



City of Phoenix

**Mission Statement**

To improve the quality of life in Phoenix through efficient delivery of outstanding public services.

**Project Team**

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**Project Number**

1250083

This report can be made available in alternate format upon request.

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**Public Transit Department  
Annual Operating Agreement – Valley Metro Rail**

**January 28, 2025**

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***Report Highlights***

**On-time Performance Reporting**

*The Public Transit Department should obtain detailed reporting on reasons for light rail delays.*

**Maintenance Reporting**

*The Public Transit Department should obtain additional maintenance reporting from Valley Metro Rail.*

**Budget Variances**

*The Public Transit Department should ensure Valley Metro Rail is reporting sufficient detail on all significant spending budget to expense variances.*

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***City Auditor Department  
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## **Executive Summary**

### **Purpose**

Our purpose was to evaluate Valley Metro Rail, Inc.'s (VMR) compliance with the Annual Operating Agreement terms and the adequacy of the Public Transit Department's (PTD) agreement monitoring.

### **Background**

In December 2008, the City of Phoenix (City) adopted the Light Rail Transit Operations Master Cooperative Funding Agreement (OMCFA) between the City and VMR (#125068) to design, build, operate, and maintain the Central Phoenix/East Valley Light Rail Transit system. The agreement states that the parties will enter into Operations Funding Agreements (OFA) annually to establish the City's financial obligations. For Fiscal Year (FY) 2023-24, the City approved OFA #158389-0 for \$54.158 million in funding for light rail transit operations and agency overhead costs. City funding for VMR operations increased in FY 2023-24, due to the absence of federal COVID relief funding and beginning of service on a new extension.

#### **Operation Funding Agreement Budgets**

<b>Fiscal Year</b>	<b>City Approved Funding (millions)</b>
<b>2023</b>	\$29.713
<b>2024</b>	\$54.158
<b>2025</b>	\$62.098

**Funding from the City has increased each year.**

Along with the OMCFA, the City and VMR entered into an Operations and Maintenance Agreement (O&M Agreement) (#122030-AR-0) to establish the terms and conditions for maintaining the light rail system. VMR's light rail service runs along a single line, from Gilbert Road in Mesa to the Metro Parkway Station in Northwest Phoenix. In 2025, a second line is scheduled to open with service along Central Avenue in South Phoenix from Baseline Road to Washington Street. Future proposed expansions include an extension to 15<sup>th</sup> Avenue and an extension along I-10 West to Desert Sky Mall. As of FY 2023-24, there were a total of 30 miles of light rail track, of which, 62% runs through Phoenix.

We reviewed the OMCFA and OCA to identify reporting and budgeting requirements. We verified that PTD had an effective process to monitor the agreement deliverables and that VMR complied with the agreement terms.

## **Results in Brief**

### **PTD should obtain detailed reporting on reasons for light rail delays.**

For FY 2023-24, VMR's light rail monthly on-time performance ranged between 42% and 81%. Excluding events outside of their control, on-time performance ranged monthly between 97% to 99%. PTD did not receive reporting from VMR for the reasons behind delays that hindered on-time performance and therefore, could not determine whether there were steps it could take to help minimize delays.

### **PTD should obtain additional maintenance reporting from Valley Metro Rail.**

VMR reported its monthly preventative vehicle maintenance on-time performance at 99% or above. However, PTD should obtain more detailed reporting on a variety of cleaning, inspection, and repair activities specified by VMR in its (O&M) Agreement. PTD also did not receive maintenance of way reports required by the 2012 Operations and Maintenance Agreement.

### **PTD should ensure all significant budget variances are reported.**

In FY 2023-24, VMR had several budget variances where spending either was less than or exceeded budgeted amounts. VMR had significant negative budget variances in insurance and utilities. In both cases, VMR provided notes to light rail member cities, (Phoenix, Chandler, Mesa, and Tempe) explaining the cause. There were also significant positive budget variances in contractual services and safety and security. Although issues with security vacancies were discussed with the VMR Board, no details about the budget variance for contractual services were provided.

## Department Responses to Recommendations

<p><b>Rec 1.1:</b> Amend the Operations and Maintenance Master Agreement to include reporting from VMR on the causes of light rail delays.</p>	
<p><b>Response:</b> PTD will work with VMR to revise the existing Operations and Maintenance Master Agreement Amendment #3 to incorporate provisions that require the submission of monthly on-time performance reports, which will include detailed explanations for any delays encountered. Furthermore, PTD will seek quarterly updates on the initiatives undertaken to enhance on-time performance during the respective quarters, thereby excluding any events that are beyond their control.</p>	<p><b><u>Target Date:</u></b> 7/31/2025</p>
<p><b>Explanation, Target Date &gt; 90 Days:</b> We are requesting a target date &gt; 90 days to confirm reports are received, reviewed and acknowledged with all discrepancies explained, and any updates are made if needed.</p>	
<p><b>Rec. 1.2:</b> Obtain more detailed reporting on light rail vehicle preventative maintenance.</p>	
<p><b>Response:</b> PTD will request VMR submit detailed monthly reports on preventative maintenance for light rail vehicles, as outlined in the O&amp;M Agreement. These reports will cover weekly and monthly maintenance activities, inspections, servicing, cleaning, equipment repair, and replacement. Additionally, PTD will request reports on preventative maintenance performed quarterly, yearly, and tri-annually.</p>	<p><b><u>Target Date:</u></b> 7/31/2025</p>
<p><b>Explanation, Target Date &gt; 90 Days:</b> We are requesting a target date &gt; 90 days to confirm reports are received, reviewed and acknowledged with all discrepancies explained, and any updates are made if needed.</p>	
<p><b>Rec. 1.3:</b> Obtain required maintenance of way reporting, including transformer resistance readings and stray current monitoring.</p>	
<p><b>Response:</b> PTD will request VMR to submit both quarterly and annual maintenance reports associated with rail operations. These reports will include but are not limited to transformer resistance readings and the monitoring of stray currents in the relevant equipment.</p>	<p><b><u>Target Date:</u></b> 7/31/2025</p>
<p><b>Explanation, Target Date &gt; 90 Days:</b> We are requesting a target date &gt; 90 days to confirm reports are received, reviewed and acknowledged with all discrepancies explained, and any updates are made if needed.</p>	

**Rec. 1.4:** Obtain reporting on overhead contact system inspections and cleaning and traction electrification system servicing.

**Response:** PTD will request VMR to provide reports on the inspections and maintenance outlined in the O&M agreement that are currently not being reported within 7 to 10 days of the scheduled maintenance date. Additionally, PTD will discuss the necessity of amending the O&M agreement to include these reporting requirements.

**Target Date:**  
7/31/2025

**Explanation, Target Date > 90 Days:** We are requesting a target date > 90 days to confirm reports are received, reviewed and acknowledged with all discrepancies explained, and any updates are made if needed.

**Rec. 2.1:** Obtain VMR's analysis of significant budget variances in monthly budget reports.

**Response:** PTD will require written documentation regarding budget variances identified in monthly reports for each category that exceeds +/-3%. This documentation must be submitted to the department at least five days prior to the VMR board meeting.

**Target Date:**  
7/31/2025

**Explanation, Target Date > 90 Days:** We are requesting a target date > 90 days to confirm reports are received, reviewed and acknowledged with all discrepancies explained, and any updates are made if needed.

**Rec. 2.2:** Ensure the contingency budget does not exceed 3%, use the Annual Operations Funding Agreement to set a budget contingency, or amend the Operations Master Cooperative Funding Agreement to match current practices

**Response:** PTD will collaborate with VMR to establish a budget contingency of not to exceed 5%, starting with the 2025-26 Annual Operations Funding Agreement. Additionally, PTD will review the Operations Master Cooperative Funding Agreement and work with VMR and member cities to amend the agreement to set the budget contingency within a range of 3-5%, based on current practices.

**Target Date:**  
12/31/2025

**Explanation, Target Date > 90 Days:** 1.) The formal Council will approve the 2025-26 Annual Operations Funding Agreement in May 2025

2.) Recommendations to amend the Operations Master Cooperative Funding Agreement will require the consent of member cities' consent and approval from member city councils and VMR boards. The process may take a minimum of 6 months to complete.

# **1 – Operations and Maintenance Reporting**

## **Background**

VMR’s FY 2023-24 adopted operating budget for both light rail and the Tempe streetcar totaled \$89 million, of which \$80 million came from member city contributions (Phoenix, Chandler, Mesa, and Tempe). The remainder of VMR’s operating funds came from fares, federal funds, and advertising.

**VMR’s FY 2023-24 Light Rail Budget**

<b>Light Rail Expenses</b>	<b>Budget</b>
<b>Operations</b>	\$18,835,000
<b>Vehicle Maintenance</b>	\$11,956,000
<b>Maintenance of Way</b>	\$20,467,000
<b>Administrative Support</b>	\$10,293,000
<b>Insurance</b>	\$4,682,000
<b>Security</b>	\$12,224,000
<b>Agency Operating</b>	\$3,304,000
<b>Total</b>	<b>\$81,233,000</b>

### **VMR budgets for the operation, maintenance, and security of the light rail system.**

In FY 2023-24 VMR had 61 light rail vehicles in service. The oldest vehicles have been in service for 15.5 years and the newest vehicle entered service in June 2024. Of the 61 vehicles in service, 49 had been in service for over 15 years. According to the Federal Transit Administration the useful life of a light rail vehicle is expected to be 31 years.

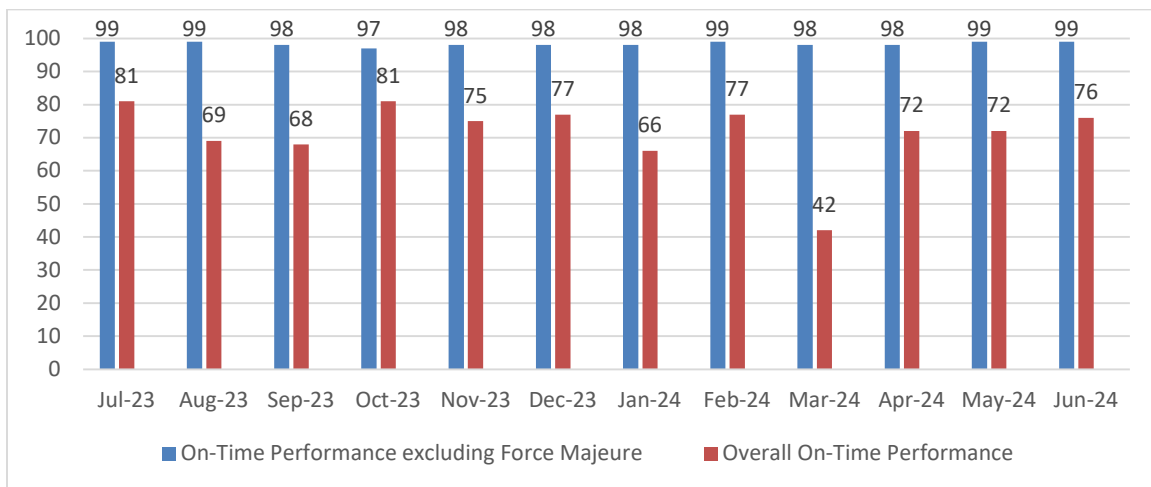
VMR provided on-time performance, vehicle maintenance, and maintenance of way reports at quarterly meetings with member cities. We reviewed PTD’s oversight of VMR’s FY 2023-24 operations spending to determine whether they received sufficient information to monitor spending.

## Results

### **PTD should review performance delay documentation to determine if on-time performance can be improved.**

VMR set a goal of 95% on-time performance for scheduled rail service with 15-minute headways. For FY 2023-24, VMR reported between 97% and 99% on-time performance when accounting for force majeure (events outside of their control). Without excluding force majeure, on-time performance ranged between 42% and 81%.

**Light Rail On-time Performance FY 2023-24**



**The on-time performance metric was, on average, 27% higher when excluding Force Majeure events.**

While VMR provided data on this performance measure at quarterly meetings with light rail member cities, PTD did not receive reporting from VMR regarding the delays that hindered on-time performance nor how delays were categorized. The O&M Agreement did not specify that VMR should provide detailed reporting on delays. However, without more information, PTD could not determine whether there were actions it could take to improve on-time performance.

### **PTD did not receive detailed preventative maintenance reports.**

VMR conducts light rail vehicle and right of way maintenance. For the fourth quarter of FY 2023-24, VMR reported its monthly preventative maintenance on-time performance at 99% or above. However, these reports do not include details about what maintenance activities were completed.

The 2012 O&M Agreement includes VMR's Operations and Maintenance Plan detailing periodic inspections, cleaning, and equipment repair and replacement activities. For the

light rail vehicles this includes daily and monthly servicing and cleaning; weekly, monthly, and quarterly maintenance; yearly heavy maintenance; and, 36-month inspections. PTD did not receive reporting from VMR on the completion of these specific activities. Reporting on maintenance activities would help PTD ensure the required tasks are completed and could help assess whether vehicles are seeing normal wear and tear or not.

**PTD did not receive required maintenance of way reports.**

PTD did not receive maintenance reports that are required by the 2012 O&M Agreement. The agreement included requirements for VMR to report the results of periodic testing conducted on a variety of equipment related to rail operations. These include quarterly reports on transformer resistance readings and annual reports of stray current monitoring.

VMR's O&M Agreement also specified schedules for other inspections and maintenance, such as overhead contact system cleaning monthly and annual inspections, and weekly, monthly, semiannual, and annual servicing of traction electrification system components. The O&M Agreement PTD did not require that VMR report on these activities. Obtaining inspection and maintenance reports would help PTD ensure VMR completes all required maintenance and that assets are properly maintained.

## **Recommendations**

- 1.1 Amend the Operations and Maintenance Master Agreement to include reporting from VMR on the causes of light rail delays.
- 1.2 Obtain more detailed reporting on light rail vehicle preventative maintenance.
- 1.3 Obtain required maintenance of way reporting, including transformer resistance readings and stray current monitoring.
- 1.4 Obtain reporting on overhead contact system inspections and cleaning and traction electrification system servicing.



## **2 – Annual Funding Reconciliation**

### **Background**

The 2008 Operations Master Cooperative Funding Agreement (OMCFA) requires VMR to present a preliminary operations budget by October 31<sup>st</sup>, and a draft budget by March 31<sup>st</sup>, of each year. The agreement includes several provisions which include:

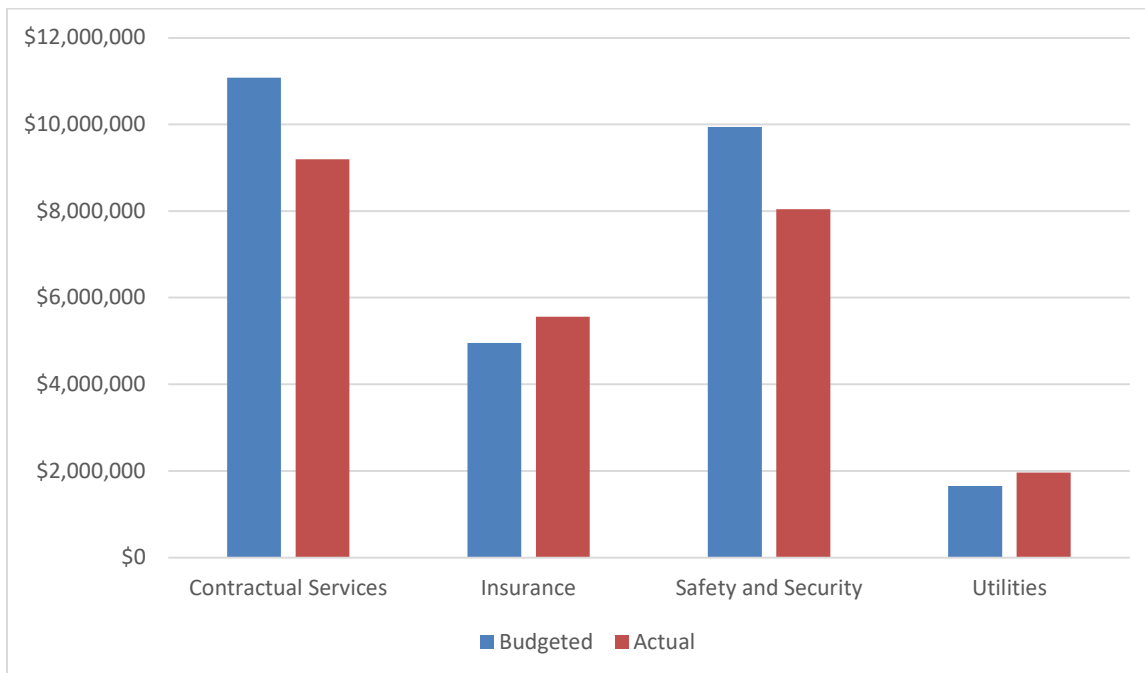
- A contingency budget not to exceed 3% of rail operating costs for the fiscal year.
- Mid-year operations updates, and monthly and year-end operations and financial reports.
- Analysis of significant variances to the budget in monthly reporting.

### **Results**

#### **PTD did not obtain reporting on all significant budget variances**

The OMCFA required monthly reporting of budgeted versus actual costs, including an analysis of significant variances. In FY 2023-24, VMR had four significant negative budget variances in insurance, utilities, contractual services, and safety and security. VMR’s monthly reports to the Financial Working Group included notes about the insurance and utilities variances, but did not include explanations for the variances in contractual services and safety and security.

**VMR Significant Budget Variances as of August, 20,2024.**



**VMR provided detail on two of four significant budget variances.**

VMR informed the Regional Public Transit Authority (RPTA) Board of the issues related to safety and security. VMR reported that there were high vacancy rates among security contractors, with a 50% vacancy rate and a 262% turnover rate. VMR attributed this to low wages and the unique requirements of the job versus other security positions. The RPTA Board approved a wage increase from the 10<sup>th</sup> percentile to the 55<sup>th</sup> percentile in August 2024. VMR did not provide any analysis for the underspend on contractual services.

**VMR's budget contingency exceeded the maximum specified in the agreement.**

The original OMCFA states that VMR shall present a draft budget to the City which will be submitted to the VMR Board for approval. That budget is to include a contingency that does not exceed 3% of rail operating costs for the fiscal year. VMR's budget for FY 2023-24 included a contingency of 5%.

## **Recommendations**

- 2.1 Obtain VMR's analysis of significant budget variances in monthly budget reports.
- 2.2 Ensure the contingency budget does not exceed 3%, use the Annual Operations Funding Agreement to set a budget contingency, or amend the Operations Master Cooperative Funding Agreement to match current practices.

## **Scope, Methods, and Standards**

### **Scope**

We reviewed the Annual Operations Funding Agreement (Fiscal Year 2023-2024) between the City of Phoenix and Valley Metro Rail, Inc.

The internal control components and underlying principles that are significant to the audit objectives are:

- Control Activities
  - Management should implement control activities through policies.
  - Management should design control activities to achieve objectives and respond to risks.
- Monitoring Activities
  - Management should establish and operate monitoring activities to monitor the internal control system and evaluate the results.

### **Methods**

We used the following methods to complete this audit:

- We interviewed PTD staff.
- We reviewed the following agreements between the City and VMR:
  - Light Rail Transit Operations Master Cooperative Funding Agreement (CON125068-0),
  - Annual Operations Funding Agreement (Fiscal Year 2023-2024) (158389-0) and,
  - Operations and Maintenance Agreement for the Light Rail Transit System (122030-AR-0).
- We reviewed meeting agendas, materials, and minutes from VMR Board meetings and various working group meetings.

Unless otherwise stated in the report, all sampling in this audit was conducted using a judgmental methodology to maximize efficiency based on auditor knowledge of the population being tested. As such, sample results cannot be extrapolated to the entire population and are limited to a discussion of only those items reviewed.

### **Data Reliability**

Data for this audit only provided context and did not present any other risks. We ensured that the data was from the best available source.

## **Standards**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Any deficiencies in internal controls deemed to be insignificant to the audit objectives but that warranted the attention of those charged with governance were delivered in a separate memo. We are independent per the generally accepted government auditing requirements for internal auditors.