ Variance
\$148,703	Total Capital Projects	\$261,534	\$237,314	(\$24,221)
6,225	Capital Planning & Development	7,830	8,802	973
0	Start-up	750	0	(750)
1,948	Non-Operating	5,650	3,613	(2,038)
<b>\$156,876</b>	<b>Sub-Total Capital / Non-Operating</b>	<b>\$275,764</b>	<b>\$249,729</b>	<b>(\$26,036)</b>
<i>Road Improvements</i>				
0	PASS Program	\$6,608	\$5,000	(\$1,608)
501	TSM (General & Street Repair Program)	6,722	10,537	3,815
0	Regional & DART/TxDOT ITS	0	0	0
<b>\$501</b>	<b>Sub-total Road Improvements</b>	<b>\$13,330</b>	<b>\$15,537</b>	<b>\$2,207</b>
<b>\$157,377</b>	<b>Total Capital &amp; Non-Op./Road Imp.</b>	<b>\$289,094</b>	<b>\$265,266</b>	<b>(\$23,828)</b>
\$651	LAP/CMS Program*	\$0	\$0	\$0
<b>\$158,028</b>	<b>Total Capital &amp; Non-Op./Road Imp./LAP/CMS Progra</b>	<b>\$289,094</b>	<b>\$265,266</b>	<b>(\$23,828)</b>

\* Please note that although no further funds are being allocated to these programs, funds allocated in prior years may be

## Debt Service Budget

The FY 2018 Debt Service Budget is shown below in Exhibit III.26. Additional information on DART's Debt Program can be found in the *Financial Plan Section* on beginning on page II-33.

Exhibit III.26  
Debt Service Expense Comparison  
(in Millions)

<b>FY 2016 Actual</b>	<b>Description</b>	<b>FY 2017 Budget</b>	<b>FY 2018 Budget</b>	<b>\$ Variance</b>
\$140.3	Long-Term Debt Interest Expense*	\$135.8	\$135.9	\$0.1
0.4	Commercial Paper Program Expenses	1.2	1.5	0.3
0.2	Financial Advisor and Other Fees	0.5	0.5	0.0
<b>\$140.9</b>	<b>Total Expenses</b>	<b>\$137.5</b>	<b>\$137.9</b>	<b>\$0.4</b>
\$48.1	Principal Repayments - Bonds	\$54.0	\$55.9	\$2.0
<b>\$189.0</b>	<b>Total Debt Service Budget</b>	<b>\$191.5</b>	<b>\$193.8</b>	<b>\$2.3</b>

\* Net interest expense including Build-America Bonds (BABs).

## **Organizational Units**

This section contains key performance indicators and budget details by mode, as well as goals and functions by organizational unit.

### **Overview**

DART is organized broadly along the following functional lines (“organizational units”).

### **Customer Care & Service Delivery**

Providing effective, efficient, safe, secure service.

- 5 Star Service Program
- Bus & Light Rail System Transportation
- Bus & Light Rail System Maintenance
- Materials Management
- System Police & Security
- Mobility Management Services
  - Paratransit

### **Business Solutions & Innovation**

Maximizing Agency resources through attractive marketing, innovative technology, sound risk management, effective procurement, and astute financial management.

- Finance
- Risk Management
- Technology
- Marketing & Communications
- Procurement

### **Workforce & Customer Safety**

Providing a structure for a safe transportation network for customers and citizens of the DART Service Area, and the safest work environment for employees, customers, and people on DART property and construction sites.

- Operations
- Customers

## **Growth/Regional Development**

Planning & Development of the overall system.

- Planning & Development
- Capital Planning
- Capital Design & Construction
- Commuter Rail and Railroad Management
- Real Property and Transit Oriented Development (TOD)

## **Workforce Leadership & Development**

Providing effective leadership.

- Human Capital
- Diversity & Labor Services
- Government Relations
- Office of Policy & Strategy

## **Functional Units Reporting Directly to the Board of Directors**

The **Office of the General Counsel** represents the Agency in all judicial and administrative proceedings, including Equal Employment Opportunity Commission, employee grievance, and construction matters. The Office also provides advice, guidance, and counsel to the Board of Directors and Agency staff on ethics, transactional, real estate, procurement, labor/employment, and regulatory matters. The Office oversees the Open Records function in coordination with representatives in the various agency departments.

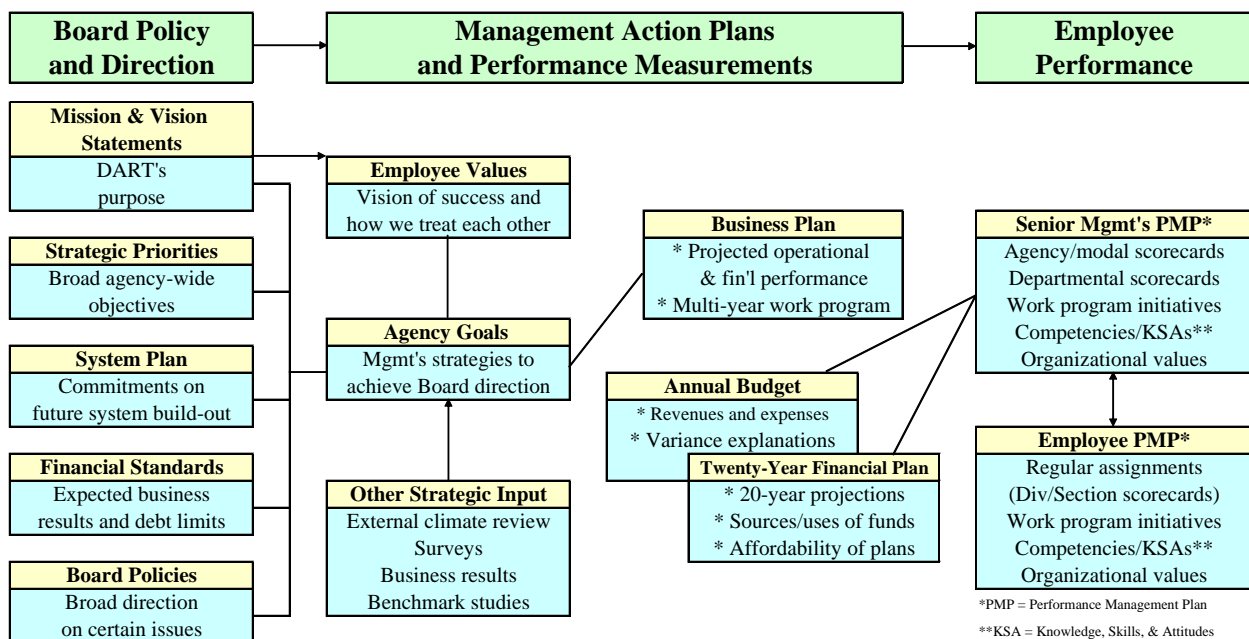
In accordance with DART's Audit Committee Charter and the Internal Audit Department Charter, the **Office of Internal Audit** operates as an independent appraisal function within DART, reporting to the Board of Directors through the Audit Committee of the Board. The Internal Audit Department conducts audits of operational functions, including technology, to assess the control of the risks to business objectives and audits of contracts for compliance.

The **Office of Board Support** provides administrative support to the Board of Directors, plus administrative/clerical support for the Trial Board (which renders decisions on hourly employee grievances), and for the Administrative Law Judges (who render decisions on contract disputes). Staff support includes coordination of Board and Committee meeting dates and times, and the management of all official DART Board policies and records of Board and Committee meetings. The FY 2018 Operating Budget and positions by department are shown in the *FY 2018 Annual Budget* section, in Exhibits III.16 and III.17, respectively.

## Development of Unit Goals

DART's leadership uses a framework of aligned strategic planning tools to ensure DART employees understand how their jobs and performance are linked to the Agency's mission statement, direction, and strategic priorities. DART's Strategic Alignment Structure is shown in Exhibit IV.1. Performance measurements are incorporated into tracking and reporting processes at all levels of the Agency. The major components of the leadership system are described in more detail in the remainder of this section.

Exhibit IV.1  
DART's Strategic Alignment Structure



**Mission Statement** – DART's mission statement defines the purpose for which the Agency was created:

The mission of Dallas Area Rapid Transit is to build, establish, and operate a safe, efficient, and effective transportation system that, within the DART Service Area, provides mobility, improves the quality of life, and stimulates economic development through the implementation of the DART Service Plan as adopted by the voters on August 13, 1983, and as amended from time to time.

*DART Vision Statement* – To help achieve the Board’s mission and strategic priorities, the Board has approved a vision statement to address DART’s customers and stakeholders.

**DART: Your preferred choice of transportation for now and in the future...**

*Board Strategic Priorities* – To achieve this mission and ensure Agency alignment, in April 2015 the Board adopted the following six Strategic Priorities for FY 2016 through FY 2020:

1. Continually improve service and safety experiences and perceptions
2. Optimize and preserve (state of good repair) the existing transit system
3. Optimize DART’s influence in regional transportation planning
4. Expand DART’s transportation system to serve cities inside and outside the current service area
5. Pursue excellence through employee engagement, development, and well-being
6. Innovate to improve levels of service, business processes, and funding

*DART Organizational Values* – The Agency’s values statement is:

DART employees value being:

- Focused on Our Customers
  - ✓ We are dedicated to meeting our customers’ needs.
  - ✓ We strive for continuous improvement.
  - ✓ We deliver quality.
- Committed to Safety and Security
  - ✓ We require safety and security to be the responsibility of every employee.
  - ✓ We are committed to ensuring the safety and security of our passengers and employees.
- Dedicated to Excellence
  - ✓ We demonstrate a high regard for each other.
  - ✓ We are committed to innovation and learning from our experiences.
  - ✓ We hold ourselves accountable.
  - ✓ We coach, reinforce, and recognize employees.
  - ✓ We foster an environment promoting diversity of people and ideas.



- Good Stewards of the Public Trust
  - ✓ We responsibly use public funds and property.
  - ✓ We maintain open communication with customers and stakeholders.
  - ✓ We respect the environment.
  - ✓ We strive to mitigate risk.
  - ✓ We demand integrity and honesty.

Strategic Plan – DART’s Strategic Plan identifies, integrates, and aligns DART’s priorities, goals, and tactical objectives. The Plan provides a dynamic structure for staying on track with long-term financial, development, and operational commitments within a rapidly changing political and economic context.

The Strategic Plan identifies what needs to be accomplished; the Business Plan defines how management intends to achieve it. Management’s Goals, Department Objectives, and Department Performance Measures indicate progress toward the Strategic Plan’s priorities.

The Strategic Plan and the events and initiatives contained in the Business Plan are the basis for the FY 2018 Annual Budget and Twenty-Year Financial Plan and for measuring management and employee performance. Executive management monitors key scorecard elements and work program initiatives on a monthly and quarterly basis. Exception reporting for key scorecard elements is provided to the Board on a quarterly basis in a green/yellow/red format. For more information on performance reporting, readers should review a copy of DART’s Quarterly Operating and Financial Performance Report which is available on DART’s website, [DART.org](http://DART.org).

DART’s Strategic Measurements – Exhibit IV.2 highlights DART’s strategic measurements. The leading indicators are the key financial, operational, and employee performance drivers that, if achieved, will yield improved Agency-wide performance. Measurement definitions are included in the Glossary in the *Reference Section* of this document.

The measurements in Exhibit IV.2 as well as other measurements, are used by the DART organizational units to assess progress towards performance that supports the achievement of DART strategic goals. These measurements (“key performance indicators” or KPIs) can be found in more than one organizational unit – as many agency activities support each strategic priority.

Exhibit IV.2  
DART’s Strategic Measurements

Strategic Priority	Examples of Key Leading Indicators	Examples of Key Lagging Indicators
<ul style="list-style-type: none"> <li>Continually improve service and safety experiences and perceptions for customers and the public</li> </ul>	<ul style="list-style-type: none"> <li>On-time performance</li> <li>Accidents per 100k miles</li> <li>Complaints per 100k passengers</li> <li>Call Center service levels</li> </ul>	<ul style="list-style-type: none"> <li>Ridership</li> <li>Passengers per mile/hour</li> <li>Customer satisfaction surveys</li> <li>Passenger revenues</li> <li>Passengers per mile/hour</li> </ul>
<ul style="list-style-type: none"> <li>Optimize and preserve (state of good repair) the existing transit system</li> </ul>	<ul style="list-style-type: none"> <li>Revenue miles/hours</li> <li>Average system speed</li> <li>Timely replacement of assets</li> <li>Mean distance between service calls</li> </ul>	<ul style="list-style-type: none"> <li>Ridership</li> <li>Customer satisfaction surveys</li> </ul>
<ul style="list-style-type: none"> <li>Optimize DART’s influence in regional transportation planning</li> </ul>	<ul style="list-style-type: none"> <li>News clippings and other media</li> <li>Actual schedule vs. plan for system expansion</li> <li>Complaints/Commendations</li> </ul>	<ul style="list-style-type: none"> <li>Completion of Transportation System Plan commitments</li> <li>Joint development created</li> <li>Regional funding</li> </ul>
<ul style="list-style-type: none"> <li>Expand DART’s transportation system to serve cities inside and outside the current service area</li> </ul>	<ul style="list-style-type: none"> <li>Actual schedule vs. plan for system expansion</li> <li>Revenue miles/hours</li> </ul>	<ul style="list-style-type: none"> <li>Number of arrangements to provide service to cities outside the current service area</li> <li>Ridership</li> </ul>
<ul style="list-style-type: none"> <li>Pursue excellence through employee engagement, development, and well-being</li> </ul>	<ul style="list-style-type: none"> <li>Employee verbal feedback</li> <li>Number of grievances</li> <li>Corrective disciplinary actions</li> <li>Retention/Absenteeism</li> <li>Operator lost-time claims</li> <li>Unscheduled absences</li> </ul>	<ul style="list-style-type: none"> <li>Employee satisfaction survey</li> </ul>
<ul style="list-style-type: none"> <li>Innovate to improve levels of service, business processes, and funding</li> </ul>	<ul style="list-style-type: none"> <li>Passenger revenues</li> <li>Advertising and other revenues</li> <li>Federal Funding</li> <li>Cycle time/process measurements</li> <li>Project implementation vs. plan</li> <li>Benchmark comparisons</li> <li>Deadhead ratio</li> <li>Pay-to-platform ratio</li> </ul>	<ul style="list-style-type: none"> <li>Ridership</li> <li>Subsidy per passenger</li> <li>Administrative ratio</li> <li>Sales taxes for operations</li> <li>Unused financing capacity</li> </ul>

**DART Key Performance Indicators**

DART's Scorecard of Key Performance Indicators (KPIs) is shown in Exhibit IV.3. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.3  
DART Scorecard of Key Performance Indicators (KPIs)

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Ridership Performance</b>					
Total Agency Ridership (M)	70.2	67.1	66.1	69.5	67.8
Fixed-Route Ridership (M)	68.6	65.5	64.6	67.9	66.2
Ridership - Bus (M)	36.5	33.7	32.7	34.8	33.0
Ridership - LRT (M)	29.9	29.8	29.9	30.8	31.0
Ridership - TRE (M)	2.2	2.1	2.1	2.2	2.2
Ridership - Paratransit (000s)	781.8	810.3	804.1	833.3	831.0
Ridership - Vanpool (000s)	871.4	792.0	708.6	838.0	720.4
<b>Efficiency Measures</b>					
Subsidy Per Passenger - Total System	\$5.28	\$5.90	\$6.10	\$5.93	\$6.73
Subsidy Per Passenger - Fixed-Route	\$4.95	\$5.53	\$5.72	\$5.56	\$6.27
Subsidy Per Passenger - Bus	\$5.47	\$6.19	\$6.52	\$6.38	\$7.51
Subsidy Per Passenger - LRT	\$4.24	\$4.55	\$4.57	\$4.42	\$4.73
Subsidy Per Passenger - TRE	\$6.11	\$9.00	\$9.80	\$8.50	\$9.08
Subsidy Per Passenger - Paratransit	\$40.02	\$41.15	\$41.28	\$41.90	\$44.66
Subsidy Per Passenger - Vanpool	\$0.09	\$0.36	\$0.20	(\$0.19)	\$1.22
Farebox Recovery Ratio - Fixed-Route	16.0%	15.3%	14.2%	15.0%	13.8%
Farebox Recovery Ratio - Bus	13.4%	12.3%	12.2%	12.3%	9.9%
Farebox Recovery Ratio - LRT	18.2%	16.6%	16.4%	16.3%	16.5%
Farebox Recovery Ratio - TRE	33.0%	27.6%	20.7%	31.4%	32.9%
Administrative Ratio	8.6%	9.5%	9.9%	9.6%	9.6%
<b>Service Quality</b>					
On-Time Performance - Fixed Route	90.4%	89.9%	89.9%	90.3%	90.3%
On-Time Performance - Bus	79.2%	79.3%	79.7%	80.0%	80.0%
On-Time Performance - LRT	93.6%	92.5%	92.0%	94.0%	94.0%
On-Time Performance - TRE	98.3%	97.9%	98.0%	97.0%	97.0%
<b>Customer Satisfaction</b>					
Complaints Per 100,000 Passengers - Fixed-Route	37.2	41.3	38.5	37.4	36.0
Complaints Per 100,000 Passengers - Bus	57.1	60.2	57.1	57.0	57.0
Complaints Per 100,000 Passengers - LRT	15.3	22.4	20.5	17.5	17.5
Complaints Per 100,000 Passengers - TRE	3.1	5.2	5.7	5.5	5.5
Complaints Per 1,000 Trips - Paratransit	4.3	4.1	4.0	3.0	3.0
<b>Safety</b>					
Accidents Per 100,000 Miles - Fixed-Route	2.07	1.95	1.88	1.96	1.96
Accidents Per 100,000 Miles - Bus	2.51	2.32	2.21	2.30	2.30
Accidents Per 100,000 Train Miles - LRT <sup>[1]</sup>	0.32	0.45	0.59	0.35	0.35
Accidents Per 100,000 Miles - TRE	0.27	0.37	0.51	1.00	1.00

[1] The measure has been restated from Accidents/Car Mile to Accidents/Train Mile; therefore, will not tie to previous reports.



Blank page

## Customer Care & Service Delivery

Customer Care & Service Delivery is charged with providing effective, efficient, safe, and secure transportation service. The Executive Vice President, Chief Operations Officer, has oversight of DART bus, light rail, and paratransit services, as well as Materials Management and the DART Police Department. The Executive Vice President reports to DART's President/Executive Director and is the management liaison for the Board's Operations, Safety, and Security Committee for departmental matters.

Customer Care & Service Delivery has reorganized its Transportation and Maintenance units into Bus Service, Rail Service, and Engineering. This change looks to improve performance and transparency, better align support functions with service, and establish a framework more in line with contemporary industry approaches. This cost-neutral realignment became effective April 1, 2017. The departmental costs shown in the Business Plan document retain the former structure to enable comparison to prior years. Future financial schedules will be restated with the new structure.

*5 Star Service Program* – This initiative is a major cultural transition for DART. Fiscal Year 2018 will be the sixth year of moving the agency towards a customer-oriented culture. The customer focus culture is a significant change in how we approach customer service internally and externally. In addition, the program emphasizes moving toward accountability. Accountable employees at every level of the organization have a role in facilitating the change and demonstrating ownership needed for making true progress, both for the individual, department, and organization. Three initiatives this year are:

- The 5 Star Program Steering Committee – Provides oversight on long-term strategies in support of 5 Star program goals, definition achievement, values culture change, continuous improvement, high performance, recognition, image, and brand. The committee is comprised of twenty vice presidents from each business unit of the organization and three graduate customer experience officers.
- Practicing, Leading, and Serving: A New Management Course – A 20-hour training course has been developed to help employees become better leaders, replace old leadership styles with new behaviors that can be integrated into daily routines of work to improve employee relationships and team performance. The key principles of the course include: Person of Character, Put People First, Skilled Communicator, Compassionate Collaborator, Foresights, Systems Thinker, and Leads with Moral Authority. This course will use the culture of collaboration and accountability to advance DART employees to the next level of leadership.
- 5 Star Service Program Website – An internal DART website is under development. This will allow employees to access 5 Star Service Program information and current events. The information will include program objectives and collateral materials housed in the following pillars: Culture Change, Center of Excellence, Improved Services, High Performance and Recognition, and Image and Brand. Additional information includes a photo gallery, videos, training materials, and program guidelines.

The following 5 Star initiatives are the cornerstones of the program and will continue in 2018:

- Customer Experience Officers (CEOs) are 5 Star Program champions in their respective work units. These persons are selected in each department by an employee application and interview process.
- Continuous Improvement Teams (CIT) are problem-solving groups that include approximately 60 employees at any given time, selected by departments to solve technical problems, improve processes, or create new ways to improve working relationships within the agency or with the agency's customers. Fifteen teams have implemented their projects to date.
- The Culture Change Management Series is a schedule of three guest speakers per year. The program has been a huge success with employees. Speakers have included representatives from Disney, Southwest Airlines, and Interstate Batteries, as well as college professors from across the country.
- Customer Service Events are a scheduled series of direct interaction activities at rail stations, transit centers, divisions, departments, and special occasions. Refreshments and small giveaways are provided for internal and external customers. Approximately 40-50 activities are scheduled each year.
- Marketing and Momentum activities include creation and distribution of printed materials, creation of video and PowerPoint presentations, employee recognition events, event photography, and placement of weekly 5 Star messages on DARTnet.
- Employee Recognition includes events, plaques, trophies, and nominal prizes to recognize achievements such as CEO training completion, CIT accomplishments, outstanding "Wow" customer service by an employee, etc.
- Ongoing 5 Star training is provided to front-line employees as part of their refresher or recertification training; leadership and communication training is being rolled out to all management staff, initially within the operating departments that are responsible for providing leadership to customer-facing team members.
- 5 Star Suggestions – Employee ideas submitted through the workflow process continues to be a positive venue in which employees let management know of innovative and useful ways to improve DART. To date, the program has received 704 suggestions and approximately 500 are in progress and/or implemented. Suggestions include a wide range of areas such as: employee recognition, equipment and signage enhancements, training, communication upgrades, and service improvements.



The 5 Star Service Program has five pillars:

- ✓ Culture Change
- ✓ Center of Excellence
- ✓ Improved Services
- ✓ High Performance and Recognition
- ✓ Image and Brand.



## Bus & Light Rail System Transportation

### *Bus System*

DART endeavors to improve the quality, efficiency, and effectiveness of the bus system. A more detailed description of long-term strategies for improving bus service is contained in Section 6.3 of DART's 2030 Transit System Plan.

DART's fixed-route bus service operates from three facilities: East Dallas, Northwest, and South Oak Cliff. DART operates a total of 650 buses and maintains extensive passenger amenity and facility infrastructure including approximately: 11,383 bus stops, 1,510 bus shelters, 1,484 benches, 9 transit centers, 2 passenger transfer locations, 20 enhanced shelters, multiple information pylons, and all operating divisions and corporate offices, for a total of approximately 70 million square feet. The Vice President of Transportation directs the overall activities of the department and reports directly to the Executive Vice President/Chief Operations Officer.

### Bus Scorecard – Key Performance Indicators

Exhibit IV.4 highlights the Bus Key Performance Indicators (KPIs) presented in scorecard format. These KPIs measure our success towards achieving the goal of providing effective, efficient, safe, and secure transportation service. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr 2 represents the four-quarter rolling period ending March 31, 2017. The numbers in the columns for fiscal years 2017 and 2018 are the target values for those years.

Exhibit IV.4  
Bus Scorecard – Key Performance Indicators

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Customer Quality</b>					
Ridership (M)	36.5	33.7	32.7	34.8	33.0
Revenue Miles (M)	25.2	25.0	24.9	25.0	25.4
Passengers per Mile	1.45	1.35	1.31	1.39	1.30
Farebox Recovery Ratio	13.4%	12.3%	12.2%	11.1%	9.9%
Complaints per 100K Passengers	57.1	60.2	57.1	57.0	57.0
On Time Performance	79.2%	79.3%	79.7%	80.0%	80.0%
Mean Distance Between Service Calls	9,977	10,325	9,980	12,220	12,220
Veh. Accidents Per 100K Miles	2.51	2.32	2.21	2.30	2.30
Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Financial Efficiency</b>					
Expenses - Fully Allocated (M)	\$236.6	\$244.3	\$248.6	\$258.8	\$275.2
Revenues (M)	\$36.9	\$35.6	\$35.5	\$36.5	\$27.2
Net Subsidy (M)	\$199.7	\$208.6	\$213.1	\$222.3	\$248.0
Subsidy Per Passenger	\$5.47	\$6.19	\$6.52	\$6.38	\$7.51
Cost Per Revenue Mile	\$9.41	\$9.77	\$9.98	\$10.35	\$10.84

*On-time Performance* – Beginning in FY 2014, DART changed the way on-time performance was measured. The Automatic Vehicle Location (AVL) technology that is part of the new radio system enables us to measure the location of each bus at every stop and time point along its route. While the new system provides more detailed information to help staff improve service reliability for customers, the new measures are not directly comparable to the previous measurement system. Other transit properties that have implemented similar systems have seen their on-time performance metrics drop from the 90% range to the 70%-to-80% range. See Exhibit IV.4 on Page IV-11 for the impact on DART's on-time performance beginning in FY 2014.

*On-Time Performance Initiatives* – Bus on-time performance will continue to be a major emphasis in FY 2018 with enhanced data provided by the new radio system and the associated AVL and Computer-Aided Dispatch (CAD) subsystems.

- The new AVL System is allowing DART to:
  - Collect detailed on-time performance reporting at the route, vehicle, and operator level;
  - Collect detailed running time information that enables service planning staff to adjust bus schedules to better reflect actual runtimes, improve the timing of system connections, and provide for adequate recovery times;
  - Improve the monitoring and real-time service management of bus on-time performance;
  - Provide real-time feedback to the operator on schedule adherence; and
  - Provide critical information for customer complaint resolution.

In 2018, the CAD/AVL system will be used to improve the reliability of connections, so that a bus departure can be held for a few minutes to allow a late-running connecting bus to arrive. This use of the system will help reduce one of the more frustrating events for riders – missed connections. Additionally, DART Technology staff is working with Trapeze, the firm that provides DART's AVL software, to develop a system for coordinating connections between buses and trains. In 2018, Bus Operations will also be implementing an On-Time Performance (OTP) Recognition Program to encourage and support operator focus on improving on-time performance.

The use of Automatic Passenger Counters (APC) on trains and buses supports the collection of real-time ridership as well as schedule performance by stop. Bus APC units have been installed on more than 150 buses as part of the new radio system implementation and are providing more accurate passenger counts and runtime data to support planning and scheduling decisions. Additional APC equipment will be installed in FY 2018 to permit passenger counts to be estimated from APC counts rather than farebox data. Software was installed in FY 2014, which is significantly improving the analysis of CAD/AVL and APC data to obtain more accurate schedule running time information.

*Fatigue Management* – Beginning in FY 2014, DART initiated pilot programs focused on better managing operator work assignments to reduce the potential for operator fatigue. One element of Fatigue Management has been the reconfiguration of the Extra Board (those operators who work fill-in assignments to cover vacations or sick time) into an AM and PM Board, providing operators with improved consistency in the span of their work hours and providing greater assurance of

adequate rest time between one work day and the next. These modifications in work assignments are critical to supporting enhanced safety, as well as employee health and quality of life. The AM and PM Extra Board reconfiguration has been successfully piloted for Rail operators and Smart Bus operators. DART Management has been working with ATU, Local 1338, to develop plans to introduce a pilot program for operators of full-size buses, as well as to provide a mandatory rest period of nine hours between work days.

*Bus Collision Reduction Program* – In FY 2017, Bus Operations partnered with the Texas Transportation Institute on a pilot program to evaluate the effectiveness of visual treatments to DART’s buses to reduce the number of collisions experienced. The pilot program concluded that the modifications reduced accidents 40% during non-daylight hours. In FY 2018, the vehicle modifications will be expanded fleet-wide.

*Fuel Costs* – Fuel and energy are major cost drivers in the delivery of DART services. DART continues to focus on stabilizing the cost for the different types of fuels used in delivering our services by using hedges and forward delivery contracts when advantageous.

In FY 2018, DART completed its transition to CNG fuel, dramatically reducing its consumption of diesel fuel and correspondingly reducing the need for a diesel fuel hedge.

In 2010, DART entered into a fixed-price contract for delivery of natural gas fuel from 2013 through 2020 to be used for DART’s new fleet of CNG buses and Paratransit vehicles. The transition to CNG (along with this contract) was projected to save \$190 million (as compared to diesel fuel) in operating expenses through 2029, but if natural gas prices continue to remain low, DART will save millions of dollars above and beyond that projection. DART is in the process of locking in favorable pricing at least through 2025.

*Service Efficiency* – The continued use of the Trapeze Blockbuster® software will enable Planning and Scheduling staff to prepare more efficient operator assignment packages. The software utilizes sophisticated algorithms to identify the most efficient operator work assignments. This software also has the ability to generate many alternative packages of run cuts in a short amount of time, allowing management to select the package that achieves the best outcome.

### DART Innovative Services

DART On-Call is provided in areas that do not meet service-planning, ridership, and efficiency standards for traditional fixed-route service. Use of demand response vans instead of larger buses operating on a defined schedule continues to provide savings to the agency. DART currently has eight On-Call zones throughout the service area, including: Farmers Branch, Glenn Heights, Lakewood, Lake Highlands, North Dallas, North Central Plano, Park Cities, and Rowlett. All zones now have midday service, including the Park Cities On-Call zone, added in FY 2015, and the Glenn Heights zone, added in FY 2016. Additional On-Call zones are being considered based upon DART’s Comprehensive Operational Analysis. DART will consider expansion of the On-



Call program including two additional zones in Plano and three new zones in southern Dallas. These On-Call services will be an integral component of the DART Federal Shared Mobility Technology grant and pilot test scheduled for implementation in FY 2018. The Shared Mobility Grant Pilot Test use the GoPass 2.0 Mobile apps to integrate non-traditional transit services like Uber and Lyft, as well as taxi and bike share into areas without significant traditional transit service.

Flex, a variation of the On-Call approach, has been in operation for a number of years. Flex combines aspects of conventional fixed-route service with the demand-response characteristics of On-Call. Passengers may choose to board Flex buses at regular stops along a designated path. Passengers also have the option of requesting pick-ups and drop-offs in a zone around the designated path.

Flex has been incorporated into the expanded service delivery modifications and are operated by DART personnel. On-Call service will continue to be operated by MV Transportation, Inc. (MV). MV will also schedule customer-requested deviations for the Flex trips.

#### Activity Center Shuttles

Shuttle services developed in partnership with employers and major activity centers are another cost-reducing way for DART to provide improved access to the transit network. Under the Board's Site Specific Shuttle Policy, DART provides up to 50% funding for these shuttle services with employers or major activity centers providing the remainder of the service cost. DART has existing shuttle agreements with Southern Methodist University, UT Southwestern Medical Center, DFW International Airport, McKinney Avenue Transit Authority, Texas Instruments, Medical City-Dallas, the City of Richardson (Galatyn Shuttle), Parkland Hospital, and Baylor University Medical Center.

Overall shuttle ridership growth continued in FY 2016. The university-oriented shuttle serving the University of Texas at Dallas continues to build a very solid ridership base, exceeding 6,000 riders per day during the fall semester. In late FY 2015, the new Parkland Hospital facility adjacent to Parkland Station opened, resulting in a major modification in the Parkland Shuttle. Because most employees and patients were able to walk to the hospital when it opened, shuttle ridership declined. In FY 2017, the Parkland Clinic will open adjacent to the Parkland Station and bus facility. This change will result in further modifications to the Parkland Shuttle.

Exhibit IV.5, on the following page, is an overview of the uses of the funds and allocated operating positions for the Bus mode.

Exhibit IV.5  
Bus Overview

To be updated

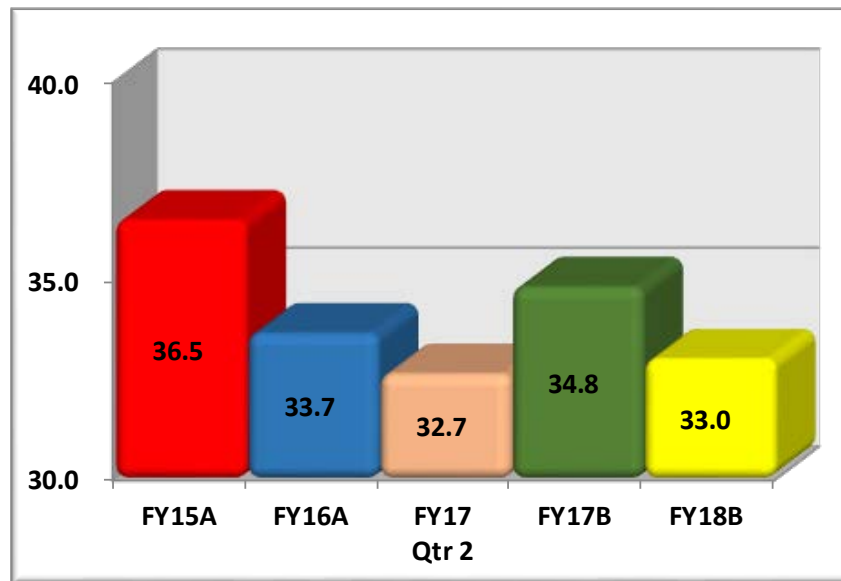
Overview	FY14A	FY15A	FY16B	FY17B
Allocated Operating Expenses (M)	\$235.9	\$236.6	\$257.6	\$258.8
Capital Expenditures (M)*	\$41.2	\$102.6	\$53.9	\$45.6
Allocated Operating Positions**	2,054	2,067	2,073	2,105

\* These amounts are the actual or budgeted capital for this mode only and do NOT include an allocation of Agency-wide capital.

\*\* Allocated positions are based on budgeted position counts.

Exhibit IV.6 highlights Bus Ridership. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.6  
Bus Ridership  
(in Millions)



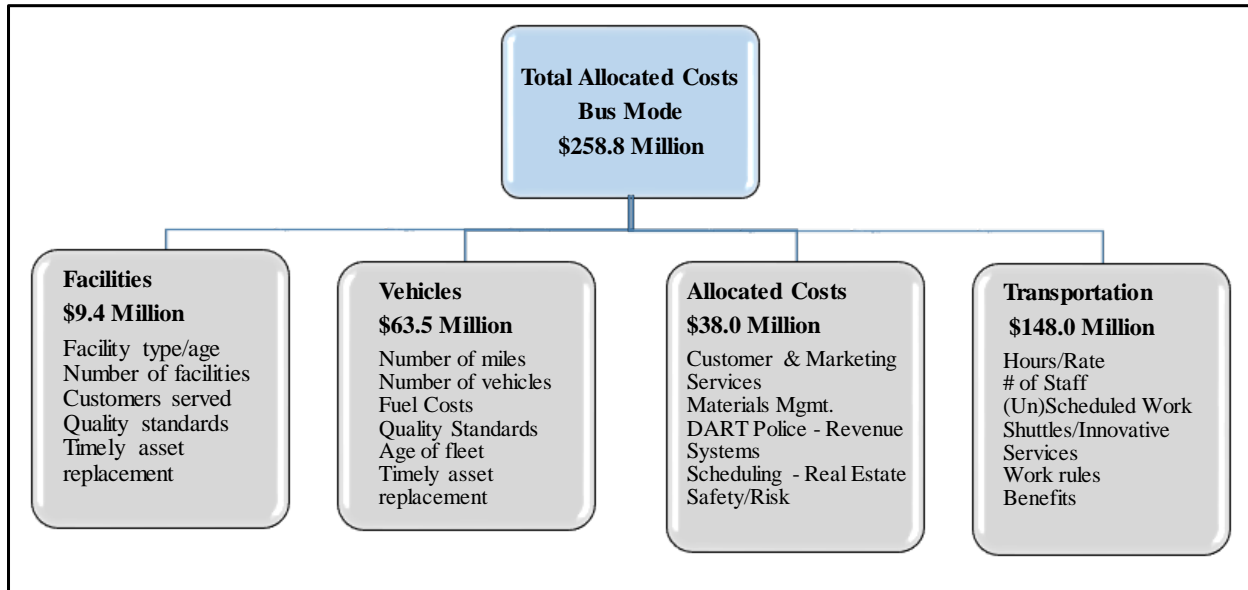
Please see Pages V-37 through V-38 8 in the *Reference Section* for a discussion of ridership trends.



Exhibit IV.7 is the cost model for the bus system. The cost of transportation (the operator and related costs) is the largest cost element of the bus mode accounting for \$148.0 million, or 57.2% of the cost.

Exhibit IV.7  
FY 2017 Bus Cost Model

To be updated



## Light Rail System

In FY 2018, DART will operate and maintain 93 miles of light rail, including 64 stations, 163 modern light rail vehicles, 2.5 miles of the Dallas Streetcar Rail system and 4 modern streetcars. Two rail operating facilities, the Central Rail Operating Facility (CROF) and the Northwest Rail Operating Facility (NWROF), support light rail and streetcar operations and maintenance.

A map of the current rail system is included as Exhibit V.2 in the *Reference Section*.

Design and construction of the South Oak Cliff (SOC-3) Blue Line extension from the Ledbetter Station to the University of North Texas – Dallas (UNT) campus was completed in October 2016. This opening completed this phase of the Light Rail buildout and added 2.6 miles and two stations to the system.



### Light Rail Scorecard – Key Performance Indicators

Exhibit IV.8 highlights LRT's Key Performance Indicators (KPIs) presented in scorecard format. These KPIs measure our success towards achieving the goal of providing effective, efficient, safe, secure transportation service. The numbers in the columns for fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. The numbers in the columns for fiscal years 2017 and 2018 are the target values for those years.

Exhibit IV.8  
Light Rail Scorecard – Key Performance Indicators

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Customer Quality</b>					
Ridership (M)	29.9	29.8	29.9	30.8	31.0
Revenue Miles (M)	10.2	10.3	10.4	10.4	10.4
Passengers per Mile	2.93	2.90	2.88	2.96	2.97
Farebox Recovery Ratio	18.2%	16.6%	16.4%	16.1%	16.5%
Complaints per 100K Passengers	15.3	22.4	20.5	17.5	17.5
On Time Performance	93.6%	92.5%	92.0%	94.0%	94.0%
Mean Distance Between Service Calls	40,891	30,011	24,239	51,222	51,222
Veh. Accidents Per 100K Train Miles	0.32	0.45	0.59	0.35	0.35
Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Financial Efficiency</b>					
Expenses - Fully Allocated (M)	\$158.2	\$164.7	\$165.7	\$167.7	\$176.0
Revenues (M)	\$31.5	\$29.3	\$29.3	\$31.5	\$29.1
Net Subsidy (M)	\$126.7	\$135.4	\$136.4	\$136.1	\$146.9
Subsidy Per Passenger	\$4.24	\$4.55	\$4.57	\$4.42	\$4.73
Cost Per Revenue Mile	\$15.50	\$16.05	\$16.36	\$16.15	\$16.95

**Fatigue Management** – Beginning in FY 2014, DART initiated pilot programs focused on better managing operator work assignments to reduce the potential for operator fatigue. One element of Fatigue Management has been the reconfiguration of the Extra Board (those operators who work fill-in assignments to cover vacations or sick time) into an AM and PM Board, providing operators with improved consistency in the span of their work hours and providing greater assurance of adequate rest time between one work day and the next. These modifications in work assignments are critical to supporting enhanced safety, as well as employee health and quality of life.

The AM and PM Extra Board reconfiguration has been successfully piloted for Rail operators and Smart Bus operators.

Exhibit IV.9 is an overview of the uses of the funds and allocated operating positions for Light Rail. To determine these amounts, each department identifies the percentage of time and money spent on each mode to determine how the expenses and positions are allocated.

Exhibit IV.9  
LRT Overview

To be updated

Overview	FY14A	FY15A	FY16B	FY17B
Allocated Operating Expenses (M)	\$156.3	\$158.2	\$168.4	\$167.7
Capital Expenditures (M)*	\$69.3	\$69.5	\$116.3	\$88.2
Allocated Operating Positions**	1,266	1,253	1,248	1,268

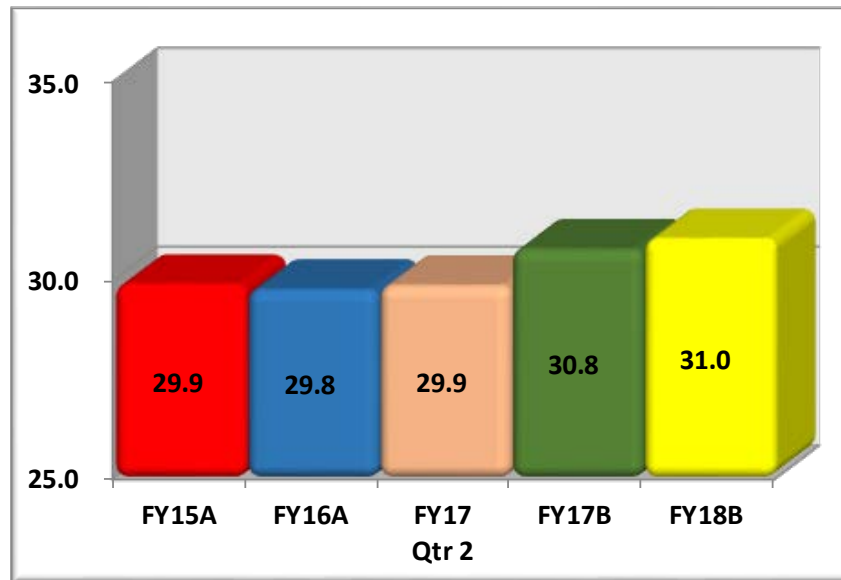
\* These amounts are the actual or budgeted capital for this mode only and do NOT include an allocation of Agency-wide capital.

\*\* Allocated positions are based on budgeted position counts.

### LRT Ridership

Exhibit IV.10 highlights LRT Ridership. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.10  
LRT Ridership  
(in Millions)



Please see pages V-21 through V-28 in the *Reference Section* for a discussion of ridership trends.

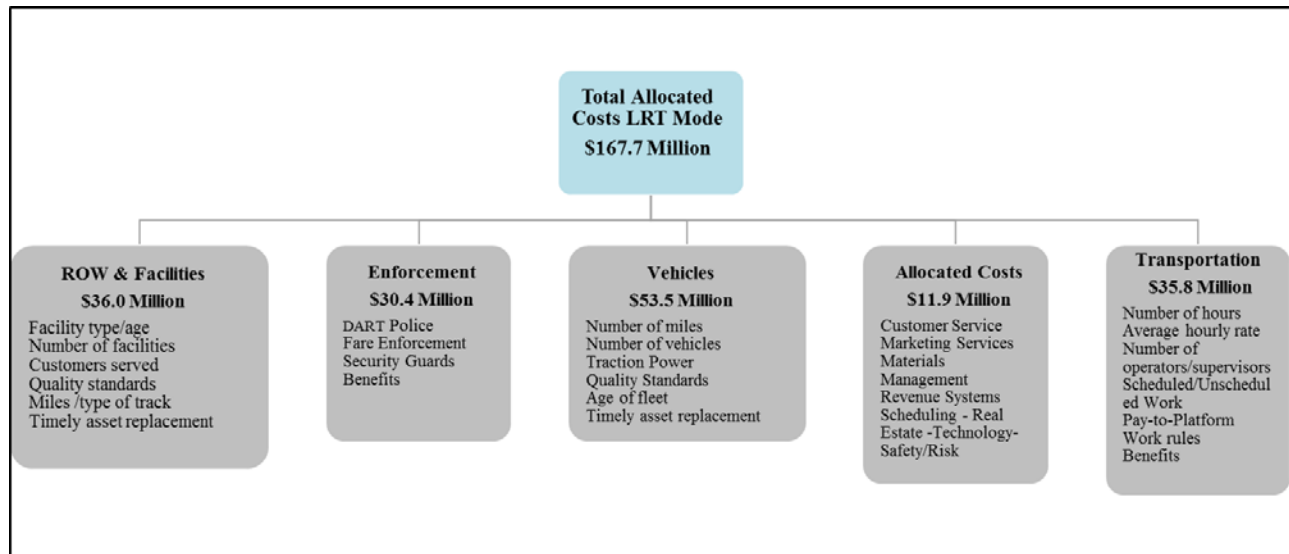
In September 2016, DART entered into an arrangement with the Texas General Land Office fixing the price of DART's electricity from FY 2019 through FY 2023. The average price over those five years is \$0.692/kwh. This is below our current price of electricity and well within the Parameters Resolution approve by the Board on May 24, 2016, which established a maximum price of \$0.085/kwh. This price lock represents a \$14.8 million savings versus the cost contained in the FY 2016 Financial Plan. Anticipating a favorable contract, approximately 75% of these savings have already been incorporated into the FY 2017 Financial Plan. The remainder of the savings will be incorporated into the FY 2018 Financial Plan.

### LRT Cost Model

Exhibit IV.11 highlights the cost structure for LRT (including Streetcar). Although LRT and Bus have very different cost structures, the drivers for each cost category (transportation, vehicle maintenance, and facility maintenance) are similar. LRT is more expensive per mile due to higher fixed costs for facilities and vehicle maintenance, but less expensive per passenger due to the higher capacity of LRT vehicles versus buses. On a relative basis, LRT vehicle maintenance costs are more significant than buses, while LRT transportation costs are less significant than for buses. Additionally, right-of-way and facility maintenance is a major cost driver for light rail but relatively small for the bus mode. Total maintenance costs for vehicles and facilities represent \$89.5 million (53.4%) of the total \$167.7 million LRT cost structure – versus only 3.6% for bus. Transportation costs, on the other hand, represent only 21.3% (\$35.8 million) of the total LRT cost structure – versus 57.2% for bus. Security and fare enforcement costs are also significant for light rail accounting for \$30.4 million (18.1%) of light rail modal costs.

Exhibit IV.11  
FY 2017 Light Rail Cost Model

To be Updated



## Bus & Light Rail Transit (LRT) System Maintenance

### Function/Organization

The Maintenance Department is the second largest and most diverse department, employing 971 skilled, non-skilled, professional, management, and support staff. This department is responsible for maintaining a state of good repair of approximately \$6.0 billion in assets including all DART-operated vehicles, operating facilities, transit centers, passenger shelters and stops, light rail right-of-way systems, and commuter rail stations. This department provides preventive and corrective maintenance services for all DART-operated revenue and non-revenue vehicles. Maintenance also manages major vehicle repair projects, provides technical training for maintenance employees, performs engineering studies for facility construction and rehabilitation projects, and develops specifications for vehicles, components, services, and consumable products. The Vice President of Maintenance directs the overall activities of the department and reports directly to the Executive Vice President/Chief Operations Officer. The department consists of three major divisions:

- Technical Services
- Fleet Services
- Ways, Structures, & Amenities

### Technical Services Division

This division provides technical service support to the Fleet Services and Ways, Structures, & Amenities (WSA) divisions. Additionally, it supports the Agency's mobility services for compliance with the equipment maintenance requirements of the contract, and provides liaison and oversight project management support for all systems integration or changes to the passenger amenities, operating facilities, right-of-way, vehicles, and equipment.

- *Fleet Engineering* – This section provides electrical and mechanical engineering support to the Fleet Services Division. Additionally, the section provides assistance to the Fleet Services Division to troubleshoot all vehicle systems and components to isolate cause of failure, and develop and document equipment configuration changes when required. Specifications, procedures, and requirements for the purchase, maintenance, and improvement of vehicles and equipment are developed by the section, as well as the development, review, and approval of all technical information related to the vehicles and equipment to ensure that rolling stock assets are maintained in accordance with the manufacturer's and/or industry recommended procedures.
- *Facilities and Systems Engineering* – This section provides civil, electrical, and mechanical engineering support to WSA. Additionally, the section provides assistance to WSA to troubleshoot facility and systems structural, electrical, pneumatic, mechanical systems, sub-systems, and components to isolate cause of failure and develop and document equipment configuration changes when required. Specifications, procedures, and



requirements for the purchase, maintenance, and improvement of systems and facilities are developed by the section, as well as the development, review, and approval of all technical information related to the systems and facilities to ensure that fixed assets are maintained in accordance with the manufacturer's and/or industry's recommended procedures. This section is also responsible for management of the On-Call Construction Services contract. This contract is used to complete construction projects that have a value less than \$250,000 that are identified for facility repair, upgrade, expansion, reconfiguration, and new system finish-out.

- Training and Document Management* – This section develops and implements training programs for mechanics, supervisors, and other maintenance personnel. This section has primary responsibility for assuring that training and maintenance documentation needs are met for all new systems and vehicles and validation of maintenance documentation in support of improving vehicle and systems reliability. This includes providing direction on the development of specification requirements for new systems and vehicles; evaluating submittals related to the manuals and documents; and approving the format, scheduling, and delivery of the training. This section is also responsible for maintenance document management through Maintenance Document Control. This area develops and maintains the online manual system and the Maintenance Document Control Workflow used to review and approve all maintenance documents.
- Warranty & Maintenance Services* – The section maintains service quality development, analysis, and distribution of maintenance reports and data. This group has primary responsibility for the measurement tool calibration program and technical responsibility for the DART tire lease contract. In addition, the section processes and administers all vehicle, equipment, and facility warranties; and monitors fluids through wear metal and contaminant analysis to prevent system or sub-system failures.



### Fleet Services Division

This division is responsible for the repair, maintenance, and upkeep of all operating facilities and approximately 649 fixed-route buses, 163 light rail cars, 4 streetcars, and 740 support vehicles/equipment. It includes bus fleet service facilities at the East Dallas, South Oak Cliff, and Northwest facilities; a non-revenue vehicle maintenance facility; and rail fleet service facilities at the Central Rail Operating (CROF) and Northwest Rail Operating facilities (NWROF). Fleet Services is also responsible for maintenance and repair of the materials management main warehouse and the mobility management operating facility.

- Bus Fleet Services* – The primary functions of the Bus Fleet Service sections are to perform preventive maintenance, corrective maintenance, campaigns, fleet modifications, servicing, fueling, and cleaning of the DART-operated bus fleet. Additionally, each bus fleet service section is responsible for the repair and maintenance of its operating facility

including all associated buildings and equipment, which includes air compressors, vehicle lifts, pumps, vehicle washers, service stations, and other structures.

- *Bus and Rail Central Support* – The Central Support section is divided into three units: Body Support, Bus Central Support, and Rail Central Support. Bus and Rail Central Support are responsible for fleet fixed scheduled maintenance, rebuilding major and small vehicle components, providing major campaign modification support, and capital program support for the DART-operated Bus, Light Rail, and Dallas Streetcar fleets. Body Support is responsible for body preventive maintenance, accident repair (minor and major), and upholstery rebuilding for the DART-operated Bus, Light Rail, and Dallas Streetcar fleets. Bus Central Support is responsible for new bus make-ready and disposal of retired buses.
- *Non-Revenue Vehicle (NRV) Services* – The Non-Revenue Vehicle (NRV) Services section is responsible for preventive maintenance, corrective maintenance, campaigns, fleet modifications, servicing, new vehicle make ready, retired vehicle disposal, and cleaning of the DART-operated support vehicle fleet. Additionally, NRV Services is responsible for the repair and maintenance of its operating facility including all associated buildings and equipment, which includes air compressors, vehicle lifts, pumps, and other structures.
- *Rail Fleet Services* – The primary functions of the Rail Fleet Service sections are to perform preventive maintenance inspections and repairs, corrective repairs, troubleshooting, running repairs, campaigns, electronic equipment, new vehicle qualification and acceptance testing and fleet modifications on both light rail vehicles and modern streetcars. Additionally, each rail fleet service section is responsible for the repair and maintenance of its operating facility and equipment, which includes air compressors, vehicle lifts, pumps, vehicle washers, and other structures.
- *Fleet Services Support* – The Fleet Services Support section is responsible for administration and compliance of services, commodities, and fuel contracts supporting bus, rail, mobility management, and NRV services operations and facilities.

#### Ways, Structures, & Amenities Division

The Ways, Structures, & Amenities Division provides maintenance for DART's 211.16 miles of light rail transit (LRT) right-of-way and systems, including the Dallas Streetcar, Bus/LRT/Commuter Rail passenger facilities, major administrative facilities, and agency-wide radio communications systems. This includes Track & Right-of-Way, Passenger Amenities/Facility Services, Signal Systems, Traction Electrification Systems, and the Communication & Control Systems. The Division consists of the following five sections:

- *Track and Right-of-Way* – This section inspects, maintains, and repairs all light rail and Dallas Streetcar track. Time-based, corrective, and condition-based maintenance and repairs are performed on all track turnouts/switches, 183 road crossings, various right-of-way track-related structures, culverts, and other rail related facilities along the right-of-way. Additionally, this section is responsible for maintaining a zero tolerance graffiti program for DART property.

- *Passenger Amenities/Facility Services* – This section inspects, maintains, and repairs passenger facilities for DART’s Bus, Rail, and Dallas Streetcar, Commuter Rail services. Time-based, corrective, and condition-based maintenance and repairs are performed on 9 transit centers, 54 LRT at-grade rail platforms, 9 LRT aerial platforms, 1 LRT subsurface platform, 6 commuter rail platforms, 6 Dallas Streetcar Sheltered Stations, 2 Park & Rides, 2 Passenger Transfer Locations, 2 Transfer Centers, 20 enhanced shelters, 19 crew quarters, 1,200 bus shelters, 1,000 benches, 14,000 bus stops/trail blazers, multiple information pylons, Guide-a-rides, and tunnel equipment maintenance including fire life safety equipment. The section is also responsible for the property management of DART Headquarters, DART Police Administrative Facilities and Police sub-stations (building maintenance and repair); Agency moving services, coffee services, cubicle reconfigurations, furniture procurement, space planning, as well as vending services and the parking garage management at Headquarters.


- *Traction Electrification Systems* – This section maintains the Traction Electrification System for DART’s light rail transit. Time-based, corrective, and condition-based maintenance and repairs are performed on 208 miles of overhead catenary including 3.6 miles for the Dallas Streetcar, support structures, conductors, cable, hardware, 78 DC-Traction Power Substations (including two substations for the Dallas Streetcar) providing power to the light rail trains and electrical power to the communication and signal systems, 9 AC power substations for the tunnel system and facilities maintenance, and 3,040 station canopy and tunnel lights.
- *Signal Systems* – This section performs inspections, tests, and conducts preventive maintenance for DART’s Signal Systems to ensure safe scheduled train operations. The section will also maintain the switches, signals, Train-to-Wayside Control System, and traffic pre-emption along the Dallas Streetcar segment. Time-based, corrective, and condition-based maintenance and repairs are performed on 266 main line switches, 136 automatic highway grade crossing warning signals, 639 wayside signals/indicators, train coming signals and green bands, 134 yard switches, 40 signal power distribution centers, 102 TWC interrogators, and approximately 10,000 relays, cab signaling equipment, and other electromagnetic apparatus, cables, and train stop apparatus.
- *Communication & Control Systems* – This section provides two-way radio and data communications to support the operations of the Transportation, Maintenance, and DART Police departments. Communications support is also provided to DART Marketing, Technology, and the City of Dallas emergency services. This section maintains real-time data communication links from field units such as traction power substations and signal houses via a Supervisory Control and Data Acquisition (SCADA) system to the Train

Control Center (TCC) and real-time data via the Trapeze TransitMaster CAD/AVL system to Bus Dispatch. The section also maintains SCADA, the Communications Transmission System, and all communication devices along the right-of-way for the Dallas Streetcar line segment. Time-based, corrective, and condition-based maintenance and repairs are performed on all communications-related hardware including 52 communication houses, 147 communication interface cabinets, 7 remote radio sites, and a fiber optic communications network. Other systems supported include the digital voice recording system, approximately 1,700 CCTV cameras, 156 public address/visual message boards, Harris OpenSky Radio System (including 1,900 portable radios, 334 LRV radios, 330 NRV radios and 649 bus radios), and 186 passenger emergency call phones. Control System Programmers provide system administration and programming on all software applications, databases, and operating systems used to support Train Control and Bus Dispatch operations.

## Materials Management

Materials Management has the primary responsibility of managing the ordering, receiving, distribution, and disposal of materials and equipment for the agency. The division manages over \$39 million in inventory for eight satellite warehouses and one outside yard.

## System Police & Security

The Agency endeavors to maintain a safe and peaceful environment for its customers and employees. The following are the goals of the DART Police Department:

- Increase visibility through deployment and scheduling of available resources (e.g. Police Officers, Fare Enforcement Officers (FEO), other off-duty, officers and Security Officers).
- Reduce police, FEO, and telecommunicator vacancies by evaluating and improving the hiring and recruiting process.
- Enhance and implement CCTV coverage at transit facilities, park and rides, and DART facilities. The DART Police Department is charged with implementing strategies addressing crime, fare enforcement, emergency preparedness, and video surveillance for DART employees, customers, facilities, and vehicles throughout DART's 700 square mile service area. The Vice President/Chief of Police and Emergency Management reports directly to the Executive Vice President/Chief Operations Officer.





### Major Functions and Duties

The DART Police Department is comprised of three major divisions: Administrative Services, Field Operations, and Operations Support.

The Administrative Services Section provides day-to-day services for internal customers, employees, and external customers. These services are provided through the following areas:

- Budget – The Police Department’s budget is monitored to ensure fiscal responsibility. Monthly updates of the department’s expenditures are provided to the department head. Purchase proposals are evaluated for cost effectiveness and need. Small purchases are monitored to ensure budget compliance.
- Records Section – The department’s Records Section is the first point of contact for customers visiting our Police Headquarters building. They direct visitors and handle all police records requests to include open records requests. They maintain and process all offense reports, accident reports, and citations. They file citations with the Justice of the Peace courts weekly. They compile data for monthly statistical reports and state and federal agency reporting to include the racial profiling report. They also utilize crime analysis software. This has assisted field operations in their ability to target crime hotspots throughout the DART service area.
- Quartermaster – The Quartermaster manages the DART Police fleet of patrol, administrative, and specialized vehicles (vans, T-3’s and motorcycles). They coordinate the preventive maintenance and recalls of all police vehicles. They manage the coordination of vehicle deployment through a key machine, KeyWatcher. They issue police equipment daily and are responsible for providing new employees with all the equipment needed to perform their jobs. The Quartermaster communicates and visits with vendors regarding picking up equipment and ordering needed items for inventory.
- Building Management – The Police Manager acts as the department’s liaison for the Police Headquarters building with the DART Passenger Amenities/Facility Services Manager. They ensure facility issues are addressed with contractors like janitorial services and facility maintenance and landscape. They coordinate repairs for equipment within the building to ensure it is in good working condition.

The **Field Operations Bureau** provides police services for customers, employees, Trinity Railway Express, Mobility Management, and DART facilities. Field Operations is comprised of the following divisions:

- **Rail Operations** – DART Police is responsible for providing police services aboard light rail and TRE commuter rail vehicles. This group also includes DART's Fare Enforcement Officers. The department has divided the rail system into seven (7) sectors to allow the officers to more efficiently patrol the rail system.
  - The primary duty of Fare Enforcement Officers is to inspect passengers for proper fare throughout the rail system. Fare Enforcement Officers issue fare evasion citations when necessary and report disruptive behavior to DART Police Officers for police action. While fare enforcement officers possess no police power, they do provide a uniformed presence on DART light rail and TRE trains and provide a high level of customer service to patrons.
- Rail Police Officers provide police visibility, protection, and security on the light rail trains, at rail stations, and light rail platforms in addition to fare enforcement. Rail Support Officers provide police visibility, protection and support to Rail and Fare Enforcement Officers in addition to providing police services to rail station and rail platforms.
- **Patrol Operations** – provides police services to the bus and paratransit systems, officers board and ride along bus routes, conduct visits of bus stops, transit centers, passenger transfer locations, and park and ride facilities, as well as at all DART Administrative and Operations facilities. Patrol officers also respond to calls for service at all rail facilities and provide back-up to officers and FEO's assigned to the trains.
- **Special Operations** consist of two categories:
  - Special Operations Team (SOT) – With funding from the Department of Homeland Security, DART Police established a five-man counter-terrorism team which specializes in deterrence and detection of terroristic activities. The team also coordinates enhanced security presence at DART light rail stations, transfer centers, and on DART buses with Visible Intermodal Protection Response (VIPER) teams from Dallas/Fort Worth International Airport and Dallas Love Field Airport.






- Canine Handlers (K-9 Unit) – Through a Transportation Security Administration (TSA) cooperative agreement, the department has four explosives-detection canines, along with four Ford Expeditions to facilitate K-9 deployment. Explosives-detection canine teams greatly increase the Agency's responsiveness to explosive threats on buses, trains, and other DART property and facilities.




The Operations Support Bureau is comprised of criminal investigations, emergency preparedness, special services, and public safety technology.

- Criminal Investigations is responsible for processing crime scenes; conducting criminal investigations; interacting with the medical examiners' offices; gathering, preparing, and distributing intelligence information; and preparing cases for court presentation.
- Emergency Preparedness is responsible for planning and preparing for emergencies, to include developing security actions in response to National Terrorism Advisory System threat alerts; applying for and overseeing Homeland Security grants; conducting multi-jurisdictional, tabletop and full scale exercises; performing needs and threat analyses; conducting Crime Prevention through Environmental Design (CPTED) studies at DART facilities; and providing security awareness training for all DART employees. The section also manages community relations, the security guard contract, DART employee identification cards, and facility access programs.
  - The security services contracts for armed and unarmed security guards provide security guard coverage at specified locations such as transit centers/facilities, administrative and operational facilities, and to accompany revenue agents and mechanics who service and retrieve monies from ticket vending machines and bus fare boxes.
  - The facility access system controls personnel and vehicle access for all DART facilities. It includes issuance of ID/Access cards and the management/maintenance of requisite hardware and software systems.
- Special Services oversees hiring, recruiting, and training for the department.
  - Hiring and Recruiting is responsible for complying with all State requirements in the hiring of department personnel, as well as recruiting to fill vacant positions.

- The Training Unit is tasked with providing the state-mandated police training to all officers as well as specialized police training including firearms, use of force, de-escalation, mental health officer training, community policing and problem solving, etc. The unit is also responsible for all other departmental training including the initial field training for new police officers, fare enforcement officers, telecommunicators and other civilian employees.


- Public Safety Technology is responsible for the procurement, installation, and coordination of maintenance and software support with the DART Maintenance and Technology departments for all closed-circuit television cameras at DART light rail stations, onboard buses, onboard light rail trains, and at DART facilities. It also contains the Police Telecommunications Section.

  - Public Safety Technology is responsible for the procurement, installation and maintenance of all police technology used by DART Police including the computer-aided dispatch (CAD) system, records management system (RMS), body-worn cameras, mobile data computers and in-car camera systems deployed in police vehicles as well as the hand-held mobile citation devices used by fare enforcement and police officers.
  - Police Telecommunications is responsible for receiving requests for police services, dispatching calls for service to DART Police Officers, monitoring police radio transmissions, and processing requests for National Criminal Information Center (NCIC) and Texas Criminal Information Center (TCIC) reports through the Texas Law Enforcement Telecommunications System. Surveillance system camera monitors are also in the police dispatch area to assist officers with visual information of events occurring on the system. They also respond to information and requests for service from the department's mobile reporting application-ELerts.





Blank page

## **Mobility Management Services (Paratransit)**

The Department of Mobility Management Services provides accessible, origin-to-destination and curb-to-curb public transportation services within the DART Service Area in accordance with the Board-approved Accessible Services Policy and the Americans with Disabilities Act of 1990 (ADA). Mobility Management Services provides a broad range of transportation choices, innovative solutions to enhance the customer experience, vehicle communication, and equipment enhancements geared toward mobility options for persons with disabilities, older adults, veterans, and those with limited incomes. The Vice President of Mobility Management Services directs the overall activities of the department and reports directly to the Executive Vice President/Chief Operations Officer.

A new business model was implemented in FY 2013 to increase efficiency and decrease the overall cost to operate paratransit services. This model enhances operational performance, customer service, and contract compliance. Several key changes in the new model were the outsourcing of the reservations, scheduling, and dispatching functions, as well as fleet ownership. Mobility Management Services continues to maintain responsibility for field supervision, contract compliance, rider eligibility, outreach, travel orientation and training, coordinated transportation services, administration, the Fixed-Route Reduced Fare Program for Persons with Disabilities, and management of DART's On-Call, Mesquite Compass, and UTD Shuttle services.

DART contracts with MV Transportation, Inc. (MV), to provide, operate, and maintain a fleet of 80 Starcraft vehicles through dedicated service. MV also oversees and manages a fleet of 116 Dodge Entervans outfitted by Braun, which are taxi vehicles provided and operated by Irving Holdings.

### Paratransit Services Scorecard – Key Performance Indicators

Exhibit IV.12 highlights the Key Performance Indicators (KPIs) for Paratransit. These KPIs measure our success towards achieving the goal of providing effective, efficient, safe, secure transportation service. The numbers in the columns for fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.12  
Paratransit Scorecard – Key Performance Indicators

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Customer Quality</b>					
Actual Ridership (000)	782	810	804	833	860
Actual Trips (000)	687	749	744	736	774
On Time Performance	90.8%	89.2%	88.7%	95.0%	95.0%
Preventable Accidents Per 100K Miles	0.7	0.5	0.4	2.0	2.0
Percentage of Trips Completed	99.8%	99.8%	99.8%	99.0%	99.0%
Passenger Canceled Trips Ratio	21.1%	21.3%	21.9%	15.0%	15.0%
Passenger No Shows Ratio	2.7%	2.7%	2.8%	3.0%	4.0%
Complaints Per 1K Trips	4.34	4.14	1.77	3.00	3.00
Service Level - Scheduling (3 minutes)	95.0%	90.0%	91.0%	95.0%	95.0%
Service Level - Scheduling (5 minutes)	98.0%	95.0%	94.8%	99.0%	99.0%
Service Level - Where's My Ride (3 minutes)	96.0%	96.0%	94.9%	95.0%	95.0%
Service Level - Where's My Ride (5 minutes)	99.0%	99.0%	98.8%	99.0%	99.0%
Certified Riders	11,770	12,026	12,279	12,320	12,611

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Financial Efficiency</b>					
Expenses - Fully Allocated (M)	\$33.49	\$35.58	\$35.43	\$37.21	\$39.56
Revenues (M)	\$2.20	\$2.23	\$2.24	\$2.30	\$2.45
Net Subsidy (M)	\$31.29	\$33.35	\$33.19	\$34.92	\$37.11
Subsidy Per Trip	\$45.53	\$44.52	\$44.58	\$44.37	\$47.95
Subsidy Per Passenger	\$40.02	\$41.15	\$41.28	\$41.90	\$43.16

KPIs for Reservations and *Where's My Ride?* are referred to as Service Levels and represent the percentage of calls answered within the established time. The contract with MV requires 95% of calls to be answered within 3 minutes and 99% of calls to be answered within 5 minutes. MV is also required to meet an On-Time Performance target of 95%. As part of the contract modification in FY 2014, MV is also required to meet an Average Ride Time of 34 minutes or less. The current target for complaints under this contract is 3 per 1,000 passenger trips. MV struggled to reach several of the established goals in the first year they operated the service (FY 2013). However, considerable improvements have been made since then. The complaints statistic reported in the Business Plan is inclusive of all complaints received related to the Department of Mobility Management Services. For contract compliance purposes however, only those complaints for which MV Transportation is responsible are counted.

Exhibit IV.13 is an overview of the uses of funds and allocated operating positions for the Paratransit mode. Each department identifies the percentage of time spent on each mode of service to determine the expenses and positions allocated to the mode of service.

Exhibit IV.13  
Paratransit Overview

To be updated

Overview	FY14A	FY15A	FY16B	FY17B
Allocated Operating Expenses (M)	\$31.9	\$33.5	\$36.1	\$37.2
Capital Expenditures (M)*	\$0.3	\$0.8	\$0.5	\$0.4
Allocated Operating Positions**	66	66	65	66

\* These amounts are the actual or budgeted capital for this mode only and do NOT include an allocation of Agency-wide capital.

\*\* Allocated positions are based on budgeted position counts.

### Paratransit Ridership

One of Mobility Management's goals is to increase efficiency while delivering excellent customer service. The service delivery model implemented in FY 2013 consists of both dedicated and non-dedicated vehicles as well as a diverse fleet mix.

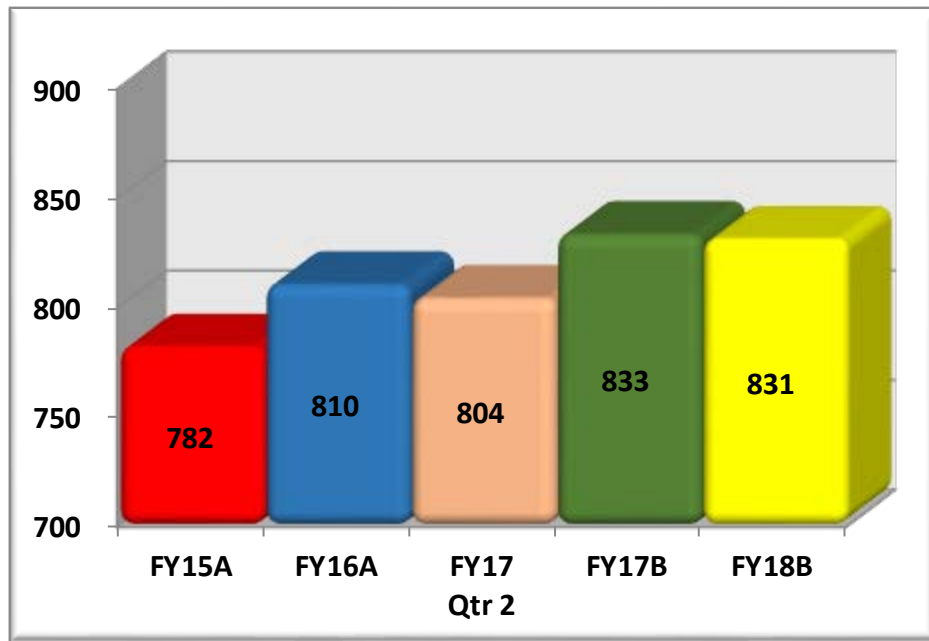
The increase in vehicles and flexibility that accompanied the MV contract has helped to ease the strain on available resources and has decreased customer ride times that had been increasing over several years prior to the change. Ultimately, this change has improved productivity and efficiency.





Exhibit IV.14 highlights Paratransit ridership. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.14  
Paratransit Ridership  
(in Thousands)



### Major Highlights/Initiatives

DART Mobility Management Services strives to improve coordination of services and sharing of resources.

*Travel Ambassador Program and Other Community Training Options* – The goals of the Travel Ambassador Program are to: 1) increase the familiarity and comfort level of older adults, persons with disabilities, and the general public with DART’s fixed-route system; and 2) encourage Health and Human Services caseworkers, non-profit transportation providers, and the public seeking transportation for persons with disabilities to consider the fixed-route system as their first choice.

For customers: The service includes travel orientation for individuals as well as groups. Travel Ambassadors work with customers to help them become familiar and comfortable with using the fixed-route service through group trips and/or accompanying first-time users on customized transit trips. The travel trainers continue to work with clients with disabilities requiring more intensive and detailed assistance. Customers that have gone through the Travel Ambassador Program, but require more than a few trips in order to feel comfortable using fixed-route services, are referred to the Travel Training Program.

For caseworkers and agencies: Mobility Management Services Planning personnel conduct training among caseworkers and agencies to increase awareness of alternatives to DART Paratransit services, the ease of using fixed-route services, and the goals of service coordination between transportation providers and the Health and Human Services community. The Travel Ambassador Program also offers group training for human service agencies and other trainers through a train-the-trainer program.

The Travel Ambassador program was implemented in FY 2013. For those riders transitioning to fixed-route services, Mobility Management Travel Ambassadors perform route checks to ensure there are no environmental barriers that would impede the rider's travel. They have been successful at educating a number of groups and individuals on using DART's fixed-route services. However, the Travel Ambassador Program is open to the general public, not just Paratransit riders.

During its inaugural year, the Travel Ambassador Program successfully trained 22 individuals and 5 groups to use DART fixed-route services. As of June 2017, 387 individuals and 77 groups have been trained. DART anticipates that this program will continue to grow and an even larger percentage of people will participate in FY 2018.

Regional Transportation Information/Database – DART is working with various regional entities to create a searchable, comprehensive, accurate, and current database of transportation resources in North Texas for persons with disabilities, older adults, and other disadvantaged populations. This effort is the first step to a regional one-call/one-click service where individuals, caregivers, and caseworkers can find and ultimately book trips by accessing one centralized source. This project, called “My Rides North Texas,” is in the final stages toward implementation.

Paratransit Eligibility and Travel Training Program – Per the ADA, passengers must be certified by DART to use Paratransit services, and passengers' certifications are updated every one to three years. DART certifies passengers in person, thereby providing the most accurate assessment of a passenger's ability to use fixed-route buses and trains. The eligibility process determines whether a person is capable of using fixed-route services, or if a disability prevents that passenger, unconditionally or under certain circumstances, from using fixed-route service.

The number of certified riders for FY 2018 is projected to be approximately 12,611. This represents a 4.8% increase from the number of certified riders at the end of FY 2016. This increase reflects the overall population growth and general aging in the DART Service Area. As of June 2017, approximately 12,148 riders are eligible to use Paratransit services.

Eligibility and Training Specialists assess applicants' ability to use fixed-route services and provide travel training. Travel training enables DART to transition eligible individuals to less costly fixed-route service. The Travel Training Program includes specialized instructions tailored to meet specific needs and skill levels for people with disabilities to successfully transition to fixed-route services. Travel Training requires daily and repetitive instruction until riders feel confident in their ability and can demonstrate competency for complete independence in the use of public transit.



Orientation and Mobility Training: Orientation and mobility training by a certified instructor became available for Paratransit riders with vision disabilities in the fourth quarter of FY 2013. The Orientation and Mobility Trainer provides instruction to people with vision disabilities on how to utilize DART's bus and rail services.

### Paratransit Productivity

*Productivity* – KPIs for productivity include on-time performance, missed trip ratios, and call center service levels. Compliance with the ADA's zero denial mandate impacts efficiency and lowers productivity by requiring all legitimate trip requests (trips requested by certified riders during applicable service hours) to be accommodated. While productivity has improved over the years, constrained resources resulted in an increase in longer trips and late trips. The business/contract model implemented in FY 2013 greatly reduced the strain on resources and is returning trips to more tolerable travel times with improved on-time performance.

*Manage No-Shows and Cancellations* – The difference between scheduled and actual trips is attributed to no-shows (when a customer fails to show for a trip), and customer cancellations (which can happen any time up until the vehicle arrives for a passenger). In FY 2018, Management estimates the ratio for no-shows will remain at or below the 4% range, and the ratio for cancellations will remain in the 15-20% range. These ratios are consistent throughout the transit industry for paratransit services.

*Vehicle Business System* – A Vehicle Business System (VBS) is installed in all Paratransit vehicles. The wireless communication system allows optimal utilization of revenue vehicles through GPS-based vehicle tracking and improved communications.

*Additional Technology/Interactive Communications* – In 2014 a contract modification was executed which included the addition of new technologies and communication methods for Mobility Management Services (Paratransit) riders.

A "Call Waiting Queue" announcement was implemented in April 2014, which informed customers of what their expected wait time was to speak to a representative when calling the reservations and "Where's My Ride?" lines.

An IVR call feature was added in November 2014. This enhancement provides riders with a phone call ten minutes prior to their vehicle's arrival so that individuals do not have to endure the elements while awaiting the arrival of the vehicle.

In June 2014, Bus.mobi, a new vehicle tracking technology, was made available which allowed riders to go online to see when they could expect their vehicle to arrive as early as 90 minutes prior to their trip. In 2015, this tool was updated to also give riders the ability to view the vehicle location in real time on a map as well as the ability to cancel trips online and see trips scheduled for the next day.

In March 2015, web booking became available to Paratransit riders. This technology allows riders to book trips online up to four days in advance, view scheduled trips regardless of their booking method, and cancel trips.

Lyft Pilot Program – Mobility Management Services (MMS), in partnership with MV Transportation, began a pilot program in May 2017 to explore the use of a Transportation Network Company (TNC), Lyft, to perform certain trips for eligible customers, in an effort to provide a more flexible and personalized service. MMS identifies the suitable candidates for the Lyft service, and contact is made with the customer to determine if they are interested and agree to become a participant. After the first eight weeks of the pilot, almost 2,000 trips have been performed with 74 participants. The pilot is anticipated to continue through the end of the current contract on September 30, 2019. MMS foresees incorporating TNCs into the new Request for Proposal, and researching possible cost savings opportunities that this service could provide going forward.

#### Purchased Transportation Contract

The purchased transportation contract with MV Transportation began on October 1, 2012, and runs through September 30, 2019.

#### Paratransit Costs and Subsidy Per Passenger

Exhibit IV.15 compares Paratransit cost and net subsidy actual results for FY 2014 through FY 2016 with budget and projections for FY 2017 through FY 2022. Net Subsidy represents the total cost of the service not covered by passenger fares. The calculation for Subsidy per Passenger takes this number and divides it by actual ridership.

Total Paratransit costs and net subsidy have been rising along with increasing ridership. Subsidy per passenger was rising as well, but at a slower rate as more and more trips were squeezed into the system. The change in the service delivery model did significantly reduce costs (subsidy per passenger dropped from \$44.93 in FY 2012 to \$35.00 in FY 2013) but program costs will continue to escalate in the future as the population continues to age, resulting in increased demand for paratransit services.

Exhibit IV.15  
Paratransit Net Subsidy Comparison

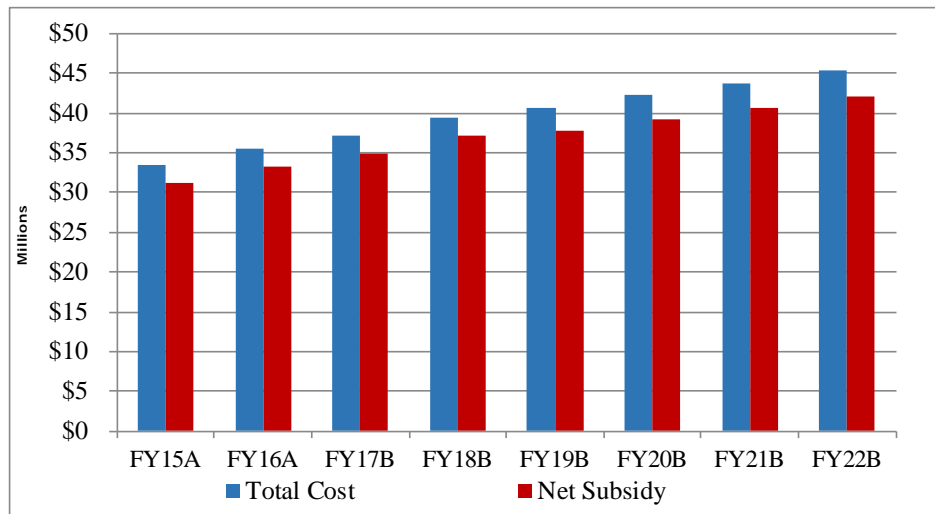
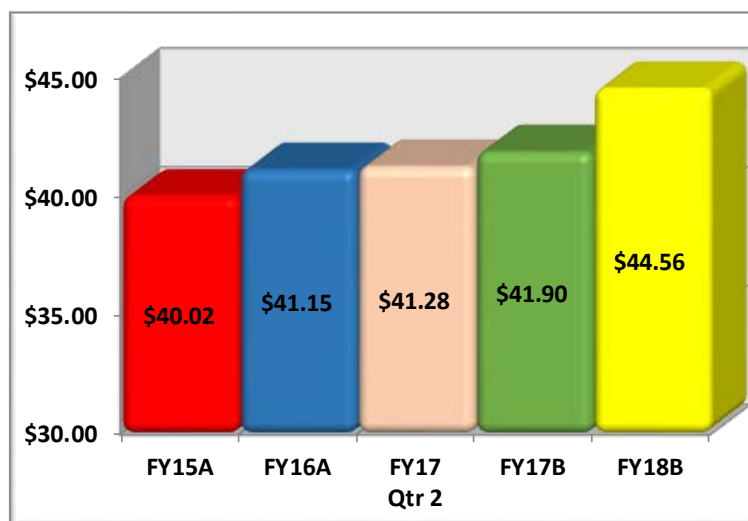


Exhibit IV.16 highlights Paratransit Subsidy per Passenger. Fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. Fiscal Years 2017 and 2018 are the target values for those years.

Exhibit IV.16  
Paratransit Subsidy per Passenger



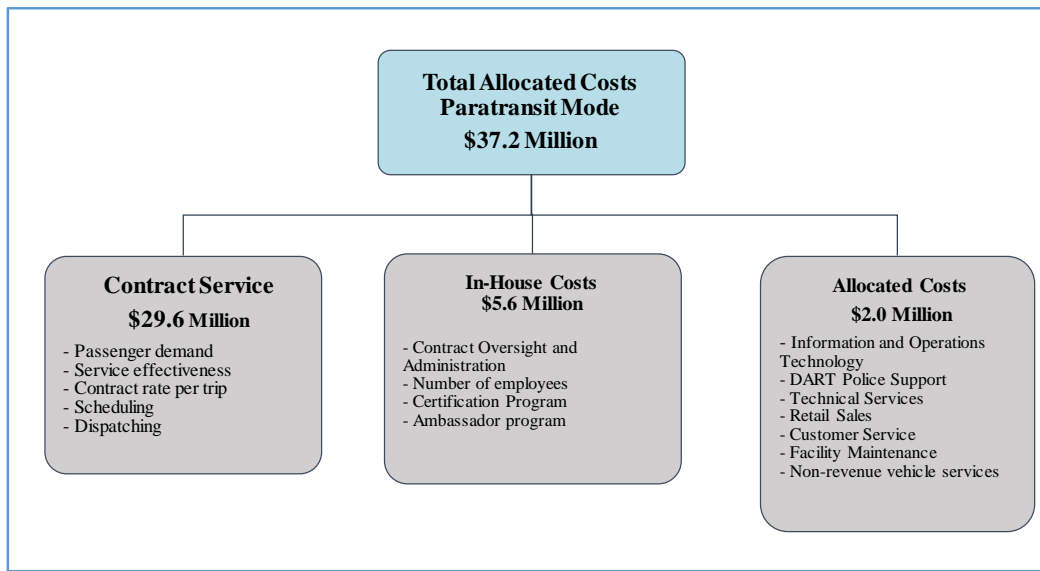


## Paratransit Cost Model

Exhibit IV.17 is the Paratransit Cost Model. 79.6% (\$29.6 million) of modal costs are contract services costs. 91.3% (\$27.0 million) of contract costs are actual purchased transportation cost.

Exhibit IV.17  
FY 2017 Paratransit Cost Model

To be updated





Blank page

## **Business Solutions & Innovation**

Business Solutions & Innovation maximizes Agency resources through effective business processes, astute financial management, attractive marketing, sound risk management, and innovative technology. The Executive Vice President, Chief Financial Officer has oversight of the Finance Department, Risk Management Division, Technology Department, Marketing & Communications Department, and the Procurement Department. The Executive Vice President reports to DART's President/Executive Director and is the management liaison for the Board's Budget & Finance Committee and Revenue Committee and jointly for the Administrative Committee with the Deputy Executive Director for departmental matters.

Each of these functional areas has objectives directed towards achieving the goal of maximizing Agency resources through attractive marketing, innovative technology, sound risk management, effective business processes, and astute financial management.

### **Finance Department**

Finance looks to effectively collect passenger fares, pay DART employees and its business partners in a timely manner, ensure cash is available to meet payment obligations in a cost efficient manner, and collect and provide financial information to DART management and other stakeholders to make informed decisions. Accounting (including payroll and accounts payable), budgeting and financial planning, revenue systems and administration, risk management, and treasury comprise the Finance Department. Performance reporting from the various Finance Department divisions is included in the DART Quarterly Operating and Financial Performance Report which is available on DART's website, [DART.org](http://DART.org).

#### Accounting Division

This division has three sections: Financial Accounting and Reporting, Payroll, and Accounts Payable. The Accounting Division is responsible for financial recordkeeping, financial reporting, payroll, accounts payable, and management of the corporate card function at DART.

The Financial Accounting and Reporting section is responsible for managing the annual financial audit and recording all of DART's business transactions in accordance with generally accepted accounting principles (GAAP). This section includes accounts receivable, cash accounting, fixed assets, general ledger, and financial reporting. Financial reports prepared by this section include: monthly, quarterly, and annual financial reports; DART's three retirement plan financial reports; and the DART Comprehensive Annual Financial Report, as well as reporting for DART subsidiaries and interests.

This section also maintains proper accounting records and delivers consistent, accurate, and timely reporting of financial results, which: builds stakeholder confidence that DART is being a good steward of public funds; ensures that financial information is accessible to accommodate the interest of the purchasers and holders of debt issued by the agency; assists in the ability to track financial targets and goals; and provides financial data that supports grant reporting and enhances DART's ability to obtain grants in the future.

Exhibit IV.18 illustrates the KPIs tracked for Financial Reporting.

Exhibit IV.18  
Financial Reporting KPIs

Key Performance Indicators	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Monthly Close/On-Time Percentage (5 days)	102%	100%	96%	90%	90%
Number of financial statements issued	21	30	33	36	40
Financial Statement Issuance/On-Time Percentage	100%	100%	100%	100%	100%
Clean Opinion on Audited Financials	100%	100%	100%	100%	100%
Received GFOA Certificate of Achievement for Excellence in Reporting	Yes	Yes	Yes	Yes	Yes

The Payroll Section is responsible for ensuring that all employees are paid accurately, timely, and in compliance with DART policies and state, and federal regulations. This section is also responsible for: ensuring that all statutory and non-statutory deductions are made; filing of employee-related taxes; W-2 issuance; and maintaining employee payment records and reports required by DART and state and federal governmental agencies.

The Payroll section is implementing a time and attendance system to replace the various scheduling systems DART currently uses to collect time worked by DART employees. The new system will improve the efficiency and accuracy of payments to employees and make payment information more accessible. The Kronos software will replace existing systems with a time and attendance system that can capture actual hours worked and can be programmed with work rules and pay policies resulting in improved service to our employees and an efficient, effective, payroll process. Prompt and accurate processing of payroll, direct deposit, and other services give DART employees peace of mind.

Exhibit IV.19 highlights the KPIs for the Payroll section:

Exhibit IV.19

Payroll Processing				
Key Performance Indicator	FY 2014	FY 2015	FY 2016	Q3 FY 2017
Number of out-of-cycle checks	1058	929	749	701
Total number of checks	105,633	104,713	109,492	80,013
Percent on time statutory reporting	100%	100%	100%	100%
Service requests volume	3,478	3,579	3,201	2,352

Average service request turn-around time in days	11.4	11.2	7.8	6.0
--	------	------	-----	-----

The Accounts Payable section includes vendor payment and administration of the corporate card program. This section is responsible for: ensuring that vendor payments are made accurately, timely, and in compliance with DART payment policies and the prompt payment act; invoice payment resolution; the escheatment process; and 1099 issuance. Accounts Payable is also responsible for the DART Corporate Card program including the administrative functions, reporting, training, and annual audit of all cardholders.

The following outlines the Accounting Division's work plan and the key performance indicators to track the effectiveness of the work plan in supporting the Agency strategic goals and initiatives.

A record of prompt and proper payment of vendor invoices provides confidence to the business community when doing business with DART. Prompt payment is particularly important to the small business community which includes many minority-owned businesses. Accounts Payable also administers the corporate card program including an annual audit of all corporate cardholders. The corporate card program not only improves the efficiency at which small purchases are made, but the annual audit builds stakeholder confidence that DART is being a good steward of public funds.

Exhibits IV.20 and IV.21 highlight KPIs for the Accounts Payable section.

Exhibit IV.20  
Accounts Payable Payments Processed

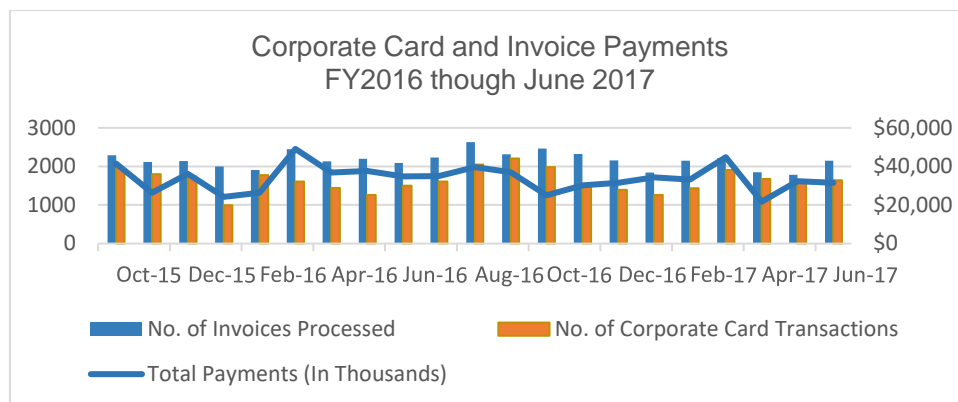
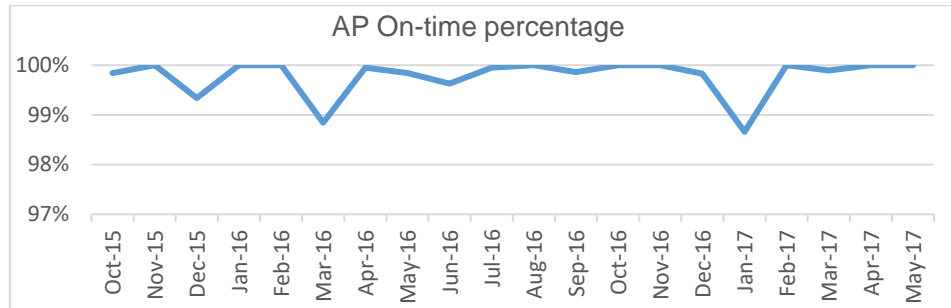


Exhibit IV.21  
Accounts Payable On-Time Payments Record



### Business Planning and Analysis Division

This division develops and administers the annual budget, capital budget, long-range financial plan, and preparation of the annual business plan, and the quarterly operating and financial performance report. This includes revenue tracking and reporting, business analysis project support, and performance reporting (e.g., key performance indicators).

The Operating Budget section implements financial target analysis reporting, works with all departments to ensure that budget targets are maintained, and monitors departmental budgets and assists departments with their budgets throughout the year. The Capital Budget section provides maintenance and administration for the capital budget and Twenty-Year Financial Plan, performs a thorough review of estimated final funding requirements for all current capital projects, and maintains current tracking and reporting systems for all capital projects. The primary functions of this group in FY 2018 will be coordinating with the Technology Department for the automation of current KPI reporting and the upgrade of the current financial planning software. Key performance measures for this area include on-time reporting by established deadlines for documents such as:

- Revenue, Operating Expense, and Capital budgets
- The Twenty-Year Financial Plan
- The Business Plan
- Sales tax results and projections
- Quarterly Operating, Performance, and Compliance Report
- Agency Division Level Measurement (DLM) program report

### Revenue Division

This division consists of Revenue Administration and Revenue Systems.

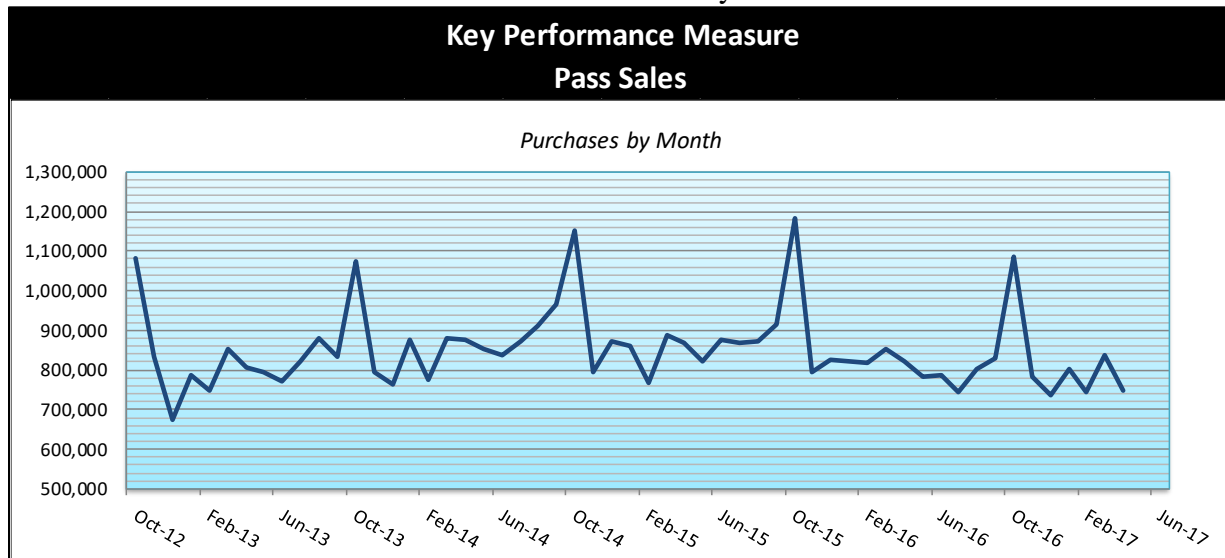
Revenue Administration consists of two separate sections within the Revenue Division (Revenue Administration and Finance Distribution). The primary responsibilities of these sections include

ridership and revenue reporting, pass sales, preparation and distribution of payroll and accounts payable checks, payroll tax transmissions, Payment Card Industry (PCI) compliance oversight, fare media inventory and procurement, and fare collection systems software administration and reconciliation for fareboxes, ticket vending machines (TVM), GoPass mobile ticketing, software to support the Plano Rides and Collin County Ride programs and courtroom currency collections software. In addition, Revenue Administration is providing project management and implementation oversight for the Comprehensive Payment System (CPS) project which is DART's state-of-the-art integrated electronic fare payment, distribution, collection, and processing system.



Revenue Administration also prepares monthly, quarterly, and annual ridership, financial data, and agency services and safety data to regulatory agencies, such as the National Transit Database (NTD), American Public Transportation Association (APTA), and the Texas Department of Transportation (TxDOT). Exhibit IV.22 shows the fare media purchases by month from October 2012 to June 2017.

Exhibit IV.22  
Fare Media Purchases by Month



The Revenue Systems section includes all Fare Equipment Dispatch responsibilities, Revenue Technicians, Bus Yard Control, the maintenance personnel assigned to repair TVMs, and the count room. The Fare Equipment Dispatch unit deploys available resources to bus or rail stations that have equipment in need of service or repair on a day-to-day basis. The dispatchers log all revenue equipment issues, coordinate all TVM repairs, and track both revenue technician and mechanic work progress throughout the day. They track all services provided under contract to Denton County Transportation Authority (DCTA), and submit information to the Accounting Division on a regular basis so DCTA can be invoiced for those services. Section personnel investigate all customer complaints relating to TVMs. The revenue technicians perform routine TVM service



including the removal of coin and currency from collection containers, replenishing pass stock, change supply, and receipt paper. They clear jams and perform the first line of troubleshooting for any TVM problems.

The revenue technicians that provide 24/7/365 bus yard control functions are located at each of the bus divisions and issue the buses to bus operators, collect the ridership data and revenue from bus fareboxes when the buses return to the divisions, and keep the buses parked on the yard in an organized manner. The Fare Equipment Maintenance personnel are responsible for all TVM field repairs, repair of Ticket Reader/Issue Machine (TRiM) units, and vault and probing systems at all bus divisions, fare collection component rebuilds, and TVM preventive maintenance. This unit works closely with Fleet Service and Materials Management to ensure that parts are available to keep fareboxes in working condition on the buses.

Exhibit IV.23 is an example of the Division Level Measurements for the revenue technicians assigned to TVM service and fare equipment maintenance personnel.

Exhibit IV.23  
Division Level Measurement Scorecard – Revenue – TVM

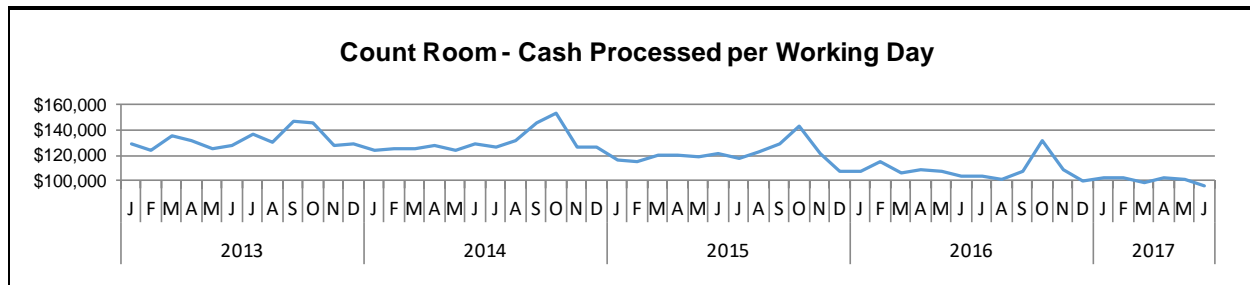
2016 Results					2017 Goals			
Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
17.52	13.77	21.10	18.56	<b>Complaints/100k Passengers</b>	15.56	15.56	15.56	15.56
16.10	20.35	22.63	12.34	<b>Unscheduled Absences (Per Person Annually)</b>	12.38	12.38	12.38	12.38
88,680	78,513	79,153	78,894	<b>Average Weekday Ridership - Rail</b>	103,451	94,746	100,590	105,511
96.03%	98.10%	97.35%	97.79%	<b>% TVMs In Service</b>	99.24%	99.24%	99.24%	99.24%
2,806	2,551	3,617	3,297	<b>Service Calls Completed</b>	3,179	3,179	3,179	3,179
217	115	126	129	<b>PMIs Completed</b>	184	184	184	184

2016 Results					2017 Goals			
Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
455	328	507	445	<b>Complaints</b>	419	378	388	412
2,722,744	2,380,469	2,399,609	2,417,899	<b>Ridership - Rail</b>	2,690,336	2,429,603	2,494,171	2,644,745
26.82	35.89	34.81	18.98	<b>Unsched. Absences 8 Hr. Days</b>	20.64	20.64	20.64	20.64
20	20	20	20	<b>Employees</b>	20	20	20	20
2,806	2,551	3,617	3,297	<b>Service Calls Completed</b>	3,179	3,179	3,179	3,179
217	115	126	129	<b>PMIs Completed</b>	184	184	184	184

The Count Room section is responsible for processing cash collected from fareboxes and ticket vending machines. A report is prepared that monitors cash processed to gain insight into the effects of fare increases, alternative pass sales methods, or significant changes to existing service revenue derived from cash (see Exhibit IV.24).

Exhibit IV.24  
Count Room Productivity



### Treasury Division

This division has responsibility over cash and investment management, debt management, and securing and monitoring grants.

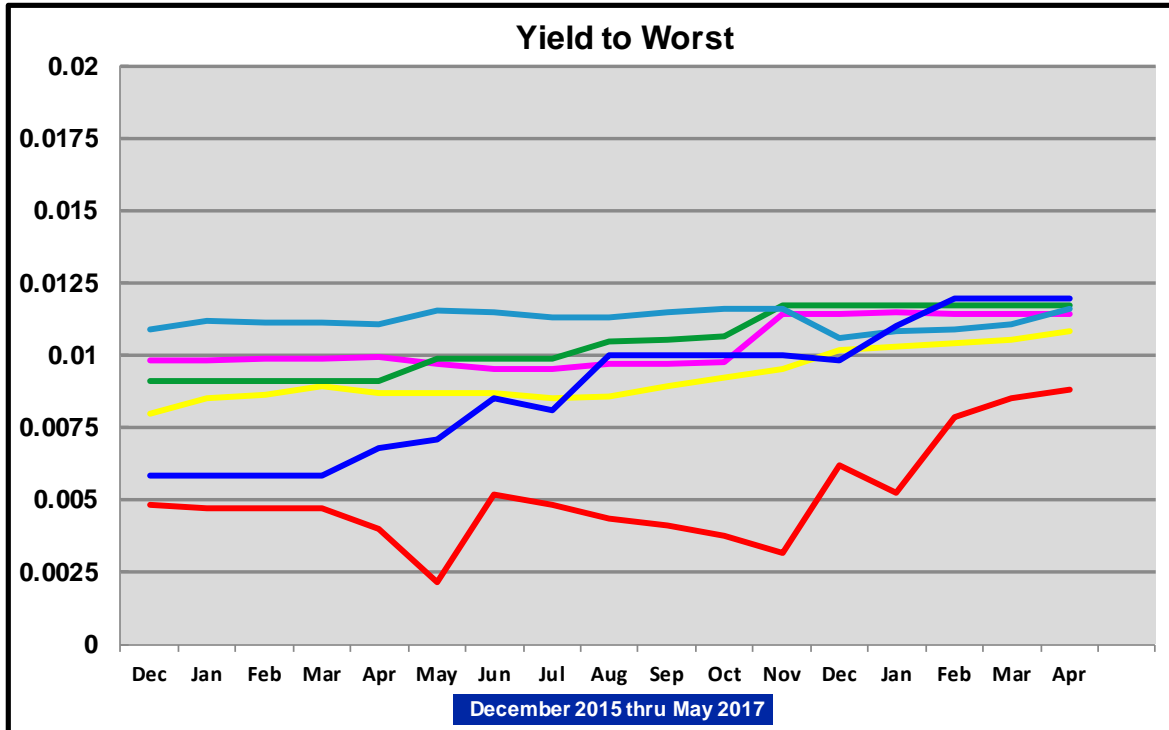
The Treasury Division maintains strict compliance with the Texas Public Funds Investment Act (PFIA) and DART Board resolutions for allowable investment types, qualitative ratings, and both weighted average maturities and maximum individual maturities by actively managing the various portfolios. All available cash proceeds are invested at all times and exceed the benchmark yields for all investment categories. PFIA compliance is monitored through an extensive series of reports prepared daily, monthly, and quarterly. The Government Treasurers of Texas Investment Policy Certificate of Distinction Award has been awarded to DART since March 2013, in recognition of the outstanding Investment Policy and Procedures produced by the Treasury Division.

Treasury staff also maintains tight controls over all cash held by the depository bank or any other institution holding funds on DART's behalf. They maintain strict compliance with debt covenants, make all debt payments on time, and stay informed on industry changes resulting from economic factors or actions by Congress. See Exhibit IV.25, on the following page, for an example of the information tracked by the Treasury Division.



# Exhibit IV-25 Fund Yields

## Fund Yields

**MAY FY17**


	Operating	Fin Res	Cap Res	Ins	Platform	Debt Srv
Dec 15	0.80%	0.98%	1.09%	0.91%	0.58%	0.48%
Jan 16	0.85%	0.98%	1.12%	0.91%	0.58%	0.47%
Feb 16	0.86%	0.99%	1.11%	0.91%	0.58%	0.47%
Mar 16	0.89%	0.99%	1.11%	0.91%	0.58%	0.47%
Apr 16	0.87%	0.99%	1.11%	0.91%	0.68%	0.40%
May 16	0.87%	0.97%	1.15%	0.99%	0.71%	0.22%
Jun 16	0.87%	0.95%	1.15%	0.99%	0.85%	0.52%
Jul 16	0.85%	0.95%	1.13%	0.99%	0.81%	0.48%
Aug 16	0.86%	0.97%	1.13%	1.05%	1.00%	0.44%
Sep 16	0.89%	0.97%	1.15%	1.05%	1.00%	0.41%
Oct 16	0.92%	0.97%	1.16%	1.06%	1.00%	0.37%
Nov 16	0.95%	1.14%	1.16%	1.17%	1.00%	0.32%
Dec 16	1.02%	1.14%	1.06%	1.17%	0.98%	0.62%
Jan 17	1.03%	1.15%	1.09%	1.17%	1.10%	0.53%
Feb 17	1.04%	1.14%	1.09%	1.17%	1.20%	0.79%
Mar 17	1.05%	1.14%	1.11%	1.17%	1.20%	0.85%
Apr 17	1.05%	1.15%	1.13%	1.17%	1.20%	0.92%
May 17	1.08%	1.14%	1.16%	1.17%	1.20%	0.88%

The Division's Grants Section handles all federal, state, and miscellaneous sources of funding and ensures compliance with the regulations associated with each. Employees in this section search for new funding opportunities, assist in the preparation of grant applications, and submit the applications to the appropriate entity. Once funding is awarded, the grant information is entered into the Transportation Improvement Program/State Transportation Improvement Program system through the North Central Texas Council of Governments (NCTCOG), as well as into DART's accounting system for tracking. When expenditures occur, reimbursement requests are submitted, receipt of funds is monitored, and information is properly recorded in DART's general ledger.

The Grants Section takes the lead on all external audits of federal and state funds and coordinates the responses to requests for information. Employees in this section also track expenditures that are funded by bond issuances, commercial paper, and designated funding sources such as the operations and maintenance of the Dallas Streetcar.

### Risk Management Division

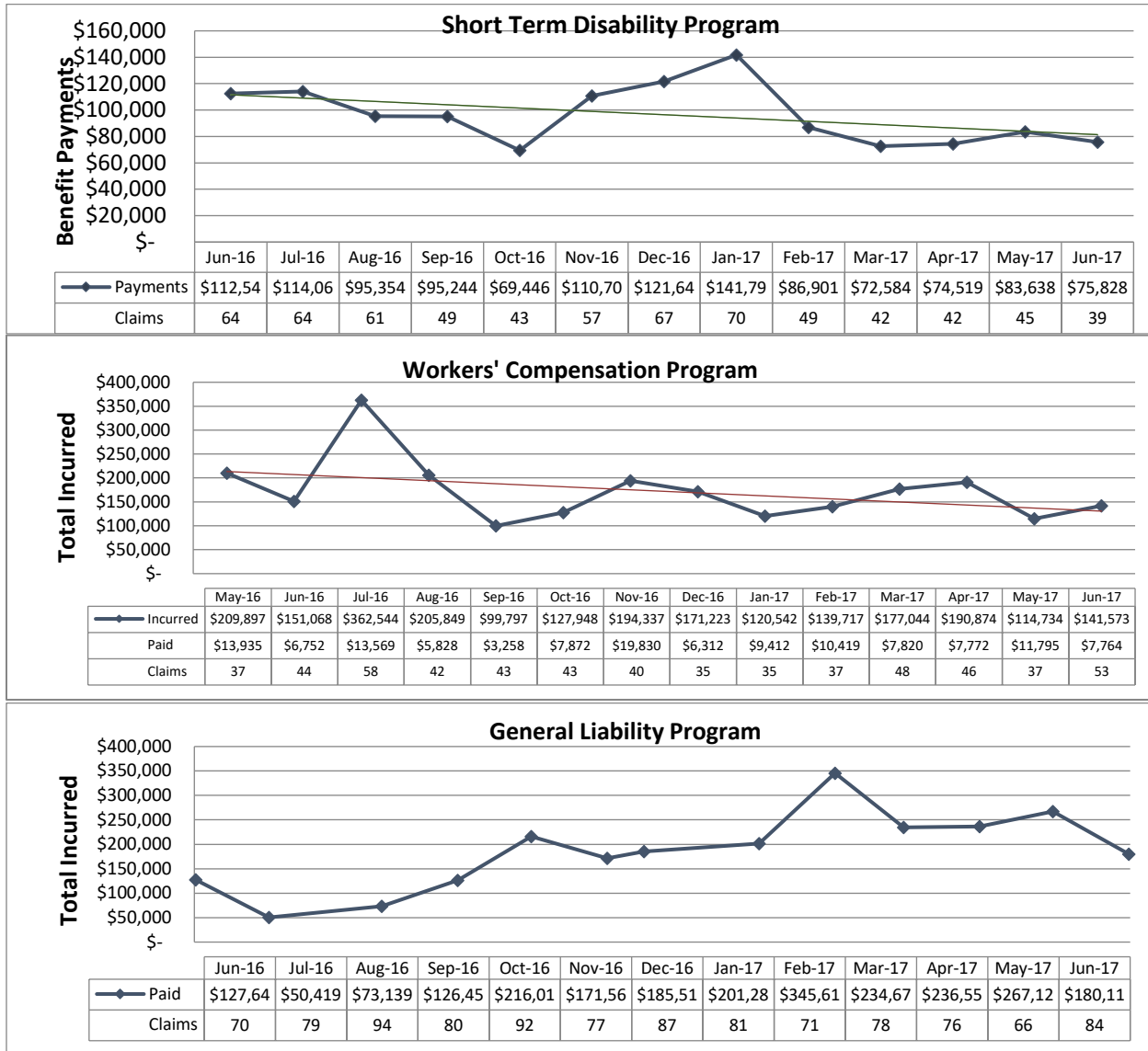
The Risk Management Division consists of four sections that focus on cost containment and risk reduction with a focus on 5 Star service to both internal and external customers.

- The Integrated Disability Benefits Section is responsible for: oversight of work-related injuries; alternative duty assignments to bring injured workers back to work; short- and long-term disability claims for non-work-related injuries; the mandatory family and medical leave program; and the employee assistance program.
- The Liability Claims Section is responsible for the intake, management, and resolution of all bodily injury and property damage claims arising out of DART operations, responding to open records requests, identification and maintenance of video evidence from the smart drive camera system, and subrogation or recovery of damages from responsible third parties.
- The Medical Compliance Section is responsible for pre-employment physicals, drug and alcohol testing, DOT physicals, mandatory drug awareness training, and rehabilitation opportunities.
- The Risk Management Programs Section manages DART's property and casualty insurance programs, vendor insurance recommendations and compliance, review of operating agreements including licenses, leases, trackage rights, and access agreements to identify and recommend appropriate risk allocations, development and oversight of cost effective programs to manage the unique risks associated with major construction projects, and facilitation of contract and insurance program closeouts for completed contract and construction projects.

The Division's primary objectives are to: reduce the cost of employee injuries through timely appropriate medical care, return-to-work initiatives, compliance with Workers' Compensation and Family and Medical Leave Act statutory requirements, maintain a ratio of one claim closed for every claim opened, actively pursue recovery of the cost of damage to property and injuries to

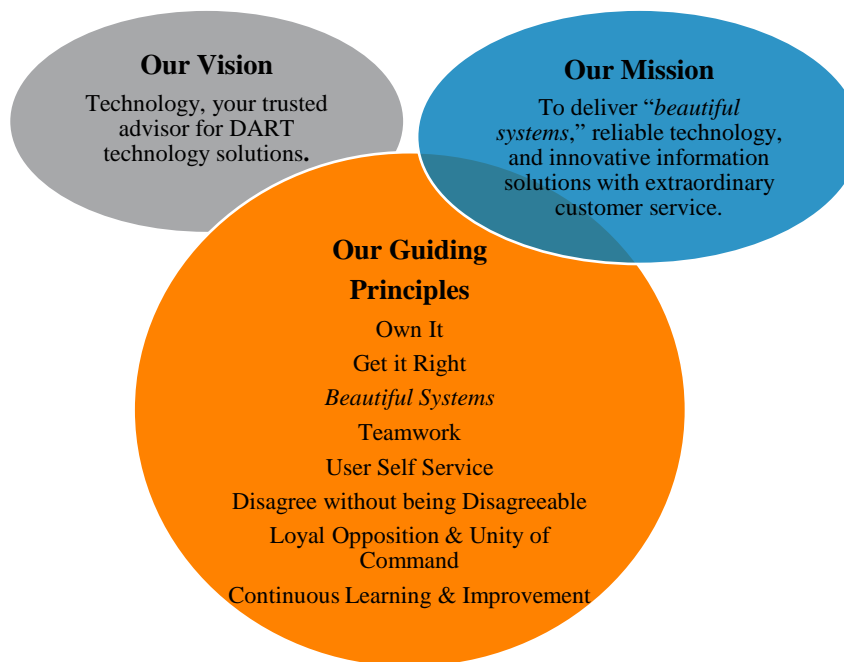


employees by responsible third parties, supporting hiring initiatives and DOT requirements, and equitable risk allocation mechanisms to ensure that the Agency's cost of risk stays within industry norms.



## Technology Department

The Technology Department delivers innovation in partnership with other departments and plays a critical role in creating improvements and capabilities that positively impact the DART business units, ridership, and other stakeholders. The Technology team is committed to performance, excellence, and 5 Star service to its customers. The Vice President/Chief Information Officer, directs the overall activities of the department. The chart below provides the vision, mission and guiding principles for the department.



The Technology Department delivers and maintains critical business systems and infrastructure in support of DART’s service delivery, operational performance, and administrative processes. The department operates in a highly integrated manner delivering new capabilities, managing business applications, data centers, networks, computers, laptops, technology equipment for conference rooms, data and voice for the agency and mobile devices. The department also manages operations technology such as the Vehicle Business System, and Traffic Signal Prioritization systems.

The department’s goal is to deliver “*beautiful systems*.” These are systems that achieve DART’s process, service, and information goals. This is accomplished through data and operational integration and consistency across diverse applications and therefore, business processes at DART. Ultimately the goal is to support and enable the business.

The team will continue to provide technical requirements, applications, risk and security assessments, design reviews, project management, and/or vendor selection services for all the major technology projects throughout the Agency by ensuring alignment with DART’s architecture strategy. The department is a major contributor and advisor to many of the technology



projects throughout the agency working together with our business partners to successfully complete the goals of the agency and provide value to our customers. The department's focus is to increase the value added to our clients and their satisfaction with technology products and services.

The DART Board has adopted a set of Strategic Priorities as well as FY 2018 Presidents Goals to guide the agency, and to address external factors that we expect will have an impact on DART over the next twenty years.

*Strategic Priorities*

1	Continually Improve Service and Safety Experiences and Perceptions for Customers and the Public	2	Optimize and Preserve (State of Good Repair) the Existing Transit System
3	Optimize DART's Influence in Regional Transportation Planning	4	Expand DART's Transportation System to Service Cities Inside and Outside the Current Service Area
5	Pursue Excellence Through Employee Engagement, Development and Well Being	6	Innovate to Improve Levels of Service, Business Processes and Funding

*President's FY 2018 Goals:*

1	Increase ridership through improvements in the availability and quality of transit service	2	Improve security through direct and indirect means
3	Drive demand for and provide additional transit service outside the current service area	4	Improve performance of various administrative functions to advance DART's mission
5	Meet or exceed schedule and budget milestones for capital projects	6	Identify strategic innovations that address the market for transit service, the value of transit service or the efficiency of transit service

With this as guidance the department has defined the clear linkage to DART's Strategic Priorities, the FY 2018 President's goals where applicable and the department's current initiatives.

Major projects/programs are listed below:

<i>Project/Program</i>	<i>Purpose</i>	<i>Board Strategic Priority</i>	<i>President's FY 2018 Goal</i>
<i>Enterprise Applications</i>			
<i>Enterprise Program Management (EPM)</i>	Implement project management software enterprise-wide to be used in managing all levels of capital program and other projects to improve: <ul style="list-style-type: none"> <li>Regulatory Compliance</li> <li>Improve data availability for operating budget modeling</li> </ul>	2,6	5
<i>Enterprise Asset Management (EAM)</i>	Implement asset management software enterprise-wide to be used in managing state of good repair of all DART assets and materials inventory.	1,2,6	
<i>Enterprise Computer-Based Security Awareness Program</i>	The project will increase employee alertness to malicious attacks and improve the capabilities of information, physical, and network security.	1,2,5,6	2
<i>Comprehensive Payment System</i>	Innovation in revenue and fare payment processes, to provide better control of revenue and more timely reporting of transactions, and reduced cash handling.	6	5
<i>Enterprise Data Warehouse (EDW) Expansion</i>	Develop a framework that consumes data from across multiple systems in the agency, integrates and prepares it for end-user consumption via available reporting solutions. Ensure data quality and integrity is maintained.	1,2,6	4,5
<i>Reporting</i>			
<i>KPI Quarterly Scorecard</i>	Provide timely reporting on Agency KPIs by building and automating data sources one at a time and thereby eliminating manual reporting using Excel spreadsheets and MS Access databases.	6	4
<i>Mapping Application GeoEvent Server</i>	Deliver real time data of Bus & Rail mapping and analytics by creating a mapping application enriched with data of scheduled and actual arrival information.	2,6	1,4
<i>Schedule Optimization</i>	Identify opportunities for service delivery optimization and accountability by providing insightful visualizations and analytic capabilities around schedule and operational service delivery data.	1,6	1



<i>EProject / Program</i>	<i>Purpose</i>	<i>Board Strategic Priority</i>	<i>President's FY 2018 Goal</i>
<i>Reporting (continued)</i>			
<i>Service Disruption Communication</i>	Continue to enhance capability to capture and share service disruption events and conditions in real time.	1,6	1,4
<i>Enterprise Geographic Information Systems (GIS) Program</i>	Continue development of applications with the ability to map field assets including storm water drains, real estate, and accidents. The application will assist users in maintenance schedules, budgeting and training.	2	4
<i>Enterprise Agency and Department Reporting and Dashboards</i>	Work with the business units to create a template dashboard using themes common to all departments e.g. Financials, Employee Management.	5,6	4
<i>Development</i>			
<i>Crowdsource Reporter Apps</i>	This application will allow riders to submit problems or observations from the field.	1,5	1,4
<i>Demographics Web App</i>	This mapping application will assist various departments in analyzing studies of 2016 population density, unemployment, population changes, minorities, medium household income, mode of transportation etc. to improve services.	1	1,4
<i>System Improvements</i>			
<i>Application Remediation</i>	This program consists of multiple projects to upgrade key technology components for various applications used by Rail Program Development.	2,6	4
<i>Application Rationalization</i>	Determine how to remove/replace/retire upward of 50 custom applications to a web platform (i.e. .NET) and/or Commercial Off-the-Shelf (COTS) package.	2,6	4



<i>Project/Program</i>	<i>Purpose</i>	<i>Board Strategic Priority</i>	<i>President's FY 2018 Goal</i>
<i>Support</i>			
<i>Cloud Strategy and Integration</i>	Lead efforts to: <ul style="list-style-type: none"> <li>• guide business demand for new cloud-based services</li> <li>• establish a repeatable process to evaluate existing applications for the cloud</li> <li>• deploy an Integration Service to manage data exchanges between cloud and on-premise data centers.</li> </ul>	6	4
<i>Innovation Program</i>	Establish a program to foster the Technology team's capacity to innovate while improving performance and services.	5	4
<i>LRT Traffic Signal Prioritization (TSP)</i>	Support the City of Dallas in deployment and testing of a new traffic controller, and enhance the existing TSP communication and detection in the Central Business District (CBD).	1,2,3	2,5
<i>TSP Three-Car Study Project</i>	Simulate and study the impact of three-car light rail vehicles in the CBD to TSP system and junctions.	1,2,3	2,5
<i>In-vehicle Mobile Communications Replacement</i>	Upgrade the current mobile communications systems for better connectivity on revenue vehicles.	1,6	6
<i>Wi-Fi Feasibility Study</i>	Conduct a Feasibility Study.		6
<i>Procurement Business Process Improvement</i>	Provide improvement in business partner transactions and relationships, implement electronic data interchange or other electronic data transmission methodology to enable users to speed up procurement cycles and improve data quality.	1,6	4

<i>Project/Program</i>	<i>Purpose</i>	<i>Board Strategic Priority</i>	<i>President's FY 2018 Goal</i>
<i>Upgrade Applications</i>			
<i>Trapeze Upgrade</i>	Advance application performance and future scalability and perform an upgrade to the 22 procured Trapeze modules and underlying databases.	2,6	4
<i>DARTnet Modernization</i>	Move DARTnet to a vendor-supported system that will provide increased user self-service and streamline internal business processes. Provide power users with better self-service capabilities, enhance workflow capabilities, and stronger auditability of web content utilizing new tools.	2,5,6	4
<i>Fleetwatch</i>	Upgrade application and underlying database to improve application performance.	2,6	4
<i>New Systems/Applications</i>			
<i>Talent Management System (TMS)</i>	This project is a two-phase project. The first year will include requirements gathering, project planning and process review.	2,5,6	4,5
	Processes for review and implementation: workforce planning, talent acquisition, onboarding, performance appraisal/assessment, career development, goal management, learning management, competency management, succession planning and compensation and retiree management.		
<i>Enterprise Document Management System Restructuring &amp; Expansion</i>	The expansion of this technology will enable the agency to build a solid platform solution to meet compliance and government requirements for maintenance of artifacts.	2,5,6	4,5

### Governance

Governance is an enabling framework for decision making. It is a means of ensuring business-technology collaboration, leading to increased consistency and transparency in decision making and prioritization of initiatives. Governance is a critical component of ensuring delivery of business value from Technology and driving high satisfaction with our clients.

The department has created governance councils for many of the major projects / areas of the department to ensure all stakeholders are engaged and informed throughout the project / initiative.



### *Development of a Security Governance Council*

- The President/CEO chartered the DART Cyber Security Governance Council, in February 2017. The Council is presided by the EVP Business Solutions & Innovation, vice chaired by the CIO, and the CEO acts as the Executive Advisor. The Head of Information Network Security serves as the facilitator for the council and leads efforts with the Council to; provide clear direction and support for cybersecurity management and initiatives, to certify that security policies, processes and procedures are implemented across the Agency, and to provide a strategic lead for organization-wide systems and applications users.
- The Council will develop security best practices for all DART business and operations-dependent technology with the goal to ensure that critical infrastructure and sensitive information is protected. They will work to develop an exemplary cybersecurity-conscious workforce that protects technology resources from increasing threats, and develop strategies and solutions that ensure that DART leads in areas of cybersecurity at a state and national level.

### *Data Governance Council*

- This group will effect change at the policy level to ensure that work practices support data quality and availability. A cross-functional and inter-departmental committee serves as a decision-making body to resolve data issues and establish interdependent data usage and definitions for the proper handling and interpretation of DART's data.
- These definitions will be stored in a data dictionary which will contain details of each element from a technical and functional perspective. The committee will serve as a common ground to communicate and coordinate data related issues and will make recommendations to senior management regarding significant issues that have broad implications.

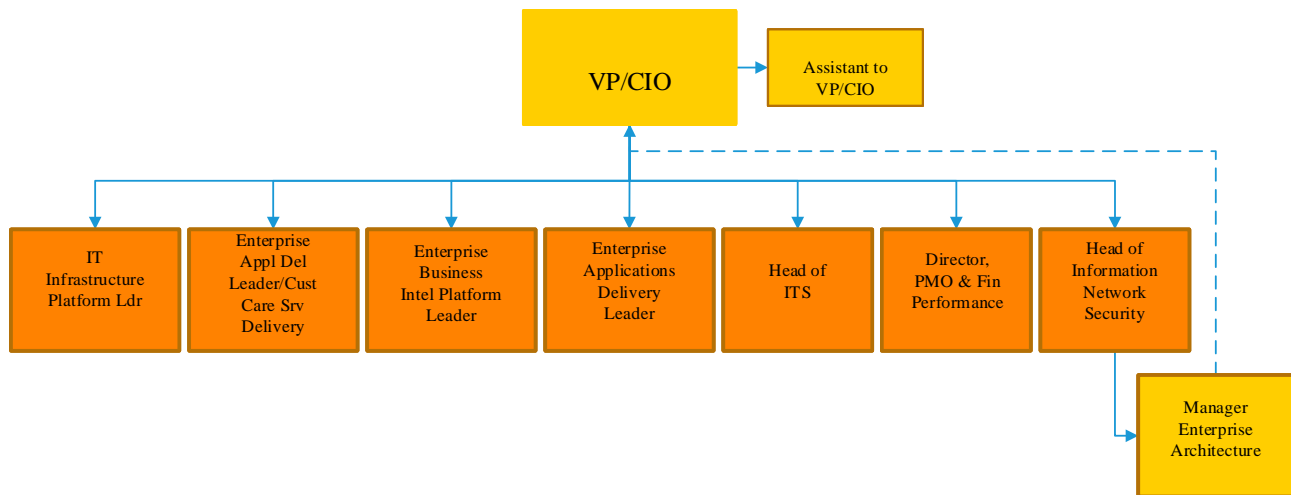
### *SharePoint Governance and Deployment*

- Create an effective agency-wide collaboration service through implementation of Microsoft SharePoint.
- The SharePoint Governance Plan will be a guidebook outlining the administration, maintenance, standards, responsibilities, guidelines, processes and support of our environments.



- The Governance Committee will be formed to assist with decisions on the roadmap, evaluating objectives, and defining roles and responsibilities.

### *Functions and overview of the Team*



### *Program Management Office (PMO)*

The PMO provides decision support information. The PMO reinforces project delivery by ensuring that all business change is managed in a controlled way. As part of the continued focus on reporting the team is working to develop dashboards to keep the department and our business clients apprised on our progress.

The PMO team fulfills a variety of functions on a day-to-day basis including:

- Delivery support, making it easy for project teams to do their jobs by reducing bureaucracy, providing training, business analysis, project management and financial guidance;
- Reporting on financial information, administering the department's budget and financial performance; and
- Training on application suites.



The PMO provides a bi-monthly newsletter to the Agency (Technology Snapshot) providing updates on major projects, key performance indicators, and what's trending in the technology world.

#### Network Security Operations (NSO)

The NSO provides security for DART's enterprise network business ecosystem. The NSO team supports the overall vision and mission of DART by enhancing its cybersecurity posture. They are entrusted to identify, protect, and detect any malicious activity against DART's enterprise network. Additionally, they respond to any data or network incident and will implement recovery activities when necessary.

#### Enterprise Architecture

The over-riding objective of the Enterprise Architecture is to translate DART business strategy and processes into well-defined future capabilities and technology plans to achieve DART's mission. The team collaborates with business and enterprise systems to continually develop, manage, communicate and govern the DART Architecture ensuring that best practices are followed in strategically developing and enhancing the DART digital ecosystem.

#### Information Management & Analytics (IMA)

The Information Management & Analytics group offers information management, business intelligence, advanced analytics, database management and Geographical Information solutions, all under one umbrella. Our vision is to make DART a data-driven organization. Our expertise in domain, technology and execution, empowers us to transform insights into foresights, collaborating with our customers at every step to answer the unasked questions. We help users design, build and run insight driven applications by helping to maximize the potential of data and analytics by delivering operational excellence. The team is focused on providing analytics on some of DART's key performance indicators like Ridership, Customer Satisfaction, On-Time Performance, Accidents etc.

The GIS (Geographic Information Systems) Team's primary mission is to support departments at DART on projects with clear and effective maps, geospatial analysis and other solutions. GIS builds Web-Map based applications, that provide distinct map layers for different types of information, which helps business units make business critical decisions.

#### Intelligent Transportation Systems (ITS) (systems for improved safety and responsiveness):

The team implements, manages and maintains in-vehicle communication systems, passenger communications, LRT traffic signal priority system, and vehicle business system, while adding value to the business operational needs.

The ITS team enables DART business units to research new ITS technologies in the areas of Internet of things (IoT), Autonomous and Connected vehicle technologies and their impact on transit business. In addition, ITS team complies with ITS Regional and National Architecture in the deployment of DART ITS Projects including the Safety and Security guidelines.

Enterprise Applications (EA)

EA provides maintenance and support for DART's enterprise systems and several dedicated applications used across the various business towers. The application development team provides custom web, mobile and desktop computing solutions in support of agency goals and business processes. The application development team also provides integration solutions for Lawson, Spear, Trapeze and other enterprise platforms as needed and is responsible for the ongoing maintenance and support of DART's intranet (DARTnet), as well as DART's public web site, DART.org.

EA supports DART in all Technology needs by providing Customer Relationship Managers (CRM). This CRM functions as the primary contact for all projects and service requests. The major application platforms supported by the divisions are listed below.

- Trapeze - Passenger Transportation Enterprise Resource Planning Application
  - Traveler Information – Trip planning, customer complaints, and IVR integration
  - ITS – Real-Time vehicle location, Enhanced automatic passenger counters (APC)
  - Demand Response – Paratransit route and service planning, customer service and IVR
  - Fixed Planning and Scheduling – Bus route planning and scheduling
  - Transit Workforce Operations – Operator assignments, bid assignments, fatigue management, operator markup
- Spear – Enterprise Asset Maintenance system to track various assets used by Operations and assign work to available mechanics. Also supports maintenance markup.
- Fleet Watch – System that controls the fueling of the bus fleet with Compressed Natural Gas (CNG)
- DART.org – Public facing site of DART
- DARTnet.org – DART company intranet integrated with workflows, DART-built applications, runs the various business operations at DART.
- Infor Lawson – Enterprise Resource Planning:
  - Financial management providing financial functionality and analysis reports
  - Human Resource Management for Personnel Management, Organization Management, Payroll Management and Personnel Development
  - Supplier and Purchase Order Management and the supply chain process
- Kronos Workforce Time and Attendance for tracking employee time and attendance, and data collection
- FileNet Enterprise Document Management System provides enterprise document management, enabling DART to manage the organization's content and documents. It includes lifecycle management, transactional content processing, document management, content consolidation, content based application development, compliance and governance.

### Infrastructure Platform Services (IPS)

Infrastructure Platform Services oversees data and voice networks, data storage, administrative computing infrastructure, application support, and service desk related issues. Fostering communication across these areas improves understanding of the shared infrastructure and facilitates DART-wide input on infrastructure complexities and problems, such as the need for minimum network standards.

IPS is not isolated to one area of DART's enterprise network consisting of the business ecosystem and operations. To share the responsibility and accountability for the seamless delivery of *Beautiful Systems* to DART, the IPS consists of three core areas: Client Services, Network Engineering, and Systems Engineering.

- *Client Services*

The Client Services team consist of three main areas: desktop support, system administration and help desk support.

- Service Desk

- This team responds to calls for assistance with workstation and network problems, installation of computer software, password resetting, login issues, printer setup, and help with all DART supported software.
    - The team is also responsible for triage of all incidents and service catalog requests to ensure proper distribution.

- System Administration

- The team performs a wide range of enterprise-level administrative responsibilities. The team is largely responsible for the health of the Agency servers and micro-computer systems.

- Desktop Support

- The team supports all computers, laptops, and mobile devices issued to DART employees as well as printers and audio-visual equipment located throughout DART's various locations.

- *Network Engineering*

- This area of IPS is responsible for the agency wide data and voice networks. The team specializes in design & setup of new networking systems and administration of the overall network. This includes support for the communications network for the agency and the management of the contracts for those systems.

- *Systems Engineering*

- The Systems Engineering team is responsible for the implementation and support of the DART server infrastructure. This includes the architecture, design, and implementation of the infrastructure for new systems and the ongoing server maintenance to provide a robust and stable infrastructure. The team also manages the contracts and vendor relationships for all infrastructure components.

## Marketing and Communications Department

The Marketing and Communications Department (Marketing) helps increase ridership and drive community and key stakeholder awareness of DART through advertising, promotions, public relations, education, community outreach, and event-specific participation.

Marketing has four main objectives:

1. Enhance brand relevance as measured in the customer satisfaction survey.
2. Increase ridership as measured by rider counts and revenue, and against the specific identified consumer segments.
3. Grow both farebox and non-farebox revenue.
4. Respond in a timely manner to internal and external requests for marketing, communications and public relations support.

For FY 2018, the department will support the following initiatives:

- Fare restructure;
- Capital development projects, including the second downtown Dallas light rail alignment (D2), the Cotton Belt, and platform extensions;
- A pilot program that builds on the Plano Legacy Business Area Mobility Study and focuses on DART's connectivity with other mobility options; and
- The agency's revamped mobile ticketing app (GoPass 2.0), which in part will involve rolling out an entirely new fare payment system (Go Pass tap card).

Additionally, the department will continue to refine the agency's brand positioning and heighten engagement in regional events.

To support both the fare restructure and capital projects, Marketing is responsible for conducting informational meetings and providing communication material and promotional support to drive awareness and community participation.

Marketing will continue to leverage the "empowering discovery" brand positioning to heighten public awareness of DART, as well as use traditional and digital/social channels to further reinforce this positioning. Marketing will also work to ensure that all agency programs support this brand positioning.

The department will be increasing its level of engagement with events in the North Texas area and has already aligned with the region's convention and visitor bureaus (CVBs), hospitality and hotel associations and organizations, and respective city event coordinators to better align with events happening in and around the region. For FY 2018, Marketing, in concert with Technology, will develop a new event tracking program that will provide the agency with clear line of sight of all events throughout the region and serve to engage key stakeholders (Dallas CVB, cities, etc.) as a depository for this information.

One of the most critical projects for FY 2018 is the rollout of the new fare payment system under the GoPass banner. GoPass, launched in September 2013, has had over 500,000 downloads and more than 3.3 million tickets sold. This system, through a redesigned app, a new stored-value card, and a backend management system will help minimize the use of cash. Marketing will have a critical role in driving awareness and adoption, while also communicating the important benefits and features. This effort will be implemented November 2017.

The remaining consumer programs scheduled for FY 2018 are of a strategic nature and include customer service tracking and strategy, DART retail store strategy, ad revenue strategy, and specific consumer segment targeting, which may include: corporate sales, cultural focus, student riders and those living within the major metro core.

### **Procurement Department**

The Procurement Department is responsible for purchasing all materials and supplies, purchased transportation, services including construction, etc. used by the agency, with the specific exceptions of real estate, legal services, and some utilities. The Vice President, Procurement, directs the overall activities of the department.

The Procurement Department's primary role is to support the mission of DART and all departments of DART. This makes Procurement a contributor in most, if not all DART objectives. The Department's high priorities are linked to the Board's Strategic Priorities as shown:

1. Award all capital project, system and program service contracts on time and under budget per the procurement plan (Strategic Priorities 2 and 4).
2. Improve procurement process compliance, efficiency, and timeliness (Strategic Priority 6).
3. Improve Materials Management supplier delivery performance (Strategic Priorities 2 and 4).
4. Augment Sustainable Procurement (Strategic Priority 3).
5. Educate employees and customers on procurement policy, regulations and processes (Strategic Priorities 5 and 6).
6. Continue to improve customer satisfaction, achieving better than 90% on annual survey (Strategic Priority 1).
7. Update DART Procurement policies and procedures (Strategic Priority 6).

Specific missions assigned to the Procurement Department include:

Acquisition planning	Contract award
Strategic sourcing	Contract administration
Supply chain analysis	Contract dispute resolution
Solicitation preparation and issuance	Contract close-out
Contract development	Procurement outreach
Cost and price analysis	Small/Micro Purchases
Negotiations	Supplier Management

Contract Specialists are responsible for the preparation and issuance of formal and informal solicitations exceeding \$50,000 in value; receipt and evaluation of bids/offers; preparation of required reports and analyses; preparation of contracts below, and proposed awards in excess of, established thresholds for Board approval. After award, they are responsible for contract administration, resolution of disputes, and all actions necessary to close out contracts (including terminations for default or for the convenience of the Agency).

Buyers are responsible for the preparation and issuance of requests for quotes (RFQs); receipt and award of purchase orders, or blanket purchase orders for goods and supplies estimated in value of less than or equal to \$50,000.

The *Design and Construction Services Division* consists of two sections responsible for procuring professional services, construction services, and some operations, and maintenance contracts.

The *Capital Acquisitions Division* is responsible for procuring capital assets, including revenue vehicles as well as some operations and maintenance contracts. This Division also provides cost and price analysis support for the Department.

The *Strategic Sourcing Division* consists of two sections responsible for operational, maintenance, and business services procurements in support of all DART departments. This Division procures a wide variety of supplies and services, including small purchases, technology, marketing services, and business products and services.

*Procurement Administration* provides administrative, technical, and policy-related support to the Procurement Department, and responds to questions from internal customers and suppliers regarding registrations, contracts, and the solicitation process. Procurement Administration maintains the supplier database, issues public notices and advertisements of procurement opportunities, makes procurement-related postings to DART's supplier portal, and manages the receipt and storage of bids and offers.

Technical support includes the development of reports, coordination with IT staff, assisting with the development and enhancement of applications, assisting staff with IT requirements, and identifying process improvements and business/system process solutions to meet business objectives.

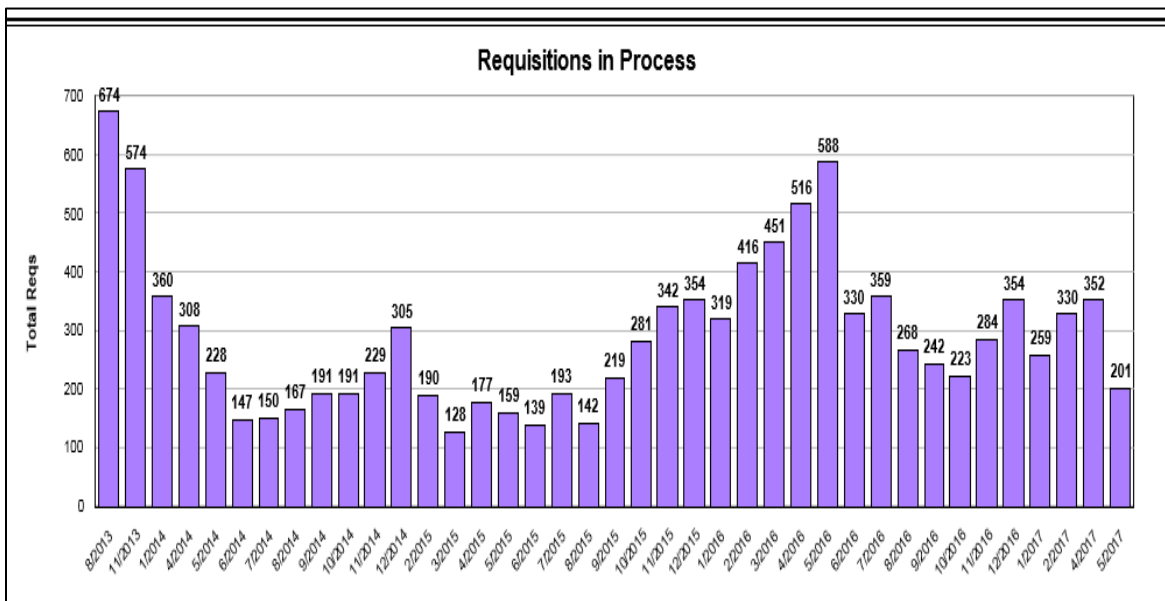
Policy support includes coordination with internal and external audit/review teams, updating policies and procedures, responding to public record requests, and other activities.

### Key Performance Indicators (KPIs) for FY 2018

- 32% D/M/WBE Participation
- 100% capital project contracts awarded on-time and within budget
- 90% of contracts extended before original expiration date
- 90% of contract extensions to Board 180 days or more before expiration date
- 90% customer satisfaction
- 85% supplier satisfaction
- 3 or more bidders on at least 90% of solicitations
- Measured savings 10x budget
- 100% of protests responded to on time
- 100% compliance with FTA requirements, where applicable

Exhibit IV.26 illustrates a reduction in transactions as a result of consolidating purchase activity under contracts and automating the delivery order process.

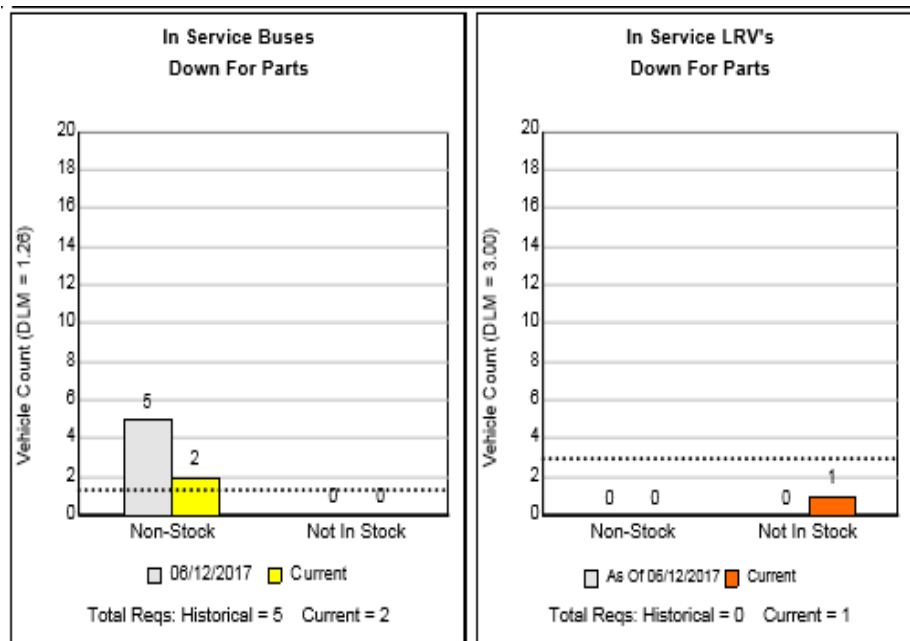
Exhibit IV.26  
Requisitions in Process



DART and Procurement Department management receive an Executive Dashboard and a Procurement Dashboard on a daily basis. The dashboards identify measurements toward Key Performance Indicators (KPIs) on a weekly basis. Exhibit IV.27 shows the number of bus and light rail vehicles (LRVs) that are down for parts on a weekly basis.



### Exhibit IV.27 Buses and LRVs Down for Parts



## **Workforce & Customer Safety**

DART has always considered the safety of our customers, employees, and contractors to be of paramount importance. We have developed and implemented a System Safety Program Plan (SSPP) designed to provide the safest transportation network for customers and citizens of our service area, and the safest work environment for employees. A series of unfortunate public transit and commuter rail incidents around the country in the past ten years has prompted Congress to adopt new regulatory oversight and compliance obligations. These new regulations require DART to further refine our program and elevate even further the emphasis on safety throughout the organization. Under the Federal Transit Administration's adopted principles of Safety Management System (SMS), DART can anticipate more safety oversight auditing and reporting obligations to both the State of Texas and the Federal Transit Administration. In addition, with the implementation of Positive Train Control on our Commuter Rail system, there will be a companion set of new compliance and reporting obligations. Finally, under an Interlocal Agreement (ILA) with the City of Dallas we have agreed to operate the Dallas Streetcar as a contractor. We have experienced an increase in the involvement of DART's Safety Department with the Dallas Streetcar and expect this to continue throughout the term of the agreement. DART serves in a technical advisory capacity supporting the McKinney Avenue Transit Authority streetcar.

The Vice President, Chief Safety Officer, reports to DART's President/Executive Director. The location of this position within the Agency's reporting structure emphasizes the importance safety should and does play in our daily operations.

Each DART department is directed and empowered to administer the SSPP and its specific activities for the prevention, control, and resolution of unsafe conditions and actions. DART's successful safety record results from the use of this plan, as well as from the regular review and revision process in place to keep the SSPP current. It is fully expected that once the Safety Management System (SMS) is fully implemented, the SSPP will be incorporated intact.

### **DART Safe Work Practices Policy**

DART's safety policy is guided by the following principles:

- Injuries and occupational illness can be prevented.
- Preventing injuries and incidents is good business.
- Operating exposures can be safeguarded.
- Management will train all employees to work safely.
- Appropriate safety equipment will be available to all employees.
- Safety is the responsibility of every employee.

DART's senior management is responsible for providing leadership in promoting safety and ensuring employees are committed to the safety of DART's customers, employees, property, and the general public who come into contact with the DART system.

The DART Safe Work Practices Policy voluntarily adopts the Occupational Safety and Health Administration (OSHA) standard as the minimum standard for safe work practice. Audits covering all of the 15 original Standard Operating Procedures, as well as System Safety Program elements, are conducted each year to measure and record improvement with respect to prior audit findings and mitigation implementations.

To further support safe work practices, DART provides safety-specific training for DART operations. Safety rules and techniques are integrated into the task-specific training associated with each departmental discipline. A senior safety professional has been designated as the single point for the delivery of training to ensure continuity of the safety message. This training is supplemented by the remaining safety professionals who conduct task-specific training. DART's Operational Safety Training Program includes the following:

- Light Railway Worker Protection Program (LRWPP)
- DART Police
- Quarterly Safety Training
- Collision Avoidance
- Industrial Health and Safety Training

Mandatory quarterly safety training meetings are held each year for Transportation and Maintenance department personnel. The topics and curriculum are based upon current events, recurrent training required by law, or training required by changes in safety-related laws, regulations, guidelines, DART policy, standard operating procedures, and work instructions. Over 3,000 individuals are trained annually.

### **Operations Safety Functions**

DART's safety program includes the following:

- Audits of various components of the system regularly based on safety rules, operating practices, and traffic laws for the Maintenance and Transportation departments, and other audits as requested.
- Light rail safety audits as mandated by the Federal Transit Administration (FTA) and State Safety Oversight.
- Job safety analyses to recommend mitigation strategies for the risks inherent in performing specific tasks. This, in turn, affects the safety requirements within the Standard Operating Procedures and Work Instructions.
- Investigation of all collision accidents to determine preventability as well as an appeal process associated with preventability decisions.

- Involvement in integrated testing prior to the opening of new light rail sections.
- Leadership of the activities of the Rail and Bus Safety Committees, which report to the DART Safety Committee (DSC). The DSC is composed of DART executive management and is responsible for safety policymaking, performance accountability, oversight of the subordinate safety committees, and assignment of safety responsibilities throughout the agency.
- Oversight of changes in configuration to bus, rail, and other systems, ensuring adherence to change management principles and processes.
- Oversight and documentation of medical monitoring for lead and hexavalent chromium.
- Primary contact for all state safety oversight issues such as compliance with federal and state regulations and serious accident investigation and reporting.
- Primary contact to the National Transportation Safety Board.
- Development and implementation of accident reduction initiatives and implementation of operational policies and procedures.
- Coordination of the National Safety Council's safe-driver recognition program.
- Participation in the development and implementation of the safety initiatives of the American Public Transportation Association.

### Bus and Light Rail Accidents per 100,000 Miles

Exhibit IV.28 shows the results of Bus Accidents per 100,000 miles for FY 2015 through May 2017.

Exhibit IV.28  
Bus Accidents per 100,000 Miles

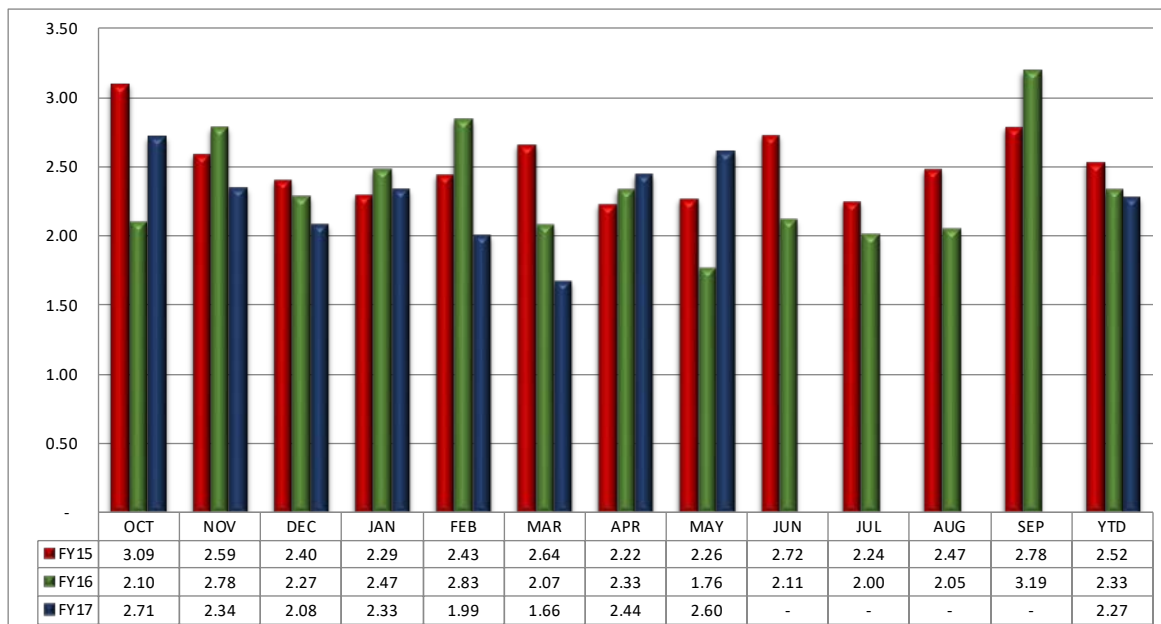
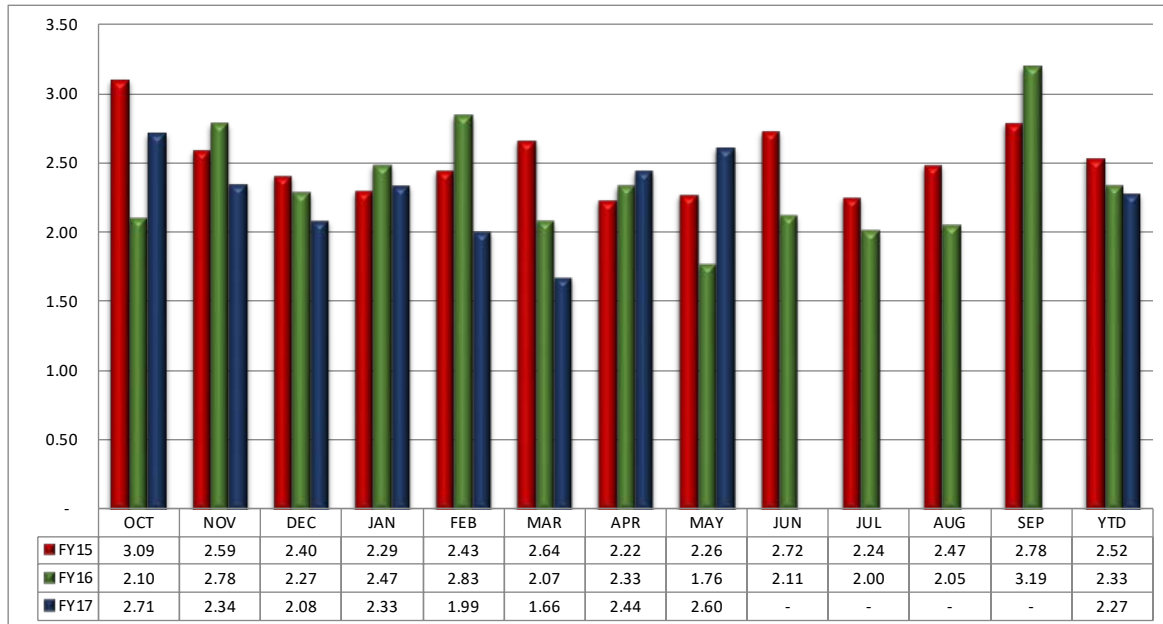


Exhibit IV.29 shows the history of Rail Accidents per 100,000 Train Miles for FY 2015 through May 2017.

Exhibit IV.29  
Rail Accidents per 100,000 Train Miles



**Rail Program Development – Safety Program(s)**

Safety and security are primary concerns that encompass all aspects of planning, design, construction, and subsequent operations of the DART Rail, Trinity Railway Express, Bus, Paratransit, Transportation, Maintenance, Dallas Streetcar System, and management facilities and assets. As a result, all of DART's Engineering and Construction staff, support staff, and rail consultants are charged with the responsibility of ensuring the safety and security of patrons, employees, and general public who come into contact either directly or indirectly with DART transportation systems and facilities. Subsequently, the Capital Design & Construction Department directs development, deployment, and management of three separate but integrated safety disciplines: Construction Safety, System Safety, and System Safety Certification. These three elements are the initial safety processes introduced into authority designs, installations, integrated testing, start-up, and the final safety certification of all DART's transportation systems and management infrastructure. The following elements represent critical components of each safety discipline:

The **Construction Safety and Security Program (CSSP)** was established by DART to promote safety and security and to mitigate and control hazards and risks associated with construction, repair, maintenance, and related services for DART, Trinity Railway Express (TRE), and Dallas Streetcar Systems.

- Management, contractual, and contractor compliance, design integration, enforcement of federal regulations and statutes (OSHA, FRA, FTA), state regulations (TxDOT), National/Industry Consensus Standards (NFPA, NEC, ANSI, AREMA, ASTM, etc.), and agency safety requirements, policies, and procedures.
- The Comprehensive Inspection/Assessment and Inspection Program focuses on jobsite construction safety, workforce (personnel) safety, and environmental health. Detailed/specific safety element audits and validation of contractual compliance are conducted, and written reports with supporting photographic documentation are prepared for record-keeping requirements.
- Investigations of accidents/incidents and property damage claims. Identifying causal factors, determining abatement, and follow-on actions. Develops and implements accident reduction initiatives and implementation of operational policies and procedures.
- Management of comprehensive bilingual safety education and training programs; i.e., Construction, Systems Safety, Storm water Protection Awareness, and the Federal Railroad Administration (FRA) Roadway Worker Protection (RWP).
- Establishment and participation of Safety Committees; Construction Safety and Security Advisory Committee (CSSAC); DART Safety Committee (DSC); and several subordinate safety committees; e.g., Bus, Rail, Commuter Rail (TRE), Fire Life Safety Committee (FLSC), and System Safety Certification Readiness Team (SSCRT).

As a result of these construction safety processes, DART has achieved an unprecedented low worker injury rate. Since the mid-1990s, DART's construction projects have now exceeded 50+

million man-hours (with the most recent Phase II and Phase III projects exceeding 18 million man-hours alone). The team of seasoned construction professionals has created a culture that promotes a high level of safety awareness that permeates every aspect/element of work being performed. With systematic refinements, the construction safety and security program successfully lowered the medical costs associated with injuries from \$1.31 per man-hour worked on the Light Rail Starter System to a laudable \$0.34 per man-hour worked on the LRT Phase II & III Build-out. These results compare most favorably to published national averages as well as departmental goals and have clearly elevated our integrated construction safety and security program to “world class” status. Exhibit IV.30 depicts scope increases and cost successes of the Construction Safety Program since the initial introduction of the LRT system, from the earliest phases (Starter System) to current Phase III Capital Build-Out Program.

Exhibit IV.30  
Construction Safety

<b>DART Construction Safety Program</b>			
	<b>LRT Starter System</b>	<b>LRT Phase I</b>	<b>LRT Phase II &amp; III (to date)</b>
<b>Total Man-Hours Worked</b>	<b>8,115,525</b>	<b>6,372,080</b>	<b>18,165,223</b>
Total "Recordable" Accidents	982	321	144
Total "Lost Time" Accidents	271	46	37
<b>Total "Cost" per Man-Hour</b>	<b>\$1.31</b>	<b>\$0.58</b>	<b>\$0.34</b>
Program Costs	\$900 M	\$900 M	\$1.9 B
Construction Costs	\$500-\$600 M	\$500-\$600 M	\$1.5 B

The **System Safety Program** (SSP) applies engineering and management principles, criteria, and techniques to achieve acceptable risk, within the constraints of operational effectiveness and cost throughout all phases of the system life cycle. The program ensures a comprehensive safety hazard analysis of systems and subsystems design, facilities, construction, and operational procedures. Comprehensive safety and security certification checklists are developed and reviewed by committee to assure compliance prior to the transportation system being placed into active revenue service.

- Management of the agency's Capital System Safety Certification, Start-Up, and Integrated Testing programs. Establishes processes and methodologies, for formalized testing, evaluation, and acceptance for LRVs, subsystems, i.e., Traction Power Substations (TPSS), Overhead Catenary System (OCS), Communications, Signals, and Fare Collection, in conjunction and other critical rail related systems.
- Directs development, implementation, evaluation, and revision of policies, procedures, standards, and publications relative to system integration testing (Integrated Test Plan)



programs. Coordinates development of hazard analysis processes, programs, and methodologies as defined in PHA, OHA, FMEA, TVA, MIL-STD-882.

- Develops technical reports, formal presentations, etc. Interfaces with Federal (FTA and FRA) and State of Texas Safety Oversight (SSO), and Project Management Oversight Committee (PMOC) representatives and officials.
- Identifies and conducts integrated testing activities prior to the start of revenue service. Testing includes safety functions of major system elements; i.e., traction power, overhead catenary system, communications, signals, fare collection, and the interoperability of these systems. The published Integrated Test Plan (ITP) includes descriptions of each system's elements test, personnel required to perform the test, and criteria for determining successful completion of the test.
- Collaborates on development and implementation of plans and procedures to efficiently transfer completed capital projects to the DART Maintenance and Transportation departments. Provides liaison between the Rail Program division and these departments during rail-related projects and design developments.

**System Safety Certification Program (SSCP)** is the process of verifying compliance with a predetermined and approved set of formal safety and security requirements. Specifically, it involves issuing Certificates of Compliance that document that the safety and security requirements of the LRT Build-Out Phase II & III Project and Dallas Streetcar System have been achieved.

- Identifies processes by which projects will be formally certified as being safe to operate in revenue service. Safety and Security Certification verifies that systems, as designed and constructed, meet or exceed the stated requirements (specifications, manufacturers' criteria, etc.) for safe operation, security, and maintenance prior to entering revenue service.
- Emphasizes security requirements through a collaborative effort with the DART Police. Accordingly, the SSCP addresses safety and security as the project progresses from planning, to design, through construction, installation, testing, and finally revenue service. The primary objective is to achieve a state of acceptable risk parameters that achieve a major system security obligation to minimize or eliminate threats and vulnerabilities to the most practical levels.
- Validates that safety and security design criteria and standards are properly incorporated into appropriate design drawings and contract specifications. Project elements are reviewed for safety and security certification upon completion of design, construction/installation, and development of operating procedures (if applicable). During design and final construction/installation, final verification activities are performed, which include inspections and integrated testing. Upon successful completion of the verification process, the project element is certified as being safe and secure for revenue service.

- Collaborates with Jurisdictions Having Authority (JHA), DART Maintenance, Transportation, and Police to conduct First Responder system familiarization training. Conducts federally-mandated Readiness Drill program by developing exercise criteria and jointly stage and conduct simulated rail vehicle emergency situations.

Collaboration and teamwork with DART personnel, contractors, subcontractors, and consultants has institutionally and effectively achieved a demonstrably high level of success in the workforce and systems safety environments and the overall integrated effectiveness of the agency's Construction Safety, System Safety Start-Up and Integration, and Safety Certification program.



Blank page

## **Growth/Regional Development**

The Executive Vice President of Growth/Regional Development has oversight of the Planning & Development, Commuter Rail & Railroad Management, Capital Planning, Capital Design & Construction, and Real Property & Transit Oriented Development (TOD) departments. The Executive Vice President reports to DART's President/ Executive Director and is the management liaison for the Board's Rail Program Committee, Planning Committee, and TOD Committee for departmental matters.

### **Planning & Development Department**

The work plan for the Planning & Development Department consists of a broad range of service planning and project development activities. These include refinement of the current bus system and developing concepts for future services and advancing them to implementation. Planning & Development Department activities also include planning, designing, and constructing various service-related capital projects.

The Vice President of Planning & Development directs the overall activities of the department. The strategic workplan for FY 2018 includes the following programs and projects:

*Integrated Corridor Management (ICM)* – Developed by the US DOT, Integrated Corridor Management (ICM) concepts may be applied in corridors with multiple transportation networks that are owned and operated by various providers. ICM requires technical, operational, and institutional integration of activities so that for the benefit of the commuter and the traveling public, the entire corridor is managed as one system rather than individual networks. A corridor is defined as an entire geographical area that may consist of highways, arterials, toll roads, parking systems, managed lanes, local bus, express bus, and light rail systems. The program includes freeway management, arterial street monitoring, responsive traffic signal system, parking management, real-time transit vehicle and park and ride lot information, regional trip planner, weather information, and the 511DFW, which is the State's first multi-modal Traveler Information System. The federally-funded ICM Program is a joint effort of DART, TxDOT, North Central Texas Council of Governments (NCTCOG), North Texas Tollway Authority (NTTA), and the cities of Dallas, Highland Park, University Park, Richardson, and Plano.

At the culmination of nine years of research and testing of the ICM concept technology and software with its partners in FY 2016, DART completed a mandatory US DOT one-year real time pilot test of the ICM project in the US 75 corridor. The results of the demonstration are being evaluated by US DOT and will be published in FY 2017. Preliminary assessments of the program's value by DART, TxDOT, Dallas, Richardson, Plano, and NCTCOG resulted in funding for the program for FY 2015 and increased funding in FY 2016. Effective October 1, 2016, DART, TxDOT, Richardson, and Plano ended the operation of the ICM project.

The workplan for FY 2016 included implementation of the mobile 511DFW app, 511DFW Twitter feed, upgrade of the ICM-511 software from SMARTNET to Ecotrafix, and an evaluation of the 511DFW to determine how to make the system more effective. Additionally, the FY 2016 work

program included a major initiative to evaluate ICM technology for use within DART to improve management of service disruptions. DART also anticipates expansion of the number of participating cities in the cooperative program.

Based upon the NCTCOG consultant evaluation of the 511DFW program in FY 2016, Regional Transportation Council has assigned responsibility for the 511DFW to NCTCOG by April 30, 2017. This change has a significant positive benefit to DART by eliminating its major responsibility for project management, procurement, and financing the program. NCTCOG has committed federal funding for three additional years and will invest in a major upgrade of the traveler information program called 511DFW Next Generation which began in FY 2017. TxDOT and DART will continue to provide local match funding to the program.

*Bus Shelter Project* – After completion of the acceleration of 437 shelter and bench installations in June 2015, the workplan will return to a more standard program of 50 shelters, 70 benches, and 40 free-standing light projects for FY 2017. During FY 2017, DART installed and tested three “SMART” shelters providing “next bus” signage, security cameras, and enhanced lighting, powered solely with larger solar panels and storage batteries. The passenger amenities group will complete the capital program for passenger amenities based upon the remaining funding in the financial plan. It is anticipated that no more than 100 shelters, 100 benches, and 40 solar lights will be installed.

An outgrowth of the Bus Shelter Program which will continue in FY 2018 is a study to reduce the number of ineffective, redundant, and closely-spaced bus stops. It is anticipated that this planning study will allow DART to improve the travel speeds of bus routes and improve a larger percentage of the bus stops with shelters and benches. The stop removal program will be phased in with the semi-annual service changes.

*Reserved Parking Program* – The DART Board of Directors decided to allow the non-resident Paid Parking demonstration program to end without renewal. Paid parking ended at the four designated locations on April 2, 2014. Out of concern for the ability of service area residents to find close-in parking at Parker Road Station, DART established a follow-up Reserved Parking Program at Parker Road. This new program began the next day.

A total of 828 parking spaces were reserved for service area residents with a valid DART resident permit. Another 1,231 spaces at Parker Road are open to all users. Eligibility for the program requires verification of service area residency and verification of vehicle ownership, and residence permits issued under the former Paid Parking program are accepted. Station Concierges at Parker Road issue the reserved parking permits, and DART Police provide enforcement.

During FY 2016, the program was evaluated to measure compliance. Compliance was found to be good but the evaluation also found that fewer reserved spaces were needed. During FY 2016, the number of spaces reserved for residents of DART cities was reduced to 628. This change provided unused spaces to be available for non-service area customers unable to find space at Parker Road. The reserved resident program will be continued in FY 2018.

*Regional Service Policies and Operations* – DART continues to work on the provision of transit services outside of the DART Service Area under Board Policy III.07 (Fixed Route Service Beyond Service Area Boundary). DART currently works through a Local Government Corporation (LGC) to manage five out-of-service area contracts: a tri-party service agreement with the City of Arlington and the Fort Worth Transportation Authority for services in Arlington; an agreement with the City of Mesquite for services between Hanby Stadium and the DART Lawnview LRT Station; and agreements with Wylie, Allen, and Fairview to provide services for seniors and disabled persons.

The Metro ArlingtonXpress (MAX) service began in August 2013 with a single weekday route connecting College Park in Arlington to CentrePort Station on the TRE line, with one stop in the Arlington Entertainment District. Under the original agreement, DART operated service through August 2015; the agreement has now been extended through December 2017. This service is carrying an average of 300 passengers per day.

In FY 2016, DART and the City of Arlington began work to develop a Comprehensive Operations Analysis (COA) of Arlington transit service. This review will look at existing services in Arlington (including MAX, UT-Arlington shuttle operations, and Arlington's Paratransit program) and potential near- and longer-term improvements. The Arlington COA will be completed during FY 2017. It is anticipated that the future of DART's involvement with Arlington will be determined by December 2017.

Mesquite service began in March 2012 with a single weekday route connecting Mesquite's Hanby Stadium to Lawnview Station on the Green Line. This agreement which was set to expire at the end of December 2014 was extended for an additional three years in a unique joint venture between STAR Transit and DART. During FY 2017, DART worked with Mesquite to complete the required service plan to guide future transit improvements within the City of Mesquite.

During FY 2016, DART was asked to provide senior and disabled demand responsive service to parts of Collin County left without transportation following the collapse of the Texoma Area Paratransit System. The NCTCOG contracted with the DART Bus Service, LGC to provide services in Allen, Wylie, and Fairview. This NCTCOG-funded service began in February 2016 and ended 90 days later in May 2016. This emergency service allowed DART to negotiate funding with Allen, Wylie, and Fairview along with NCTCOG to provide a similar service through FY 2017. DART was able to obtain a major grant from Toyota Motor North America, Inc., as well as NCTCOG for funding to permit the cities to have a longer time to evaluate their needs for public transportation. During FY 2017, DART implemented a program for Collin County like the Plano Ride Program to service seniors and disabled persons. In addition, during FY 2017 and FY 2018, DART will collaborate with the cities in Collin County to complete a county-wide public transportation plan to guide future investments in transit. DART anticipates that the Cities of Wylie, Fairview, and Allen will contract with the DART LGC to extend the taxi subsidy program through 2019.

*Plano Ride Program* – For several years, DART has partnered with the City of Plano to support the Plano Senior Rides program, a program providing taxi vouchers to help fund transportation for Seniors who are unable to use DART fixed-route or Paratransit services. DART has made a key

program change that replaced paper vouchers with debit cards, which simplified record-keeping and administrative burdens. The program has been expanded to include the addition of Plano residents who are former customers of the now-defunct Collin County Area Rural Transit (CCART) system, but do not qualify or are unable to use DART fixed-route or Paratransit services.

DART has received requests for similar programs in Carrollton and Rowlett in areas with very limited or no regular fixed-route transit service. The pilot was deployed in Plano in November 2015 which will help determine if the approach has applications in other cities in the service area. DART has submitted a grant request for funding to help start the taxi voucher program in Rowlett and Carrollton. Since October 2016, the taxi voucher program is being used in the Collin County cities of Allen, Wylie, and Fairview under a contract with DART's LGC.

*Comprehensive Operations Analysis* – During FY 2015, DART Capital Planning and Service Planning staff began work on the Agency's first Comprehensive Operations Analysis, commonly called a COA. This effort, which is the first phase of the development of a new 2040 Transit System Plan, consists of a comprehensive look at DART transit services. The COA is a thorough examination of all DART services, with an emphasis on the bus system, that analyzes demographic and travel data, transit service provided, and transit service needs over the next decade and beyond. The COA is being performed by HDR and Connectics Transportation Group and was completed in late Calendar Year (CY) 2016. DART will review the results of the COA, and—with input from the Board—make any service adjustments necessary to improve the service to our riders while ensuring that changes fit within the framework of the budget and Twenty-Year Financial Plan. Implementation of the COA began in late FY16 and have continued in FY17. Major changes are being considered by the DART Board in FY18 and FY19.

*Area Service Reviews and Service Changes* – DART conducts periodic detailed service reviews in different sectors of the DART Service Area. These reviews include a careful analysis of the demographics and performance of services in the respective areas, looking for gaps in coverage and other changes that can be implemented in a three to five-year time horizon. During FY 2016 and FY 2017, DART conducted two service reviews; Rowlett, and Oak Cliff/West Dallas. In FY 2017 DART will complete reviews in Carrollton. Some of the work for these efforts borrows from COA activities that were occurring at the same time. Some early Oak Cliff/West Dallas service changes occurred in late FY 2016 and through FY 2017, including the extension of the Dallas Streetcar to Zang at Davis, changes to D-Link service, and bus feeder routes that support the startup of the SOC-3 light rail extension to the University of North Texas Station and Camp Wisdom Station. Other changes in these areas will be implemented over the next five years. A service review for Richardson will commence during FY 2018 when the Rowlett work is complete.

*On-Time Performance Project* – DART completed a comprehensive analysis of bus on-time performance and recovery during FY 2015. This study identified the routes which perform below DART's service standard for on-time performance and identified some of the reasons for that level of performance. A major focus of Service Planning's FY 2017 workplan was an effort to reschedule deficient bus routes to adjust running times to better match field operations, increase recovery time, and improve schedule adherence. DART implemented revised schedules for up to ten routes at each of the major service changes in March 2017 and August 2017. Most of the



adjustments target off-peak schedules; weekday peak changes are planned for later years when new buses are available to augment peak service. Assuming DART Board approval of the proposed COA recommendations for FY 2018 and FY 2019, major modifications in bus schedules will be continued.

*Legacy Area Transportation Study* – Due to the explosive employment and residential growth in the Legacy area of northwest Plano, the City of Plano completed a major transportation study to evaluate options to reduce congestion and improve mobility in the area in FY 2016. DART participated by preparing the transit element of the plan for Plano and adjacent communities as part of our FY 2016 work program. DART implemented several of the recommended route changes from the Legacy Plan in March 2017. The Legacy Study also recommended the implementation of micro transit options supplemented by Transportation Network Companies (Uber/Lyft) and real-time carpooling. A pilot test of this new type of service will be implemented in the Plano area during FY18. Other changes will be implemented in future years based upon COA recommendations.

*Downtown Shuttle* – In FY 2016, DART developed a revised routing plan for the downtown Dallas shuttle, D-Link. This project, jointly funded by the City of Dallas, Downtown Dallas, Inc., and DART, was originally designed to provide a free downtown shuttle between major activity centers. In August 2016, the Dallas Streetcar was extended to Bishop Arts allowing D-Link to be restricted to serve only the downtown area. During FY 2017, DART will perform an evaluation of the revised Downtown Shuttle to present to the funding partners. During FY 2018, DART will receive seven (7) electric buses which will be used to operate the D-Link shuttle.



### Vanpool Program

DART and the NCTCOG have worked together to identify strategies for reducing vehicle emissions in the Metroplex. The vanpool program has been identified as a critical component of the State Implementation Plan for improving air quality. Employers in the Metroplex have also discovered that vanpools are a viable transportation alternative for their employees and are subsidizing passenger fares to help with escalating fuel costs.

### Vanpool Scorecard

Exhibit IV.31 highlights Vanpool Key Performance Indicators (KPIs) presented in scorecard format. These KPIs measure our success towards achieving the goal of providing effective, efficient, safe, secure transportation service. The numbers in the columns for fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr 2 represents the four-quarter rolling period ending March 31, 2017. The numbers in the columns for fiscal years 2017 and 2018 are the target values for those years.

Exhibit IV.31  
Vanpool Scorecard – Key Performance Indicators

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Customer Quality</b>					
Ridership (000)	871.4	792.0	708.6	838.0	720.4
Number of Vanpools	164	185	184	228	265

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Financial Efficiency</b>					
Expenses - Fully Allocated (M)	\$1.97	\$1.99	\$0.91	\$2.03	\$2.07
Revenues (M)	\$1.89	\$1.70	\$0.95	\$2.19	\$1.19
Net Subsidy (M)	\$0.08	\$0.29	(\$0.04)	(\$0.16)	\$0.88
Subsidy Per Passenger	\$0.09	\$0.36	(\$0.12)	(\$0.19)	\$1.22

DART currently offers vans in a range of capacities (up to 15 passengers) through a third-party contractor (vRide). This program is partially funded by the NCTCOG through a Surface Transportation Program/Metropolitan Mobility (STP/MM) grant. Over the past few years, NCTCOG has provided funding to DART that covers up to 45% of the total cost of operations. Through monthly fees and fuel payments, users pay up to 55% of the program costs. The bulk of DART's expenses are in-kind services such as program management. The vanpool program also allows DART to receive over \$1 million of federal formula funds to support programs other than the vanpool program.

Vanpool funding is expected to be capped at or slightly below current levels for FY 2017. Nevertheless, we expect to be able to continue under the current funding arrangement, with NCTCOG funding remaining at approximately 45% of eligible expenses, and user fees covering up to 55% of program costs. It is anticipated that NCTCOG funding may be reduced to 35% during FY 2018.

The vanpool program experienced a rapid expansion from 109 vanpools at the beginning of 2008 to the budgeted or close to the cap of 198 vanpools in FY 2012. We operated at or close to the cap for a couple of years, working to increase ridership by improving occupancy on under-subscribed vanpools. Given an increase in demand, the maximum number of vans was increased to 206 in FY 2013. Vanpool programs in the region, including DART's, experienced a drop-in participation over the past few years, spurred in large part by employee reductions at several employers participating in the program and falling gasoline prices.

A more aggressive marketing campaign, pricing reductions and better contractor performance reversed some these recent trends, and we have seen formation of new vanpools during the second half of FY 2016. This trend continued in FY 2017, particularly with the pricing for the vanpool

program. We anticipate approximately 190 vanpools during 2017. The program has been authorized for up to 228 vanpools.

Exhibit IV.32 is an overview of the uses of the funds and allocated operating positions for the Vanpool mode of service.

Exhibit IV.32  
Vanpool Overview

To be updated

Overview	FY14A	FY15A	FY16B	FY17B
Allocated Operating Expenses (M)	\$2.0	\$1.9	\$2.3	\$2.0
Capital Expenditures (M)*	\$0.0	\$0.0	\$0.0	\$0.0
Allocated Operating Positions**	2	2	2	2

\* These amounts are the actual or budgeted capital for this mode only and do NOT include an allocation of Agency-wide capital.

\*\* Allocated positions are based on budgeted position counts.

### Road Improvement Programs

The Road Improvement Programs shown in Exhibit IV.33 represent all of the Board-approved road programs with cities in the service area and state agencies. Road improvement programs are recorded as non-operating expenses in the Budget and Twenty-Year Financial Plan because DART does not take an ownership interest in most of these mobility improvements.

Exhibit IV.33  
General Mobility & Road Improvement Programs  
(in Millions)

Program	FY14A	FY15A	FY16A	FY17B	FY18B
LAP/CMS	\$0.5	\$0.6	\$0.6	\$0.0	\$0.0
Transit Pass <sup>[1]</sup>	(0.0)	0.0	0.0	6.6	5.0
TSM (includes street repair)	0.7	0.0	0.5	6.7	10.5
ITS	1.4	0.5	0.0	0.0	0.0
<b>Total</b>	<b>\$2.6</b>	<b>\$1.2</b>	<b>\$1.1</b>	<b>\$13.3</b>	<b>\$15.5</b>

[1] A small reimbursement was received back on this program in FY 2014.

Local Assistance Program/Congestion Management System (LAP/CMS) – This agreement returned 15% of DART sales taxes collected in a city within the service area to that city until a

contract was awarded for rail construction in that city. Irving was included at a 7.5% funding level because it is served by commuter rail.

Additional allocations to the program ended for all cities within the service area in FY 2004. Cities with remaining balances may request the programming of LAP/CMS funds, as necessary, for projects that enhance transit.

Exhibit IV.34 reflects the LAP/CMS payable to each service area city. The timing of the draw-downs is dependent upon the request of the service area cities with remaining balances.

Exhibit IV.34  
LAP/CMS Program – Remaining Balances

Service Area City	6/30/17 LAP/CMS Balance	6/30/17 LAP/CMS Committed Amount
Addison	\$306,497	\$306,497
Carrollton	211,606	211,606
Dallas County	23,235	0
Glenn Heights	65	0
Irving	50,000	50,000
Plano	93,525	93,525
<b>Total</b>	<b>\$684,930</b>	<b>\$661,629</b>

Transit Principal Arterial Street System (PASS) – The Transit PASS program is funded in the amount of \$150 million by DART, TxDOT (through the Federal Highway Administration), and eligible counties and DART Service Area cities. Several projects in Addison, Carrollton, Dallas, Farmers Branch, Plano, and Richardson have been completed. A total of \$6.5 million in PASS funding is available for the remaining few projects in the cities of Dallas and Garland. A revised funding arrangement between DART, TxDOT, and NCTCOG was approved whereby DART PASS funding would be reallocated to several key projects in Garland and the City of Dallas. The City of Garland will construct the projects, and DART will transfer its funding to Garland to complete DART’s responsibility. The City of Dallas requested that the PASS funds be transferred to street repair projects. Like Garland, the City of Dallas has asked DART to transfer its budgeted PASS and street repair funding to the City, which has agreed to construct the projects. It is anticipated that these transfers will take place in FY 2018.

Transit Related Improvement Program (TRIPS) – During FY 2017, DART approved Policy IV.15 Transit Related Improvement Program (TRIPS), which is special funding allowable under Texas

Transportation Code 452 to fund Complementary Transportation Services for cities where there is no rail in operation or no rail is included within an approved financial plan. As approved by DART, the cities of Glenn Heights, Cockrell Hill, University Park, and Highland Park may request reimbursement for projects like street repair, traffic control and signal systems, public safety systems, sidewalks or other projects which augment and support a public transit system. The maximum funding allowable for each city may not exceed 21% of the sales tax collected for the period of FY 2017 through FY 2025. The program automatically expires after FY 2025. During FY 2018, DART will consider interlocal agreements with each city to permit these funds to be provided to support these four non-rail cities for the period of time permitted by the Policy.

*Transportation System Management (TSM)* – A total of \$16.1 million TSM funding is available for the first and second phases of the Street Repair Program as well as General TSM projects over the next five years. TSM funding is available to repair streets damaged by buses and for minor enhancements such as intersection corner radius modifications, bus pads, and traffic studies/signal modifications. Several projects in Dallas, Garland, Glenn Heights, Cockrell Hill, Richardson, and Highland Park have been completed; new projects in Garland and Cockrell Hill were completed in FY 2015; and the remaining projects are in various stages of design or procurement. The City of Dallas has asked DART to draft an ILA for several high priority street repair projects. As with PASS funding, Dallas has requested that DART transfer the street repair funding to the City of Dallas for construction.

*Intelligent Transportation Systems (ITS)* – ITS is an element of DART's Transit System Plan, which includes Smart Vehicle, Smart Traveler, and Smart Intermodal Systems. DART is working with other regional transportation providers, cities, counties, airports, and national organizations to develop a *Regional Comprehensive ITS Program for the Dallas/Fort Worth Region*. The program's purpose is to review and, if necessary, update the ITS plans for compliance with the ITS national architecture for interoperability and funding purposes. The program is aimed at prioritized implementation of projects to improve transportation throughout the region. It focuses on providing metropolitan areas ITS elements including: Advanced Traveler Information Systems (ATIS), Advanced Public Transportation Systems (APTS), and Advanced Traffic Management Systems (ATMS). The goal of this project is to facilitate information exchange between the various ITS systems and to create a seamless intermodal transportation infrastructure across jurisdictional boundaries. This effort will lead to the implementation of the Regional ITS system being designed by the regional partners.

As part of the ITS program, DART continues to develop the Vehicle Business System (i.e., Smart Vehicle). This effort will be rolled into the overall DART ITS program, but will continue to be funded by DART and the FTA.

In FY 2015, DART also completed the design and construction bid package for the enhanced park and ride equipment for security and real-time next bus information at the Northwest Plano Park & Ride facility. The phase II construction began in FY 2016 and the facility improvements will be completed in 2017.

*Pathfinder Signage Plan* – Pathfinder signs help direct motorists to DART and TRE Park & Ride lots from major regional highways and along frontage and arterial roads in the DART Service

Area. In order to comply with updated US DOT and TxDOT Uniform Standards for highway signage, DART completed a project to replace current pathfinding signs with new, compliant versions. During FY 2017, DART completed the GIS mapping of all pathfinder locations allowing more effective state of good repair maintenance.

Crew Room Projects – During FY 2015, DART completed a planning-design study to construct up to 13 bus operator crew rooms. With the rapid build-out of the rail system and modification of bus service to serve the rail lines, DART has identified locations to provide access to restroom facilities during operator recovery periods. These facilities are essential to help improve on-time performance and improve work conditions for bus operators. The FY 2016 work program included completion of the design and bid packages for all 13 crew rooms. It is anticipated that the construction package will be bid and awarded in the first quarter of FY 2017 and pre-fabricated units will be installed during 2017 and FY 2018.

### **Capital Planning Department**

The primary responsibilities for this department are to implement the Transit System Plan, provide policy and capital project coordination with regional partners, develop conceptual and preliminary engineering, and complete environmental clearance documents for a variety of transit projects. Capital Planning provides policy and technical support to all departments during a wide range of activities including state of good repair, bus facilities, special events planning, and other infrastructure improvements that support the DART Mission. The Vice President of Capital Planning directs the overall activities of the department.

Capital Planning consists of three program areas:

- Programming, which focuses on local, state, and federal regulatory and funding programs.
- System Planning, which focuses on development and updates to the Transit System Plan as well as broad policy initiatives both locally and with regional partners.
- Corridor Planning, which focuses on planning and environmental review for a range of transportation projects. This section also provides support for new capital improvements around the system, including state of good repair efforts and bus facilities.

The Modeling team provides support to both System and Corridor Planning efforts.

### **Project Milestones**

DART will advance the Capital Program per Board direction consistent with published schedules for:

- Red and Blue Line Platform Modifications
- Downtown Dallas Second Light Rail Alignment (D2)
- Dallas Streetcar northern extension to the Convention Center
- Central Dallas Streetcar Link



- High Speed Rail Coordination
- Cotton Belt Corridor Regional Rail Project

Capital Planning will provide support to construction and system integration efforts prior to revenue service and continue support to Operations and Maintenance teams. Mitigation monitoring programs will be implemented after environmental clearance.

#### DART 2040 Transit System Plan

DART is in the process of developing a new 20-year Transit System Plan to guide the Agency in its efforts to develop more and broader support for public transportation.

- Phase I of the 2040 Plan Update, including Comprehensive Operations Analysis (COA) and Bus Service Plan recommendations are complete, with phasing and prioritization to be developed as part of Phase 2.
- Continue public and agency involvement through FY 2018.
- Complete Phase 2 of the 2040 Plan update, focusing on long-range programs and regional expansion opportunities in FY 2018.

### **Capital Design & Construction Department**

The Capital Design & Construction Department has the primary responsibility for the design, construction, testing, and acceptance of capital projects including light rail and streetcar expansions, commuter rail, and other assigned projects, including State of Good Repair. The Vice President of Capital Design & Construction directs the overall activities of the department.

#### Rail Program Division

This division is responsible for management and coordination of engineering for facilities and systems designs, construction, and contract administration implementation oversight.

***Systems Engineering*** – Systems Engineering is responsible for preliminary design, management, and coordination of final design. Included are light rail and streetcar vehicles, overhead catenary system, traction power substations, signal system (train protection and highway crossing protection), communications and control systems (radio and hard line transmissions, train control center, etc.), and fare vending equipment as well as technical support for DART's radio systems and Maintenance department engineering requests.

***Facilities Engineering*** – Facilities Engineering is responsible for management and coordination of engineering design, architectural design, and construction document production efforts associated with the development of DART's fixed facilities. This includes stations, rail track guideways, bridges, service areas, and other improvements. Related activities include implementation of the



Art & Design Program and coordination with public agencies regarding facility design, zoning, permits, and certificates of occupancy.

*Construction Management* – Construction Management is responsible for administering a construction program including LRT and commuter rail line sections with stations, aerial structures and guideway including track installation, bus and rail operating facilities, transit centers, shelter installation, and renovations of existing facilities.

The major elements of construction management are constructability analysis, construction planning, construction engineering, and safety engineering. Managing construction includes quality control/assurance, materials testing, contract administration, coordination of contracts, conflict resolution, quantity verifications, cost and schedule adherence, and interfaces with outside organizations during construction including the community and jurisdictional authorities.

*Contract Administration* – Efforts associated with solicitation preparation, contractor and consultant selection, document review for compliance with contract requirements, conflict resolution, dispute processing, claims management, invoice certification, acceptance of the work, and contract close-out.

## **Real Property & Transit Oriented Development (TOD) Department**

The Vice President of Real Property & Transit Oriented Development directs the overall activities of the department. The department has the primary responsibility for:

- Real property assets
- Leveraging the viability of the Transit System
- Adding value to the Community
- Federal, regional, and local initiatives
- Working in close partnership with Service Area Cities to:
  - Identify and implement TOD opportunities
  - Generate new opportunities to create revenue for DART and environmentally sustainable livable communities that are focused on transit accessibility

## *Economic Development*

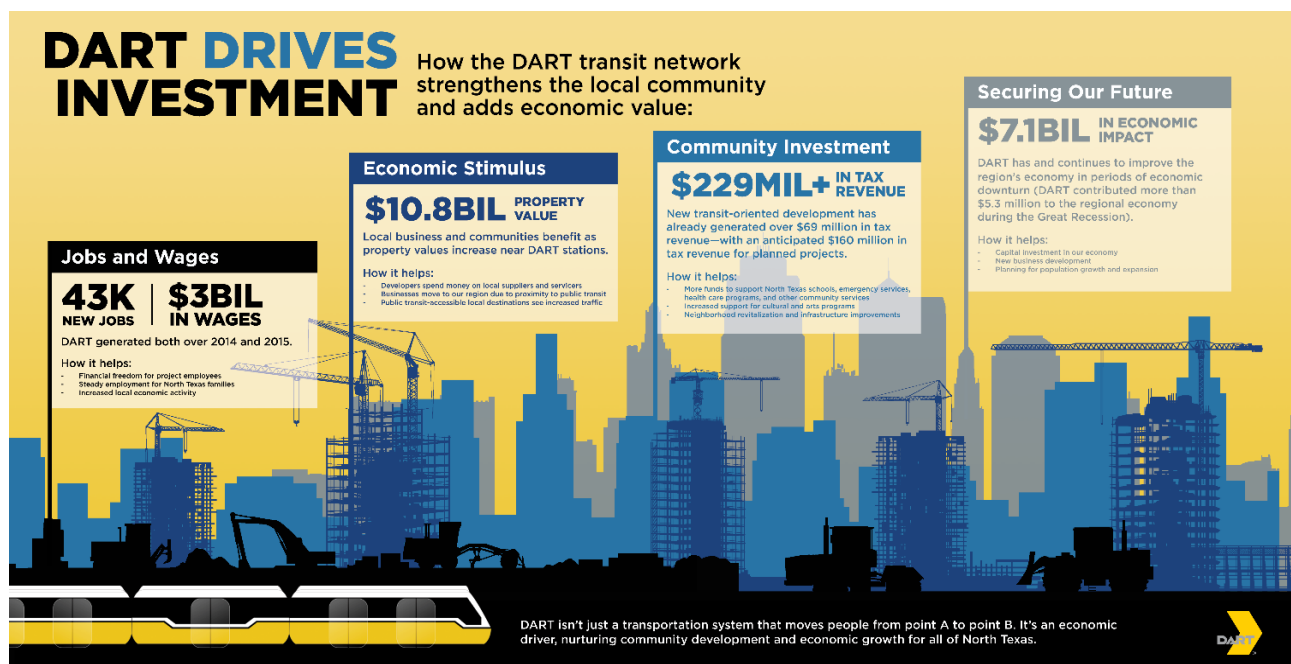
The economic impact of DART on the regional economy has been significant, exceeding \$10.8 billion, according to a study by the University of North Texas (UNT). The study, which was published in May 2017, and looked at public and private transit-oriented development along the light rail corridor between 1999 to 2015. A copy of this study is included in the Section G of the *Reference Section* of this document as well as on the DART website, [www.DART.org](http://www.DART.org).

DART's investment continues to be a catalyst for investment near DART transit facilities to create transit-oriented development opportunities that result in vibrant, livable communities, increasing transit ridership and generating new sources of revenue.

Two of the objectives of the Agency, as stated in the DART mission statement, are to improve the quality of life and to stimulate economic development through the implementation of the Transit System Plan. It has been both surprising and gratifying to see how quickly transit-oriented developments have been constructed along the rail corridors since the launch of DART Rail in 1996. Management continues to support DART's Economic Development staff and continues to monitor, identify, evaluate, and develop opportunities in partnership with service area cities.

As noted above, DART Economic Development staff periodically engages the UNT Economics Research Group to monitor and assess the impact of all DART assets that have the potential for future transit-oriented development (TOD). The latest study presented in May 2017, identified the impact of public and private investment (built, under construction, and planned) in TOD within ¼ mile of rail stations to be over \$10.8 billion over the period of 1999-2015. For the first time, the study has included public projects such as hospitals, educational, and governmental construction. The previous study undertaken in 2014 found that over the period from 2003 through 2013, the average premium on office rents located within the same ¼ mile of a DART station was 14%. Economic Development staff is currently working with the UNT Economics Research Group to initiate the next update the 2017 study; a final report should be available in late 2019.

To support efforts such as these and provide information to the public and development community, DART has established a transit-oriented development website which provides an overview of DART's transit-oriented development program including its TOD policy, guidelines, and station area fact sheets for each of the rail stations. ([www.DART.org/economicdevelopment](http://www.DART.org/economicdevelopment))





Blank page

## **Commuter Rail & Railroad Management Department**

The purpose of this section is to highlight the Commuter Rail (Trinity Railway Express or more simply, TRE) business plan, including key indicators and strategic initiatives. TRE passenger service is provided jointly with the Fort Worth Transportation Authority (FWTA) pursuant to an Interlocal Agreement as restated by the two transit authorities in September 2003. The Vice President of Commuter Rail & Railroad Management directs the overall activities of the department.

### Commuter Rail – TRE Scorecard – Key Performance Indicators

Exhibit IV.35 highlights Commuter Rail – TRE’s Key Performance Indicators (KPIs) presented in scorecard format. The numbers in the columns for fiscal years 2015 and 2016 indicate actual values. Fiscal Year 2017 Qtr. 2 represents the four-quarter rolling period ending March 31, 2017. The numbers in the columns for fiscal years 2017 and 2018 are the target values for those years.

To more accurately depict the true operating costs of TRE, the data shown includes combined revenues and expenses for both DART and FWTA. By including all revenues and expenses, the information presented will provide the reader with data comparable to all other modes. Ridership is collected and reported for the TRE system; therefore, KPIs associated with ridership are calculated as TRE totals.

Fiscal Year 2018 budgeted revenues include \$2.2 million of FWTA’s passenger revenues allocated to the TRE. These KPIs measure our success towards achieving the goal of providing effective, efficient, safe, secure transportation service. Expenses include all direct and indirect costs allocated to TRE, including FWTA’s allocated costs of \$2.4 million.

Exhibit IV.35  
Commuter Rail – TRE Scorecard (System wide)  
Key Performance Indicators

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Customer Quality</b>					
Ridership (M)	2.2	2.1	2.1	2.2	2.2
Revenue Car Miles (M)	1.6	1.6	1.6	2.0	2.2
Passengers Per Revenue Car Mile	1.39	1.30	1.28	1.12	1.60
Revenue Train Hours (000)	17.6	17.5	21.3	26.2	25.5
Farebox Recovery Ratio	33.0%	27.6%	20.7%	29.2%	32.9%
On Time Performance	98.3%	97.9%	98.0%	97.0%	97.0%
Complaints per 100K Passengers	3.1	5.2	5.7	5.5	5.5
Accidents Per 100K Train Miles - TRE <sup>[1]</sup>	0.27	0.37	0.51	1.00	1.00

[1] The measure has been restated from Accidents/Car Mile to Accidents/Train Mile and therefore will not tie to previous reports

Indicators	FY15A	FY16A	FY17 Qtr 2	FY17B	FY18B
<b>Financial Efficiency</b>					
Expenses - Fully Allocated (M) <sup>[2]</sup>	\$24.93	\$30.02	\$29.79	\$31.61	\$30.17
Revenues (M)	\$11.66	\$11.53	\$9.69	\$12.66	\$9.93
Net Subsidy (M)	\$13.27	\$18.49	\$20.10	\$18.95	\$20.24
Subsidy Per Passenger	\$6.11	\$9.00	\$9.80	\$8.50	\$9.08
Cost Per Revenue Car Mile	\$15.97	\$19.01	\$18.57	\$15.82	\$13.72

[2] Fully allocated expenses and revenues for FY16B and FY17B include overhead from the Fort Worth Transportation Authority.

**TRE Fuel Hedge** – A fuel hedge was put in place starting in May 2015 and will run through the end of FY 2020. Exhibit IV.36 shows the fuel hedge costs in place from FY 2015 – FY 2020. With the completion of the transition to CNG-fueled buses, DART’s exposure to diesel price fluctuations are limited to TRE and a few non-revenue vehicles.

Exhibit IV.36  
Fuel Hedge Costs by Fiscal Year

Fiscal Year	Fuel Hedge Cost per Gallon
2015	\$1.7625
2016	\$2.0650
2017	\$2.1590
2018	\$1.6590
2019	\$1.7645
2020	\$1.8465

Exhibit IV.37 is an overview of the uses of the funds and allocated operating positions for the Commuter Rail mode of service. For allocation purposes, each department identifies the percentage of time and money spent on each mode of service to determine the expenses and positions allocated to the mode of service.

Exhibit IV.37  
Commuter Rail Overview

To be updated

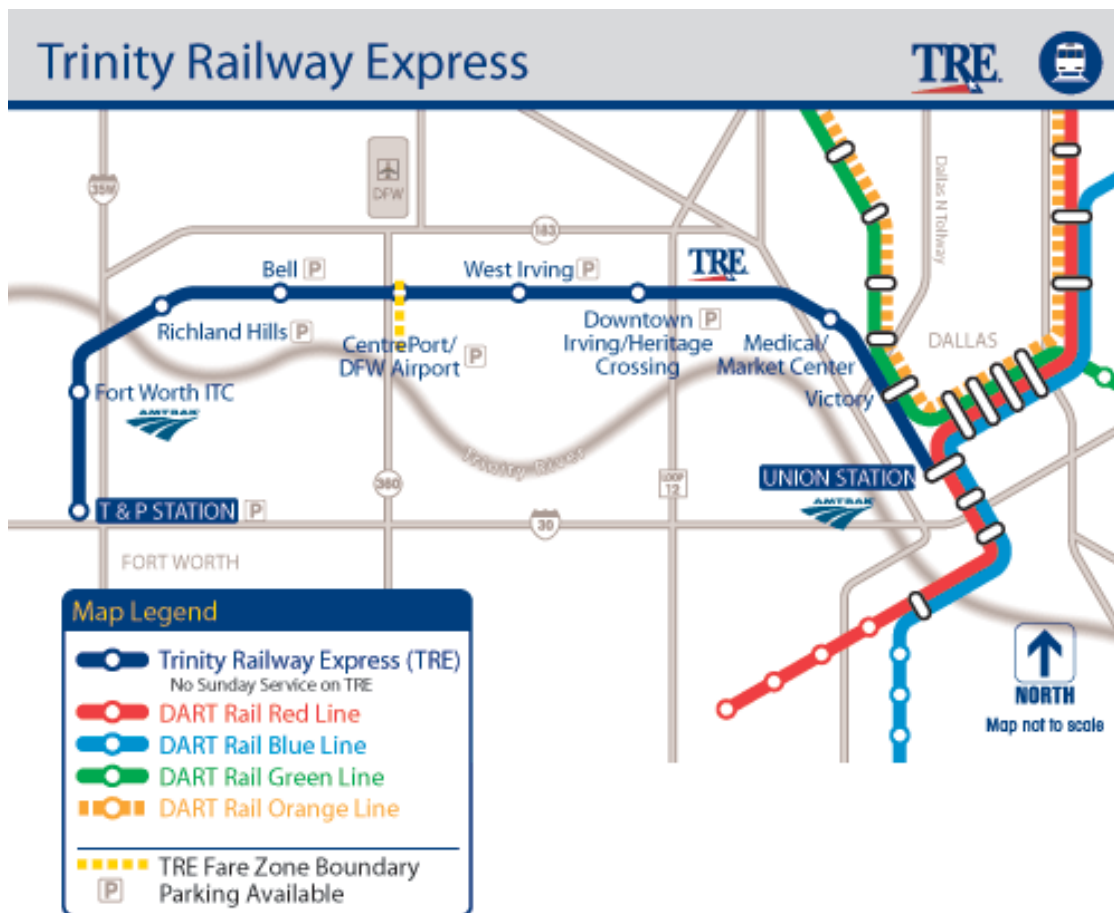
Overview	FY14A	FY15A	FY16B	FY17B
Allocated Operating Expenses (M)	\$25.5	\$24.9	\$32.3	\$31.6
Capital Expenditures (M)*	\$6.6	\$9.4	\$24.7	\$85.0
Allocated Operating Positions**	13	19	19	19

\* These amounts are the actual or budgeted capital for this mode only and do NOT include an allocation of Agency-wide capital.

\*\* Allocated positions are based on budgeted position counts.

Exhibit IV.38 is a map that includes the TRE Corridor.

Exhibit IV.38  
Trinity Railway Express Corridor



### TRE Ridership and Subsidy Per Passenger

Exhibit IV.39 graphically depicts actual and budgeted TRE ridership and Exhibit IV.40 depicts TRE subsidy per passenger. In both exhibits, Fiscal Years 2015, and 2016 indicate the actual values, Fiscal Year 2017 Qtr 2 represents the four-quarter rolling period ending March 31, 2017, while figures for Fiscal Years 2017 and 2018 represent the target for those years.

Exhibit IV.39  
TRE Ridership  
(in Millions)

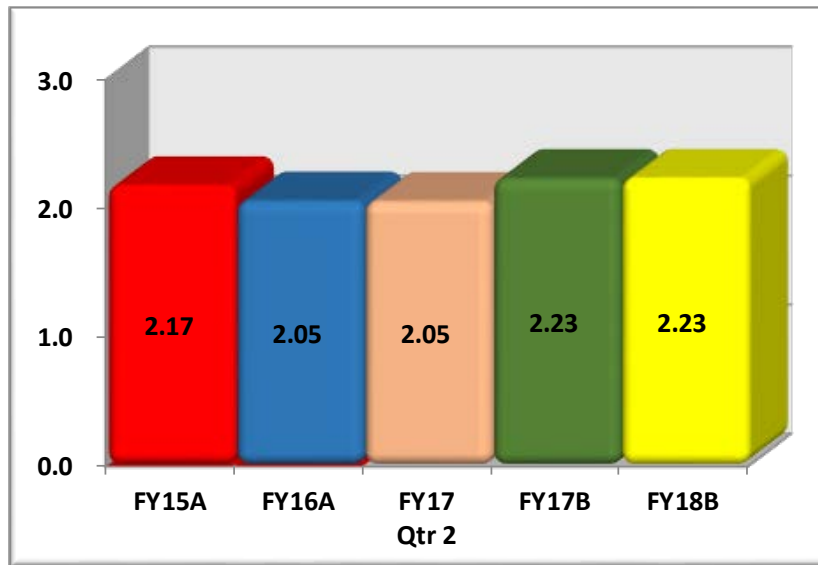
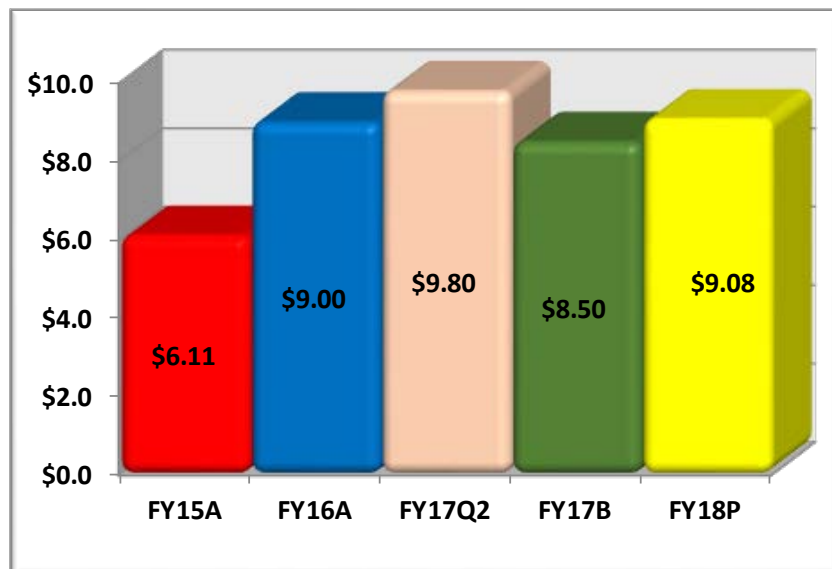


Exhibit IV.40  
Commuter Rail – TRE Subsidy Per Passenger





*Subsidy Per Passenger* – This metric increased starting in FY 2016 because of higher first-year contract costs. While those first year costs do not apply in FY 2017 or FY 2018, the majority of those savings have been reinvested into a revised schedule that is expected to boost ridership by 4-5%. While these costs will go down in the subsequent fiscal years, the overall subsidy per passenger will continue to increase in FY 2018 and beyond due to additional operating costs associated operating contract escalation as well as with the federal mandate for Positive Train Control (PTC). Please see page IV-90 for more information on this program.

*Revenue Contributions from the Mid-Cities* – In FY 2002, the cities of Arlington, Bedford, Colleyville, Euless, Grand Prairie, Grapevine, Haltom City, Hurst, and North Richland Hills (the Mid-Cities) agreed through an Interlocal Agreement (ILA) with the North Central Texas Council of Governments (NCTCOG) to contribute to DART and FWTa for TRE services that their citizens utilize. None of the Mid-Cities currently belong to either DART or FWTa. Several additional ILAs have been negotiated over the past few years. NCTCOG, DART, and FWTa are securing amendments to extend the 2007 Mid-Cities ILA to the new agreement period of October 2011 through September 2016 at the same 2007 funding level. This funding was not allocated by the Mid Cities / NCTCOG in FY 2017, however NCTCOG has proposed to reinstate the program in FY 2018.

*City of Arlington Service* - The City of Arlington, working in combination with DART and FWTa, entered into a two-year agreement in June 2013 for inaugural express bus service to the TRE CentrePort station from the main campus of the University of Texas at Arlington. The service is separately branded as the Metro Arlington Express (MAX Express). The City of Arlington and its public and private sector participants are responsible for 100% of the cost of operating this service. The two transit agencies split 100% of all fare revenues generated from riders. This agreement was the first of its kind that DART has entered into under the Board Policy that outlines how DART will offer this type of service to cities outside of the service area. This Agreement was recently extended through December 2017. MAX Express ridership is estimated to exceed 73,200 in FY 2017.



*Weekday and Weekend Service Expansion* – Beginning in October 2017, weekday and Saturday service was expanded to include earlier morning and late-night service with standardized 60-minute headways. Sunday service is not currently offered because maintenance and construction activities within the right-of-way are performed on Sundays. The majority of the double-tracking projects remaining to be done are in Tarrant County, and the project cost is not included in DART's Twenty-Year Financial Plan, as they will be incurred by FWTa.

*Ensure Service Quality* – There are a number of railroads using the TRE (Amtrak, BNSF, DGNO, FW&W, and UP) which presents a challenge to maintaining on-time passenger service. The TRE has consistently maintained this metric between 97% and 98%. Weekday service improvements implemented in October 2016 added an additional 130 trains per week – enhancements include 30-minute peak and 60-minute off peak headways, and a longer service day. There is a

commitment to our freight customers utilizing the corridor to move as much freight traffic as can be done in a safe manner without disrupting TRE service. There are currently 20-25 freight train movements per day along the corridor despite this being a predominantly single-track railroad. This is accomplished through careful coordination with the freight railroads and the TRE Operations and Maintenance contractor. On-time performance is targeted at 97% for FY 2017. Amtrak's intercity passenger rail service was moved from the Union Pacific corridor to the TRE corridor in December of 2016. Amtrak also utilizes two TRE stations: the Intermodal Transportation Center (ITC) in Fort Worth and Union Station in Dallas. Negotiations were completed in December 2015, and Amtrak service is now provided across the TRE corridor.

Constant monitoring of the track and signal systems is essential to ensure safe and continued operation of the railroad; but eventually, more sidings, double tracking, and bridge refurbishments and replacements will be required to support both current service levels and future service expansion. One such project is the Valley View double tracking project, which includes adding an additional 1.4 miles of track and the replacement of the Bear Creek Bridge. This project is anticipated to begin construction in the fourth quarter of FY 2017 and completed by the fourth quarter of FY 2018. This project will be partially funded from a grant provided to TxDOT via the Federal Railroad Administration, and grants from the CMAQ and STIP programs.

The major capital projects proposed over the next few years to maintain and improve service quality and safety of the TRE are listed under Departmental Emphasis on FY 2018 Strategic Priorities section below. TRE has developed a 20-year capital program that identify both right-of-way and vehicle maintenance projects required to maintain a state of good repair for the service. Reserves are planned within DART's Twenty-Year Financial Plan to provide for both right-of-way and vehicle maintenance projects. These reserves will ensure the timely replacement and overhaul of assets, as well as allow for a certain amount of unanticipated future capital requirements.

### Departmental Overview

The Commuter Rail Division is responsible for the operations and management of the TRE commuter rail service between Dallas and Fort Worth, the Madill Subdivision, and future commuter rail service on the Cotton Belt corridor.

- Contract operation – DART, on behalf of DART and FFWTA, has contracted with Herzog Transit Services, Inc. (Herzog) to maintain the commuter rail rolling stock and railroad right-of-way, provide dispatching services for the corridor, and operate the commuter rail service on the corridor. During 2014, the operation and maintenance contract was resolicited. Herzog was chosen to be awarded a ten-year contract commencing at the beginning of FY 2016. The contract expires on September 30, 2025.
- Service – TRE service operates Monday through Saturday between downtown Dallas and downtown Fort Worth. This line covers a distance of 34.5 miles and includes a total of 10 stations, 5 of which are maintained by DART and 5 by FFWTA.
- Operating Fleet – The operating fleet consists of 9 locomotives, 17 bi-level coaches, and 8 bi-level cab cars (all jointly owned by DART and FFWTA). In FY 2017, DART negotiated

the sale of 12 of the 13 rail diesel cars (RDCs). The remaining RDC will be held by the Agency with its future to be determined.

- Sharing of Costs – The DART/FWTA ILA specifies that revenues generated on or by the TRE Corridor are joint revenues and are to be applied against TRE operating costs. After the application of these revenues, the remaining net costs are allocated to DART and FWTA based on revenue seat miles operated in each county. DART's share for FY 2015 was 46.25% , FY 2016 was 46.11%, and FY 2017 was 43.22%, as a result of the new train schedule and is projected to remain at this level in FY 2018. Except for employees that are 100% dedicated to TRE, DART and FWTA separately absorb their own staff, administrative, and station maintenance costs.
- Madill Subdivision – The department is also responsible for the maintenance and operation of the Madill Subdivision, which is achieved through the contract with Herzog. This is currently a freight-only corridor. The City of Dallas deeded the northern section of the Madill Subdivision to DART in exchange for easements related to Hike and Bike Trails. The Madill Subdivision located between Irving and Carrollton is now owned in its entirety by DART.

Departmental Emphasis on Strategic Priorities – Strategic Priorities that will be the subject of special emphasis during the year are:

- Strategic Priority 1: Continually improve service and safety experiences and perceptions
- Strategic Priority 2: Optimize and preserve (state of good repair) the existing transit system
- Strategic Priority 3: Optimize DART's influence in regional transportation planning.

Major initiatives that are underway or proposed that are targeted at achieving the Board's Goals and at improving the overall safety, efficiency, and effectiveness of the Commuter Rail & Railroad Management services and operations are as follows:

- Operations and Maintenance Contract – The current Operations and Maintenance (O&M) contract expires on September 30, 2025. The contract provides for a ten-year base contract with an additional ten-year option for providing long-term commuter rail services to the region, including but not limited, to:
  - General management
  - Train operations, including crews
  - Maintenance services for all TRE-owned rolling stock and equipment
  - Train dispatching services
  - Timely and accurate communications to customers, to DART and FWTA, and to tenant railroads
  - Provision of 5 Star Customer Service to all commuter rail customers

- Maintenance of rights-of-way
- Maintenance of infrastructure, centralized traffic control (CTC), and voice radio system
- Maintenance and operations of PTC, including configuration management
- Provision of Federal Railroad Administration (FRA) required Roadway Worker Protection services for the maintenance of the corridors, capital projects, and other contractors on the corridors

The TRE operations and maintenance (O&M) contract provides O&M services for the TRE DFW Subdivision and the right-of-way maintenance of the Madill Subdivision. The FWTa has separately procured an O&M contract with Herzog to provide O&M services on the TEX Rail Corridor estimated to be in revenue service in December 2018. The agencies are exploring opportunities of cost for contractor positions that may be shared by the two services.

- Positive Train Control (PTC) – The Rail Safety Improvement Act of 2008 defines PTC and mandated its implementation by December 2015. PTC is defined as a system designed to prevent train-to-train collisions, over-speed derailments, incursions into established work zone limits, and the movement of a train through a switch left in the wrong position. PTC is required for intercity passenger rail or commuter rail passenger main lines and will further enhance safety on the TRE. An implementation plan for TRE was submitted and approved by the FRA. PTC implementation is planned as a regional project with several components of the PTC system to be shared by the TRE and the TEX Rail service when it begins revenue operation. Federal legislation was passed in December 2015 that extended the implementation deadline to December 2018 with an available two year extension available to agencies showing positive progress in the proposed PTC implementation.
- State of Good Repair and Capital Investment Plan – In 2016, The TRE performed a State of Good Repair (SGR) review that included the infrastructure, facilities and rolling stock that addressed the capital maintenance and capital improvement needs over the next twenty years through FY 2036. The Condition Assessment and Capital Investment Plan (CIP) are maintained by the Commuter Rail & Railroad Management Department and serve as the basis for budget planning each fiscal year and help to ensure that all operational and business assets are in working order and fulfill their intended use. The SGR analysis serves as the basis for a long-range capital asset replacement program and a 20-year financial forecast for both the TRE and Madill Subdivision. This enables DART and FWTa to plan for adequate funding to maintain TRE service quality.
  - Rail and Tie Replacement Program – As a result of continued operations along the TRE and Madill lines, the rail and track ties have experienced wear and will need to be replaced over time in order to maintain a state of good repair and the desired operating speeds and track class. The TRE is replacing 115-pound rail with new 136-pound rail and also replacing wood ties with longer-lasting, concrete ties to extend the life of the assets. This helps reduce capital and operating costs in the long term.

- *Bridge Management Plan and Bridge Replacement Program* – In FY 2012, an FRA-mandated Bridge Management Plan and Capacity Rating Study was completed. As a result of the Capacity Rating Study, the department is performing preliminary engineering for bridge enhancements and replacements in accordance with the SGR for the TRE and Madill. On the TRE, two bridges in Dallas County (Obsession and Inwood) have been designed and will undergo construction beginning FY 2018; the I35/Stemmons freeway has been repaired; the Medical Market Street bridge will be replaced in partnership with Dallas County, TxDOT, and the City of Dallas; and the Trinity River Bridge in Tarrant County will be at final design in FY 2018.
- *Next Train Customer Communication System* – To improve customer communications, the effort to expand the Next Train system to the TRE vehicles and train stations was completed in August 2016. This project includes automatic voice announcements of stops, variable message signs on-board vehicles, and the platforms at TRE stations. An added operational benefit will come from the installation of automatic passenger counters onboard the TRE vehicles. In FY 2013 Variable Message Boards (VMB) were installed at the ten TRE stations allowing for ad hoc messages to be sent to inform passengers of delays and other TRE-related information.
- *Valley View Double-Tracking* – This project upgrades the existing TRE line by double-tracking 1.5 miles between the Dallas/Tarrant County Line and the existing siding west of West Irving Station. A new bridge will also be constructed over Bear Creek. This project was tied to the TEX Rail and Amtrak agreements with DART that were executed in December 2015. The funding and construction agreements between the FRA, TxDOT, and DART were executed in June 2016 to allow for the project activities to commence once the FRA issues Notice to Proceed which is expected in the fourth quarter of FY 2017.
- *Vehicle Maintenance* – TRE has issued a solicitation for an overhaul program that will extend over the next three years and will include up to six coaches, two cab cars, and two locomotives. The solicitation for the locomotive overhauls is planned for the first quarter of FY 2018.
- *Vehicle Expansion* – In FY 2014, TRE performed a study to determine spare fleet ratio requirements. The results of the study indicated the TRE fleet should consist of two additional locomotives and an additional cab car to protect service levels and allow for maintenance, inspection, overhaul activities, and a ready set. In line with the study and in anticipation of removing the RDCs from active status from the fleet, TRE began the process of developing specifications to solicit and purchase a rebuilt locomotive for fleet expansion. In FY 2015, the TRE received a grant to purchase a locomotive using CMAQ funds. The department has developed a statement of work and an estimate for the use of these funds to procure an additional locomotive in FY 2018.

*Cotton Belt Corridor* – DART owns 54 miles of the Cotton Belt rail corridor from north Fort Worth to downtown Wylie. In 2016, FWTa received FTA approval to begin final engineering and construction for the TEX Rail project, which proposes to use the western segment of the Cotton Belt at DFW Airport, and continue south into downtown Fort Worth to the existing TRE Intermodal Transportation Center and the T&P Station. In the summer of 2016, FWTa received a Letter of No Prejudice from the FTA to allow the project to move forward prior to receiving a Full Funding Grant Agreement. FWTa issued a notice to proceed (NTP) to their general contractor in the second quarter of FY 2017.

Preliminary engineering for DART's Cotton Belt project is at the 5% level with DART's General Planning Consultant progressing the plans to 10% in the fourth quarter of FY 2017. The project is currently scheduled for revenue service in 2022.



## **Workforce Leadership & Intergovernmental Relations**

The Deputy Executive Director has oversight of the Human Capital, Governmental Relations, Diversity, and Office of Policy and Strategy departments. The Deputy Executive Director reports to DART's President/Executive Director and is the management liaison for the Board's Administrative Committee for departmental matters.

### **Human Capital Department**

The Human Capital department responds to operational demands and programs by working to ensure the right person is in the right job at the right time. Human Capital strives to provide best-in-class human resource services and is uniquely positioned to utilize contemporary human capital business practices in order to provide efficient and timely human capital services and programs to the employees of DART. The Vice President of Human Capital directs the overall activities of the department.

Human Capital oversees the development of people and resources necessary for talent acquisition, organizational development and benefits/compensation in support of DART's operations. Human Capital builds consensus at every step of the management process, and leverages the knowledge base by ensuring commitment to supporting the array of services based on Human Capital best practices.

Human Capital will assume ownership for the resolution of people issues, assess situations, and create change models to help facilitate and guide relevant Human Capital programming. Human Capital will also provide guidance for performance management and eliminate barriers to success by providing services and resources which will enhance each individual employee's contribution to the success of DART. Human Capital will demonstrate the interdependencies between business success and "living the DART values" while measuring operational progress against critical success factors and key performance indicators.

### **Diversity Department**

The Diversity Department is responsible for the development, evaluation, implementation, coordination, and monitoring of DART's Disadvantaged Business Enterprise Program, Minority and Woman-Owned Business Enterprise Program (DMWBE), Equal Employment Opportunity/Affirmative Action (EEO/AA) Program, and Employee and Labor Relations. It is also responsible for compliance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act. The functional areas of the department are: Civil Rights, Diversity and Equal Employment Opportunity, Employee and Labor Relations, and Outreach. The Vice President of Diversity directs the overall activities of the department.

- *Civil Rights* is responsible for managing and administering DART's Disadvantaged Business Enterprise (DBE), Minority and Woman-Owned Business Enterprise (MWBE), and Small Business Enterprise (SBE) Programs. This division is also charged with the responsibility of ensuring compliance with the Americans with Disabilities Act (ADA) and



Title VI of the Civil Rights Act. The division monitors to ensure that transportation-dependent, underprivileged, minority and disability populations are treated fairly in all DART services, activities and programs.

- Diversity and EEO is responsible for developing and managing DART's EEO/AA Program, investigating EEO discrimination complaints, conducting EEO training, developing a focused recruitment plan and diversity strategy, formalizing a Veterans' Recruitment Program, and providing ADA job accommodations for employees.
- Employee and Labor Relations is responsible for developing and managing DART's Personnel Manuals, assisting employees and management through the alternative dispute resolution process, conducting training to improve communications between employees and management, investigating formal and informal complaints, processing and resolving general grievances and complaints, coordinating disciplinary and corrective actions, coordinating Trial Board and Management Appeal Hearings, tracking and monitoring general grievances and complaints, ensuring adherence to labor policies, and working with employees and unions regarding labor and employee issues.
- Outreach is responsible for developing and implementing a contract-specific focused outreach program and developing a DMWBE strategic plan to educate disadvantaged and minority business owners. Additionally, Outreach is responsible for programs and activities of the DART Diversity Council.

### **Federal, State, Local, and Regional Government Relations**

DART's Government Relations Department acts as the liaison between DART and its external political environment. The Vice President of Government Relations directs the overall activities of the department.

Government Relations encompasses all interactions between DART and its external political environment. DART's Government Relations staff plans and implements the Agency's advocacy efforts and ensures the accurate, consistent, and timely exchange of information between DART, the 13 cities in the service area, the D/FW region, the U.S. Congress, the U.S. Department of Transportation including but not limited to: the Federal Transit Administration, the Federal Railroad Administration, and the Texas Legislature. In addition to providing tours and briefings to elected officials and members of their staff, Government Relations responds to citizens' concerns as they are relayed to the elected officials' offices for resolution. Government Relations actively participates in transportation-related organizations such as the American Public Transportation Association, South West Transit Association, Texas Transit Association, Dallas Regional Mobility Coalition, Transit Coalition of North Texas, and the Regional Transportation Council. Government Relations oversees the day-to-day administration of DART's contracted legislative consultants in Washington, D.C., and Austin to develop appropriate advocacy strategies for securing Agency objectives for both operations and capital projects.

DART Government Relations staff monitors dialogue emanating from stakeholders and transit advocacy groups regarding the implementation of federal transportation policy authorized by the Fixing America's Surface Transportation or FAST Act, as well as annual appropriations items

concerning DART's capital projects and federal funding requests. Government Relations staff coordinates with members of the Dallas-area congressional delegation to convey DART's positions on federal policy and seek letters of support on federal grant applications, such as for the TIGER program, when necessary. The staff provides timely updates on the status of any grant applications submitted by DART to the U.S. Department of Transportation. Finally, staff actively monitors the U.S. Congress and the Administration for any developments relating to potential funding for projects identified in DART's Twenty-Year Financial Plan.

Working with DART's Austin legislative counsel team, staff closely monitored the activities of the 85<sup>th</sup> Texas Legislature which began on January 10, 2017, and will continue to engage as necessary to ensure DART's position is effectively communicated and advocated. Staff will continue to monitor and provide relevant agency data and transit capital project and maintenance and operational financing expertise as requested to the House Committee on Transportation's Subcommittee on Long-term Infrastructure Planning that considers all matters pertaining to the transportation needs of the state during the next ten years and funding mechanisms to provide for meeting those needs.

Government Relations actively maintains a strong presence in local government activities through regular attendance at service area city council meetings and work sessions, and continues strong relationships with service area city staff, ensuring timely resolution of DART issues. Staff will be increasingly engaged in the development and implementation of a strategy for the future association between DART and cities outside the DART service area.

### **Office of Policy and Strategy**

The Office of Policy and Strategy was created in FY 2014 to provide agency-wide coordination and consistent management of policies and related processes. The Vice President, Policy and Strategic Planning, directs the overall activities of the department.

*Strategic Planning* – The Office leads and supports DART's strategic planning and development initiatives. Goal-setting, policy analysis, policy development, organizational strategy, and high-level issue analysis are significant parts of the strategic planning process that is led by the Office.

In FY 2018, the Office of Policy and Strategy will continue to refine processes to ensure that strategic planning, tracking, reporting, and revision is timely completed in meaningful ways. In support of the Strategic Plan, the Office will design, develop, lead, and facilitate projects and teams that plan, communicate, and implement strategic initiatives that are aligned with or that need to be brought into alignment with DART's Strategic Plan.

*Policy Analysis, Review and Coordination* – Another major focus is the continuing comprehensive review and analysis of DART's Administrative Policies and implementation of a system for regular review and updates. A separate but related activity focuses on making all strategic planning documents and Administrative Policies easily available to DART employees.

*Support for Strategic Initiatives* – The Office of Policy and Strategy provides administrative and executive level strategic project management and support. This function requires highly responsible and responsive review and analysis of matters including governmental reports, regulations, and policies. Leadership, support, and management for other complex, high-priority administrative and executive level projects and initiatives is another function of the Office. The importance of consistency across Agency functions requires a high level of engagement, coordination with key decision-makers and executives, and broad knowledge of all aspects of the Agency's business.

*Records Management* – Responsibility for records management as contemplated by Board Policy is under the leadership of the Office of Policy and Strategy. Key activities in FY 2018 will include a continuing review of current practices and processes along with an analysis of potential efficiencies with implementation dependent on shared resources.

## Reference

### A. BUSINESS PLAN DEVELOPMENT

#### Purpose of Business Plan

The FY 2018 Business Plan provides the DART Board of Directors, DART customers, and the region's taxpayers, elected officials, and other stakeholders with a comprehensive summary of the Agency's plans and commitments to improve regional mobility, enhance the quality of life, and stimulate economic development. This document consolidates the key elements of the FY 2018 Annual Budget, the FY 2018 Twenty-Year Financial Plan, the Transit System Plan, and the Agency's Strategic Plan. The draft resolutions shown at Exhibit V.4 approve the funding levels for the FY 2018 Annual Budget and at Exhibit V.5 approve the FY 2018 Twenty-Year Financial Plan as required by DART's enabling legislation.

The Business Plan is management's written document that outlines DART's performance projections and commitments for each mode of service and the Agency as a whole. The Plan includes key operating, financial, and quality measures that identify the initiatives necessary to improve performance, ridership, and financial targets.

#### Business Planning Process

Exhibit V.1 highlights the business planning, compilation, and approval process used at DART.

Exhibit V.1  
Business Plan Development Schedule

Date	Description
	Management reviews Strategic Plan every five years
Dec – Feb	Management reviews and makes recommendations for changes to Financial Standards
Feb – Mar	Board reviews and approves Financial Standards
Mar – Jul	Staff develops Business Plan (which includes the Annual Budget and Twenty-Year Financial Plan) for following year
Jul	Management presents proposed Budget and Twenty-Year Financial Plan to Board
Aug	Board approves issuance of the Budget and Twenty-Year Financial Plan to the cities within the DART Service Area
Aug – Sep	Service area cities provide input to DART
Sep	Board approves Budget and Twenty-Year Financial Plan

DART takes a top-down approach to business planning. The approach begins with the Board Goals, Strategic Plan, and Board-approved Financial Standards which establish parameters within which management must operate.

The Board reviews projected business and financial results, including proposed new operating and capital programs, beginning in the Spring. Departmental targets are set based on projections from the Twenty-Year Financial Plan and other known factors or programs (e.g., increases in health care, contract rates, or fuel costs). Based on the direction of senior management, departments prepare detailed budgets for each of their cost centers within those targets. These budgets are in turn reviewed during meetings with the department head, the Deputy Executive Director or Executive Vice President, the President/Executive Director, the Chief Financial Officer, and the Budget Office to discuss the respective budgets as well as any changes. All new proposed programs are evaluated for effectiveness and efficiency.

The Finance Department then compiles the numbers, coordinates work programs to achieve strategies, and publishes the Business Plan (including the Annual Budget and Twenty-Year Financial Plan) for review by the cities within the DART Service Area. The Board performs additional reviews in August and September, before approving the Budget and Twenty-Year Financial Plan in September.

Capital Budgeting – DART’s capital budgeting processes are focused on ensuring that DART spends its available capital dollars on projects that provide the most benefit to the service area and are done in the most cost-effective manner possible. Capital projects are prioritized based on the following criteria:

- Compliance with government regulations;
- Safety-related;
- Interlocal Agreement (ILA) or other prior commitment;
- Required to maintain existing infrastructure; and
- Cost effectiveness.

Many dimensions of each project must be submitted with the project request, including:

- Consequences of not doing the project;
- Potential ridership generated;
- Effect of the project on customers, employees, and other stakeholders;
- Compliance with long-range plans of the Agency, such as the Strategic Plan, Transit System Plan, and Twenty-Year Financial Plan;
- Time criticality;
- Life-cycle cost including capital expenditures, operating and maintenance expenses, and revenue generation in comparison with current operations;
- Other potential alternatives to the proposed project and associated life-cycle costs of each alternative; and
- Concurrence from all affected departments.

For certain classes of expenditures (such as infrastructure maintenance), discrete projects cannot be specifically identified or the timing of equipment replacement cannot be accurately determined. Capital reserves have been established in the Twenty-Year Financial Plan for each capital project category based on historic spending patterns and projected levels of new work. These reserves act as placeholders for anticipated future capital expenditures. Once a specific project is identified that relates to a particular reserve, that project is given its own unique identification number, and the reserve is reduced accordingly.

### **Budget and Financial Plan Approval and Amendments**

Annual Budget – DART’s legislation requires the Board to approve an annual budget. The proposed annual budget must be made available to the governing bodies of the participating municipalities at least 30 days prior to final budget adoption.

Twenty-Year Financial Plan – The Twenty-Year Financial Plan addresses the affordability of the Transit System Plan and the timing of service and capital expansion projects. The Twenty-Year Financial Plan details projected sources and uses of cash for twenty years. The first year of the Plan corresponds with the coming year’s budget. The Plan validates the affordability of our long-range Transit System Plan, and includes our commitments for future system expansion and the issuance and repayment of debt.

The Board approves two resolutions prior to the start of each new fiscal year (see Exhibits V.4 and V.5). The Board approves the Annual Budget including operating expense, capital, and debt service budgets in one resolution which requires a simple majority for approval. The Twenty-Year Financial Plan is approved in a second resolution and requires an affirmative vote of two-thirds of the appointed and qualified members of the Board for approval.

Any major change to the Twenty-Year Financial Plan that occurs outside of the normal approval schedule requires a Financial Plan Amendment. A major change is defined as when DART’s share of a new operating program, or DART’s share of an increase to an existing operating program, is in excess of \$500,000 per year; or, when DART’s share of a new capital program, or the cumulative addition to an existing capital program, is in excess of \$1 million (see Exhibit V.8, FS-G9). These changes require the affirmative vote of two-thirds of the number of appointed and qualified members of the Board.

### **Multiple Versions of the Proposed 2018 Financial Plan**

For FY 2018, DART is advancing two different versions of the Financial Plan. The only difference between the two plans is the funding for the D2 project. All of the data, tables, and write-ups in this document assume that DART will be able to obtain federal (or other external) funding in the amount of \$300 million and will issue Capital Appreciation Bonds, or CABs, (see page II-35 for a discussion of CABs) in the amount of \$350 million. The alternative plan assumes that DART is able to obtain a Full Funding Grant Agreement for 49.5% of the total project cost (\$653.5 million). DART is advancing the \$350 million CABs version as the primary FY 2018 Financial Plan, because it is the more conservative of the two Plans. Both versions of the Proposed FY 2018 Financial Plan are contained at the end of this document.

## **Budget Basis and Presentation of Amounts and Years**

DART's Annual Budget is presented on the same basis as our audited financial statements, but does not include depreciation, amortization of Federal grants, or the interest income and interest expense from leveraged lease transactions. Each of these non-cash transactions, however, is incorporated into the projected balance sheet shown at Exhibit II.18 in the *Financial Plan Section*.

Schedules are presented and rounded to millions or thousands (as indicated), but are based on actual raw numbers. Consequently, certain schedules may not tie exactly or add due to rounding. In some cases, prior years' numbers have been restated to conform to the current year's format. All schedules are in fiscal years unless otherwise stated.

## **Board Planning Documents**

Several related reports are referenced in this document. Readers may wish to refer to these for a more comprehensive understanding of DART's plans and operations. These documents may be obtained from DART's Finance or Capital Planning departments. See Exhibit V.3 for an illustration of how the Transit System Plan interrelates with other documents.

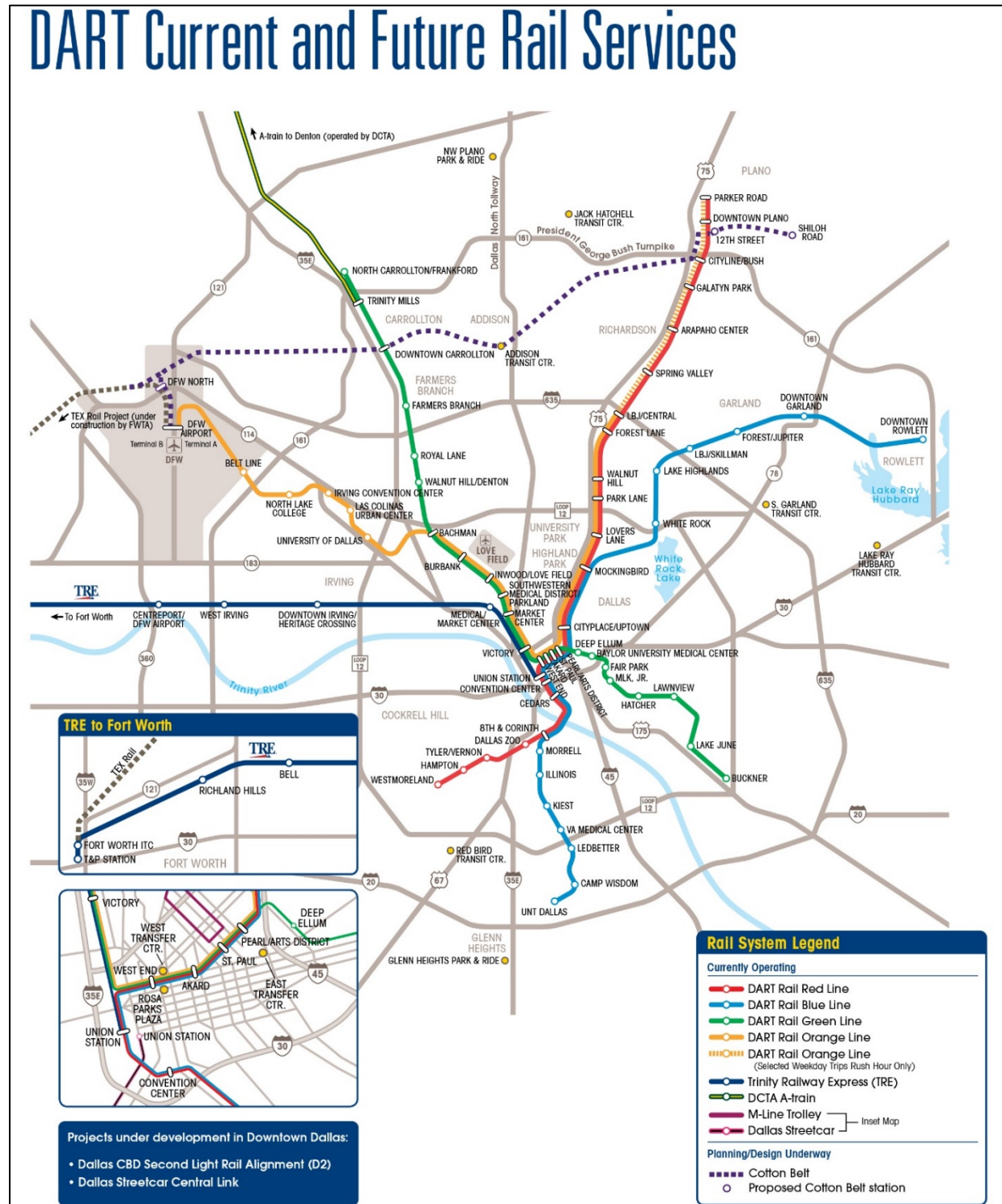
*Service Plan and Transit System Plan* – DART has a Service Plan and a Transit System Plan. The Service Plan is required by DART's legislation and describes, in legal terms, where DART's facilities and rail alignments are physically located. DART's Transit System Plan is a long-range planning tool that identifies and prioritizes major capital projects needed to improve regional mobility. The Transit System Plan provides detailed discussions of bus service recommendations, light rail and regional rail project development phasing schedules, paratransit strategies, as well as recommendations associated with system-wide mobility elements, and transit-oriented development. The Transit System Plan is closely coordinated with development of the North Central Texas Council of Governments' Metropolitan Transportation Plan and undergoes a major revision every five to ten years.

*2030 Transit System Plan (TSP)* – In October 2006, the DART Board adopted the 2030 Transit System Plan. The TSP focused on transit needs and opportunities within the context of a 2030 horizon. It includes recommendations for DART's core services (bus, light rail, regional rail, and [previously] HOV) and includes a discussion of issues such as land use and economic development, system accessibility, bicycle and pedestrian integration, and policies relative to DART's role in regional transit initiatives. The plan is financially constrained and is thus closely coordinated with the DART Twenty-Year Financial Plan. The economic slowdown of the late 2000's resulted in placing a number of major capital projects in the 2030 TSP in a deferred/unfunded status. Those projects that remain in deferred status are being re-evaluated and may be incorporated into the 2040 Transit System Plan currently under development.



Exhibit V.2 is the map of DART Current and Future Services.

Exhibit V.2



2040 Transit System Plan – The DART Board has initiated a revision to the existing 2030 Transit System Plan using a two-phased approach. Phase 1 included a Comprehensive Operations Analysis (COA) of the bus system to develop recommendations for improvements to the bus network. Phase 2 focused on evaluating potential high capacity transit corridors, including those deferred from the 2030 Transit System Plan. Phase 2 also integrated COA bus recommendations while focusing on system sustainability including low cost initiatives to grow ridership, improve accessibility, and increase operating efficiency, maintaining the system in a state of good repair, and regional opportunities. Projects in the 2030 Transit System Plan that were deferred/underfunded over the past several years were reviewed and evaluated for potential inclusion in the 2040 Plan along with any new projects that may be identified. The Draft 2040 Plan is expected to be approved by the Board in the first half of FY 2018 and will be a financially constrained plan. A Final 2040 Plan will be presented to the Board of Directors following Board approval to distribute the plan for public and stakeholder comment.

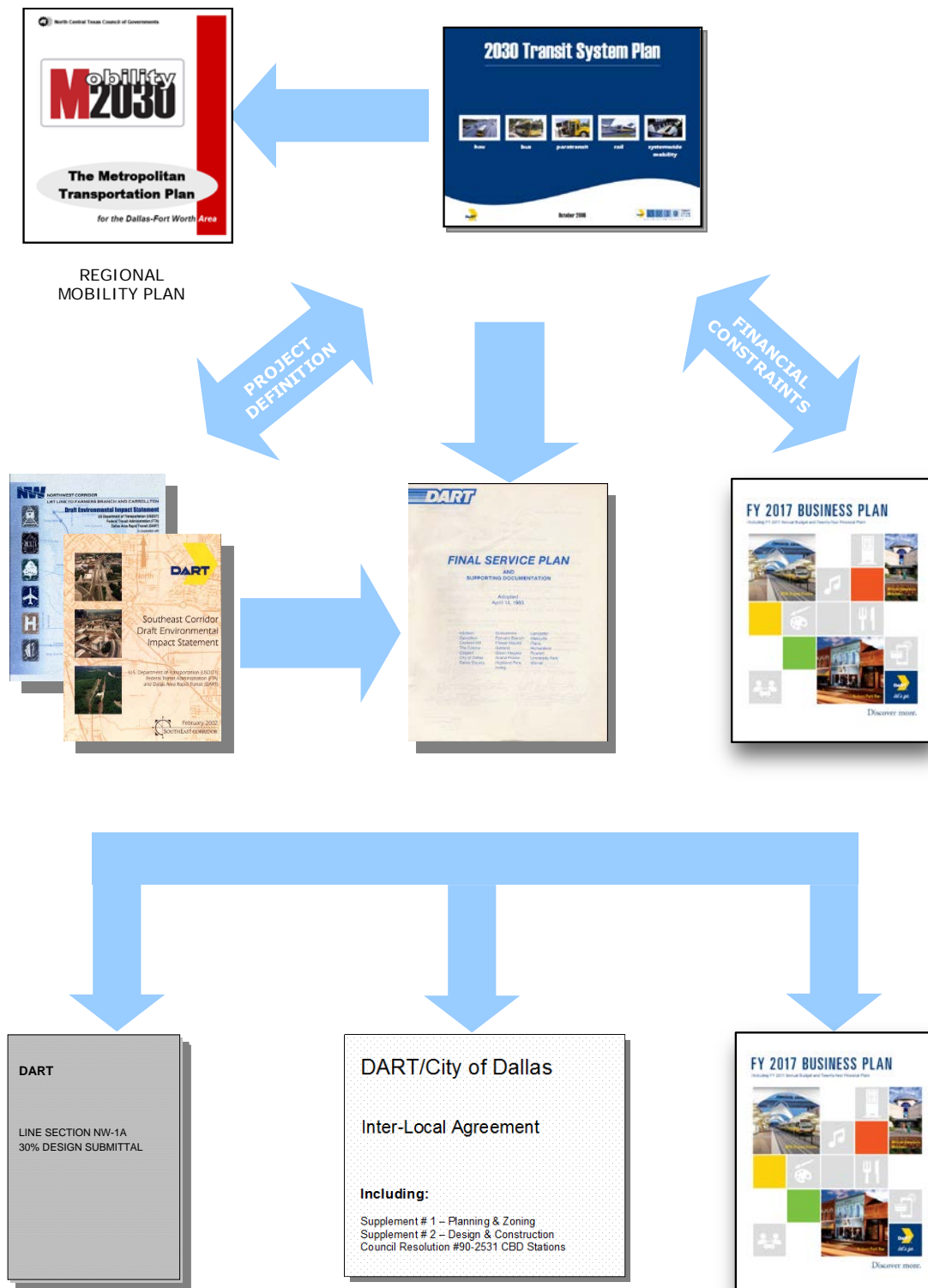
Program of Interrelated Projects (Core Capacity) –Three projects that will increase core capacity and maximize the overall capacity of the existing DART light rail system within the Dallas central business district (CBD) were incorporated in DART’s Twenty Year Financial Plan beginning in FY 2015. These projects are:

- Platform extensions for the twenty-eight oldest stations in the light rail system along the Red and Blue lines to accommodate three-car trains;
- The second downtown light rail alignment (known as D2), for which a locally preferred alternative (LPA) was adopted in September 2015. Given recent support for a subway alignment, DART will be undertaking alignment refinement in FY 2017 to enable approval of a refined subway LPA by September 2017; and
- Extension of the Dallas streetcar system through the CBD, linking the Oak Cliff and McKinney Avenue streetcar lines.

Cotton Belt – The FY 2016 Financial Plan included the development of rail service along the Cotton Belt corridor from Plano, through the North Dallas area, to DFW Airport. This service will connect with DART’s Green Line in Carrollton and the Red Line in Plano. Service was programmed to begin in 2035, but several regional sources of funds and scope modifications allowed for the FY 2017 Financial Plan to accelerate revenue service along the Cotton Belt Corridor to 2022. This plan requires confirmation of external funding sources and obtaining environmental clearance. DART has initiated an environmental impact statement and preliminary engineering to support this implementation timeline. Many communities through which the Cotton Belt rail corridor passes have expressed a strong support for an earlier service date.

Quarterly Operating and Financial Performance Reports – DART’s Quarterly Operating and Financial Performance Reports provide updates on management's progress against financial and operating projections for the current year and provide status reports on ridership, planning, and capital projects in progress. These reports are available on DART’s website, [DART.org](http://DART.org).

### Exhibit V.3 Interrelationship of System Plan with Other Documents



## Exhibit V.4

	<b>RESOLUTION</b> of the <b>DALLAS AREA RAPID TRANSIT BOARD</b> (Executive Committee)	<b>160094</b>  <b>RESOLUTION</b>								
<b>Approval of Fiscal Year (FY) 2017 Annual Budget</b>										
To be updated										
<p>WHEREAS, on May 24, 2016 (Resolution No. 160056), the Board approved the Financial Standards (including the General Standards, Business Planning Parameters, and Debt Service Standards) which were the basis for compiling the FY 2017 Annual Budget; and</p> <p>WHEREAS, the Board has been briefed on the assumptions used to prepare the FY 2017 Annual Budget; and</p> <p>WHEREAS, the proposed FY 2017 Annual Budget was sent to the governing bodies of the municipalities within the DART Service Area at least thirty days prior to Board approval in accordance with Section 452.113(3) of the Texas Transportation Code.</p> <p>NOW, THEREFORE, BE IT RESOLVED by the Dallas Area Rapid Transit Board of Directors that the FY 2017 Annual Budget is approved in the amount of \$975,500,815.</p>										
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 60%;">Annual Operating Budget</td><td style="text-align: right;">\$494,944,001</td></tr><tr><td>Capital Budget</td><td style="text-align: right;">289,094,176</td></tr><tr><td>Debt Service Budget</td><td style="text-align: right;">191,462,638</td></tr><tr><td><b>Total FY 2017 Annual Budget</b></td><td style="text-align: right;"><b>\$975,500,815</b></td></tr></table>			Annual Operating Budget	\$494,944,001	Capital Budget	289,094,176	Debt Service Budget	191,462,638	<b>Total FY 2017 Annual Budget</b>	<b>\$975,500,815</b>
Annual Operating Budget	\$494,944,001									
Capital Budget	289,094,176									
Debt Service Budget	191,462,638									
<b>Total FY 2017 Annual Budget</b>	<b>\$975,500,815</b>									
 _____ Gary Slagel Secretary	 _____ Faye Moses Wilkins Chair									
APPROVED AS TO FORM:	ATTEST									
 _____ Scott Carlson General Counsel	 _____ Gary C. Thomas President/Executive Director									
	September 27, 2016 _____ Date									



## Exhibit V.5

## RESOLUTION

To be updated



of the

160109

DALLAS AREA RAPID TRANSIT BOARD

(Executive Committee)

**RESOLUTION****Approval of Fiscal Year (FY) 2017 Twenty-Year Financial Plan**

WHEREAS, on May 24, 2016 (Resolution No. 160056), the Board approved the Financial Standards (including the General Standards, Business Planning Parameters, and Debt Service Standards) which were the basis for compiling the FY 2017 Twenty-Year Financial Plan; and

WHEREAS, the Board has been briefed on the assumptions used to prepare the FY 2017 Twenty-Year Financial Plan; and

WHEREAS, the proposed FY 2017 Twenty-Year Financial Plan was sent to the governing bodies of the municipalities within the DART Service Area at least thirty days prior to Board approval in accordance with Article VI, Section 3, of the Board Bylaws; and

WHEREAS, on September 27, 2016, Resolution No. 160093, the Board approved a resolution deferring adoption of the FY 2017 Twenty-Year Financial Plan until October 25, 2016; and

WHEREAS, during August, September, and early October, the Board discussed the financial impact of variations to the Core Capacity Program of Interrelated Projects (D2, Platform Extensions, and Dallas Central Streetcar link) and construction of commuter rail service in the Cotton Belt corridor, which was advanced from a revenue service date in 2035 to a revenue service date in 2022; and

WHEREAS, DART will identify and regularly engage with stakeholders along the entirety of the Cotton Belt corridor, including municipalities, to collaborate and address design and aesthetic issues and potential operational issues including mitigation measures associated with the operation of the Cotton Belt.

NOW, THEREFORE, BE IT RESOLVED by the Dallas Area Rapid Transit Board of Directors that the FY 2017 Twenty-Year Financial Plan is approved as shown in Exhibit 1 to the Resolution.

  
Gary Stigel  
Secretary  
Faye Moses Wilkins  
Chair

APPROVED AS TO FORM:

ATTEST

  
Scott Carlson  
General Counsel  
Gary C. Thomas  
President/Executive DirectorOctober 25, 2016  
Date

Exhibit V.6a (Proposed FY 2018 20-Year Financial Plan)  
(Exhibit 1 to Resolution)

Dallas Area Rapid Transit FY 2018 Proposed Financial Plan - As of August 8, 2017 Twenty Year Sources and Uses of Cash (In Millions - Inflated Dollars)																								
Line	Description	5 Year Total	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	20 Year Total	
SOURCES OF FUNDS																								
1	Sales Tax Revenues	\$3,141.5	\$593.9	\$593.9	\$617.7	\$648.6	\$687.5	\$722.0	\$750.9	\$773.4	\$773.4	\$804.9	\$845.5	\$896.2	\$941.0	\$978.7	\$1,008.0	\$1,008.0	\$1,048.3	\$1,100.8	\$1,166.8	\$1,225.2	\$17,184.7	
2	Operating Revenues	\$460.4	82.2	92.4	92.1	94.0	99.6	102.0	114.1	115.3	117.5	119.7	122.5	137.1	138.5	141.1	143.6	146.3	163.8	165.3	168.2	173.5	2,528.6	
3	Interest Income	\$60.1	7.5	9.0	13.0	17.0	18.6	18.6	18.5	17.8	19.9	23.1	18.1	17.7	17.3	18.9	20.4	20.7	22.1	24.1	26.7	29.5	376.7	
4	Federal Funding	\$467.6	125.3	111.8	76.8	76.8	76.8	76.8	76.8	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	1,651.8	
5	Discretionary Federal Funding	\$448.0	20.5	102.5	51.0	147.0	125.0	100.0	0.0	12.4	12.8	6.3	6.1	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	1,777.6	
6	Net Debt Issuances	\$1,710.0	(30.0)	335.0	670.0	515.0	220.0	200.0	150.0	370.0	120.0	310.0	250.0	50.0	0.0	0.0	(50.0)	(50.0)	(50.0)	(100.0)	(100.0)	(100.0)	2,760.0	
7	Other Non-Operating Sources	\$87.8	14.2	14.2	16.6	19.6	23.3	23.3	24.4	25.5	25.7	26.3	27.0	27.7	28.5	29.1	29.9	30.7	31.5	32.4	33.2	34.1	517.2	
8	Other Capital Sources	\$12.0	15.0	29.5	20.3	5.0	12.0	\$81.8	5.6	8.2	17.1	11.5	8.9	6.9	14.7	9.8	14.6	8.8	12.5	24.7	12.7	9.3	253.7	
9	Total Sources of Funds	\$6,462.2	\$828.5	\$1,288.3	\$1,559.5	\$1,523.0	\$1,262.9	\$1,248.3	\$1,144.4	\$1,412.8	\$1,163.1	\$1,373.3	\$1,354.7	\$1,214.0	\$1,218.5	\$1,256.6	\$1,240.0	\$1,243.7	\$1,307.4	\$1,326.4	\$1,366.8	\$1,518.4	\$25,879.5	
USES OF FUNDS																								
10	Sales Taxes for Operations	n/a	73.0%	74.6%	73.6%	70.9%	70.0%	68.1%	66.1%	65.7%	66.6%	66.1%	64.4%	60.9%	59.5%	58.4%	57.8%	59.2%	56.7%	55.3%	53.2%	51.5%	n/a	
11	Operating Expenses:																							
12	Bus	\$1,465.7	\$275.2	\$291.5	\$296.9	\$302.5	\$303.5	\$310.0	\$316.0	\$322.3	\$328.4	\$334.1	\$340.5	\$347.4	\$353.9	\$361.0	\$367.8	\$375.0	\$381.8	\$389.5	\$396.8	\$404.4	\$6,794.5	
13	Light Rail Transit	\$904.6	174.4	177.7	180.8	184.4	187.2	190.9	195.8	199.7	203.4	207.7	211.6	215.8	219.8	224.2	228.4	232.8	237.0	241.7	246.2	250.9	4,210.5	
14	Structure	\$13.7	1.6	1.6	1.6	1.6	1.6	4.6	4.7	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	6.0	92.3	
15	Commuter Rail/RTR Management	\$190.8	30.2	30.5	36.0	37.3	36.8	57.4	60.2	63.0	63.7	65.6	67.5	69.6	71.6	73.7	75.9	78.2	80.4	82.9	85.4	87.9	1,273.7	
16	Paramount	\$212.0	39.6	40.8	42.4	43.8	45.4	47.2	49.1	51.0	53.0	55.2	57.3	59.6	62.0	64.5	67.0	69.7	72.4	75.4	78.3	81.5	1,155.2	
17	General Mobility - TDM	\$10.8	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0	50.1	
17	Total Operating Expenses	\$2,974.4	\$523.0	\$544.3	\$559.8	\$570.7	\$596.6	\$612.4	\$627.9	\$643.1	\$658.8	\$670.0	\$684.5	\$700.1	\$715.1	\$731.4	\$747.1	\$764.1	\$780.1	\$798.1	\$815.5	\$833.6	\$13,576.2	
18	Capital Projects and Non-Operating	\$2,448.4	\$531.9	\$553.2	\$569.0	\$583.2	\$609.1	\$622.7	\$637.9	\$653.2	\$668.7	\$680.5	\$692.2	\$706.2	\$721.0	\$736.2	\$751.8	\$767.9	\$783.9	\$800.4	\$817.4	\$834.4	\$13,793.8	
19	Agency-Wide	\$119.2	\$35.8	\$40.4	\$18.6	\$12.9	\$11.5	\$15.8	\$10.1	\$24.6	\$19.2	\$27.0	\$25.1	\$14.8	\$18.8	\$15.9	\$17.5	\$12.9	\$14.0	\$16.6	\$22.5	\$39.9	\$440.0	
20	Light Rail Transit	\$141.4	33.5	40.4	26.8	13.9	16.8	\$141.4	22.1	14.5	100.3	129.1	104.9	91.2	30.0	14.6	12.3	46.0	41.2	17.5	9.1	15.1	\$941.1	
21	Structure	\$800.2	68.0	122.8	187.7	285.0	317.0	\$800.2	320.3	275.7	297.8	324.4	238.8	186.6	51.6	19.4	28.4	19.3	36.3	42.5	44.4	31.4	2,674.6	
22	Commuter Rail/RTR Management	\$130.2	9.6	8.5	27.7	37.0	18.4	\$101.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	102.2	
23	Paramount	\$130.2	80.0	276.6	385.9	424.3	137.8	\$130.4	15.4	15.9	29.5	24.6	15.0	11.0	23.1	17.8	35.5	27.2	22.3	40.1	33.5	24.7	1,663.1	
24	General Mobility - TDM	\$11.6	0.4	0.1	0.2	0.0	0.8	\$11.6	0.0	0.2	0.1	0.0	0.0	0.6	0.4	0.5	0.3	0.2	0.2	0.1	0.1	1.2	56.6	
25	Capital P & D, Start-Up, Non-Operating	\$61.6	12.4	10.9	10.2	16.6	11.5	\$61.6	10.6	10.7	10.9	10.5	11.3	11.0	12.4	12.6	12.9	14.3	12.1	13.1	13.3	12.8	243.6	
26	General Mobility - Road Impr, ITS	\$33.5	15.5	7.8	5.4	4.8	0.0	\$33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5	
27	Total Capital and Non-Operating	\$2,743.6	\$626.3	\$697.4	\$662.5	\$794.4	\$513.9	\$574.0	\$537.2	\$463.2	\$376.0	\$441.8	\$319.5	\$120.2	\$89.1	\$132.9	\$112.9	\$103.3	\$121.6	\$122.8	\$125.6	\$127.7	\$6,107.7	
28	Debt Service	\$3,406.9	\$3,320.9	\$3,320.9	\$3,497.6	\$4,206.5	\$4,657.6	\$4,809.9	\$4,935.5	\$5,003.4	\$5,281.6	\$5,295.6	\$5,486.1	\$5,688.1	\$5,822.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	n/a	
29	Total Debt O/S End of Year	\$3,320.9	\$3,320.9	\$3,320.9	\$3,497.6	\$4,206.5	\$4,657.6	\$4,809.9	\$4,935.5	\$5,003.4	\$5,281.6	\$5,295.6	\$5,486.1	\$5,688.1	\$5,822.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	\$5,930.8	n/a	
30	Principal - LT Debt	\$55.9	\$58.3	\$61.1	\$63.9	\$66.7	\$69.5	\$72.3	\$75.1	\$77.9	\$80.7	\$83.5	\$86.3	\$89.1	\$91.9	\$94.7	\$97.5	\$100.3	\$103.1	\$105.9	\$108.7	\$111.5	\$2,425.5	
31	Cost of Debt (Interest and Fees)	\$137.9	\$138.6	\$139.4	\$140.2	\$141.0	\$141.8	\$142.6	\$143.4	\$144.2	\$145.0	\$145.8	\$146.6	\$147.4	\$148.2	\$149.0	\$149.8	\$150.6	\$151.4	\$152.2	\$153.0	\$153.8	\$2,250.0	
32	Total Debt Service Costs	\$193.8	\$196.9	\$200.5	\$204.1	\$207.7	\$211.3	\$214.9	\$218.5	\$222.1	\$226.7	\$231.3	\$235.9	\$240.5	\$245.1	\$249.7	\$254.3	\$258.9	\$263.5	\$268.1	\$272.7	\$277.3	\$281.9	\$6,155.5
33	External Coverage Ratio	3.10	3.05	2.86	2.79	2.89	2.89	2.86	2.82	2.76	2.47	2.47	2.45	2.62	2.75	2.84	2.89	2.87	2.99	3.10	3.22	3.30	n/a	
34	Internal Coverage Ratio	1.28	1.22	1.17	1.21	1.27	1.27	1.29	1.32	1.30	1.18	1.18	1.21	1.32	1.41	1.48	1.51	1.46	1.59	1.68	1.80	1.89	n/a	
35	Total Uses of Funds	\$6,022.4	\$982.1	\$1,248.6	\$1,440.0	\$1,599.0	\$1,352.6	\$1,250.0	\$1,222.2	\$1,388.7	\$1,240.4	\$1,436.6	\$1,358.5	\$1,178.5	\$1,163.3	\$1,180.5	\$1,246.4	\$1,244.4	\$1,247.2	\$1,287.6	\$1,309.3	\$1,460.5	\$25,836.5	
36	Net Inc (Dec) in cash	(\$153.6)	\$39.7	\$119.5	(\$76.0)	(\$58.7)	(\$39.7)	(\$171.7)	(\$77.8)	(\$24.0)	(\$77.3)	(\$63.3)	(\$33.7)	(\$35.5)	(\$55.2)	(\$76.1)	(\$2.6)	(\$0.7)	(\$0.7)	(\$38.8)	(\$77.5)	(\$57.9)	\$43.0	
37	Change in Balance Sheet Accts	29.6	47.4	48.7	20.0	(\$5.8)	\$89.9	(41.5)	(11.8)	22.9	(32.5)	24.1	(23.5)	(56.8)	(21.9)	(6.9)	5.1	(1.0)	(9.5)	(4.4)	(9.5)	16.7	(60.8)	
38	Cash, Beg of Period	669.1	545.1	632.2	800.3	744.4	598.8	598.8	555.6	466.1	512.9	403.1	363.8	316.3	345.6	315.3	348.6	417.7	425.2	474.3	508.8	576.8	803.1	
39	Cash, End of Period	721.1	669.1	632.2	800.3	744.4	598.8	598.8	555.6	466.1	512.9	403.1	363.8	316.3	345.6	315.3	348.6	417.7	425.2	474.3	508.8	576.8	803.1	
40	Less: Cash Reserves & Restricted Funds	(72.1)	(72.1)	(71.7)	(71.7)	(71.7)	(71.6)	(71.6)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(69.4)	
41	Less: Working Cash Requirement (Core Capacity)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(208.4)	
42	Less: Working Cash Requirement	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(130.8)	(208.4)	
43	Less: Capital Reserve	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(23.4)	(56.9)	
44	Unrestricted Cash (Net Available Cash)	\$33.8	\$384.2	\$572.7	\$512.9	\$373.9	\$373.9	\$335.9	\$320.5	\$271.1	\$155.2	\$109.3	\$75.2	\$46.6	\$72.7	\$134.1	\$134.0	\$124.0	\$166.5	\$192.1	\$251.3	\$316.6	\$316.6	

Exhibit V.6b (Proposed FY 2018 20-Year Financial Plan, \$653.5M D2 Grant)  
(Exhibit 2 to Resolution)

Dollars And Pounds Tens of Millions FY 2018 Proposed Financial Plan, As of August 8, 2017 with 40.5% (\$653.5M) D2 Grant Twenty Year Sources and Uses of Cash (\$ Millions - Inflated Dollars)																							
Line	Description	2018	2019	2020	2021	2022	5 Year Total	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	20 Year Total
<b>SOURCES OF FUNDS</b>																							
1	Sales Tax Revenues	\$593.9	\$593.9	\$617.7	\$648.6	\$687.5	\$3,141.5	\$722.0	\$750.9	\$773.4	\$773.4	\$804.9	\$845.5	\$896.2	\$941.0	\$978.7	\$1,008.0	\$1,048.3	\$1,100.8	\$1,166.8	\$1,225.2	\$1,283.7	\$17,184.7
2	Operating Revenues	82.2	92.4	92.1	94.0	99.6	\$460.4	102.0	114.1	115.3	117.5	119.7	122.5	137.1	138.5	141.1	143.6	146.3	163.8	165.3	168.2	173.5	2,528.6
3	Interest Income	7.5	9.0	11.1	12.6	15.0	\$55.2	15.7	16.3	19.2	22.6	17.5	17.0	16.6	16.0	18.2	19.9	20.6	22.4	24.9	28.4	32.5	363.1
4	Formula Federal Funding	125.3	111.8	76.8	76.8	76.8	\$467.6	76.8	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	1,651.8
5	Discretionary Federal Funding	20.5	102.5	203.0	197.0	175.0	\$698.0	150.0	53.5	12.4	12.8	6.3	6.1	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	177.9
6	Net Debt Issuances	(30.0)	335.0	330.0	515.0	220.0	\$1,560.0	200.0	150.0	370.0	120.0	310.0	250.0	50.0	0.0	0.0	(50.0)	(50.0)	(50.0)	(100.0)	(100.0)	(100.0)	2,410.0
7	Other Non-Operating Sources	14.2	14.2	16.6	19.6	23.3	\$87.8	23.3	24.4	25.5	25.7	26.3	27.0	27.7	28.5	29.1	29.9	30.7	31.5	32.4	33.2	34.1	517.2
8	Other Capital Sources	15.0	29.5	20.3	5.0	12.0	\$81.8	5.6	8.2	17.1	11.5	8.9	6.9	6.5	14.7	9.8	14.6	8.8	12.5	24.7	12.7	9.3	253.7
9	<b>Total Sources of Funds</b>	<b>\$828.5</b>	<b>\$1,288.3</b>	<b>\$1,357.6</b>	<b>\$1,568.7</b>	<b>\$1,309.2</b>	<b>\$6,352.3</b>	<b>\$1,295.4</b>	<b>\$1,196.5</b>	<b>\$1,412.1</b>	<b>\$1,162.5</b>	<b>\$1,372.7</b>	<b>\$1,354.1</b>	<b>\$1,213.3</b>	<b>\$1,217.8</b>	<b>\$1,255.9</b>	<b>\$1,248.5</b>	<b>\$1,243.5</b>	<b>\$1,307.7</b>	<b>\$1,327.2</b>	<b>\$1,388.5</b>	<b>\$1,521.4</b>	<b>\$2,569.3</b>
<b>USES OF FUNDS</b>																							
10	Sales Taxes for Operations	73.0%	74.6%	73.9%	71.5%	70.5%	n/a	68.5%	66.3%	65.8%	66.7%	66.2%	64.4%	61.0%	59.6%	58.5%	57.9%	59.2%	56.7%	55.2%	53.0%	51.2%	n/a
11	Operating Expenses:																						
12	Bus	\$275.2	\$291.5	\$296.9	\$298.6	\$303.5	\$1,465.7	\$310.0	\$316.0	\$322.3	\$328.4	\$334.1	\$340.5	\$347.4	\$353.9	\$361.0	\$367.8	\$375.0	\$381.8	\$389.5	\$396.8	\$404.4	\$6,794.5
13	Light Rail Transit	174.4	177.7	180.8	184.4	187.2	\$904.6	190.9	195.8	199.7	203.4	207.7	211.6	215.8	219.8	224.2	228.4	232.8	237.0	241.7	246.2	250.9	4,210.5
14	Structure	1.6	1.6	1.6	1.6	1.6	\$10.8	4.6	4.7	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.9	6.0	92.3
15	Commuter Rail/RR Management	30.2	30.5	36.0	37.3	36.8	\$190.8	37.4	60.2	63.0	63.7	65.6	67.5	69.6	71.6	73.7	75.9	78.2	80.4	82.9	85.4	87.9	1,273.7
16	Paratransit	39.6	40.8	42.4	43.8	45.4	\$212.0	47.2	49.1	51.0	53.0	55.2	57.3	59.6	62.0	64.5	67.0	69.7	72.4	75.4	78.3	81.5	1,155.2
17	General Mobility - TDM	2.1	2.1	2.2	2.2	2.2	\$10.8	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.9	3.0	3.0	50.1
17	<b>Total Operating Expenses</b>	<b>\$523.0</b>	<b>\$544.3</b>	<b>\$559.8</b>	<b>\$570.7</b>	<b>\$590.6</b>	<b>\$2,797.4</b>	<b>\$612.4</b>	<b>\$627.9</b>	<b>\$643.1</b>	<b>\$658.8</b>	<b>\$670.4</b>	<b>\$684.5</b>	<b>\$700.1</b>	<b>\$715.1</b>	<b>\$731.4</b>	<b>\$747.1</b>	<b>\$764.1</b>	<b>\$780.1</b>	<b>\$815.5</b>	<b>\$833.6</b>	<b>\$864.4</b>	<b>\$13,756.2</b>
<b>Operating P&amp;D - Start Up</b>																							
18	Capital Projects and Non-Operating:																						
19	Agency-Wide	\$35.8	\$40.4	\$18.6	\$12.9	\$11.5	\$119.2	\$15.8	\$10.1	\$24.6	\$10.2	\$72.0	\$25.1	\$14.8	\$18.8	\$15.9	\$12.5	\$12.9	\$14.0	\$16.6	\$22.5	\$29.9	\$490.0
20	Light Rail Transit	43.5	40.4	26.8	13.9	16.8	\$141.4	22.1	14.5	100.3	120.1	104.9	91.2	30.0	14.6	12.3	46.0	41.2	17.5	9.1	8.1	15.1	93.1
21	Structure	9.6	8.5	27.7	37.0	18.4	\$101.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.0	0.0	0.3	0.0	102.2
22	Commuter Rail/RR Management	80.0	276.6	385.9	424.3	137.8	\$1,904.6	15.4	15.9	29.5	24.6	24.8	15.0	11.0	23.1	17.8	35.5	27.2	22.3	40.1	33.5	24.7	1,665.1
23	Paratransit	0.4	0.1	0.2	0.0	0.8	\$1.6	0.0	0.2	0.1	0.0	0.0	0.6	0.4	0.5	0.3	0.2	0.2	0.1	0.1	1.2	0.1	5.6
24	Capital P & D Start-Up, Non-Operating	12.4	10.9	10.2	16.6	11.5	\$61.6	10.6	10.7	10.9	10.5	11.3	11.0	12.4	12.6	12.9	14.3	12.1	13.1	13.3	12.8	13.8	243.6
25	General Mobility - Road Impr./ITS	15.5	7.8	5.4	4.8	0.0	\$33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
27	<b>Total Capital and Non-Operating</b>	<b>\$265.3</b>	<b>\$507.4</b>	<b>\$662.5</b>	<b>\$794.4</b>	<b>\$519.9</b>	<b>\$2,743.6</b>	<b>\$384.2</b>	<b>\$327.2</b>	<b>\$463.2</b>	<b>\$276.0</b>	<b>\$441.8</b>	<b>\$329.5</b>	<b>\$202.2</b>	<b>\$89.1</b>	<b>\$87.9</b>	<b>\$135.9</b>	<b>\$112.9</b>	<b>\$103.3</b>	<b>\$121.6</b>	<b>\$122.8</b>	<b>\$251.6</b>	<b>\$6,107.7</b>
<b>Debt Service</b>																							
28	Total Debt O/S Beginning of Year	\$3,406.9	\$3,320.9	\$3,597.6	\$3,856.5	\$4,307.6	n/a	\$4,459.9	\$4,585.5	\$4,653.4	\$4,931.6	\$4,945.6	\$5,136.1	\$5,258.5	\$5,172.8	\$5,030.8	\$4,882.3	\$4,676.9	\$4,464.5	\$4,245.1	\$3,968.1	\$3,683.1	n/a
29	Total Debt O/S End of Year	\$3,320.9	\$3,597.6	\$3,856.5	\$4,307.6	\$4,459.9	\$4,459.9	\$4,585.5	\$4,653.4	\$4,931.6	\$4,945.6	\$5,136.1	\$5,258.5	\$5,172.8	\$5,030.8	\$4,882.3	\$4,676.9	\$4,464.5	\$4,245.1	\$3,968.1	\$3,683.1	\$3,406.9	n/a
30	Principal - LT Debt	\$55.9	\$58.3	\$61.1	\$63.9	\$67.7	\$306.9	\$74.5	\$82.1	\$91.6	\$106.1	\$119.5	\$127.6	\$135.8	\$142.0	\$148.5	\$155.3	\$162.4	\$169.4	\$177.1	\$185.0	\$193.1	\$2,776.9
31	Cost of Debt (Interest and Fees)	137.9	138.6	156.5	169.9	171.5	\$774.5	178.9	185.0	190.7	202.5	205.4	217.0	222.4	217.2	210.7	204.9	195.8	186.5	177.8	165.9	152.8	\$4,688.1
32	<b>Total Debt Service Costs</b>	<b>\$193.8</b>	<b>\$196.9</b>	<b>\$217.7</b>	<b>\$233.8</b>	<b>\$239.2</b>	<b>\$1,081.4</b>	<b>\$253.4</b>	<b>\$267.1</b>	<b>\$282.5</b>	<b>\$308.6</b>	<b>\$324.9</b>	<b>\$344.5</b>	<b>\$358.2</b>	<b>\$359.2</b>	<b>\$362.2</b>	<b>\$369.2</b>	<b>\$380.2</b>	<b>\$385.9</b>	<b>\$395.9</b>	<b>\$409.9</b>	<b>\$426.9</b>	<b>\$6,065.0</b>
33	External Coverage Ratio	3.10	3.05	2.86	2.79	2.89	n/a	2.86	2.82	2.76	2.57	2.55	2.62	2.75	2.86	2.94	2.94	3.06	3.22	3.41	3.58	3.81	n/a
34	Internal Coverage Ratio	1.28	1.22	1.17	1.23	1.29	n/a	1.32	1.36	1.36	1.25	1.25	1.28	1.38	1.38	1.48	1.56	1.62	1.58	1.72	1.84	2.01	2.16
35	<b>Total Uses of Funds</b>	<b>\$982.1</b>	<b>\$1,248.6</b>	<b>\$1,440.0</b>	<b>\$1,599.0</b>	<b>\$1,352.6</b>	<b>\$6,622.4</b>	<b>\$1,250.0</b>	<b>\$1,222.2</b>	<b>\$1,388.7</b>	<b>\$1,240.4</b>	<b>\$1,436.6</b>	<b>\$1,358.5</b>	<b>\$1,178.5</b>	<b>\$1,163.3</b>	<b>\$1,176.5</b>	<b>\$1,240.3</b>	<b>\$1,235.2</b>	<b>\$1,239.4</b>	<b>\$1,274.7</b>	<b>\$1,289.2</b>	<b>\$1,431.2</b>	<b>\$2,546.9</b>
36	Net Inc (Dec) in cash	(\$153.6)	\$39.7	(\$82.4)	(\$30.3)	(\$43.4)	\$84.9	\$45.5	(\$25.7)	\$23.3	(\$77.8)	(\$63.9)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	(\$4.3)	\$120.4
37	Change in Balance Sheet Assets	29.6	47.4	33.7	30.0	(55.8)	\$84.9	(41.5)	(12.2)	28.2	(32.5)	24.1	(23.5)	(56.8)	(21.9)	(6.9)	5.1	(1.0)	(9.5)	(4.4)	(9.5)	16.7	(60.8)
38	Cash, Beg. of Period	669.1	545.1	632.2	583.4	583.1	803.1	483.9	487.9	450.0	501.5	391.2	351.3	323.4	301.4	334.0	404.5	417.8	425.0	483.9	532.0	621.8	803.1
39	Cash, End of Period	545.1	632.2	583.4	583.1	483.9	803.1	483.9	487.9	450.0	501.5	391.2	351.3	323.4	301.4	334.0	404.5	417.8	425.0	483.9	532.0	621.8	728.7
40	Less: Cash Reserves & Restricted Funds	(72.1)	(71.9)	(71.7)	(71.7)	(71.6)	(71.6)	(71.5)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(71.4)	(69.4)	(69.4)
41	Less: Adv. Funding/Reserve (Core Capacity)	(65.0)	(40.0)	(15.0)	(15.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Less: Working Cash Requirement	(130.4)	(136.1)	(140.0)	(142.7)	(149.9)	(149.9)	(153.1)	(157.0)	(160.8)	(163.9)	(167.5)	(171.1)	(175.0)	(178.8)	(182.9)	(186.8)	(191.0)	(195.0)	(203.9)	(208.4)	(208.4)	(208.4)
43	Less: Capital Reserve	(23.4)	0.0	(1.0)	(2.1)	(3.5)	(3.5)	(5.2)	(7.1)	(9.5)	(16.7)	(17.5)	(18.9)	(22.4)	(26.0)	(29.8)	(33.8)	(42.4)	(47.0)	(51.8)	(56.9)	(56.9)	(56.9)



## B. FINANCIAL POLICIES

*Board Policies* – The Board has a number of policies that provide direction to management for implementation. Examples of Board policies are: real estate purchases, advertising, and fare structure. DART's enabling legislation requires the Board to adopt an annual budget prior to the commencement of a fiscal year. It also requires the Board to have a Financial Plan. The Financial Plan details the projected sources and uses of cash for twenty years and reviews the affordability of DART's currently-approved Transit System Plan. The Board's Bylaws require a two-thirds vote of the appointed and qualified Board Members to approve or amend the Financial Plan. Budget and Financial Plan amendments are required when DART's share of a new operating program or increase to an existing operating program is in excess of \$500,000 per year; or when DART's share of a new capital program or the cumulative addition to an existing capital program is in excess of \$1 million. The Board's Financial Standards Policy (Exhibit V-7) requires that the Board review the Financial Standards each year as a part of the budget and financial planning process.

*Financial Standards* – DART's Financial Standards (Exhibit V-8) are divided into three sections: General (FS-G), Business Planning Parameters (FS-B), and Debt Service (FS-D). The purpose of the General Standards is to ensure that DART prudently manages its financial affairs and establishes appropriate cash reserves. The Business Planning Parameters (BPPs) provide management with a framework for developing the following year's budget and Twenty-Year Financial Plan and establish future business targets for management to achieve. The purpose of the Debt Service Standards is to limit the level of debt that may be incurred and to ensure that debt assumptions are based on financial parameters similar to (or more conservative than) those that would be placed on DART by the financial marketplace.

The combination of these policy documents provides a framework within which management can formulate strategy and action plans to maximize return on investment (for example, increase ridership and improve subsidy per passenger). Exhibit V.9 highlights which Financial Standards correlate with the major sources and uses of cash included in the Annual Budget and Twenty-Year Financial Plan.

Exhibit V.7  
Board Financial Standards Policy

DATE ISSUED:	May 13, 1997
Resolution No.	970083
Amended by Resolutions:	980067, 980239, 990087, 990145, 000117
Policy No.	II.02 (Finance)

---

The Board shall review and approve a set of Financial Standards each year as part of the Budget and Financial Plan approval process. The Financial Standards shall be divided into three sections:

1. General Financial Standards – The purpose of the general standards is to ensure that DART prudently manages its financial affairs and establishes appropriate cash reserves to be able to meet its future financial commitments.
2. Debt Financial Standards – The purpose of the debt standards is to limit the level of debt that may be incurred and to ensure that debt assumptions used in the Financial Plan are based on financial parameters similar to (or more conservative than) those that would be placed on DART by the financial marketplace. Actual debt covenants may differ from these standards. Where this occurs, the Financial Plan may reflect the actual covenants in the Board-approved debt instruments.
3. Business Planning Parameters – The purpose of the Business Planning Parameters is to provide management with a framework for developing the following year's budget and the twenty-year Financial Plan and establish future business targets for management to achieve.

Approval or amendment of this policy and of DART's Financial Standards will require an affirmative vote of two-thirds of the appointed and qualified Board members.

Exhibit V.8  
FY 2018 Financial Standards  
Resolution No. 170053

The Financial Standards are divided into three sections: General, Debt Service, and Business Planning Parameters. The purpose of the general standards is to ensure that DART prudently manages its financial affairs and establishes appropriate cash reserves. The purpose of the debt service standards is to limit the level of debt that may be incurred and to ensure that debt assumptions are based on financial parameters similar to (or more conservative than) those that would be placed on DART by the financial marketplace. Actual debt covenants may differ from these standards. Where this occurs, the Financial Plan will reflect the actual covenants in the Board-approved debt instrument. The Business Planning Parameters provide management with a framework for developing the following year's budget and the Twenty-Year Financial Plan and establishing future business targets for management to achieve. Since DART's enabling legislation requires a two-thirds vote on debt and the Financial Plan, approval or amendment of DART's Financial Standards will require an affirmative vote of two-thirds of the appointed and qualified Board members.

**FY 2018 Financial Standards – General**

- G1. Complete and accurate accounting records shall be maintained in accordance with Generally Accepted Accounting Principles as promulgated by the Government Accounting Standards Board. DART's fiscal year-end for financial reporting purposes shall be September 30.
- G2. Funds of the Authority shall be invested within the guidelines of the Board's approved Investment Policy and Investment Strategy, and in compliance with applicable State law, including Section 452.102 of the Texas Transportation Code, Article 717q V.T.C.S., the Texas Public Funds Investment Act, and applicable Federal law. The Board shall approve the signatories for all Agency checking and savings accounts.
- G3. An independent accounting firm shall perform an examination of DART's consolidated financial statements (including Single Audit requirements) and DART's retirement plan financial statements on an annual basis. The Agency's goal is to receive an unqualified opinion on the financial statements and an opinion that DART is in compliance with Federal Single Audit requirements in all material respects.
- G4. An annual actuarial analysis shall be performed on the Defined Benefit Plan. This Plan shall be funded in accordance with guidance received from the actuaries.
- G5. Appropriate insurance coverage shall be maintained to mitigate the risk of material loss. For self-insured retentions, a separately funded Master Insurance Reserve shall be maintained in an amount equal to the estimated liability for incurred losses and a reasonable allowance for claims incurred but not filed. An actuarial review of self-insured retentions will be made at least once every three years to ensure adequacy of the Master Insurance Reserve.

**FY 2018 Financial Standards – General (cont.)**

- G6. Since sales taxes are received on a monthly basis, the unrestricted cash balance at the end of the year shall not be less than one-twelfth of the difference between the subsequent year's total sources of cash (excluding sales taxes) and total uses of cash as projected in the Twenty-Year Financial Plan. This reserve will be invested in accordance with the investment strategy for the Operating Fund.
- G7. In order to provide a buffer against an unanticipated shortfall in sales tax collections, DART will maintain a Financial Reserve. The goal of this reserve is to maintain a balance of at least 10% of the current year's sales tax budget. During periods in which sales taxes exceed the budget, the excess collections will be deposited into the Reserve by January 1 of the following year, up to a maximum fund balance of \$50 million. Once the \$50 million maximum balance is reached, all interest from the reserve and all future sales tax collections that exceed the budget will be placed into a Capital Project Reserve to help ensure that DART can meet its capital program commitments. Authorization to spend Reserve funds requires the affirmative vote of two-thirds of the appointed and qualified members of the Board.
- G8. The fiscal year of DART shall end on September 30 of each year. At the beginning of the budget and financial planning process each year, the Board should review and approve a set of Financial Standards that can be used by management as a framework for developing the following year's Budget, Business Plan, and Twenty-Year Financial Plan. The Board shall approve the Budget and Twenty-Year Financial Plan by September 30 of each fiscal year. The Annual Budget shall be the first year of the Twenty-Year Financial Plan.
- G9. Twenty-Year Financial Plan amendments shall require a two-thirds vote of the number of appointed and qualified Board members. An amendment is necessary when DART's share of the addition of a new capital project or the cumulative modification of an existing capital project is in excess of \$1 million or DART's share of the addition of a new operating program or increase in an existing operating program is in excess of \$500,000.

**FY 2018 Financial Standards – Business Planning Parameters**

- B1. Sales tax revenue forecasts shall be based on a sales tax model developed specifically for the DART Service Area by an independent economist. In order to ensure a conservative sales tax estimate, the model's projections may be reduced from the forecasted levels, but not increased for years 2-20 of the Twenty-Year Financial Plan. The most current year may be based on management's best estimate. All such modifications shall be approved by the Board during the financial planning process.
- B2. Passenger revenue forecasts shall be derived from ridership and average fare forecasts based on the Board's approved fare policy and fare structure. The Board will consider, from time to time, fare modifications to achieve Service Plan, ridership, and subsidy per passenger targets (see B4) and to maintain DART's financial viability.
- B3. The Board shall approve annual fixed route service levels by mode for each of the next five years. Fixed route service levels shall be based on the Five-Year Action Plan prepared by the Planning and Development Department. Cost of service will be developed jointly by Finance and Planning.
- B4. The Board desires to steadily improve service efficiency over time. Subsidy per passenger will continue to be monitored and managed. Management will continue to report the subsidy per passenger in the Quarterly Operating and Financial Performance Report. Items that impact subsidy per passenger will be reported in the Financial Considerations section of Agenda Reports.
- B5. For financial planning purposes, total operating expenses may not increase by more than 90% of the projected rate of inflation for the Dallas area, plus the incremental costs associated with the addition of new services, programs, and/or facilities as approved by the Board, as well as Board-approved contract increases, actuarial analyses, health-care cost increases, and fuel prices. The projected incremental cost impact of new services, programs, and/or facilities shall be presented to the Board for approval as part of the Twenty-Year Financial Plan assumption process each year.
- B6. Management shall use a consistent methodology for computing net administrative costs and direct costs. The administrative ratio (administrative costs minus administrative revenues divided by direct costs) may not increase for two consecutive years and shall not be higher than 14.0%.
- B7. General Mobility programs for road improvement programs such as the Local Assistance Program (LAP), Principal Arterial Street System (PASS), Transit Related Improvement Program (TRIP), and Transportation System Management (TSM) and Intelligent Transportation System projects shall be funded according to the terms of the approved Interlocal Agreements and recorded as non-operating expenses in the Twenty-Year Financial Plan.

**FY 2018 Financial Standards – Business Planning Parameters (cont'd)**

- B8. Capital planning and development costs and start-up costs are the internal staff costs associated with planning, designing, constructing, and opening new capital projects such as the light rail system. Management shall use a consistent methodology for allocating costs between operating and capital planning. Capital planning and development costs shall not exceed 7% of total operating costs. Cumulative start-up costs for a line section shall not exceed 60% of the first year operating costs of that line section.
- B9. The Twenty-Year Financial Plan shall include funding for asset replacement and expansion projects. Capital projects in excess of \$1 million shall be approved by the Board. Timely replacement of assets shall be the highest priority to ensure a safe system. Accordingly, the Twenty-Year Financial Plan shall include replacement reserves by major asset category to ensure adequate future funding. The reserve levels shall be based on an independent assessment of asset condition (to be completed at least once every five years). Expansion projects shall be prioritized based on the project's cost, impact on ridership, return on investment, available funds, and other relevant factors. Capital construction projects shall be increased at annual inflation rates no less than the greater of those: (i) contained in projections developed specifically for DART by an independent economist; or (ii) based on the current available data from construction contract awards. Inflation rates will be reviewed annually and as construction contracts are awarded to determine if the assumptions are reasonable. Non-construction capital projects will be increased at rates no less than general inflation (Consumer Price Index).
- B10. DART receives formula and discretionary Federal funding. Formula funding shall be programmed primarily for bus replacement, capital preventive maintenance (if available), state-of-good repair projects, and passenger facility construction. Formula funding for future years shall be forecast at the current year's funding level or at the minimum levels included in Federal authorizations to ensure a conservative forecast. Discretionary funding shall be programmed primarily for major system expansion projects (e.g., LRT or new bus maintenance facilities). Discretionary funding levels shall be estimated by project based on Federal criteria and the likelihood of obtaining congressional appropriations and require Board approval during the Budget/Twenty-Year Financial Plan process.

**FY 2018 Financial Standards – Debt Service**

- D1. DART may not enter into a debt or financing arrangement unless the transaction is in full compliance with all applicable provisions of the Texas Transportation Code and other applicable state and federal laws.
- D2. Long-term debt may be included in the Twenty-Year Financial Plan; however, no debt secured solely by a pledge of sales and use tax revenues and that has a maturity longer than five years from the date of issuance shall be incurred without the approval by the voters of the Service Area.
- D3. Debt shall only be issued for approved capital projects and insurance reserves. Specific debt issuances are not tied to specific projects. Any project included in the Budget or Twenty-Year Financial Plan may be funded from the General Operating Fund or with debt, as needed.
- D4. Sinking funds shall be established to ensure that cash is available to make timely debt service payments on fixed-rate debt issuances that have maturities of one year or less and have periodic semi-annual interest payments. DART shall deposit on a monthly basis a prorated amount sufficient to fund the next principal and interest payment.
- D5. Reserve fund(s) that may be required by the financial markets for each debt issuance shall be maintained. These reserves may be funded by cash and securities, insurance, or surety bonds, but shall not be accessed unless the sinking funds have insufficient money to make the principal and interest payments as due. For financial planning purposes, reserve projections shall be based on the actual requirement on existing debt, plus the lower of maximum annual debt service, 125% of average annual debt service, or 10% of principal outstanding on projected debt.
- D6. DART shall establish a legal security structure of liens, agreements, pledged revenues, and other covenants which will be sufficient to (1) secure a rating of "A" or better on sales tax securities; (2) a MIG1 or SP1 rating on short-term notes; or (3) secure A1 or P1 rating on other short-term debt, or if necessary, secure a credit enhancement from a financial institution with a rating of "AA" or better.
- D7. Certain debt service coverage ratios are required to access the financial markets. For financial planning purposes, annual sales tax revenues must exceed DART's current year debt service obligations by a factor of at least two (External Coverage Ratio). It is a goal of DART that for financial planning purposes, for long-term debt, sales tax revenues plus operating revenues, plus interest income, less operating expenses (excluding debt service and depreciation), for any twelve consecutive months of the prior eighteen months, must be sufficient to cover maximum annual debt service (ratio greater than 1.0). However, the DART Board may choose to grant exceptions to this standard in the interest of expediting the completion of the System Plan.



Exhibit V.9 shows the linkages between DART's Financial Standards and its financial information.

Exhibit V.9  
Relationship of Financial Standards to  
Sources and Uses of Cash

Description	Where Covered
<u>Sources of Cash</u>	
Sales Taxes	FS-B1
Operating Revenue	FS-B2
Federal Funding	FS-B10
Debt	FS-D1 to D7
<u>Uses of Cash</u>	
<u>Operating Budget</u>	
Fixed Route Service	FS-B3 & B4
Administrative Costs	FS-B6
Total Expenses	FS-B5
<u>Capital Budget</u>	
Gen. Mobility-Road Improvements	FS-B7
Start-up/Capital Planning Costs	FS-B8
Capital Projects	FS-B8, FS-B9
<u>Net Debt Service Budget</u>	FS-D1 to D7
Cash Reserves	FS-G5 & G7
Working Cash Requirement	FS-G6



## C. SALES TAX

Exhibits V.10 and V.11 provide sales tax information for DART and for the cities within DART's Service Area.

Exhibit V.10  
Sales Tax History, FY 2007 – FY 2016  
(in Millions)

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Oct	\$28.6	\$31.4	\$30.2	\$28.7	\$29.0	\$33.3	\$35.4	\$38.0	\$41.3	\$42.2	\$43.3
Nov	28.9	31.6	27.3	26.6	30.2	31.7	32.1	36.3	38.1	40.4	43.3
Dec	42.8	44.8	43.5	41.7	43.0	46.1	47.8	50.2	55.9	57.5	59.7
Jan	28.3	31.4	27.2	28.3	29.1	30.8	35.5	35.0	38.4	40.3	43.5
Feb	28.2	29.5	27.0	25.8	27.5	31.8	32.9	36.1	37.0	39.8	42.1
Mar	37.7	37.9	35.8	36.7	39.7	39.5	41.1	44.5	49.5	51.8	53.7
Apr	29.5	32.0	29.7	29.0	31.9	33.4	35.8	39.2	41.8	41.9	42.9
May	30.2	33.9	29.6	29.7	31.1	33.9	37.9	36.8	39.6	42.7	47.0
Jun	37.2	41.6	37.3	37.3	39.5	40.9	43.0	44.7	50.1	51.9	
Jul	30.7	33.3	28.8	27.8	33.3	37.2	36.5	39.7	39.3	42.3	
Aug	30.2	31.4	27.7	28.7	29.6	34.8	36.0	40.1	39.8	44.3	
Sep	36.8	37.4	33.4	35.3	38.4	39.1	41.7	45.2	47.9	50.0	
<b>FY Total</b>	<b>\$370.5</b>	<b>\$389.1</b>	<b>\$416.1</b>	<b>\$377.6</b>	<b>\$375.5</b>	<b>\$402.4</b>	<b>\$432.5</b>	<b>\$455.7</b>	<b>\$485.8</b>	<b>\$545.1</b>	<b>\$375.4</b>



Exhibit V.11  
Sales Tax Collections by City Since Inception (\$000s)

**DART SALES TAX COLLECTIONS BY CITY (January 1984 - May 2017)**

FISCAL YEAR	DART	ADDISON	BUCKINGHAM*	CARROLLTON	COCKRELL HILL	DALLAS	FARMERS BRANCH	GARLAND
Yrs. 1984 to 1999	\$3,429,800	\$89,685	\$1,407	\$152,503	\$941	\$1,986,023	\$128,229	\$172,391
2000	373,781	9,430	0	17,995	37	201,494	13,660	17,138
2001	357,883	9,060	0	17,584	45	193,830	11,793	16,763
2002	325,545	8,186	0	15,833	35	176,904	10,172	15,673
2003	311,818	8,074	0	16,139	45	165,809	9,046	15,150
2004	332,396	8,546	0	17,207	67	176,897	9,411	15,704
2005	341,757	8,733	0	17,528	65	177,708	9,686	16,148
2006	370,519	8,765	0	18,361	165	190,406	10,602	18,340
2007	389,129	9,407	0	19,617	95	198,850	11,996	19,328
2008	416,148	9,937	0	20,063	159	214,308	12,091	20,605
2009	377,597	8,828	0	19,264	246	191,124	11,550	18,645
2010	375,471	8,531	0	18,471	298	189,197	10,427	18,498
2011	402,404	9,140	0	20,480	253	202,934	11,544	18,812
2012	432,478	10,682	0	23,046	254	218,145	12,122	20,135
2013	455,700	12,020	0	24,677	258	230,959	12,944	21,113
2014	485,740	13,083	0	26,483	311	243,594	12,724	22,101
2015	518,624	12,671	0	30,091	314	260,892	13,809	23,846
2016	545,083	12,485	0	33,539	332	273,161	13,492	27,713
2017 YTD	375,427	8,900	0	23,305	234	188,148	9,238	18,196
<b>TOTAL</b>	<b>10,617,299</b>	<b>266,163</b>	<b>1,407</b>	<b>532,185</b>	<b>4,155</b>	<b>5,680,383</b>	<b>334,539</b>	<b>516,298</b>
<b>% of 2017</b>		<b>2.29%</b>	<b>0.00%</b>	<b>6.15%</b>	<b>0.06%</b>	<b>50.11%</b>	<b>2.48%</b>	<b>5.08%</b>
<b>% of Total</b>		<b>2.51%</b>	<b>0.01%</b>	<b>5.01%</b>	<b>0.04%</b>	<b>53.50%</b>	<b>3.15%</b>	<b>4.86%</b>
FISCAL YEAR	GLENN HEIGHTS	HIGHLAND PARK	IRVING	PLANO	RICHARDSON*	ROWLETT	UNIVERSITY PARK	COPPELL/ FLOWER MOUND
Yrs. 1984 to 1999	\$698	\$16,724	\$341,255	\$299,315	\$200,017	\$13,744	\$23,836	\$2,991
2000	102	1,488	41,643	43,639	23,175	1,789	2,191	0
2001	113	1,517	37,480	43,893	21,441	2,232	2,131	0
2002	112	1,459	34,078	41,556	17,186	2,406	1,947	0
2003	133	1,422	32,652	41,899	17,197	2,491	1,761	0
2004	158	1,557	34,630	45,208	18,402	2,825	1,782	0
2005	125	1,743	36,805	46,826	19,577	3,342	3,471	0
2006	175	1,857	39,697	53,949	18,831	6,560	2,810	0
2007	198	2,012	41,717	56,365	21,171	5,574	2,800	0
2008	221	2,250	47,195	59,440	21,480	5,498	2,902	0
2009	208	2,122	43,870	52,547	21,239	5,264	2,690	0
2010	237	2,240	41,005	54,756	23,174	5,780	2,858	0
2011	333	2,418	45,300	59,389	23,112	5,443	3,247	0
2012	353	2,769	45,852	67,616	23,722	4,662	3,118	0
2013	398	2,814	50,191	66,404	25,556	5,154	3,210	0
2014	436	3,272	54,525	71,695	28,481	5,395	3,639	0
2015	493	3,351	60,124	73,711	29,757	5,732	3,833	0
2016	506	3,466	62,225	76,055	31,767	6,471	3,871	0
2017 YTD	338	2,356	42,183	52,530	22,855	4,423	2,721	0
<b>TOTAL</b>	<b>5,337</b>	<b>56,837</b>	<b>1,132,426</b>	<b>1,306,793</b>	<b>608,140</b>	<b>94,784</b>	<b>74,818</b>	<b>2,991</b>
<b>% of 2017</b>	<b>0.09%</b>	<b>0.64%</b>	<b>11.42%</b>	<b>13.95%</b>	<b>5.83%</b>	<b>1.19%</b>	<b>0.71%</b>	<b>0.00%</b>
<b>% of Total</b>	<b>0.05%</b>	<b>0.54%</b>	<b>10.67%</b>	<b>12.31%</b>	<b>5.73%</b>	<b>0.89%</b>	<b>0.70%</b>	<b>0.03%</b>



Blank page

## **D. DEBT PROGRAM**

### **DART's Debt Program**

On January 23, 2001, the Board approved a Master Debt Resolution which authorized DART to pledge its sales tax revenues for Senior Lien Debt (Bonds) and Senior Subordinate Lien Debt (Commercial Paper).

*Bonds* – With the passage of a bond referendum on August 12, 2000, DART received voter authorization to issue up to \$2.9 billion of solely pledged Senior Lien sales tax-backed long-term debt (sales tax bonds). A change to DART's enabling legislation was enacted during the 2009 Texas legislative session allowing DART to pledge multiple revenue sources as a first lien on Senior Lien Long-Term Bonds (multi-revenue bonds). This change allows DART to issue more than \$2.9 billion in long-term debt, provided that DART issues bonds backed by multiple revenue sources.

The Office of the Attorney General of Texas disagreed with that interpretation and on July 23, 2012, DART filed a Bond Validation Petition in District Court 160 in Dallas County. DART sought a judicial ruling clarifying whether a \$2.9 billion limitation on “solely” pledged Sales Tax Revenue Bonds applies to “combined” Pledged Revenue Bonds. The hearing was conducted on August 13, 2012, and the Court concurred with DART's position. As a result, DART is no longer limited to \$2.9 billion in long-term debt so long as the debt is backed by a combined pledge of revenues (sales taxes plus another revenue source).

*Commercial Paper* – The Board has authorized the issuance of up to \$200 million in Commercial Paper notes, backed by self-liquidity, for capital acquisition purposes. DART maintains at least 2.0 times the debt service coverage amount for the notes and ensures that no more than \$35 million of the notes mature within five days. As of August 2017, DART had \$140 million in Commercial Paper debt outstanding.

### **Debt Program Structure**

DART's two-tiered debt structure program is designed to meet capital funding requirements and to provide flexibility to meet changing debt market conditions. The commercial paper program is issued to meet temporary capital funding requirements and to access variable interest rates when the financial markets dictate that strategy to be advantageous. Long-term bonds are used as the ultimate capital financing instrument for long-lived assets such as buildings and rail lines.

Exhibit V.12, on the following page, is DART's Annual Debt Service Schedule.



Exhibit V.12  
DART Annual Debt Service Schedule (\$000s)

Senior Lien Debt Service Schedule					
	Principal	Interest	BABS Reimbursement	Net Interest	Total Net Debt Service
FY18	\$ 55,935,636	\$ 164,268,699	\$ (28,360,386)	\$ 135,908,313	\$ 191,843,949
FY19	\$ 58,291,473	\$ 161,871,104	\$ (28,360,386)	\$ 133,510,718	\$ 191,802,191
FY20	\$ 59,974,081	\$ 159,274,053	\$ (28,360,386)	\$ 130,913,666	\$ 190,887,748
FY21	\$ 62,688,511	\$ 156,552,516	\$ (28,360,386)	\$ 128,192,130	\$ 190,880,641
FY22	\$ 65,449,816	\$ 153,793,258	\$ (28,360,386)	\$ 125,432,871	\$ 190,882,687
FY23	\$ 68,358,050	\$ 150,878,775	\$ (28,360,386)	\$ 122,518,388	\$ 190,876,438
FY24	\$ 72,683,270	\$ 147,499,949	\$ (28,116,700)	\$ 119,383,249	\$ 192,066,519
FY25	\$ 73,710,533	\$ 143,891,938	\$ (29,666,216)	\$ 114,225,722	\$ 187,936,254
FY26	\$ 76,734,899	\$ 140,312,954	\$ (29,109,750)	\$ 111,203,204	\$ 187,938,103
FY27	\$ 79,126,429	\$ 136,534,062	\$ (28,530,210)	\$ 108,003,852	\$ 187,130,281
FY28	\$ 82,450,186	\$ 132,611,470	\$ (27,926,666)	\$ 104,684,804	\$ 187,134,990
FY29	\$ 86,286,235	\$ 128,275,249	\$ (27,298,079)	\$ 100,977,169	\$ 187,263,404
FY30	\$ 90,399,642	\$ 123,499,639	\$ (26,643,411)	\$ 96,856,228	\$ 187,255,870
FY31	\$ 94,750,477	\$ 118,473,533	\$ (25,961,621)	\$ 92,511,911	\$ 187,262,388
FY32	\$ 99,303,809	\$ 113,209,333	\$ (25,251,563)	\$ 87,957,770	\$ 187,261,579
FY33	\$ 103,994,712	\$ 107,769,151	\$ (24,512,088)	\$ 83,257,063	\$ 187,251,775
FY34	\$ 108,498,260	\$ 102,129,313	\$ (23,741,938)	\$ 78,387,375	\$ 186,885,635
FY35	\$ 113,589,531	\$ 96,228,106	\$ (22,939,855)	\$ 73,288,251	\$ 186,877,781
FY36	\$ 118,753,602	\$ 90,239,389	\$ (22,121,945)	\$ 68,117,444	\$ 186,871,047
FY37	\$ 124,045,557	\$ 84,119,780	\$ (21,288,173)	\$ 62,831,607	\$ 186,877,164
FY38	\$ 124,245,479	\$ 77,848,562	\$ (19,985,127)	\$ 57,863,435	\$ 182,108,914
FY39	\$ 128,403,454	\$ 71,441,105	\$ (18,197,365)	\$ 53,243,740	\$ 181,647,194
FY40	\$ 135,404,571	\$ 64,627,927	\$ (16,345,026)	\$ 48,282,901	\$ 183,687,471
FY41	\$ 140,728,921	\$ 57,371,140	\$ (14,425,788)	\$ 42,945,352	\$ 183,674,274
FY42	\$ 146,266,600	\$ 49,831,759	\$ (12,437,276)	\$ 37,394,483	\$ 183,661,083
FY43	\$ 152,067,702	\$ 41,961,791	\$ (10,366,317)	\$ 31,595,474	\$ 183,663,176
FY44	\$ 149,822,329	\$ 33,956,357	\$ (8,209,613)	\$ 25,746,744	\$ 175,569,072
FY45	\$ 156,090,582	\$ 25,837,003	\$ (5,974,372)	\$ 19,862,631	\$ 175,953,213
FY46	\$ 104,697,567	\$ 19,123,810	\$ (4,261,324)	\$ 14,862,487	\$ 119,560,054
FY47	\$ 108,768,394	\$ 13,871,496	\$ (3,091,443)	\$ 10,780,053	\$ 119,548,447
FY48	\$ 113,008,172	\$ 8,413,812	\$ (1,882,892)	\$ 6,530,920	\$ 119,539,092
FY49	\$ 112,330,000	\$ 2,816,190	\$ (634,398)	\$ 2,181,792	\$ 114,511,792
FY50	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 3,266,858,481	\$ 3,078,533,222	\$ (649,081,475)	\$ 2,429,451,747	\$5,696,310,229

Exhibit V.13 is a history of DART's long-term bond issuance credit ratings:

Exhibit V.13  
Long-Term Bond Credit Ratings

	Standard & Poor's Rating Services	Moody's Investors Services	Fitch Ratings
Series 2001	AA	Aa3	AA
Series 2002	AA	Aa3	AA
Series 2007	AA+	Aa3	AA
Series 2009	AAA	Aa3	No rating sought
Series 2010	AA+	Aa2	No rating sought
Series 2012	AA+	Aa2	No rating sought
Series TIFIA	AA+	Aa2	No rating sought
Series 2014	AA+	Aa2	No rating sought
Series 2015	AA+	Aa2	No rating sought
Series 2016A	AA+	Aa2	No rating sought
Series 2016B	AA+	Aa2	No rating sought

Exhibit V.14 shows DART's weighted average interest rate on long-term debt as of September 30, 2017.

Exhibit V.14  
Weighted Average Interest Rate

Series	All-In Rate At Issue	Remaining Principal (000s)	Final Payment Date
<b>Bond Principal Outstanding &amp; Rates as of 9/30/17</b>			
2007	4.492%	\$118,395	12/1/2032
2008	4.973%	\$18,340	12/1/2018
2009A	3.957%	\$36,630	12/1/2018
2009B *	4.010%	\$829,615	12/1/2044
2010A	2.740%	\$59,125	12/1/2023
2010B *	3.260%	\$729,390	12/1/2048
2012	3.513%	\$118,900	12/1/2042
2014	3.307%	\$426,035	12/1/2043
TIFIA	2.910%	\$102,968	12/1/2047
2015	2.171%	\$116,030	12/1/2027
2016A	3.780%	\$482,530	12/1/2048
2016B	2.912%	\$228,900	12/1/2038

Combined Weighted Average      3.521%      \$3,266,858

\* Build America Bonds subject to federal subsidy changes.





Blank page

## E. FARES

### DART Fare Collection

DART entered into an interlocal agreement with the City of Dallas to manage and operate the public transportation services known as Dallas Transit System (DTS), empowering the DART Board to establish fares for any and all services provided. On September 18, 1983, the interim DART Board called for a public hearing to reduce the base fare to \$0.50. The Board approved this fare reduction December 6, 1983, making it effective January 1, 1984. In February 1988, DART formally acquired the Dallas Transit System and its operations from the City of Dallas. A history of DART's fare structure is shown in Exhibit V.15. DART's current fare structure is shown at Exhibit V.16.

Exhibit V.15  
DART Fare Structure History  
As of December 3, 2012

Approval Date	Effective Date	Base Rate	Board Resolution	Comments
December 6, 1983	January 1, 1984	\$0.50	830026	Multiple fare rates for different cities and routes
December 16, 1986	February 1, 1987	\$0.75	860106	Two-year phased-in fare increase
December 8, 1987	February 1, 1987	\$0.75	870100	Rescinded second year rate increase approved in Resolution No. 860106
June 10, 1997	August 1, 1997	\$1.00	970101	Consolidated all fares and increased some fare types including Paratransit
November 26, 2002	March 3, 2003	\$1.25	020192	
April 24, 2007	October 1, 2007	\$1.50	070064	Across-the-board fare increase with a two-year phased-in approach for Paratransit
May 12, 2009	September 14, 2009	\$1.75	090067	Fare increase for all base fares, excluding Paratransit
August 28, 2012	December 3, 2012	\$2.50	120105	Fare increase for all base fares, excluding Paratransit

## Ticket Vending Machines (TVMs)

DART began using TVMs when light rail became operational in 1996. These machines are installed at all light rail and commuter rail stations and can be installed at transit centers if there is a business necessity.



A contract was approved by the DART Board on July 10, 2007, to purchase TVMs from Genfare for the Phase II Light Rail Build-out. The Board approved the purchase of replacement TVMs for the Starter System on December 11, 2007. All TVMs have been installed, including 11 cashless TVMs which will only accept bank cards for payment. DART is utilizing cashless TVMs at high traffic stations which provide faster transaction times, reduces service calls, and lowers maintenance costs for those machines. The cashless machines have been installed at various rail stations and at two transit centers.

*Genfare TVM Capabilities* – The TVM issues magnetic encoded tickets that can be swiped on our current Genfare bus fareboxes to validate authenticity. Electronic validation is much more efficient for bus operators and customers. Customers have the ability to buy extended period passes, such as 7-Day and 31-Day passes, on these machines. The Genfare TVMs are also configured to process credit/debit card transactions. The magnetic encoding provides enhanced ridership data for customers who buy a ticket at a TVM and transfer to a bus allowing further analysis of ride patterns for system planning purposes. The TVMs provide configurable change-making options that will better support nickel/dime-based fare adjustments, if needed.

## Future of Comprehensive Payment System

DART engaged in a multi-year agreement with Vix Technology, a system integration firm in August 2015 to streamline DART's fare payment environment by utilizing new innovative technologies. The goal of this project is to find better methods that permit customers to obtain and purchase fare media that is convenient and easy to understand.

This new solution incorporates an account-based back office system which utilizes best practices of modern technologies in the consumer and fare payment sectors, capable of interfacing with both bank and non-bank financial clearing systems for transaction processing and settlement. One goal of this solution is to allow DART to significantly reduce the total amount of physical cash that the agency must process. DART has determined that this can be accomplished by creating an electronic payment infrastructure for transportation and other services that is ultimately capable of being deployed region-wide, using third-party produced and distributed prepaid cards and contactless devices such as smart cards, contactless bank cards, RFID tags, and Near Field Communication (NFC) enabled devices.

In addition to the system integrator selection, DART awarded a contract to PayNearMe (PNM) in April 2016 to provide the retail distribution solution. PNM will provide over 900 retail locations within the DART Service Area for customers to purchase and reload smart cards for use in the new account-based system. PNM partners include Blackhawk Network, which provides access to the largest grocery store network in the U.S. and Fidelity Express, which provides access to independent and small grocery operators.

Vix and PNM will implement the state-of-the-art electronic fare payment, distribution, collection and processing system by August 2018.

### **Mobile Ticketing (GoPass<sup>SM</sup>)**

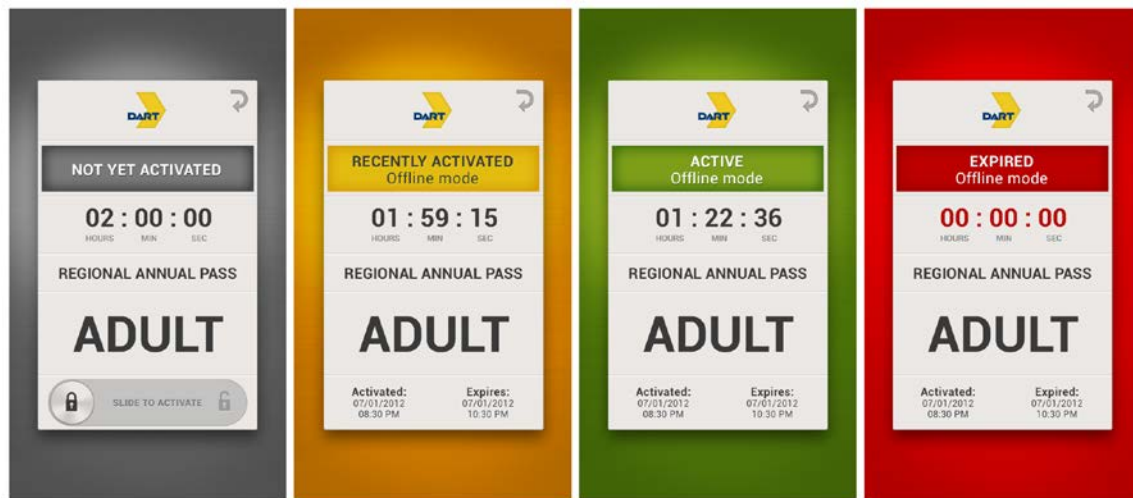


DART has successfully implemented a mobile ticketing product called GoPass that permits customers to purchase tickets and download them to their phones, obtain trip plans and status of buses and trains, and receive information about area events – even combine the purchase of a transit pass to the purchase of tickets for those events! The mobile application (GoPass) developed by Danish software vendor Unwire represents the first step towards a cashless fare solution for the Dallas/Fort Worth region. This mobile ticketing application allows riders to buy tickets in advance at their convenience using a web-enabled mobile phone, avoiding the need to deposit cash into a farebox or use a ticket vending machine to purchase tickets.

On June 17, 2013, DART, DCTA, and FWTa began a 31-day beta testing phase with almost 700 testers using Android and iPhones to purchase tickets. The result of the beta test illustrated testers highly favored GoPass due to its simplicity, purchasing ease, and its substantial customer benefits. The launch of the mobile application was September 16, 2013.

Passengers are able to purchase tickets for DART Rail and buses, Fort Worth Transportation Authority buses (FWTA), Denton County Transportation Authority buses and rail, and the Trinity Railway Express (TRE). GoPass also includes a trip planning feature which allows customers the ability to plan their trips in the palm of their hand while also taking advantage of special events and offers occurring near transit facilities. The application permits users to buy bundled tickets such as an admissions ticket to the State Fair of Texas with a transit pass to the venue. GoPass has since deployed annual and semester passes for corporate, college, and university clients.

In addition to product features, the mobile application provides invaluable means for checking and validating various fares. Each ticket on the mobile phone displays a color-coded image indicating the validity of the ticket allowing bus operators and fare enforcement personnel a more precise means for checking fares. A barcode also appears on the back side of the ticket for scanning. A validator will be installed on buses and at platforms in the near future to assist with authenticating tickets with ease.



In the interest of continuous improvement, DART elected to provide enhanced mobile ticketing capabilities (GoPass 2.0) as part of a larger platform being developed by Vix Technology in conjunction with the mobile ticketing provider. These new mobile ticketing system enhancements will include upgraded interfaces with Uber, Lyft, taxi providers, and other ride-sourcing services, and will further enhance the previous app offerings and improve the way in which customers pay their fares. GoPass 2.0 will introduce a quicker loading speed to the platform as well as deliver real-time trip planning, provide direct customer feedback in the app, set up autoloan for pass products, provide a system maps, and allow customers to purchase mobile tickets with cash via a retail solution (PayNearMe). The enhanced mobile ticketing platform will be implemented by the third quarter of FY 2018.

### Proposed FY 2018 Fare Structure Amendment

Staff has proposed an amendment to the current DART fare structure, consistent with Board-adopted Financial Standard B2 and Policy III.01. The proposed change is generally across-the-board, designed to meet the Financial Plan revenue projections. The proposal incorporates changes necessary to take advantage of new fare boxes, next generation version of GoPass, and new payment system – all scheduled to arrive in FY 2018.

Highlights of the changes relating to the new fare boxes include the following:

- The 2-hour and day passes will change to a.m. and p.m. passes. The new fare box ticket issuing mechanism will be more reliable but will not issue mag-stripe ticket. The a.m. and p.m. passes will be easier for operators to inspect. Also, this will provide more value (up to 12 hours vs. 2 hours).
- Midday pass availability will expand from Monday through Friday to full week to address the circumstance in which a rider boards shortly before noon and plans to board again soon but after noon.

The new payment system will have two new features: Stored value and fare capping. The proposed amendment will establish these features in Section 3.

- *Section 3: Stored Value and Fare Capping.*

Stored value is a payment system feature that allows DART riders to load value into an account to use to purchase DART passes or pay for travel.

- *Loading Value* - Customers can load value at retail locations throughout the service area, on-line, at the DART store, or by calling DART customer service.
- *Fare Capping* - Fare capping is a pay-as-you-go feature that allows DART riders to make several trips with their GoPass or DART card, and the DART payment system will automatically cap the daily and monthly (calendar month) fare so the rider will not spend more than needed on travel. Riders pay for each part of their journey until the cap amounts are reached, then pay no more for the rest of the day or month. To benefit from fare capping, riders must tap their DART card at the validator – or activate their GoPass ticket – on every trip.

The proposed amendment will also provide clarifications to the fare structure to add programs now in pilot, and reference other Board policies.

- Reduced Fare availability will expand to include service area residents participating in a transitional program administered by an approved social agency, with a valid DART-issued ID.
- Transportation Network Companies  
DART continues to explore mobility-on-demand options using transportation network companies that can connect riders to the DART system, as well as provide public transportation within areas difficult to serve efficiently with traditional transit service, using bicycles, cars, vans and other vehicles. These companies are responsible for some or all of the components – customer access, dispatch, transportation, fare collection, and related information – of delivering customers from origin to destination. The journey may represent premium service with greater customer convenience, improved travel times, and closer origin and destination endpoints. Fare structure may appropriately reflect this premium.  
Recognizing the experimental nature of exploring mobility-on-demand options, this portion of the DART Fare Structure authorizes DART management to establish fare structures for these services that are designed to encourage ridership, reflect customer convenience levels and perceived economic value, allow efficient implementation and administration, and contribute to financial sustainability.
- DART Board Policy III.07  
DART Service Outside Service Area Boundary authorizes and provides guidance regarding the provision of DART service outside its service area boundary. Policy III.07 requires a service agreement approved by the DART Board of Directors. This agreement will establish fares for riders using the service.

- **Site Specific Shuttle Service**  
DART Board Policy III.16 Site Specific Shuttle Service Policy authorizes and provides guidance regarding the provision of DART circulator/distributor shuttle service which connects to rail stations or transit centers operated by employers or other private entities. Policy III.16 requires proposals for service be approved by the DART Board of Directors. The approved agreement will establish fares for riders using the service.

### **December 3, 2012 Fare Structure Change**

The DART Board approved a change to the fare structure effective December 3, 2012, coincidental with the opening of the second segment of the Orange Line to Belt Line Station in Irving and the extension of the Blue Line to downtown Rowlett. The goal of the fare change was to simplify the fare structure and improve system-wide fare consistency, by reducing the number of fare types and ensuring multi-pass pricing is equivalent throughout the fare structure. Additionally, these changes were designed to minimize the impact on transit-dependent riders and balance peak loads by encouraging additional off-peak ridership, by offering economical fares to transit-dependent customers and passengers who have time-flexibility.

Exhibit V.16. on the following pages, shows the current fare structure.





**Exhibit V.16**  
**DART Fare Structure**  
**Effective – December 3, 2012**

**BASE TWO-HOUR FARE**

Local (1)	\$2.50
Regional (2)	\$5.00
Reduced Fare*	\$1.25
Child**	\$1.25
High School***	\$1.25
College/Trade School (non-participating)****	\$1.25
Paratransit - Demand Response Van/Sedan Service	\$3.00
Paratransit trips to fixed-route stops	\$0.75
Paratransit - eligible riders on fixed-route services	FREE

**MID-DAY FARE**

Mid-Day (Pass that allows unlimited travel between 9:30 a.m. and 2:30 p.m. Monday through Friday) (3):	
Local	\$1.75
Regional	\$3.50

**PREPAID MULTI-RIDE FARES**

Annual Pass:	
Local	\$800.00
Regional	\$1,600.00
Senior	\$480.00
Monthly Pass:	
Local	\$80.00
Regional	\$160.00
Reduced*	\$40.00
High School***	\$40.00
College/Trade School (non-participating)****	\$40.00
Weekly Pass:	
Local	\$25.00
Regional	\$50.00
Day Pass:	
Local	\$5.00
Regional	\$10.00
Reduced*	\$2.50
Child**	\$2.50
High School***	\$2.50
College/Trade School (non-participating)****	\$2.50
Regional Day Pass Book of Ten*****	\$30.00
10-Ticket Paratransit Coupon Book	\$30.00
Lone Star Card	*****

\* Reduced Fares are applicable on bus and rail for the following:

- (a) Seniors and Non-Paratransit Disabled with valid ID
- (b) DART Shuttle Bus Routes

\*\* Child Fares are applicable on bus and rail for children, elementary through middle school; Children under 5 (see Free Fares)

\*\*\* High School Fares are applicable on bus and rail and valid Monday through Friday only.

\*\*\*\* College/Trade School Fares are applicable on bus and rail with a DART Student ID for full-time undergraduate students in the service area whose schools are not participating in the Higher Education Program.

\*\*\*\*\* Regional Day Pass Book of Ten is available only to government and non-profit institutions to be issued to DART Service Area clients.

\*\*\*\*\* Lone Star cardholders with TANF benefits are eligible to purchase Monthly Passes at a 50% discount from listed fares. This discount does not apply to Reduced or High School Monthly Pass purchases.

**FOOTNOTES:****Fare, Pass, and Ticket Descriptions**

- Local: All DART buses and trains; Trinity Railway Express service between Union Station and CentrePort Station; DART On-Call; and Flex service.
- Regional: All DART buses and trains; all Trinity Railway Express service; The T in Fort Worth; the A Train and DCTA in Denton.
- Mid-Day Pass: Pass that allows unlimited travel between 9:30 a.m. and 2:30 p.m. Monday through Friday.



Exhibit V.16 (cont'd)  
DART Fare Structure  
Effective – December 3, 2012

**FREE FARES**

The following categories of riders may ride bus, light rail, or commuter rail without fare payment. (This section is not applicable to charters nor to Paratransit service, except as noted.)

- (a) Paratransit-eligible riders on fixed-route services with a valid Paratransit identification card.
- (b) ADA Paratransit-eligible individuals who are authorized to have one personal care attendant (PCA) may have the PCA travel with them on fixed-route service, at no charge, provided a proper ID, indicating that an attendant is required, is displayed.
- (c) Children under the age of five (maximum of two per trip) when accompanied by an adult (age 18 or older) paying the appropriate Local, Regional, or Reduced fare. Any additional child under the age of five traveling with that adult, or any child accompanied only by person(s) younger than age 18, shall be charged the reduced fare.
- (d) Voters showing a valid voter registration card during the hours of 6:00 a.m. to 8:00 p.m. on a state or national primary or general election day in accordance with Board Resolution No. 900232.
- (e) Uniformed police officers and plain-clothes police officers displaying badges issued by DART member cities.
- (f) Uniformed parking enforcement officers.
- (g) Downtown Safety Patrol personnel when in uniform and when traveling within the CBD.
- (h) Active and retired DART employees and (1) the employee's spouse, or (2) one permanent member of the employee's household, who displays a valid DART photo ID card. (Also honored on Paratransit service with appropriate Paratransit certification and identification.)
- (i) Part-time DART employees with DART photo ID card. (Also honored on all flyer services and on Paratransit service with appropriate Paratransit certification and identification and identification.)
- (j) Current and former DART Board members and their spouses with valid DART photo ID card. (Also honored on Paratransit service with appropriate Paratransit certification and identification.)
- (k) Employees of contractors who operate fixed-route or demand responsive service in DART's behalf and certain engineering consultants, including the GEC, System Design, and Design Contract Integration consultants domiciled in the DART headquarters, who have been provided with valid DART photo ID cards. (Also honored on Paratransit service with appropriate Paratransit certification and identification.)
- (l) McKinney Avenue Trolley employees or operators with valid Trolley ID card.



**Exhibit V.16 (cont'd)**  
**DART Fare Structure**  
**Effective – December 3, 2012**

**SPECIAL PROGRAMS****I. Customer Promotions:**

The President/Executive Director, Deputy Executive Director, and any Executive Vice President, or their designee may approve the free distribution of prepaid media, VIP passes, or special coupons as needed for the following purposes:

- (a) to support marketing programs, including but not limited to special route promotions, introductory shuttles, air quality improvement programs, and focus group or survey participation.
- (b) to provide inbound travel to jury duty on all DART service, including bus, rail, and Paratransit, to all individuals showing a jury summons with the current date displayed. A pass valid for outbound travel on all DART service, including bus, rail, and Paratransit, will be distributed by Court Services upon request to those individuals reporting for jury duty.
- (c) to compensate customers for inconvenience or system problems.
- (d) to allow courtesy access to the system for special tour groups, non-local DART visitors, or consultants involved in DART system planning. As a tax-supported governmental agency, DART does not contribute free transportation or offer special discounts on fare media to other governmental agencies, social service agencies, or charitable organizations.

**II. Convention and Special Event Passes:**

Day Passes for the dates specified on the ticket for convention registrants and special event participants will be priced at the appropriate (Local or Regional) Day Pass rate. A sliding scale with discounts ranging from 10% to 30% of the convention and special event base rate will be available on advanced bulk purchase of 2,000 or more passes.

<b>Passes Purchased</b>	<b>Discount</b>
2,000 - 4,999	10%
5,000 - 9,999	20%
10,000 - 14,999	25%
15,000 and above	30%

**III. Corporate and Residential Programs:**

- (a) Annual passes, known as Corporate annual passes, may be purchased by businesses, apartments/condominium complexes, or other employer organizations. Minimum purchase requirements is 5 passes. Pricing will be as follows:

<b>Local Annual Pass</b>	<b>Regional Annual Pass</b>
\$600	\$1,200

- (b) Emergency Ride Home (ERH) program, administered by DART, will be made available to employees registered in the Corporate Annual Pass Program.



**Exhibit V.16 (cont'd)**  
**DART Fare Structure**  
**Effective – December 3, 2012**

**IV. Higher Education Programs (Passes Must Be Purchased by the School)**

Semester and quarterly passes may be purchased for full-time students by colleges, universities, trade schools, technical schools, middle schools, or high schools. High school passes are only valid Monday through Friday. Pricing will be as follows:

Middle and High School						
	2013		2014		2015 and following	
	Quarter	Semester	Quarter	Semester	Quarter	Semester
Purchase for 100% full-time students	\$30	\$40	\$40	\$50	\$50	\$65
Purchase only for students who wish to use	\$120	\$160	\$120	\$160	\$120	\$160

**V. Route Promotion Pass**

The Route Promotion Pass is produced through Consumer Programs to support DART's public awareness and outreach efforts. Marketing will negotiate with Special Events organizers to determine where DART could benefit from the exposure the event media and attendance could provide; and the event organizers are interested in including DART Day Passes for their attendees. The parameters of the negotiation are as follows:

- (a) The event is within a city in the DART Service Area.
- (b) DART must receive a minimum of a 2 to 1 ratio based on the value of the passes DART is willing to provide to the event. This can be through barter, cash, or any combination of the two.
- (c) The media provided by the event must promote using DART.
- (d) A simple agreement is signed by both DART and the event organizer/chair.
- (e) The President/Executive Director or his designee may sign the agreement. Concurrence from the Treasurer or Chief Financial Officer must be received before presenting the agreement for signature.
- (f) The Marketing Department will provide documentation to the Finance Department, within 90 days after conclusion of the special event that supports the value of the barter used to pay for the passes.

**VI. Fees for the Paid Parking Demonstration ended on April 2, 2014, and these fees are no longer applicable.**

**VII. System Fare - No discounts available on this Route**

Time	System/Regional			
	2-Hour	Day Pass	Monthly	Upgrade
Weekday All Day	\$3.50/\$5.00	\$7.00/\$10.00	\$100/\$160	\$1.00
Weekend All Day				

## Fares by Type

Exhibit V.17, shown on the next page, identifies the fares by types that DART customers can purchase based on the approved fare structure. This also provides the estimated sales and revenue by fare type.



### Exhibit V.17 Revenue by Fare Type Analysis

Type of Fare	FY 2015 ACTUAL		FY 2016 ACTUAL		FY 2017 Projected	
	Actual Units	Actual Revenue	Actual Units	Actual Revenue	Actual Units	Actual Revenue
<b>Single Fare</b>						
Local	-	\$ -	-	\$ -	-	\$ -
System	-	-	-	-	-	-
Regional	-	-	-	-	-	-
Reduced	-	-	-	-	-	-
Paratransit (book of ten)	35,712	1,071,360	33,160	994,800	30,428	912,841
<b>Total Single Fare</b>	<b>35,712</b>	<b>\$ 1,071,360</b>	<b>33,160</b>	<b>\$ 994,800</b>	<b>30,428</b>	<b>\$ 912,841</b>
<b>2-Hour</b>						
Local	3,932,378	\$ 9,830,945	3,857,400	\$ 9,643,500	3,726,367	\$ 9,315,918
Regional	39,523	197,615	41,236	206,180	40,430	202,152
Reduced	638,686	798,358	694,552	868,190	726,202	907,752
Mesquite	1,344	4,704	765	2,678	150	524
High School	272,049	340,061	274,274	342,842	277,443	346,803
College/Trade	105,997	132,496	113,507	141,884	107,030	133,787
<b>Total 2-Hour</b>	<b>4,989,977</b>	<b>\$ 11,304,180</b>	<b>4,981,734</b>	<b>\$ 11,205,274</b>	<b>4,877,621</b>	<b>\$ 10,906,936</b>
<b>Midday</b>						
Local	862,303	\$ 1,509,030	895,632	\$ 1,567,356	877,616	\$ 1,535,828
Regional	3,646	12,761	3,652	12,782	3,558	12,453
<b>Total Midday</b>	<b>865,949</b>	<b>\$ 1,521,791</b>	<b>899,284</b>	<b>\$ 1,580,138</b>	<b>881,174</b>	<b>\$ 1,548,281</b>
<b>Day Passes</b>						
Local	3,571,794	\$ 17,858,969	3,262,622	\$ 16,313,108	3,029,221	\$ 15,146,107
System	-	-	-	-	-	-
Regional	42,802	428,020	39,271	392,710	38,899	388,993
Reduced	1,042,537	2,606,342	1,015,982	2,539,954	967,856	2,419,640
High School	182,894	457,235	151,887	379,718	134,716	336,789
College/Trade	153,079	382,698	159,396	398,490	142,379	355,948
Mesquite	2,253	15,771	1,391	9,737	297	2,078
Vouchers (book of ten)	66,123	1,983,660	65,999	1,979,970	64,163	1,924,898
<b>Total Day Passes</b>	<b>5,061,482</b>	<b>\$ 23,732,695</b>	<b>4,696,547</b>	<b>\$ 22,013,686</b>	<b>4,377,531</b>	<b>\$ 20,574,452</b>
<b>7-Day Passes</b>						
Local	99,592	\$ 2,489,800	94,534	\$ 2,363,350	83,353	\$ 2,083,823
System	-	-	-	-	-	-
Regional	608	30,400	727	36,350	683	34,172
<b>Total 7-Day Passes</b>	<b>100,200</b>	<b>\$ 2,520,200</b>	<b>95,261</b>	<b>\$ 2,399,700</b>	<b>84,036</b>	<b>\$ 2,117,996</b>
<b>Monthly Passes</b>						
Local	118,784	\$ 9,502,720	115,972	\$ 9,277,760	107,503	\$ 8,600,204
System	-	3,100.00	-	-	-	-
Regional	2,720	435,200	2,179	348,640	2,401	384,111
Reduced	34,803	1,392,120	32,394	1,295,760	30,316	1,212,647
Mesquite	86	8,600	135	13,500	61	6,107
Lone Star - Local	44	1,760	42	1,680	23	912
Lone Star - Regional	16	640	13	520	3	125
High School	28,776	1,151,040	26,016	1,040,640	26,668	1,066,703
College/Trade	3,761	150,440	2,845	113,800	2,552	102,092
<b>Total Monthly Passes</b>	<b>188,990</b>	<b>\$ 12,645,620</b>	<b>179,596</b>	<b>\$ 12,092,300</b>	<b>169,526</b>	<b>\$ 11,372,902</b>
<b>Annual Passes</b>						
Local	198	\$ 133,101	168	\$ 52,971	161	\$ 61,301
System	-	-	-	-	-	-
Regional	11	16,000	8	1,280	7	3,002
Senior	95	41,320	102	16,360	101	16,840
Corporate Programs	17,540	10,899,700	16,294	10,292,040	16,925	9,104,874
<b>Total Annual Passes</b>	<b>17,844</b>	<b>\$ 11,090,121</b>	<b>16,572</b>	<b>\$ 10,362,651</b>	<b>17,194</b>	<b>\$ 9,186,017</b>
<b>Other Programs</b>						
Secondary/College Decals	29,415	\$ 1,388,223	34,242	\$ 1,342,187	41,842	\$ 1,443,259
Special Events	20,722	118,930	42,950	67,006	27,406	137,030
<b>Total Other Programs</b>	<b>50,137</b>	<b>\$ 1,507,153</b>	<b>77,192</b>	<b>\$ 1,409,193</b>	<b>69,248</b>	<b>\$ 1,580,289</b>
<b>Total Pass Sales</b>	<b>11,310,291</b>	<b>65,393,119</b>	<b>10,979,346</b>	<b>62,057,742</b>	<b>10,506,759</b>	<b>58,199,713</b>
<b>Without Paratransit Coupons</b>	<b>11,274,579</b>	<b>\$ 64,321,759</b>	<b>10,946,186</b>	<b>\$ 61,062,942</b>	<b>10,476,331</b>	<b>\$ 57,286,873</b>



Blank page

## F. OPERATIONAL INFORMATION

Historical data: The data that follows reflects the construction mode that DART has been in since the early 1990s. Exhibit V.18 denotes key dates regarding the construction of the DART light rail system. On August 13, 1983, DART was created when 58 percent of voters in 14 cities and Dallas County cast more than 101,000 ballots in favor of regional transportation. DART assumed operations of Dallas Transit System and cut the base bus fare from 70 to 50 cents, and senior fares from 25 to 15 cents. In January 1984, the voter-approved one-cent sales tax took effect, and DART officially began operations. On June 14, 1996, the first 11.2 miles of DART's 20-mile light rail transit starter system opened on time and within budget, with weekend festivities followed by a week of free rides. Revenue service began on June 24. With the opening of Blue Line south extension to the UNT-Dallas campus on October 24, 2016, DART now has 93 miles of light rail in service. This is currently the longest light rail system in North America. A map of DART Current and Future Rail Services is located at Exhibit V.2.

Exhibit V.18 shows the revenue service dates for all of DART's LRT line segments.

Exhibit V.18  
LRT Revenue Service Dates

Corridor	Line	From	To	Miles	Stations	Opening Date
<b>STARTER SYSTEM</b>						
Central Business District	All	West End	Pearl	1.0	4	June 1996
Oak Cliff	Red/Blue	West End	8th & Corinth	3.8	4	June 1996
South Oak Cliff	Blue	8th & Corinth	Ledbetter	4.6	5	June 1996/May 1997
West Oak Cliff	Red	8th & Corinth	Westmoreland	4.6	4	June 1996
North Central	Red	Pearl	Park Lane	6.0	4	Jan 1997
<b>Starter System Subtotal</b>				<b>20.0</b>	<b>21</b>	
<b>RED/BLUE LINE EXTENSIONS</b>						
North Central	Red	Park Lane	Parker Road	12.3	9	July-Dec 2002
Northeast	Blue	Mockingbird	Downtown Garland	11.2	5	Sept 2001-Nov 2002
Northeast	Blue	Downtown Garland	Downtown Rowlett	4.6	1	Dec 2012
South Oak Cliff	Blue	Ledbetter	UNT-Dallas	2.6	2	Oct 2016
<b>Extension Subtotal</b>				<b>30.7</b>	<b>17</b>	
<b>GREEN LINE</b>						
Northwest (NW-1A)	Green	West End	Victory	1.2	1	Nov 2004
Northwest (NW-1B)	Green	Victory	Inwood	2.8	3	Dec 2010
Northwest (NW-2)	Green	Inwood	Bachman	3.2	2	Dec 2010
Northwest (NW-3)	Green	Bachman	Farmers Branch	4.9	3	Dec 2010
Northwest (NW-4)	Green	Farmers Branch	Frankford	5.3	3	Dec 2010
<b>Northwest Subtotal</b>				<b>17.4</b>	<b>12</b>	
Southeast (SE-1A)	Green	Pearl	MLK, Jr.	2.7	4	Sept 2009
Southeast (SE-1B)	Green	MLK, Jr.	Hatcher	1.4	1	Dec 2010
Southeast (SE-2)	Green	Hatcher	Buckner	6.0	3	Dec 2010
<b>Southeast Subtotal</b>				<b>10.1</b>	<b>8</b>	
<b>ORANGE LINE</b>						
Northwest-Irving/DFW (I-1)	Orange	Bachman	Irving Convention Center	5.4	3	July 2012
Northwest-Irving/DFW (I-2)	Orange	Center	Belt Line	3.6	2	Dec 2012
Northwest-Irving/DFW (I-3)	Orange	Belt Line	DFW Airport	5.0	1	Aug 2014
<b>Orange Line Subtotal</b>				<b>14.0</b>	<b>6</b>	
<b>Total Miles/Stations in Operation*</b>				<b>93.0</b>	<b>64</b>	

\*Total miles by includes approximately 0.75 miles of pocket track.



## **Ridership Trends**

Fixed Route Ridership has been mixed over the last several years, with Bus and Commuter Rail ridership down but Light Rail ridership increasing. Bus ridership has contracted by about 25% from its high of 45 million passengers in 2008. The most significant factor in the decrease is that DART has nearly doubled its light rail system. While bus ridership was declining by 11.4 million passengers, light rail was increasing by 10.2 million riders. Commuter Rail also decreased by 20% during this time frame. Another prime driver of ridership is fuel prices, and while the economy has come back from the recession in 2008, fuel prices have remained low.

A contributing factor in ridership reduction has been the changing distribution of employment in the region. Significant growth in employment has occurred in the suburban communities that are just beyond the boundaries of the DART Service Area. Decentralization of jobs in the Service Area in developments such as the Inland Port, the Legacy area of Plano and the CityLine development in Richardson has contributed to less attractive commute times.

Bus ridership is expected to remain relatively flat in 2018 with gains from the initial route improvements stemming from the recent Comprehensive Operations Analysis (COA) being offset by decreases resulting from the fare increases planned for FY 2018. Ridership should continue to increase slowly over the next several years. During FY 2019, DART will be implementing additional COA-developed route and service enhancements as newly purchased buses are delivered and peak-period improvements can be implemented.

Specific efforts are underway to address the on-time performance of the bus system. These efforts are directed toward improving schedules to more accurately reflect on-street operating conditions; to managing the bus system's performance using the Automatic Vehicle Location (AVL) system to better manage operations and the initiation of a pilot project to provide traffic signal priority to buses in the congested Belt Line road corridor. This latter project will be complimented by an improvement in the service frequency of the primary bus route in the corridor.

Meanwhile, DART is in the process of completing the installation of automated passenger counters (APCs) on its bus fleet. Staff examined variations between farebox-based counts and APC-based counts – especially where there are high boarding volumes that do not involve physical farebox transactions – and verified that APC-based counts are more appropriate for measurement of bus ridership over the long term. A similar exercise was conducted for light rail, as noted below.

## **LRT Ridership**

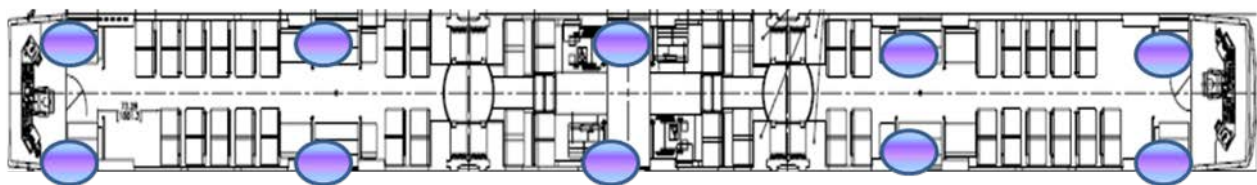
Ridership counting on light rail was conducted manually from the opening of the light rail system in 1996 through 2011 and was based on a sampling approach. As shown in Exhibit V.19, one person counted passengers boarding and alighting through five separate entry/exit points. At low volume times of day and low volume stations, this could be done with reasonable accuracy. Accuracy of the counts suffered during high volume times of the day and at high-volume stations. DART began testing the use of automated passenger counters (APCs) in October 2011. As shown in Exhibit V.20, the APCs are able to extract data from all five entry/exit points on each side of

each car. The new equipment has been shown to be significantly more accurate than the manual counting method. The result is that ridership counts based on APC data are more than 15% higher than had been previously reported. The APCs also allow DART to count nine times as many cars as could be counted within the available budget using human counters. DART received approval from the FTA to use the APC ridership data as our official data beginning in FY 2012.

Exhibit V.19  
LRT Manual Counting



Exhibit V.20  
APCs



In addition to the bus service improvements noted above and greater service levels on TRE commuter rail ridership should increase as many bus and commuter rail passengers transfer to or from DART light rail to complete their trips.

### Commuter Rail (TRE) Ridership

FY 2016 ridership was nominally the same as in FY 2015. FY 2017 trended above FY 2016 primarily because of the opening of the SOC-3 line segment that included the Camp Wisdom and UNT Dallas stations. These two new stations have generated new riders while resulting in a shift of some riders from the Ledbetter station. Lower ridership to the State Fair of Texas in October and the cancellation of some anticipated special events in December limited ridership growth.

Ridership for FY 2018 should increase at a similar pace as the extension of the Blue line south to the University of North Texas – Dallas campus sees its ridership patterns mature. Continued development around several stations is anticipated to further increase ridership. Service level improvements to TRE commuter rail schedules produced some ridership increases in FY 2017 and should continue to produce increased ridership as commuters and visitors take advantage of improved frequencies.

# Exhibit V.21 Number of Employees by Function

## DALLAS AREA RAPID TRANSIT NUMBER OF EMPLOYEES BY FUNCTION LAST TEN FISCAL YEARS

FUNCTION	Fiscal Year									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Transport Operations										
Bus Operations	1,516	1,534	1,539	1,537	1,451	1,487	1,522	1,470	1,511	1,556
Commuter Rail Operations	14	15	16	14	13	14	14	11	14	14
HOV Lane Operations	58	71	69	67	63	63	55	3	-	-
Light Rail Operations	176	192	225	272	266	313	292	298	285	308
Paratransit Operations	68	67	71	67	64	63	59	55	59	60
Vanpool Operations	2	2	2	2	2	2	2	2	2	2
	1,834	1,881	1,922	1,959	1,839	1,942	1,944	1,839	1,871	1,940
Maintenance										
Vehicle Maintenance	599	609	626	695	657	630	738	733	710	722
Non-vehicle Maintenance	187	197	214	282	303	342	270	302	297	286
	786	806	840	977	960	972	1,008	1,035	1,007	1,008
Public Safety and Fare Enforcement	171	189	221	309	309	319	340	352	336	326
Operations Total	2,791	2,876	2,983	3,245	3,128	3,233	3,292	3,226	3,214	3,274
Administrative	419	433	447	435	398	359	369	353	352	374
Total	3,210	3,309	3,430	3,680	3,526	3,592	3,661	3,579	3,566	3,648

Note – Number of employees presented here is actual head count of full-time, temporary and part-time employees at the end of each fiscal year.

Source: DART's personnel data



**Exhibit V.22**  
**Level of Service – Average Weekday**

**DALLAS AREA RAPID TRANSIT**  
**LEVEL OF SERVICE - ANNUAL**  
**LAST TEN FISCAL YEARS**

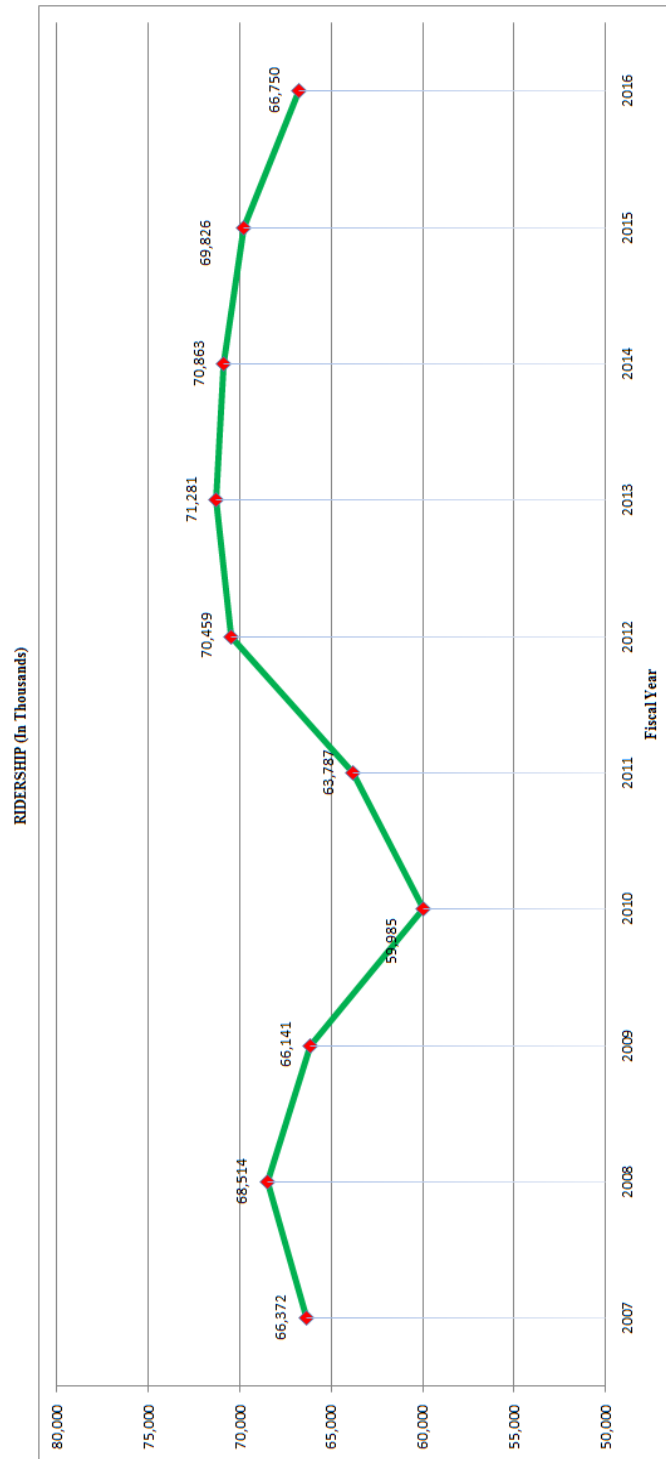
	Fiscal Year									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>PASSENGERS (RIDERSHIP)</b>										
Bus	44,689,900	44,752,343	42,517,272	37,693,438	36,971,366	38,378,872	37,937,209	37,383,043	36,366,269	33,521,239
Light Rail	17,892,532	19,437,603	18,965,249	17,799,186	22,302,390	27,653,893	29,471,890	29,458,289	29,841,000	29,762,161
Commuter Rail*	2,475,495	2,717,162	2,738,856	2,432,174	2,388,407	2,252,140	2,092,782	2,283,895	2,173,653	2,054,001
Demand Response	822,262	910,157	1,038,686	1,135,997	1,140,165	1,141,015	832,271	468,964	396,672	334,880
Demand Response-Taxi	-	-	-	-	-	-	-	376,174	471,177	562,000
Vanpool	492,202	697,050	880,678	924,600	985,046	1,033,042	946,976	892,966	576,804	515,880
	66,372,391	68,514,315	66,140,741	59,985,395	63,787,374	70,438,962	71,281,128	70,863,331	69,825,575	66,750,161
<b>REVENUE MILES</b>										
Bus	27,666,962	27,781,344	27,547,241	27,323,659	25,727,585	27,144,101	27,250,680	26,785,827	27,343,486	27,501,704
Light Rail	5,224,548	5,250,953	5,007,225	4,941,155	6,897,909	7,560,914	9,123,662	9,262,430	9,721,956	9,829,532
Commuter Rail*	1,137,231	1,565,010	1,292,607	1,239,709	1,142,577	1,109,867	1,144,466	1,152,029	1,153,406	1,164,706
Demand Response	7,406,058	8,109,876	7,818,699	8,458,570	8,638,492	8,813,149	4,198,696	2,939,099	2,373,541	1,986,108
Demand Response-Taxi	-	-	-	-	-	-	3,357,344	4,144,030	4,975,169	5,614,299
Vanpool	1,952,128	2,750,115	3,294,533	3,505,934	3,816,639	3,919,736	3,632,332	3,426,983	2,695,134	3,061,242
	43,386,927	45,457,298	44,960,305	45,469,027	46,223,202	48,547,767	48,707,180	47,710,399	48,262,692	49,157,591
<b>REVENUE HOURS</b>										
Bus	1,990,866	2,028,437	2,021,031	2,009,486	1,953,954	2,010,240	2,100,705	2,077,637	2,148,462	2,159,309
Light Rail	243,357	244,033	235,160	248,127	348,543	381,882	451,717	453,951	468,421	473,059
Commuter Rail*	47,813	54,743	56,156	49,836	47,440	49,789	49,496	49,789	49,720	49,534
Demand Response	450,966	441,543	455,030	513,131	521,623	529,754	501,626	223,948	185,498	157,192
Demand Response-Taxi	-	-	-	-	-	-	-	241,078	276,047	328,641
Vanpool	47,613	67,076	80,354	87,648	95,416	97,993	90,808	85,675	69,437	80,758
	2,780,615	2,835,832	2,847,731	2,908,228	2,966,976	3,068,116	3,194,352	3,132,078	3,197,585	3,248,513
<b>PASSENGERS PER REVENUE MILE</b>										
Bus	1.62	1.61	1.54	1.38	1.44	1.41	1.39	1.39	1.33	1.22
Light Rail	3.42	3.70	3.79	3.60	3.23	3.66	3.23	3.23	3.07	3.03
Commuter Rail*	2.18	1.74	2.12	1.96	2.09	2.03	1.83	1.83	1.88	1.76
Demand Response	0.11	0.11	0.13	0.13	0.13	0.13	0.11	0.11	0.17	0.17
Demand Response-Taxi	-	-	-	-	-	-	-	-	0.09	0.10
Vanpool	0.25	0.25	0.27	0.26	0.26	0.26	0.26	0.26	0.21	0.17
	1.53	1.51	1.47	1.32	1.38	1.45	1.46	1.49	1.45	1.36
<b>PASSENGERS PER REVENUE HOUR</b>										
Bus	22.45	22.06	21.04	18.76	18.92	19.09	18.06	17.99	16.93	15.52
Light Rail	73.52	79.65	80.65	71.73	63.99	72.41	65.24	64.89	63.71	62.91
Commuter Rail*	51.77	49.63	48.77	48.80	50.35	46.68	42.28	45.87	43.72	41.45
Demand Response	1.82	2.06	2.28	2.21	2.19	2.15	1.66	2.09	2.14	2.13
Demand Response-Taxi	-	-	-	-	-	-	-	1.56	1.71	1.71
Vanpool	10.34	10.39	10.96	10.55	10.32	10.54	10.43	10.42	8.31	6.39
	23.87	24.16	23.23	20.63	21.50	22.96	22.31	22.63	21.84	20.55

\* Commuter Rail service information shown here includes information reported to the National Transit Database by both DART and The Fort Worth Transportation Authority (The T).  
 \*\*Operating expense does not include depreciation and amortization, interest expense and non-operating expenses.

Source: National Transit Database  
 Bus ridership for fiscal year 2007 is based on internal ridership records

Exhibit V.23  
Ridership

DALLAS AREA RAPID TRANSIT  
RIDERSHIP  
LAST TEN FISCAL YEARS



## Exhibit V.24 Revenue Miles

DALLAS AREA RAPID TRANSIT  
REVENUE MILES  
LAST TEN FISCAL YEARS

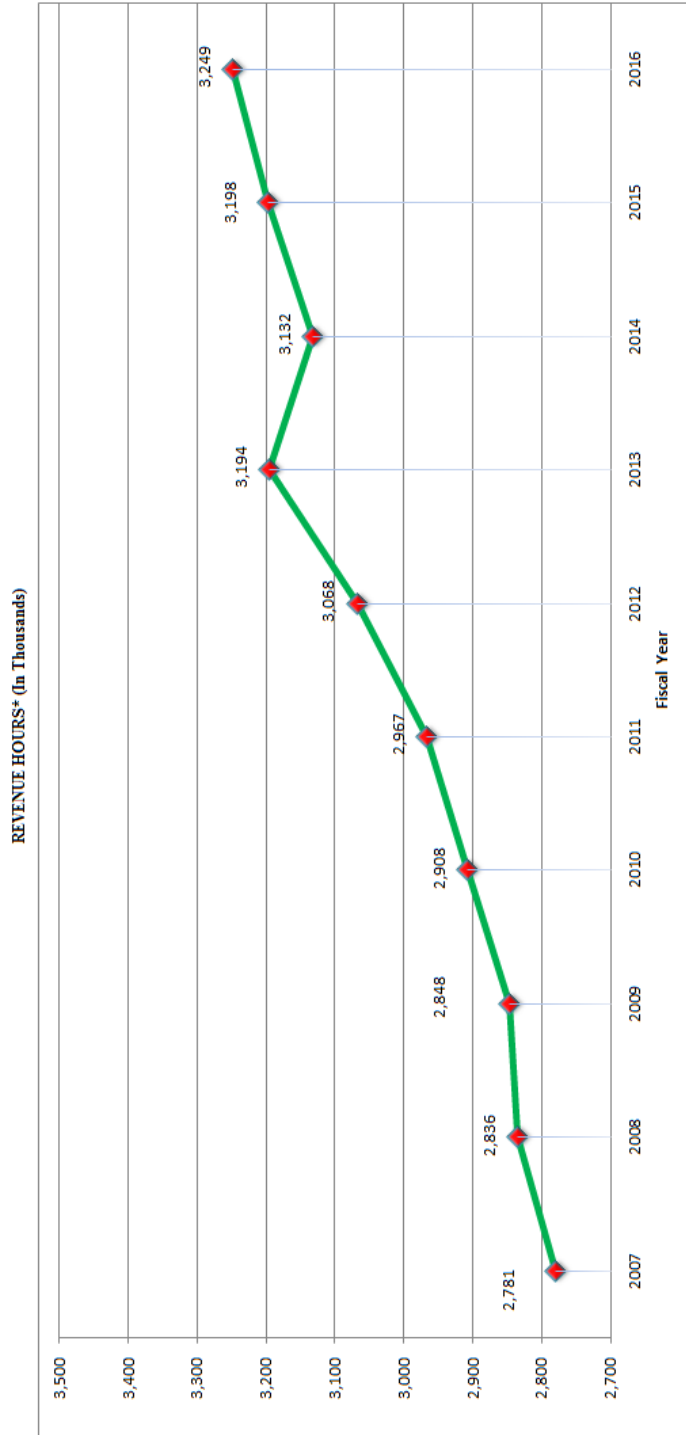
REVENUE MILES\* (In Thousands)



\* Revenue miles for rail services are car revenue miles.

Exhibit V.25  
Revenue Hours

DALLAS AREA RAPID TRANSIT  
REVENUE HOURS  
LAST TEN FISCAL YEARS



\* Revenue hours for rail services are car revenue hours.





Exhibit V.26  
Passenger Fare Revenue and Ridership

DALLAS AREA RAPID TRANSIT  
PASSENGER FARE REVENUE AND RIDERSHIP  
LAST TEN FISCAL YEARS (Amounts in Thousands)

	Fiscal Year									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Passenger revenues(1)</b>										
Bus	\$28,141	\$31,214	\$29,236	\$27,826	\$28,245	\$32,525	\$37,133	\$32,564	\$30,834	\$29,005
Light Rail	9,453	13,557	13,041	13,140	\$17,788	17,962	20,435	27,905	26,387	27,596
Commuter Rail	1,284	1,954	1,926	8,027	\$8,036	6,044	6,880	9,478	9,383	8,140
Demand Response	1,807	1,921	1,976	2,493	\$2,506	2,465	2,154	1,149	1,021	838
Demand Response-Taxi	-	-	-	-	-	-	-	922	1,213	1,421
Vanpool	430	311	533	595	\$754	813	967	996	787	749
<b>Total</b>	<b>\$41,115</b>	<b>\$48,957</b>	<b>\$46,712</b>	<b>\$52,081</b>	<b>\$57,329</b>	<b>\$59,809</b>	<b>\$67,569</b>	<b>\$73,014</b>	<b>\$69,625</b>	<b>\$67,749</b>
<b>Ridership (2)</b>										
Bus	44,690	44,752	42,517	37,693	36,971	38,379	37,937	37,383	36,366	33,521
Light Rail	17,893	19,438	18,965	17,799	22,302	27,654	29,472	29,438	29,841	29,762
Commuter Rail	2,475	2,717	2,739	2,432	2,388	2,252	2,093	2,284	2,173	2,054
Demand Response	822	910	1,039	1,136	1,140	1,141	832	469	397	335
Demand Response-Taxi	-	-	-	-	-	-	-	376	471	562
Vanpool	492	697	881	925	985	1,033	947	893	577	515
<b>Total</b>	<b>66,372</b>	<b>68,514</b>	<b>66,141</b>	<b>59,985</b>	<b>63,786</b>	<b>70,459</b>	<b>71,281</b>	<b>70,863</b>	<b>69,825</b>	<b>66,749</b>
<b>Average fare per passenger (3)</b>	<b>\$0.62</b>	<b>\$0.71</b>	<b>\$0.71</b>	<b>\$0.87</b>	<b>\$0.90</b>	<b>\$0.85</b>	<b>\$0.95</b>	<b>\$1.03</b>	<b>\$1.00</b>	<b>\$1.01</b>
<b>Average fare per passenger, Transit Industry - all agencies (4)</b>	<b>\$1.04</b>	<b>\$1.27</b>	<b>\$1.07</b>	<b>\$1.11</b>	<b>\$1.17</b>	<b>\$1.22</b>	<b>\$1.31</b>	<b>\$1.40</b>	<b>\$1.46</b>	<b>N/A</b>

Exhibit V.27  
Passengers per Revenue Mile and Revenue Hour

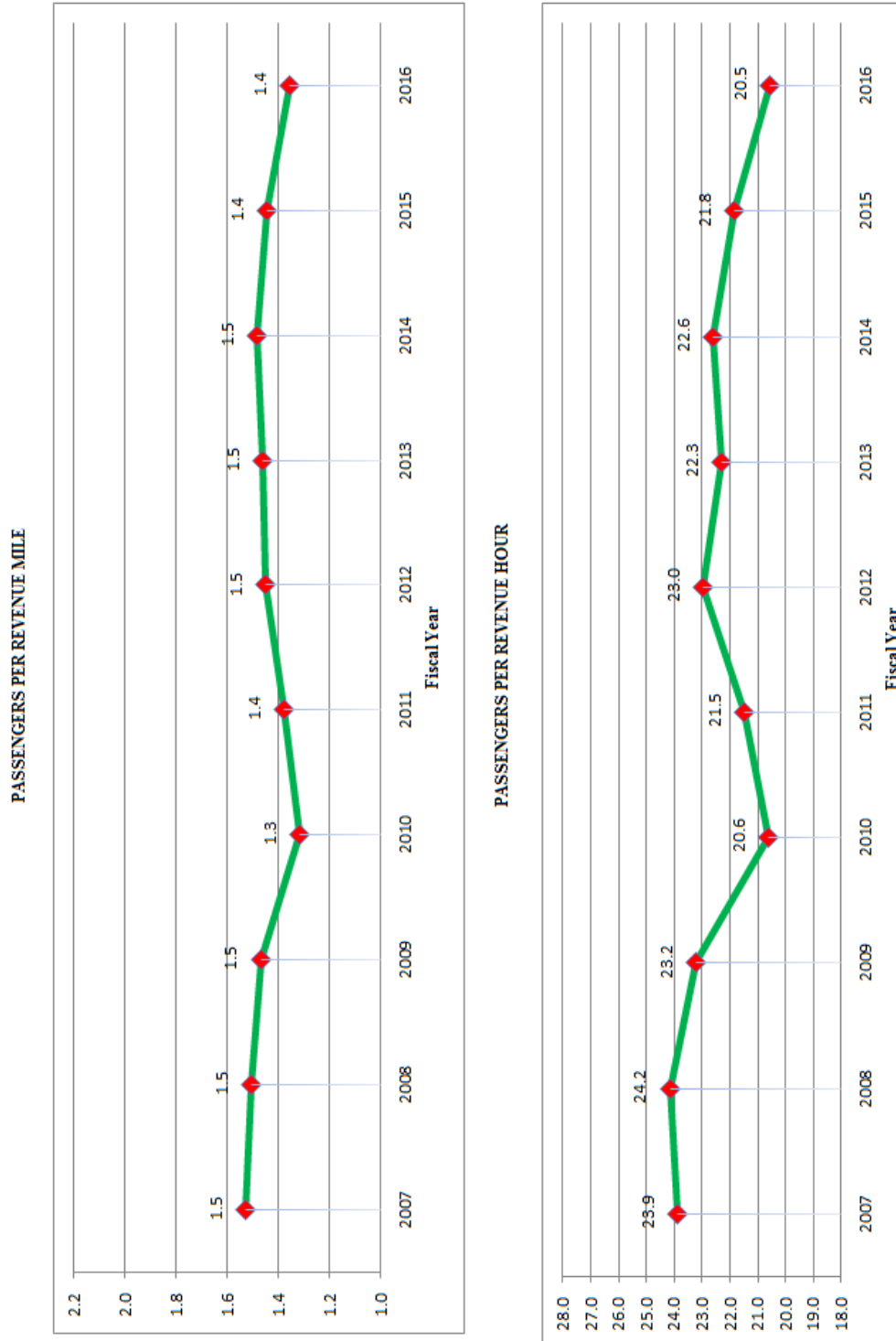




Exhibit V.28  
Number of Vehicles and Operating Facilities

DALLAS AREA RAPID TRANSIT  
NUMBER OF VEHICLES AND OPERATING FACILITIES  
LAST TEN FISCAL YEARS

	Fiscal Year									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of vehicles available for service (1)										
Bus	740	728	663	663	638	629	650	861	744	648
Light Rail	115	115	115	122	163	163	163	163	163	163
Commuter Rail	36	36	36	44	47	35	35	35	32	32
Demand Response	199	209	209	209	209	209	175	165	107	96
Demand Response-Taxi	-	-	-	-	-	-	-	79	125	-
Vanpool	103	145	175	178	200	215	204	190	229	190
Total	1,193	1,233	1,198	1,216	1,277	1,251	1,227	1,493	1,400	1,129
Number of vehicles operated during weekday (1)										
Bus	559	564	564	556	507	509	527	544	535	533
Light Rail	85	85	84	76	77	78	102	103	105	104
Commuter Rail	21	19	19	18	18	18	18	23	18	18
Demand Response	169	184	190	190	186	186	148	148	92	106
Demand Response-Taxi	-	-	-	-	-	-	-	79	115	-
Vanpool	92	129	162	173	190	196	183	183	162	175
Total	926	981	1,019	1,013	978	987	978	1,080	1,027	936
Operating Facilities (2)										
Bus										
Number of operating garages	4	3	3	3	3	3	3	3	3	3
Number of transit centers	15	15	15	15	15	15	15	15	15	15
Number of bus stops	11,961	11,961	12,322	12,500	12,500	12,500	12,500	11,973	11,973	11,383
Light Rail										
Miles of tracks	45	45	45	48	48	72	77	85	85	85
Number of stations	35	35	35	39	39	55	58	61	62	62
Number of operating garages	1	1	1	1	1	2	2	2	2	2
Commuter Rail										
Miles of tracks	34	34	34	34	34	34	34	34	34	34
Number of stations	10	10	10	10	10	10	10	10	10	10
Number of operating garages	1	1	1	1	1	1	1	1	1	1
Demand Response										
Number of operating garages	1	1	1	1	1	1	1	1	1	1

Sources:

1) National Transit Database

2) Quarterly Performance Reports for the 4th quarter of each fiscal year.



Exhibit V.29  
Cost of Capital Assets

DALLAS AREA RAPID TRANSIT COST OF CAPITAL ASSETS LAST TEN FISCAL YEARS (Amounts In Thousands)											
	Fiscal Year										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Non-Depreciable Capital Assets											
Land and right-of-way	\$388,000	\$387,934	\$398,914	\$397,997	\$548,904	\$554,714	\$578,169	\$609,498	\$616,728	\$615,709	
Capital projects in progress	745,171	1,210,357	1,755,739	2,305,270	859,872	662,567	205,542	70,845	101,124	190,992	
Total Non-Depreciable Capital Assets	1,133,171	1,598,291	2,154,653	2,703,267	1,408,776	1,217,281	783,711	680,343	717,852	806,701	
Depreciable Capital Assets											
Transit-ways	1,369,288	1,408,118	1,607,364	1,631,987	2,779,751	3,188,305	3,696,268	3,845,836	3,860,836	3,861,876	
Buildings and Improvements	369,411	404,477	416,472	419,849	696,102	702,179	745,314	746,585	748,445	749,160	
Revenue and Non-Revenue Vehicles and Equipment	703,230	719,346	804,314	935,898	1,218,639	1,275,561	1,319,261	1,303,485	1,287,039	1,282,270	
Furniture, Fixtures, and Leasehold Improvements	33,083	35,370	38,189	38,940	43,242	49,537	61,184	59,872	64,523	65,909	
Total Depreciable Capital Assets	2,475,012	2,567,311	2,866,339	3,026,674	4,737,734	5,215,582	5,822,027	5,955,778	5,960,843	5,959,215	
Less Accumulated Depreciation											
Transit-ways	357,424	403,562	452,524	508,156	593,902	690,650	820,845	931,205	1,060,638	1,190,044	
Buildings and Improvements	175,430	191,518	207,275	221,232	240,967	265,881	292,055	316,802	341,810	366,599	
Revenue and Non-Revenue Vehicles and Equipment	321,540	357,358	395,183	447,998	499,242	559,630	568,776	527,137	536,743	605,467	
Furniture, Fixtures, and Leasehold Improvements	31,244	29,214	31,868	31,939	36,569	38,929	46,450	50,973	57,584	60,150	
Total Accumulated Depreciation	885,638	981,652	1,086,850	1,209,325	1,370,680	1,555,090	1,728,126	1,826,117	1,996,775	2,222,260	
Net Depreciable Capital Assets	1,589,374	1,585,659	1,779,489	1,817,349	3,367,054	3,660,492	4,093,901	4,129,661	3,964,068	3,736,955	
Net Capital Assets	\$2,722,545	\$3,183,950	\$3,934,142	\$4,520,616	\$4,775,830	\$4,877,773	\$4,877,612	\$4,810,004	\$4,681,920	\$4,543,656	

Source: Annual financial statements



Exhibit V.30  
Transit Agency Comparison (2015 NTD)

## Transit Agency Comparison (2015 NTD)

Metric	Dallas (DART)	Boston (MBTA)	Denver (RTD)	Houston (METRO)	Los Angeles (LACMTA)	Philadelphia (SEPTA)	Portland (TRIMET)	San Diego (MTS)	St. Louis (METRO)
Service Area (Sq.Mi.)	696	3,244	2,348	1,285	1,513	836	570	716	558
Service Area Population	2,437,820	4,181,019	3,157,520	3,695,527	8,626,817	3,355,152	1,489,796	2,218,791	1,540,000
<b>Annual Vehicles Revenue Miles (In Thousands)</b>									
Bus	27,250	23,420	35,520	41,230	73,550	39,760	19,110	16,870	18,470
Heavy Rail	N/A	23,280	N/A	N/A	6,870	16,880	N/A	N/A	N/A
Commuter Rail	1,440	22,070	N/A	N/A	N/A	18,680	160	N/A	N/A
Light Rail	9,120	5,820	10,180	990	13,240	3,380	7,720	7,760	6,230
Demand Response	7,560	17,030	10,030	16,590	N/A	11,020	7,430	3,290	5,250
<b>Annual Vehicles Revenue Hours (In Thousands)</b>									
Bus	2,100	2,340	2,610	2,830	6,690	3,880	1,620	1,560	1,350
Heavy Rail	N/A	1,440	N/A	N/A	300	870	N/A	N/A	N/A
Commuter Rail	50	740	N/A	N/A	N/A	690	7	N/A	N/A
Light Rail	450	620	570	83	650	380	530	470	260
Demand Response	500	1,420	670	970	N/A	1,000	500	190	310
<b>Annual Unlinked Trips (In Thousands)</b>									
Bus	37,940	114,700	76,350	68,690	350,390	184,860	58,660	51,890	29,410
Heavy Rail	N/A	168,720	N/A	N/A	49,520	101,040	N/A	N/A	N/A
Commuter Rail	2,090	35,230	N/A	N/A	N/A	37,170	440	N/A	N/A
Light Rail	29,470	70,030	23,770	11,320	63,650	27,430	39,170	29,700	17,050
Demand Response	830	2,110	1,230	1,750	N/A	1,710	1,040	510	590
<b>Fixed Guideway Directional Route Miles</b>									
Bus	66.1	6.2	43.6	50.9	141.9	2.4	3.3	17	N/A
Heavy Rail	N/A	76.3	N/A	N/A	31.9	74.9	N/A	N/A	N/A
Commuter Rail	72.3	776.1	N/A	N/A	N/A	446.9	29.2	N/A	N/A
Light Rail	171.4	51	94.2	14.8	136.3	82.9	104.3	108.4	91.1
<b>Vehicles Available/Operated for Maximum Service</b>									
Bus	650/527	955/784	1,029/819	1,257/1,048	2,320/1,860	1,389/1,172	597/505	543/437	378/312
Heavy Rail	N/A	430/336	N/A	N/A	104/70	369/286	N/A	N/A	N/A
Commuter Rail	35/23	512/416	N/A	N/A	N/A	412/334	4-Jun	N/A	N/A
Light Rail	163/102	184/151	172/139	37/22	171/144	159/126	320/275	175/96	87/58
<b>Operating Expenses (In Thousands)</b>									
Bus	\$248,810	\$380,740	\$313,100	\$352,300	\$931,760	\$596,070	\$239,130	\$145,750	\$145,370
Heavy Rail	N/A	\$315,540	N/A	N/A	\$117,010	\$186,690	N/A	N/A	N/A
Commuter Rail	\$26,970	\$351,360	N/A	N/A	N/A	\$246,820	\$7,040	N/A	N/A
Light Rail	\$151,020	\$151,780	\$87,140	\$18,390	\$234,860	\$65,510	\$99,330	\$66,350	\$64,810
Demand Response	\$30,740	\$104,590	\$46,930	\$46,190	N/A	\$51,790	\$35,590	\$14,500	\$21,880
<b>Fare Revenue (In Thousands)</b>									
Bus	\$37,130	\$97,130	\$66,190	\$63,000	\$254,420	\$172,210	\$63,820	\$53,090	\$31,690
Heavy Rail	N/A	\$191,850	N/A	N/A	\$34,750	\$95,720	N/A	N/A	N/A
Commuter Rail	\$8,820	\$168,960	N/A	N/A	N/A	\$137,430	\$470	N/A	N/A
Light Rail	\$20,440	\$89,940	\$49,410	\$4,480	\$44,560	\$30,590	\$46,440	\$35,550	\$18,610
Demand Response	\$2,150	\$7,320	\$2,480	\$1,600	N/A	\$5,920	\$4,140	\$2,010	\$2,480

SOURCE: 2015 National Transit Database Agency Profiles

NOTE: Fixed Guideway Directional Route Miles is reported as the mileage in each direction over which public transportation vehicles travel while in revenue service on fixed guideway (including HOV lanes), or exclusive Right-of-Way.



Blank page

## **G. DART's Economic Environment**

DART periodically contracts with the Center for Economic Development and Research at the University of North Texas to perform a study of the economic and fiscal impacts of capital and operating spending by DART. The following is the most recent study which was released in May 2017. This study is shown below and is located on [DART.org](http://DART.org).

### **The Economic and Fiscal Impacts of Development near DART Stations**



**PREPARED FOR DALLAS AREA RAPID TRANSIT**

**PREPARED BY  
MICHAEL C. CARROLL, PH.D.  
CHRISTOPHER CARLYLE  
MICHAEL SEMAN, PH.D.**

## **SECTION I: ECONOMIC AND FISCAL IMPACTS OF THE DART LIGHT RAIL SYSTEM: 1999 - 2013**

### **INTRODUCTION**

Since 1996, the DART Light Rail Transit (LRT) system has moved millions of people and sparked billions of dollars in development in the Dallas-Fort Worth economy. Since 1999, the University of North Texas and DART have partnered to derive the economic impacts of development near light rail stations. As noted numerous times below, property values near DART LRT stations far exceed and grow much faster than those in similar areas without a light rail station. As DART celebrates the 20th anniversary of opening its light rail system in DFW, the Economics Research Group (formerly The Center for Economic Development and Research, CEDR) at the University of North Texas has compiled a review of the six studies done from 1999 to 2013. The purpose of this study is to merge all former UNT-DART studies and derive a comprehensive dollar value of properties near DART LRT stations since inception.



## REVIEW OF ECONOMIC IMPACT STUDIES

### The Initial Economic Impacts of the DART LRT System (1999)

In 1999, this office began the collaboration between UNT and DART. This first study concentrated on the change in property values, occupancy and rental rates, and retail sales of properties located near DART LRT stations from 1994 to 1998.

The study first compared nearly 700 commercial and residential property values within a quarter-mile<sup>1</sup> of 15 DART LRT stations with 160 properties in eight comparable areas. These comparable areas were deemed similar in both usage and neighborhood characteristics as those properties near DART stations. As seen from Table 1, retail property values increased 12.39% for those near DART stations compared with 7.79% for the comparable areas. Office property values rose substantially around DART stations, almost 29% compared with similar areas, where property values rose only slightly over 6%. Combining all properties studied, those near DART LRT stations on average increased nearly 16% compared with other properties, which rose just under 13%. Despite residential and vacant properties, the results of Table 1 show that proximity to DART LRT stations increased property values at an overall faster clip.

Table 1: Average Percent Change in Total Property Values (1994 – 1998)						
	Retail	Office	Residential	Industrial	Vacant	All Properties
Near DART LRT	12.39%	28.97%	11.02%	3.79%	-5.12%	15.98%
Comparable Areas	7.79%	6.32%	16.17%	0.0%	26.38%	12.86%

The 1999 study also looked at the change in rental and occupancy rates for office buildings, community and neighborhood centers, shopping malls, retail strips, and industrial properties over the same time period. Table 2 shows these changes. Rental rates per square foot for properties analyzed increased at least 20% for 5 out of the eight different property types. Moreover, occupancy rates for the different classes of office buildings were positive over the five-year period.

Table 2: Average Percent Change in Occupancy & Rental Rates (1994 – 1998)								
	Class A Office	Class B Office	Class C Office	Community Centers	Neighborhood Centers	Shopping Mall	Retail Strip	Industrial
Rent/SF	47.4%	40.4%	20.9%	17.2%	6.25%	20%	18.4%	27.35%
Occupancy	10.4%	6.73%	3.5%	-2.12%	0.83%	0.81%	4.17%	15.99%

Finally, the 1999 study also looked at changes in gross retail sales in the Dallas Central Business District (CBD). Researchers used four DART LRT stations in the Dallas CBD, West End, Akard, St. Paul and Pearl/Arts District, and observed how retail sales changed since the opening of the DART light rail service. As can be seen from Table 3, gross retail sales increased 36.2% from the year beginning third quarter of 1997 when compared with the year beginning third quarter 1996. The change in gross retail sales for the rest of the city of Dallas was only 3.6% for the same time frame, according to the Texas Comptroller of Public Accounts.

Table 3: Changes in Gross Retail Sales, Dallas CBD (1996 – 1998, \$s in millions)				
Quarter	Amount	Quarter	Amount	Percent Change
2Q 98	\$202.3	2Q 97	\$113.2	78.7%
1Q 98	\$197.2	1Q 97	\$109.9	79.4%
4Q 97	\$177.5	4Q 96	\$169.2	4.9%
3Q 97	\$146.2	3Q 96	\$138.7	5.4%
<b>Total</b>	<b>\$723.2</b>		<b>\$531</b>	<b>36.2%</b>

Source: Texas Comptroller of Public Accounts

### An Assessment of the DART LRT on Taxable Property Valuations and Transit-Oriented Development (2002)

In the analysis published in 2002, researchers at UNT again looked to the changes in property values for properties immediately surrounding DART LRT stations. The new study used only properties within a quarter-mile from the stations, and similar to the previous study, a set of control properties to compare against. Unlike the previous study, this study focused on changes in median property values rather than averages.

The findings from this analysis confirmed results from the previous study: close proximity to DART stations have a positive impact on property values. Moreover, the authors asserted that “DART rail is an amenity-enhancing service most keenly affecting the market values of properties where people live and where there are comparatively high concentrations of [office] jobs.” The largest changes came from office properties, where those near DART stations saw a 24.7% increase in median property values compared with only an 11.5% increase from the control group. Residential properties also saw a substantial increase: 32.1% for properties within a quarter-mile of DART stations versus a 19.5% increase in the control group. All changes to the different property types can be seen in Table 4.

Table 4: Changes in Median Property Values (1997 – 2001)					
	Retail	Office	Residential	Industrial	Vacant
<b>Near DART LRT</b>	28.3%	24.7%	32.1%	13.0%	11.1%
<b>Control</b>	30.4%	11.5%	19.5%	21.5%	0.0%

### The Estimated Value of New Investment Adjacent to DART LRT Stations: 1999 – 2005

In 2005, almost a decade after the light rail began operating, the same office at UNT presented another study for DART LRT stations, but with a different approach. This study looked at newspaper articles and other community announcements about development within a quarter-mile proximity of DART stations. The announcements were categorized by station and aggregated to a total economic impact on the Dallas-Fort Worth economy (if property values were not announced in the articles, comparable figures were looked up at county appraisal districts).

The authors found that new investment with close proximity to DART stations had a total value of \$3.3 billion. The stations with the highest values in this report, Park Lane, Las Colinas and Mockingbird, continue to see investment and reinvestment to this day. Table 4A details these top three stations as well as the total impact of development near DART stations.

<b>Table 4A: Estimated New Investment and Reinvestment of Selected Stations, Total (1999 – 09/2005)</b>	
<b>Station</b>	<b>Announced Development Value</b>
Park Lane	\$610,000,000
Las Colinas	\$420,000,000
Mockingbird	\$270,000,000
<b>Total</b>	<b>\$3,314,000,000</b>

### **Assessment of the Potential Fiscal Impacts of Existing and Proposed Transit-Oriented Development in the DART Service Area (2007)**

The following research done by this department again looks back at the property values surrounding DART stations since 1999 in tandem with the fiscal impacts of those property values. This report is an update of the previous. Methods used to acquire these property values were similar to the previous report (newspaper announcements for values and locations of development projects), but the authors of this report also utilized work in the field to identify projects not announced in local publications. The study found that values that could be directly attributed to the existence of a nearby DART station totaled \$4.26 billion, (values were excluded if the development would have occurred with or without the station, such as with a convenience store) as detailed in Table 5.

<b>Table 5: Potential Fiscal Impacts of Existing &amp; Proposed TOD</b>	
<b>Description</b>	<b>Value</b>
<b>Announced Value</b>	<b>\$ 4,902,800,000</b>
<b>Announced Value Attributable to DART</b>	<b>\$ 4,255,700,000</b>
<b>Cities (Annually)</b>	
Taxable Property Value	\$ 2,843,779,000
Property Tax Revenues	\$ 16,785,000
Taxable Retail Sales	\$ 665,552,000
Sales Tax Revenues	\$ 6,656,000
<b>Total Revenue to Cities</b>	<b>\$ 23,531,000</b>
<b>Total State and Local Tax Revenues</b>	<b>\$ 127,095,000</b>

The results from this 2007 study update those done in the 2005 research. The value of properties near DART stations in the 2005 study (\$3.3 billion) increased nearly 50% in the 2007 study (\$4.9 billion) due to higher property values and more new development. While some of this increase

comes from properties that might have been overlooked in the 2005 study, overall development in the North Texas region increased in this time period as well, with an emphasis on transit-oriented development. The authors gave a favorable outlook for more development around DART stations when ridership and support for expansion were taken into account, and they anticipated that property values would continue to rise.

### **Economic and Fiscal Impacts of DART Light Rail System Buildout and System Operations (2009)**

In 2009, DART was on the brink of finishing major extensions and opening new lines for the light rail system. The next study conducted by CEDR for DART looked at the capital projects in line with the completion of these DART lines as well as the projected impacts of operating expenditures for fiscal years 2009 and 2014.

In Table 6, the total impact of buildout of the Green Line and Orange Line, and extensions of the Blue Line are outlined. According to this report, expenditures for these lines totaled \$2.3 billion, which, when run through the economic input-output model, had a total economic impact of \$4.06 billion on the local economy. Additionally, these expenditures caused labor income in the area to increase by \$1.5 billion and the creation of over 32,000 jobs. Almost \$100 million in taxes were also generated from the spending on the completion of these DART light rail lines.

<b>Table 6: Economic &amp; Fiscal Impacts from DART System Buildout (All Lines)</b>	
<b><i>Description</i></b>	<b><i>Impact</i></b>
Total Expenditures	\$2,337,000,000
Economic Activity	\$ 4,059,672,000
Labor Income	\$ 1,520,157,000
Employment	32,095
Other Property Income	\$ 432,140,000
Indirect Business Taxes	\$ 99,986,000

Moreover, this study aimed to estimate the operations spending in 2009 and 2014. DART operations spending supports other spending throughout the local economy despite DART's being a public entity. The spending helps to create direct impacts for local business and employees, as well as creating new jobs and subsequently, tax revenues. According to this 2009 report, DART spent \$411 million (Table 7) on operations, which include wages and salaries, goods, and services to support DART on a day-to-day basis. The operations spending, in turn, created a total economic impact of nearly \$544 million, almost 5,000 jobs and taxes above \$11 million. The paper also estimated what spending on operations might look like in 2014. This produced \$501 million of direct spending causing a total economic impact of \$663 million, over 5,300 jobs and taxes greater than \$13 million (Table 7).

Table 7: Economic and Fiscal Impacts of DART Operations		
Description	2009	2014
Total Expenditures	\$ 411,000,000	\$501,000,000
Economic Activity	\$ 543,984,000	\$663,106,000
Labor Income	\$325,921,000	\$412,013,000
Employment	4,955	5,327
Other Property Income	\$ 49,626,000	\$60,494,000
Indirect Business Taxes	\$ 11,289,000	\$13,760,000

### Developmental Impacts of the DART Light Rail System (2013)

In the most recent study done by this office, property values surrounding DART stations were again compared against a set of control property values in similar locations. Like previous studies, the properties within close proximity to DART stations must have been within a quarter-mile radius of the station – a distance researchers agree yields a positive association with increased development. On top of this support for the quarter-mile distance, the authors conducted further analysis to verify its validity.

The analysis done in this study finds that, from 1996 to 2013, new development occurring within three years of the opening of a DART station (and still existing) had a value of \$1.5 billion compared with \$601 million for the control properties (Table 8). Similarly, the tax revenue generated from the DART station properties outpaced control properties by \$22 million (\$36 million for DART versus \$14 million for control).

Table 8: Estimated 2013 Property Values and Tax Contributions					
Property Type	Est. Value of All Properties		Est. Tax Contributions		Tax Differential
	DART	Control	DART	Control	
Industrial	\$23,473,050	\$19,481,050	\$556,311	\$461,701	\$94,610
Multi-Family	\$751,646,900	\$169,555,466	\$17,814,032	\$4,018,465	\$13,795,567
Office	\$224,798,649	\$45,121,010	\$5,327,728	\$1,069,368	\$4,258,360
Retail	\$393,286,515	\$300,039,538	\$9,320,890	\$7,110,937	\$2,209,953
Single Family	\$140,960,100	\$67,550,410	\$3,340,754	\$1,600,945	\$1,739,810
<b>Total</b>	<b>\$1,534,165,214</b>	<b>\$601,747,474</b>	<b>\$36,359,716</b>	<b>\$14,261,415</b>	<b>\$22,098,300</b>

The 2013 analysis then looked to announced values of upcoming planned and proposed development projects. As seen from Table 5 (page 7), the 2007 study found \$4.9 billion in existing and planned development. When this 2013 study was conducted, the authors found, as expected, that some properties slated for future development in the 2007 study were either paused or did not come to fruition, most likely because of the recession. In this analysis, when the properties were updated, planned and proposed developments near DART stations had a total value of \$3.8 billion. This summed together with the \$1.5 billion of existing property values above makes total property values since 1996 worth \$5.3 billion.

In the second section of the 2013 study, the authors looked at the effect of different office classes, ages of the structures, and whether the properties were within a quarter-mile or between a quarter-mile and a half-mile all on office lease rates. Regression analysis was used to estimate the effect of these variables. The most notable finding of this analysis shows that properties located within a quarter-mile of a DART station gained a \$2.61 statistically significant<sup>5</sup> premium while controlling for office class and age of the building (Table 9). Furthermore, properties outside the quarter-mile radius did not attain the statistical significance nor the positive premium. This aligns with what has been studied in the literature and with the results of past studies done by this office.

<b>Table 9: Regression Analysis of Office Lease Rates</b>		
<i>Variables</i>	<i>Marginal Effect</i>	<i>P</i>
Constant	-36.47023	0.0010*
Class A Office	1.52042	0.0001*
Class B Office	1.03960	0.0001*
Year built	0.02577	0.0001*
Located Within 0.25 miles of station	2.61279	0.0001*
Located Within 0.5 miles of station	-0.25237	0.6170

*\*Statistically Significant at the 1% level*

## CONCLUSION

UNT has conducted six economic impact studies of DART LRT stations from 1999 to 2013. These impact studies range from the change in rental rates over time to the aggregated value of properties surrounding DART LRT stations. Though different in methodologies, the studies done over the past 16 years document the positive effects property values derive from being located near a light rail station. Additionally, some studies highlight the substantial economic, fiscal and developmental impacts that result from capital and operational spending by DART.

In total, the value of properties within a quarter-mile of DART LRT stations was \$5.3 billion as of 2013. What follows this summary of previous findings is the Economic Research Group's newest study of developmental impacts of properties near DART stations for 2014 and 2015.

## SECTION II: THE ECONOMIC IMPACT OF PUBLIC PROJECTS AT DART STATIONS

This memorandum details the economic impact of public projects within a quarter-mile of DART stations. The projects were not included in previous University of North Texas projects as the amounts were previously not available. The analysis in the memorandum covers projects that were developed from DART's early construction and therefore includes more projects completed in 2014-2015. This report excludes downtown stations because of their closeness to one another and the resulting overlap in the quarter-mile criteria.



## SELECTED HIGHLIGHTS

- Public development had a property value of \$1.81 billion
- Public development produced an economic impact of \$3.36 billion for the Dallas-Fort Worth region
- Public development near DART stations created 20,741 construction jobs in the Dallas-Fort Worth region
- Public development created \$1.3 billion in employee compensation
- Public development generated \$105 million in state and local taxes, and \$278 million in federal tax revenue

## METHODOLOGY

To understand how money being spent developing properties within a quarter-mile of a DART station ripples through a regional economy, the first step is to define the region in question. This study uses the Dallas-Fort Worth region for analysis as its economy is strongly integrated. The U.S. Office of Management and Budget's (OMB) definition of the "Dallas-Fort Worth-Arlington Metropolitan Statistical Area" is used and the counties included are Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Somervell, Tarrant and Wise. Next, the values of the selected properties are placed into an Input/Output economic model that examines how the money being spent on property development ripples through a regional economy. Input/Output methodology allows for insight into forward and backward linkages that are present in any regional economy, highlighting how they add value to the initial dollar spent. The model – in this case facilitated by the IMPLAN software package – measures the total annual economic activity that results from inter- and intra-industry transactions.

IMPLAN is an industry standard Input/Output tool used to calculate the direct, indirect and induced impacts of spending and employment. The model first breaks the economy into 536 separate sectors, with each sector representing an individual industry, and then it uses a sectoring scheme developed by the IMPLAN Group. This scheme is closely related to the Bureau of Economic Analysis (BEA) REIS model and is a 536 X 536 (row x column) matrix showing all the economic activity among the individual sectors. The entries in the matrix are based on the dollar amount that each industry sells to (and purchases from) other industries in a regional economy. It measures the amount of final consumption by the residents of the region as well as how much each industry exports from the area. The model uses data collected at the county level, which are obtained from the IMPLAN Group and the BEA. County data are in turn aggregated or "rolledup" to form service areas such as local regions, states or larger geographic regions, such as the Southwest. Input/Output models are able to estimate economic impacts because the flow of goods and services within an economic region is relatively stable. Predictions can be made of an industry's total economic impact by examining the purchasing patterns of the individual sectors. The BEA collects extensive data on these regional trade flows and reports its findings annually.

After the region is selected and the data on spending are entered, how the spending flows through the region and impacts it can be calculated. The three levels of spending impacts analyzed are direct, indirect and induced. The direct impact includes the purchases of resources (labor, goods



and services) by real estate developers, builders and construction companies for the completion of a project. The indirect impact occurs through industry-to-industry purchases made by regional suppliers. Finally, the induced impact reflects the change in household demand as the employees of real estate developers, builders and construction companies and the employees of their suppliers earn dollars for consumer spending. Therefore, the total impact to the economy is the summation of the direct, indirect and induced components. The indirect and induced portions are commonly known as the multipliers and their impacts often referred to as the “multiplier effect.” It shows how the initial (direct) spending get multiplied through the economy. Calculating the multipliers based on the supplier relationships and employee consumption patterns is much more accurate than simple multiplier tables.

The effects that the three levels of impacts and related spending have on employment is also calculated in the IMPLAN economic model. Employment is the total number of full-time wage and salary employees, plus the number of self-employed workers in a particular industry. Part-time workers’ hours are aggregated into full-time equivalents (2,080 hours), and reported with the full-time workers. An IMPLAN economic model will draw from multiple sources of data to offer employment estimates. This is due to the differences in how employment data is gathered by varying government agencies. In general, because of nondisclosure rules, the employment figure reported by government agencies often underestimates true employment in a given county. In accordance with U.S. Code Title 13, Section 9, no datum is published that would disclose the operations of an individual employer or put an individual employer at an unfair disadvantage.

By carefully combining employment figures reported by the U.S. Department of Labor, Bureau of Economic Analysis, U.S. Census Bureau and Internal Revenue Service, a fairly comprehensive employment figure can be reconstructed. The raw data are then “sectored” into the appropriate North American Industry Classification System (NAICS) and, in turn, combined into the necessary industry vectors and IMPLAN matrices. The result of this process is a “total employment” impact figure that is a result of the three levels of economic impacts associated with the initial spending. An IMPLAN economic model also calculates employee compensation, which includes all salaries, wages and benefits paid to the industry’s employees resulting from the direct, indirect and induced employment impacts. The figure includes the proprietors’ income of selfemployed people in the industry. The figures reported are gross amounts and taken from the IMPLAN data set.

Input/Output methodology and IMPLAN software allow one to leverage and integrate the enormous amount of data collected by government agencies. As such, a reliable model of how spending affects a regional economy can be developed. These models take into account not only how money is initially spent in the “direct” stage of an event, but also inter- and intra-industry transactions. These transactions establish forward and backward linkages in a regional economy during the “indirect” and “induced” stages. In addition to spending, these models also estimate the resulting change in employment. The end product is a comprehensive economic analysis of a given event and its effect on a region.

## RESULTS

The following section reports the economic impact of public projects within a quarter-mile of DART Light Rail stations. The table below details the direct, indirect, induced and total effects on employment, labor income, value added and output as a result of the development projects. These effects show the dollar amount of the output and employment impacts for development spending in the DFW area.

### Public Project Impacts

Spending on public projects includes properties built for health care, city halls, school campuses and other public use properties. To correctly analyze the development spending impact, properties were held to a strict quarter-mile radius around DART stations. The dollar amounts and announcements were derived using information from The Dallas Morning News, Dallas Business Journal and other local sources. The property values have been cross-checked with the Dallas and Collin county central appraisal districts and verified using a third-party firm (Cushman & Wakefield). A list of the properties used follows (Table 1).

Table 1: Public Properties within 1/4 mile of DART Stations	
<i>Station</i>	<i>Project Name</i>
Irving Convention Center	Irving Convention Center
Mockingbird	Bush Library
Galatyn Park	Eisemann Center
Cedars	DCCCD District Office
	Dallas Police Headquarters
Downtown Plano	Courtyard Theater
Hatcher	Hatcher Station Health Center
Illinois	DART Police Station
Baylor Medical Center	Sammons Cancer Center
Downtown Rowlett	Rowlett City Hall
	Rowlett Public Library
SW Medical Center/Parkland	New Parkland Hospital
UNT Dallas	UNT Dallas

After making the appropriate adjustments, public property spending amounted to \$1,815,333,100. This direct impact generated an additional \$682,884,872 of indirect activity as contractors and construction firms purchased raw materials. Finally, the induced impacts amounted to \$858,142,497, which represents the spending of wages by employees of those suppliers in the study area. The total economic impact (summation of the direct, indirect and induced effects) from development spending within a quarter-mile of DART stations amounts to \$3,356,360,469 as shown in Table 2.

Table 2: Impact Summary of Public Properties				
<i>Impact Type</i>	<i>Employment</i>	<i>Labor Income</i>	<i>Value Added</i>	<i>Output</i>
Direct Effect	12,046	\$739,317,390	\$938,939,188	\$1,815,333,100
Indirect Effect	3,206	\$239,001,840	\$374,503,750	\$682,884,872
Induced Effect	5,490	\$292,459,862	\$510,154,127	\$858,142,497
<b>Total Effect</b>	<b>20,741</b>	<b>\$1,270,779,092</b>	<b>\$1,823,597,065</b>	<b>\$3,356,360,469</b>

Also from Table 2, the description of employment created by public development spending can be seen. The jobs created by the direct spending total 12,046. Additionally, indirect and induced effects generated 3,206 and 5,490 jobs, respectively. The total number of jobs created as a consequence of development of public properties amounts to 20,741. Moreover, value added, a measure that can be seen as gross regional product, shows how the development of public projects adds to the local economy. Total value added summed to \$1,823,597,065 for public projects.

### Fiscal Impacts

The effects of public projects within a quarter-mile radius of DART stations generated a total of \$278,141,545 in federal tax revenue and \$105,302,562 in state and local taxes. For ease of comparison, the various federal, state and local taxes have been grouped into four categories: employee compensation-related taxes, production-related, household and corporate taxes. State and local and federal details are presented in Table 3.

Table 3: Tax Impacts of Public Properties		
<i>Description</i>	<i>Total State and Local Tax</i>	<i>Total Federal Tax</i>
Employee Compensation	\$1,342,609	\$112,220,297
Proprietor Income	N/A	\$10,570,114
Tax on Production and Imports	\$94,555,162	\$16,891,166
Households	\$9,096,993	\$105,446,215
Corporations	\$307,798	\$33,013,753
<b>Total</b>	<b>\$105,302,562</b>	<b>\$278,141,545</b>

## **SECTION III: THE ECONOMIC AND FISCAL IMPACTS OF DEVELOPMENT NEAR DART STATIONS 2014 – 2015**

### **Executive Summary**

The purpose of this document is to identify and calculate economic impacts of real estate development projects within a quarter-mile radius of DART light-rail stations. The study is a follow-up to the 2013 analysis completed by this office and analyzes development projects in 2014 and 2015. The values of all projects included in the analysis were determined through a combination of steps, including the use of their estimated values as published in the sources analyzed, cross-checking the properties with the Dallas and Collin county appraisal districts where possible, and augmenting all information with a review by analysts at Cushman & Wakefield. IMPLAN software was used to create an economic input-output model to measure the direct, indirect and induced impacts of the development projects on the Dallas-Fort Worth region.

### **Highlights**

- A total of 27 private projects were announced in the two-year period, 16 of which were characterized as “Completed or Under Construction” and 11 as “Planned or Proposed.”
- Projects “Completed or Under Construction” are responsible for \$2.03 billion in total spending throughout the region supporting over 12,000 jobs paying \$703 million in salaries, wages and benefits.
- Projects “Completed or Under Construction” generated \$69 million in state and local tax revenue.
- Potential spending for projects “Planned or Proposed” could result in \$5.1 billion of total spending in the region, which would support over 31,000 jobs and pay almost \$2 billion.
- Potential spending for projects “Planned or Proposed” could generate \$160 million in state and local tax revenue.

### **Introduction**

In 2013, our office examined the economic impacts associated with construction near DART rail stations. This study is a follow-up to that analysis and examines the impacts of projects that were proposed, planned, underway or completed near DART stations in 2014 and 2015. As with the previous study, construction activity is only considered if it took place within a quarter mile of a DART station. Further, this study does not include downtown stations. While our focus is only on projects within a quarter-mile of a DART station, it is likely that the effects of station proximity spread beyond this impact zone.

### **Methodology and Data**

The underlying data used for the calculation of impacts – the real estate development projects – were gathered through an ongoing review of publicly announced projects in publications such as The Dallas Morning News, Dallas Business Journal and assorted community newspapers and online resources. A total of 27 projects were identified, then organized by type and status of

completion. First, details of the projects were examined, which helped assign them to one of four categories: “Non-Residential,” “Multi-Family,” “Single-Family,” and “Health Care.” The next step was to establish their stage of completion. Of the total number of projects, 16 were assessed as “Completed or Under Construction” and 11 as “Planned or Proposed.” Intermittent consultation with a DART representative over the two-year period helped refine what emerged as a database of properties proposed, planned, underway or completed during 2014 and 2015. The values of all projects included in the database were determined through a combination of steps, including the use of their estimated values as published in the sources analyzed, cross-checking the properties with the Dallas and Collin county appraisal districts where possible, and augmenting all information with a review for accuracy by commercial real estate analysts.

To understand how the effects of development projects constructed within a quarter-mile of DART stations ripple throughout the economy of the Dallas-Fort Worth region, IMPLAN was used to create economic models based on the spending data provided. To better understand this process, a brief look at how impacts are calculated for the development of a property is helpful. Direct effects are the result of the money initially spent in the region by real estate developers, builders and construction companies for the completion of a project. This includes money spent to pay employee salaries, purchase supplies and maintain other operating expenses. Indirect effects are the result of business-to-business transactions. When suppliers to the companies driving the development (e.g., an accounting firm) purchase services or supplies, they create the indirect effect. When the employees of the real estate developers, builders, construction companies and their suppliers spend their income, this causes the induced effect. If the sum of all the activity from direct, indirect and induced impacts is greater than the combined spending of the developer, this is referred to as the multiplier effect. For more detail concerning how the economic impacts were calculated in this study, please see Appendix A.

## Results

What follows are descriptions of the economic and fiscal impacts for “Projects: Completed and Under Construction” and “Projects: Planned or Proposed.” It should be noted that the economic impacts for projects not yet in the construction phase are offered as economic scenarios of what may happen if the projects in question come to fruition. It is reasonable to assume that some of the projects planned or proposed may never make it to the construction phase. It is also important to keep in mind that while dollar values are associated with projects as they are announced, once reaching the construction phase projects may be expanded or contracted in scale and material costs may have fluctuated from initial projections. These uncertainties can result in direct spending on a project that is higher or lower than previous expectations.

### **Projects: Completed or Under Construction — Total**

Construction activity within a quarter mile of DART rail stations in 2014 and 2015 resulted in significant economic activity for the Dallas-Fort Worth region. The projects either in the construction phase or completed in this time frame resulted in over \$986 million in direct spending and a total economic impact of \$2.03 billion for the region. This activity created more than 12,000 construction-related jobs paying almost \$69 million in salaries, wages and benefits (Table 1).

Table 1. Projects: Completed or Under Construction, 2014 – 2015	
Description	Impact
Direct Impact	\$986,175,066
Total Impact	\$2,030,315,970
Labor Income	\$703,717,303
Employment	12,157
State and Local Taxes*	\$69,232,886
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

When the projects are grouped together according to function, further insight is gained concerning the economic effects of differing types of development.

### Projects: Completed or Under Construction — Non-Residential

Impacts generated by activity in the non-residential sector are the largest out of all the sectors. The non-residential sector includes office buildings, retail stores, hotels, training facilities, mixed-use developments and public projects such as libraries, convention centers and police headquarters. Direct spending of \$181 million on non-residential real estate development projects resulted in a total economic impact of \$336 million for the Dallas-Fort Worth region. This activity supported just over 2,000 construction-related jobs paying \$127 million in salaries, wages and benefits. State and local fiscal impacts amounted to \$10.5 million (Table 2).

Table 2. Projects: Completed or Under Construction – Non-Residential, 2014 - 2015	
Description	Impact
Direct Impact	\$181,752,260
Total Impact	\$336,040,875
Labor Income	\$127,231,184
Employment	2,077
State and Local Taxes*	\$10,542,958
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

### Projects: Completed or Under Construction — Multi-Family Residential Impacts

The multi-family residential sector includes apartment complexes and multi-family residential units within a quarter mile radius of DART stations. Multi-family residential projects were directly responsible for \$796 million in direct spending, creating significant indirect and induced impacts



for a combined total impact of over \$1.6 billion. This activity supported almost 10,000 construction-related jobs paying \$570 million in salaries, wages and benefits. State and local taxing entities received \$58 million as a result of these development projects (Table 3).

Table 3. Projects: Completed or Under Construction – Multi-Family Residential, 2014 – 2015	
Description	Impact
Direct Impact	\$796,422,799
Total Impact	\$1,678,363,786
Labor Income	\$570,754,859
Employment	9,980
State and Local Taxes*	\$58,132,516
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

### Projects: Completed or Under Construction — Single-Family Residential

The single-family residential sector showed the weakest economic impact out of the categories analyzed. A total of \$8 million in spending provided a modest \$15 million in total economic impacts for the Dallas-Fort Worth region. This activity facilitated 101 construction-related jobs paying \$5.7 million in wages, salaries and benefits. State and local tax revenues from single-family residential development are also comparably low, with \$557,412 reaching city and state coffers (Table 4).

Table 4. Projects: Completed or Under Construction – Single-Family Residential, 2014 – 2015	
Description	Impact
Direct Impact	\$8,000,000
Total Impact	\$15,911,309
Labor Income	\$5,731,266
Employment	101
State and Local Taxes*	\$557,412
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

### Projects: Planned or Proposed — Totals

As the spending for projects under construction or completed suggests, real estate development has recovered from the 2007-2009 recession in the Dallas-Fort Worth region. In addition, the region is one of the fastest-growing nationwide in terms of population and continues to be the destination for corporate relocations.<sup>6 7</sup> As a result, many real estate development projects were



proposed or in the planning stages in 2014 and 2015 that fall within a quarter-mile of DART rail stations. To gain perspective of the magnitude of these projects and their potential impacts on the Dallas-Fort Worth region, the reported details (e.g., square footage, construction value, use classification) of 11 projects were captured from various media outlets, placed into a database, then verified by a third party to ensure accuracy of the media reports.

The estimated value of the 11 projects either in the planning stages or proposed in 2014 and 2015 offers potential for significant economic impact on the Dallas-Fort Worth region. Potential direct spending of \$2.7 billion to complete the projects in question would result in potentially \$5.1 billion in total economic impact for the region. This activity would create more than 31,000 jobs paying almost \$2 billion in salaries, wages and benefits and generate \$160 million in state and local tax revenues (Table 5).

Table 5. Projects: Planned or Proposed, 2014 - 2015	
Description	Impact
Direct Impact	\$2,746,789,671
Total Impact	\$5,103,459,207
Labor Income	\$1,924,425,687
Employment	31,490
State and Local Taxes*	\$160,779,265
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

As with projects that are completed or under construction, when the projects are grouped together according to function, further insight is gained concerning the potential economic effects. Unlike projects that are completed or under construction, projects proposed or already in the planning stages are less varied in scope and fall into the “Non-Residential” and “Multi-Family” categories.

### Projects: Planned or Proposed — Non-Residential

The office buildings, mixed-use developments, public projects and more that are proposed or in the planning stages are estimated to provide \$2.6 billion in direct spending, which would result in a total economic impact of almost \$5 billion for the Dallas-Fort Worth region. This activity would provide for just over 30,000 construction-related jobs paying over \$1.8 billion in salaries, wages and benefits. State and local fiscal impacts would amount to close to \$154 million (Table 6).

<b>Table 6. Projects: Planned or Proposed – Non-Residential, 2014 - 2015</b>	
<b>Description</b>	<b>Impact</b>
Direct Impact	\$2,650,329,668
Total Impact	\$4,900,181,530
Labor Income	\$1,855,297,812
Employment	30,281
State and Local Taxes*	\$153,738,452
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

### Projects: Planned or Proposed — Multi-Family Residential Impacts

If fully realized, the apartment complexes and multi-family residential units planned or proposed within a quarter-mile radius of a DART station may result in \$96 million in direct spending and \$203 million of total economic impact. This activity would support 1,208 construction-related jobs paying nearly \$69 million in salaries, wages and benefits. State and local taxing entities would receive \$7 million in revenues if these development projects were completed (Table 7).

<b>Table 7. Projects: Planned or Proposed – Multi-Family, 2014 - 2015</b>	
<b>Description</b>	<b>Impact</b>
Direct Impact	\$96,460,004
Total Impact	\$203,277,677
Labor Income	\$69,127,875
Employment	1,208
State and Local Taxes*	\$7,040,811
* Includes state and local sales and use taxes, property taxes, and license and permit fees. Source: IMPLAN	

## Conclusion

The Dallas-Fort Worth region's economy weathered the recessionary period between 2007 and 2009 better than most metropolitan regions in the United States. The substantial development within a quarter-mile of DART stations analyzed in our last report attests to the region's economic health. The current building boom the region is experiencing is reflected in the number of projects "Completed or Under Construction" while the continued health and growing strength of the region's economy is portrayed in the billions of dollars of projects currently in the planning stages or being proposed.

As this office has done over the past 16 years, the total values of properties near DART stations has been aggregated over the 2014-2015-time period. In Table 8, we add to this the values found in Section II of this report for public projects, as well as Section I values from previous studies. Over the 2014-2015-time period, the total property values, including "Completed or Under Construction" and "Planned or Proposed," summed to \$3.7 billion. When added to the previous totals, total property values near DART stations amount to \$10.8 billion (Table 8).

Table 8. Total Property Values 1999 - 2015	
1999-2013: Private	\$5,300,000,000
1999-2015: Public	\$1,800,000,000
2014-2015: Private	\$3,700,000,000
<b>Total Property Value</b>	<b>\$10,800,000,000</b>

The trend to develop properties near light rail stations extends across the nation. Connectivity and multimodal access are increasingly important in a Texas that is rapidly urbanizing – this is especially true in the Dallas-Fort Worth region. The 27 projects completed, under construction, planned or proposed represent not only the region's commitment to multimodal transportation options and an urban landscape that reflects the importance of those options, but billions of dollars in economic activity and tens of thousands of jobs throughout the region.



## H. DART FACTS

DART is a regional transportation authority created pursuant to Chapter 452 of the Texas Transportation Code (the “Act”). Our boundaries include the corporate limits of 13 North Texas cities and towns, and our headquarters are located in Dallas, Texas. Under the Act, we are authorized to provide public transportation and complementary services within such cities and towns.

DART has the longest light rail system in the U.S. Please see the inside cover of this document for a map of our light rail system, and the *Who We Are Section* for a map of our service area. Exhibit V.30 provides general information about DART.

Exhibit V.30  
DART Fast Facts

<b>Agency Overview</b>		
15 Board Members	FY 2016 sales tax revenue \$545.1 million	16-county region population – 6.5 million (2010 Census)
13 participating cities providing 1 cent sales tax	700 square mile Service Area	3,719 budgeted employees for FY 2016
	Service Area population 2.3 million (2010 Census)	Contracted service with Arlington and Mesquite
<b>Ridership</b>		
Mode	FY16 Annual	FY16 Average Weekday
Bus	33.7 million	113,100
Light Rail	29.7 million	98,000
Commuter Rail	2.1 million	7,400
Paratransit	816,200	2,780
Vanpool	789,000 (185 Vanpools)	3,100
Total System	67.1 million	223,380
<b>Operations and Performance (FY16)</b>		
<u>Fixed Route Revenue Miles</u>	<u>Service Quality: On-Time Performance</u>	<u>Subsidy per Passenger</u>
Annual Bus Revenue Miles – 27,499,916	Bus – 80%	Subsidy per Passenger – Total System – \$5.93
Annual LRT Revenue Car Miles – 9,829,532	LRT – 94%	Subsidy per Passenger – Fixed Route – \$5.56
Annual Commuter Rail Revenue Car Miles – 1,164,706	TRE – 97%	
Annual Demand Response Revenue Miles – 7,600,407		

Exhibit V.30  
DART Fast Facts (cont'd)

<b>Fleet Overview</b>		
<b>Bus/Paratransit</b>	<b>Light Rail</b>	<b>Commuter Rail</b>
476 NABI (CNG) Buses Vehicle length: 30 feet and 40 feet Capacity: Up to 37 seats	163 Kinkisharyo Super LRVs Vehicle length: 123'8" Capacity: 94 seated/274 crush (165 peak per DART policy)	9 TRE locomotives Vehicle length: 58'2"
15 NABI Suburban Buses Vehicle length: 40 feet Capacity: 41 seats		17 bi-level coaches Vehicle length: 85 feet Capacity: 152 seats
123 Arboc Buses (CNG)  Vehicle length: 26 feet Capacity: 17 seats	<b>Paratransit</b>	8 bi-level cab cars Vehicle length: 85 feet
46 New Flyer (CNG) Vehicle Length: 26 Feet Capacity: 39	80 Starcraft Vehicle length: 22 feet Capacity: 6-10 seated / 2-3 wheelchair  Non-dedicated fleet of 116 Braun entervans	Capacity: 132 to 138 seats
<b>Facilities</b>		
<b>Bus</b>	<b>Light Rail</b>	<b>Commuter Rail</b>
11,271 bus stops	64 stations – 53 at-grade; 10 aerial; 1 tunnel	10 stations (5 in DART Service Area)
129 shelters, 59 enhanced shelters, 1,442 benches	2 operations & maintenance facilities	1 operations & maintenance facility
3 operations & maintenance facilities	<b>Streetcar</b>	<b>Administration</b>
	6 Streetcar Sheltered Stations	Agency Headquarters DART Police Headquarters
<b>Infrastructure</b>		
<ul style="list-style-type: none"> <li>93 LRT miles,</li> <li>(3.2 miles in tunnel)</li> </ul>	<ul style="list-style-type: none"> <li>33.8 TRE Miles</li> </ul>	<ul style="list-style-type: none"> <li>2.5 Streetcar Miles</li> </ul>
<b>Budget (FY17)</b>	<b>Efficiency Measures (FY16)</b>	
\$494.9M Operating Budget	Farebox Recovery:	Subsidy per Passenger:
\$289.1M Capital Budget	Bus – 12.3%	Bus – \$6.19
\$191.5M Debt Service Budget	LRT – 16.6%	LRT – \$4.55
	CR – 27.6%	CR – \$9.00
\$563.6M Sales Tax Budget	Fixed Route Total – 15.3%	Paratransit – \$41.15 Vanpool – \$0.36

Exhibit V.30  
DART Fast Facts (cont'd)

<b><i>Rail Expansion Program</i></b>
Blue Line South Oak Cliff/UNT extension – 2.6 miles opened in October 2016
Future projects in planning: Program of Interrelated Projects
Red/Blue Line platform modifications
Second downtown LRT alignment (D2)
Central Dallas Streetcar Link
Cotton Belt Rail Service
<b><i>Economic and Fiscal Impacts</i></b>
DART capital spending on rail expansion from FY 2003 – FY 2017 resulted in:
Boosting regional economic activity by almost \$8.8 billion
Supporting more than 63,700 person-years of employment – an average of approximately 4,250 jobs per year for 15 years
Increasing total state and local government revenues by \$281 million
Existing, under construction and planned developments around DART stations total \$5.4 billion

DART currently consists of the following member jurisdictions: Addison, Carrollton, Cockrell Hill, Dallas, Farmers Branch, Garland, Glenn Heights, Highland Park, Irving, Plano, Richardson, Rowlett, and University Park. The DART Service Area is approximately 700 square miles and includes approximately 2.3 million people (see Exhibit V.31 for population and employment breakdown by city).

Exhibit V.31  
Service Area Population and Employment

City	Population 2010 Census	Population 2017 NCTCOG Forecast	% Population Change	Employment 2010 Census
Addison	13,056	15,730	20%	54,500
Carrollton	119,097	130,820	10%	77,600
Cockrell Hill	4,193	4,160	-1%	750
Dallas	1,197,816	1,257,730	5%	1,158,500
Farmers Branch	28,616	30,560	7%	119,000
Garland	226,876	234,710	3%	107,000
Glenn Heights	11,278	11,680	4%	1,350
Highland Park	8,564	8,510	-1%	2,500
Irving	216,390	234,710	8%	219,500
Plano	259,841	277,700	7%	135,400
Richardson	99,223	107,400	8%	120,500
Rowlett	56,199	57,840	3%	11,200
University Park	23,068	22,820	-1%	9,700
<b>Total Service Area</b>	<b>2,264,217</b>	<b>2,394,370</b>	<b>6%</b>	<b>2,017,500</b>
<b>16-County NCTCOG Region</b>	<b>6,539,950</b>	<b>7,246,350</b>	<b>11%</b>	<b>4,006,300</b>

Sources: 2010 Census and North Central Texas Council of Governments (NCTCOG) 2017 population estimates.



Blank page



## I. GLOSSARY/ACRONYMS

### Exhibit V.32 Glossary of Terms/Definitions

**Accessible** – As defined by FTA, a site, building, facility, or portion thereof that complies with defined standards and that can be approached, entered, and used by persons with disabilities.

**Accessible Service** – A term used to describe service that is accessible to non-ambulatory riders with disabilities. This includes fixed-route bus service with wheelchair lifts or paratransit service with wheelchair lift-equipped vehicles.

**Accidents per 100,000 Miles** – Measures vehicle accidents reported (Bus, Light Rail, TRE and Paratransit) per 100,000 miles of actual fixed route mileage. Management's objective is to reduce this ratio.

$$\text{Calculation} = [(Vehicle\ Accidents / Actual\ Mileage) * 100,000]$$

**Accounting Basis** -- DART uses the accounting principles and methods appropriate for a government enterprise fund. Financial statements are prepared on the accrual basis of accounting under which revenues and expenses are recognized when earned or incurred.

**Accrual Method of Accounting** – An accounting method that measures the performance and position of a company by recognizing economic events in the period they occur regardless of when cash transactions occur (i.e., recognize revenue in the period in which it is earned rather than when the cash is received; and recognize expenses when incurred rather than when cash is paid).

**ADA (The Americans with Disabilities Act of 1990)** – This federal act requires changes to transit vehicles, operations, and facilities to ensure that people with disabilities have access to jobs, public accommodations, telecommunications, and public services, including public transit.

**ADA Paratransit Service** – Non-fixed-route paratransit service utilizing vans and small buses to provide pre-arranged trips to and from specific locations within the service area to certified participants in the program.

**Administrative Ratio** – Measures administrative costs as a percentage of direct operating costs. It is management's objective to reduce this ratio. Administrative costs include (but are not limited to) executive management, finance, purchasing, legal, internal audit, human resources, marketing, board support, and administrative services. Administrative revenues include (but are not limited to) advertising revenue.

$$\text{Calculation} = [(Administrative\ Costs - Administrative\ Revenues) / (Direct\ Costs + Start-up\ Costs)]$$

**Ambulatory Disabled** – A person with a disability that does not require the use of a wheelchair. This would describe individuals who use a mobility aid other than a wheelchair or have a visual or hearing impairment.

**American Recovery and Reinvestment Act (ARRA)** – The American Recovery and Reinvestment Act was signed into law by President Barack Obama on February 17, 2009. ARRA included appropriations and tax law changes totaling approximately \$787 billion to support government-wide efforts to stimulate the economy. Goals of the statute include the preservation or creation of jobs and the promotion of an economic recovery, as well as the investment in transportation, environmental protection, and other infrastructure providing long-term economic benefits.

**Arbitrage** – Investment earnings representing the difference between interest paid on bonds and the interest earned on the investments made using bond proceeds.

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**Average Fare** (calculated by mode) – Represents the average fare paid per passenger boarding on each mode of service during the period.

*Calculation = (Modal Passenger Revenue - Commissions & Discounts) / (Modal Passenger Boardings)*

**Average Weekday Ridership** – The average number of passenger boardings on a weekday. This measurement does not include ridership on Saturdays, Sundays, or holidays.

**Balanced Budget** – A budget in which projected revenues equal projected expenses during a fiscal period.

**Bond Refinancing/Refunding** – The redemption (payoff) and reissuance of bonds to obtain better interest rates and/or bond conditions. This results in the defeasance of the earlier debt. See also *Defeasance*.

**Bus Rapid Transit (BRT)** – BRT combines the quality of rail transit and the flexibility of buses. It can operate on exclusive transitways, High Occupancy Vehicle (HOV) lanes, expressways, or ordinary streets. A BRT system combines intelligent transportation systems, technologies, transit signal priority (TSP), cleaner and quieter vehicles, rapid and convenient fare collection, and integration with land use policies.

**Capital** – Funds that finance construction, renovation, and major repair projects or the purchase of machinery, equipment, buildings, and land.

**Capital Expenditure** – A cost incurred to acquire a new asset, or add capacity/improve the functionality of an existing asset, or extend the useful life of an existing asset beyond its original estimated useful life. The asset will have an expected life of one or more years and a value of \$5,000 or more.

**Major Capital Transit Investment Program** – A federal grants program providing capital assistance for new fixed guideway, extensions of existing fixed guideway, or a corridor-based bus rapid transit system. This program includes New Starts, Small Starts, and Core Capacity projects.

**Car Mile or Vehicle Mile** – A single bus, rapid transit car, light rail vehicle, or commuter rail car traveling one mile.

**CAFR** – Comprehensive Annual Financial Report. It includes audited financial statements, financial notes, and related materials.

**CMAQ** – Congestion Mitigation and Air Quality. A federal program to fund transportation projects that will contribute to the attainment of national ambient air quality standards.

**Certified Riders** – Passengers who have been deemed eligible for Paratransit services because their disability inhibits them from functionally accessing fixed route services. Eligibility is determined in accordance with the criteria outlined in the Americans with Disabilities Act of 1990.

**Complaints per 100,000 Passengers** – Modal quality ratio that measures the number of service complaints per 100,000 passenger boardings (or per 1,000 boardings for Paratransit). Management's objective is to reduce this ratio.

*Calculation = [(Service Complaints Received / Modal Passenger Boardings) \* 100,000]*

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**Cost per Revenue Mile** – Efficiency ratio that measures the cost of providing a revenue mile of service. This measurement is based on fully loaded costs and excludes operating revenues. Management's objective is to reduce this ratio.

*Calculation = [Total Operating Expenses / Revenue Miles]*

**Crimes against persons** – Monitoring provides an overview of patron safety by detailing the frequency of crimes that occur on the DART system. Management's objective is to reduce this ratio.

*Calculation = [Crimes Against Persons/Total Incidents]*

**Crimes against property** – Monitoring provides an overview of the safety of our customer's property. Management's objective is to reduce this ratio.

*Calculation = [Crimes Against Property/Total Incidents]*

**Debt Service** – The payment of interest and the repayment of principal on long-term borrowed funds according to a predetermined schedule.

**Debt Service Coverage** – The measure of the Agency's ability to meet debt service payments. It is a ratio of cash flows to debt service requirements. See also *External Coverage Ratio* and *Internal Coverage Ratio*.

**Defeasance of Bonds** – The redemption of older higher-rate debt prior to maturity usually with replacement by new securities bearing lower interest rates.

**Demand Responsive** – Paratransit passengers call to request service; therefore, that service is provided on demand, and is considered to be demand responsive, rather than scheduled service. In addition, DART provides some non-traditional demand responsive service that may not be Paratransit related, such as DART OnCall.

**Depreciation** – Expiration in the service life of fixed assets, other than wasting assets, attributable to wear and tear, deterioration, action of the physical elements, inadequacy, and obsolescence. The portion of the cost of a fixed asset, other than a wasting asset, charged to expense during a particular period.

**Enterprise Fund** – Gives the flexibility to account separately for all financial activities associated with a broad range of government services. It establishes a separate accounting and financial reporting mechanism for services for which a fee is charged. Revenues and expenses of the service are segregated into a fund with financial statements separate from all other activities.

**Express Bus or Route** – A suburban or intercity route that operates a portion of the route without stops or with a limited number of stops.

**External Coverage Ratio** – The ratio of gross sales tax revenues to annual debt service. DART standards (and the financial markets in general) require that this ratio be at least two.

**Farebox Recovery Ratio** – the proportion of operating cost that is generated by passenger fares.

*Calculation = [Modal Farebox Revenue / Modal Operating Expense]*

**Farebox Revenue** – All revenue from the sale of passenger tickets, passes, or other instruments of fare payment.

**Fares** – The amount charged to passengers for use of various services.

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**FAST Act – Fixing America’s Surface Transportation Act** - FAST Act was signed into law in December 2015 to provide funding for surface transportation.

**FEMA – Federal Emergency Management Agency** – An agency of the U.S. Department of Homeland Security. This agency provides grant money to transit systems under the Freight Rail Security Grant Program and other such programs.

**FTA (Federal Transit Administration)** – The FTA is the federal agency that helps cities and communities provide mobility to their citizens. Through its grant programs, FTA provides financial and planning assistance to help plan, build, and operate bus, rail, and paratransit systems.

**Fiscal Year** – DART’s fiscal year is from October 1 through September 30 of the following year.

**Fixed-Route Service** – Service that operate according to fixed schedules and routes (for DART that service is bus, light rail, commuter rail, and streetcar).

**Full Funding Grant Agreement (FFGA)** – The Federal Transit Administration uses a FFGA to provide financial assistance for new start projects and other capital projects. The FFGA defines the project, including cost and schedule; commits to a maximum level of federal financial assistance (subject to appropriation); covers the period of time for the project; and helps to manage the project in accordance with federal laws and regulations. The FFGA assures the grantee of predictable federal financial support for the project while placing a ceiling on the amount.

**Full-Time Equivalent** – A measurement equal to one staff person working a full-time work schedule for one year (2,080 hours).

**Fund Balance** – The difference between a fund’s assets and liabilities (also called Fund Equity). Often this term refers to moneys set aside or earmarked for future needs. DART uses “reserves” as well as “funds” to ensure resources are available for anticipated and unanticipated needs. See **Funds and Fund Balances** at the end of the Twenty-Year Financial Plan portion of this document for yearly amounts, and Board-adopted financial policies regarding funds and reserves in the preceding pages of this Reference section.

**Formula Grant** - Allocations of federal funding to states, territories, or local units of government determined by distribution formulas in the authorizing legislation and regulations. To receive a formula grant, the entity must meet all the eligibility criteria for the program, which are pre-determined and not open to discretionary funding decisions. Formula grants typically fund activities of a continuing nature and may not be confined to a specific project. Common elements in formulas include population, proportion of population below the poverty line, and other demographic information.

**General Operating Account** – The operating account that is used to account for all financial resources and normal recurring activities except for those required to be accounted for in another fund.

**Grants** – Monies received from local, federal, and state governments to provide capital or operating assistance.

**Headway** – The time span between service vehicles (bus or rail) on a specified route.

**Internal Coverage Ratio** – A ratio which has a numerator of gross sales tax revenues plus operating revenues plus interest income less operating expenses, and a denominator of annual debt service on long-term debt. DART standards state the goal that this ratio be at least one—i.e., total revenues less operating expenses should be at least as great as total annual debt service.

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**JARC (Job Access Reverse Commute)/New Freedom** – JARC is a federally funded program that provides operating and capital assistance for transportation services planned, designed, and carried out to meet the transportation needs of eligible low-income individuals and of reverse commuters regardless of income. The New Freedom program provides new public transportation services and public transportation alternatives beyond those required by the Americans with Disabilities Act (ADA).

**Labor Expenditure** – The cost of wages and salaries (including overtime) to employees for the performance of their work.

**Line Item** – An appropriation that is itemized on a separate line in a budget or financial plan.

**Linked Trip** – A single one-way trip without regard for the number of vehicles boarded to make the trip. For example, a commute from home to work achieved by boarding a bus to a train, and then taking another bus after leaving the train, represents one linked trip. See also *Unlinked Trip*.

**Maintenance Expenditure** – Expenditures for labor, materials, services, and equipment used to repair and service transit and service vehicles and facilities.

**Mean Distance Between Service Calls** – Quality ratio that measures the average number of miles a vehicle operates before a service call occurs. Management's objective is to increase this ratio.

$$\text{Calculation} = [\text{Total Miles Operated} / \text{Total \# of Service Calls}]$$

**MAP-21 – The Moving Ahead for Progress in the 21st Century Act** was signed into law by President Obama on July 6, 2012. MAP-21 provides over \$105 billion in funds for surface transportation programs in 2013 and 2014.

**New Starts Program** – A federal program which provides funding for fixed guideway transit projects which utilize and occupy a separate right-of-way or other high occupancy vehicle.

**Obligations** – Funds that have been obligated/committed to a specific purpose, but have not yet been expended.

**On-Time Performance** – Quality ratio that measures how often a service is on time (i.e., at a designated pick-up spot within a predetermined timeframe). The timeframe differs based on mode and frequency of service. Bus Operations currently uses 59 seconds early and 4 minutes and 59 seconds late. Light rail uses 1 minute early and 4 minutes late. Commuter rail uses 5 minutes late as required by FRA. Paratransit uses 20 minutes early and late. Management's objective is to increase this ratio.

$$\text{Calculation} = [(\# \text{ Scheduled Trips Sampled} - \# \text{ of Times Early or Late}) / \text{Total \# of Scheduled Trips Sampled}]$$

**Operating Budget** – The planning of revenue and expenditures for a given period of time to maintain daily operations.

**Off-Peak** – Non-rush hour time periods.

**Operating Revenues** – Includes the revenues obtained from the farebox, special events service, advertising, signboard rentals, leases, pass sales, operating grants, shuttle services, other and other miscellaneous income. Operating revenues do not include sales tax revenue, interest income, or gain on sale of assets.

**Operating Expenses** – Includes the expenses required to operate DART's revenue services, and general mobility projects. Operating expenses do not include the cost of road improvements or the staff costs associated with DART's capital programs.

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**Paratransit Service** – Any transit service required by the 1990 Americans with Disabilities Act (ADA), generally characterized by pre-arranged curb-to-curb service provided by accessible vehicles.

**Passenger Canceled Trips Ratio** – Measures the percentage of times that Paratransit users schedule a trip, then cancel the trip. Total scheduled trips include actual trips made, cancellations, and no-shows.

$$\text{Calculation} = [\# \text{ of Canceled Trips} / \text{Total} \# \text{ of Scheduled Trips}]$$

**Passenger Mile** – A single passenger traveling one mile.

**Passenger No-Show Ratio** – Quality measurement for Paratransit service that measures the number of times a Paratransit user makes a reservation and does not show-up for the ride. This measurement is different from a cancellation. Management's objective is to reduce this number so that other trips can be scheduled in that timeframe. Users can lose the ability to access the Paratransit system if they have an excessive number of no-shows.

$$\text{Calculation} = [\# \text{ of No Shows} / \text{Total} \# \text{ of Scheduled Trips}]$$

**Passengers per Hour – Actual** – The total number of Paratransit passengers actually carried, divided by the total hours of revenue service. Management's objective is to increase this number.

$$\text{Calculation} = [\text{Actual Passenger Boardings} / \text{Revenue Hours}]$$

**Passengers per Hour - Scheduled** – The total number of Paratransit passengers scheduled per hour of revenue service. Management's objective is to increase this number.

$$\text{Calculation} = [\text{Scheduled Passenger Boardings} / \text{Revenue Hours}]$$

**Passengers per Mile** – Effectiveness ratio that measures route productivity by comparing the number of passenger boardings to the number of revenue miles. Management's objective is to increase this ratio.

$$\text{Calculation} = [\text{Passenger Boardings} / \text{Revenue Miles}]$$

**Peak Period** – Morning or evening rush hour.

**Percentage of Trips Completed** – Quality measurement for Paratransit service that measures the number of times DART completes a scheduled passenger pick-up. Management's objective is to increase this ratio.

$$\text{Calculation} = [(\# \text{ of Actual Trips} - \# \text{ of Trips Missed}) / \# \text{ of Actual Trips}]$$

**Principal** – The amount borrowed or the amount still owed on a loan, separate from the interest.

**Reduced Fares** – Discounted fares for children elementary through middle school, seniors and non-Paratransit disabled with valid ID; high school fares are applicable on bus and rail on Monday through Friday only; college/trade school valid on bus and rail with a DART Student ID.

**Repurchase Agreement** – A money-market transaction in which one party sells securities to another while agreeing to repurchase those securities at a later date.

Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**Reserves** – DART uses “reserves” as well as “funds” to ensure resources are available for anticipated and unanticipated needs. See **Funds and Fund Balance** at the end of the Twenty-Year Financial Plan portion of this document for yearly amounts, and Board-adopted financial policies regarding funds and reserves in the preceding pages of this Reference section.

**Revenue Bond** – A bond on which debt service is payable solely from a restricted revenue source (or sources)—for example sales tax revenues.

**Revenue Car Miles** – Total miles operated by LRT or TRE trains in revenue service multiplied by the number of cars operated as part of each train. Power consumption and maintenance requirements are driven by the number of car miles operated. As a result, one area of management focus is to optimize the number of cars operated per train based on ridership and Board-adopted loading standards.

$$\text{Calculation} = \text{Sum for all trips of } [\# \text{ of Revenue Train Miles operated} * \# \text{ of cars in the train}]$$

**Revenue Miles or Hours** – Measures the number of miles, or hours, that a vehicle is in revenue service (i.e., available to pick up passengers) and includes special events service. This measure does not include “deadhead miles” which are the miles between the bus maintenance facility and the beginning and/or end of a route.

**Reverse Commute** – City-to-suburb commute. This phrase refers to the fact that most riders commute from the suburbs to the city.

**Ridership** – For the total system, this is the total number of passengers boarding a DART vehicle. Transfers are included in total ridership and passenger boarding counts (e.g., if a person transfers from one bus to another bus or from a bus to rail, this is counted as two passenger boardings). Fixed route ridership counts passenger boardings (including transfers) for bus, light rail, streetcar, and commuter rail only. See also *Unlinked Trip*.

**Sales Taxes for Operating Expenses** – Measures the amount of sales taxes required to subsidize operations. 100% minus this percentage is the amount of sales taxes available for capital and road improvement programs. Management's objective is to reduce this ratio.

$$\text{Calculation} = [(\text{Operating Expenses} - \text{Operating Revenues} - \text{Interest Income}) / \text{Sales Tax Revenues}]$$

**Scheduled Miles Per Hour** – Represents the average overall speed of the modal service as reflected in the schedule, with stops and recovery time included. This value reflects both the composition of the service (i.e., express and local routes for bus mode) and the efficiency of the schedule (e.g., reducing recovery time in the schedule improves average speed).

$$\text{Calculation (for bus)} = [\text{Scheduled Miles} / \text{Scheduled Hours}]$$

$$\text{Calculation (for rail)} = [\text{Scheduled Train Miles} / \text{Scheduled Train Hours}]$$

**Service Hours** – Paratransit service hours are also known as revenue hours. They are calculated from the time of the first passenger pick-up until the time of the last passenger drop-off. Travel time to and from the garage is not included.

**Service Levels** – Also known as Telephone Service Factor (TSF), measures the response to calls within a specified period. This measurement is being used to monitor the effectiveness of the main call center (CI: 214-979-1111) within 1 minute, the response to Paratransit scheduling issues within 1 minute, and the response to Where's My Ride inquiries within 2 minutes.

$$\text{Calculation} = (\# \text{ of Calls Answered}) / (\# \text{ of Calls Received Within the Specified Time Period})$$



Exhibit V.32  
Glossary of Terms/Definitions (cont'd)

**Start-Up Costs** – Costs associated with the implementation of a major new light rail, commuter rail, or streetcar expansion that are incurred prior to the service implementation (e.g., vehicle and system testing).

**State of Good Repair (SGR)** – Capital investment in infrastructure maintenance in order to improve the condition of current transit facilities and provide safe, reliability service.

**Subscription Service** – Paratransit passengers traveling at least three times per week to the same location at the same time can be placed on "subscription service." This service is "automatically" scheduled for the passenger, and it is not necessary for the passenger to call and schedule the service.

**Subsidy per Passenger** – Efficiency ratio, which measures the tax subsidy required for each passenger boarding for a mode or combination of modes. Management's objective is to reduce this ratio.

$$\text{Calculation} = [(\text{Operating Expenses} - \text{Operating Revenues}) / \text{Passenger Boardings}]$$

**Total Vehicle Miles** – The sum of all miles operated by passenger vehicles, including mileage when no passengers are carried.

**Transit Asset Management (TAM)** – Measurement of the condition of capital assets such as equipment, rolling stock, infrastructure, and facilities.

**Transit-Oriented Development (TOD)** – Mixed-use development of residential, commercial, and retail uses within walking distance of a transit station or bus route.

**Transit Signal Priority** – Transit signal priority either gives or extends a green signal to public transit vehicles under certain circumstances to reduce passenger travel times, improve schedule adherence, and reduce operating costs.

**TIGER (Transportation Investment Generating Economic Recovery)** – A program administered by The U.S. Department of Transportation for capital investments in surface transportation infrastructure that are to be awarded on a competitive basis for projects that will have a significant impact on the Nation, a metropolitan area, or a region with regards to fostering economic development.

**Unlinked Trip** – A trip involving a single boarding and alighting from a transit vehicle. For example, a commute from home to work achieved by boarding a bus to a train, and then taking another bus after leaving the train, represents three unlinked trips. See also *Linked Trip*.

**Vanpool** – Consists of a group of 5 to 15 people who regularly travel together to work (typically 30 miles or more roundtrip) in a DART-provided van.

**Vehicle Revenue Mile** – Vehicle mile during which the vehicle is in revenue service (i.e., picking up and/or dropping off passengers).

**Yield to worst** – The lowest yield that you can earn from a bond when holding to maturity, absent a default. It is a measure that is used in place of **yield to maturity** with callable bonds. As callable bonds can be bought back before their stated maturity date, **yield to maturity** does not provide an accurate picture of what an investor can expect to earn. **Yield to worst** allows apples to apples comparisons of bonds with varying call features and coupon payments.

**Zero Denials** – A Federal mandate that in effect states that a provider cannot systematically deny Paratransit trips on an on-going basis.



Exhibit V.33  
Acronyms  
(Pages V-78 through V-82)

000s	Thousands
AAC	American Airlines Center
ABC	Activity-Based Costing
ADA	Americans with Disabilities Act of 1990
AHJ	Authority Having Jurisdiction
AMS	Analysis, Modeling, and Simulation
APC	Automatic Passenger Counters
APT	Area Personal Transit (Las Colinas)
APTA	American Public Transportation Association
APTS	Advanced Public Transportation Systems
APU	Auxiliary Power Unit
AREMA	American Railway Engineering & Maintenance-of-Way Association
ARRA	American Reinvestment & Recovery Act of 2009
ATIS	Advanced Traveler Information Systems
ATMS	Advanced Traffic Management Systems
ATU	Amalgamated Transit Union
AVA	Automated Voice Announcements
AVL	Automated Vehicle Locator
AVP	Assistant Vice-President
B	Billions
BABs	Build America Bonds
BBL	Barrel
BI	Business Intelligence
BNSF	Burlington, Northern & Santa Fe Railroad
BPP	Business Planning Parameter
BRT	Bus Rapid Transit
CABs	Capital Appreciation Bonds
CAD	Computer-Aided Dispatch
CAR	Condition Assessment Report
CBD	Central Business District
CCART	Collin County Area Rural Transit
CCTV	Closed Circuit Television
CDHP	Consumer-Directed Health Care Plan

CDL	Commercial Driver's License
CEO	Customer Experience Officer
CFPS	Comprehensive Fare Payment System
CIP	Capital Investment Plan
CIT	Continuous Improvement Team
CMAQ	Congestion Mitigation/Air Quality
CMGC	Construction Manager/General Contractor
CNG	Compressed Natural Gas
COA	Comprehensive Operations Analysis
COGNOS	Budget Software
COOP	Continuity of Operations
COPS	Community Oriented Policing Services (grant)
CP	Commercial Paper
CPTED	Crime Prevention Through Environmental Design
CPU	Central Processing Unit
CR	Commuter Rail
CROF	Central Rail Operating Facility
CRT	Customer Response Team
CS	Central Services
CSSAC	Construction Safety and Security Advisory Committee
CSSP	Construction Safety and Security Program
CST	Customer Service Team
CTC	Centralized Traffic Control
CVB	Convention and Visitors Bureaus
CY	Current Year
D2	Dallas Central Business District Second Alignment
DART	Dallas Area Rapid Transit
DB	Defined Benefit Retirement Plan
DC	Defined Contribution Retirement Plan
DCTA	Denton County Transportation Authority
DCURD	Dallas County Utility and Reclamation District
DFW	Dallas/Fort Worth International Airport



DGE	Diesel Gallon Equivalent
DGNO	Dallas, Garland, and Northeastern Railroad
DLM	Division Level Measurement
DMU	Diesel Multiple Unit
DMWBE	Disadvantaged, Minority, and Woman-Owned Business Enterprise
DOE	Department of Energy
DOT	Department of Transportation
DSC	DART Safety Committee
EA	Environmental Assessment
EAP	Employee Assistance Program
ED	East Dallas Operating Facility
EEO	Equal Employment Opportunity
EEO/AA	Equal Employment Opportunity/Affirmative Action Plan
ELT	Executive Leadership Team
EMF	Equipment Maintenance Facility
EMS	Emergency Management System
EMT	Executive Management Team
EOY	End of Year
EPA	Environmental Protection Agency
EPO	Exclusive Provider Organization
EVP	Executive Vice President
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act
FFGA	Full Funding Grant Agreement
FGM	Fixed-Guideway Modernization
FHWA	Federal Highway Administration
FICA	Federal Insurance Contributions Act
FLSC	Fire Life Safety Committee
FP	Financial Plan
FRA	Federal Railroad Administration
FS-B	Financial Standards-Business Planning Parameter
FS-D	Financial Standards-Debt Service

FS-G	Financial Standards-General
FT	Full-Time
FTA	Federal Transit Administration
FWTA	Fort Worth Transportation Authority
FY	Fiscal Year
FYxxA	Actual year-end cost for FY(xx)
FYxxB	Budget cost for FY(xx)
FYxxP	Projected cost for FY(xx)
G&A	General & Administrative
GAAP	General Accepted Accounting Principles
GASB	Government Accounting Standards Board
GLO	General Land Office
GM	General Mobility
GPS	Global Positioning System
HEP	Head End Power
HMO	Health Maintenance Organization
HOT	High-Occupancy/Tolling (lanes)
HOV	High Occupancy Vehicle (lane)
HQ	Headquarters
HRA	Health Reimbursement Account
HVAC	Heating, Ventilation, Air Conditioning
I-1	Irving LRT Line Section – Northwest Hwy. To Las Colinas Urban Center
I-2	Las Colinas Urban Center to State Hwy. 161
I-3	State Hwy. 161 to DFW International Airport
IACP	International Association of Chiefs of Police
ICM	Integrated Corridor Management
IH	Interstate Highway
ILA	Interlocal Agreement
IMA	Information Management & Analytics
IRS	Integrated Radio System
IRV	Irving



IT	Information Technology
ITC	Intermodal Transportation Center
ITIL	IT Infrastructure Library
ITP	Integrated Test Plan
ITS	Intelligent Transportation System
IVR	Interactive Voice Response
JARC	Joint Access/Reverse Commute (grant)
JHA	Jurisdictions Having Authority
JV	Joint Venture
K	Thousands
kHz	Kilohertz
KPI	Key Performance Indicator(s)
kWh	Kilowatt Hour
LAN	Local Area Network
LAP/CMS	Local Assistance Program/Congestion Management System
LBJ	“Lyndon B. Johnson” Freeway
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LGC	Local Government Corporation
LNG	Liquefied Natural Gas
LPA	Locally Preferred Alternative
LPIS	Locally Preferred Investment Study
LRT	Light Rail Transit
LRV	Light Rail Vehicle
LRWPP	Light Railway Worker Protection Plan
LT or LTD	Long-Term Debt or Long-Term Disability
M	Millions
MAP-21	Moving Ahead for Progress in the 21st Century
MATA	McKinney Avenue Transit Authority
MAX	Metro Arlington Express

MBE	Minority-Owned Business Enterprise
MDC	Mobile Data Computer
MDT	Mobile Data Terminal
MIS	Major Investment Study
MLK	Martin Luther King, Jr.
MMS	Mobility Management Services
MOU	Memorandum of Understanding
MOWIS	Maintenance of Way Information System
MPH	Miles Per Hour
MPLS	Multi-Powered Label Switching
MS	Microsoft
MV	MV Transportation, Inc. (Paratransit Provider)
NABI	North American Bus Industries (now part of New Flyer Industries, Inc.)
NC LRT	North Central Light Rail Transit
NCIC	National Criminal Information Center
NCTCOG	North Central Texas Council of Governments
NETRMA	Northeast Texas Regional Mobility Authority
NFC	Near Field Communications
NIMS	National Incident Management System
NOC	Network Operations Center
NOx	Nitrogen Oxide
NRV	Non-Revenue Vehicle
NSO	Network Security Operations
NTD	National Transit Database
NTTA	North Texas Tollway Authority
NW	Northwest Corridor
NW-1A	Northwest LRT Line Section (Downtown to American Airlines Center/Victory Station)
NW-1B	Victory Station to Inwood Station
NW-2	Inwood Station to Northwest Highway



NW-3	Northwest Highway to Valley View (Farmers Branch)
NW-4	Valley View to Frankford Rd (North Carrollton)
NWROF	Northwest Rail Operating Facility
O&M	Operations & Maintenance (contract)
O/S	Operating System
O/S EOY	Outstanding End-of-Year
OC	Oak Cliff
OCC	Operations Control Center
OCIP	Owner-Controlled Insurance Program
OCL	Operations Communications Liaisons
OCS	Overhead Catenary System
OEM	Original Equipment Manufacturer
OPEB	Other Post-Employment Benefits
Ops	Operations
OSHA	Occupational Safety Hazard Administration
OTP	On-time performance
P&D	Planning & Development
PA/VMB	Public Announcement/Variable Message Boards
PACE	Professionals Achieving Communication Excellence
PASS	Principal Arterial Street System
PBX	Private Branch Exchange
PCA	Personal Care Attendant
PCI	Payment Card Industry
PE/EIS	Preliminary Engineering/Environmental Impact Statement
PEC	Passenger Emergency Call
PMOC	Project Management Oversight Committee
PMP	Performance Management Plan
PMSA	Primary Metropolitan Statistical Area
PNM	PayNearMe
POS	Point of Sale

PPO	Preferred Provider Organization
PPP	Public/Private Partnership
PT	Part-Time
PTC	Positive Train Control
PTO	Paid Time Off
PTP	Pay-to-Platform
Q	Quarter
R	Registration (mark)
RDC	Rail Diesel Car
RFI	Request for Information
RFID	Radio Frequency Identification
RITA	Research and Innovative Technology Administration
RMS	Records Management System
ROTC	Refresher Operator Training Class
ROW	Right-of-Way
RPD	Rail Program Development
RPM	Reaching Performance Milestones
RR	Railroad
RRIF	Railroad Rehabilitation & Improvement Financing
RRM	Railroad Management
RTC	Regional Transportation Council
RTR	Regional Toll Roads
RWP	Roadway Worker Protection
S&I	Service & Inspection
S&W	Salaries & Wages
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SAP	Shift Assignment Pay
SDC	Secondary Data Center
SE	Southeast Corridor
SE-1A	Southeast LRT Line Section – Downtown to Fair Park
SE-1B	Fair Park to Hatcher
SE-2	Hatcher to Buckner Blvd.
SEAF	System Expansion & Acquisition Fund
SEJ	South East Junction

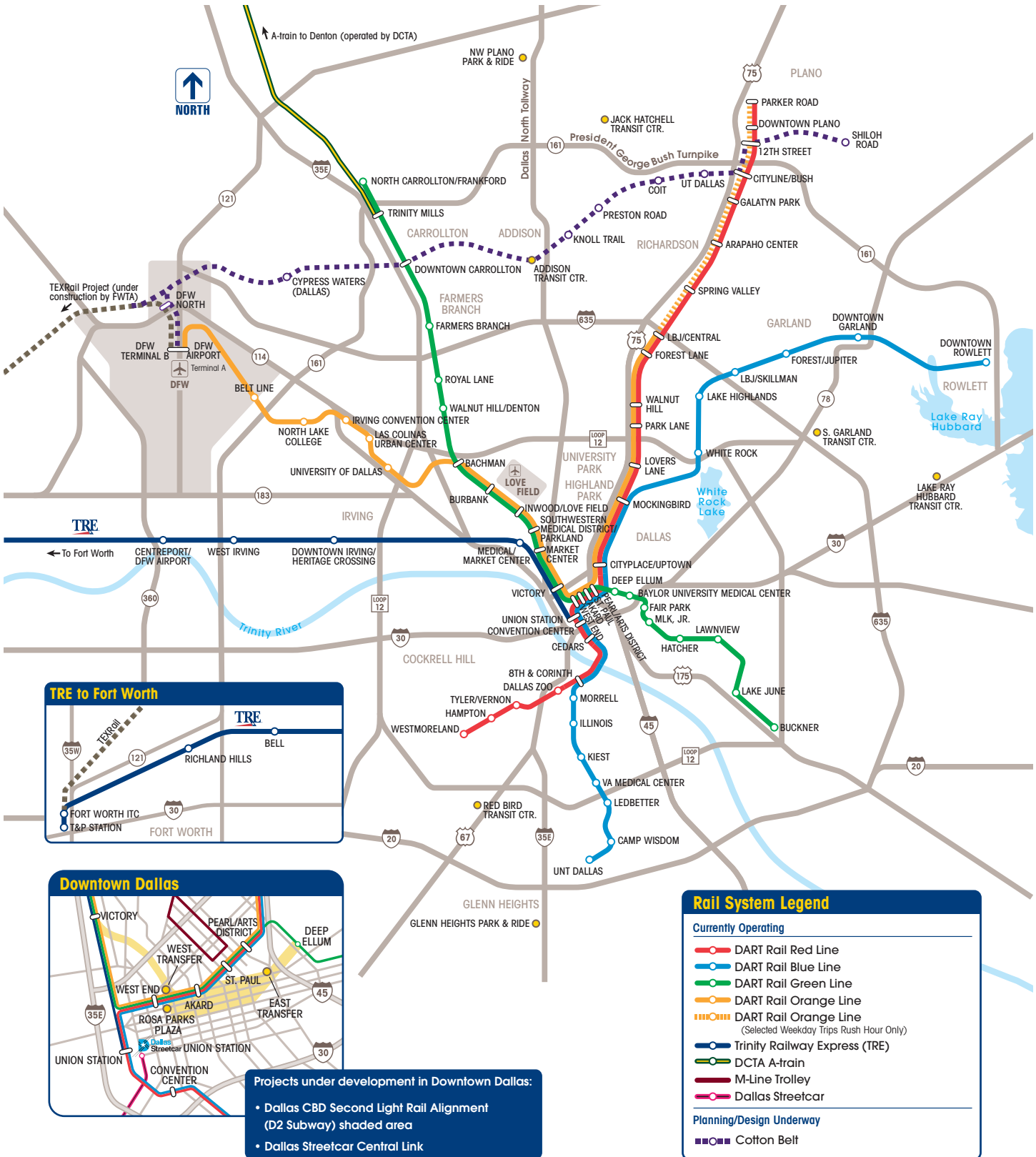


SGR	State of Good Repair
SH	State Highway
SIP	Service Incentive Pay
SLRV	Super LRV (LRV with additional low-floor section)
SM	Service Mark
SMS	Short Message Service
SMS	Safety Management System
SOCBOF	South Oak Cliff Bus Operating Facility
SOP	Standard Operating Procedure
SS	Support Services
SSCRT	System Safety Certification Readiness Team
SSPP	System Safety Program Plan
ST	Short-Term (debt)
STD/FMLA	Short-Term Disability/Family Medical Leave Act
STP/MM	Surface Transportation Program/Metropolitan Mobility
SU	Start-Up
T&P	Texas & Pacific Station
TBD	To be determined
TC	Transit Center
TCEQ	Texas Commission on Environmental Quality
TCIC	Texas Criminal Information Center
TDM	Transportation Demand Management
TES	Traction Electrification System
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Recovery
TIF	Tax Increment Financing
TIP	Transportation Improvement Program
TLETS	Texas Law Enforcement Telecommunications System
TMA	Transportation Management Association
TMF	Texas Mobility Funds

TOD	Transit-Oriented Development
TPSS	Traction Power Sub-Station
TRE	Trinity Railway Express
TRIM	Ticket Reader / Issue Machine
TSA	Transportation Security Administration
TSM	Transportation System Management
TSP	Transit System Plan or Traffic Signal Priority
TTI	Texas Transportation Institute
TVM	Ticket Vending Machine
TxDOT	Texas Department of Transportation
UAFP	Urbanized Area Formula Program
ULEV	Ultra-Low-Emission Vehicles
UNT	University of North Texas
UP	Union Pacific
UPS	Uninterruptible Power Supply
US	United States
USC	United States Code
UT	University of Texas
UTA	University of Texas at Arlington
VAF	Vehicle Acceptance Facility
VBS	Vehicle Business System
VE	Value Engineering
VIPER	Visible Intermodal Protection Response
VMB	Variable Message Boards
VoIP	Voice over Internet Protocol
VP	Vice President
VRDN	Variable Rate Demand Note
WAN	Wide-Area Network
WBE	Women-Owned Business Enterprise
WSA	Ways, Structures & Amenities
XPB	X-Press Booking
ZEV	Zero Emission Vehicles



# CURRENT AND FUTURE SERVICES





DALLAS AREA RAPID TRANSIT  
P.O. BOX 660163  
DALLAS, TX 75266

DART's Financial Information is located online at:  
[DART.org/debtdocuments/investorinformation](http://DART.org/debtdocuments/investorinformation)



## **DART***Table* Dallas Zoo

Dallas Area Rapid Transit helps residents and visitors discover all North Texas has to offer. Our extensive network of light rail, Trinity Railway Express commuter rail, bus routes and paratransit services moves more than 220,000 passengers per day across a 700-square-mile service area.

Explore North Texas and discover something new on DART. From off-the-beaten-path venues to the trendiest spots in town, every trip can be an adventure. These “DARTable” places are an easy walk from a DART rail station or bus stop, and the free GoPass® app makes discovering them easy.

If your journey begins or ends in places not easily served by DART, you now can take the train or bus for the longest portion of the trip, and use Uber or Lyft for the short leg. Customers can access the Uber, Lyft and Zipcar apps through GoPass® by selecting “Connect 2 Car” in the Travel Tools section.

**Visit [DART.org/DARTable](http://DART.org/DARTable)** for a list of possibilities that span arts, culture, sports, recreation, dining, shopping and special events.