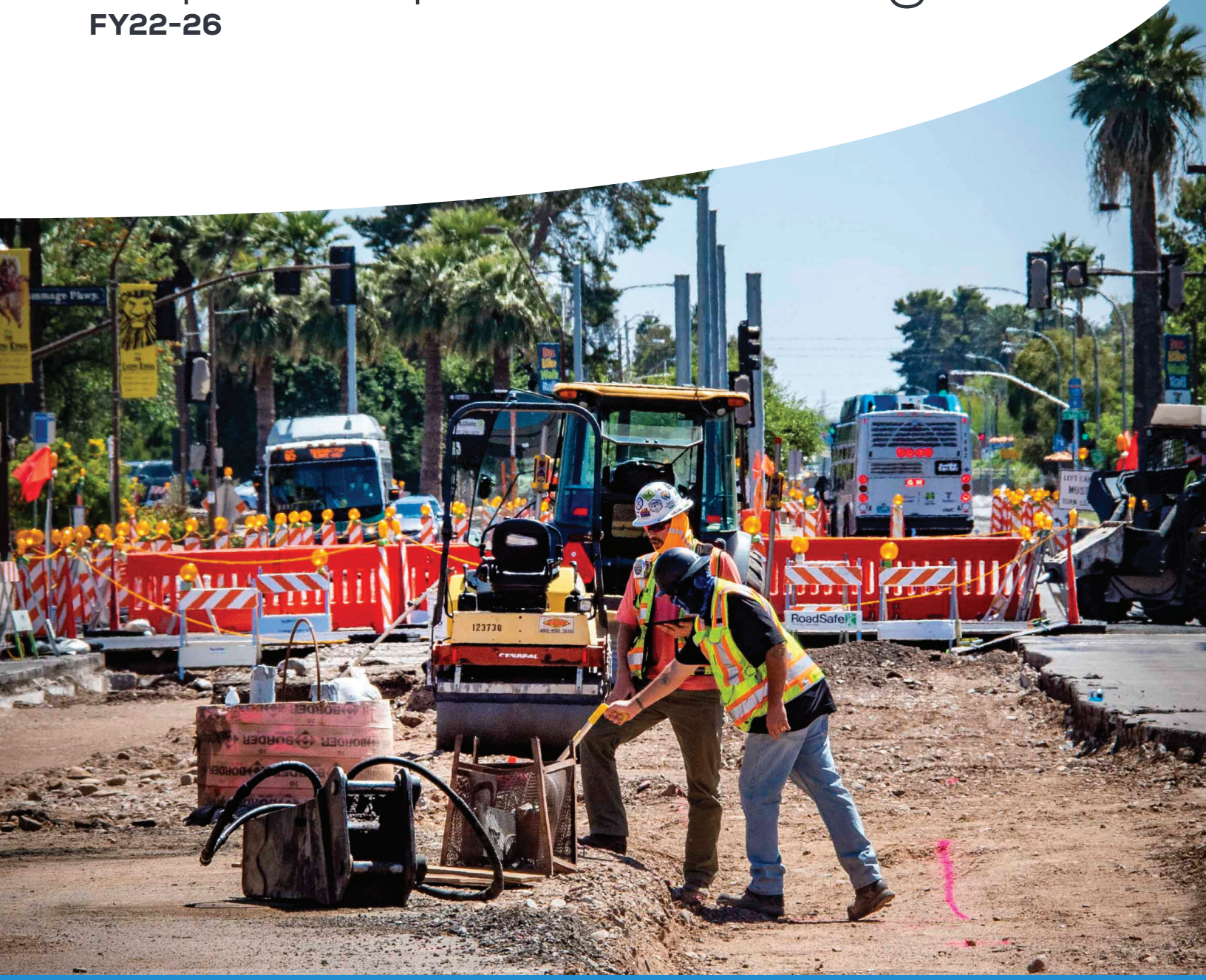
Valley Metro

Capital Improvement Program

FY22-26



VALLEY METRO

Regional Public Transportation Authority & Valley Metro, Inc.

PHOENIX, ARIZONA

FIVE-YEAR CAPITAL IMPROVEMENT PROGRAM

FISCAL YEAR 2022 THROUGH FISCAL YEAR 2026

(JULY 1, 2021 THROUGH JUNE 30, 2026)

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Chief Executive Officer

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Chief Operations Officer

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Chief Auditor

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Director, Communication & Strategic Initiatives

Jim Hillyard
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Director, Safety, Security and Quality Assurance

Alexis Tameron Kinsey
Chief of Staff; Director, Government Relations

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OVERVIEW

Valley Metro's Capital Improvement Program (CIP) is a plan developed to meet the capital maintenance needs of both Valley Metro Rail (VMR) and the Regional Public Transportation Authority (RPTA) while ensuring available revenues are efficiently utilized to support the existing infrastructure, assets, and state of good repair needs. Projects within the CIP are at least $25,000 and have a useful life or replacement interval of at least 3 years. The CIP covers the current 5-year period, while long-range projects are tracked within the Transit Life Cycle Program (TLCP). This plan is developed based on agency-wide input from departments, with executive review, and is updated each year in coordination with the annual budget development and 5-year forecasts.

FUNDING SOURCES

The Capital Improvement Program is funded by three primary sources: Federal, Regional, and Operations. Based on the revenue projections for the various sources, funding is programed based on availability and priority of the project.

There are several major sources of federal funds which support the CIP. Formula programs are the largest Federal Transit Administration (FTA) programs, supporting fleet and fleet facilities. The funds are allocated annually to each area, as defined by the Census Bureau. The areas are split into three tiers: urbanized areas over 200,000 population, urbanized areas over 50,000 but less than 200,000 and non-urbanized areas. Each urbanized area must have a designated recipient that applies for the funds to FTA. Within an area, there can be additional recipients of funds. These sub-recipients deal with the designated recipient and not with FTA directly. The City of Phoenix is the designated recipient for the Phoenix-Mesa urbanized area. RPTA and METRO are considered sub-recipients to Phoenix. FTA funds include 5307 Urban Area Formula, 5309 Capital Investment Grants, 5337 State of Good Repair, 5339 Bus and Bus Facilities, 5311 Rural Area Formula, and 5310 New Freedom. Other revenues received from the Federal Highway Administration include the Surface Transportation Program and Congestion Mitigation/Air Quality funds.

Regional revenues are sourced from the Proposition 400 Transportation Excise Tax which is a 20-year half-cent sales tax, sunsetting December 31, 2025. One-third of the revenues generated goes to public transportation funds with the remainder going to regional area road funds. We receive approximately $180M in Public Transportation Funds (PTF) annually which is allocated between bus and rail, by 57% and 43% respectively, based upon the statutory requirement. PTF can be used for both operating and capital expenditures by RPTA, however it can only be used to support capital programs for VMR.

Operations revenues are composed of member city contributions, fare revenues, advertising, and any other revenues received for operations. VMR member cities include Phoenix, Tempe, Mesa, and Chandler. RPTA member cities include Avondale, Buckeye, Chandler, El Mirage, Fountain Hills, Gilbert, Glendale, Goodyear, Maricopa County, Mesa, Peoria, Phoenix, Queen Creek, Scottsdale, Surprise, Tempe, Tolleson, Wickenburg, and Youngtown.

CATEGORIES

Based on the National Transit Database's definitions.

Administrative buildings - Administrative buildings are the general administrative offices owned by a transit agency. Administrative buildings usually house executive management and support activities for overall transit operations, including accounting, finance, engineering, legal, safety, security, customer services, scheduling, and planning. Administrative buildings also include separate buildings for customer information or ticket sales that a transit agency owns and that are not part of passenger stations.

Communication Systems - Communication systems include two-way radio systems between dispatchers and vehicle operators, cab signaling, and train control equipment in rail systems, automatic vehicle locator systems, automated dispatching systems, vehicle guidance systems, telephones, and public address systems.

Fare revenue collection equipment - Fare revenue collection equipment includes, fareboxes, automated fareboxes and related software, farebox vaulting equipment, fare validators, and ticket vending machines.

Guideways - A public transportation facility using and occupying a separate right-of-way (ROW) or rail for the exclusive use of public transportation including the buildings and structures dedicated for the operation of transit vehicles such as:

- At-Grade
- Elevated
- Below-Grade

Guideway does not include passenger stations and transfer facilities, bus pull-ins or communication systems (e.g., cab signaling and train control).

Information Systems - Information systems include computers, monitors, printers, scanners, data storage devices, and associated software that support transit operations. Associated software may include general office, accounting, scheduling, planning, vehicle maintenance, non-vehicle maintenance, and customer service programs.

Maintenance buildings - Maintenance facilities are those where routine maintenance repairs or heavy maintenance, or unit rebuilds are conducted. Maintenance buildings include garages, shops, operations centers, and equipment that enhance maintenance, such as diagnostic equipment.

Passenger stations - A passenger boarding / deboarding facility with a platform, which may include:

- Elevators, Escalators, Canopies, Wind shelters, Lighting, Signs,
    - Does not include stops (which are typically on-street locations at the curb or in a median, sometimes with a shelter, signs, or lighting) for:
- Bus
- Light rail
- Streetcar

Revenue vehicles - new - Replacing a fleet — the replacement of revenue vehicles having reached the end of their service lives. Expanding a fleet — the acquisition of revenue vehicles for expansion of transit service.

Revenue vehicles – overhaul (SOGR) - Rebuilding a fleet — the installation of new or rebuilt major components (e.g., engines, transmissions, body parts) and/or structural restoration of revenue vehicles to

extend service life. Overhauling a rail fleet — the one-time rebuild or replacement of major subsystems on revenue producing light rail cars and streetcars, commonly referred to as midlife overhaul.

Service vehicles (non-revenue) - Service vehicles include supervisor vans, mobile repair trucks, transit security cars, and staff pool cars.

Other - Furniture and equipment that are not an integral part of buildings and structures. Shelters, signs, and passenger amenities (e.g., benches) not in passenger stations.

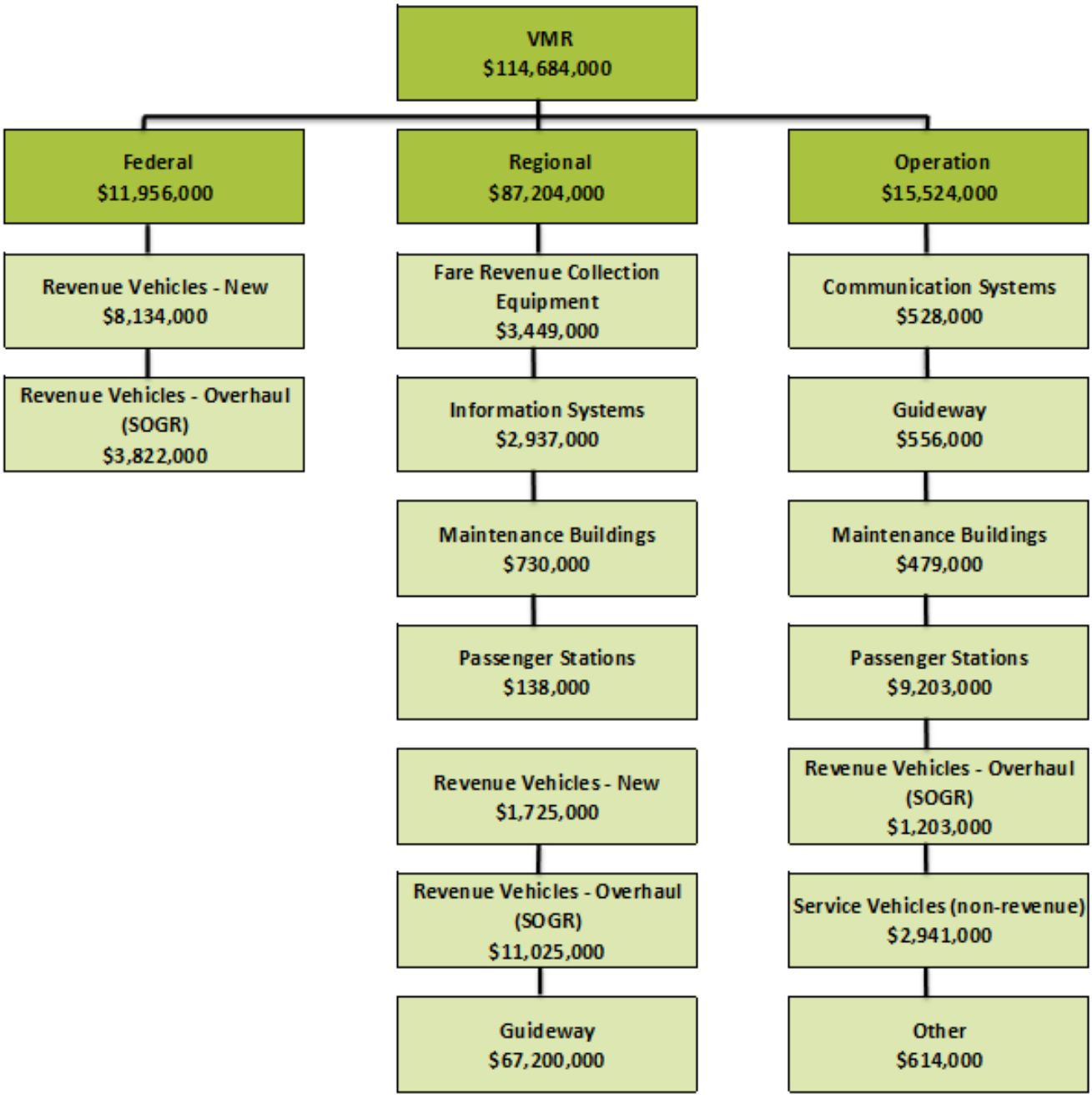
TYPES

Most categories have four unique types which identify the major actvities within the category. Other type is used for items outside the major four types.

Category	Type
Administrative Buildings	101 Building Mobility Center
Communication Systems	Radios Switches SCADA Public address systems Other
Fare Revenue Collection Equipment	Farebox Software Ticket Vending Machine (TVM) Validator
Guideways	Track Catenary Switches Traction Power Substation Other
Information Systems	Hardware Software Printers Storage devices Other
Maintenance Buildings	Operation & Maintenance Center Maintenance of Way Maintenance of Equipment Mesa Bus & Operations Maintenance
Passenger Stations	Communication Cabinet Landscaping Park-and-Ride Pavers/Asphalt Other
Revenue Vehicles - Overhaul	Bus Paratransit Vanpool Rail Streetcar
Revenue Vehicles - New	Bus Paratransit Vanpool Rail Streetcar
Service Vehicles (non-revenue)	Service Administrative
Other	Furniture/Equipment Shelters Signs Passenger amenities Other

VALLEY METRO RAIL, INC

FIVE YEAR FUNDING SUMMARY



SUMMARY

USES OF FUNDS	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Communication Systems	$ 437,000	$ 91,000	$ -	$ -	$ -	$ 528,000
Fare Revenue Collection Equipment	1,776,000	1,080,000	593,000	-	-	3,449,000
Guideway	6,178,000	32,945,000	22,400,000	6,233,000	-	67,756,000
Information Systems	1,779,000	263,000	275,000	329,000	291,000	2,937,000
Maintenance Buildings	713,000	221,000	275,000	-	-	1,209,000
Passenger Stations	2,070,000	4,804,000	1,699,000	534,000	234,000	9,341,000
Revenue Vehicles - New	8,620,000	1,239,000	-	-	-	9,859,000
Revenue Vehicles - Overhaul (SOGR)	9,040,000	2,400,000	2,354,000	1,128,000	1,128,000	16,050,000
Service Vehicles (non-revenue)	279,000	899,000	775,000	829,000	159,000	2,941,000
Other	60,000	500,000	54,000	-	-	614,000
Total Uses of Funds	**$ 30,952,000**	**$ 44,442,000**	**$ 28,425,000**	**$ 9,053,000**	**$ 1,812,000**	**$ 114,684,000**

SOURCES OF FUNDS	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal Funding	$ 8,432,000	$ 2,384,000	$ 1,141,000	$ -	$ -	$ 11,957,000
Regional Funding	18,812,000	35,328,000	24,188,000	7,457,000	1,419,000	87,204,000
Operations Funding	3,709,000	6,730,000	3,096,000	1,596,000	393,000	15,524,000
Unfunded	-	-	-	-	-	-
Total Sources of Funds	**$ 30,952,000**	**$ 44,442,000**	**$ 28,425,000**	**$ 9,053,000**	**$ 1,812,000**	**$ 114,684,000**

COMMUNICATIONS SYSTEMS

Public Address Systems

Station Amplifier

Replace the station amplifiers, which are used for making station announcements. The amplifiers at 34 platforms along the original alignment are scheduled to be replaced.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	91,000	-	-	-	91,000
Total Project	**$ -**	**$ 91,000**	**$ -**	**$ -**	**$ -**	**$ 91,000**
Type Total	**$ -**	**$ 91,000**	**$ -**	**$ -**	**$ -**	**$ 91,000**

Radios

Radio Base Station

Upgrade the existing OCC radio base stations and add two additional channels.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	300,000	-	-	-	-	300,000
Total Project	**$ 300,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 300,000**
Type Total	**$ 300,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 300,000**

Supervisory Control and Data Acquisition (SCADA)

Communication Room UPS

Replace the uninterruptable power supply (UPS) at the Maintenance of Equipment (MOE) facility. The communications room at the MOE facility has one UPS unit. The UPS is for the Supervisory Control and Data Acquisition (SCADA) network system. The life expectancy of the UPS is 10-15 years.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	137,000	-	-	-	-	137,000
Total Project	**$ 137,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 137,000**
Type Total	**$ 137,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 137,000**
Category Total	**$ 437,000**	**$ 91,000**	**$ -**	**$ -**	**$ -**	**$ 528,000**

FARE REVENUE COLLECTION EQUIPMENT

Ticket Vending Machine (TVM) & Validator

Fare Collection System

The new fare system will move away from magnetic-striped paper passes toward electronic fare media, including mobile tickets and smartcards. The account-based electronic fare media will allow for greater control of reduced fares at the point of sale. The new system will have an open architecture. This means that Valley Metro and the City of Phoenix would own the keys and dictate how hardware would interact with the back end software. This project includes the replacement of existing TVMs and validator hardware as well as expansion of the number of validators to accommodate the new fare media options.

The City of Phoenix is funding the project. Valley Metro is budgeting the Public Transportation Fund (PTF) portion.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	1,776,000	1,080,000	593,000	-	-	3,449,000
Operations	-	-	-	-	-	-
Total Project	**$ 1,776,000**	**$ 1,080,000**	**$ 593,000**	**$ -**	**$ -**	**$ 3,449,000**
Type Total	**$ 1,776,000**	**$ 1,080,000**	**$ 593,000**	**$ -**	**$ -**	**$ 3,449,000**
Category Total	**$ 1,776,000**	**$ 1,080,000**	**$ 593,000**	**$ -**	**$ -**	**$ 3,449,000**

GUIDEWAYS

Other

Bar Signals

Replace the bar signals, which indicate to the train operator whether to stop or go at intersections. The life expectancy of the bar signal is around 10 years. Approximately 365 bar signals are scheduled for replacement in FY25. The bar signals along the Central Mesa Extension and Northwest Extension Phase I are schedule to be replaced, as needed.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	-	139,000	-	139,000
Total Project	**$ -**	**$ -**	**$ -**	**$ 139,000**	**$ -**	**$ 139,000**
Type Total	**$ -**	**$ -**	**$ -**	**$ 139,000**	**$ -**	**$ 139,000**

Switches

Crossovers

The additional crossovers are for operational efficiency when it is necessary to switch to the other track. The anticipated locations for the crossover are:

- FY23: Central/Camelback Storage Track and 15th Avenue - 16th Avenue and Camelback turnout
- FY24: Crossover between 38th Street and 44th Street

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	32,800,000	16,400,000	-	-	49,200,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ 32,800,000**	**$ 16,400,000**	**$ -**	**$ -**	**$ 49,200,000**

Switches

This project will power manual switches to be able to operate remotely. Efficiencies will be created by not having to provide a switch tender to throw switches for situations where the train needs to change tracks.

- FY22: Four switches at Earll Drive and Central
- FY23: Four switches at River Drive and Apache
- FY24: Four switches at the end of the line for the streetcar at Marina Heights
- FY25: Four switches at Dorsey and Apache (streetcar to LRT track)

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	6,000,000	-	6,000,000	6,000,000	-	18,000,000
Operations	-	-	-	-	-	-
Total Project	**$ 6,000,000**	**$ -**	**$ 6,000,000**	**$ 6,000,000**	**$ -**	**$ 18,000,000**
Type Total	**$ 6,000,000**	**$ 32,800,000**	**$ 22,400,000**	**$ 6,000,000**	**$ -**	**$ 67,200,000**

Traction Power Substation (TPSS)

Batteries

Replacement battery cartridges for the platforms' uninterruptible power supply (UPS). During a utility power outage, the UPS keeps providing power to maintain communication with the Operations Control Center. There are 56 batteries at each station. The original system has 33 stations for a total 1,850 batteries needing replacements. The life expectancy is three to six years in the Arizona climate.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	-	94,000	-	94,000
Total Project	**$ -**	**$ -**	**$ -**	**$ 94,000**	**$ -**	**$ 94,000**

Battery Chargers

Replace 16 battery charger units on the original system, which have reached their end of useful life (10-14 years). There is one battery charger per substation.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	64,000	-	-	-	-	64,000
Total Project	**$ 64,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 64,000**

Battery Controls

Replace the battery controls. The battery controls are in the substations that are used to keep the control power up in case of a power outage. The replacements are for the 24 substations on the original system, each of which contain 31 batteries. The life expectancy of the batteries is 15 years.

The battery replacements at the eight substations are scheduled to be done in FY21 - FY23.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	114,000	145,000	-	-	-	259,000
Total Project	**$ 114,000**	**$ 145,000**	**$ -**	**$ -**	**$ -**	**$ 259,000**
Type Total	**$ 178,000**	**$ 145,000**	**$ -**	**$ 94,000**	**$ -**	**$ 417,000**
Category Total	**$ 6,178,000**	**$ 32,945,000**	**$ 22,400,000**	**$ 6,233,000**	**$ -**	**$ 67,756,000**

INFORMATION SYSTEMS

Hardware

Hardware

The hardware projects include:

- Storage area network expansion
- Virtual desktop infrastructure hardware
- Maintenance coverage for routers, firewalls, and switches, and wireless application protocols
- Annual maintenance renewal starting five years after purchase

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	180,000	-	-	-	-	180,000
Operations	-	-	-	-	-	-
Total Project	**$ 180,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 180,000**
Type Total	**$ 180,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 180,000**

Software

Software

The software projects include:

- Security orchestration, automation, and response software
- Data operations platform (part of the data warehouse)
- Office productivity software and remote connection management
- Application resource management software for virtual desktop infrastructure
- Backup and disaster recovery
- Operating system update management

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	408,000	263,000	275,000	329,000	291,000	1,566,000
Operations	-	-	-	-	-	-
Total Project	**$ 408,000**	**$ 263,000**	**$ 275,000**	**$ 329,000**	**$ 291,000**	**$ 1,566,000**

Financial system: ERP

Valley Metro currently has multiple financial systems that are not integrated and/or unable to integrate with each other. Certain aspects of these systems have been in use for more than 10 years. The new Financial Enterprise Resource Planning (ERP) will integrate multiple systems.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	1,191,000	-	-	-	-	1,191,000
Operations	-	-	-	-	-	-
Total Project	**$ 1,191,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,191,000**
Type Total	**$ 1,599,000**	**$ 263,000**	**$ 275,000**	**$ 329,000**	**$ 291,000**	**$ 2,757,000**
Category Total	**$ 1,779,000**	**$ 263,000**	**$ 275,000**	**$ 329,000**	**$ 291,000**	**$ 2,937,000**

MAINTENANCE BUILDINGS

Maintenance of Equipment (MOE)

MOE Chiller

Replace the chiller unit. This unit has been in place since the facility opened and has a very high workload. This equipment is critical to continue operations and has reached its life expectancy.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	180,000	-	-	180,000
Total Project	**$ -**	**$ -**	**$ 180,000**	**$ -**	**$ -**	**$ 180,000**

MOE Flooring Update

Replace or refurbish the 15 year-old flooring at the MOE and MOW facilities.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	125,000	-	-	-	-	125,000
Operations	-	-	-	-	-	-
Total Project	**$ 125,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 125,000**

Hoist Nuts

Replace the hoist nuts. Hoist nuts are jack nuts that are a critical component of the in-ground light rail vehicle hoist. They have reached their end of useful life.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	118,000	-	-	-	-	118,000
Operations	-	-	-	-	-	-
Total Project	**$ 118,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 118,000**

Painting

Repaint areas of the MOW and MOE buildings due to normal wear and tear, aging, and sun fade. These building are 15 years old.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	50,000	-	-	-	-	50,000
Operations	-	-	-	-	-	-
Total Project	**$ 50,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 50,000**

Maintenance Materials

Purchase materials for systems and facilities maintenance.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	78,000	-	-	-	-	78,000
Total Project	**$ 78,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 78,000**

Lift Nuts

Replace the nuts on the shop table lifts, which have been in place since the facility opened.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	136,000	-	-	-	136,000
Total Project	**$ -**	**$ 136,000**	**$ -**	**$ -**	**$ -**	**$ 136,000**

Hoist System

Purchase an additional portable hoist system in FY22.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	147,000	-	-	-	-	147,000
Operations	-	-	-	-	-	-
Total Project	**$ 147,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 147,000**

Roof

Repair the MOE facility's roof. Areas of the MOE roof have leaks and are in need of repair.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	75,000	-	-	-	-	75,000
Operations	-	-	-	-	-	-
Total Project	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**
Type Total	**$ 593,000**	**$ 136,000**	**$ 180,000**	**$ -**	**$ -**	**$ 909,000**

Operations & Maintenance Center (OMC)

Air Compressors

Replace the OMC shop's air compressors. The units have been in place since the facility opened. They work constantly and are a critical system. The units have reached the end of useful life.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	85,000	-	-	-	85,000
Total Project	**$ -**	**$ 85,000**	**$ -**	**$ -**	**$ -**	**$ 85,000**

Evaporative Cooler

Replace the evaporative cooler unit at the MOE facility, which has reached its end of useful life. The current unit is approximately 13 years old and has significant corrosion issues.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	120,000	-	-	-	-	120,000
Operations	-	-	-	-	-	-
Total Project	**$ 120,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 120,000**

Painting

Repaint the parking canopies at the OMC. This would be the first time these canopies have been repainted.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	95,000	-	-	95,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ -**	**$ 95,000**	**$ -**	**$ -**	**$ 95,000**
Type Total	**$ 120,000**	**$ 85,000**	**$ 95,000**	**$ -**	**$ -**	**$ 300,000**
Category Total	**$ 713,000**	**$ 221,000**	**$ 275,000**	**$ -**	**$ -**	**$ 1,209,000**

PASSENGER STATIONS

Cameras

Security Cameras

Replace security cameras. There are security cameras located on the passenger stations and at the park-and-rides. The cameras are PTZ (pan, tilt, zoom) or fixed. There are 65 PTZ cameras and 408 fixed cameras in the system. The cameras on the original alignment will be upgraded to digital, which will provide clearer images.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	600,000	300,000	-	900,000
Total Project	**$ -**	**$ -**	**$ 600,000**	**$ 300,000**	**$ -**	**$ 900,000**
Type Total	**$ -**	**$ -**	**$ 600,000**	**$ 300,000**	**$ -**	**$ 900,000**

Communication Cabinet

APC/Heads Communications

Replace the automatic power control (APC) heads. These units control the charging of the battery cartridges for the uninterruptable power supply for each platform. There are 33 platforms on the original system. The life expectancy is 10-12 years. Some of these units have started to fail.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	95,000	-	-	-	-	95,000
Total Project	**$ 95,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 95,000**

WiMAX Base Stations

Purchase and install additional WiMAX base stations to help in areas that have less than ideal coverage. These units track the locations of the trains as they travel along the alignment.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	29,000	-	-	-	29,000
Total Project	**$ -**	**$ 29,000**	**$ -**	**$ -**	**$ -**	**$ 29,000**

CPU, Back Plane, and Power Supply

Replace the CPU, back plane, and power supply for the communication cabinets that provide the power to the equipment. These units are no longer available and need replacing. The new units would be backward-compatible to the equipment that they supply. There are 35 platforms, 15 traction power substations, and nine signal houses. Each of these locations have one unit that will be replaced. The anticipated replacement schedule is 27 locations in FY21 and 22 locations in FY22.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	112,000	-	-	-	-	112,000
Total Project	**$ 112,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 112,000**

Station Routers

Upgrade the station routers to MX204. This will allow for more multiprotocol label switching (MPLS) and firewall functions at the platforms, so the SCADA system can be kept separate from the new TVMs that are an open internet design. Without this upgrade, the SCADA system could be vulnerable to an outside threat. There are a total of 40 routers with 39 stations. There are two routers for 50th Street because it has a separate link for each side and one for the BRT link.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	2,420,000	-	-	-	2,420,000
Total Project	**$ -**	**$ 2,420,000**	**$ -**	**$ -**	**$ -**	**$ 2,420,000**
Type Total	**$ 207,000**	**$ 2,449,000**	**$ -**	**$ -**	**$ -**	**$ 2,656,000**

Landscaping

Granite

Add granite ground cover to existing alignment locations due to current ground cover thinning.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	100,000	-	-	100,000
Total Project	**$ -**	**$ -**	**$ 100,000**	**$ -**	**$ -**	**$ 100,000**

Greenery

Replace missing or damaged landscaping around the platforms and park-and-rides.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	25,000	50,000	50,000	50,000	50,000	225,000
Total Project	**$ 25,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 225,000**
Type Total	**$ 25,000**	**$ 50,000**	**$ 150,000**	**$ 50,000**	**$ 50,000**	**$ 325,000**

Other

Emergency call boxes

Upgrade the 39 emergency call boxes on original alignment to Talkaphone. This would convert the call boxes to Voice over Internet Protocol (VoIP). These call boxes are currently provided by Janis Elevator.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	137,000	-	-	-	-	137,000
Total Project	**$ 137,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 137,000**

Message Boards

Replace visual message boards on the platforms. There are two to four message boards per platform with 132 total on the original system. The life expectancy is seven to ten years. These replacements may get pushed back if they continue to perform with little to no functionality failures.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	667,000	-	-	-	667,000
Total Project	**$ -**	**$ 667,000**	**$ -**	**$ -**	**$ -**	**$ 667,000**

Outlet Covers

Install new heavy duty outlet covers at the stations. The outlets at the stations are frequently vandalized and need to have a more robust cover installed.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	75,000	-	-	75,000
Total Project	**$ -**	**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ 75,000**

Painting

Repaint the original alignment's stations due to normal wear. Over the next three fiscal years, six to eight stations per year will be repainted.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	1,400,000	1,450,000	590,000	-	-	3,440,000
Total Project	**$ 1,400,000**	**$ 1,450,000**	**$ 590,000**	**$ -**	**$ -**	**$ 3,440,000**

Painting

Recoat the yellow safety tape on passenger stations.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	100,000	-	-	100,000
Total Project	**$ -**	**$ -**	**$ 100,000**	**$ -**	**$ -**	**$ 100,000**

Station Fencing

Install additional station fencing. The purpose of the additional station fencing is to deter people from crossing roadways from the platform. The fencing design is based upon the fencing at the Montebello/19th Avenue station. The fencing will consist of 400 feet of barrier railing on a particular side of the platform using galvanized steel posts. The railing will be placed behind the station curbing instead of cutting the curbing as was done at the Montebello Station.

The stations receiving the fencing are:

- 44th Street/Washington on the north side
- 7th Avenue/Camelback on the north side
- Thomas Road/Central on the east side
- 19th Avenue/Camelback on the south side

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	191,000	-	-	-	-	191,000
Total Project	**$ 191,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 191,000**

Refurbishment

Replace the 'Paid Fare Zone' striping on the light rail passenger stations.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	134,000	134,000	134,000	402,000
Total Project	**$ -**	**$ -**	**$ 134,000**	**$ 134,000**	**$ 134,000**	**$ 402,000**

Water Fountains

Replace the water fountain shells located on the passenger stations. The shells are rusting and are in need of replacement. The anticipated schedule is 20 fountains shell replacements in FY22. The schedule depends on the conditions of the fountain shells.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	60,000	-	-	-	-	60,000
Total Project	**$ 60,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 60,000**
Type Total	**$ 1,788,000**	**$ 2,117,000**	**$ 899,000**	**$ 134,000**	**$ 134,000**	**$ 5,072,000**

Park-and-Ride

Painting

Repaint parking canopies at 19th Avenue/Camelback and 3rd Avenue/Camelback. This would be the first time these canopies have been repainted.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	138,000	-	-	-	138,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ 138,000**	**$ -**	**$ -**	**$ -**	**$ 138,000**
Type Total	**$ -**	**$ 138,000**	**$ -**	**$ -**	**$ -**	**$ 138,000**

Pavers/Asphalt

Pavers

Level the platform pavers. The pavers on the original alignment's station platforms need leveling due to the sand displacement between and below the pavers. The unleveled pavers are a safety hazard which needs rectifying. Work is done once these safety hazards start to appear.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	50,000	50,000	50,000	50,000	50,000	250,000
Total Project	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 250,000**
Type Total	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 250,000**
Category Total	**$ 2,070,000**	**$ 4,804,000**	**$ 1,699,000**	**$ 534,000**	**$ 234,000**	**$ 9,341,000**

REVENUE VEHICLES – NEW

Rail

Fleet

Purchase of eight Siemens LRVs. Delivery began February 2020.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 7,112,000	$ 1,022,000	$ -	$ -	$ -	$ 8,134,000
Regional	1,508,000	217,000	-	-	-	1,725,000
Operations	-	-	-	-	-	-
Total Project	**$ 8,620,000**	**$ 1,239,000**	**$ -**	**$ -**	**$ -**	**$ 9,859,000**
Type Total	**$ 8,620,000**	**$ 1,239,000**	**$ -**	**$ -**	**$ -**	**$ 9,859,000**
Category Total	**$ 8,620,000**	**$ 1,239,000**	**$ -**	**$ -**	**$ -**	**$ 9,859,000**

REVENUE VEHICLES – OVERHAULS (SOGR)

Rail

Air Compressors

Replace air compressors. The air compressors provide the air needed by several of the systems on the light rail vehicle. The air compressors are scheduled for overhaul on a five year interval. There are 54 units in the fleet, each taking 40 hours to overhaul. The components include the frame assembly, compressor, motor, air dryer, and controls. The overhaul replaces worn items and performs rust preventative measures to the frame.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	64,000	-	-	64,000
Total Project	**$ -**	**$ -**	**$ 64,000**	**$ -**	**$ -**	**$ 64,000**

Auxiliary Power Supply (APS)

Mid-life overhaul of the auxiliary power supply (APS). The APS converts the high voltage catenary power to 208 VAC and 28 VDC that powers all of the systems of the light rail vehicle. The replacement of 52 cooling fans will also be completed as part of this overhaul.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	50,000	-	-	50,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ -**	**$ 50,000**	**$ -**	**$ -**	**$ 50,000**

Communications System

Replace the LRV communications system. Valley Metro has a fleet of 50 Kinkisharyo (KI) light rail vehicles (LRVs). The current age of the LRVs is 10 years in revenue service. The communications system in the KI LRVs is obsolete and has performance issues. The current system has completed its life cycle and needs to be replaced with a new, more reliable, and user-friendly communications system. The on-board communication system includes:

- Public-address system (PA)
- Intercom system, including cab-to-cab intercom and passenger-to-operator intercom (POIC)
- Passenger information system (PI)
- Video surveillance (CCTV)
- Vehicle position system (GPS) receiver
- Train to train communications
- Vehicle wireless communications to wayside
- Event recorder
- Monitoring and diagnostic system (MDS)

The anticipated LRV communications system replacement schedule is:

- FY22: 14 vehicles
- FY23: 28 vehicles
- FY24: 5 vehicles

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 1,320,000	$ 1,362,000	$ 1,141,000	$ -	$ -	$ 3,822,000
Regional	330,000	340,000	285,000	-	-	956,000
Operations	-	-	-	-	-	-
Total Project	**$ 1,650,000**	**$ 1,702,000**	**$ 1,426,000**	**$ -**	**$ -**	**$ 4,778,000**

Couplers

Overhaul coupler assemblies. Coupler assemblies are scheduled for overhaul on a 10-year interval. Couplers mechanically and electrically 'couple' two light rail vehicles together, so they can operate as a single unit. There are 102 units in the fleet, each taking 16 hours to overhaul. The anticipated schedule is 12 couplers in FY21 and seven couples in FY22.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	215,000	-	-	-	-	215,000
Operations	-	-	-	-	-	-
Total Project	**$ 215,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 215,000**

Door Operating Units

Replace 50% of the fleet's door control units due to the obsolescence of the part. Valley Metro will contract with a vendor for the parts. The contractor will do the first two replacements. Valley Metro will complete the replacement on the other 23 LRVs.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	970,000	-	-	-	-	970,000
Operations	-	-	-	-	-	-
Total Project	**$ 970,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 970,000**

Friction Brakes

Overhaul friction brakes. Friction brakes and related components are the equipment that provide the physical stopping power for the light rail vehicle. They are similar to the brakes used on cars but larger.

Friction brakes are scheduled for overhaul on a five year interval. There are 50 car sets in the fleet. It takes 28 hours to overhaul each car set, which consists of four motor truck calipers, four center truck calipers, and three electro-hydraulic units.

The anticipated friction break overhaul schedule is:

- FY22: 12
- FY25: 15
- FY26: 15

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	502,000	-	-	638,000	638,000	1,778,000
Operations	-	-	-	-	-	-
Total Project	**$ 502,000**	**$ -**	**$ -**	**$ 638,000**	**$ 638,000**	**$ 1,778,000**

Gear Units

Overhaul gear units. Gear units attach to the traction motors and act similarly to a car's transmission. They physically turn the axles to move the light rail vehicle. This is a continuation of an ongoing offsite overhaul of gear units and axle components, which include the seals, bearings, and other high wear items. This overhaul is to be completed every 10 years. There are 212 gear units total in the fleet.

The anticipated gear unit overhaul schedule is:

- FY22: 36
- FY23: 38
- FY24: 38
- FY25: 38
- FY26: 38

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	464,000	490,000	490,000	490,000	490,000	2,424,000
Operations	-	-	-	-	-	-
Total Project	**$ 464,000**	**$ 490,000**	**$ 490,000**	**$ 490,000**	**$ 490,000**	**$ 2,424,000**

HVAC Units

Overhaul the heating, ventilation, and air conditioning (HVAC) units in LRVs.

There are 104 HVAC units in the fleet. This overhaul replaces common wear items and high-failure electrical components. The anticipated schedule for the in-house overhaul is 52 units in FY24 and 52 units in FY25. The HVAC overhaul parts will be purchased in FY24 to cover both years of the overhaul project.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	-	-	324,000	-	-	324,000
Total Project	**$ -**	**$ -**	**$ 324,000**	**$ -**	**$ -**	**$ 324,000**

Line Filter Chokes

Recondition the line filter chokes. The line filter choke is a large electrical coil that is used to filter the electrical power that is provided to the light rail vehicle propulsion system from the overhead catenary wire to prevent power spikes and unwanted 'noise'. It acts like a surge protector to prevent spikes in power to damage components. There are 55 line filter chokes in the fleet that require reconditioning to address wear to the insulating varnish of the windings and to refinish the electrical connections. The anticipated reconditioning schedule is 35 in FY21 and 20 in FY22. This will be conducted by a vendor offsite.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	107,000	-	-	-	-	107,000
Total Project	**$ 107,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 107,000**

LRV Exteriors

Repaint LRV exteriors. The vehicles are over 10 years old and the exterior paint is showing signs of aging. The vehicles will be painted with the updated color scheme to coordinate with the new vehicles that will be delivered in the near future.

The anticipated LRV repainting schedule is:

- FY22: 14
- FY23: 6

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	500,000	208,000	-	-	-	708,000
Total Project	**$ 500,000**	**$ 208,000**	**$ -**	**$ -**	**$ -**	**$ 708,000**

Mid-Life LRV Overhauls

These overhauls will be conducted onsite by VMR staff and will address items such as converting the LRVs over to LED lighting and replacing high cycle count items such as certain relays along with other items that have reached end of useful life on all 50 LRVs.

Anticipated schedule to overhaul 50 light rail vehicles between FY23 and FY27. The mid-life overhaul parts will be purchased in FY22 to cover the entire overhaul project.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	4,500,000	-	-	-	-	4,500,000
Operations	-	-	-	-	-	-
Total Project	**$ 4,500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,500,000**

Pantograph

Purchase materials for 52 pantographs. The pantograph is the component that physically connects the LRV to the overhead catenary wire and allows the flow of electricity to the LRV.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	132,000	-	-	-	-	132,000
Operations	-	-	-	-	-	-
Total Project	**$ 132,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 132,000**
Type Total	**$ 9,040,000**	**$ 2,400,000**	**$ 2,354,000**	**$ 1,128,000**	**$ 1,128,000**	**$ 16,050,000**
Category Total	**$ 9,040,000**	**$ 2,400,000**	**$ 2,354,000**	**$ 1,128,000**	**$ 1,128,000**	**$ 16,050,000**

SERVICE VEHICLES (NON-REVENUE)

Administrative

Agency Vehicles

Agency vehicle purchases:

- FY22: (2) Ford Explorers, (1) F-150, (1) Ford Transit Van
- FY23: (2) Mini Vans, (6) Ford Explorers, (1) Ford Fusion, (1) Ford Transit Connect, (1) Ford F-150, (3) F-250 Service Trucks, (1) F-450 Bucket Truck
- FY24: (1) Van, (1) Ford Fusion, (1) Ford Escape, (1) Ford Explorer, (2) F-150s, (4) F-250s, (1) F-450 Bucket Truck
- FY25: (2) Ford Escapes, (5) Ford Explorers, (2) F-150s, (2) F-250 Service Trucks, (3) F-450 Bucket Trucks
- FY26: (3) Ford Explorers, (1) Ford Escape

Includes extended warranty costs.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	164,000	748,000	625,000	768,000	159,000	2,464,000
Total Project	**$ 164,000**	**$ 748,000**	**$ 625,000**	**$ 768,000**	**$ 159,000**	**$ 2,464,000**

Replacement

Non-revenue vehicles replacements:

- FY22: (2) F-250 Service Trucks
- FY23: (2) Ford Escapes, (2) Ford Explorers
- FY24: (3) Ford Escapes, (1) F-150
- FY25: (1) F-250 Service Truck

Includes extended warranty costs.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	115,000	151,000	150,000	61,000	-	477,000
Total Project	**$ 115,000**	**$ 151,000**	**$ 150,000**	**$ 61,000**	**$ -**	**$ 477,000**
Type Total	**$ 279,000**	**$ 899,000**	**$ 775,000**	**$ 829,000**	**$ 159,000**	**$ 2,941,000**
Category Total	**$ 279,000**	**$ 899,000**	**$ 775,000**	**$ 829,000**	**$ 159,000**	**$ 2,941,000**

OTHER

Other

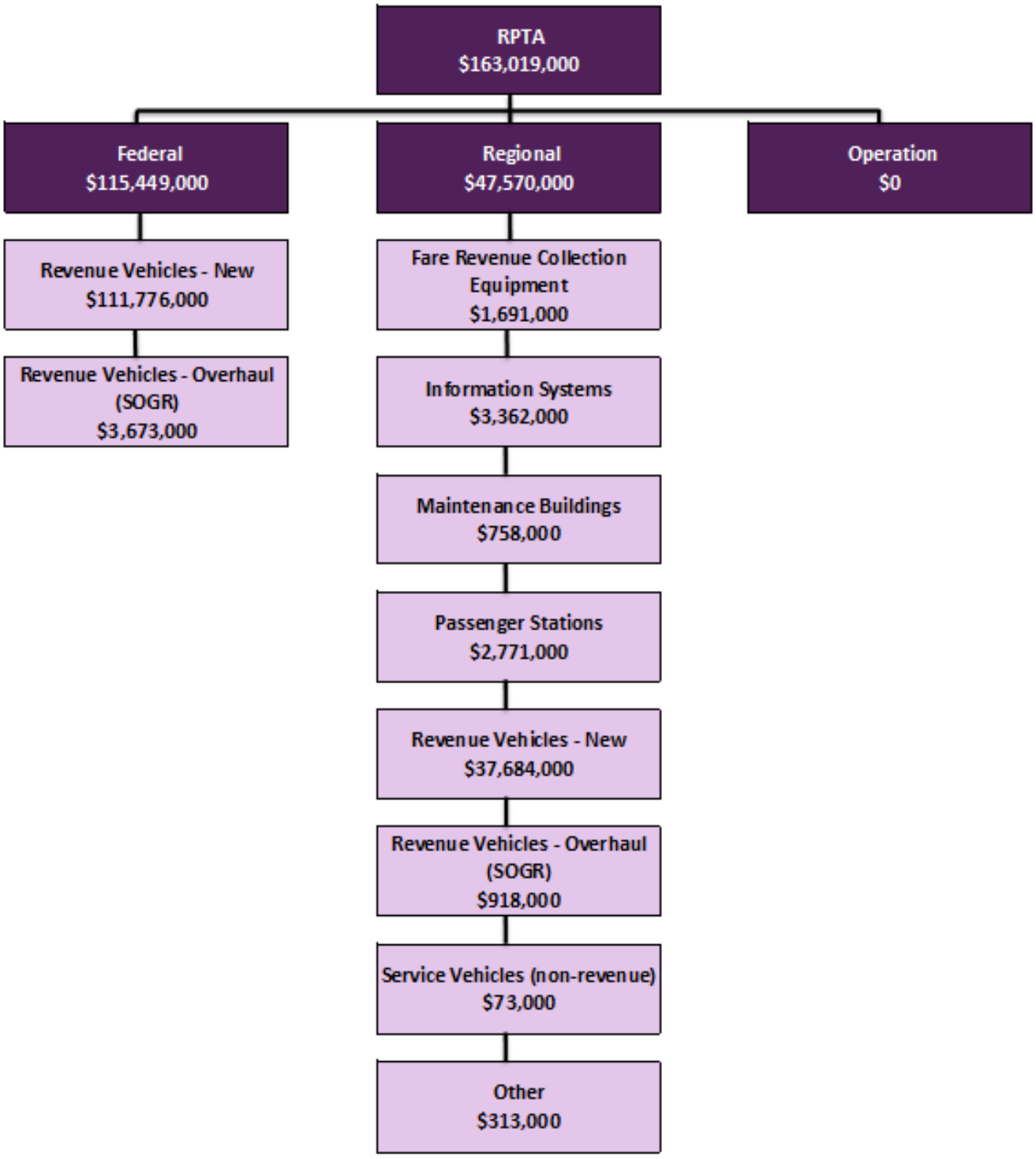
Asphalt

Replace the striping, repair asphalt, and/or seal the coating of the Operation and Maintenance Center facility, park-and-rides, traction power substations, and the signal buildings' parking areas. The asphalt degrades over time and requires maintenance.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	-	-	-	-	-
Operations	60,000	500,000	54,000	-	-	614,000
Total Project	**$ 60,000**	**$ 500,000**	**$ 54,000**	**$ -**	**$ -**	**$ 614,000**
Type Total	**$ 60,000**	**$ 500,000**	**$ 54,000**	**$ -**	**$ -**	**$ 614,000**
Category Total	**$ 60,000**	**$ 500,000**	**$ 54,000**	**$ -**	**$ -**	**$ 614,000**

REGIONAL PUBLIC TRANSPORTATION AUTHORITY

FIVE YEAR FUNDING SUMMARY



SUMMARY

USES OF FUNDS	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Fare Revenue Collection Equipment	$ 856,000	$ 539,000	$ 296,000	$ -	$ -	$ 1,691,000
Information Systems	1,917,000	284,000	365,000	484,000	312,000	3,362,000
Maintenance Buildings	283,000	325,000	150,000	-	-	758,000
Passenger Stations	2,771,000	-	-	-	-	2,771,000
Revenue Vehicles - New	41,962,000	15,029,000	39,535,000	20,798,000	32,136,000	149,460,000
Revenue Vehicles - Overhaul (SOGR)	1,032,000	1,032,000	895,000	816,000	816,000	4,591,000
Service Vehicles (non-revenue)	40,000	33,000	-	-	-	73,000
Other	313,000	-	-	-	-	313,000
Total Uses	**$ 49,174,000**	**$ 17,242,000**	**$ 41,241,000**	**$ 22,098,000**	**$ 33,264,000**	**$ 163,019,000**

SOURCES OF FUNDS	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal Funding	$ 33,182,000	$ 11,716,000	$ 31,317,000	$ 14,245,000	$ 24,989,000	$ 115,449,000
Regional Funding	15,992,000	5,526,000	9,924,000	7,853,000	8,275,000	47,570,000
Total Sources of Funds	**$ 49,174,000**	**$ 17,242,000**	**$ 41,241,000**	**$ 22,098,000**	**$ 33,264,000**	**$ 163,019,000**

FARE REVENUE COLLECTION EQUIPMENT

Software & Validator

Fare Collections System

The new fare system will move away from magnetic-striped, paper passes toward electronic fare media, including mobile tickets and smartcards. The account-based electronic fare media will allow for greater control of reduced fares at the point of sale. The new system will have an open architecture. This means that Valley Metro and the City of Phoenix would own the keys and dictate how hardware would interact with the back end software. This project includes the installation of validators on over 800 buses within the region to accommodate the new fare media options.

The City of Phoenix is funding the project. Valley Metro is budgeting the Public Transportation Fund (PTF) portion.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	856,000	539,000	296,000	-	-	1,691,000
Operations	-	-	-	-	-	-
Total Project	**$ 856,000**	**$ 539,000**	**$ 296,000**	**$ -**	**$ -**	**$ 1,691,000**
Type Total	**$ 856,000**	**$ 539,000**	**$ 296,000**	**$ -**	**$ -**	**$ 1,691,000**
Category Total	**$ 856,000**	**$ 539,000**	**$ 296,000**	**$ -**	**$ -**	**$ 1,691,000**

INFORMATION SYSTEMS

Hardware

Hardware

The hardware projects include:

- Storage area network expansion
- Virtual desktop infrastructure hardware
- Maintenance coverage for routers, firewalls, switches, and wireless application protocols
- Annual maintenance renewal starting five years after purchase

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	293,000	114,000	188,000	120,000	122,000	837,000
Operations	-	-	-	-	-	-
Total Project	**$ 293,000**	**$ 114,000**	**$ 188,000**	**$ 120,000**	**$ 122,000**	**$ 837,000**
Type Total	**$ 293,000**	**$ 114,000**	**$ 188,000**	**$ 120,000**	**$ 122,000**	**$ 837,000**

Software

Software

The software projects include:

- Security orchestration, automation, and response software
- Data operations platform (part of the data warehouse)
- Office productivity software
- Remote connection management
- Application resource management software for virtual desktop infrastructure
- Backup and disaster recovery
- Operating system update management

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	433,000	170,000	177,000	364,000	190,000	1,334,000
Operations	-	-	-	-	-	-
Total Project	**$ 433,000**	**$ 170,000**	**$ 177,000**	**$ 364,000**	**$ 190,000**	**$ 1,334,000**

Financial System: ERP

Valley Metro currently has multiple financial systems that are not integrated and/or unable to integrate with each other. Certain aspects of these systems have been in use for more than 10 years. The new Financial Enterprise Resource Planning (ERP) will integrate multiple systems.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	1,191,000	-	-	-	-	1,191,000
Operations	-	-	-	-	-	-
Total Project	**$ 1,191,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,191,000**
Type Total	**$ 1,624,000**	**$ 170,000**	**$ 177,000**	**$ 364,000**	**$ 190,000**	**$ 2,525,000**
Category Total	**$ 1,917,000**	**$ 284,000**	**$ 365,000**	**$ 484,000**	**$ 312,000**	**$ 3,362,000**

MAINTENANCE BUILDINGS

Mesa Bus and Operations Maintenance (MBOM)

Air Conditioner (AC) Units

Replace 20-40 ton AC units:

- FY23: 1 unit
- FY24: 2 units

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	75,000	150,000	-	-	225,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ 75,000**	**$ 150,000**	**$ -**	**$ -**	**$ 225,000**

Site Improvements

Replace the compressed natural gas fuel detection units and heating actuator. Convert parking lot lighting to LED.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	283,000	-	-	-	-	283,000
Operations	-	-	-	-	-	-
Total Project	**$ 283,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 283,000**

Video Surveillance

Replace the video surveillance system.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	-	250,000	-	-	-	250,000
Operations	-	-	-	-	-	-
Total Project	**$ -**	**$ 250,000**	**$ -**	**$ -**	**$ -**	**$ 250,000**
Type Total	**$ 283,000**	**$ 325,000**	**$ 150,000**	**$ -**	**$ -**	**$ 758,000**
Category Total	**$ 283,000**	**$ 325,000**	**$ 150,000**	**$ -**	**$ -**	**$ 758,000**

PASSENGER STATIONS

Park-and-Ride

Park-and-Ride

Lead agency PTF disbursement for construction and oversight of the North Glendale Park-and-Ride.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	2,771,000	-	-	-	-	2,771,000
Operations	-	-	-	-	-	-
Total Project	**$ 2,771,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,771,000**
Type Total	**$ 2,771,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,771,000**
Category Total	**$ 2,771,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,771,000**

REVENUE VEHICLES - NEW

Bus

Express/BRT Replacements

Purchase over-the-road replacement buses:

- FY22: 20 buses
- FY23: 6 buses

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 11,938,000	$ 3,802,000	$ -	$ -	$ -	$ 15,740,000
Regional	2,107,000	671,000	-	-	-	2,778,000
Operations	-	-	-	-	-	-
Total Project	**$ 14,045,000**	**$ 4,473,000**	**$ -**	**$ -**	**$ -**	**$ 18,518,000**

Rural Fleet Replacements

Purchase rural connector replacement buses:

- FY22: 4 buses
- FY23: 3 buses

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 682,000	$ 525,000	$ -	$ -	$ -	$ 1,207,000
Regional	120,000	93,000	-	-	-	213,000
Operations	-	-	-	-	-	-
Total Project	**$ 802,000**	**$ 618,000**	**$ -**	**$ -**	**$ -**	**$ 1,420,000**

Standard Bus Expansions

Lead agency PTF disbursements for standard bus expansions:

FY22: Local match for 3 Scottsdale buses.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	255,000	-	-	-	-	255,000
Operations	-	-	-	-	-	-
Total Project	**$ 255,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 255,000**

Standard Bus Expansions

FY22: Purchase 11 standard buses for Short Range Transit Plan (SRTP) agency expansion.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 5,217,000	$ -	$ -	$ -	$ -	$ 5,217,000
Regional	921,000	-	-	-	-	921,000
Operations	-	-	-	-	-	-
Total Project	**$ 6,138,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 6,138,000**

Express/BRT Expansions

Standard bus expansions:

One standard bus is planned for SRTP expansion in FY22.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 458,000	$ -	$ -	$ -	$ -	$ 458,000
Regional	100,000	-	-	-	-	100,000
Operations	-	-	-	-	-	-
Total Project	**$ 558,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 558,000**

Bus Replacements

Purchase replacement buses:

- FY22: 17 standard buses and 3 BUZZ circulators
- FY23: 3 standard buses and 6 POGO circulators
- FY24: 39 standard buses
- FY25: 29 standard buses
- FY26: 35 standard buses

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 9,234,000	$ 1,448,000	$ 25,760,000	$ 8,510,000	$ 19,174,000	$ 64,127,000
Regional	1,630,000	255,000	4,546,000	1,502,000	3,384,000	11,316,000
Operations	-	-	-	-	-	-
Total Project	**$ 10,864,000**	**$ 1,703,000**	**$ 30,306,000**	**$ 10,012,000**	**$ 22,558,000**	**$ 75,443,000**

Standard Bus Replacements

Lead agency PTF disbursements for standard bus replacements:

- FY22: 25 buses
- FY23: 12 buses
- FY24: 26 buses
- FY25: 57 buses
- FY26: 42 buses

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	3,739,000	2,315,000	2,345,000	5,078,000	3,723,000	17,200,000
Operations	-	-	-	-	-	-
Total Project	**$ 3,739,000**	**$ 2,315,000**	**$ 2,345,000**	**$ 5,078,000**	**$ 3,723,000**	**$ 17,200,000**
Type Total	**$ 36,401,000**	**$ 9,109,000**	**$ 32,651,000**	**$ 15,090,000**	**$ 26,281,000**	**$ 119,532,000**

Paratransit

Expansions

Paratransit vehicle expansion:

FY22 - FY26: 25 expansion vehicles are planned each fiscal year based on the SRTP estimates.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 1,126,000	$ 1,195,000	$ 1,236,000	$ 1,288,000	$ 1,326,000	$ 6,171,000
Regional	-	-	-	-	-	-
Operations	-	-	-	-	-	-
Total Project	**$ 1,126,000**	**$ 1,195,000**	**$ 1,236,000**	**$ 1,288,000**	**$ 1,326,000**	**$ 6,171,000**

Replacements

Lead agency disbursements for paratransit vehicle replacements:

- FY22: 27 vehicles
- FY23: 37 vehicles
- FY24: 42 vehicles
- FY25: 27 vehicles
- FY26: 30 vehicles

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	461,000	504,000	1,733,000	378,000	437,000	3,513,000
Operations	-	-	-	-	-	-
Total Project	**$ 461,000**	**$ 504,000**	**$ 1,733,000**	**$ 378,000**	**$ 437,000**	**$ 3,513,000**
Type Total	**$ 3,409,000**	**$ 3,704,000**	**$ 5,034,000**	**$ 3,321,000**	**$ 3,468,000**	**$ 18,936,000**

Vanpool

Replacements

Vanpool vehicle replacements:

- FY22: 45 vans
- FY23: 46 vans
- FY24: 37 vans
- FY25: 45 vans
- FY26: 45 vans

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 2,152,000	$ 2,216,000	$ 1,850,000	$ 2,387,000	$ 2,387,000	$ 10,992,000
Regional	-	-	-	-	-	-
Operations	-	-	-	-	-	-
Total Project	**$ 2,152,000**	**$ 2,216,000**	**$ 1,850,000**	**$ 2,387,000**	**$ 2,387,000**	**$ 10,992,000**
Type Total	**$ 2,152,000**	**$ 2,216,000**	**$ 1,850,000**	**$ 2,387,000**	**$ 2,387,000**	**$ 10,992,000**
Category Total	**$ 41,962,000**	**$ 15,029,000**	**$ 39,535,000**	**$ 20,798,000**	**$ 32,136,000**	**$ 149,460,000**

REVENUE VEHICLES – OVERHAULS (SOGR)

Bus

Engines and Transmissions

The anticipated transmission and engine rebuilds for FY22-FY26 are:

- FY22: 28 engines and 22 transmissions
- FY23: 28 engines and 22 transmissions
- FY24: 26 engines and 20 transmissions
- FY25: 26 engines and 20 transmissions
- FY26: 26 engines and 20 transmissions

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ 826,000	$ 826,000	$ 716,000	$ 653,000	$ 653,000	$ 3,673,000
Regional	206,000	206,000	179,000	163,000	163,000	918,000
Operations	-	-	-	-	-	-
Total Project	**$ 1,032,000**	**$ 1,032,000**	**$ 895,000**	**$ 816,000**	**$ 816,000**	**$ 4,591,000**
Type Total	**$ 1,032,000**	**$ 1,032,000**	**$ 895,000**	**$ 816,000**	**$ 816,000**	**$ 4,591,000**
Category Total	**$ 1,032,000**	**$ 1,032,000**	**$ 895,000**	**$ 816,000**	**$ 816,000**	**$ 4,591,000**

SERVICE VEHICLES (NON-REVENUE)

Administrative

Replacement

Accessible transit vehicle replacements:

- F22: Replaces N-142 with medium-sized Dodge Grand Caravan SE
- F23: Replacing N-175 pool vehicle with a small SUV crossover at the administration building due to the age and mileage of the vehicle being replaced

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	40,000	33,000	-	-	-	73,000
Operations	-	-	-	-	-	-
Total Project	**$ 40,000**	**$ 33,000**	**$ -**	**$ -**	**$ -**	**$ 73,000**
Type Total	**$ 40,000**	**$ 33,000**	**$ -**	**$ -**	**$ -**	**$ 73,000**
Category Total	**$ 40,000**	**$ 33,000**	**$ -**	**$ -**	**$ -**	**$ 73,000**

OTHER

Other

Bus Stop Improvements

Avondale bus stop improvements.

	FY22	FY23	FY24	FY25	FY26	Total 5-Year
Federal	$ -	$ -	$ -	$ -	$ -	$ -
Regional	313,000	-	-	-	-	313,000
Operations	-	-	-	-	-	-
Total Project	**$ 313,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 313,000**
Type Total	**$ 313,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 313,000**
Category Total	**$ 313,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 313,000**

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