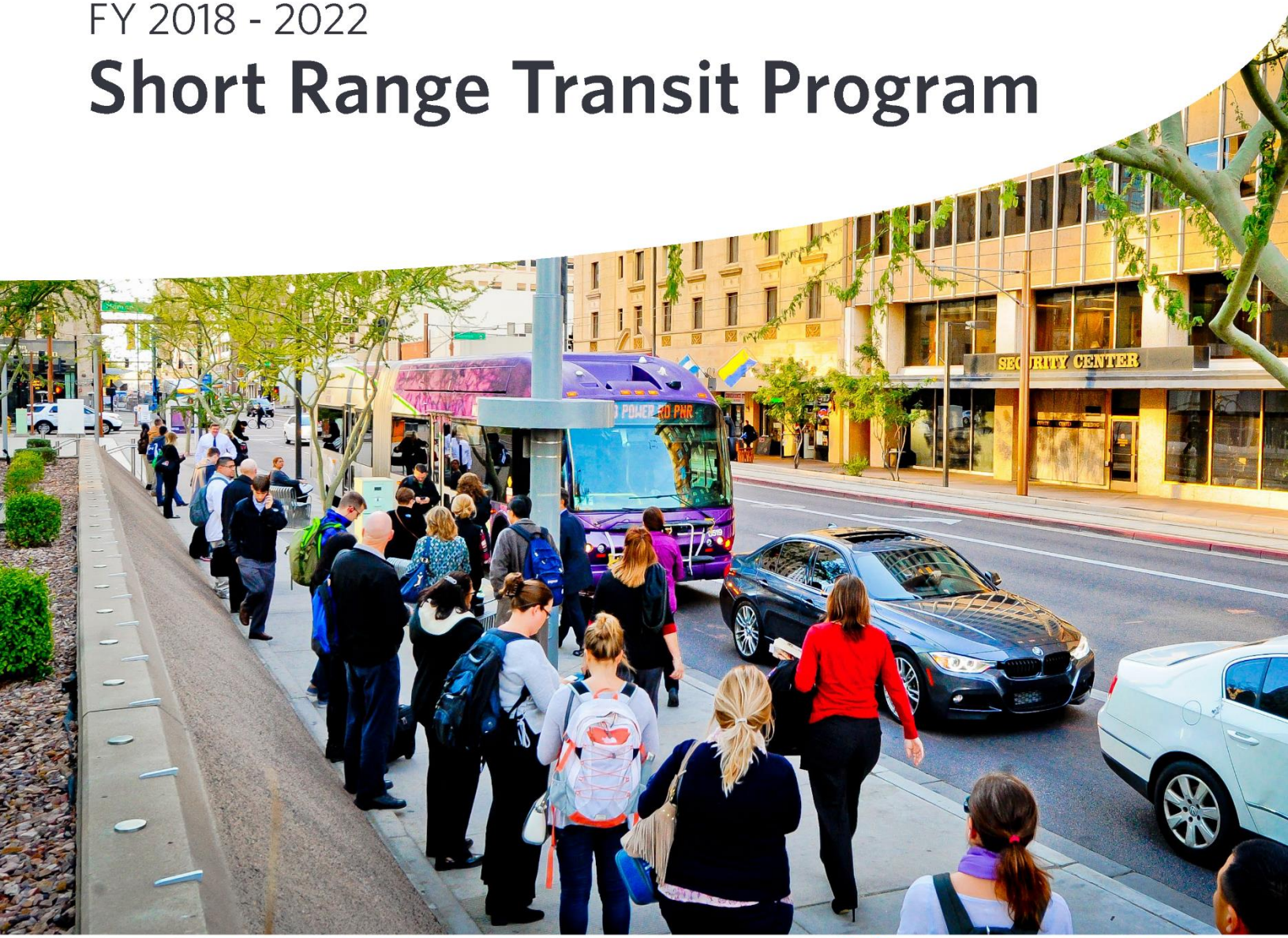
FY 2018 - 2022

Short Range Transit Program



VALLEY METRO

SHORT RANGE TRANSIT PROGRAM (SRTP)
FY 2018-2022

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Executive Summary

The Short Range Transit Program (SRTP) identifies transit service change concepts for the next five years and builds upon previous and ongoing Valley Metro efforts. The SRTP identifies regional and local fixed-route service change concepts regardless of funding source (e.g. regional or local). The SRTP currently focuses on fixed-route bus operations, but in the future the SRTP may incorporate other capital improvements, such as bus stop enhancements, park-and-ride facilities and vanpool fleet. The SRTP is based on input submitted by individual member agencies, as well as concepts developed by Valley Metro staff in conjunction with the Board-approved Transit Standards and Performance Measures (TSPM). The SRTP serves as input for processes such as the Transit Life Cycle Program (TLCP), Fleet Management Plan (FMP), bi-annual service changes and the Transportation Improvement Program (TIP). The SRTP addresses three goals in the Valley Metro Board FY16-20 Strategic Plan:

- Goal 1: Advance performance-based operations
    - Tactic A: Operate an effective, reliable, high-performing transit system
- Goal 2: Grow transit ridership
    - Tactic A: Expand and improve transit services to reach new markets
- Goal 3: Focus on economic development, regional competitiveness and financial resources
    - Tactic B: Pursue all available funding opportunities for transit projects and services

The SRTP is a five-year program updated annually. The goals for the annual update process are to re-evaluate the existing concepts, analyze new concepts requested for inclusion and update the implementation order for all concepts residing in the SRTP. The SRTP is divided into two planning phases: Production Years (first two years) and Development Years (last three years). Service change concepts programmed in the Production Years have committed funding and an implementation schedule. Service change concepts under Development Years may require further analysis and discussion.

The SRTP analyzes all potential regionally funded service change concepts through a set of guiding principles and member agency feedback. Input from member agencies is continuous and also occurs during monthly Service Planning Working Group meetings and the annual subregional SRTP update meetings held in the fall/winter. During the update process, recommendations for regionally funded service is shared with the TLCP working group and analysis for locally funded service is shared with member agencies. Based on feedback from these groups, revisions to the SRTP may be needed. Given financial realities and time for procurement of new vehicles, a fleet prioritization process is used to revise the SRTP if concepts require more vehicles than what is available.

Motivated by both federal and state government requirements, Valley Metro initiated a separate process to establish transit standards and performance measures (TSPM) ending in 2016 with involvement by member agencies and a peer agency panel. The purpose of TSPM was to continue to move towards a performance-based planning and programming approach. Overall, TSPM is used as a framework for the annual SRTP update process.

As part of the guiding principles, analysis of both existing and future performance are a key component of the SRTP annual update process. As shown graphically by Figure ES-1 below, performance thresholds of existing service are analyzed based on comparison to other services of the same type in the system and grouped into quartiles. For the SRTP, both the bottom quartile and top quartile are given priority in order to improve service.

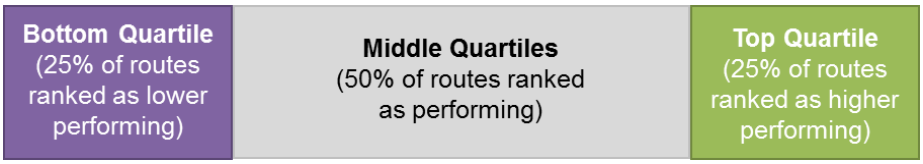


Figure ES-1: Performance Thresholds Diagram

Ultimately, the list of proposed service change concepts for fixed-route bus services are used as a blueprint for the bi-annual service changes that occur in April and October. Service change concepts in the Production Years of the SRTP will serve as an input into not only the annual TLCP updates, but also the bi-annual service change process. During the biannual service change process, Valley Metro performs any actions necessary for public outreach, Title VI impacts, accessibility and feedback from the Valley Metro Accessibility Advisory Group (VMAAG), further analysis and adjustment of affected transit service operating contracts and Intergovernmental Agreements with member agencies. Following the aforementioned process and feedback by the Service Planning Working Group (SPWG), the proposed biannual service changes are brought before the Board for action. The FY18-22 SRTP contains various service change concepts from funding changes to new routes. Please refer to Section 6.0 of this report for the list of proposed concepts by fiscal year.

1.0 Introduction

1.1 SRTP Overview

Valley Metro RPTA is the regional public transportation agency providing coordinated, multi-modal transit options to residents of greater Phoenix, along with its regional partners under the brand name of Valley Metro. With a core mission of advancing a network of transit services, Valley Metro plans, develops and operates the regional bus and light rail systems and alternative transportation programs for commuters, seniors and people with disabilities (See Table 1 below).

Table 1: Valley Metro Service Overview

Service	Brief Description
Light Rail	Rail line providing high-capacity transit service for major centers currently in parts of Phoenix, Tempe and Mesa.
Local and Key Local Bus Service	Bus routes serving stops along major streets in the metropolitan area, e.g. Route 29 Thomas Rd, Route 72 Scottsdale/Rural Rd, etc.
Express/RAPID Commuter Bus Service	Bus routes serving peak commute times and major centers, currently morning and afternoon peak travel to Downtown Phoenix
Neighborhood Circulator Bus Service	Short bus routes serving local areas often traveling through neighborhoods, e.g. Tempe Orbits, Mesa Downtown BUZZ, etc.
Limited Stop Peak Bus Service	Bus routes serving a limited number of stops for increased travel speed during peak service, currently the Grand Avenue Limited route.
Rural Route Bus Service	Long bus routes connecting rural areas to urban services, currently Route 685 connecting Ajo, Gila Bend, and the Phoenix metro area.
Paratransit Service	Service that offer either curb-to-curb or door-to-door shared-ride pre-arranged public transportation mainly for people with disabilities who are unable to use the fixed-route transit system.
RideChoice	Taxi services intended for seniors and people with disabilities
Vanpool Program	Valley Metro vans for qualifying groups of 6-15 commuters, who share the responsibility and cost of operating the van.
ShareTheRide	An online bike, carpool and vanpool ride matching system to allow commuters to quickly and securely find a ride match.
Maricopa County Travel Reduction Program Marketing and Communications	Assistance to local businesses to help them meet the requirements of the Maricopa County Travel Reduction Program. Services provided include training, education, technical assistance and consultation.

In fiscal year (FY) 2016, Valley Metro provided about 46.9 million miles of service on light rail, bus, paratransit and vanpool supporting nearly 69.6 million trips in the Phoenix metropolitan area. The bus system alone accounted for 74.4% of those annual trips with about 1.4 million bus trips supporting bicyclists and 313,000 bus trips supporting people using wheelchairs. In addition as of December 2016, there were 46,828 active users on ShareTheRide taking alternative modes of transportation.

The Short Range Transit Program (SRTP) is a five-year program with the purpose of identifying an implementation order for regionally and locally funded fixed-route service change concepts. The SRTP is a living program that is updated annually and based on ongoing discussion and analysis. The SRTP currently focuses on fixed-route bus operations. In the future the SRTP may incorporate other capital improvements, such as bus stop enhancements, park-and-ride facilities and vanpool fleet.

Service change concepts in the SRTP can be funding re-allocations, route extensions, route modifications, route reductions, service additions, service eliminations, frequency changes, and span changes. Service change concepts can apply to an entire route, but can also apply to specific route segments. Concepts are developed through a number of planning efforts including coordination with member agencies, adherence to the Regional Transportation Plan (RTP) and local or sub-regional studies.

The SRTP is separated into two planning phases. The first two years are referred to as the Production Years and concepts programmed in this phase have committed funding. The last three years are referred to as the Development Years and concepts programmed in this phase need funding and/or further analysis and discussion.

The SRTP supports the Transit Life Cycle Program (TLCP) and Fleet Management Plan (FMP) in an iterative and dynamic update process by identifying the financial feasibility and logistics of the SRTP concepts. Other outputs from the SRTP are future capital needs and updates to the Transportation Improvement Program (TIP). Throughout the annual update process to the SRTP, service change concepts are evaluated using the framework of Transit Standards and Performance Measures (TSPM), which was adopted in its final phase by the Regional Public Transportation Authority Board of Directors (Board) in 2016. The final SRTP outputs are often manifested in the bi-annual service change process that eventually goes before the Board and/or individual city councils.

1.2 Strategic Plan Alignment

The SRTP adheres to previously agreed upon policies, such as those found in the TLCP, and also adheres to the agency's strategic plan. The SRTP addresses three goals in the Valley Metro Board FY16-20 Strategic Plan:

- Goal 1: Advance performance based operations
  - Tactic A: Operate an effective, reliable, high-performing transit system
- Goal 2: Grow transit ridership
  - Tactic A: Expand and improve transit services to reach new markets
- Goal 3: Focus on economic development, regional competitiveness and financial resources
  - Tactic B: Pursue all available funding opportunities for transit projects and services

1.3 New SRTP Process

The annual update process to the SRTP has changed since 2012, which was the last year using the older process. Only the new process will be described in this report. Motivated by both federal and state government requirements, Valley Metro initiated a separate process from 2013 to 2016 with member agencies and a peer agency panel to establish transit standards and performance measures (TSPM). The purpose of TSPM was to continue to move towards a performance-based planning and programming approach. The efforts to establish TSPM were completed in three phases which were documented in three separate reports. Upon initial completion of these efforts in FY16, TSPM has since been integrated into the new annual update process to the SRTP as a framework for evaluating and prioritizing service change concepts. Major items identified through the efforts of TSPM include the following:

- Service Provision Goals
  - Service Provision Objectives (Phase I)
  - Descriptions of Service Types (Phase I)
  - Performance Measures and Planning Tools (Phase I/II)
  - Performance Thresholds/Quartiles (Phase I/II)
- Service Standards
  - Minimum Level of Service Standards (Phase I)
  - New Service Implementation Standards (Phase II)
  - Route Deviation Standards (Phase III)
  - Route Duplication Standards (Phase III)
  - Revenue Service End of Line Vehicle Turnaround Standards (Phase III)
- Service Processes and Applications
  - Principles for the Application of TSPM (Phase II)
  - Performance Improvement Actions (Phase I/II)
  - Bi-annual Service Change Process (Phase I/II/III)
  - Regional Bus Fleet Prioritization Process (Phase III)

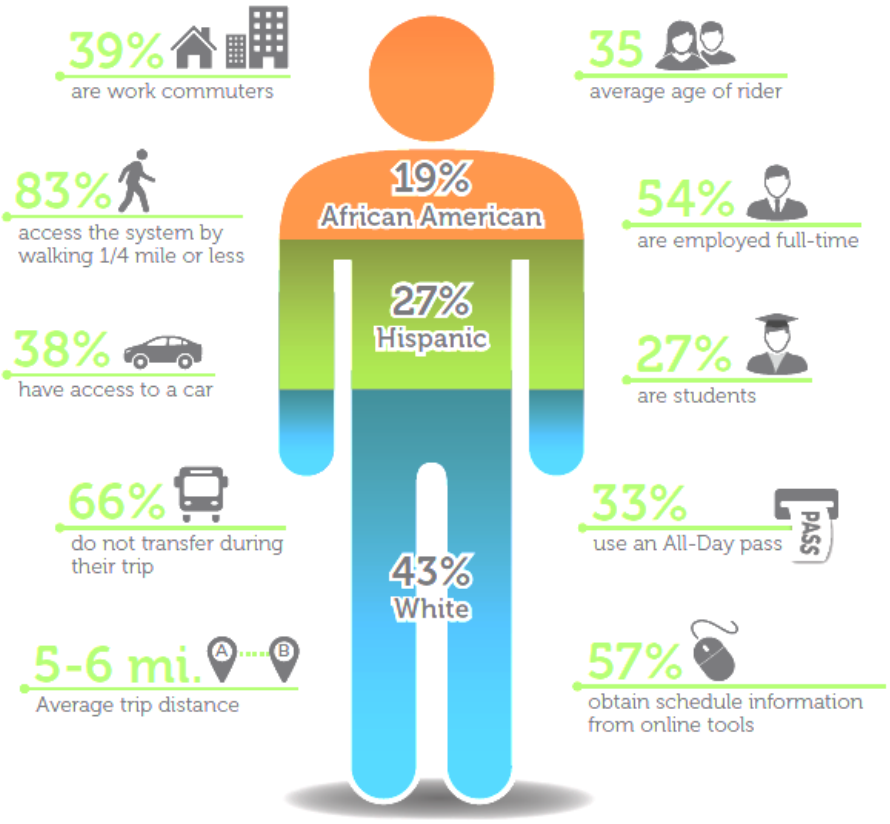
2.0 Region Overview

2.1 Current Fixed-Route Transit Rider Demographics

System-wide rider demographics are helpful in order to establish a baseline to understand, communicate, and eventually address the current and future needs of transit passengers. However, the actual rider demographic in a community can change over time and often vary from the system's typical rider, and overall it is crucial to promote diversity, rather than specialization, of the markets in which transit serves.[1]

Valley Metro conducted a system-wide fixed-route transit on-board Origin and Destination Survey in 2015 in order to gather updated travel behavior and rider demographics from current transit passengers on both light rail and bus routes. The survey is conducted typically every three to four years or around the time of significant changes to the system, such as light rail extensions. Figure 1 below, is a snapshot of a typical rider in the region.

Figure 1: 2015 System-Wide Fixed-Route Rider Profile[2]



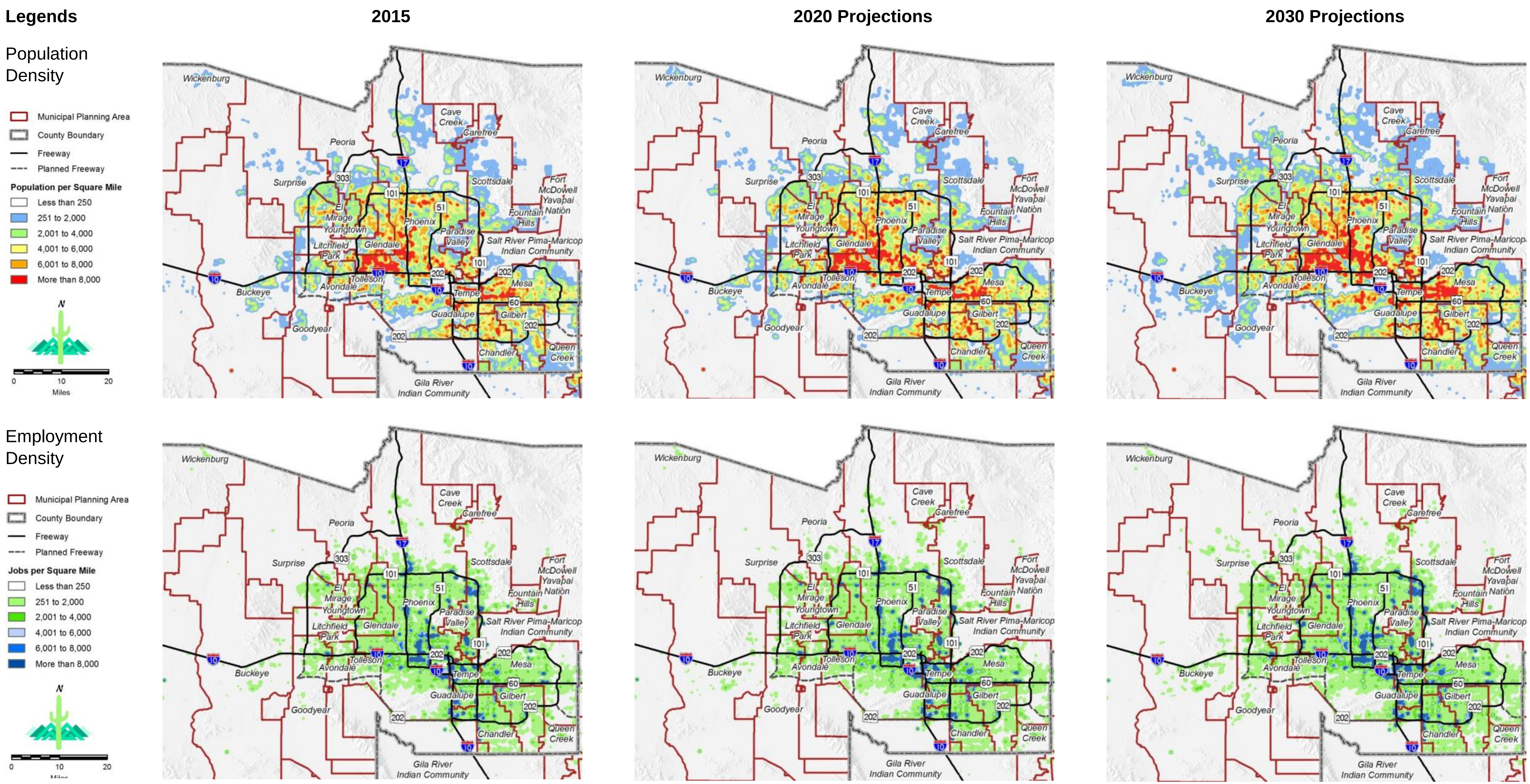
[1] Jarrett Walker's Human Transit Blog, *Explainer: The Transit Ridership Recipe*.
[2] Figure from the 2014-2015 Valley Metro Onboard Survey.

2.2 Current and Projected Population and Employment Density

The region's population and employment are important factors to consider when understanding the needs of current and future transit passengers; however, for transit and, more specifically, for fixed-route bus services, population density and employment density are more important. Transit is typically most effective when it serves areas that are highly concentrated with people and jobs where other forms of transportation might not suffice due to both limited space and high demand for mobility. These highly concentrated areas are most notably downtowns, places with higher education, commercial areas, etc. While growth on the outer ring of urban development can be significant, if the development is not concentrated and/or is isolated, then services such as vanpool may be the most appropriate mobility option.

The Phoenix metropolitan area lies within Maricopa County. The maps in Figure 2 below are adopted from the Socioeconomic Projections Documentation (June 2016) from the Maricopa Association of Governments (MAG). The maps in this figure give a more detailed story of where the projected future population density and employment density may occur given current knowledge of the region. The baseline for these maps is 2015, which is shown by the maps on the left. Areas in the region projected to experience growth in population density and employment density can be identified by comparing the maps in the middle and on the right to the 2015 baseline on the left.

Figure 2: MAG's Population and Employment Density Projections[3]



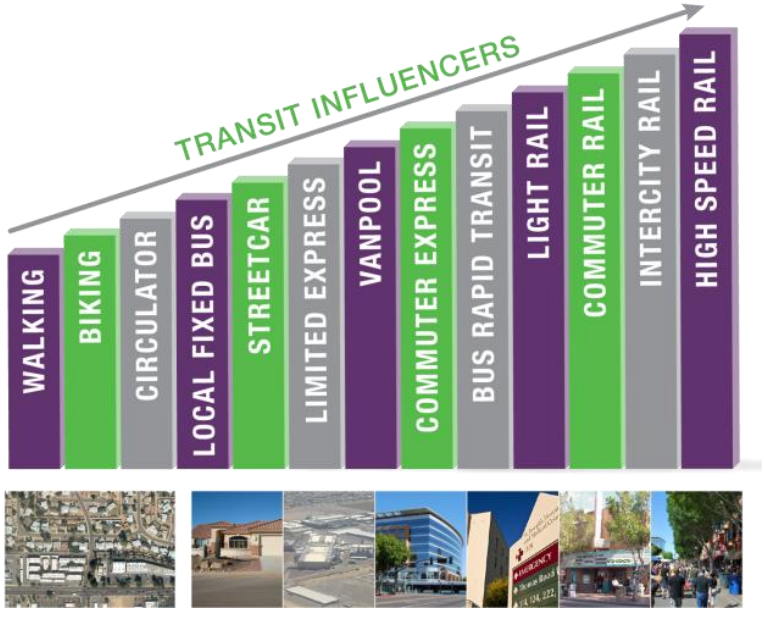
[3]Figures adopted from Maricopa Association of Governments' (MAG's) Socioeconomic Projections Documentation (June 2016). For more information please visit MAG's website.

2.3 Transit Influencers

Population and employment density are not the only factors that influence the attractiveness of transit. Other major transit influencers are those factors that help determine whether transit takes people where and when they want to go, is a good use of people's time and money, respects people (safety, security, amenity, courtesy, cleanliness, etc.), is reliable, and ultimately gives people the freedom to change their plans.[4] Both the right location of a transit line, or a development, and the frequency of service address a significant number of these demands. Understanding multiple transit influencers can help prioritize service change concepts for future updates to the SRTP.

A region's perception and attitude toward shared space can influence the attractiveness of transit. An area with a denser living arrangement and/or with multiple places of interest located nearby, may be best served when people choose to share more space while traveling. One way to help foster this transit culture is by incentivizing low-risk introductions to transit during sporting events, art events, other community events, etc. during which people have the opportunity to continue to meet other travelers in the area.

Figure 3 below shows a generalized transit continuum on the left and a list of major transit influencers on the right. The purpose of the transit continuum is to help areas understand where they are currently positioned on the continuum and steps along the continuum needed to advance to another level by addressing transit influencers.



Transit Influencers
- Connectivity & Accessibility
- Land Use
- Neighborhood Design
- Quality of Service
- Gas Prices
- Cultural Shifts
- Density
- Availability of Travel Choices
- Rider Market
- Transportation Demand Management (TDM) Strategies
- Destinations
- Federal Regulations
- Frequency and Service Speed

Figure 3: Transit Continuum and Influencers

[4] Jarrett Walker's Human Transit Blog, *outtake: on endearing-but-useless transit*.

2.4 Agency Structure and Regional Coordination

Valley Metro's vision is to be a partner in connecting communities and building a vibrant, sustainable region, with a mission to provide customers with a safe, efficient and reliable total transit network. The name Valley Metro has been used since 1993 as the identity for the regional transit system in the Phoenix metropolitan area. Neighborhood circulator bus services often use alternative identities, such as Orbits in Tempe, ZOOM in Avondale, Downtown BUZZ in Mesa, etc. The Valley Metro name is useful when communicating with passengers and the public as well as unifying the region under an easily recognized identity.

Current representation on the Valley Metro RPTA Board include Maricopa County and the cities and towns listed below:

West Valley	Central Valley	East Valley
Avondale	Phoenix	Chandler
Buckeye		Gilbert
El Mirage		Mesa
Glendale		Scottsdale
Goodyear		Tempe
Peoria		
Surprise		
Wickenburg		

For SRTP planning purposes, the region is grouped into three main sub-regions: West Valley, Central Valley, and East Valley. Planning for future travel by coordinating with members in these sub-regions is effective to provide passengers with an efficient regional transit system.

The region's bus system is delivered by two primary providers, Phoenix and Valley Metro directly, and two secondary providers, Scottsdale and Glendale. Phoenix-operated routes include RAPID commuter and neighborhood circulator bus services as well as local and key local bus services. While routes directly operated by Valley Metro include local and key local bus services in the East and Central Valley as well as Express commuter bus services in the East and West Valley, the Grand Avenue Limited route, rural route bus services, and a number of different neighborhood circulator bus services. Scottsdale and Glendale directly operate their brand of neighborhood circulator bus services. Lastly, each provider may have a number of private contractors that help operate and maintain the bus system on a daily basis.

2.5 Transit Funding in the Region

Financial support in the Phoenix metro area for public transportation is provided through multiple regional, local, state, and federal funding sources as well as passenger fares, advertising revenue and general city as summarized in Table 2 on the next page.

Regional funding for public transportation is often referred to as Proposition 400 dollars, TLCP dollars, the public transportation fund (PTF), etc. These references are to the Maricopa County half-cent sales tax passed through Proposition 400, a third of which goes to the public transportation fund, with a portion for bus and another for rail. However, regional funding also come from the Regional Area Road Fund (RARF) as briefly described in Table 2. (See the TLCP report for more information). Local funding sources including municipal general funds and local sales tax collections, specifically for transit or not, also contribute towards fulfilling elements of the regional transit system. Regional and local funds are combined to fund entire routes or specific route segments and can be used for either operational or capital purposes. Fares paid by passengers contribute significantly to the operational funding of transit services in the region.

Overall, funding for public transportation comes from a variety of sources that are often dynamic over time or may have a limited lifetime. Some sources are dedicated solely to transportation and transit, so funding projections can be more reliable; however, the future of funding from other sources, including grant funds and general funds, can experience wide variability and remains uncertain. As a result, the SRTP is intended to be flexible in order to accommodate change, especially in the later years of the five-year program. Projects may be shifted from one year to another or eliminated completely, depending on the availability of funding for transit programs.

While every attempt has been made to present a transit program of reasonable expectations, realization of future plans and projects is entirely subject to future appropriations by local, state, and federal governments.

Table 2: Funding Structure[5]

Cities	Description	Initiative Date	Tax Duration
Local Transit-Related Taxes			
Avondale	Half-cent sales tax for maintaining and improving water, sewers, and streets.	2001	Perpetuity
Buckeye	N/A		
Chandler	N/A		
El Mirage	N/A		
Fountain Hills	N/A		
Gilbert	N/A		
Glendale	Half-cent sales tax for transit and transportation	2001	2002-2023
Goodyear	N/A		
Maricopa County	See "Regional"		
Mesa	Quality-of-life half-cent sales tax for transit, parks and recreation, and police and fire departments	1998	2008
Peoria	Three-tenths cent sales tax increase for transportation projects and services	2005	2005-2025
Phoenix	Four-tenths cent sales tax for public transportation and transit. Extension and increase under T2050 to seven-tenths cent sales tax for street improvements and public transportation and transit.	2000/2015	2000-2050
Scottsdale	Transportation tax for transit and transportation.	1988	Perpetuity
Surprise	N/A		
Tempe	Half-cent sales tax for transit.	1996	Perpetuity
Tolleson	N/A		
Wickenburg	N/A		
Regional			
Half-cent sales tax for Maricopa County to fund freeway construction with a portion, or $5 million per year (inflated annually), as seed money for regional transit administered through Valley Metro - Regional Public Transportation Authority. Extension and modification under Proposition 400 remaining at half-cent county-wide sales tax with one-third of for transit, including light rail. Furthermore, the Regional Area Road Fund (RARF) is used by Valley Metro RPTA and MAG and is based on a formula, inflating each year the original $5 million in July 1986.		1985/2004	1985-2026
State			
Lottery revenues from the Arizona Lottery Fund are used to help fund public transportation administered through Valley Metro - Regional Public Transportation Authority and is part of a state implementation plan, as required by the Clean Air Act, to meet the national ambient air quality standards.		N/A	Perpetuity
Federal			
Moving Ahead for Progress in the 21st Century (MAP-21) and Fixing America's Surface Transportation (FAST) Act. Federal allocations are awarded to the region through multiple federal programs including formula distributions that are based on the region's population, on-going transit investments and transit system performance and discretionary investments that are awarded on a limited basis. Formula programs are the largest Federal Transit Administration (FTA) programs that support bus and bus facilities.			
Other			
Additional funding comes from fares, advertising revenue, and city general funding.			

[5] See History and Local Funding on Valley Metro's website for more information.

3.0 System and Service Overview

3.1 Existing System

The following section describes the existing system and services. During the preparation of this report, the latest update to the system was in October 2016 and will last until the next major update of April 2017. The system comprises the streets on which routes operate, the stops served by routes, and the vehicles operating the routes as well as park-and-rides and transit centers for transfers and multimodal connections.

Fixed-Route Transit

The first three figures on the following show Valley Metro's transit system. Figure 4 is the system map from October 2016 to April 2017, which shows the local (and key local), Express/RAPID, limited stop peak, and rural route bus services. The system map also shows the light rail as well as various transit centers, park-and-rides, and points of interest in the region. Figure 5 is a map of just the Express/RAPID bus service, which is not to scale, in order to give an idea of how communities are connected to centers during peak commute times. Namely in this situation, how park-and-rides in various communities are connected to Downtown Phoenix. In this figure, the Grand Avenue Limited route is shown as well. The last figure, Figure 6, shows the neighborhood circulator bus services in each of the communities. The circulator services help to connect passengers to different local centers in the neighborhoods as well as nearby local bus routes and even the light rail.

Facilities: Stations and Stops, Transit Centers, Park-and-Rides

Stations and stops are important facilities in the transit system connecting passengers to the vehicles; the Valley Metro service area currently has 7,358 bus stops and 35 light rail stations. The next table and two figures complement the first three figure and give further context to the major transit centers and park-and-rides. Figure 7 and 8 show the different transit centers and the specific locations where passengers can transfer to routes as well as car parking and bike racks/lockers for multimodal trips. The SRTP also serves as a tool to better understand transit center capacity for the future. Table 3 gives a detailed list of the documented car and bike capacities at each park-and-ride to help get an idea of the potential for transfers and connections.

Figure 4: System Map

(October 2016)

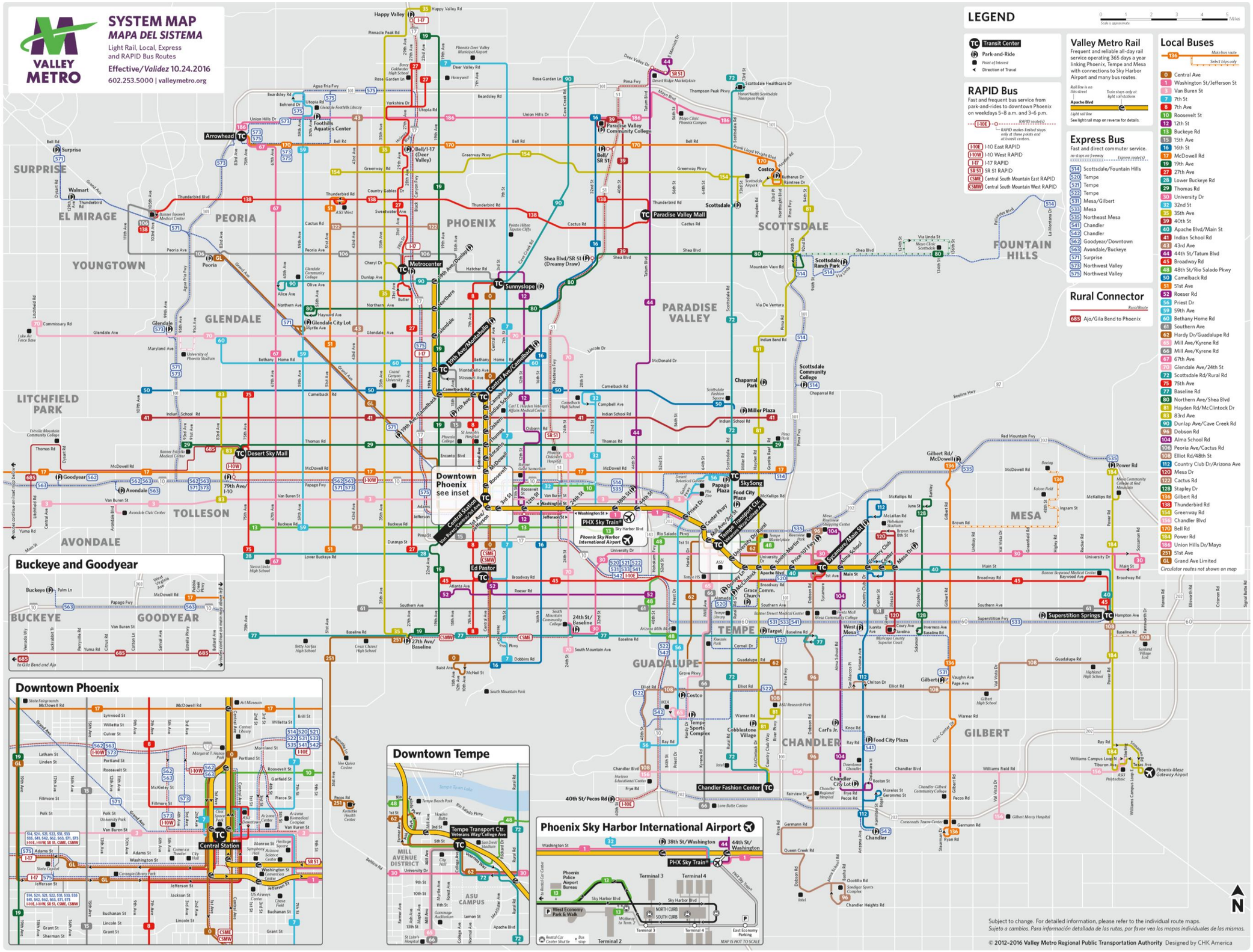


Figure 5: Express, RAPID and Limited Routes (October 2016)

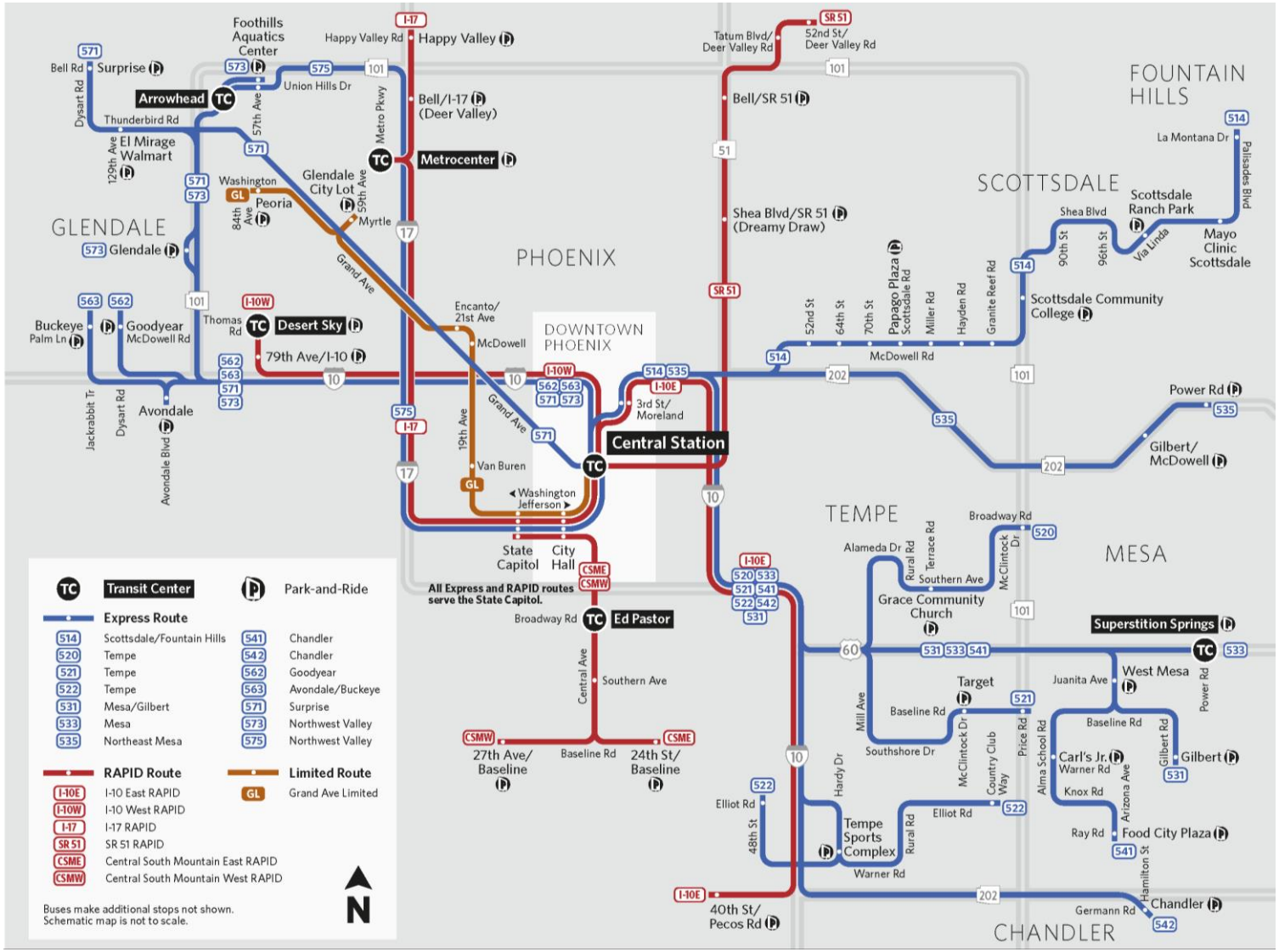


Figure 6: Neighborhood Circulator Routes (October 2016)

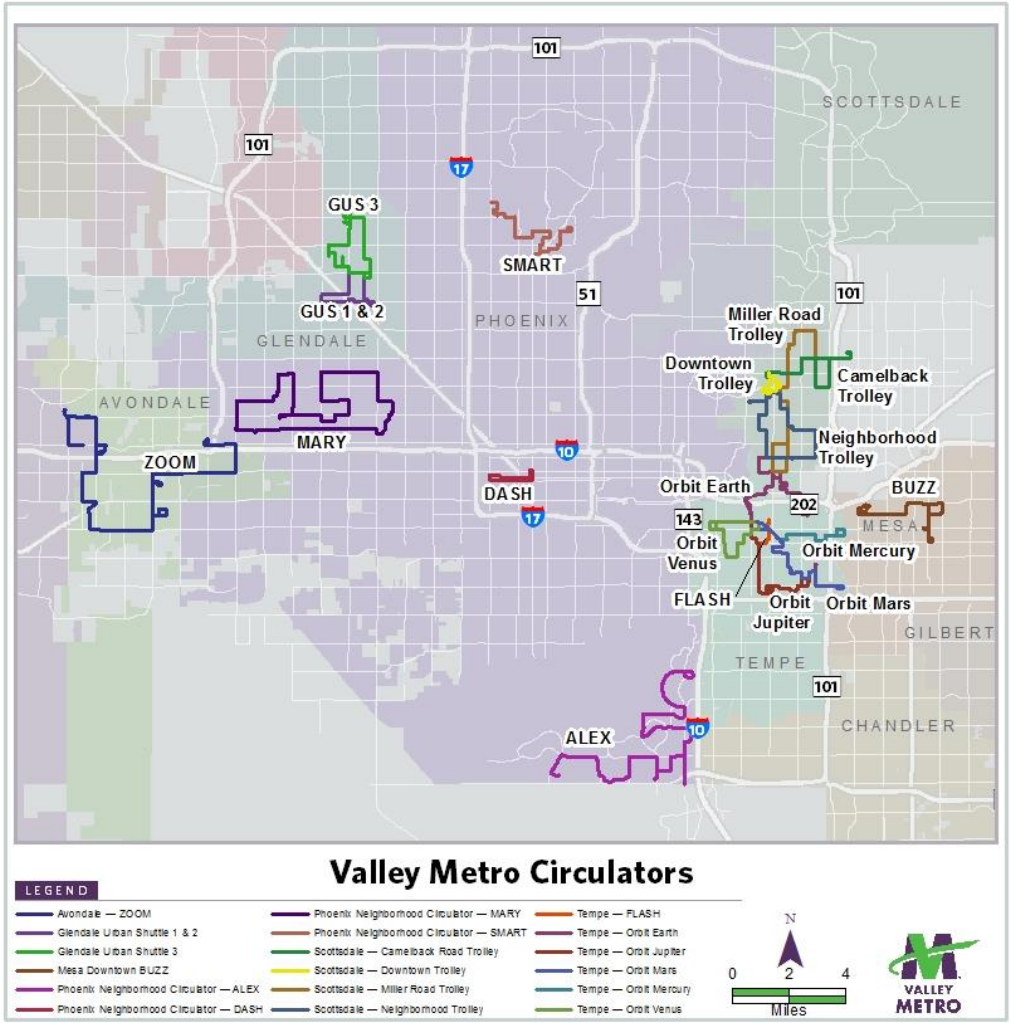


Figure 7: Transit Centers and Other Bus Boarding Areas 1 (October 2016)

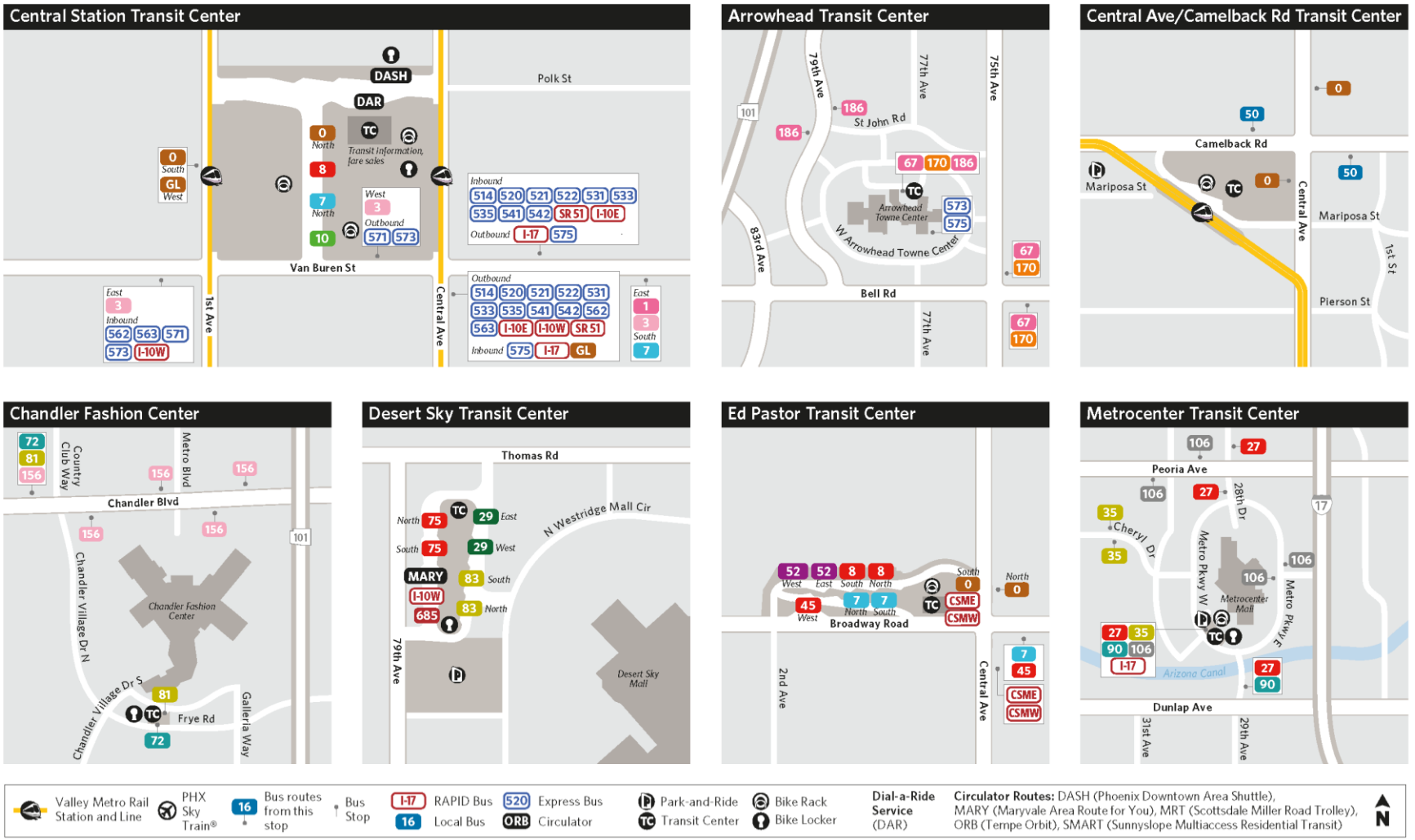


Figure 8: Transit Centers and Other Bus Boarding Areas 2 (October 2016)

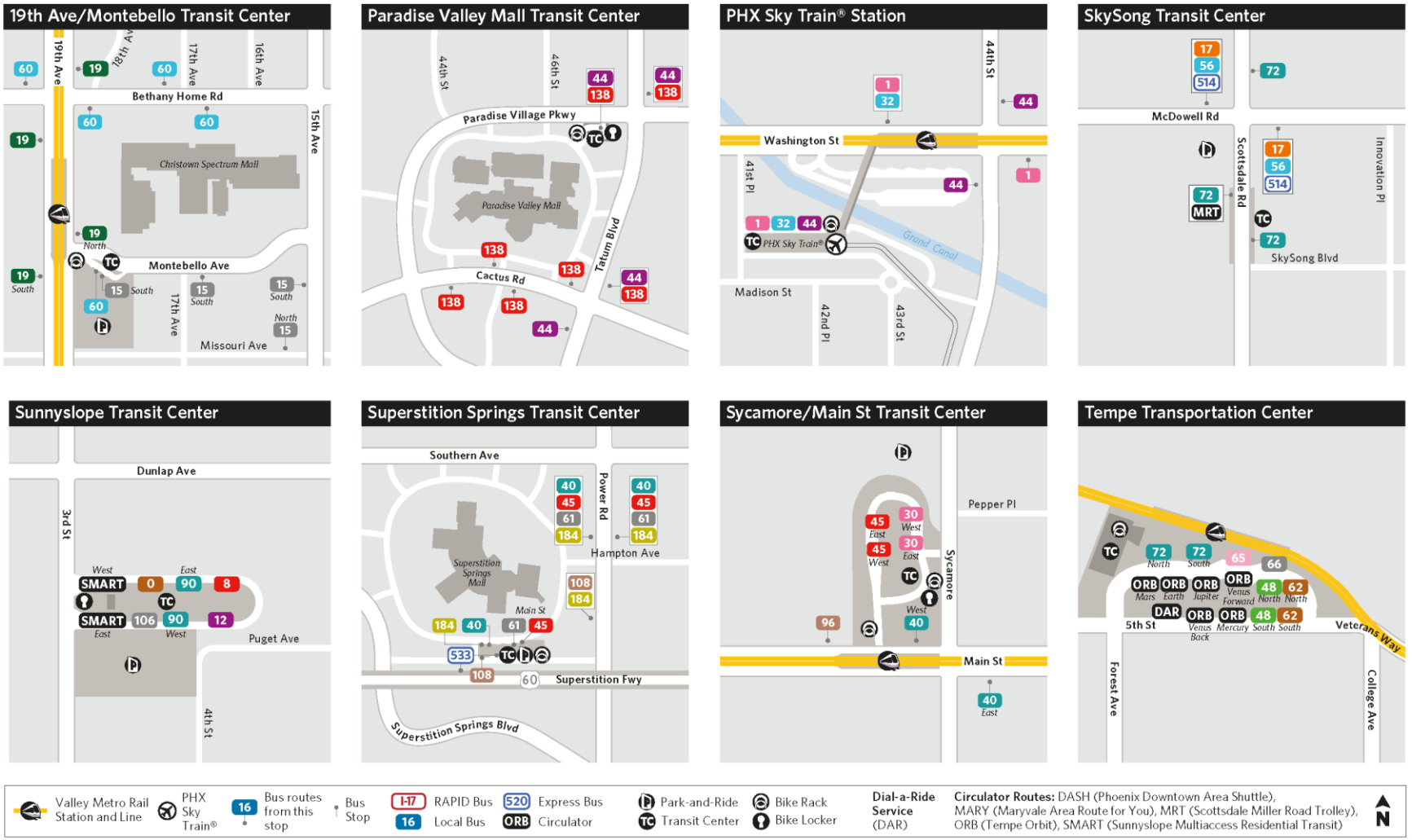


Table 3: Park-and-Rides (October 2016)

Park-and-Ride Name	Location	Car Spaces	Bike Lockers	Bike Racks	Transit Connections
Other Cities					
Avondale	*Avondale Blvd/Roosevelt St*	370	6	0	563
Buckeye	*Jackrabbit Trail/Palm Ln*	250	0	0	563
El Mirage Walmart	*Thunderbird Rd/129th Ave*	*	*	*	571
Gilbert	*Page Ave/Oak St*	250	6	12	136, 531
Goodyear	*Cornerstone Blvd/Dysart Rd*	400	8	0	562
Peoria	*Jefferson St/84th Ave*	82	0	6	Grand Ave Limited
Surprise	*Grand Ave/Bell Rd*	230	0	3	571
Chandler					
Chandler	*Hamilton St/Germann Rd*	460	4	7	112, 542
Chandler City Lot	*Chicago St/Arizona Ave*	*	*	*	104, 112
Carl's Jr.	*Warner Rd/Alma School Rd*	*	*	*	104, 541
Food City Plaza	*Arizona Ave/Ray Rd*	*	*	*	112, 541
Glendale					
Glendale City Lot	*59th Ave/Myrtle Ave*	109	0	0	59, Grand Ave Limited, GUS I, GUS II
Glendale	*99th Ave/Glendale Ave*	388	4	4	70, 573
Foothills Recreation/Aquatics Center	*5600 W Union Hills Dr*	*	*	*	186, 573, 575
Mesa					
Mesa Dr/Main St	*Mesa Dr/Main St*	445	0	12	Valley Metro Rail, 40, 120
Superstition Springs Transit Center	*Southern Ave/Power Rd*	200	8	12	40, 45, 61, 108, 184, 533
Sycamore/Main St Transit Center	*Sycamore/Main St*	802	1	12	Valley Metro Rail, 30, 40, 45, 96
Power Rd	*Power Rd/Preston St*	194	12	12	184, 535
Gilbert Rd/McDowell	*Gilbert Rd/McDowell Rd*	220	8	8	136, 535
West Mesa	*Juanita Ave/Country Club Dr*	305	8	12	531, 541
Phoenix					
7th Ave/Camelback	*7th Ave/Camelback Rd*	123	0	4	Valley Metro Rail, 8, 50
19th Ave/Camelback	*19th Ave/Camelback Rd*	410	0	1	Valley Metro Rail, 19, 50
19th Ave/Montebello Transit Center	*19th Ave/Montebello Ave*	794	0	8	Valley Metro Rail, 15, 19, 60
24th St/Baseline	*24th St/Baseline Rd*	209	0	8	30, 70, 77, CSME RAPID
27th Ave/Baseline	*27th Ave/Baseline Rd*	212	8	0	19, 35, 77, 251, CSMW RAPID
38th St/Washington	*38th St/Washington St*	190	0	2	Valley Metro Rail, 1, 32
40th St/Pecos Rd	*40th St/Pecos Rd*	562	12	0	I-10 East RAPID, ALEX
79th Ave/I-10	*79th Ave/McDowell Rd*	607	4	10	I-10 West RAPID, 17
Bell/I-17 (Deer Valley)	*Bell Rd/29th Ave*	350	8	7	I-17 RAPID, 27, 170
Bell Rd/SR 51	*36th St/Bell Rd*	377	10	0	SR 51 RAPID, 170
Central Ave/Camelback Rd Transit Ctr	*Central Ave/Camelback Rd*	135	0	4	Valley Metro Rail, 0, 50
Dunlap/19th Ave	*Dunlap Ave/19th Ave*	415	8	0	Valley Metro Rail, 19, 90
Desert Sky Transit Center	*79th Ave/Thomas Rd*	70	4	7	I-10 West RAPID, 29, 75, 83, 685, MARY
Happy Valley	*Happy Valley Rd/29th Ave*	512	4	3	I-17 RAPID, 35
Metrocenter Transit Center	*Mission Ln/Metro Park W*	215	4	4	I-17 RAPID, 27, 35, 90, 106
Sunnyslope Transit Center	*3rd St/Dunlap Ave*	45	4	0	SMART, 0, 8, 12, 90, 106
Shea Blvd/SR 51 (Dreamy Draw)	*32nd St/Shea Blvd*	370	5	14	SR 51 RAPID, 16, 80
Paradise Valley Community College	*32nd St/Union Hills*	*	*	*	16, 39, 186
Scottsdale					
Scottsdale	*Scottsdale Rd/Thunderbird Rd*	275	0	5	72, 154
Scottsdale Ranch Park	*Via Linda/104th St*	*	*	*	514
Scottsdale Community College	*Chaparral Rd/92nd St*	*	*	*	514
Chaparral Park	*Hayden Rd/Jackrabbit Rd*	*	*	*	81
Costco - Scottsdale	*83rd Pl/Butherus Dr*	*	*	*	81, 170
Miller Plaza	*Montecito Ave/Miller Rd*	*	*	*	Miller Rd Trolley
Papago Plaza	*Scottsdale Rd/McDowell Rd*	*	*	*	17, 56, 72, 514, Miller Rd Trolley
Tempe					
Dorsey/Apache Blvd	*Dorsey Ln/Apache Blvd*	190	0	8	Valley Metro Rail
McClintock/Apache Blvd	*McClintock Dr/Apache Blvd*	300	0	24	Valley Metro Rail, 81
Price-101 Fwy/Apache Blvd	*Loop 101/Apache Blvd*	693	0	6	Valley Metro Rail, 40
Tempe Sports Complex	*Hardy Dr/Warner Rd*	*	*	*	65, 522
Food City Plaza	*Scottsdale Rd/McKellips Rd*	*	*	*	72
Cobblestone Village	*Warner Rd/McClintock Dr*	*	*	*	81
Costco - Tempe	*Priest Dr/Elliot Rd*	*	*	*	56, 108
Grace Community Church	*Southern Ave/Dorsey Ln*	*	*	*	61, 520
Target	*McClintock Rd/Baseline Rd*	*	*	*	77, 81, 521

Park-and-ride locations are subject to change without notice. Contact the city listed in the chart with any questions or concerns.
** Parking spaces are shared with businesses.*

Additional Transportation Demand Management Programs

Transportation Demand Management (TDM) programs encourage reductions in travel demand within the transportation system. Table 4 lists additional TDM programs offered by Valley Metro. TDM activities generally focus on both improved travel choice and incentives to reduce driving alone. These programs promote alternatives to driving alone, including carpooling, vanpooling, transit, walking and bicycling. TDM also encourages alternative work schedules that reduce trips, including teleworking and compressed work schedules. TDM activities generally focus on commute trips and student trips during peak travel periods. Valley Metro provides TDM support services to employers, commuters and local jurisdictions, including:

- Employer assistance. Valley Metro provides assistance with travel reduction plans and programs, technical assistance with the Maricopa County Travel Reduction Program, telework program development, and provides region-wide promotions to encourage use of commute solutions.
- Commuter assistance. Valley Metro provides commute matching, commuter vanpools, transit support and awareness campaigns.
- Local jurisdiction support. Valley Metro will consult with and help local jurisdictions design and implement TDM programs. TDM includes strategies to change how, when, and where people travel to improve transportation system efficiency, reduce traffic congestion and pollution, increase safety and mobility, and improve health and fitness through physical activity.

Table 4: Additional Transportation Demand Management Programs[6]

TDM Strategy	Brief Description
Maricopa County Travel Reduction Program marketing and communication	Valley Metro provides marketing and communication for the Maricopa County Travel Reduction Program (TRP). The TRP affects all employers with 50 or more employees at a single site and encompasses approximately one third of County residents. The goal of the program is to improve air quality by changing commute behavior of employees and students. Employers in the program develop annual plans to reduce single-occupant vehicle (SOV) trips and/or miles traveled, with an overall target of 60% SOV travel rate at each work site. Valley Metro services include training and education, technical assistance and consultation in TRP compliance, assistance with development travel reduction strategies, presentation and events, and assistance with promotion of alternative transportation modes and schedules.
ShareTheRide	ShareTheRide is Valley Metro's online multimodal trip matching tool for those who live and/or work in Maricopa County. Since 2009, this online tool has connected commuters to a secure online matching program that displays carpooling, vanpooling, transit, bicycling and walking options. ShareTheRide is also the information source to learn how transportation solutions can meet the transportation needs of busy Valley commuters: carpool, vanpool, bus, light rail, bicycle, walking, teleworking and work schedule options.ShareTheRide is offered free of charge for users. In addition to creating commute matches, ShareTheRide manages online contests for alternative mode users, calculates pollution savings from alternative mode use on an individual or custom subsite basis, and also calculates fuel savings and the financial savings associated with alternative mode use. ShareTheRide helps employers in the Maricopa County Travel Reduction Program manage their annual plan incentives online, reducing time and paperwork. Employer representatives can administer custom subsites, obtain reports documenting participation and results, and enter employee information for those without internet access. This tool enables the employers to include online matching services with other travel reduction efforts, monitor employee usage of alternative modes as recorded in the system and facilitate contests as incentives to promote alternative mode usage.
Vanpool Program	The Valley Metro vanpool program began as a 10-month demonstration project in 1987 with funding provided by the Arizona Department of Transportation. The program is unique for public transportation as 100% of the operating costs are funded by user fares. A vanpool is a group of six to 15 people who live and work near each other who commute together. The Valley Metro vanpool program provides a van and one person volunteers to be the driver. Passengers pay a monthly fare that covers the lease, fuel, maintenance and insurance. Vehicles for Valley Metro's vanpool program are purchased with federal funding. Valley Metro currently provides 8-, 9-, 12-, 14- and 15-passenger vans. Valley Metro owned vans provide vanpool services for commuters who live and/or work in Maricopa County through a contract with v-Ride. v-Ride provides insurance, vehicle maintenance, billing, administration, fleet management and National Transit Database reporting for the program. Valley Metro's vanpool program is one of the largest in the nation and contributes approximately $3 million annually in NTD value to regional transit (non-vanpool) operations.
Clean Air Campaign	The Clean Air Campaign is a year-round educational campaign that includes TRP employers and the general public. The campaign encourages behavior to reduce vehicle pollutants – driving less, reducing idling and refueling after dark. Activities emphasize the winter carbon monoxide season and also address ozone and particulates. The annual Clean Air Campaign Awards and Luncheon honors efforts by TRP participants who reduce air pollution & traffic congestion by supporting clear air programs and encouraging transportation alternatives to driving alone.
Alternative Mode Education and Encouragement	For three decades, Valley Metro has developed, implemented and promoted commute solutions to employers and the general public. Valley Metro's Commute Solutions team promotes alternatives to driving alone by developing and implementing campaigns and contests, enhancing online resources, increasing the number of retail partners that sell transit fare media, contacting employers and providing regional advocacy for alternative modes and schedules, and by developing materials that educate users on how to implement alternative modes and schedules. Each year, a marketing plan is developed to encourage commuters to seek options to driving alone. Each April, a phone survey is conducted to measure commute mode choice, shifts to and away from SOV use, and to examine opinions regarding transportation, air quality and traffic issues. The survey helps staff determine marketing strategies and measure awareness and effectiveness of Valley Metro Commute Solutions programs and services.

[6] See Commute Solutions on Valley Metro's website and ShareTheRide.com for more information.

3.2 Existing Service

The purpose of this section is to describe both what hours of the day and how frequently the bus system is in service. A brief summary of the existing frequency and span as of October 2016 will be provided for high level planning purposes. More specific details of route services are located in the schedules published online and in the transit book.

Service Types and Minimum Service Standards

Developed from the efforts to establish TSPM, Table 5 summarizes the different fixed-route transit service types provided by Valley. The complementing minimum service standards and stop spacing are given in Table 6 and Table 7 on the following pages. While developing and evaluating service change concepts in the SRTP, these tables should be referenced for bus services that are either fully or partially supported by regional funds. For services entirely locally funded, referencing these tables are encouraged and can help in the communication of service needs to local governing bodies as well as provide passengers with a regionally consistent transit experience.

Table 5: Transit Service Types[7]

Service Type	Description
Rural Connector	Provides rural areas with connections to urban services. Service typically operates in "flex" mode to offer required complementary paratransit service within 0.75 miles of the route alignment. Passenger stops may be fixed by location or offered on a "flag" or "hail" basis.
Community Circulator	Generally operates in neighborhoods or activity centers (i.e. central business district, historic town center, etc.) providing connectivity to local area resources /amenities, providing area circulation, or connecting to fixed local route service. Routes are typically short in length and may offer circuitous routing to provide direct connections to local area destinations. Passenger stops may be fixed by location or offered on a "flag" or "hail" basis.
Local Bus	Traditional fixed-route transit bus service that generally operates on arterial roadways. Except where there is limited development, stops are typically posted on frequent intervals to maximize passenger access. The Valley generally operates on a grid system (north-south/east-west routes) that facilitates transfers to reach destinations.
Key Local Bus	Similar to local bus service, but located in corridors that are expected to meet a higher level of performance based on proximity to transit dependent populations (low-income and low-auto ownership) and demonstrated performance. New local routes should be classified as a local bus, until performance at the Key Local Bus level is demonstrated. Please see an expanded description in the Key Local Bus Qualifications Section in the TSPM Phase I Report.
Limited Stop Peak	Limited stop peak service generally operates on arterial roadways during peak periods with a limited or infrequent number of stops. The limited stop configuration provides for increased operating speeds. This service type can be operated as an overlay service within a corridor or roadway that is served by one or more other service types.
Limited Stop All-Day	Characterized by limited stop, high frequency, all-day service. Generally operates on arterial roadways with a limited or infrequent number of passenger stops. The limited stop configuration provides for increased operating speeds. This service can be operated as an overlay service within a corridor or roadway that is served by one or more other service types as demonstrated by service-demand studies.
Commuter Express	Transit service designed to serve commuter markets. Typically operates during peak periods with a limited number of inbound passenger stops (express), connecting residential areas or suburbs/cities with regional employment centers. This service uses park-and-ride facilities as primary inbound passenger access points and freeway high occupancy vehicle lanes (HOV) or other fixed/semi-exclusive guideways where available.
Light Rail Transit	A high capacity rail transit technology operating on a fixed or semi-exclusive guideway. Generally serves moderate to high density urban/suburban areas providing connections to regional employment centers and other major activity centers.

[7] Table adopted from TSPM. See TSPM Phase I Report on Valley Metro's website for more information.

Table 6: Minimum Service Standards by Transit Service Type[8]

Service Type	Minimum Headway or Daily Trips	Minimum Span Weekday / Sat / Sun	Minimum Operating Days
Dial-a-Ride (ADA)	NA	ADA service shall be available throughout the same hours and days as fixed-route service	
Rural Connector	4 trips in / 4 trips out	NA	Mon – Fri
Community/Circulator	30 min	12 hrs / 0 hrs / 0 hrs	Mon – Fri
Local Bus	30 min*	16 hrs / 14 hrs / 12 hrs	Mon – Sun
Key Local Bus	15 min peak / 30 min base*	16 hrs / 14 hrs / 12 hrs	Mon – Sun
Limited Stop Peak	4 trips AM / 4 trips PM	NA	Mon – Fri
Limited Stop All-Day	Headways same as LRT	16 hrs / 14 hrs / 12 hrs	Mon – Fri
Commuter Express	4 trips AM / 4 trips PM	NA	Mon – Fri
Light Rail Transit	12 min peak / 20 min base	18 hrs / 14 hrs / 12 hrs	Mon – Sun

**60 min early morning and late night service*

Table 7: Minimum Stop Spacing by Transit Service Type[8]

Service Type	Base*
Dial-a-Ride (ADA)	NA
Rural Connector	NA
Community/Circulator**	¼ Mile
Local Bus	¼ Mile
Key Local Bus	¼ Mile
Limited Stop Peak	1 Mile
Limited Stop All-Day	1 Mile
Commuter Express	4 Maximum Inbound Stops
Light Rail Transit	1 Mile

**There can be stops spaced up to 1/8 of a mile in High Density Areas*
***Some circulators have flag stops so spacing may vary*

[8] Tables adopted from TSPM. See TSPM Phase I Report on Valley Metro's website for more information

Typical Service

Local/Key Local bus service encompasses the largest single category of transit service provided in the region. This is general local and regional line-haul service operating during weekdays for approximately 18 hours from 5 a.m. to 11 p.m. The exact hours vary by route with some service beginning as early as 4 a.m. and some ending as late as 1:00 a.m. On Saturdays, service hours are from 6 a.m. to 10 p.m., again with variations by route. Service on Sunday generally operates from 6 a.m. to 9 p.m. and is primarily concentrated in Phoenix, Glendale and Tempe with limited service into the communities of Chandler, Mesa and Scottsdale. Recently as of October 2016 with the passage of Phoenix's T2050, service in Phoenix has expanded to as early as 4 a.m. on weekdays and 5 a.m. on weekends and as late as midnight on weekdays and 10 p.m. on weekends.

Neighborhood circulator bus services are confined to small localized areas to connect residents with local business, government buildings, education, and human services, and provide connections to the larger local/key local system. All operate Monday through Saturday with most providing service on Sunday. Weekday hours are generally from 6 a.m. to 9 p.m. with reduced hours or frequency on Sunday.

Express routes operate during peak hours weekdays in the peak direction to pick-up passengers at park-and-rides and designated stops in suburban local communities outside of Phoenix and utilize the freeway system to bring passengers to downtown Phoenix with the ability to make connections to the light rail and local/regional system for additional destination points beyond. RAPID routes are City of Phoenix-operated express routes that utilize specialized fleet and specialized stops during peak hours in the peak direction to pick up passengers at park-and-rides (and some limited designated stops) at the outermost parts of the City of Phoenix and utilize the freeway system for the most part to bring passengers to downtown Phoenix.

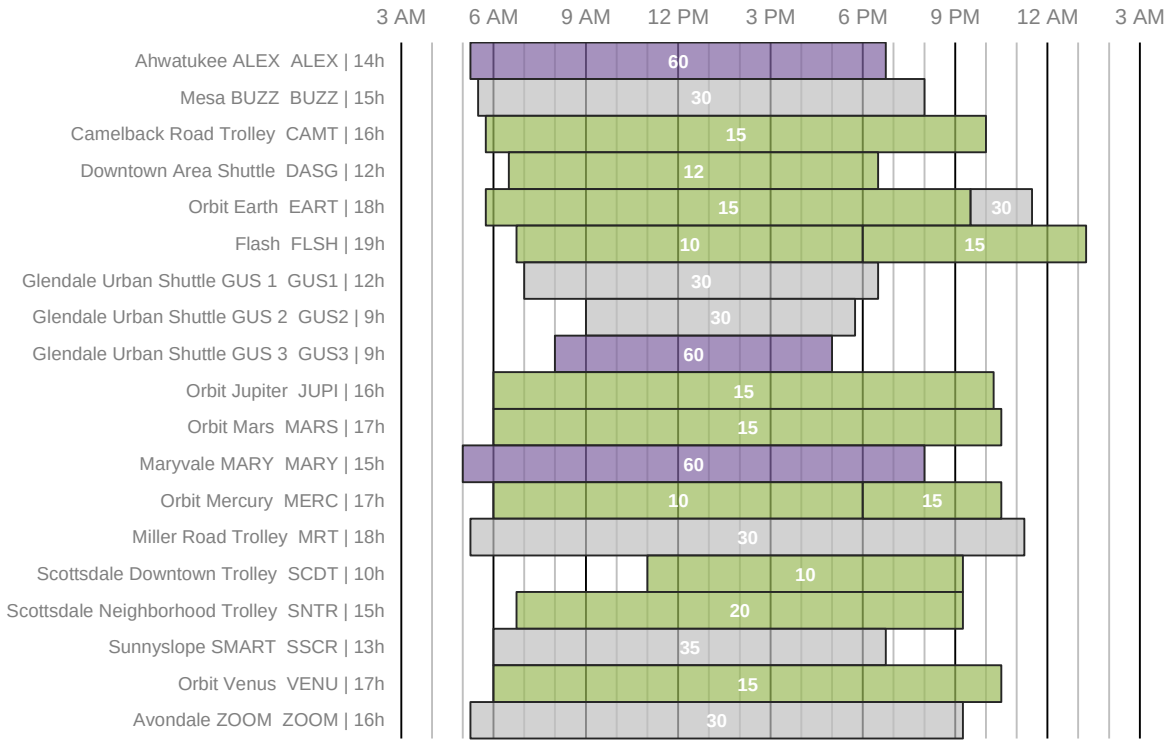
The Grand Avenue Limited operates along Grand Avenue and picks up passengers in the peak direction in the a.m. peak in the cities of Peoria and Glendale, at park-and-rides/designated stops on weekdays and drops passengers off at designated stops in or near downtown Phoenix the route operates in the outbound direction during the p.m. peak.

Rural route service is an intercity service connecting rural communities with each other and to local businesses, government buildings, education and human services, and provides connections to the larger local/ key local system in Phoenix. Current rural service connects the communities of Ajo, Gila Bend, Buckeye, Goodyear and Avondale ending at the Desert Sky Transit Center in Phoenix with connections to the regional system. The route offers flex stop service with five round trips from 2 a.m. to 10 p.m. Monday through Friday with two round trips on Saturday. Service is also provided during minor holidays.

Service Span and Frequency

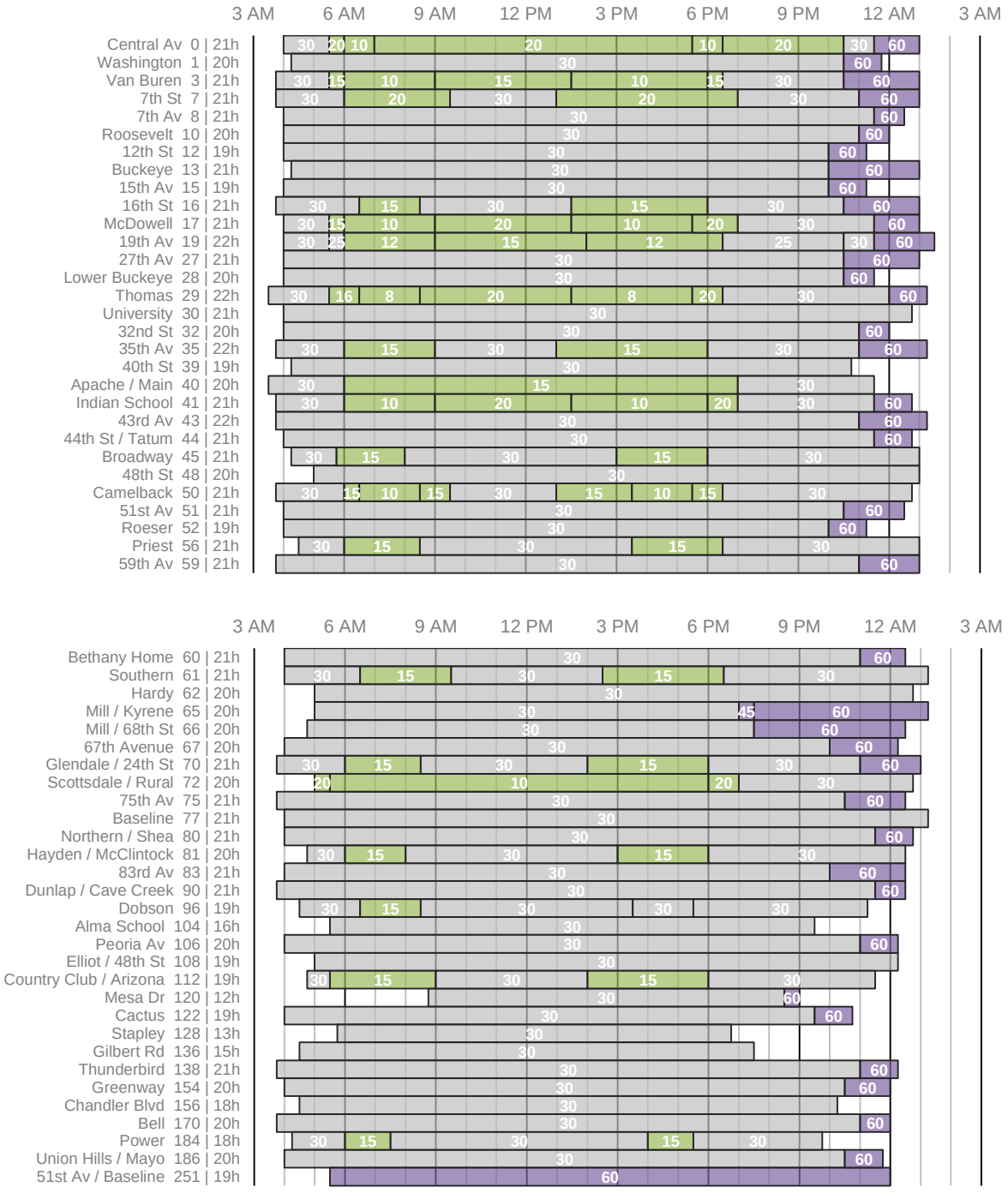
The bus system has both a location and time component. The location component is represented on a map while the time component is contained in the schedules. The following two figures, Figure 9 and Figure 10, attempt to better summarize the time component of the bus system by showing what hours of the day and how frequently the bus system is in service. When coupled with the system map, these figures are intended to give a better holistic understanding of how communities are served. In addition, these figures below provide a rough estimate on whether routes meet and/or exceed the minimum service standard as adopted through TSPM. The labels on the left first show the route descriptions followed by the route number and then a rounded span in hours. The start and end of service are shown by the bars, which are colored by groups of frequency (in minutes) of the route with green being higher frequency and purple being lower frequency. The length of the bars is the span.

Figure 9: Weekday Best Frequency and Span for Circulator Routes (October 2016)[9]



[9] The given frequency and span of service is for the best case scenario and may not apply for all stops on the route. The data is an output from Remix, which uses GTFS data as an input. Please refer to the actual schedule for detailed information on route frequency and span of service.

Figure 10: Weekday Best Frequency and Span for Local/Key Local Routes (October 2016)[10]



[10] The given frequency and span of service is for the best case scenario and may not apply for all stops on the route. The data is an output from Remix, which uses GTFS data as an input. Please refer to the actual schedule for detailed information on route frequency and span of service.

Table 8 below shows the number of trips on commuter bus services as of the latest schedules from October 2016. This table helps to compare against the minimum standards in Table 6. Note that for the Grand Avenue Limited bus service, there are currently two inbound and two outbound trips. Also Route 685, the rural route that connects Ajo to Gila Bend and the Phoenix metro area, has nine trips northbound and nine trips southbound during the weekday and two trips northbound and two trips southbound on Saturday.

Table 8: Number of Trips on Express/RAPID Commuter Routes (October 2016)

Route Index	Inbound Trips	Outbound Trips
514	2	2
520	2	2
521	4	4
522	4	4
531	6	6
533	6	6
535	5	5
541	4	4
542	7	7
562	4	4
563	4	4
571	4	4
573	4	4
575	3	3
CSME	5	5
CSMW	5	5
I10E	15	14
I10W	12	13
I17	25	26
SR51	13	13

Bus Fleet Inventory

A region-wide inventory of existing fleet of buses is shown in Table 9 on the next page according to the Fleet Management Plan (FMP). The potential fleet impacts of service change concepts in the SRTP should be compared to the FMP. The FTA permits agencies a spare ratio of 20 percent for non-specialized standard bus fleet, and maintaining this ratio closely to 20 percent is preferred. Non-specialized bus fleet are currently used on local and key local, express, and limited stop peak bus services while specialized bus fleet are used for RAPID, neighborhood circulator, and rural route bus services. Furthermore, the minimum programmed lifetime of vehicles ranges from 7-12 years and should also be kept in mind. As of June 2016, the spare ratio for the non-specialized fleet was 19 percent with an average age of 7.6 years. (See the FMP for more information.)

Table 9: Existing Bus Fleet Inventory* (June 2016)[11]

Provider	Peak Vehicles	Spare Vehicles	Total Vehicles	Ratio
Non-Specialized				
Phoenix	362	72	434	20%
Valley Metro	243	44	287	18%
All	**605**	**116**	**721**	**19%**
Specialized				
Phoenix	56	29	85	Not Applicable
Valley Metro	47	12	59	
Scottsdale	17	4	21	
Glendale	4	4	8	
All	**124**	**49**	**173**	
Non-Specialized and Specialized				
Phoenix	418	101	519	Not Applicable
Valley Metro	290	56	346	
Scottsdale	17	4	21	
Glendale	4	4	8	
All	**729**	**165**	**894**	

*all reported fleet in this table are wheelchair accessible

3.3 Bi-annual Service Change Process (Next Steps)

Ultimately, transit services are updated during the bi-annual service changes in both April and October. Essentially this is the next step after updating the SRTP. Service change concepts in the Production Years of the SRTP serve as an input into not only the annual TLCP updates, but also the bi-annual service change process. During the bi-annual service change process Valley Metro performs any task necessary for public outreach, considers Title VI impacts and accessibility issues, gathers feedback from The Valley Metro Accessibility Advisory Group (VMAAG), conducts further analysis, and determines adjustment of affected transit service operating contracts and Intergovernmental Agreements with member agencies. An important part of the bi-annual service change process is the analysis of the potential service changes under Title VI of the Civil Rights Act of 1964. Title VI analysis determines whether the potential changes to existing service will have a disparate impact based on race, color, or national origin or whether potential service changes will have a disproportionately high or adverse impact on minority and/or low-income populations. Refer to Figure 11 on the next page for more information on the tasks performed during the bi-annual service change process. Following ongoing review by the Service Planning Working Group (SPWG), proposed service changes are brought before the Board for action through the bi-annual service changes process.

[11] Table modified from the FMP. See the FMP for more information.

Figure 11: Service Change Tasks (October 2016)

Activity	Task Type
Service Planning Working Group	Meeting Date
April Board Memo	Deadline
Service Planning Working Group	Meeting Date
March RTAG Meeting	Meeting Date
March Board of Directors Meeting - Notification of Public Outreach in CEO Report	Meeting Date
VM - Deadline for proposed Oct. 2016 Service Changes	Deadline
Service Planning Working Group	Meeting Date
April TMC/RMC Meeting - Item for Info Only	Meeting Date
VM - Cost Estimates and Title VI Analysis	Duration
COP - Notice of Public Outreach to CTC	Meeting Date
April Board of Directors Meeting - Item for Info Only	Meeting Date
VM - Service Analysis	Duration
COP - Notice of Public Outreach to T&I	Meeting Date
May Board of Directors Meeting - Status of Public Outreach in CEO Report	Meeting Date
VM - Public Outreach	***Duration***
COP - Approval of Service Changes from CTC	Meeting Date
Service Planning Working Group	Meeting Date
COP - Approval of Service Changes from T&I	Meeting Date
August Board Memo Deadline	Deadline
COP - Approval of Service Changes from COP Full Council	Meeting Date
Service Planning Working Group	Meeting Date
VM - Scheduling Deadline (For all VM operated service)	Duration
Add delete or modified bus stops in the bus stop database	Duration
VM - ADA Service Compliance/Facilities	Duration
COP - Add, delete or modified Bus Stops in bus stop database	Deadline
COP - Schedule Building - Work on route scenarios	Duration
Phoenix scheduling deadline	Deadline
COP - All Schedules (Phoenix and other providers) completed and in HASTUS	Deadline
COP - Transfer all schedules to RPTA Graphics	Deadline
Service Planning Working Group	Meeting Date
COP - Send preliminary HASTUS blocking to all contractors for review/modification (blocking will be HASTUS generated, no exceptions)	Deadline
August TMC/RMC Meeting - IGA and Contract Approvals	Meeting Date
Final blocking solution received from contractors in HASTUS format (no exceptions)	Deadline
August RTAG Meeting	Meeting Date
August Board of Directors Meeting - IGA and Contract Approvals	Meeting Date
Final runcut returned to PTD in HASTUS format for ALL PROVIDERS	Deadline
Transfer schedules for ATIS and VMS	Deadline
Service Planning Working Group	Meeting Date
Service providers must provide updates to Fare Collection System	Deadline
Service Planning Working Group	Meeting Date
VM - Transit Book Development/Printing	Duration
VM - Transit Book Distribution	Deadline
COP-Supplemental Documents & Reports	Deadline
Effective service change date	Deadline

4.0 SRTP Annual Update Process

4.1 Process Overview

The goals for this new annual SRTP update process are to re-evaluate the existing program, analyze new concepts requested for inclusion in the SRTP and update the implementation order for all concepts residing in the SRTP. The SRTP is updated annually in accordance with policies now from both TSPM and the TLCP. Valley Metro hosts both monthly Service Planning Working Group (SPWG) meetings and sub-regional meetings (i.e. West, Central, East Valley) in the fall/winter to obtain member agency feedback for updates to the SRTP. Additional meetings, either in groups or with individual member agencies are held as needed. These meetings allow Valley Metro and member agencies to formalize the SRTP collectively together during the annual update process.

Figure 12 below summarizes the annual update process. While the process in the figure appears to be sequential, it is iterative and dynamic. Multiple concepts can be on different steps simultaneously, and revisiting previous steps is often needed based on interaction with the TLCP and FMP, as well as ongoing input from member agencies.

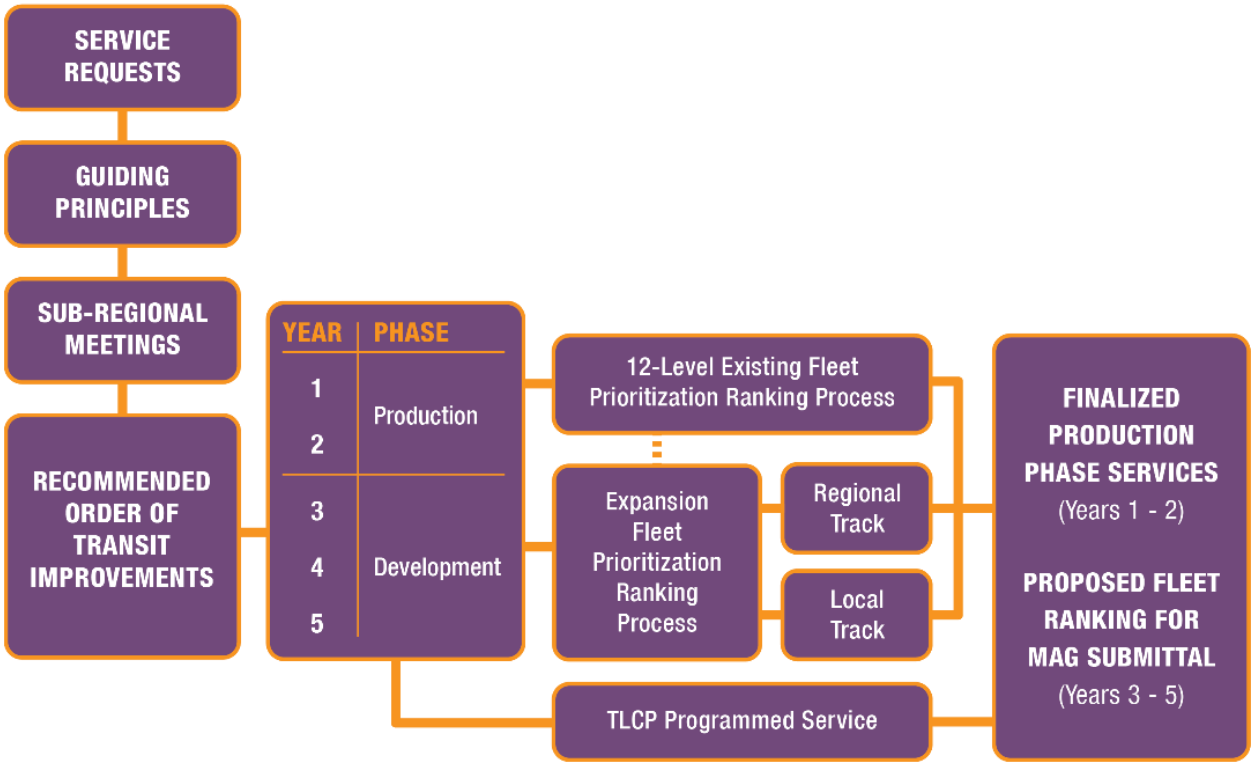


Figure 12: Diagram of SRTP Process Overview [12]

[12] Figure adopted from TSPM. See TSPM Phase III Report on Valley Metro's website for more information.

The annual SRTP update begins with a review of the existing concepts in the program. The programming is split into two phases. The first two years in the SRTP are referred to as the Production Years since service concepts have both committed funding and an implementation schedule and will likely occur or be implemented. The last three years in the SRTP are referred to as the Development Years. The service change concepts in these last years are desired in the near-term, but may not have committed funding and may require further analysis and discussion to be fully developed. Most concepts naturally move up a year in the program as time passes. However, delay of existing service change concepts is possible and some may remain for an extended period of time in the Development Years. Programming delay can occur for a number of reasons including funding delays or changes, fleet requirements and availability, prioritization of TSPM performance improvement actions, new goals, etc.

New service concepts requested for inclusion in the SRTP are evaluated using six guiding principles. These guiding principles are also used to update the implementation order and, if necessary, the fleet prioritization process. The guiding principles and fleet prioritization process are explained subsequently in greater detail. Please note that the annual SRTP update process is kept flexible to adapt and accommodate to funding and performance changes and uncertainty.

4.2 Guiding Principles

Six Guiding Principles are used to evaluate service change concepts requested for inclusion in the SRTP to be regionally funded, as well as updating the implementation order for all items residing in the SRTP. Again, the principles are based on adopted policies and frameworks from both the TLCP and TSPM. Table 10 notes the six guiding principles and which ones are applicable to concepts for new and existing services.

Table 10: SRTP Guiding Principles

No.	SRTP Guiding Principles	Existing Service	New Service
1	Financially Sustainable (Operations)	X	X
2	Financially Sustainable (Capital)	X	X
3	Current Transit Performance Threshold Quartile	X	
4	Route in Original Proposition 400 Plan		X
5	Supports Major High-Capacity Transit Investments	X	X
6	Future Performance	X	X

Guiding Principle 1 and 2

The first two guiding principles focus on evaluating a service concept's financial sustainability from both an operations and capital perspective. Higher priority in the SRTP is given to the concept that is more financially sustainable. This usually means that there is a committed and reliable funding source for many years. Reliable commitments are typically in the form of PTF or local funds from a long-term dedicated transit or transportation tax. Those improvements planned with general fund dollars require a funding letter of commitment if an improvement requires additional fleet. Valley Metro requires a letter of commitment principally if the proposed service change concept requires additional fleet, which may not currently be available because of adherence to the FTA spare ration quota.

Guiding Principle 3

The third guiding principle focuses on the performance threshold quartiles developed through TSPM for evaluation of existing service. Priority is given to both bottom and top performing routes to address performance improvement and high demand, respectively. This guiding principle helps to ensure that Valley Metro is continuing to move towards a performance-based planning and programming approach. Routes are ranked using a number of measures and then classified into three categories: bottom quartile for lower performing routes, middle quartiles for performing routes, and a top quartile for higher performing routes. The figure on the following page gives a visualization of the performance threshold quartiles.

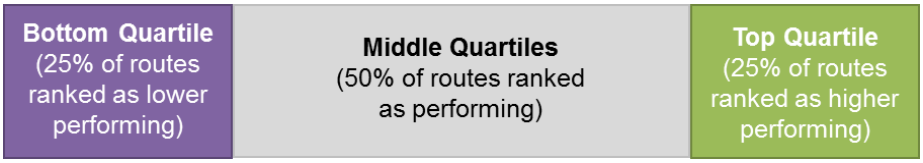


Figure 13: Performance Thresholds Diagram[13]

This quartiles are based on the ranking of five performance measures: (1) on-time performance (OTP), (2) boardings per revenue hour, (3) boardings per revenue mile, (4) boarding per trip (*only for Express/RAPID commuter bus services*), (5) farebox recovery.

If two or more of the five measures for a route are in the top quartile, then the entire route is classified in the top quartile of performance and vice versa. (See TSPM Phase II report for more information.) In the current methodology, routes are ranked against each other in the system, so there will always be routes in the bottom quartile. This is true even if industry standards and best practices indicate that those routes in the bottom quartile are actually performing above average.

[13] Figure modified from TSPM. See TSPM Phase II Report on Valley Metro's website for more information.

Guiding Principle 4

The fourth guiding principle is straightforward: if a service was originally in the voter-approved Proposition 400 it receives higher priority in the SRTP.

Guiding Principle 5

The fifth principle gives higher priority to concepts supporting high-capacity transit. Usually high-capacity transit support involves enhancing the transit culture and increasing ridership of services near, and connecting to, the current light rail and/or future light rail extensions. However, high capacity transit support can also include supporting developments needed for bus rapid transit, commuter rail, park-and-ride facilities, etc.

Guiding Principle 6

The sixth and final guiding principle is about future performance of a service change concept and is usually the most complex and time-demanding principle. However before considering future performance, service change concepts for regionally funded services must adhere to the minimum service standards. (See *Section 3.2 Existing Service* for more details.)

Future performance for new and existing service is evaluated using the Transit Propensity Tool to project boardings per revenue mile on local bus and key local bus services. Higher productive service concepts receive higher priority in the SRTP. The calculations used in the tool are summarized in the table below.

Table 11: Methodology for Projecting Average Daily Boardings per Revenue Mile[14]

Step	Calculation
1	*Projected Daily Boardings 1 (from population)* = *total population within ½ mile of corridor* x 0.013 *Projected Daily Boardings 2 (from poverty)* = *total population below poverty within ½ mile of corridor* x 0.067 *Projected Daily Boardings 3 (from zero-auto households)* = *total zero-auto households within ½ mile of corridor* x 0.687 ***Projected Average Daily Boardings*** = $\frac{\textit{Projected Daily Boardings 1 (population)} + \textit{Projected Daily Boardings 2 (poverty)} + \textit{Projected Daily Boardings 3 (zero-auto HH)}}{3}$
2	***Daily Revenue Miles*** = *Trip Mileage* x *Service Span* x *Trips per hour*
3	***Projected Boardings per Revenue Mile*** = $\frac{\textit{Projected Average Daily Boardings}}{\textit{Daily Revenue Miles}}$
4	Compare projection to the upper and bottom quartiles from the previous fiscal year
Note: The presented methodology is used to calculate projected productivity for service extensions and depending on the circumstance may have limited usefulness for extensions less than 3 miles.	

Valley Metro has developed a Transit Propensity Tool which calculates the projected boardings of proposed routes in addition to providing complete demographic data for that route corridor. In addition to route-specific demographic data used for transit propensity, the tool also summarizes additional factors which aid in understanding the service area of the route including other demographic factors such as ethnicity and languages spoken, employment data, and population density. Even though the projected boardings per revenue mile is grounded in statistics, it is a rough estimate and the actual boardings per revenue mile can vary based on local characteristics that vary widely from the average. The projected productivity should be used with caution and only for high-level planning purposes. Additional transit planning software, such as Remix, can be used to assist in checking these projections and delivering additional insights into the proposed transit corridor.

[14] Table adopted from TSPM. See TSPM Phase II Report on Valley Metro's website for more information.

The first step in determining future performance is to project average daily boardings. Total population, population below poverty and total zero-auto households were found to be the most significant factors affecting future service performance based on statistical analysis. Coefficients for each service type are calculate by first collecting total population, population below poverty and total zero-auto households within a half mile of each existing local and key local route. These figures are then summed for the local and key local networks, as are the average daily boardings figures from the most recent Valley Metro Transit Performance Report (TPR). The resulting figures are used to develop average boarding factors for each variable. The second step is to calculate the daily revenue miles by multiplying the trip mileage by the service span by the trips per hour. The third and final step finds the projected boardings per revenue mile by dividing projected average daily boardings by daily revenue miles. The projected boardings per revenue mile is compared against the thresholds that determine the bottom and top quartiles from the previous fiscal year. Currently for implementation of a new route or major (more than 3 miles) extension, the projected boardings per revenue mile must be greater than 90 percent of the threshold boardings per revenue mile of the bottom quartile[15]. Concepts with greater projected boardings per revenue mile have higher priority.

For service types other than local and key local bus services (e.g. limited stop all day, commuter/express, community circulator, rural connector, demand response/flex routes, and vanpool), there is a separate set of criteria used to evaluate future performance and whether implementation of that service change concept is recommended. These criteria are based on characteristics that are important to each service type. Example characteristics include market demand, proximity and quantity of activity and employment centers, land use densities, route length, etc[16]. It should be noted that light rail is evaluated through a separate process defined by the Federal Transit Administration (FTA).

Concepts that follow the standards receive higher priority in the SRTP. This is required for regionally funded service and encouraged for locally funded service.

The prioritization process for programming in the SRTP also depends on the financial realities as modeled in the TLCP and member agency local budgets. However, in order to model the service change concepts in the TLCP, a “wish list” or rather first draft of the implementation order and new concepts residing in the SRTP is needed first. The annual update process to the SRTP is iterative and dynamic, especially in this part of the process. The results of the draft SRTP are shared with the TLCP for regional financial modeling, which can affect considerations for member agency local budgets. The TLCP model may require reprioritization of the concepts in the SRTP. This iterative cycle back and forth between the SRTP “wish list” or drafts and modeling in the TLCP is repeated until the results are financially feasible.

[15] See TSPM Phase II Report on Valley Metro’s website for more information.

4.3 Fleet Prioritization

Although implementing all concepts would be desired, given the realities of a finite quantity of buses, as documented in the Fleet Management Plan (FMP), and the length of time required to procure expansion buses, not all concepts may be accommodated in the desired year. Thus, separate processes have been developed for prioritizing existing and expansion fleet. However, not all service change concepts in the SRTP require purchasing buses. The maximum number of buses simultaneously in operation occurs on weekdays during regular morning and afternoon commute hours, so service change concepts that occur outside of this peak period may not require additional buses. Furthermore, Valley Metro provides ongoing schedule and fleet analysis in order to effectively balance the usage of buses during peak periods, on-time performance, and other vehicle and operator considerations.

There are two process for determining the implementation order in the SRTP from limited bus availability: one for Production Years and one for Development Years. For service concepts in the Production Years, a 12-level fleet prioritization process for existing fleet is used as shown in Table 12. The levels serve as a ranking mechanism and apply priorities to elements such as funding source, type of concept and purpose of the concept. Service change concepts in the Production Years that require expanding the fleet may be delayed to the Development Years to accommodate the fleet acquisition process. The lower the rank, the higher the priority for implementation.

Table 12: 12-Level Prioritization Process for Existing Fleet (Production Years)[16]

Service Adjustment	Purpose	Rank Level
Implement TLCP-programmed service as scheduled	Implement TLCP-programmed service	1
Early implementation of programmed service as scheduled in TLCP	Addresses performance-based fleet need (high ridership or running-time adjustment)	2
	Will enhance regional transit connectivity (connect one or more routes)	3
	Will reach potential ridership generator	4
Implement TLCP-planned service	Implement TLCP-planned service	5
Locally funded expansion of an existing route funded through the TLCP	Existing service with performance-based fleet need (high ridership or insufficient schedule)	6
	Will reach potential ridership generator	7
Implementation of service adjustment on existing locally funded service	Addresses performance-based fleet need (e.g. running-time adjustment)	8
	Will enhance regional transit connectivity (connect one or more routes)	9
	Will reach potential ridership generator	10
Implementation of new locally funded service	Will enhance regional transit connectivity (connect one or more routes)	11
	Will reach potential ridership generator	12

Note: If multiple service change concepts have the same rank, the Transit Propensity Tool is used, with the highest projected boardings per revenue mile receiving higher priority.

[16] Table adopted from TSPM. See TSPM Phase III Report on Valley Metro's website for more information.

For service change concepts in the Development Years requiring expansion fleet, a process has been developed that evaluates the service change concepts and assigns points based on their funding characteristics, compliance with established TSPM standards and regional connectivity. The more points a service earns, the higher it is prioritized in the list of fleet requests submitted to the Board for their consideration and possible recommendation to MAG. Refer to Table 13 below. For locally funded services that require expansion fleet, a letter of commitment to fund the service for a number of years is required. The reason for committed funding is to ensure that vehicles are utilized efficiently and the spare ratio remains as closely as possible around 20% as permitted by the FTA. A higher spare ratio is seen as inefficient use of public dollars, which could be utilized elsewhere. (See TSPM Phase III report for the tiebreaker methodology for expansion fleet.)

Table 13: Prioritization Process for Expansion Fleet (Development Years)[17]

Category	Metric	Points
Funding Characteristics	Is there between 2 and 3 years of funding committed for the service improvement? OR Is there more than 3 years of funding committed for the service improvement?	1 / 2
	Is the service improvement a TLCP-planned service?	1
TSPM Compliance	Does the service improvement meet weekday service standards?	0.5
	Does the service improvement meet Saturday service standards?	0.25
	Does the service improvement meet Sunday service standards?	0.25
	Does the service improvement meet the current transit propensity threshold? (Note: only applicable to local/key local service improvements greater than 1 mile)	1
	Does the service improvement remove/modify an under-performing route deviation, thereby requiring at least one less vehicle for operation?	1
Regional Connectivity	Does the service improvement serve multiple jurisdictions?	1
	Does the service improvement connect to other transit route alignments?	0.25 per connection (2 points maximum)

[17] Table adopted from TSPM. See TSPM Phase III Report on Valley Metro's website for more information.

5.0 FY18-22 SRTP Performance Analysis

The majority of the annual update process to the FY18-FY22 SRTP occurred between the fall of 2016 and winter of 2017 with additional input throughout the year. Valley Metro hosted both formal and informal meetings for member agency input throughout the process. Every month, Valley Metro hosts the Service Planning Working Group (SPWG) to discuss the bi-annual service changes and items that may impact future SRTP years, updates to the SRTP and includes staff from both Valley Metro and member agencies. For the FY18-FY22 SRTP update, Valley Metro hosted sub-regional meetings to discuss and formalize service change concepts with collective input from member agencies. For the FY18-FY22 SRTP update, subregional meetings were held on the following dates:

Central Valley Subregional Meeting	Wednesday January 18, 2017
West Valley Subregional Meeting	Tuesday January 24, 2017
East Valley Subregional Meeting	Tuesday January 24, 2017

The majority of the next annual update process for the FY19-FY23 SRTP will occur between the fall of 2017 and winter of 2018 with additional input throughout the year.

The latest performance data from FY16 as well as monthly performance data from the Performance Dashboard and other ongoing planning tools and efforts were referenced when updating the FY18-FY22 SRTP. Most importantly, Table 14 of the FY16 Performance Thresholds was used to evaluate the comparative performance of local, key local and Express/RAPID commuter bus services. Neighborhood circulator bus services were excluded from the quartile analysis due to limited resources to collect representative data. Figures 14 to 16 summarize the information from Table 14 on a map. Additional analysis of the quartile trends over time was performed as well. The performance thresholds of each route over the last three fiscal years can be seen in Figure 17 and Figure 18 in the Appendix. According to the third SRTP Guiding Principle, routes in the bottom and top quartiles were given programming priority in the SRTP. The service change concepts that were included to address performance improvement in the bottom quartile and meeting high demand of the top quartile are shown in Table 20 and Table 21, respectively, in the Appendix.

Table 14: Routes in the Bottom and Top Quartile Ranking for FY16

Bottom Quartile	Route	On-time Performance	Boardings per rev. hour	Boardings per rev. mile	Farebox Recovery	Boardings per trip
Local	1		●	●	●	NA
	28		●	●	●	NA
	39		●	●	●	NA
	75	●	●		●	NA
	83	●	●	●	●	NA
	108	●	●	●	●	NA
	122		●	●	●	NA
	154		●	●	●	NA
	184		●	●	●	NA
	186		●	●	●	NA
	251		●	●		NA
Key Local	7		●	●	●	NA
	45		●	●		NA
	72		●	●		NA
Commuter Express	514		●	NA	●	●
	520	●	●	NA		●
	521		●	NA	●	●
	522	●		NA	●	
	CSM			NA	●	●
	CSM-E		●	NA	●	●

Top Quartile	Route	On-time Performance	Boardings per rev. hour	Boardings per rev. mile	Farebox Recovery	Boardings per trip
Local	10		●	●	●	NA
	43		●	●	●	NA
	51		●	●	●	NA
	59		●	●	●	NA
	60		●	●		NA
	67		●	●	●	NA
	77		●	●	●	NA
	90		●	●		NA
	112	●	●	●	●	NA
	170	●	●	●		NA
Key Local	29			●	●	NA
	41			●	●	NA
	50		●	●		NA
Commuter Express	533		●	NA	●	●
	535		●	NA	●	●
	542		●	NA	●	●
	562		●	NA	●	●
	563	●		NA	●	
	SR51	●	●	NA		
	I-10 E	●	●	NA		●

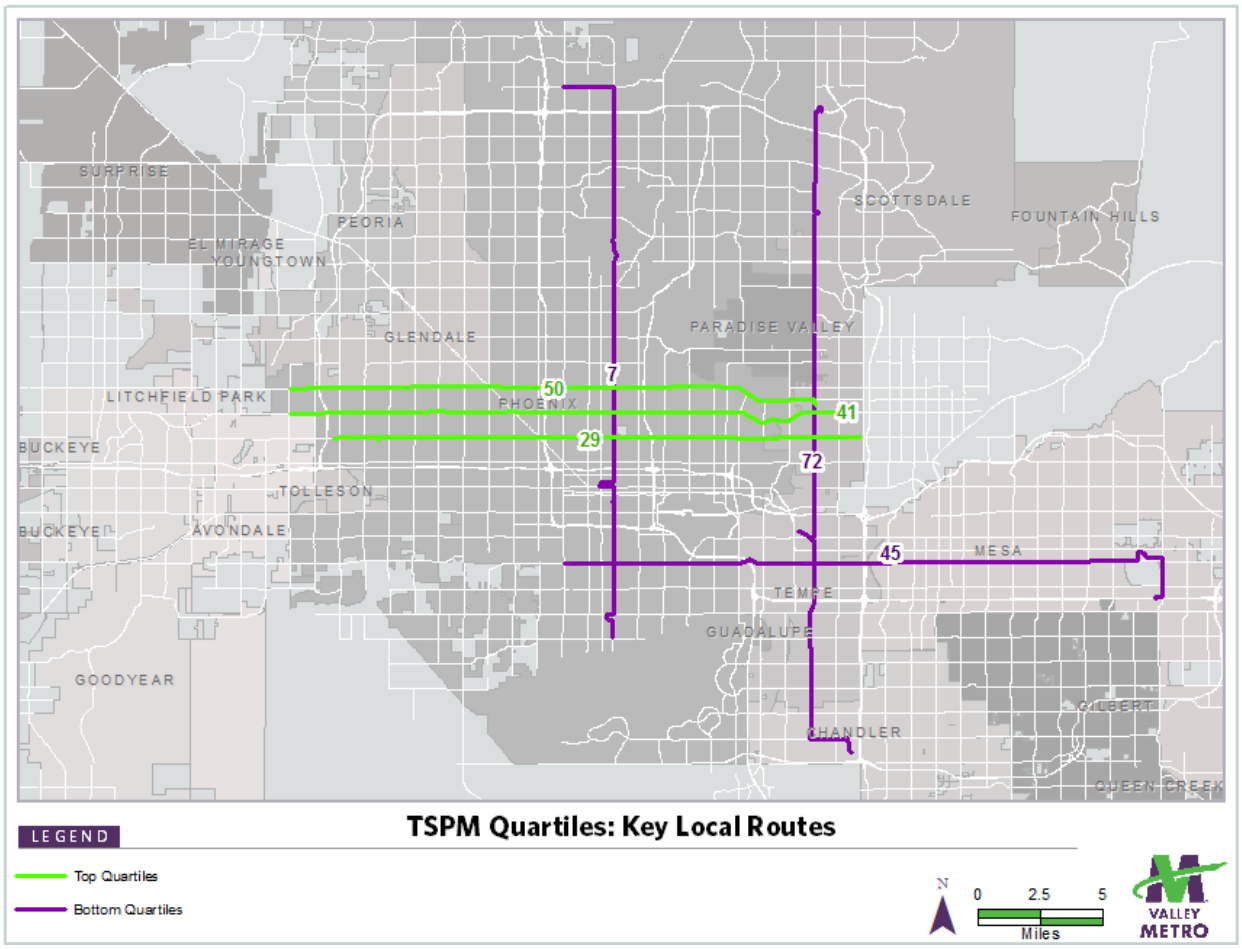


Figure 14: Key Local Routes in the Top and Bottom Quartile for FY16

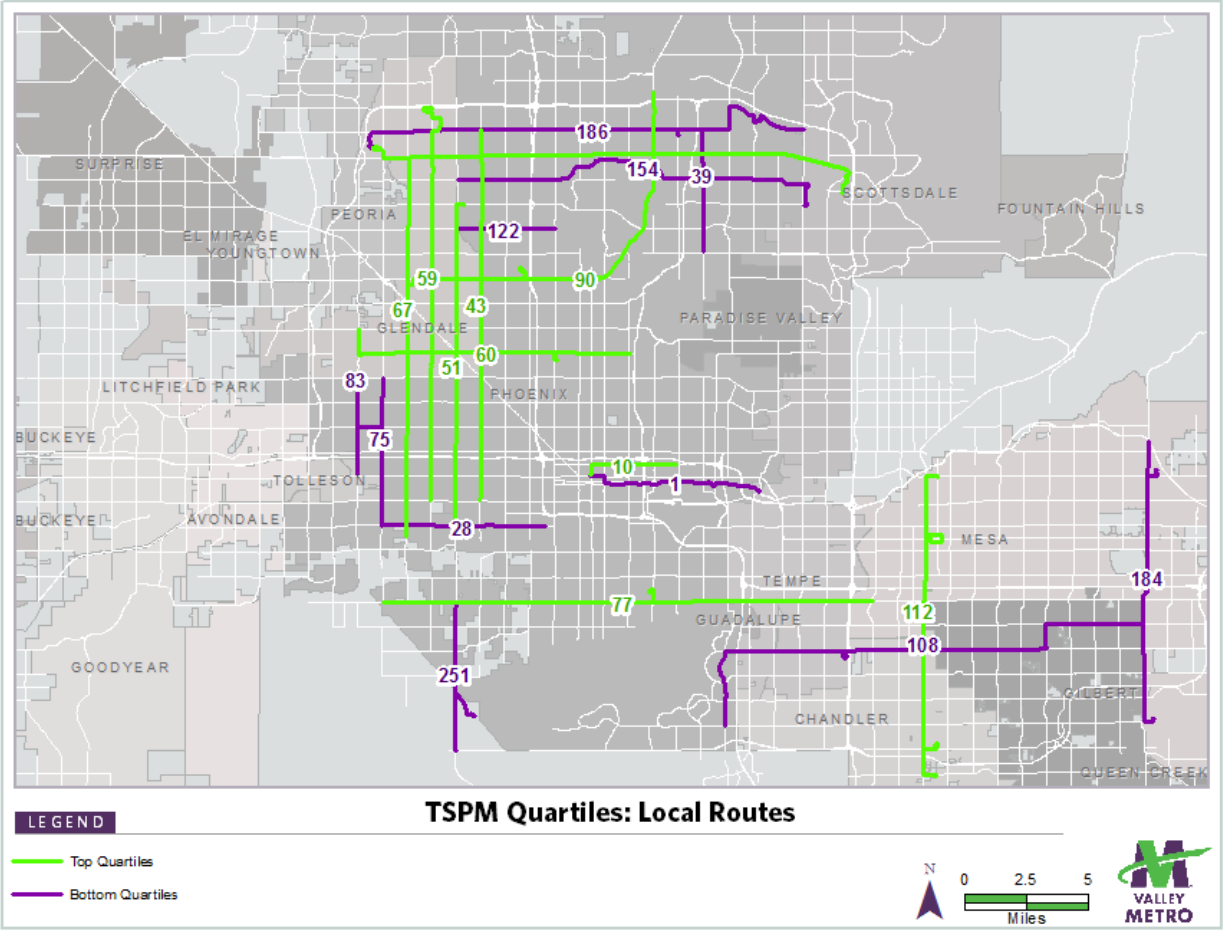


Figure 15: Local Routes in the Top and Bottom Quartile for FY16

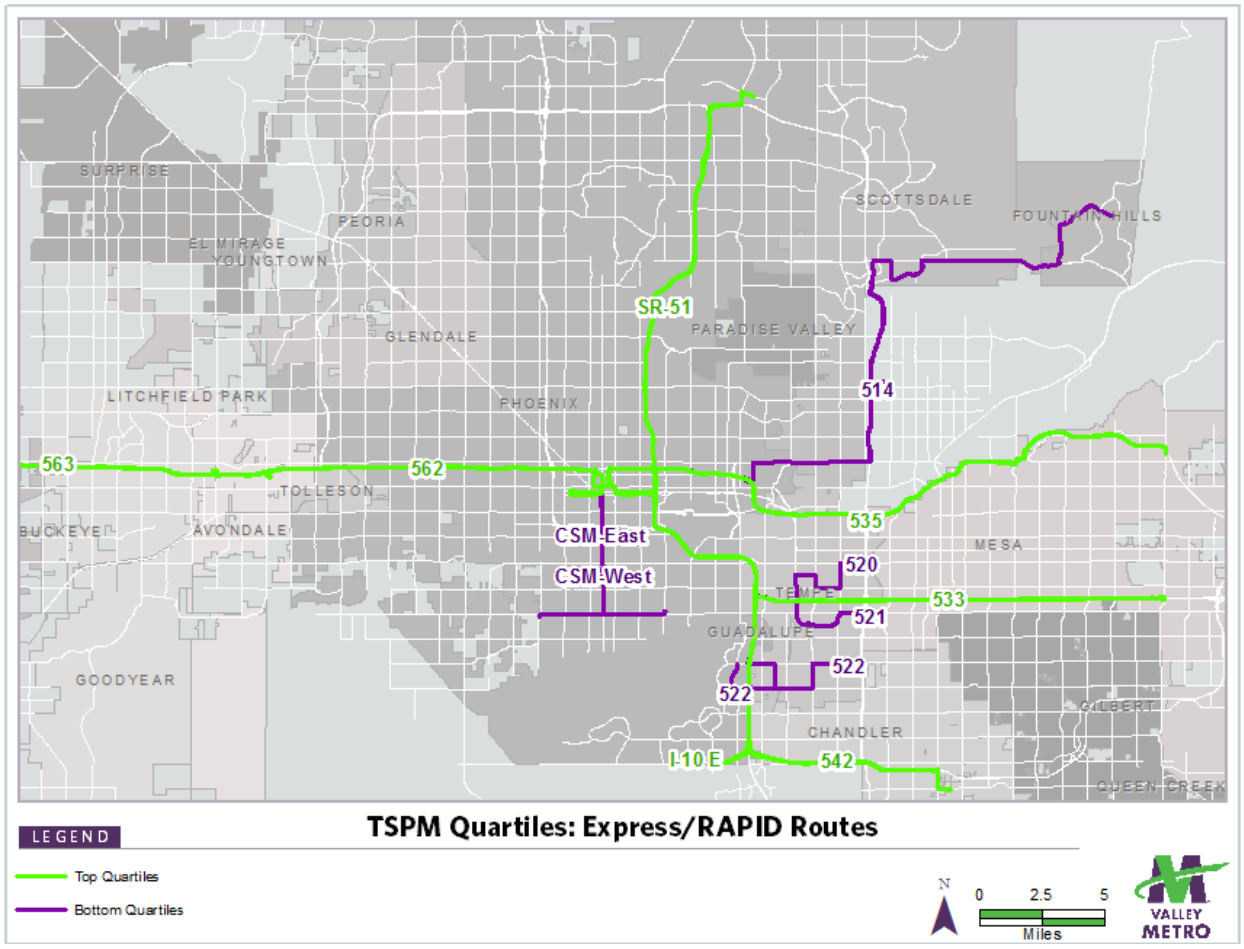


Figure 16: Express/RAPID Routes in the Top and Bottom Quartile for FY16

6.0 FY18-22 SRTP

The updated Short Range Transit Program (SRTP) for fiscal years 2018 through 2022 is given by Tables 15-19 below. The route number, service type, impacted city or town, service change concept type, description of the potential service change concept, additional fleet needed, and additional fleet rank are given in the tables. These tables are the output of the annual SRTP update process. The first two tables give the service change concepts for the Production Years. The last three tables are the service change concepts for the Development Years, which still need further analysis and discussion to be fully developed. The SRTP typically does not require fleet prioritization for the Production Years because fleet for each service change concept is identified in the Development Years.

The *Additional Fleet Needed* represents the number of vehicles needed for a service change concept above what is currently available in the existing fleet of vehicles. As mentioned in Section 4.0, the fleet of vehicles usually needs to be increased if the service change concept adds service during peak periods of service (i.e. peak service) when the maximum number of vehicles are in operation. Fewer vehicles are operated in the off-peak hours. Therefore, it is possible that the vehicle requirements of a service change concept are supported by the existing fleet. The *Additional Fleet Rank* represents a ranking of each service change concept for those concepts that require additional fleet. The ranking is based on the TSPM fleet prioritization process in Section 4.0.

Although Valley Metro is continuously searching for funding to implement all service change concepts in the SRTP, not all concepts may be accommodated in the desired year due to financial and logistical realities. The ranking of additional fleet is used as a planning tool to help prioritize the acquisition of additional fleet in the appropriate timeframe. The rankings are reevaluated annually during the annual update process to the SRTP.

Table 15: FY18 SRTP Service Change Concepts

Route Name	Route Index	Service Type	Impacted City/Town	Change Type	Potential Service Change Concept
October 2017 (FY18)					
19th Av	19	Local	Phoenix	Service	Extend to Happy Valley Road and 23rd Ave.
Thomas	29	Key Local	Phoenix	Service	Improve off-peak service to 15 minutes weekdays from Desert Sky to 44th St.
Camelback	50	Local	Phoenix	Service	Improve off-peak service to 15 minutes weekdays from 67th Ave to 44th St.
59th Av	59	Local	Glendale	Modification	Eliminate deviation off of 59th Ave.
Bethany Home	60	Local	Glendale	Service	Remove 83rd Ave segment to avoid duplication of service.
Bethany Home	60	Local	Phoenix	Service	Extend east end to 24th St. and Camelback Rd.
67th Av	67	Local	Glendale	Modification	Eliminate deviation to Arrowhead Mall, instead serve Abrazo Arrowhead Hospital.
Scottsdale/Rural	72	Key Local	Scottsdale, Tempe	Service	Improve Sunday service to 30 minutes in Scottsdale. Also affects Tempe as trips currently end at TTC
83rd Av	83	Local	Glendale, Phoenix, Peoria	Extension	Extend 83 to Arrowhead Town Center M-F 5AM-10PM at 30 Minutes; Weekend 6AM-10PM at 60 minutes
Country Club/Arizona Av	112	Local	Chandler, Mesa, Gilbert	Service	Extend Peak hours to between 9AM and 2PM at 15 minute frequency between Main and Pecos.
Gilbert Rd	136	Local	Chandler, Gilbert	Modification	Eliminate turnaround loop
Ajo/Gila Bend	685	Rural	Buckeye	Modification	Small route modification in Buckeye to better serve school
Country Club/Arizona Av and Alma School	112 and104	Local	Chandler	Modification	Revisit Boston and Morelos turnarounds
Ray Rd	140	Local	Chandler, Phoenix, Gilbert	New Route	Proposed Route to serve Ray Road west of Gilbert Road (weekday) [48th St. to Gilbert Rd] Service: 30 min weekday & Saturday
Multiple	Express Routes	Express	All	Stop Consolidation	Consolidate downtown Phoenix stops, standardize runtimes downtown
Glendale	GUS 2	Circulator	Glendale	Modification	Re-route GUS 2 to serve east of the current route. Will run M-F 9AM-6PM Clockwise. Starts/Ends at Tanner Terrace
Orbit Saturn	New	Circulator	Tempe	New Route	Orbit Saturn; M-Sun 30 minutes
Zoom North	New	Circulator	Avondale	New Route	Zoom North; M-Sat 30 minutes
April 2018 (FY18)					
51st Av	51	Local	Phoenix	Service	Extend Route 51 from Lower Buckeye Road to Baseline Road
44th St/Tatum or 32nd St	44 or 32	Local	Phoenix	Service	Extend Route 44 or 32 from 44th St/Washington to 48th St/Baseline Rd

Table 16: FY19 SRTP Service Change Concepts

Route Name	Route Index	Service Type	Impacted City/Town	Change Type	Potential Service Change Concept
July 2018 (FY19)					
Camelback	50	Local	Scottsdale	Cost Allocation	Begin fully PTF funding of Route 50 in Scottsdale
October 2018 (FY19)					
McDowell	17	Key Local	Scottsdale	Service	Match Phoenix service span expansion 5AM-Midnight Weekdays and Weekends
59th Av	59	Local	Phoenix	Elimination	Once South Mountain Loop 202 construction begins, reduce Route 59 to end at Van Buren or McDowell
Baseline	77	Key Local	Phoenix	Extension	Extend route north on 75th Avenue to Vineyard
Alma School	104	Local	Chandler, Mesa	Service	Add Saturday service and some weekday evening trips
Hayden/McClintock or Dobson	81 or 96	Local	Chandler	Extension	Explore options to serve Price Corridor
BUZZ	BUZZ	Local	Mesa	Service	Add Sunday Service
All	Holiday Service	Local, Key Local, Circulator	All	Service	Restore holiday service for select holidays on Light Rail and Local, Key Local, Circulator, and Rural routes
Cactus Trolley	New	Circulator	Scottsdale	New Route	New Trolley Route
April 2019 (FY19)					
University	30	Local	Mesa	Modification	After GRE goes online, add a deviation to the LRT end of the line from Gilbert Rd.
Broadway	45	Key Local	Mesa	Modification	After GRE goes online, remove the Sycamore Station deviation. And add a deviation from Gilbert Rd. to serve the end of the line. Dependent on development of Sycamore.

Table 17: FY20 SRTP Service Change Concepts[18]

Route Name	Route Index	Service Type	Impacted City/Town	Change Type	Potential Service Change Concept	Additional Fleet Needed	Additional Fleet Rank
July 2019 (FY20)							
University	30	Local	Tempe	Cost Allocation	City of Tempe requests that the entire cost for the Tempe segment of this route to be funded using Tempe's PTF allocation		
Baseline	77	Local	Mesa	Cost Allocation	Begin PTF funding of Route 77 in Mesa		
Alma School	104	Local	Mesa	Cost Allocation	Begin PTF funding of route in Mesa		
October 2019 (FY20)							
Indian School	41	Local	Scottsdale	Service	Match Phoenix service span expansion 5AM-Midnight Weekdays and Weekends		
Baseline	77	Local	Mesa	Extension	Extend to Gilbert Rd. in connection with GRE and keep at current weekday level of service, remove existing end-of-line loop. Implement 30 min Sat and Sun service.	2	1
Alma School	104	Local	Mesa	Service	Add evening trips until 11:30PM from Alma School to Baseline; improve weekend frequency to 30 minutes and extend evening service.		
Alma School	104	Local	Mesa	Service	Increase Peak frequency to 15 minutes Riverview to Elliot Rd.	2	7
Mesa Dr	120	Local	Gilbert	Extension	Extend to Warner Road in Gilbert	2	2
Mesa Dr	120	Local	Mesa	Service	Connect to Baseline Rd. WKDY service (both directions) start at 5am and end at 10PM. Improve Saturday service to match weekday service. Implement Sunday service from 6am to 9pm at 30 min frequency		
Stapley	128	Local	Mesa	Service	Weekday service (both directions) start at 5am and end at 10pm. Improve Saturday service to match weekday service. Implement Sunday service from 6am to 9pm at 30 minute frequency. Will go online when GRE is complete.		
Power Rd	184	Local	Mesa, Gilbert	Modification	Streamline north end route deviation by removing deviation to RMCC; Streamline south end to enter/exit Phoenix Mesa Gateway Airport via Chandler Blvd.		
Avondale/ Buckeye Express	563	Express	Buckeye	Extension	Extend one additional trip to Buckeye PNR	1	4
Airpark Trolley	New	Circulator	Scottsdale	New Route	New Trolley Route	4	6
Scottsdale Limited	New	Limited Service	Scottsdale	New Route	Pending: Possibly straight from Thunderbird PnR to Fashion Square to Light Rail	3	8
Val Vista	Val Vista	Local	Gilbert	New Route	New local route on Val Vista Dr. from Greenfield on Baseline Rd. to south of Pecos Rd. to Gilbert Mercy Hospital, replacing deviation of Route 156	4	5
Gilbert Rd	136	Local	Mesa, Gilbert	Service	Improve peak weekday frequency in Gilbert and Mesa (Main to Elliot), add some evening trips. Improve Saturday service in Mesa to 30 min. and add Sunday service in Mesa and Gilbert at 30 minute frequency, extend span of service by adding some night trips. (In TLCP for FY2019)	2	3
April 2020 (FY20)							
Van Buren	3	Key Local	Avondale, Tolleson, Phoenix	Service	Increase Saturday and Sunday Frequency		
Zoom	ZOOM	Circulator	Avondale, Goodyear	Service	Increase Saturday frequency to match weekday, Sunday to frequency to current Saturday		
					Total Circulators:	4	
					Total Local, Key Local, Express/RAPID, Limited Buses:	16	

[18] The *Additional Fleet Needed* column indicates the number of vehicles needed to support a service change concept above currently available fleet. For concepts needing additional fleet, the *Additional Fleet Rank* column indicates the ranking based on the fleet prioritization process described in Section 4.0. If blank, then the service change concept does not require additional fleet.

Table 18: FY21 SRTP Service Change Concepts[19]

Route Name	Route Index	Service Type	Impacted City/Town	Change Type	Potential Service Change Concept	Additional Fleet Needed	Additional Fleet Rank
July 2020 (FY21)							
Broadway	45	Key Local	Mesa	Cost Allocation	Begin PTF funding of route in Mesa		
October 2020 (FY21)							
Indian School	41	Key Local	Avondale	Extension	From Avondale mid-term Transit Plan, extend to Litchfield Rd.	3	4
Broadway	45	Key Local	Mesa	Service	Increase frequency on Saturday and Sunday.		
Broadway	45	Key Local	Mesa	Service	Match Tempe and Phoenix 15 minute frequency	5	17
Broadway	45	Key Local	Mesa	Reduction	Remove duplication of service along Power Rd. south of Broadway.		
59th Av	59	Local	Phoenix	Service	Increase peak frequency to 15 minutes	3	14
Bethany Home	60	Local	Phoenix	Service	Increase peak frequency to 15 minutes	4	13
67th Av	67	Local	Phoenix	Service	Increase peak frequency to 15 minutes	3	11
75th Av	75	Local	Peoria, Glendale	Extension	Extend 75 to Arrowhead Town Center	5	1
Baseline	77	Local	Gilbert, Mesa	Extension	Extend to Power Rd, replace Route 108 service to Sunland Village East. Analyze infrastructure costs east of Val Vista.	3	2
Northern/Shea	80	Local	Scottsdale	Service	Match Phoenix service weekdays 30 minute; service span expansion 5AM-Midnight Weekends; add hourly trips to Mayo Clinic off-peak		
Dobson	96	Local	Mesa	Service	Improve peak weekday frequency to 15 minutes from Riverview to Elliot Rd.	3	18
Mesa Dr	120	Local	Mesa	Extension	Extend route to McKellips Rd.		
Stapley	128	Local	Gilbert	Extension	Extend Route 128 south to Galveston St.	2	15
Thunderbird	138	Local	Surprise, El Mirage	Extension	Extend service to Surprise Civic Center	3	8
Bell	170	Local	Surprise, Glendale, Peoria, County	Extension	Extend service to Surprise Civic Center	6	7
Power Rd	184	Local	Mesa	Service	Reduce peak service from 15 to 30 minutes; improve weekend frequency to 30 minutes.		
ALEX	ALEX	Circulator	Phoenix	Service	Increase frequency to 30 minutes	4	12
MARY	MARY	Circulator	Phoenix	Service	Increase frequency to 30 minutes	4	9
Surprise Circulator	New	Circulator	Surprise	New Route	Develop a new circulator route for downtown Surprise.	4	19
Phoenix Circulator	New	Circulator	Phoenix	Service	New neighborhood circulator (ca. 10 linear miles)	4	16
Loop202 RAPID	New	RAPID	Phoenix	New Route	Once South Mountain Loop 202 is complete, create new RAPID from 59th Ave/202 to Downtown Phoenix	3	6
56th St	56A	Local	Phoenix	Service	New Route 56A from Shea Blvd to Deer Valley Road (Desert Ridge Mall area)	3	5
SMART	SMART	Circulator	Phoenix	Service	Increase frequency to 30 minutes		
April 2021 (FY21)							
Hayden/McClintock	81	Local	Chandler, Tempe	Service	Weekday, improve service in Chandler by extending current service to add two evening round trips.		
Dobson	96	Local	Chandler	Service	Weekday, improve service in Chandler by extending current service to add one evening round trip.		
Country Club/ Arizona	112	Local	Chandler	Extension	Extend Route 112 to Hamilton High School.	1	10
Thomas	Thomas Rd BRT	BRT	Phoenix	Service	Thomas Road BRT/Limited Stop Service from Desert Sky Transit Center to 44th St. Peak service only	9	3
					Total Circulators:	16	
					Total Local, Key Local, Express/RAPID, Limited Buses:	56	

[19] The *Additional Fleet Needed* column indicates the number of vehicles needed to support a service change concept above currently available fleet. For concepts needing additional fleet, the *Additional Fleet Rank* column indicates the ranking based on the fleet prioritization process described in Section 4.0. If blank, then the service change concept does not require additional fleet.

Table 19: FY22 SRTP Service Change Concepts[20]

Route Name	Route Index	Service Type	Impacted City/Town	Change Type	Potential Service Change Concept	Additional Fleet Needed	Additional Fleet Rank
July 2021 (FY22)							
University	30	Local	Mesa	Cost Allocation	Begin PTF funding of Route 30 in Mesa		
October 2021 (FY22)							
Van Buren	3	Key Local	Goodyear	Extension	Extend Route 3 West and North to Estrella Pkwy and McDowell	3	5
Thomas	29	Key Local	Avondale, Phoenix	Extension	From Avondale mid-term Transit Plan, extend to Avondale Civic Center	2	1
University	30	Local	Mesa	Service	Improve weekend frequency in Mesa only		
University	30	Local	Mesa	Extension	Extend route to Ellsworth Rd.	1	6
48th St/Rio Salado	48	Local	Tempe, Mesa	Extension	Extend to Mesa Riverview along Rio Salado	2	4
Scottsdale/Rural	72	Key Local	Scottsdale	Route Extension	Implement Pinnacle Extension	2	11
Gilbert Rd	136	Local	Mesa	Modification	Analyze and streamline north end route deviation either by potentially removing deviation or finding a better service connection for Boeing.		
Chandler Blvd/ Williams Field Rd	156	Local	Chandler	Service	15 minute peak frequency from Kyrene to Gilbert Road and 1 evening round trip in Chandler	4	12
Chandler Blvd/ Williams Field Rd	156	Local	Chandler, Phoenix, Gilbert	Service	15 minute peak from 48th St to Val Vista	5	8
Bell	170	Local	Scottsdale	Service	Match Phoenix service span expansion 5AM-Midnight Weekdays and Weekends	0	
Ray	140	Local	Chandler, Phoenix, Gilbert	New Route	Extend 140 from Gilbert Rd to Power Rd on Warner; Add Sunday service	6	9
Buckeye Circulator	Buckeye Circulator	Circulator	Buckeye	New Route	New, ca. 10-mile circulator in Buckeye. From Buckeye Transit Plan.	4	13
Luke Circulator	Luke Circulator	Circulator	Surprise	New Route	Consider local circulator down to Luke Air Base	4	7
Miller Rd Trolley	Miller Road Trolley	Circulator	Scottsdale	Service	Increase service to 20 minute frequency	1	14
Gilbert Express	New	Express	Gilbert, Phoenix	New Route	Add new commuter Express from Williams Field Rd. and Greenfield Rd. to Downtown Phoenix	4	2
Greenfield	New	Local	Mesa	Service	Add new route on Greenfield from 202, southern terminus TBD	TBD	3
Perimeter Trolley	New	Circulator	Scottsdale	New Route	Implement Perimeter Trolley	4	10
					Total Circulators:	13	
					Total Local, Key Local, Express/RAPID, Limited Buses:	29 (TBD)	

[20] The *Additional Fleet Needed* column indicates the number of vehicles needed to support a service change concept above currently available fleet. For concepts needing additional fleet, the *Additional Fleet Rank* column indicates the ranking based on the fleet prioritization process described in Section 4.0. If blank, then the service change concept does not require additional fleet. TBD means to be determined in the future.

7.0 Appendix

Table 20: Service Change Concepts for Routes in the Bottom Quartile

Service Type	Route	Improvements
Local Routes	**1**	T2050 improvements to service hours and weekend frequency (FY17).
	28	T2050 improvements to service hours and weekend frequency (FY17).
	39	T2050 improvements to service hours and weekend frequency (FY17).
	75	T2050 improvements to service hours and weekend frequency (FY17); Extend to Arrowhead (FY21)
	83	T2050 improvements to service hours and weekend frequency (FY17); Extend to Arrowhead (FY18)
	108	T2050 improvements to service hours and weekend frequency (FY17).
	122	T2050 improvements to service hours and weekend frequency (FY17).
	154	T2050 improvements to service hours and weekend frequency (FY17).
	184	Reroute south end (FY18); eliminate north end deviation (FY19); Reduce weekday frequency, increase weekend frequency (FY21).
	186	T2050 improvements to service hours and weekend frequency (FY17).
	251	Infrastructure improvements (FY18).
Key Local Routes	**7**	T2050 improvements to service hours (FY17).
	45	After GRE, remove Sycamore add Gilbert deviation(FY19); Increase frequency Weekday, Saturday, and Sunday in Mesa (FY21)
	72	Improve Sunday service to 30 minutes in Scottsdale (FY18); Extend to Pinnacle Peak (FY22)

Table 21: Service Change Concepts for Routes in the Top Quartile

Service Type	Route	Improvements
Local Routes	**10**	T2050 improvements to service hours (FY17).
	43	T2050 improvements to service hours and weekend frequency (FY17).
	51	T2050 improvements to service hours and weekend frequency (FY17); Extend to Baseline Rd (FY18).
	59	T2050 improvements to service hours and weekend frequency (FY17); Reduce route to accommodate Loop 202 (FY19); Increase peak frequency to 15 minutes (FY21).
	60	T2050 improvements to service hours (FY17); Increase peak frequency to 15 minutes (FY21).
	67	T2050 improvements to service hours and weekend frequency (FY17); Increase peak frequency to 15 minutes (FY21).
	77	T2050 improvements to service hours and weekend frequency (FY17); Extend to Gilbert Road, 30 minute weekend service in Mesa (FY20); Extend to Power Rd (FY21).
	90	T2050 improvements to service hours (FY17); Extend to 99th Ave (FY21).
	112	Increased service from LINK consolidation to 30 minute all day, 15 minute peak (FY17); Extend peak hours from 6AM to 6PM (FY18); Extend route to Hamilton High School (FY21)
	170	T2050 improvements to service hours (FY17); Extend to Surprise Civic Center (FY21); Match Phoenix hours in Scottsdale (FY21)
Key Local Routes	**29**	T2050 improvements to service hours and weekend frequency (FY17); Match Phoenix frequency and span in Scottsdale (FY18); Extend to Avondale Civic Center (FY21).
	41	T2050 improvements to service hours and weekend frequency (FY17); Match Phoenix span in Scottsdale (FY18); Extend to Litchfield Rd (FY21).
	50	T2050 improvements to service hours and weekend frequency (FY17).

Figure 17: FY14-16 Quartile Trends for Key Local and Express/RAPID Routes

Route Number	On-time Performance			Boardings per rev. hour			Boardings per rev. mile			Farebox recovery		
	14	15	16	14	15	16	14	15	16	14	15	16
0												
3												
7												
16												
17												
19												
27												
29												
35												
41												
45												
50												
61												
70												
72												

Key
Top Quartile
Middle Quartiles
Bottom Quartile
No Data

Route Number	On-time Performance			Boardings per rev. hour			Boardings per rev. mile			Farebox recovery		
	14	15	16	14	15	16	14	15	16	14	15	16
511												
514												
520												
521												
522												
531												
533												
535												
541												
542												
562												
563												
571												
573												
575												
SR51												
I-10 E												
CSM												
CSM-E												
I-10 W												
I-17												

Figure 18: FY14-16 Quartile Trends for Local Routes

Route Number	On-time Performance			Boardings per rev. hour			Boardings per rev. mile			Farebox recovery		
	14	15	16	14	15	16	14	15	16	14	15	16
1												
8												
10												
12												
13												
15												
28												
30												
39												
40												
43												
44												
48												
51												
52												
56												
59												
60												
62												
65												
66												
67												
75												

Route Number	On-time Performance			Boardings per rev. hour			Boardings per rev. mile			Farebox recovery		
	14	15	16	14	15	16	14	15	16	14	15	16
77												
80												
81												
83												
90												
96												
104												
106												
108												
112												
120												
122												
128												
136												
138												
154												
156												
170												
184												
186												
251												
17A												

Key
Top Quartile
Middle Quartiles
Bottom Quartile
No Data


VALLEY
METRO