
RIO METRO REGIONAL TRANSIT DISTRICT TRANSIT ASSET MANAGEMENT PLAN



RIO METRO
REGIONAL TRANSIT DISTRICT

Rio Metro
Regional Transit District
Transit Asset Management Plan
FY 2023-FY 2026 Update





Acknowledgements

This Transit Asset Management (TAM) Plan update reflects contributions from various Rio Metro Regional Transit District (Rio Metro) staff members and divisions. The key staff members involved in the development of this update include:

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- Kevin Merlo, Herzog Transit Services, Inc. (Rail SME)
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Rio Metro drafted its original TAM Plan with support from WSP. Much of their initial effort is reflected in this update.



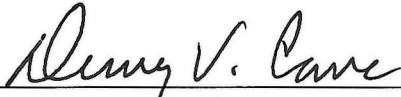
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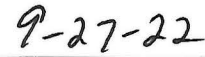


Accountable Executive Statement

I approve this Transit Asset Management Plan and the performance targets contained herein. In addition, I affirm my commitment to implementing this Plan to ensure the delivery of safe, reliable, and cost-effective service to our customers throughout Bernalillo, Sandoval and Valencia counties.



Dewey V. Cave, Chief Executive Officer



Date

Plan at a Glance

TAM OVERVIEW

What is a Transit Asset Management (TAM) Plan?

This TAM Plan defines the assets owned, operated and/or maintained by Rio Metro, their condition, and how Rio Metro will prioritize capital funding to keep the transit network in a state of good repair. The TAM Plan covers FY 2023–FY 2026.

Why asset management?

The key benefits of asset management include:

- Reduced total costs of ownership across the lifecycle of an asset by performing the most effective activities at the right time
- Improved reliability of assets by predicting the condition and conducting preventive activities instead of “finding and fixing” defects
- Improved customer experience – reliable travel times and a comfortable and pleasant travel experience

ASSET MANAGEMENT POLICY



Rio Metro is committed to implementing a strategic process for acquiring, operating, maintaining, upgrading, and replacing our transit assets to directly support our mission of providing safe, accessible, efficient, and innovative transportation services.

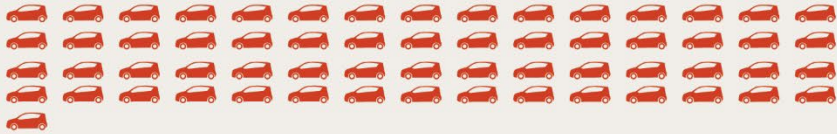


Our policy is to promote a culture that supports asset management at all levels of the organization—we will work toward employing effective asset management business practices and tools; ensuring optimal asset performance and useful life; and using timely, quality data to support transparent and cost-effective decision-making to optimize resource allocation and asset preservation.



We will align our policies, processes, tools, and staff knowledge to meet our asset management needs; incorporate safety and accessibility into our business practices; and deliver to our customers the best service and value for every fare and tax dollar spent.

SUMMARY OF CAPITAL ASSET INVENTORY (JULY 2022)

Cutaway Bus	40 Vehicles		Operator: Rio Metro Maintainer: ABQ RIDE/Village of Los Lunas Owner: Rio Metro
Minivan	3 Vehicles		Operator: Rio Metro Maintainer: Village of Los Lunas Owner: Rio Metro
Automobile (non-revenue)	6 Vehicles		Operator/Maintainer/Owner: Rio Metro
Trucks and other Rubber-Tired Vehicles (non-revenue)	20 Vehicles		Operator/Maintainer/Owner: Rio Metro
Automobile (Taxi)*	61 Vehicles		Operator/ Maintainer/Owner: zTrip Duke-C Rides
Bus*	8 Vehicles		Operator/ Maintainer/Owner: All Aboard America
Commuter Rail Locomotive	9 Vehicles		Operator/Maintainer: Rio Metro (Herzog) Owner: NMDOT
Commuter Rail Passenger Coach/Cabs	22 Vehicles		Operator/Maintainer: Rio Metro (Herzog) Owner: NMDOT
Track	112.40 Miles		Operator/Maintainer: Rio Metro (Herzog) Owner: NMDOT
Signals	103 Signals		Operator/Maintainer: Rio Metro (Herzog) Owner: NMDOT
Bridge	82 Bridges		Operator/Maintainer: Rio Metro (Herzog) Owner: NMDOT
Administrative and Maintenance Facility**	16 Facilities		Operator/ Maintainer: Various Owner: Various
Passenger and Parking Facility (NMRX Stations)	17 Facilities		Operator/Maintainer: Rio Metro Owner: NMDOT

* These vehicles are third-party contractor vehicles that are not owned by Rio Metro; while they are included in the capital asset inventory, they are not included in the performance measure calculation

**Rio Metro has direct capital responsibility for 5 administrative and maintenance facilities

Plan at a Glance

PERFORMANCE MEASURES AND TARGETS

ROLLING STOCK

Rolling stock performance is measured by the percentage of active revenue vehicles (by type) that meet or exceed the useful life benchmark (ULB).*

Vehicle Type	Useful Life Benchmark (ULB)	Total # of Active Vehicles	# of Vehicles that Meet or Exceed ULB (FY 2022)	% of Vehicles that Meet or Exceed ULB (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Cutaway (CU)	8	39	15	39%	35%	72%
 Minivan (MV)	7	3	1	33%	33%	33%
 Commuter Rail Locomotive (RL)	39	9	0	0%	0%	0%
 Commuter Rail Passenger Coach/Cabs (RP)	39	22	0	0%	0%	0%

EQUIPMENT

Equipment performance is measured by the percentage of non-revenue service vehicles (by type) that meet or exceed the useful life benchmark (ULB).*

Vehicle Type	Useful Life Benchmark (ULB)	Total # of Vehicles	# of Vehicles that Meet or Exceed ULB (FY 2022)	% of Vehicles that Meet or Exceed ULB (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Automobile	8	6	3	50%	50%	50%
 Trucks and other Rubber-Tired Vehicles	8	20	10	50%	19%	33%

INFRASTRUCTURE

Infrastructure performance is measured by the percentage of track segments (by mode) that have performance restrictions.

Infrastructure Type	Total # Miles of Main Track Segments	Average # of Miles Under Performance Restriction (FY 2022)	Average % of Track Miles Under Performance Restriction (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Commuter Rail (CR)	100.4	0.46	0.5%	5%	3%

FACILITIES

Facility performance is measured by the percentage of facilities (by group) that are rated less than '3' on the Transit Economic Requirements Model (TERM) scale.

Facility Type	Total # of Facilities	# of Facilities Below '3' on TERM Scale (FY 2022)	% of Facilities Below '3' on TERM Scale (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Administrative and Maintenance Facility	5	0	0%	33%	0%
 Passenger and Parking Facility	17	0	0%	0%	0%

* Note: The useful life benchmark is the expected age at which the vehicle is retired/disposed.

DECISION SUPPORT STRATEGY



The investment prioritization approach prioritizes annual maintenance activities, followed by planned overhauls. Both activities will enable Rio Metro to get the planned useful life from its assets. When the asset comes up for replacement based on its planned useful life (third priority), Rio Metro will use a set of evaluation criteria to establish replacement priorities. These criteria (in no particular order) include:

- Safety
- Impact to service and operators (reliability)
- Level of maintenance required

EVALUATION PLAN



IMPLEMENTATION STRATEGY



Institutionalize Asset Management



Strengthen Data Capture to Inform Decision-Making



Maintain Asset Management Planning Tools

RESOURCES

These divisions will provide key inputs into the TAM Plan:



Rio Metro will update its asset inventory (in conjunction with NTD reporting) annually and revise its TAM Plan every four years. Rio Metro may decide to update its TAM Plan more frequently than every four years if there are significant and unexpected changes to its asset inventory, asset condition, funding levels, or policies that may reshape investment prioritization. In addition, Rio Metro will monitor and evaluate the progress made towards implementing its improvement program annually, and make any adjustments to the program as needed.



1 Introduction

1.1 Plan Overview

The purpose of this Transit Asset Management (TAM) Plan is to provide a clear picture of the assets owned by the Rio Metro Regional Transit District (hereinafter “Rio Metro”) and their condition, and to establish the policy and processes Rio Metro follows to ensure that the agency conducts the right work at the right time to maintain these assets efficiently.

The Federal Transit Administration (FTA) website defines transit asset management as “a business model that prioritizes funding based on the condition of transit assets to achieve or maintain a state of good repair for the nation’s public transportation assets.” In other words, asset management is about doing the right amount of work, at the right time, to deliver the right service level for the right cost.



This TAM Plan is organized into the following sections:

- **Asset Management Policy** describes the policy that sets the direction for Rio Metro’s asset management efforts.
- **Capital Asset Inventory** summarizes all assets that are owned, operated, and/or maintained by Rio Metro and its contractors as required by the TAM Final Rule.
- **Performance and Condition** summarizes the performance and condition of revenue vehicles, non-revenue service vehicles, railroad track, and facilities for which Rio Metro has at least partial capital responsibility.
- **Risk Management** presents a risk register that identifies the potential risks (and responses to those risks) that Rio Metro may encounter while implementing its TAM Plan and the overall management and operations of its assets.
- **Decision Support** describes the investment prioritization approach that Rio Metro uses to estimate capital investment needs over time and to develop its list of priorities.



- **Investment Prioritization** lists the projects to improve and maintain the state of good repair of capital assets.
- **Implementation Strategy and Key Activities** identifies the activities that will comprise Rio Metro's asset management improvement program.
- **Resources** describes the staff resources that will be involved with implementing and delivering Rio Metro's asset management improvement program.
- **Continuous Improvement** describes how Rio Metro will review and update its TAM Plan.

This TAM Plan covers the asset classes identified in **Figure 1** that are critical to Rio Metro's provision of public transit. Rio Metro also contracts commuter rail, commuter bus and demand taxi services. Although the contractors' assets have been included in the inventory where required by the TAM Final Rule, they have not been included in the condition assessments, performance measures or lifecycle strategies since they are owned, maintained and replaced by contractors.



Figure 1: Primary Asset Classes



1.2 Federal TAM Requirements

As part of the *Moving Ahead for Progress in the 21st Century* (MAP-21) Act and the subsequent *Fixing America's Surface Transportation* (FAST) Act, FTA enacted regulations for transit asset management that require transit providers to establish asset management performance measures and targets, and develop a TAM Plan.

The TAM Final Rule was published on July 26, 2016, and went into effect on October 1, 2016. The rule amended the United States (US) Code of Federal Regulations (CFR) Title 49 Parts 625 and 630, which relate to TAM and the National Transit Database (NTD), respectively.

1.2.1 Tier I vs. Tier II Considerations

The TAM Final Rule's requirements distinguish between larger (Tier I) and smaller or rural (Tier II) transit providers. A Tier I provider is defined by the TAM Final Rule as a "recipient that owns, operates, or manages either (1) one hundred and one (101) or more vehicles in revenue service during peak regular service or in any one non-fixed route mode, or (2) rail transit."

Since Rio Metro manages commuter rail transit (the NMDOT-owned New Mexico Rail Runner Express; hereinafter "Rail Runner"), it qualifies as a Tier I provider and must prepare its own TAM Plan. However, since the Rail Runner is largely operated and maintained by a contractor, Rio Metro's internal staffing levels are much smaller than other Tier I providers and more akin to a Tier II provider.

If not for the Rail Runner, Rio Metro would easily fall under the Tier II designation and join in NMDOT's group plan with other Tier II providers. Even so, as a recipient of NMDOT-apportioned Section 5310 and 5311 funds, Rio Metro is a "de facto" group plan participant, reporting much of the same asset information to NMDOT as do formal participants of that group plan.

1.2.2 TAM Plan Elements

As a Tier I provider, Rio Metro's TAM Plan must incorporate all nine elements listed in **Figure 2** (Tier II providers must only incorporate the first five). The last four—implementation strategy, list of key annual activities, identification of resources, and evaluation plan—comprise Rio Metro's asset management improvement program. How this TAM Plan satisfies these nine elements and other TAM Final Rule requirements is listed in Appendix A.

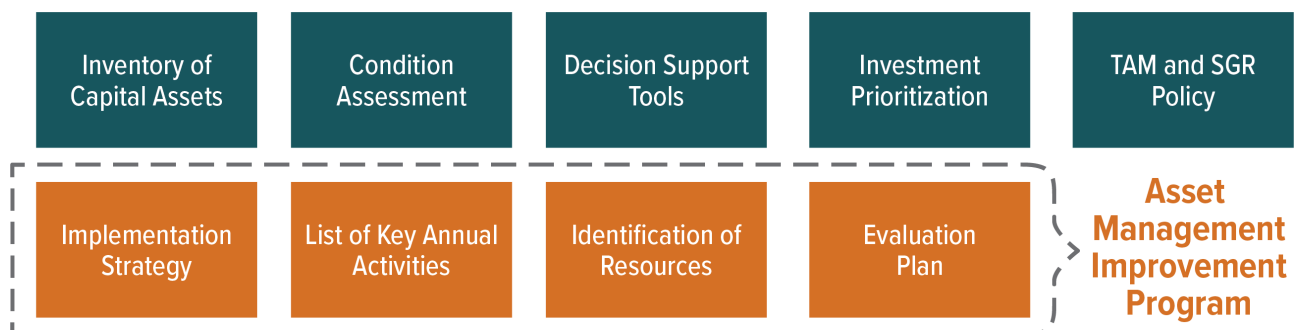


Figure 2: TAM Plan Elements



1.2.3 State of Good Repair Performance Measures

The TAM Final Rule also requires that transit providers establish state of good repair performance measures and targets for each asset class to convey asset condition. Each transit provider is required to report on the performance measures outlined in **Figure 3**, although the infrastructure performance measure applies only to Tier I providers with rail assets.

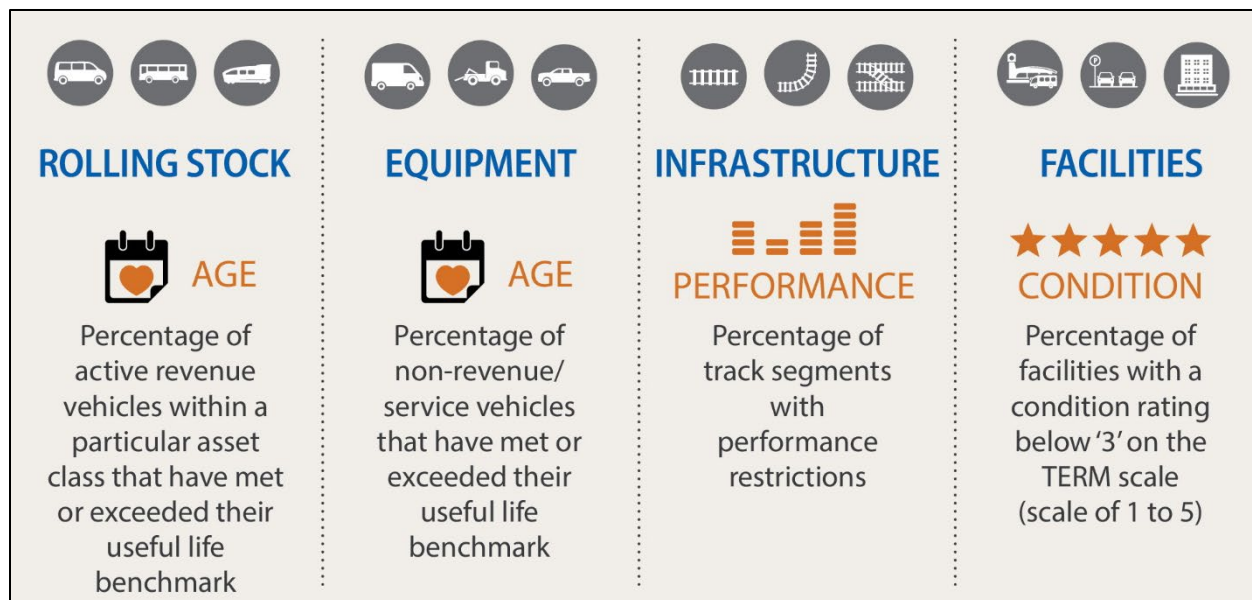


Figure 3: State of Good Repair Performance Measures

1.2.4 Certification, Amendment and NTD Reporting Requirements

The TAM Final Rule requires that a TAM Plan must cover a planning horizon of at least four years and must be updated at least once every four years. Rio Metro's first TAM Plan was certified by its accountable executive on September 27, 2018 and spanned the FY2019-FY2022 horizon. Similarly, this update was certified in September 2022 and covers the FY2023-FY2026 horizon. As recommended by the TAM Final Rule, this update cycle also coincides with the Mid-Region Metropolitan Planning Organization's (MRMPO) development of its FY2024-FY2029 Transportation Improvement Program (TIP), which begins Fall 2022.

The TAM Final Rule also requires that "a provider shall amend its TAM Plan whenever there is a significant change to the asset inventory, condition assessments, or investment prioritization that the provider did not reasonably anticipate during the development of the TAM Plan." While Rio Metro did not encounter a reason to formally amend its TAM Plan during the last four years, it did incorporate many of the processes and tools established by the TAM Plan to refine its investment priorities in the annually adopted Budget and Capital Plan (formerly Short Range Plan). Section 7 describes the interplay between the TAM Plan and the Budget and Capital Plan in more detail.

In addition to establishing deadlines and standards for TAM Plan certification and amendment, the TAM Final Rule also requires that two asset management reports be submitted to the NTD annually:



- The **Data Report** inventories and describes the condition of Rio Metro's assets at the end of the fiscal year, uses that information to calculate Rio Metro's actual performance against its targets for that fiscal year, and records Rio Metro's performance targets for the upcoming fiscal year.
- The **Narrative Report** allows Rio Metro to more thoroughly explain the challenges faced and progress made toward meeting its performances targets. Rio Metro uses the Narrative Report template published by FTA in 2021 to ensure that it provides the appropriate level of detail.

Based on its NTD reporting schedule, Rio Metro's first Data Report was due October 31, 2018, and its first Narrative Report was due October 31, 2019. Rio Metro met these deadlines and each subsequent annual deadline. As this TAM Plan update coincides with the end of FY2022, the data presented herein will align with Rio Metro's FY2022 NTD Data and Narrative reports.



2 Asset Management Policy

Rio Metro’s asset management policy outlines its overall asset management approach and sets the direction for establishing and continuously improving asset management strategies, including setting objectives and measures to monitor and continually improve performance (Figure 4).



Figure 4: Asset Management Policy



3 Capital Asset Inventory

3.1 Services and Responsibilities

Rio Metro is the regional transit provider for Bernalillo, Sandoval, and Valencia counties, providing commuter rail, commuter bus, demand response, and demand taxi (job access program) services between municipalities and across county lines. More specifically, Rio Metro directly operates cutaway bus/minivan demand response service in Sandoval and Valencia counties, as well as commuter bus service in Bernalillo and Valencia counties. Rio Metro also contracts 1) Rail Runner commuter rail operations and maintenance to Herzog Transit Services, although it retains dispatching, station maintenance, project management, and safety training; 2) commuter bus service in Bernalillo and Sandoval County to All Aboard America; and 3) demand taxi service in Bernalillo County to zTrip and Duke-C Rides. Finally, Rio Metro funds a portion of ABQ RIDE's (the City of Albuquerque's Transit Department) operating costs.

Rio Metro's Rail and Transit Divisions oversee their respective contractors to ensure service is delivered safely, efficiently and in accordance with all applicable FTA and FRA regulations. The Rail Division also coordinates with NMDOT and tenant railroads (i.e., BNSF and Amtrak). The Transit Division works closely with NMDOT (who has Section 5310/5311 oversight) and coordinates with neighboring public transit providers like the North Central Regional Transit District.

3.2 Capital Asset Inventory

Rio Metro's capital asset inventory is updated at the end of each fiscal year with input from the Rail and Transit Divisions and from contractors. The inventory complies with the requirements of the TAM Final Rule and was constructed to easily extract the data needed for NTD reporting.

Rio Metro maintains its asset inventory in Excel worksheets. An excerpt from the directly-operated cutaway/minivan inventory is shown below in [Figure 5](#). [Figure 6](#) provides a summary of the asset inventory, although the Excel worksheets include additional assets required for NTD reporting (turnouts, grade crossings, etc.).

	A	B	C	D	E	F	G	H	I	K	L	M	N
1	VIN	Licens	Vehicle	Active Vehi	Dedicated Fle	Emergency Cont. Ve	Primary Mo	Supports Other Mo	Year Manufactur	Model Ye	Vehicle Ty	NMDOT Vehicle Type	Manufacturer
2	1FDFE4F3BDA80347	G83502	RM710	Active	Yes	No	DR DO	MB DO	2011	2011	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
3	1FDFE4F31CDA19256	G85146	RM711	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
4	1FDFE4F3CDA19257	G85144	RM712	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
5	1FDFE4F55CDA19258	G85143	RM713	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
6	1FDFE4F57CDA19262	G85145	RM714	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
7	1FDFE4F59CDA19263	G85147	RM715	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
8	1FDFE4F52CDA47521	G85900	RM716	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
9	1FDFE4F51CDA47526	G85899	RM717	Active	Yes	No	DR DO	MB DO	2012	2012	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
10	1FDFE4F50BDA54787	003166	RM718	Active	Yes	No	DR DO	MB DO	2011	2011	Cutaway	Light-Duty Mid-Sized Bus	GLV - Glaval Bus
	Performance Measures--FG			Equipment	Non-Rev. Service Veh.--Master		Non-Rev. Service Veh.--Fleet		Rev. Vehicle--RM Transit Master		Rev. Vehicle--RM Transit Fleet		Rev. Vehicle CB-PT

Figure 5: Screenshot of Cutaway Inventory

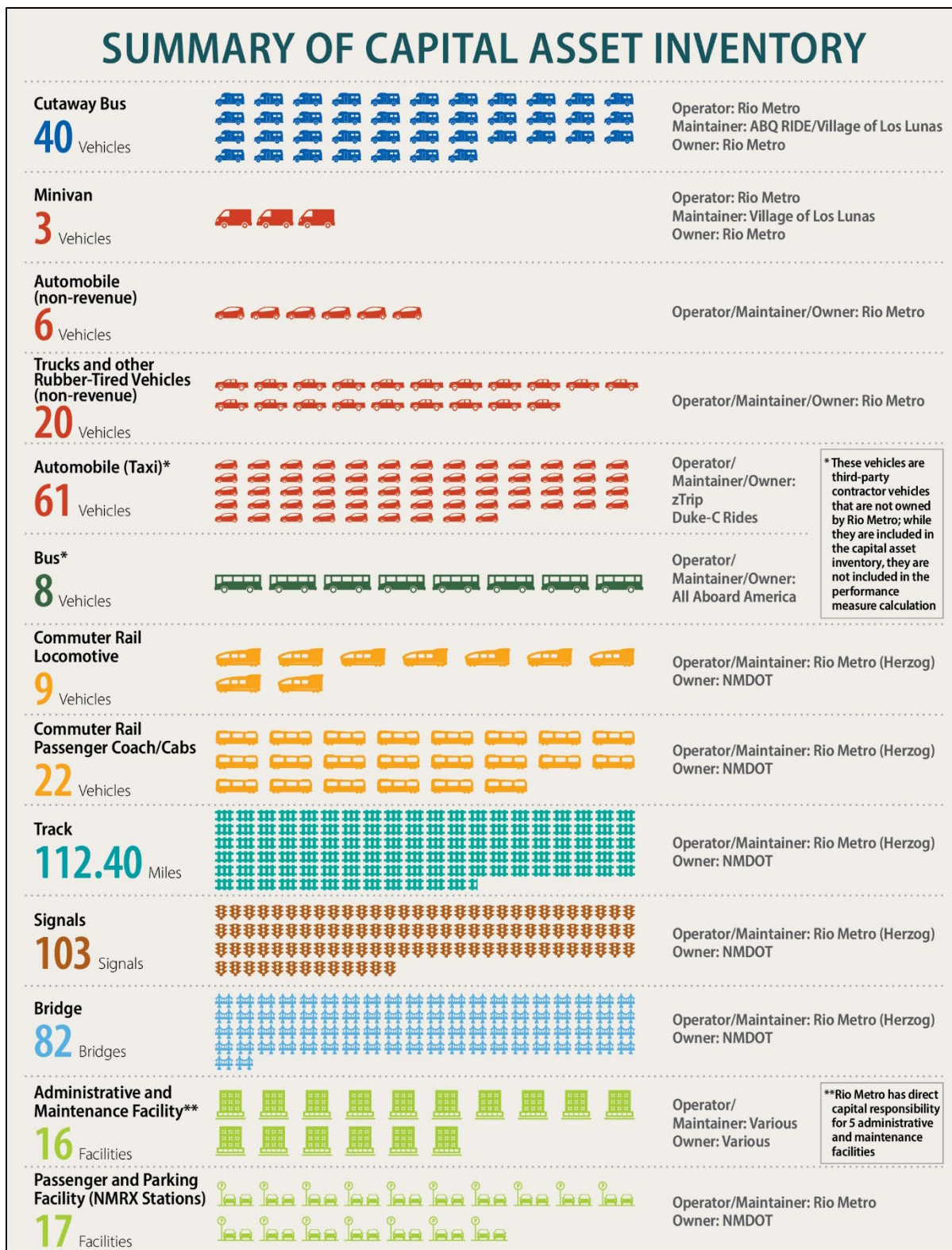


Figure 6: Summary of Capital Asset Inventory



4 Performance and Condition

4.1 State of Good Repair Summary

The TAM Final Rule states that an asset is in a state of good repair if it is “able to perform its designed function...does not pose an identified unacceptable safety risk...[and] the life-cycle investment needs of the asset have been met or recovered.” Conversely, FTA’s four state of good repair performance measures described in Section 1.2.3 and applied to Rio Metro in Section 4.2 serve to identify a provider’s assets that are *not* in a state of good repair.

Figure 7 inverts those measures to highlight the overall state of good repair of Rio Metro’s rolling stock, equipment (non-revenue service vehicles), infrastructure (track) and facilities. Generally, Rio Metro’s assets are in good condition, as Rio Metro is a young provider with relatively new assets.

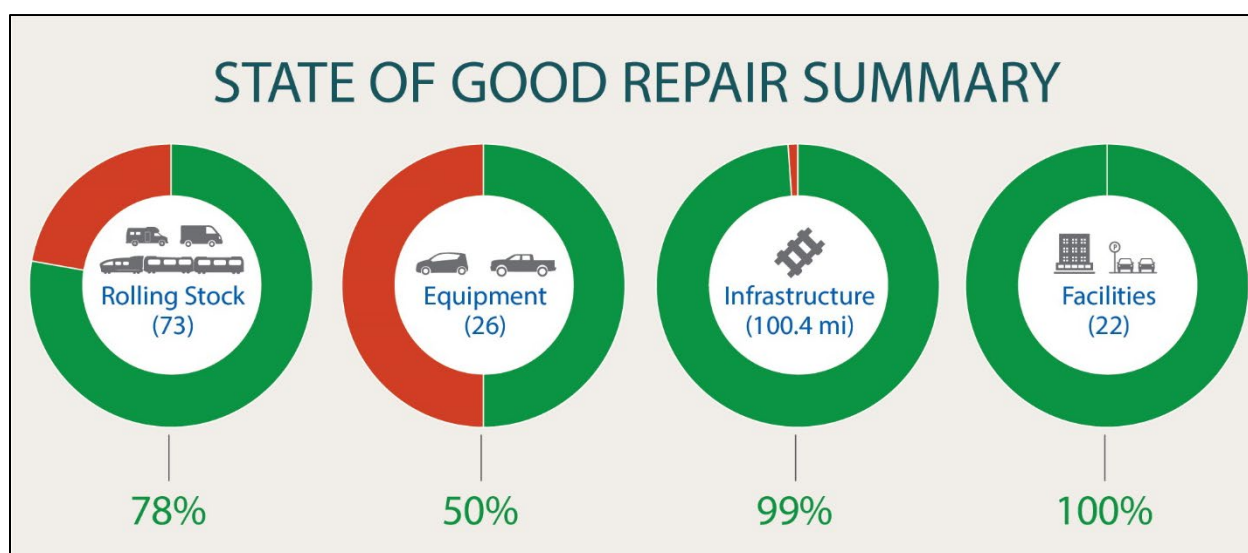


Figure 7: State of Good Repair Summary

On the basis of useful life benchmark (ULB)—the expected age at which a vehicle is retired/disposed—78 percent of revenue vehicles (rolling stock) are in a state of good repair. While commuter rail vehicles are still young relative to their 39-year ULB, the revenue vehicle percentage has declined from the original TAM Plan’s 99 percent because a growing number of cutaway buses are exceeding their ULB for various reasons. The most influential factor for this decrease is Rio Metro’s inability to procure replacements in a timely manner. Because of supply chain issues, the current wait time for cutaway buses is approximately three years. Furthermore, Rio Metro has retained four cutaway buses for commuter rail bus bridge service that have exceeded their ULB, but are otherwise in good condition. In the next fiscal year, 13 cutaway buses will also meet their ULB, and Rio Metro intends to replace these vehicles over several years. Assuming that safety hazards, costly repairs, or other defects do not surface, Rio Metro will replace the highest-mileage vehicles first, allowing safe, dependable, lower mileage vehicles to exceed their ULB for a few years.

Fifty percent of all non-revenue service vehicles are in a state of good repair and have not yet met their ULB. While this percentage is also lower than the original TAM Plan, Rio Metro has little concern about



this trend. Higher-mileage service vehicles that have met their ULB, but are still in good condition, are used as spares or are commonly transferred to employees who have occasional need for a vehicle.

In FY2022, less than 0.5 percent of Rio Metro’s main track, on average, was subject to performance restrictions. In previous fiscal years, this figure never rose above three percent. Most all performance restrictions over the last four years can be attributed to preventative maintenance (e.g., tie replacement). The lengthiest restriction during the last TAM Plan horizon was a five-mile, 79 mph to 50 mph slow order. This was in effect while Rio Metro refined its PTC braking calculations for a steep grade, and had nothing to do with the actual condition of the track.

Rio Metro utilizes FTA’s five-point, Transit Economic Requirements Model (TERM) Lite scale to assess the condition of the facilities for which it has capital responsibility. A score of three or above indicates than asset is in adequate condition, and all of Rio Metro’s facilities satisfy this measure. The distribution of scores for both classes of facilities (administrative and maintenance; passenger and parking) is shown below in **Figure 8**.

Notably, in FY2022, Warehouse A, a 1960s wood-framed, metal-sided building that scored 1 in its FY2018 condition assessment, was demolished after being further damaged in a wind storm. Also, Warehouse B, which scored 2 on its FY2018 condition assessment, was improved considerably in the intervening years and scored 3 on its FY2022 condition assessment.

TERM Lite Scale			
STATE OF GOOD REPAIR	0%	5	0%
	40%	4	82%
	60%	3	18%
	0%	2	0%
	0%	1	0%
Administrative and Maintenance Facilities			Passenger and Parking Facilities

Figure 8: Summary of Facility Condition Assessments

4.2 Performance Measures and Target Setting

Because of a quirk in the TAM Final Rule, Rio Metro set its initial FY2018 performance targets for each asset class in January 2017—before Rio Metro had the opportunity to finalize its inventory or conduct condition assessments. However, from FY2019 on, Rio Metro’s performance targets have reflected its asset inventory and condition assessments. Rio Metro’s actual performance for FY2022 and most recent performance targets for FY2023 are shown in **Figure 9**.



PERFORMANCE MEASURES AND TARGETS

ROLLING STOCK

Rolling stock performance is measured by the percentage of active revenue vehicles (by type) that meet or exceed the useful life benchmark (ULB).*

Vehicle Type	Useful Life Benchmark (ULB)	Total # of Active Vehicles	# of Vehicles that Meet or Exceed ULB (FY 2022)	% of Vehicles that Meet or Exceed ULB (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Cutaway (CU)	8	39	15	39%	35%	72%
 Minivan (MV)	7	3	1	33%	33%	33%
 Commuter Rail Locomotive (RL)	39	9	0	0%	0%	0%
 Commuter Rail Passenger Coach/Cabs (RP)	39	22	0	0%	0%	0%

EQUIPMENT

Equipment performance is measured by the percentage of non-revenue service vehicles (by type) that meet or exceed the useful life benchmark (ULB).*

Vehicle Type	Useful Life Benchmark (ULB)	Total # of Vehicles	# of Vehicles that Meet or Exceed ULB (FY 2022)	% of Vehicles that Meet or Exceed ULB (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Automobile	8	6	3	50%	50%	50%
 Trucks and other Rubber-Tired Vehicles	8	20	10	50%	19%	33%

INFRASTRUCTURE

Infrastructure performance is measured by the percentage of track segments (by mode) that have performance restrictions.

Infrastructure Type	Total # Miles of Main Track Segments	Average # of Miles Under Performance Restriction (FY 2022)	Average % of Track Miles Under Performance Restriction (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Commuter Rail (CR)	100.4	0.46	0.5%	5%	3%

FACILITIES

Facility performance is measured by the percentage of facilities (by group) that are rated less than '3' on the Transit Economic Requirements Model (TERM) scale.

Facility Type	Total # of Facilities	# of Facilities Below '3' on TERM Scale (FY 2022)	% of Facilities Below '3' on TERM Scale (FY 2022)	FY 2022 Performance Target	FY 2023 Performance Target
 Administrative and Maintenance Facility	5	0	0%	33%	0%
 Passenger and Parking Facility	17	0	0%	0%	0%

* Note: The useful life benchmark is the expected age at which the vehicle is retired/disposed.

Figure 9: Performance Measures and Targets



Rio Metro typically sets its performance targets for the current fiscal year (July-June) in September, which falls between the close of the last fiscal year (June 30) and its NTD reporting deadline (October 31). This gives Rio Metro time to calibrate its targets based on the actual disposition of its asset inventory at the start of the current fiscal year, and on the capital maintenance and replacement assumptions from the Budget and Capital Plan typically adopted in May. The new targets are approved by the accountable executive, distributed to MRMPO and NMDOT, and then uploaded to the NTD as required by the TAM Final Rule.

For revenue vehicles and non-revenue service vehicles, Rio Metro calculates performance targets based on ULBs provided by FTA and NMDOT. NMDOT ULBs, reserved for cutaway buses and minivans, are slightly shorter than FTA's default ULBs because of New Mexico's harsh operating environment (wide ranging temperatures, sandy/dusty conditions, unpaved roads, etc.). This also aligns Rio Metro with other New Mexico transit providers that receive Section 5310 and 5311 funding from NMDOT for vehicle replacement.

The infrastructure performance measure is calculated by summing the length of main track operating under performance restrictions (i.e., "slow orders") on the first Wednesday of each month at 9 a.m. and dividing that sum by the entire length of main track. The resulting monthly percentages are then averaged to calculate the annual percentage of track segments with performance restrictions. In practice, Rio Metro reviews the daily general track bulletin for the first Wednesday of the month to identify any performance restrictions, and also confirms with dispatchers that there were no other temporary performance restrictions in effect at 9:00 a.m.

For measuring facility condition, Rio Metro scores each facility using a weighted approach that is based on the requirements of FTA's *TAM Facility Performance Measure Reporting Guidebook*. Essentially, each primary level¹ receives a score that is then weighted based on that level's estimated share of the facility's overall cost to calculate an overall facility score.

While deriving a facility score is of some merit, Rio Metro's condition assessments are primarily conducted with the following practical objectives in mind:

- Identify near-term capital concerns that may need to be addressed prior to the next TAM Plan update;
- Identify existing, acceptable conditions that may grow into significant medium- and long-term capital concerns; and
- Highlight deficiencies that constitute an immediate safety concern or could give rise to a service delay.

With respect to timing, the TAM Final Rule allows a provider to assess the condition of one-quarter of its facilities each year, as long as each facility is assessed at least once every four years. Because it has relatively few facilities, Rio Metro chose to assess them all just prior to drafting its initial TAM Plan and

¹ Primary levels include substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and equipment/fare collection, site



this update. This approach not only better informs the TAM Plan, but also the subsequent TIP development cycle and the next iteration of the Budget and Capital Plan.

Overall, because Rio Metro has relatively few facilities and small revenue and non-revenue fleets, even a small, unanticipated change to the asset inventory can cause a significant fluctuation in an asset class's performance relative to its target. For example, if a vehicle that has met its ULB is unexpectedly retained for another fiscal year, it can cause Rio Metro to miss its target by several points. On the other hand, having relatively small asset classes allows Rio Metro to set more precise targets.



5 Risk Management

While a risk management section is not required under 49 CFR 625, it has been included as best practice. Rio Metro uses a risk register to identify and manage the following categories of risk related to implementing its asset management improvement program and its overall operations:

- **Safety** risks are associated with the identification of hazards and Rio Metro’s ability to deliver its services and maintain its assets in a way that is not likely to cause harm or injury to employees, customers, or other stakeholders.
- **Strategic** risks are associated with Rio Metro’s ability to meet its goals and objectives. They also include external risks (outside of Rio Metro’s control) related to government policy, economic impacts on the organization’s finances, and commercial risks related to outsourced asset management activities.
- **Operational** risks are associated with the lifecycle management of assets, including procurement, project delivery, asset handover, and the maintenance and management of assets. Operational risks also consider impacts on assets—including events related to weather and climate change, as well as security-related events.
- **Financial** risks are related to Rio Metro’s operating and capital budgets.
- **Organizational** risks are related to Rio Metro’s ability to manage assets and deliver services, including the performance/capacity/capability of its employees, agency-wide support for asset management, and the adequacy of policies, processes, tools and technology to support decision making.

The risk register is presented in [Table 1](#). The risk score is calculated based on a risk’s probability and impact, as illustrated in [Figure 10](#). Probability is measured on a scale from 0 to 1, with 1 indicating a high likelihood, while impact is measured on a scale from 1 to 10, with 10 indicating a high impact. Rio Metro also generates an appropriate response/mitigation strategy for each risk.

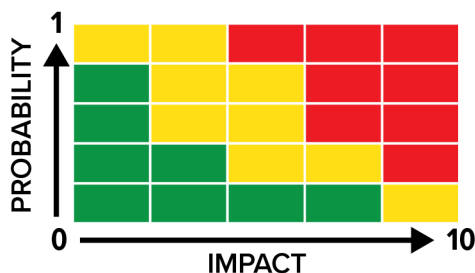


Figure 10: Risk Matrix

Rio Metro updates the risk register with each TAM Plan update. Risks that have been closed or are no longer applicable are removed. Risks that have evolved in the intervening years may receive updated descriptions and/or mitigation strategies, or may be merged with similar risks. Finally, new risks that may impact Rio Metro’s TAM efforts in the upcoming horizon are added to the register.



Table 1: Risk Register

Risk Category	Risk Description	Probability	Impact	Risk Score	Response/Mitigation Strategy	Date Identified
Safety	Assets are not maintained in a state of good repair and pose a safety risk to the travelling public and Rio Metro staff.	0.2	8	1.6	Prioritize funding to ensure that the assets most critical to employee and public safety are maintained, overhauled, or replaced on schedule to preserve state of good repair	6/2018
	Failure of Rio Metro and/or contractor staff to identify and mitigate hazards.	0.2	8	1.6	Continue to promote employee and customer reporting mechanisms established through the Agency Safety Plan–Bus and the Rail Runner System Safety Program Plan. Ensure inspections are being conducted by trained personnel at the required intervals.	9/2022
Strategic	Lack of training, institutional capacity, and buy-in to support ongoing asset management initiatives.	0.4	5	2.0	Attend FTA and other asset management-related webinars/workshops/events to stay informed on the latest policies, requirements, and best practices. Bring TAM data, tools and outputs to bear on budgeting and capital planning discussions to help management make more informed decisions.	6/2018
	Changes to NMDOT or FTA policies/regulations create additional burdens for Rio Metro (e.g., higher ULB = keeping vehicles longer = creating the need for overhauls that were not previously necessary).	0.4	7	2.8	Maintain communication with NMDOT and FTA staff and monitor rulemaking so that Rio Metro has ample time to plan for and accommodate any changes	6/2018
	COVID-19-related ridership losses erode support for Rio Metro's services and investment in the rehabilitation/replacement of its assets.	0.3	8	2.4	Consider advertising campaigns, passenger surveys, and other efforts that help promote and improve Rio Metro's services. If warranted, revamp services away from declining ridership markets and toward emerging ridership markets.	9/2022
Operational	Data collected for TAM is not granular enough to support more proactive maintenance/root cause analysis.	0.6	4	2.4	Consider targeted data collection/investigations if assets exhibit recurring issues without a discernable cause	9/2022
	Theft/vandalism to vehicles and facilities.	0.6	5	3.0	Invest in security measures (fencing, cameras, catalytic converter shields, etc.) to discourage criminal activity that may result in costly repairs, lengthy time out of service, or the retirement of an asset before it reaches its ULB.	9/2022
	Supply-chain backlogs prevent the replacement of assets on schedule.	0.9	6	5.4	Manage bus and minivan fleets with the understanding that vehicles may remain in operation for a year or two after reaching their ULB while awaiting replacements. Work with grantors and vendors to place orders as early as possible.	9/2022
Financial	Unfunded federal mandates arise that incur near-term capital costs and long-term maintenance costs (e.g., PTC).	0.2	8	1.6	Identify future mandates and their costs as soon as possible. Research potential funding streams/grant opportunities.	6/2018
	PTC's on-going maintenance costs cut into funding for maintenance, rehabilitation, and replacement across all modes, impacting service reliability.	0.5	6	3.0	Monitor potential impacts to service reliability and consider applying for eligible discretionary grant funds for PTC maintenance.	9/2022
	Gross receipts tax, fare, and other local revenues are insufficient to match anticipated federal funding increases through the Infrastructure Investment and Jobs Act and other discretionary grant awards.	0.8	6	4.8	Identify other potential sources of local match and/or pursue strategies that optimize the use of local match so that Rio Metro can fully leverage federal funds and maintain a state of good repair.	9/2022



Risk Category	Risk Description	Probability	Impact	Risk Score	Response/Mitigation Strategy	Date Identified
	The expected, future conversion of fleets to zero-emission vehicles— whether by mandate or funding carrots/sticks— results in significant, unanticipated capital costs.	0.5	7	3.5	Develop a plan for converting to zero-emission vehicles and for the necessary support facilities/infrastructure before it becomes absolutely necessary to do so. Target discretionary grant programs exclusive to zero-emission vehicle/facilities funding.	9/2022
Organizational	Because of Rio Metro’s small size, TAM institutional knowledge is at risk because of staff turnover.	0.5	4	2.0	Document all critical procedures and relevant knowledge in TAM Plan and other TAM-related tools/documents.	6/2018
	Employees already or soon to be eligible for retirement do not pass on their expertise/institutional knowledge before leaving Rio Metro.	0.5	6	3.0	Emphasize the need for succession planning and cross training, especially as it pertains to procurement, asset inspection, maintenance, budgeting and capital planning.	9/2022
	Inability to hire drivers and/or maintainers impairs Rio Metro’s ability to provide existing/additional service and/or properly maintain vehicles.	0.9	8	7.2	More aggressively advertise positions, offer competitive wages/benefits and take other actions that encourage retention.	9/2022



6 Decision Support Tools

6.1 Investment Prioritization Approach

Rio Metro uses a straightforward investment prioritization approach to maintain its system in a state of good repair and to achieve a low total cost of ownership. Over the life of an asset, Rio Metro first prioritizes scheduled maintenance, then planned overhauls, and finally replacement (**Figure 11**).



Figure 11: Investment Prioritization Approach

Prioritizing scheduled maintenance and planned overhauls enables assets to reach their intended useful life. Since Rio Metro’s assets are relatively young, planned overhauls to date have been limited to locomotive “top deck” overhauls. To date, most other vehicles, such as cutaway buses and service vehicles, have reached their useful life without requiring a planned overhaul to either the engine or transmission. However, this could change if Rio Metro is required to hold vehicles longer because of supply-chain issues that preclude on-time replacement. On the distant horizon, Rio Metro will have to replace major components/systems on its facilities, but will prioritize customer-serving facilities (i.e., stations) when the time comes.

As assets reach the end of their useful life, Rio Metro uses five evaluation criteria to help prioritize replacements within each asset class—particularly when funding is inadequate to replace all assets eligible for replacement. The evaluation criteria are listed below in no particular order:

- Safety
- Impact to service and operations (reliability)
- Maintenance
- Age
- Condition

Furthermore, the description of each criterion is appropriately nuanced for the asset class, and example templates for prioritizing replacements are outlined below and provided in Appendix C.

Ultimately, Rio Metro maintains a list of investment priorities (major capital maintenance, planned overhauls, replacements, etc.) in this TAM Plan and the annual Budget and Capital Plan. Projects in the



current year reflect the most immediate priorities, and lesser needs are distributed across out years as funding becomes available.

Finally, this investment prioritization approach applies only to assets that Rio Metro already owns. Decisions to expand or modernize Rio Metro's system should consider additional factors (e.g., availability of operating funds) that are outside the scope of the TAM Plan process.

6.1.1 Vehicles (Revenue and Non-Revenue)

Table 2 identifies the evaluation criteria that Rio Metro uses to prioritize vehicle replacement projects.

Table 2: Evaluation Criteria for Vehicles

Evaluation Criteria	
Safety	Does operating the vehicle pose a safety risk to the traveling public, operators or others that cannot be easily mitigated through routine maintenance/service to the vehicle?
Impact to Service and Operations	Is the vehicle reliably providing service to the public?
Maintenance	Does the vehicle require any major parts/components or major overhaul activities?
Age	Is the vehicle beyond its planned useful life? If yes, how many years is it beyond its planned useful life?
Condition/Usage	Is the vehicle in good condition/is the usage infrequent? Have the vehicles exceeded their recommended mileage?

6.1.2 Fixed Guideway

Table 3 identifies the evaluation criteria that Rio Metro uses to prioritize fixed guideway projects.

Table 3: Evaluation Criteria for Fixed Guideway

Evaluation Criteria	
Safety	Does operating service on this segment of track pose a safety risk to the traveling public, operators or others that cannot be easily mitigated through routine maintenance?
Impact to Service and Operations	Does the condition of the track segment/component impact the ability to provide revenue service and meet existing levels of service? Have any performance restrictions been issued on the segment of track?
Maintenance	What is the level of maintenance and inspection required to keep the track segment/component in working condition?
Age	Is the track segment/component beyond its planned useful life? If yes, how many years is it beyond its planned useful life?
Condition	What is the track segment/component condition? The condition may be based on a visual inspection, review of maintenance records, and any other tests that may have been performed on it.



6.1.3 Signals

Table 4 identifies the evaluation criteria Rio Metro uses to prioritize signal projects.

Table 4: Evaluation Criteria for Signals

Evaluation Criteria	
Safety	Does the condition of this signal/component pose a safety risk to the traveling public, operators or others that cannot be easily mitigated through routine maintenance?
Impact to Service and Operations	Does the condition of this signal/component impact the ability to provide revenue service and meet existing levels of service?
Maintenance	What is the level of maintenance and inspection required to keep the signal/component in working condition?
Age	Is the signal/component beyond its planned useful life? If yes, how many years is it beyond its planned useful life?
Condition	What is the signal/component's condition? The condition may be based on a visual inspection, review of maintenance records, and other tests that may have been performed on it.

6.1.4 Bridges

Table 5 identifies the evaluation criteria Rio Metro will use to prioritize bridge investments.

Table 5: Evaluation Criteria for Bridges

Evaluation Criteria	
Safety	Does the condition of this bridge pose a safety risk to the traveling public, operators or others who interface with this facility? Does the condition of the bridge component impact the safety of the bridge?
Impact to Service and Operations	Does the condition of the bridge/bridge component impact revenue service?
Maintenance	What is the level of maintenance and inspection required to keep the bridge or its major components in working condition?
Age	Is the bridge/bridge component beyond its planned useful life?
Condition	What is the bridge's condition rating (from bridge inspection report)?



6.1.5 Facilities

Table 6 identifies evaluation criteria Rio Metro uses to prioritize facility replacements. As noted in Section 4.2, Rio Metro also uses the most recent condition assessments to identify specific issues.

Table 6: Evaluation Criteria for Facilities

Evaluation Criteria	
Safety Risk to Customers (Passenger and Parking Facilities)	Does the condition of this facility pose a safety risk to customers who interface with this facility? Does the condition of this facility affect the ability to maintain the safe operation of customer-facing assets (e.g., vehicles)?
Safety Risk to Staff (Administrative and Maintenance Facilities)	Does the condition of this facility pose a safety risk to staff who use this facility?
Impact to Service and Operations	Does the facility impact revenue service? This factor prioritizes passenger facilities over administrative facilities.
Maintenance	What is the level of maintenance and inspection required to keep the facility or its major components in working condition?
Age	Is the facility (or a major component of the facility) beyond its planned useful life?
Condition Score	What is the facility's condition score (based on the physical condition assessment)?

6.2 Lifecycle Cost Models

To help support the investment prioritization approach, Rio Metro uses an Excel-based lifecycle cost model for each asset class to calculate the estimated lifecycle needs over a 20-year planning horizon. The lifecycle needs are calculated based on each asset's age, expected useful life, replacement cost, and planned lifecycle activities (major maintenance, overhauls, etc.) to create an unconstrained scenario.

The tabular and graphical outputs of the lifecycle cost models enable Rio Metro to determine whether it is performing the right activities on its assets at the right time; whether it has sufficient funding programmed in its Budget and Capital Plan for these activities; and whether additional activities need to be included in the plan. For obvious reasons, Rio Metro does not rigidly conform to the models, but uses them in conjunction with the investment prioritization approach and staff knowledge to ultimately program capital funding and to "constrain" the unconstrained model outputs.

The lifecycle cost models assume straight-line deterioration instead of incorporating decay curves, although Rio Metro may decide to incorporate decay curves in the future to predict asset condition. Also, since these models are formula-based, they are flexible and can be modified in the future to incorporate more granular data that Rio Metro might collect as well as new activities it might perform on its assets. Nevertheless, Rio Metro re-evaluates asset costs and frequency for existing activities with each TAM Plan update using actual expenses and frequencies from the intervening four years, published industry-wide or regional costs, inflationary trends; etc.

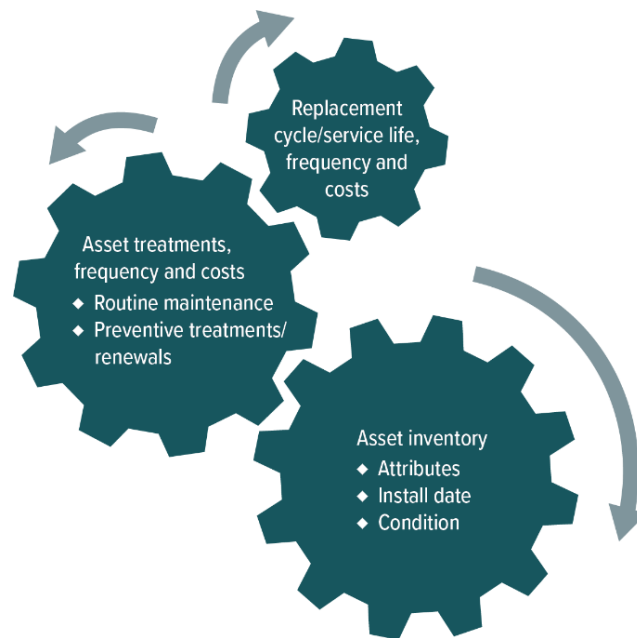


Figure 12: Overview of Lifecycle Needs Analysis

Rio Metro has opted to use these Excel-based lifecycle models to ensure that staff members can easily understand the underlying calculations and update them regularly. Moreover, since Rio Metro is a small agency, procuring an expensive enterprise asset management system is not a cost-effective option at this time (and may never be). However, Rio Metro may revisit this decision and explore the procurement of an enterprise asset management system in the future if the need arises.

Figure 13 is a graphical output from the lifecycle cost model for Rio Metro's transit revenue vehicles; it illustrates the anticipated replacement schedule for minivans and light-/medium-duty cutaway buses based on the current age of each vehicle and their respective useful life benchmark. Figure 14 is a tabular output from the lifecycle cost model of the same asset class but for the seven-year horizon of the Budget and Capital Plan.

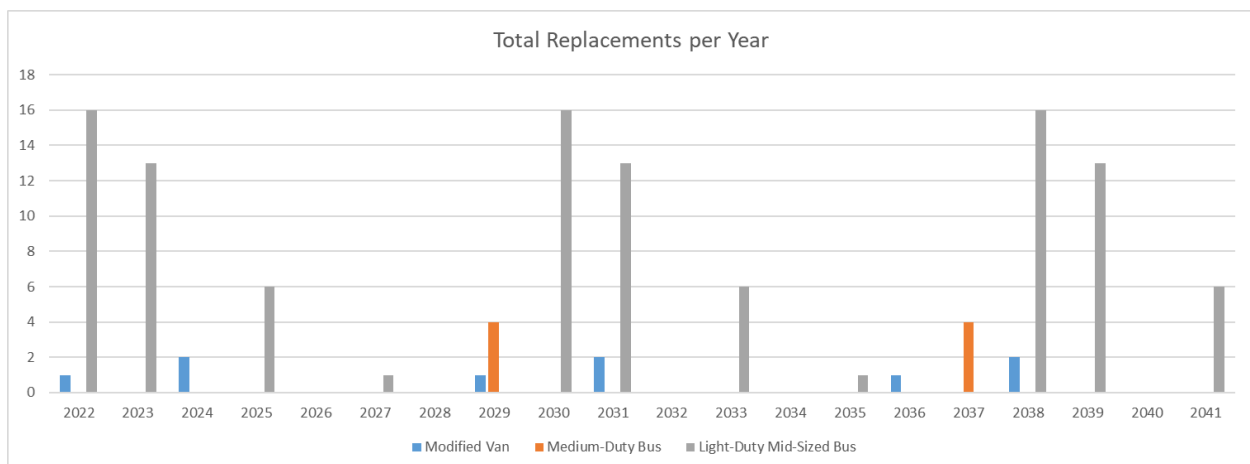


Figure 13: Non-rail Revenue Vehicle Replacement Schedule



CIP Activity Output (CIP Timeframe: 2022-2028)								
<i>This sheet is a list of CIP activities to be done during the selected CIP Start and CIP End Years. This sheet should be manually refreshed as</i>								
#	Asset Class	Activity	Frequency (year)	Cost / Frequency	# of Activities within CIP Timeframe	Total Cost	Activity Year	
RM710	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM711	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM712	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM713	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM714	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM715	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM716	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM717	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM718	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM719	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM724	Modified Van	Replacement	7	\$ 52,012	1	\$ 52,012	2022	
RM735	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM736	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM739	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM740	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM741	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM742	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2022	
RM744	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM745	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM746	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM747	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM748	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM749	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM750	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM751	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM752	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM753	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM754	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM755	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM756	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2023	
RM767	Modified Van	Replacement	7	\$ 52,012	1	\$ 52,012	2024	
RM768	Modified Van	Replacement	7	\$ 52,012	1	\$ 52,012	2024	
RM761	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM762	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM763	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM764	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM765	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM766	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2025	
RM769	Light-Duty Mid-Sized Bus	Replacement	8	\$ 100,049	1	\$ 100,049	2027	

Figure 14: Lifecycle Cost Model Output



7 Investment Prioritization

7.1 Budget and Capital Plan Process

Rio Metro uses the investment prioritization approach and the lifecycle cost models described in Section 6 to inform its annual investment prioritization as part of the Budget and Capital Plan process. That process is illustrated in **Figure 15**.

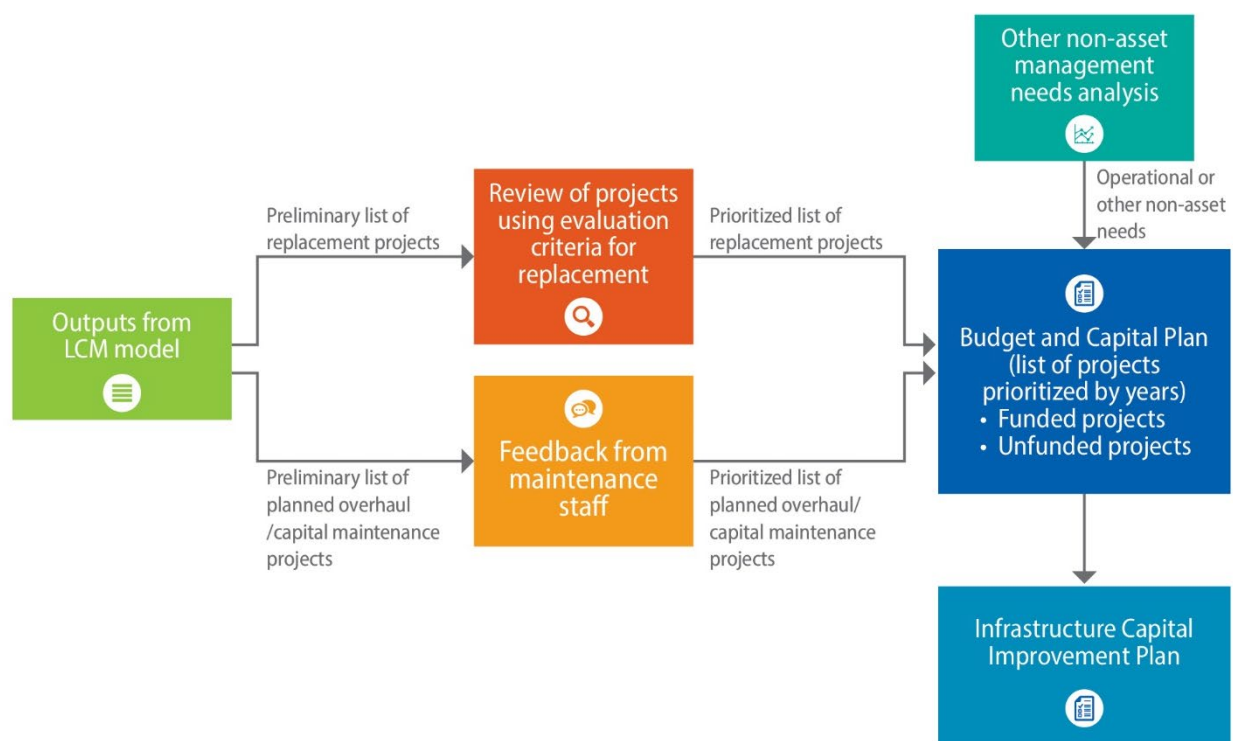


Figure 15: Budget and Capital Plan Process

Essentially, the lifecycle cost model outputs function as an unconstrained scenario—a starting point that helps Rio Metro estimate what it should be spending on its assets to maintain them in a state of good repair. Staff meet to consider this information along with any funding limitations to prioritize projects across the next seven fiscal years. In the case of planned overhauls that are identified by the lifecycle cost models, maintenance staff also consider usage, past maintenance and other asset-specific information to prioritize otherwise identical assets. For replacements, Rio Metro follows the evaluation criteria from Section 6.1.

Additional non-state of good repair projects may be included in the Budget and Capital Plan if they are critical to supporting Rio Metro’s service goals, but they are not prioritized using the decision support tools. These projects are sorted within “funded” or “unfunded” capital project tables based on available funding and their relative priority to staff and to Rio Metro’s board.

The highest priority unfunded and underfunded projects (typically 10-20) are also placed in the Infrastructure Capital Improvement Plan (ICIP) section of the Budget and Capital Plan. The ICIP is a five-



year planning tool devised by the State of New Mexico to help local governments sustainably plan for the future and to inform state legislators' and cabinet departments' capital outlay appropriations. Essentially, each local government in New Mexico vets and adopts a prioritized list of unfunded and underfunded capital projects and then uploads them to the state's ICIP database. That database, in turn, becomes the basis for requesting capital outlay funding and other state appropriations. Rio Metro uploads its ICIP to the state's database annually, typically a month or two after adoption of the Budget and Capital Plan.

Although it is not treated as a formal amendment to the TAM Plan, the Budget and Capital Plan process functions as an annual re-evaluation of Rio Metro's investment priorities. This approach allows Rio Metro to be more responsive to changing conditions between TAM Plan updates.

7.2 Investment Priorities

The tables in Appendix D reflect Rio Metro's investment priorities from the FY2023-FY2029 Budget and Capital Plan, which was adopted by Rio Metro's Board in May 2022. These tables, as revised annually, are intended to satisfy the requirement in 49 USC 5337(b)(2) that a recipient include Section 5337-funded projects in its TAM Plan.

Rather than using a strict sequential ranking, Rio Metro prioritizes projects based on the year in which they would be funded/implemented for practical, budgetary purposes. Moreover, these projects generally align with the following themes:

- Maintaining existing Rail Runner assets in a state of good repair while also now accounting for PTC maintenance;
- Improving the speed, capacity and efficiency of the Rail Runner corridor to reduce travel time and minimize delay;
- Replacing transit revenue vehicles that have exceeded their useful life, an activity that was delayed during PTC implementation and is now exacerbated by supply-chain shortages; and
- Constructing permanent facilities for both rail and transit administration and maintenance.



8 Implementation Strategies and Key Annual Activities

This section describes the implementation strategies, key annual activities, and other potential activities that Rio Metro may take during the upcoming four-year planning horizon. The three implementation strategies are organized around the key enablers of asset management: people, processes, and tools (Figure 16). Specific activities are then fleshed out underneath the strategies to help Rio Metro improve its existing asset management practices and thereby achieve its asset management policy and vision. Each implementation strategy, along with their corresponding activities, are described in more detail below.

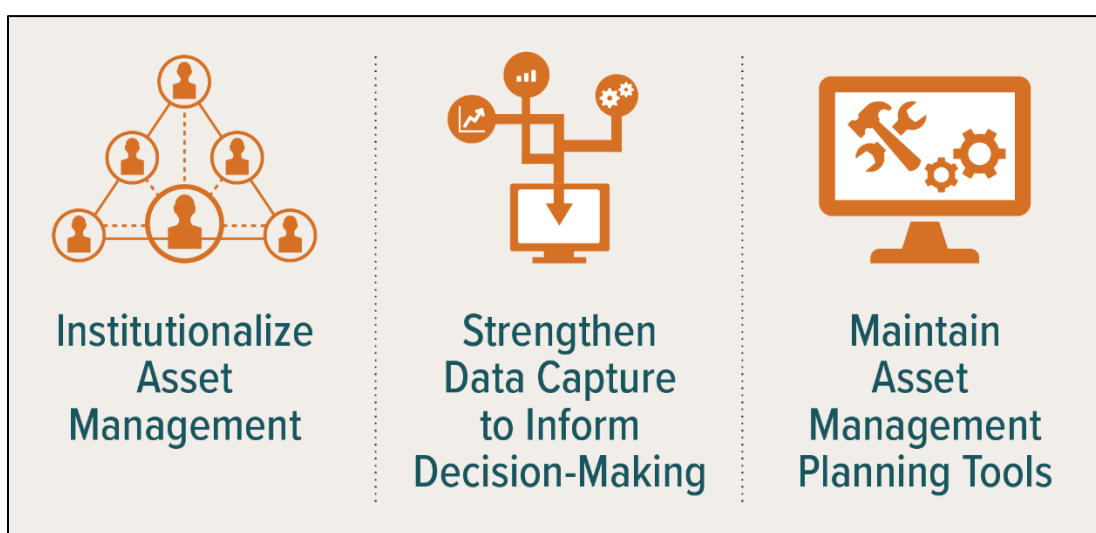


Figure 16: TAM Plan Implementation Strategies

8.1 Institutionalize Asset Management

Rio Metro seeks to institutionalize asset management within its organization so that everyone understands their role in implementing and supporting the asset management improvement program. Perhaps the most simple but meaningful action that Rio Metro undertook to institutionalize asset management during the last TAM Plan horizon was simply to identify and arrange all of the key annual activities on the calendar and formulate a routine. This enabled the TAM Plan leads to better organize their time, and gave them a better grasp of whom to involve when.

Beginning at the start of a new fiscal year, key annual activities are generally ordered as follows:

- July-August
 - Update asset inventory and ancillary data to reflect the disposition of all assets at the close of the last fiscal year
 - Update lifecycle cost models with data from asset inventory and maintenance records (i.e., date of overhauls and other major maintenance activities)
 - Resolve issues raised by ICIP reviewer (prepared in June)



- September
 - Prepare and certify performance targets for the current fiscal year based on the updated asset inventory and the replacement assumptions of the most recently adopted Budget and Capital Plan
 - Draft narrative report for NTD
- October
 - Provide certified performance targets and narrative report to MRMPO and NMDOT
 - Enter all required TAM data—including performance targets—into NTD, and upload narrative report to NTD
- November-December
 - Resolve issues raised by NTD reviewer
 - Update GIS database to account for new assets
- January
 - Submit capital outlay requests using data from ICIP
- February
 - Begin facility condition assessments, if necessary (conduct up through June 30)
- March-May: Budget and Capital Plan Development
 - Develop unconstrained scenario from lifecycle cost models
 - Meet with directors/managers to develop investment priorities
 - Draft Budget and Capital Plan that aligns with investment priorities for adoption by Board in May
- June
 - Prepare and upload ICIP to state database
 - Compile bridge condition data from inspection reports
 - Request relevant data from Rio Metro divisions (rail, transit, finance, etc.) to update asset inventory and lifecycle cost models
- Monthly
 - Assess general track bulletin from first Wednesday of the month for performance restrictions and confirm with dispatch that no other performance restrictions were in effect at 9:00am

This calendar also reflects Rio Metro’s success at strengthening the relationship between the TAM Plan and Budget and Capital Plan. The nature of this relationship has largely been described elsewhere in this TAM Plan (notably Section 7). However, in terms of institutionalizing asset management, the Budget and Capital Plan process gives the TAM Plan leads the opportunity to conduct outreach with/provide updates to leadership who is not directly involved in TAM throughout the remainder of the year.

Table 7 identifies potential projects and activities that may help Rio Metro further institutionalize TAM internally and with its contractors.



Table 7: Potential Activities to Institutionalize Asset Management

Project	Potential Activities	Responsible Divisions	Contributing Divisions	Timeframe
Participate in asset management training and provide asset management training as needed	• Participate in FTA webinars, conferences and other professional development opportunities, and encourage other staff to attend when applicable • Accept opportunities to present at conferences, etc. • Provide one-on-one training to staff who may not be familiar with TAM and/or their responsibilities	Planning	Administration	Years 1-4
Conduct outreach on the TAM Plan, both internally and externally, to ensure staff, contractors and others have a firm understanding of Rio Metro's TAM obligations and implementation strategies/activities	• Distribute TAM Plan to key Rio Metro staff, MRMPPO and NMDOT • Integrate TAM Plan into other agencies' (e.g., MRMPPO) plans and project prioritization processes, where applicable • Coordinate with Safety Officer when TAM obligations intersect with Rio Metro's Public Transportation Agency Safety Plan	Planning	Administration, Rail, Transit	Years 1-4
Align TAM Plan and Budget and Capital Plan	• Ensure quadrennial TAM Plan updates are folded into subsequent to the Budget and Capital Plans • Convey TAM Plan priorities to staff responsible for developing Budget and Capital Plan	Planning	Administration, Finance	Years 1-4



Project	Potential Activities	Responsible Divisions	Contributing Divisions	Timeframe
As needed, develop standard procedures for key activities (e.g., how is data reported, maintained, and stored), managing the lifecycle cost models, and updating the TAM Plan	• Ensure each TAM Plan update provides a high-level summary of current processes and procedures • Identify specific procedures that need to be developed to ensure that they can survive turnover/transition • Circulate procedures to relevant contributing divisions for review • Revisit and revise SOPs as needed	Planning	Administration Finance Rail Transit	Years 1-4



8.2 Strengthen Data Capture to Inform Decision Making

At minimum, Rio Metro collects data at levels appropriate to maintain its asset inventory and lifecycle cost models and to meet NTD reporting requirements. Nevertheless, Rio Metro strives for incremental improvements in data collection to support more robust data-driven decision making and to better determine the true lifecycle costs of its assets.

To streamline TAM data requests, the TAM Plan leads identify the specific data needed from staff and contractors and generally limits requests to once a year. For example, for work performed on commuter rail vehicles, the TAM Plan leads provide the contractor with an Excel file at the end of the fiscal year that lists each vehicle, the relevant activities, the date each activity was last performed, and a place for the contractor to enter the most recent date the activity was performed. Regardless of their experience with TAM, this allows the contractor to quickly identify the needed data and respond within a few days. In other instances, the TAM Plan leads may request key data that can be processed through other simple tools to ascertain additional information. For example, the VIN number for a service vehicle can be entered into an online VIN decoder to identify other vehicle attributes that are stored in Rio Metro's asset inventory.

Over the last four years, Rio Metro has also strengthened its data collection in several areas. First, with this TAM Plan update, Rio Metro analyzed the annual cost of key activities for the last four years and updated the lifecycle cost models accordingly. In some cases, this allowed Rio Metro to replace estimated costs with known costs. Second and similarly, capturing the dates of work performed on rail vehicles allowed Rio Metro to reassess the frequency of activities in the lifecycle cost models. Third, the condition assessment scores and recommended actions for each bridge are now compiled into one Excel file to allow for comparisons between bridges and to highlight changes in condition over time. Previously, this information was found in individual inspection reports.

Table 8 identifies potential projects and activities that may strengthen Rio Metro's data capture.



Table 8: Potential Activities to Strengthen Data Capture

Project	Potential Activities	Responsible Divisions	Contributing Divisions	Timeframe
Consider more robust facility condition assessment data collection if Rio Metro experiences increasing, unanticipated issues/system failures as facilities age	- Contract facility condition assessments to contractor who can develop actionable information (e.g., repairs) - Hire specialty contractors to assess specific systems that may be beyond Rio Metro's ability to do so	Planning	Administration Rail Transit	Year 1-4
Update lifecycle cost models as needed	Revise cost and frequency of existing activities, if warranted, or add new, major activities (e.g., bus engine overhauls) that may be undertaken by Rio Metro	Planning	Administration Finance Rail Transit	Year 1-4
Improve integration of bridge and grade crossing data	- Increase coordination with NMDOT Rail and Bridge bureaus on the prioritization and funding for Rail Runner bridges and grade crossings - Consider partnering with Amtrak on grant applications to fund rehabilitation of low-scoring bridges used by Amtrak	Rail	Administration Finance Planning	Years 1-4
Re-evaluate requirements for rail and transit contractors	- Review current contracts for ways to improve TAM data capture - Identify information that contractors should be required to provide (and the frequency). Rio Metro will own this information to avoid data loss if it changes contractors.	Planning	Administration Finance Rail Transit	When RFPs are issued or contracts are renewed



8.3 Maintain Asset Management Tools

In addition to the lifecycle cost models, Rio Metro and its contractor maintains a variety of tools that can support Rio Metro's asset inventory, lifecycle analyses and investment prioritization. Two notable examples include:

- **Herzog Integrated Transportation System (HITS):** HITS is Herzog's in-house system of record for performance, ridership and material/maintenance data. Rio Metro draws heavily from the ridership and performance data for reporting to its Board and the NTD, but less so on the maintenance data. With respect to maintenance, HITS is generally used for rolling stock, but not for track, signals or other maintenance of way assets. Much of the TAM data that Rio Metro requests from Herzog comes from HITS.
- **GIS database:** Rio Metro has undertaken efforts using internal resources to develop electronic records of its maintenance of way assets in a GIS database (Figure 17). The database was created to supplement and visualize Rio Metro's asset inventory, and also to calculate the length of guideway elements such as the length of tangent track, curved track, tunnels, etc. to meet NTD reporting requirements. In FY2022, this database was updated to align with the PTC subdivision file track charts.

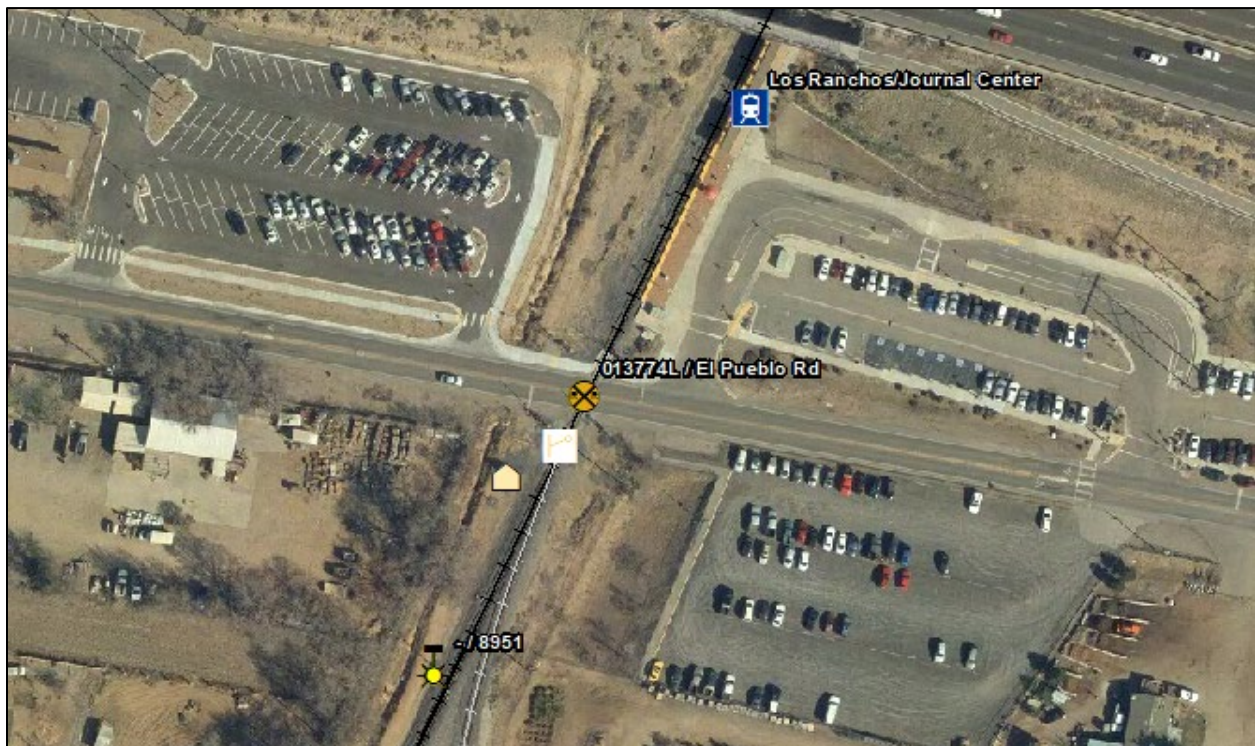


Figure 17: Screenshot of GIS Database

Table 9 identifies potential projects and activities that will enable Rio Metro to maintain its asset management tools.



Table 9: Key Projects to Maintain Asset Management Tools

Project	Potential Activities	Responsible Divisions	Contributing Divisions	Timeframe
Fully implement HITS	- Establish a plan for using HITS consistently across Herzog's divisions, particularly signals and wayside - Develop a mechanism for oversight/accountability for full HITS implementation - Consider direct Rio Metro access to HITS to facilitate data export and analysis	Rail	Administration Planning	Years 3-4
Maintain and update GIS database	- Update GIS database when rail assets are added, removed, relocated, etc. or track speeds are revised - Update GIS database and asset inventory to include major PTC/Wi-Fi infrastructure (e.g., towers) when as-builts become available	Planning	Rail	Years 1-2



9 Resources

This TAM Plan, particularly Section 8, has alluded to the key divisions and individuals responsible for implementing Rio Metro's asset management improvement program. **Figure 18** summarizes these human resources, and Rio Metro continues to refine their roles and responsibilities as its TAM processes mature.

In future years, as Rio Metro evolves and potentially adds more services and assets, it may decide to dedicate a full-time employee to manage its asset management and capital planning activities. Until then, TAM is a shared responsibility among the divisions identified in **Figure 18**, stewarded by the TAM Plan leads.

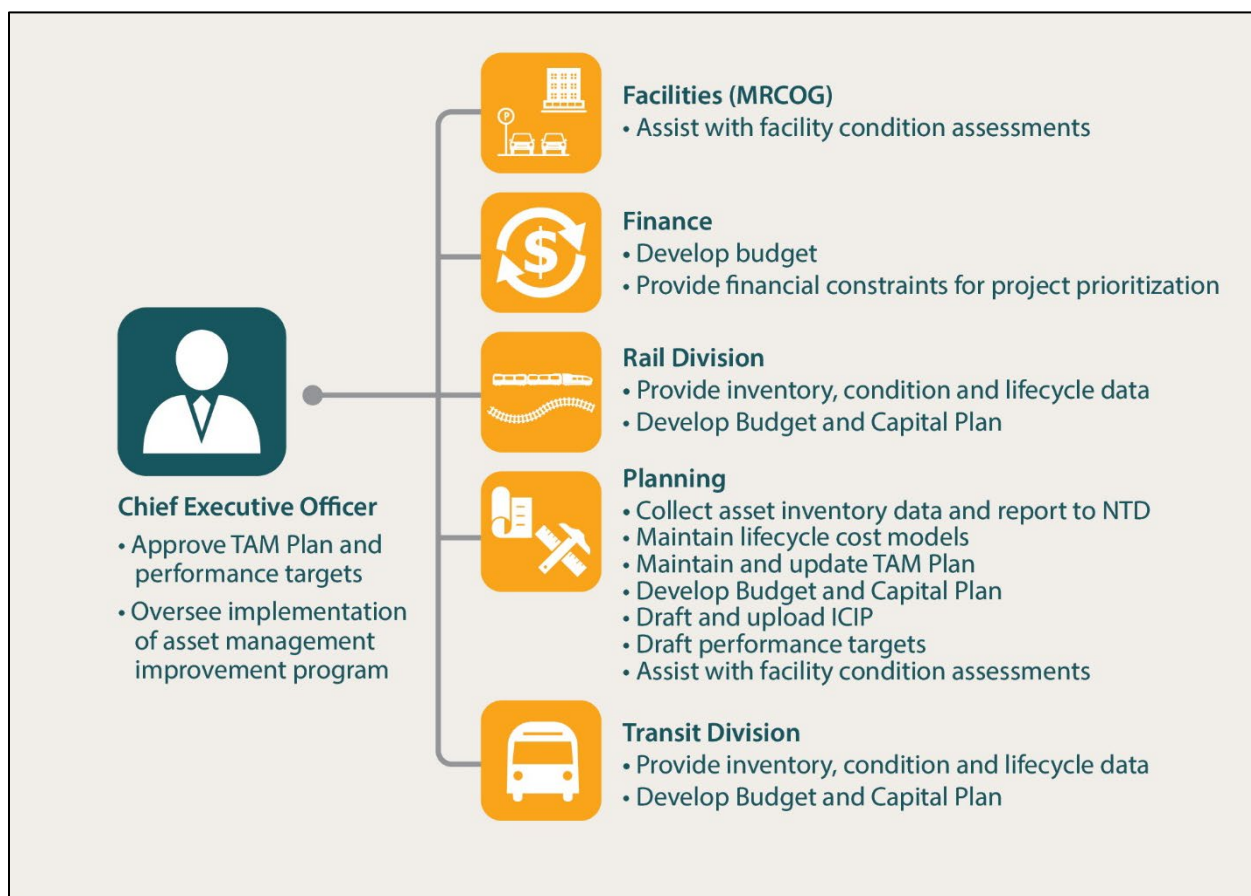


Figure 18: TAM Key Resources



10 Continuous Improvement

Per the TAM Final Rule, Rio Metro updates its TAM Plan every four years. And, although the Budget and Capital Plan is intended to capture Rio Metro's investment priorities in the intervening years, Rio Metro will amend its TAM Plan between updates if there are significant and unexpected changes to its asset inventory, asset condition, funding levels, or policies that would vastly reshape its investment priorities. Furthermore, Rio Metro will strive for improved asset performance, risk reduction, and agency cost savings with each update.

In addition to updating the TAM Plan, Rio Metro will update its asset inventory (in conjunction with NTD reporting) annually, with input from the Rail and Transit Divisions. The inventory will be a key input into its lifecycle cost models; and, as Rio Metro works towards collecting more accurate and granular data, this will improve its ability to forecast and prioritize its needs.

Finally, Rio Metro will monitor and evaluate the progress made towards implementing its asset management improvement program, and make any adjustments to the program as needed. However, Rio Metro is limited in the resources that it can dedicate to TAM; as a small organization, the degree to which it can improve is contingent on the degree to which it is able to grow as an organization. In the interim, Rio Metro is committed to continuous improvement within its means, and will take an incremental and proactive approach to advancing TAM as described in previous sections.



Appendix A: 49 CFR 625 Requirements

The following table demonstrates how this TAM Plan complies with the requirements in 49 CFR 625.

US 49 CFR 625 Reference:	Requirement	TAM Plan Section for Compliance
A Tier I provider's TAM Plan must include the following elements:		
49 CFR § 625.25 (b)(1)	Inventory of the number and type of all capital assets a provider owns, except equipment with an acquisition value under \$50,000 that is not a service vehicle	Section 3 Capital Asset Inventory
49 CFR § 625.25 (b)(1)	An inventory must also include third-party owned or jointly procured exclusive-use maintenance facilities, passenger station facilities, administrative facilities, rolling stock, and guideway infrastructure used by a provider in the provision of public transportation	Section 3 Capital Asset Inventory
49 CFR § 625.25 (b)(2)	Condition assessment of those inventoried assets for which a provider has direct capital responsibility and to level of detail to monitor, predict performance of assets and inform investment prioritization	Section 4 Performance and Condition
49 CFR § 625.25 (b)(3)	Description of analytical processes or decision-support tools to estimate capital investment needs over time and develop its investment prioritization	Section 6 Decision Support
49 CFR § 625.25 (b)(4)	Project-based prioritization of investments	Section 7 Investment Prioritization
49 CFR § 625.25 (b)(5)	Provider's TAM and SGR policy	Section 2 Asset Management Policy
49 CFR § 625.25 (b)(6)	Provider's TAM plan implementation strategy	Section 8 Implementation Strategies and Key Annual Activities
49 CFR § 625.25 (b)(7)	A description of key TAM activities that a provider intends to engage in over the TAM plan horizon period	Section 8 Implementation Strategies and Key Annual Activities
49 CFR § 625.25 (b)(8)	A summary or list of the resources, including personnel, that a provider needs to develop and carry out the TAM plan	Section 9 Resources



US 49 CFR 625 Reference:	Requirement	TAM Plan Section for Compliance
49 CFR § 625.25 (b)(9)	An outline of how a provider will monitor, update, and evaluate, as needed, its TAM Plan and related business practices, to ensure the continuous improvement of its TAM practices	Section 10 Continuous Improvement
When developing their investment prioritization, providers must:		
49 CFR § 625.33 (a)	TAM plan must include an investment prioritization that identifies a provider's program and projects to improve or manage the SGR of capital assets for which the provider has direct capital responsibility over the TAM plan horizon period	Section 7 Investment Prioritization
49 CFR § 625.33 (b)	Provider must rank projects to improve or manage the SGR of capital assets in order of priority and anticipated project year	Section 7 Investment Prioritization
49 CFR § 625.33 (c)	Provider's project rankings must be consistent with its TAM policy and strategies	Section 6 Decision Support
49 CFR § 625.33 (d)	Give due consideration to those SGR projects to improve that pose an identified unacceptable safety risk	Section 7 Investment Prioritization
49 CFR § 625.33 (e)	Take into consideration its estimation of funding levels from all available sources that it reasonably expects will be available in each fiscal year during the TAM plan horizon period	Section 7 Investment Prioritization
49 CFR § 625.33 (f)	Take into consideration requirements under 49 CFR 37.161 and 37.163 concerning maintenance of accessible features and the requirements under 49 CFR 37.43 concerning alteration of transportation facilities	Section 7 Investment Prioritization



Appendix B: Key Terms and Definitions

Accountable Executive

Defined by 49 USC Chapter 53 as a “single, identifiable person who has ultimate responsibility for carrying out the safety management systems of a public transportation agency; responsibility for carrying out transit asset management practices; and control or direction over the human and capital resources needed to develop and maintain both the agency’s public transportation agency safety plan, in accordance with 49 USC 5329(d), and the agency’s transit asset management plan in accordance with 49 USC 5326.”

Asset

An asset is defined as a tangible entity (or system of entities) that is either owned, leased, or maintained by Rio Metro and is:

- Repairable and/or replaceable
- Has an expected useful life of more than one year
- Requires intervention/activities to reduce risk of failure
- One or more of the following apply:
 - Requires a preventative maintenance schedule
 - Needs to be inspected
 - Needs to be calibrated
 - Needs to be tracked

This definition applies to discrete physical properties that are considered part of and enable the safe operation of transit in Bernalillo, Sandoval, and Valencia counties by Rio Metro.

Lifecycle

The time interval that begins with the acquisition of a Transit Asset or Land Asset, and ends with the disposal of the Transit Asset or Land Asset. Lifecycle phases may include planning, design, procurement, construction, operations, maintenance, rehabilitation, and asset replacement/disposal.

State of Good Repair (SGR)

Defined by 49 USC Chapter 53 as the “condition in which a [transit asset or] capital asset is able to [safely] operate at a full level of performance.” The State of Good Repair is further defined by an asset’s Useful Life Benchmark (for rolling stock and equipment) or physical condition (for facilities). Assets are considered in a State of Good Repair when they do not meet or exceed their ULB (revenue vehicles and equipment/non-revenue service vehicles) or physical condition (facilities) threshold. Vehicle and equipment assets, for example, are considered in a State of Good Repair when they meet the ULB identified for each vehicle type. Facilities are considered in a State of Good Repair when they are rated as a 3 or above on FTA’s TERM scale. *Also, see definition for Useful Life Benchmark.*

State of Good Repair (SGR) Backlog

The cumulative dollar value of deferred capital maintenance and replacement needs.



TERM Scale

The five-category rating system used in the FTA's Transit Economic Requirement Model (TERM) to describe the condition of an asset, where 5 is excellent condition and 1 is poor condition.

Tier I Provider

An entity that receives federal financial assistance under 49 USC Chapter 53, either directly from FTA or as a subrecipient, that owns, operates, or manages either (1) one hundred and one (101) or more vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode, or (2) rail transit.

Tier II Provider

An entity that receives federal financial assistance under 49 USC Chapter 53, either directly from FTA or as a subrecipient that owns, operates, or manages (1) one hundred (100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a subrecipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

Transit Asset Management (TAM)

Defined by 49 USC Chapter 53 as "the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their lifecycles, for the purpose of providing safe, cost-effective, and reliable public transportation."

Transit Asset Management Plan (TAM Plan)

This document, which describes the capital asset inventory, the condition of inventoried assets, TAM performance measures and targets, the investment prioritization approach, and includes a list of investment priorities.

Useful Life

Defined by 49 USC Chapter 53 as "either the expected lifecycle of a capital asset or the acceptable period of use in service determined by FTA." It generally defines the minimum eligibility for retirement, replacement, or disposal of an asset.

Useful Life Benchmark (ULB)

Defined by 49 USC Chapter 53 as "the expected lifecycle or the acceptable period of use in service for a capital asset, as determined by a transit provider, or the default benchmark provided by FTA." The ULB is the realistic expectation for when an asset would be disposed of or replaced based on operating environment and procurement timelines. It is not the same as "Useful Life" in FTA grant programs, is reported by age (in years), and usually only pertains to rolling stock or equipment. It is a single number shared for or within specified asset classes, although may vary across different asset classes and providers.



Appendix C: Investment Prioritization Templates

Vehicles

Project Name	<i>Example: Replace hybrid fleet</i>
Project Description	<i>Example: The fleet of hybrid buses are nearing their planned useful life and need to be replaced in the next 2 years. The buses are still running but there are some periodic issues that arise.</i>
Asset Class	Vehicles
Estimated Cost	

Evaluation Criteria		Comments/Notes
Safety	Does operating the vehicle pose a safety risk to the traveling public, operators, or others that cannot be easily mitigated through routine maintenance/service to the vehicle?	<i>Example: No, there have been no major safety incidents reported on the vehicle since it was put into service.</i>
Impact to Service and Operations	Is the vehicle reliably providing service to the public?	<i>Example: No, some vehicles in the fleet have broken down during revenue service, which has affected reliability targets. These breakdowns are anticipated to become more frequent if the fleet is not replaced soon.</i>
Maintenance	Does the vehicle require any major parts/components or major overhaul activities?	<i>Example: The shells of the vehicles are starting to show some signs of wear and deterioration; we do not conduct overhauls on our vehicles.</i>
Age	Is the vehicle beyond its planned useful life? If yes, how many years is it beyond its planned useful life?	<i>Example: No, the fleet is right at its planned useful life. We anticipate the fleet will be able to run for two more years before it must be retired.</i>
Condition/Usage	Is the vehicle in good condition/is the usage infrequent? Have the vehicles exceeded their recommended mileage?	<i>Example: No, the vehicles are in fair/poor condition.</i>
Recommendation		
<i>Example: The fleet needs to be retired in two years. Given the two-year procurement period, we recommend funding the replacement so that a new fleet of vehicles can be put in service when the current fleet is retired.</i>		



Track

Project Name	
Project Description	
Asset Class	Track
Estimated Cost	

Evaluation Criteria		
Safety	Does operating service on this segment of track pose a safety risk to the traveling public, operators, or others that cannot be easily mitigated through routine maintenance?	
Impact to Service and Operations	Does the condition of the track segment/component impact the ability to provide revenue service and meet existing levels of service? Have any performance restrictions been issued on the segment of track?	
Maintenance	What is the level of maintenance and inspection required to keep the track segment/component in working condition?	
Age	Is the track segment/component beyond its planned useful life? If yes, how many years is it beyond its planned useful life?	
Condition	What is the track segment/component condition? The condition may be based on a visual inspection, review of maintenance records, and any other tests that may have been performed on it.	
Recommendation		



Signals

Project Name	
Project Description	
Asset Class	Signals
Estimated Cost	

Evaluation Criteria		Comments/Notes
Safety	Does the condition of this signal/component pose a safety risk to the traveling public, operators or others that cannot be easily mitigated through routine maintenance?	
Impact to Service and Operations	Does the condition of this signal/component impact the ability to provide revenue service and meet existing levels of service?	
Maintenance	What is the level of maintenance and inspection required to keep the signal/component in working condition?	
Age	Is the signal/component beyond its planned useful life? If yes, how many years is it beyond its planned useful life?	
Condition	What is the signal/component's condition? The condition may be based on a visual inspection, review of maintenance records, and other tests that may have been performed on it.	
Recommendation		



Bridge

Project Name	
Project Description	
Asset Class	Bridge
Estimated Cost	

Evaluation Criteria		Comments/Notes
Safety	Does the condition of this bridge pose a safety risk to the travelling public, operators or other who interface with this facility? Does the condition of the bridge component impact the safety of the bridge?	
Impact to Service and Operations	Does the condition of the bridge/bridge component impact revenue service?	
Maintenance	What is the level of maintenance and inspection required to keep the bridge/bridge component in working condition?	
Age	Is the bridge/bridge component beyond its planned useful life?	
Condition	What is the bridge's condition rating (based on the National Bridge Inspection Report)?	
Recommendation		



Facilities

Project Name	
Project Description	
Asset Class	Facilities
Estimated Cost	

Evaluation Criteria		Comments/Notes
Safety Risk to Customers (Passenger and Parking Facilities)	Does the condition of this facility pose a safety risk to customers who interface with this facility? Does the condition of this facility affect the ability to maintain the safe operation of customer-facing assets (e.g., vehicles)?	
Safety Risk to Staff (Administrative and Maintenance Facilities)	Does the condition of this facility pose a safety risk to staff who use this facility?	
Impact to Service and Operations	Does the facility impact revenue service? This factor prioritizes activities on passenger facilities versus administrative facilities.	
Maintenance	What is the level of maintenance and inspection required to keep the facility or its major components in working condition?	
Age	Is the facility element (or a major component of the element) beyond its planned useful life?	
Condition Score	What is the element's condition score (based on the physical condition assessment)?	
Recommendation		



Appendix D: Rio Metro Capital Priorities

Table AD-1: FY2023 Capital Budget and FY2024-FY2029 Projections

Project	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Rail Division								
Bridge Improvement Program	\$300,000	\$100,000	\$100,000	\$100,000	\$100,000			\$700,000
Capital Maintenance Program	\$13,245,600	\$10,870,600	\$7,030,600	\$4,380,600	\$3,830,600	\$3,580,600	\$5,330,600	\$48,269,200
Centralized Traffic Control/Main 2 Extension	\$17,049,320							\$17,049,320
Fiber Optic Backbone	\$2,500,000	\$1,500,000						\$2,500,000
Operations & Maintenance Facility, Phase 1	\$3,003,417	\$16,000,000	\$16,000,000	\$12,000,000	\$4,000,000			\$51,003,417
Service Vehicle Replacement	\$90,000		\$52,000	\$60,000	\$27,000	\$30,000	\$19,000	\$278,000
Ross Siding		\$14,000,000						\$14,000,000
Sidings and Platforms (Hourly Service)			\$14,000,000			\$14,000,000	\$14,000,000	\$42,000,000
Rail Total	\$36,188,337	\$42,470,600	\$37,182,600	\$16,540,600	\$7,957,600	\$17,610,600	\$19,349,600	\$177,299,937
Transit Division								
Micromobility	\$1,250,747	\$877,809						\$2,128,556
Revenue Vehicle Replacement		\$45,000	\$1,222,000	\$552,000	\$920,000	\$734,000		\$3,473,000
Sandoval County Transit Facility Improvements	\$300,000							\$300,000
Service Vehicle Replacement	\$44,000	\$22,000	\$22,000	\$49,000	\$44,000			\$181,000
Valencia County Transit Facility	\$9,804,430	\$1,250,000						\$11,054,430
Transit Total	\$11,399,177	\$2,194,809	\$1,244,000	\$601,000	\$964,000	\$734,000	\$0	\$17,136,986
Grand Total	\$47,587,514	\$44,665,409	\$38,426,600	\$17,141,600	\$8,921,600	\$18,344,600	\$19,349,600	\$194,436,923



Table AD-2: Rail Capital Maintenance Program (Primarily Section 5337 Funded)

Project	Unit Cost	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Rolling Stock									
Cab/Coach/Loco. Clean, Oil, Test & Stencil	\$80,000/Year	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$560,000
Cab/Coach/Loco. Exterior Refinish	\$10,000/Car	\$310,000							\$310,000
Cab/Coach Door Overhaul	\$20,500/Car	\$451,000							\$451,000
Cab/Coach HVAC Overhaul	\$20,000/HVAC Unit	\$320,000	\$160,000						\$480,000
Cab/Coach Truck Replacement	\$60,000/Car	\$660,000	\$660,000						\$1,320,000
Coupler Repair/Replacement	\$20,000/Year	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$140,000
Loco. Head End Power Overhaul	\$160,000/Year	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$160,000	\$1,120,000
Locomotive Tier Upgrade	\$400,000/Loco		\$2,000,000	\$1,600,000					\$3,600,000
Loco. Top Deck Overhaul 103	\$800,000/Loco	\$800,000							\$800,000
Loco. Top Deck Overhaul 104	\$800,000/Loco	\$600,000							\$600,000
Loco. Top Deck Overhaul 105	\$800,000/Loco		\$800,000						\$800,000
Loco. Top Deck Overhaul 106	\$800,000/Loco		\$800,000						\$800,000
Loco. Top Deck Overhaul 107	\$800,000/Loco			\$800,000					\$800,000
Loco. Top Deck Overhaul 108	\$800,000/Loco			\$800,000					\$800,000
Loco. Top Deck Overhaul 109	\$800,000/Loco				\$800,000				\$800,000
Loco. Traction Motor Repair	\$350,000/Year	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$2,450,000
Loco. Turbocharger Replacement	\$24,000/Loco	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$336,000
Wheel Replacement	\$100,000/Year	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$700,000
Fixed Guideway									
Ballast	\$200,000/Year	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,400,000
Bridge Components	\$100,000/Year	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$700,000
CTC Spectrum Reallocation	\$350,000/EA	\$350,000							\$350,000
Emergency Drainage Cleanout	\$80,000/Year	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$560,000
Fencing	\$100,000/Year	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$700,000
Frog Replacement	Varies	\$140,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$440,000
Grade Crossing Electronics Upgrade	\$2,750,000/Year	\$2,750,000	\$2,750,000						\$5,500,000
Other Track Material	\$50,000/Year	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$350,000



Project	Unit Cost	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
PTC/Wi-Fi Capital Maintenance	\$300,000/Year	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$2,100,000
Quiet Zones	Varies	\$367,000		\$250,000		\$250,000		\$250,000	\$1,117,000
Rail Grinding	\$1,500,000/Year	\$1,500,000						\$1,500,000	\$3,000,000
Signal Component Replacement	\$220,000/Year	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000	\$1,540,000
Ties	\$700,000/Year	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$4,900,000
Ongoing Capital Maintenance	\$500,000/Year	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,500,000
Facilities									
480-Volt Electrical Upgrade	\$665,000/EA	\$665,000							\$665,000
Fare Payment System	\$300,000/EA	\$300,000							\$300,000
NMRX Yard LED Conversion	\$25,000/EA	\$25,000							\$25,000
Station IT Refresh	Varies	\$462,000	\$172,000	\$172,000	\$172,000	\$172,000	\$172,000	\$172,000	\$1,494,000
Station Rehabilitation	\$326,600/Year	\$326,600	\$326,600	\$326,600	\$326,600	\$326,600	\$326,600	\$326,600	\$2,286,200
Station Signage Refresh	\$19,000/Year	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000	\$133,000
Equipment									
Hand Tools	\$5,000/Year	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$35,000
Heavy Equipment	Varies	\$187,000	\$120,000						\$307,000
Grand Total		\$13,245,600	\$10,870,600	\$7,030,600	\$4,380,600	\$3,830,600	\$3,580,600	\$5,330,600	\$48,269,200

Table AD-3: Grade Crossing Improvement Program

Project	Cost
Claremont Avenue	\$522,000
Griego Road	\$235,000
Lomas Blvd.	\$148,000
Menaul Blvd.	\$254,000
Saw Mill Spur: 12th Street	\$600,000
Tribal Road 54	\$250,000
Trujillo Road	\$235,000
Grand Total	\$2,244,000

Table AD-4: Bridge Repair and Replacement Program

Bridge #	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
AB0864.78								TBD
AB0877.34	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000			\$500,000
AB0878.28	\$200,000							\$200,000
Grand Total	\$300,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$700,000

Table AD-5: Rail Capital Projects Program

Project	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Centralized Traffic Control/Main 2 Extension	\$17,049,320							\$17,049,320
Fiber Optic Backbone	\$2,500,000	\$1,500,000						\$4,000,000
Operations & Maintenance Facility, Phase 1	\$3,003,417	\$16,000,000	\$16,000,000	\$12,000,000	\$4,000,000			\$51,003,417
Positive Train Control Debt Service	\$786,149	\$786,149	\$786,149	\$786,149	\$786,149	\$786,149	\$786,149	\$5,503,043
Ross Siding		\$14,000,000						\$14,000,000
Sidings and Platforms (Hourly Service)			\$14,000,000			\$14,000,000	\$14,000,000	\$42,000,000
Grand Total	\$23,338,886	\$32,286,149	\$30,786,149	\$12,786,149	\$4,786,149	\$14,786,149	\$14,786,149	\$133,555,780

Table AD-6: Revenue Vehicle Replacement Program

Vehicle Type (Funding)	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Cutaway Bus (5307)			\$519,000		\$92,000	\$368,000		\$979,000
Cutaway Bus (5310)			\$611,000		\$368,000	\$92,000		\$1,071,000
Cutaway Bus (5311)			\$92,000	\$276,000	\$460,000	\$184,000		\$1,012,000
Cutaway Bus (5339)				\$276,000				\$276,000
Minivan (5339)		\$45,000				\$90,000		\$135,000
Grand Total		\$45,000	\$1,222,000	\$552,000	\$920,000	\$734,000		\$3,473,000

Table AD-7: Service Vehicle Replacement Program

Vehicle Type (Funding)	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Automobile (5337)							\$19,000	\$19,000
Truck/SUV (5337)	\$90,000		\$52,000	\$60,000	\$27,000	\$30,000		\$259,000
Truck/SUV (GRT)	\$44,000	\$22,000	\$22,000	\$49,000	\$44,000			\$181,000
Grand Total	\$134,000	\$22,000	\$74,000	\$109,000	\$71,000	\$30,000	\$19,000	\$459,000

Table AD-8: Transit Capital Projects Program

Project	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	7-Year Total
Sandoval County Transit Facility Improvements, Phase 2	\$300,000							\$300,000
University Corridor Transit Project Development	\$1,881,480	\$760,768	\$3,920,880					\$6,563,128
Valencia County Transit Facility	\$9,804,030	\$1,250,000						\$11,054,030
Grand Total	\$11,985,510	\$2,010,768	\$3,920,880	\$0	\$0	\$0	\$0	\$17,917,158



Table AD-9: FY2024-FY2028 Infrastructure Capital Improvement Plan (unfunded and underfunded projects)

Priority	Project	Cost
2024-1	Rail Runner Operations & Maintenance Facility, Phase 1	\$48,000,000
2024-2	Rail Runner Sidings and Platforms (Hourly Service)	\$96,400,000
2024-3	Rio Metro Valencia County Transit Facility, Phase 2	\$8,750,000
2024-4	University Corridor Transit Implementation	\$7,500,000
2024-5	Rail Runner Sidings and Platforms (Reliability/Capacity)	\$77,000,000
2024-6	Rail Runner Operations & Maintenance Facility, Phase 2	\$15,000,000
2024-7	Rio Metro Buses (New and Replacement)	\$3,473,000
2024-8	Rail Runner Quiet Zones	\$750,000
2024-9	Rail Runner Locomotives	\$14,000,000
2024-10	Rail Runner Bi-Level Cab Car	\$4,500,000
2024-11	Rail Runner Bi-Level Coach Car	\$4,000,000
2024-12	Rail Runner Bridge and Drainage Reconstruction	\$6,000,000
2024-13	Ties & Fencing, Madrid to Lamy	\$2,500,000
	Grand Total	\$287,873,000