



Transit Asset Management Plan Calendar Year 2021



Shoreline Metro Transit Asset Management Plan Calendar Year 2021

Prepared by:
Sheboygan Metropolitan Planning Organization
Bay-Lake Regional Planning Commission

August 2021

Principal Authors:
Jeffrey C. Agee-Aguayo and Chris Garcia
Sheboygan Metropolitan Planning Organization
Bay-Lake Regional Planning Commission
1861 Nimitz Drive
De Pere, WI 54115
Phone: (920) 448-2820
FAX: (920) 448-2823
E-Mails: jagee@baylakerpc.org and cgarciab@baylakerpc.org



The preparation of this report was financed in part through a joint planning grant from the U.S. Department of Transportation, Federal Highway Administration, Federal Transit Administration and the Wisconsin Department of Transportation, under the provisions of Section 112 of the Federal Highway Act of 1973 and the Federal Transit Act of 1964 (as amended). Local funding was provided by Sheboygan County and by the Sheboygan Parking and Transit Utility.

The contents of this report reflect the views of the Bay-Lake Regional Planning Commission, which is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views and policies of the U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation.

Table of Contents

Transit Asset Management Plan (TAMP) Policy _____	4
Agency Overview _____	4
Introduction _____	4
TAMP Elements _____	4
Definitions _____	5
State Of Good Repair (SGR) Standards Policy _____	6
Useful Life Benchmark (ULB) _____	6
Condition _____	7
Methodology _____	7
Asset Inventory Portfolio and Condition Assessment _____	7
Vehicles _____	7
Equipment _____	8
Facilities _____	9
Decision Support Tools And Management Approach _____	9
Decision Support Tools _____	9
Investment Prioritization _____	9
Plan Review _____	10
National Transit Database (NTD) Reporting _____	10
Conclusion _____	10
Contacts _____	10
Adoption and Revision History _____	10

Transit Asset Management Plan (TAMP) Policy

Shoreline Metro has developed this TAMP to aid in:

1. Assessing the current condition of capital assets
2. Determining the appropriate condition and performance of assets (if not currently in a State of Good Repair)
3. Identifying unacceptable risks in continuing to use an asset not in a State of Good Repair
4. Deciding how to best balance and prioritize reasonably anticipated funds (revenues from all sources) toward improving asset condition and achieving a sufficient level of performance

Agency Overview

Shoreline Metro is a public transit system owned and operated by the City of Sheboygan since 1973. Partnering municipalities include the City of Sheboygan Falls and the Village of Kohler.

Shoreline Metro provided fixed route bus and paratransit services to over 373,000 passengers in the Shoreline Metro service area in 2020. This was a 45% decrease from 2019's ridership of 680,000 due to the COVID-19 pandemic. 2019 to 2020 ridership decreases impacted transit operations throughout the country. Shoreline Metro's inventory of revenue vehicles and capital assets include the following:

- 21 fixed route buses
- 10 paratransit vehicles
- 5 support vehicles
- 4 significant pieces of equipment
- 2 facilities

Introduction

In accordance with 49 CFR Parts 625 and 630 for Transit Asset Management (TAM), Shoreline Metro is the TAM sponsor for the Section 5307 Formula Grant in the Sheboygan Urbanized Area as well as any Section 5310, Section 5339, Congestion Mitigation and Air Quality (CMAQ) or other federal grants received by that entity. This document presents Shoreline Metro's methodology for its January 1, 2021, performance targets of capital assets.

Shoreline Metro is currently operating as a Federal Transit Administration (FTA)-defined Tier II transit operator in compliance with 49 CFR §625.45 (b) (1). Tier II transit providers are those transit agencies that do not operate rail fixed-guideway public transportation systems and have either 100 or fewer vehicles in fixed-route revenue service during peak regular service, or have 100 or fewer vehicles in general demand response service during peak regular service hours.

This TAMP provides a strategy of how Shoreline Metro will assess, monitor, and report the physical condition of assets utilized in the operation of the public transportation system.

TAMP Elements

As a Tier II public transportation provider, Shoreline Metro has developed and implemented a TAMP containing the following elements:

1. Asset Inventory Portfolio and Condition Assessment: An inventory of the number and type of capital assets for which Shoreline Metro has direct ownership and capital responsibility (including rolling stock, facilities, and equipment) and a condition assessment of those inventoried assets
2. Decision Support Tools and Management Approach: A description of the analytical processes and decision-support tools that Shoreline Metro uses to estimate capital investment needs over time and to develop its investment prioritization

3. Investment Prioritization: Shoreline Metro's project-based prioritization of investments, developed in accordance with 49 CFR §625.33.

Definitions

Capital Asset — A unit of rolling stock, a facility, a unit of equipment, or an element of infrastructure used for providing public transportation.

Decision Support Tool — An analytic process or methodology used (1) To analyze available condition data and objective criteria to help prioritize projects that improve and maintain the state of good repair of capital assets within a public transportation system; or (2) To assess financial needs for asset investments over time.

Equipment — An article of nonexpendable, tangible property having a useful life of at least one year.

Facility — A building or structure that is used in providing public transportation.

Full Level of Performance — The objective standard established by FTA for determining whether a capital asset is in a state of good repair.

Infrastructure — The underlying framework or structures that support a public transportation system.

Investment Prioritization — A transit provider's ranking of capital projects or programs to achieve or maintain a state of good repair. This is based on financial resources from all sources a transit provider reasonably anticipates will be available over the TAM plan horizon period.

Life-Cycle Cost — The cost of managing an asset over its whole life.

Performance Measure — An expression based on a quantifiable indicator of performance or condition used to establish targets and assess progress toward meeting the established targets. For example, a measure for on-time performance is the percentage of buses that arrive on time, and a corresponding quantifiable indicator of performance or condition is the difference between scheduled and actual arrival time for each bus.

Performance Target — A quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the FTA.

Rolling Stock — A revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services.

Service Vehicle — A unit of equipment that is used primarily either to support maintenance and repair work for a public transportation system or for delivery of materials, equipment, or tools.

State of Good Repair (SGR) — The condition in which a capital asset is able to operate at a full level of performance.

Subrecipient — An entity that receives federal transit grant funds indirectly through a State or a direct recipient.

TERM Scale — The five (5) category rating system used in the FTA's Transit Economic Requirements Model (TERM) to describe the condition of an asset: 5.0 = Excellent; 4.0 = Good; 3.0 = Adequate; 2.0 = Marginal; and 1.0 = Poor.

Tier II Provider — A recipient 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, or (3) any American Indian tribe.

Transit Asset Management (TAM) — 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 life cycles for the purpose of providing safe, cost-effective, and reliable public transportation.

Transit Asset Management (TAM) Plan — A plan that includes an inventory of capital assets, a condition assessment of inventoried assets, a decision support tool, and a prioritization of investments.

Shoreline Metro

Transit Asset Management (TAM) Policy—A transit provider’s documented commitment to achieving and maintaining a state of good repair for all its capital assets. Defines the transit provider’s TAM objectives and assigns roles and responsibilities for meeting those objectives.

Transit Provider (provider) — A recipient or subrecipient of federal financial assistance under 49 U.S.C. Chapter 53 that owns, operates, or manages capital assets used in providing public transportation.

Useful Life Benchmark (ULB) — The expected life cycle 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.

State Of Good Repair (SGR) Standards Policy

The Shoreline Metro SGR policy is as follows:

A capital asset is in a state of good repair (SGR) when each of the following objective standards is met:

- If the asset is in a condition sufficient for the asset to operate at a full level of performance. An individual capital asset may operate at a full level of performance regardless of if other capital assets within a public transportation system are in a SGR
- The asset is able to perform its manufactured design function
- The use of the asset in its current condition does not pose an identified unacceptable safety risk and/or deny accessibility
- The asset’s life-cycle investment needs have been met or recovered, including all scheduled maintenance and rehabilitation.

The TAMP assists Shoreline Metro in predicting the impact of its policies and justifying investment decisions on the condition of its assets throughout their life cycles. It enhances Shoreline Metro’s ability to maintain a SGR by proactively investing in an asset before its condition deteriorates to an unacceptable level.

Shoreline Metro shall establish annual TAM goals based on asset performance criteria and measures. TAM goals for 2021 are highlighted in Table 1.

Table 1: TAM Goals, Shoreline Metro, 2021

Criteria	Measure	Asset Performance FY2021	
		Goal	Actual
Safety Risks	Number of Accidents per Year	5	5
System Reliability	On Time Performance	95%	98%
Maintenance Resources	Number of Vehicles Out of Service for 30+ Days	1	0
System Performance	% of Total Trips Missed Due to Major Breakdown	<5%	0%

It is the belief of Shoreline Metro that TAMP implementation and monitoring provides a framework for maintaining a SGR by considering the condition of its assets in relation to the local operating environment. Shoreline Metro has developed its SGR policies to account for the prevention, preservation, maintenance, inspection, rehabilitation, disposal, and replacement of capital assets. The goal of these policies is to allow Shoreline Metro to prioritize capital, operation, and expansion needs. The two foundational criteria of SGR performance measures are Useful Life Benchmark (ULB) and Condition.

Useful Life Benchmark (ULB)

Useful Life Benchmark (ULB) is defined as the expected lifecycle or the acceptable period of use of a capital asset in service for a transit provider’s operating environment. ULB criteria are user defined, considering a provider’s unique operating environment (service frequency, weather, geography). When developing ULBs, Shoreline Metro recognized and took into account the local operating environment of its assets within the service area, historical maintenance records, manufacturer guidelines, and the default asset ULB derived from the FTA. In most cases, an

Shoreline Metro

asset exceeding its ULB is a strong indicator that it may not be in a state of good repair.

For the purposes of this TAMP, all assets (facilities, equipment, and fixed route rolling stock) were assessed using FTA's ULB set in FTA 5010.1D (found on page IV-17). This guidance indicates that typical useful life of the type of heavy duty buses that Shoreline Metro operates is 12 years or 500,000 miles, medium duty buses is 7 years or 150,000 miles, and light duty vehicles is 10 years or 100,000 miles. Shoreline Metro has defined each of these vehicle ULBs as whichever (years or mileage) comes last.

Condition

Shoreline Metro assesses the condition of its assets on an annual basis by utilizing the FTA TERM (Transit Economic Requirements Model) condition rating assessment scale. This rating scale assigns a numerical value or rank based on the physical condition presented by each individual asset throughout its life cycle. The rating scale is based on numbers from 1 to 5, with five being excellent and one being poor. Assets with a rating of 2.5 or higher are considered to be in a SGR. All completed asset inspection forms are documented, and ratings are recorded on the Shoreline Metro Fixed Asset List.

The inspection process and documentation forms utilized to assess facility and vehicle assets are detailed in the following TAMP companion documents:

- Mechanical Failures/Inspections
- Shoreline Metro Comprehensive Preventative Maintenance Program
- Facility/Equipment/Vehicle Preventative Maintenance Inspections
- Shoreline Metro Five Year Capital Needs Plan: 2022 - 2026

Methodology

Shoreline Metro (with assistance of Sheboygan MPO staff with the Bay-Lake Regional Planning Commission) reviewed the inventory of federally funded vehicles, equipment, and facilities and used age to ascertain a starting point for the 2021 TAM targets.

Asset Inventory Portfolio and Condition Assessment

Shoreline Metro owns, operates, and has a direct capital responsibility for the rolling stock, equipment, and facilities included in the TAMP asset inventory. At the time of this writing, Shoreline Metro does not operate passenger rail service. Therefore, Shoreline Metro does not have any associated rail infrastructure in its asset portfolio.

Vehicles

Shoreline Metro evaluated its vehicle capital items and divided all vehicle types into three categories: heavy duty bus, medium duty bus (cutaways), and light duty vehicles (auto, pickup truck, minivan, van, SUV, etc.) then examined the ULB for each category. Because useful life is measured by both mileage and age for vehicles, condition was not considered in this inventory. Percent of Fleet Beyond ULB was calculated by taking the lower of the Vehicles Beyond ULB (either age or mileage) and dividing by the vehicle count. Findings are shown in Table 2.

Shoreline Metro

Table 2: Vehicle Inventory, Shoreline Metro, 2021

Vehicle Type	Vehicle Count	ULB – Age (in years)	ULB – Mileage (in miles)	Vehicles Beyond ULB – Age	Vehicles Beyond ULB – Mileage	Percent of Fleet Beyond ULB
Revenue						
Heavy Duty Bus	21	12	500,000	12	8	38%
Medium Duty Bus	10	7	150,000	5	4	40%
Sub-Total	31			17	12	39%
Non-Revenue						
Light Duty Vehicles	5	10	100,000	2	0	0%
Sub-Total	5			2	0	0%
Total	36			19	12	33%

Target for Vehicles

Shoreline Metro sets the TAM performance target to allow for 39 percent of revenue vehicles to pass beyond useful life. Shoreline Metro is aggressively attempting to replace its fleet through various grant programs in order to lower the revenue vehicle performance target percentage over time. The Transportation Improvement Program (TIP) includes many of these bus replacements. Shoreline Metro sets the TAM performance target to allow for 0 percent of non-revenue vehicles to pass beyond useful life.

Equipment

Shoreline Metro evaluated its inventory of most significant equipment (items with a replacement cost of \$50,000 or more). These items include a bus wash, forklift, hoist, and scrubber, all located at the Shoreline Metro bus garage. Shoreline Metro then used guidance from the FTA and from various reports that discuss useful life for these types of equipment to determine if these pieces of equipment were beyond their useful life. Results of this analysis can be found in Table 3.

Table 3: Equipment Inventory, Shoreline Metro, 2021

Equipment Type	ULB - Age (in years)	Age (in years)	Years of Useful Life Remaining
Bus Wash	10	20	(-10)
Forklift	7	52	(-45)
Hoist	10	46	(-36)
Scrubber	5	26	(-21)

Target for Equipment

All of Shoreline Metro's most significant equipment is beyond its useful life. For now, Shoreline Metro is setting the TAM performance target to allow for 100 percent of its most significant equipment to pass beyond useful life. Shoreline Metro will examine the condition of this equipment in greater detail in future TAM plans. In future TAM plans, if the condition of equipment is deemed to be beyond a state of good repair, steps will be taken to program replacements into a future TIP.

Facilities

Shoreline Metro evaluated the condition of its facilities using the useful life standards outlined in FTA 5010.1D, page IV-18, 2(e) as a guide. The guidance indicated that facilities relevant to Shoreline Metro generally have a useful life of 40 years. Table 4 shows the results of this evaluation.

Table 4: Facility Inventory, Shoreline Metro, 2021

Facility Type	Condition Rating	Condition Description	ULB – Age (in years)	Age (in years)	Years of Useful Life Remaining
Administration, Maintenance, and Storage (Bus Garage)	3	Adequate	40	46	(-6)
Transfer Station	4	Good	40	29	11

Target for Facilities

One of Shoreline Metro’s two facilities is beyond its useful life of 40 years. Shoreline Metro set the TAM performance target to only allow 50 percent of the facilities to pass beyond useful life. Shoreline Metro will continue to examine the condition of these facilities in greater detail in future TAM plans. A roof replacement for the administration, maintenance and storage facility was recently completed. In addition, various improvements to the administration, maintenance and storage facility are currently underway.

Decision Support Tools And Management Approach

The primary management approach utilized to maintain a SGR is risk mitigation. This management philosophy applies risk mitigation strategies (policies and procedures) throughout the asset’s life cycle, both from a maintenance perspective (breakdowns) and a safety and accessibility perspective (accidents and ADA requirements).

Decision Support Tools

The following tools are used in making investment decisions:

Table 5: Decision Support Tools

Tool	Brief Description
Inspection Reports	Individual reports documenting the condition of an asset.
Rolling Stock Report	Report inventorying all rolling stock including stock age and mileage. This assists in decision making by showing comparisons between rolling stock.
Fixed Asset Inventory Report	Report showing rolling stock and all other equipment. This allows staff to see what is surpassing useful life, the condition rating of a particular asset, and other investment opportunities for Shoreline Metro.

Investment Prioritization

The Lead Mechanic uses his best judgment and experience to prioritize needs and submits a request of priorities to the Director of Transit & Parking. Projects are then ranked based on need. Consideration is given to estimation of funding levels from all sources that are reasonably expected.

The ranking of programs and projects will be expressed as: High Priority, Medium Priority, or Low Priority. Each investment prioritization program or project ranked shall contain a year and/or date in which Shoreline Metro intends to carry out the program or project.

Plan Review

Shoreline Metro shall maintain all supporting TAMP records and documents. Shoreline Metro shall make TAMP records available to federal (FTA), state (WisDOT) and MPO (Bay-Lake Regional Planning Commission) entities that provide(s) funding to Shoreline Metro and/or aid in its planning processes. The TAMP can be considered a “living document” that shall be reviewed at least quarterly, updated, and incorporated into Shoreline Metro’s capital and budget planning and reporting processes. TAMP data shall serve as a “baseline” measure of asset performance management. As more data are collected, additional monitoring categories and goals may be included to support condition and reliability-based decision-making.

National Transit Database (NTD) Reporting

TAM Targets will be reported to the NTD annually as required.

Conclusion

The Sheboygan Transit Commission, management team, staff, and employees of Shoreline Metro firmly believe that by implementing this Transit Asset Management Plan (TAMP), Shoreline Metro will better meet its mission and provide its customers with professional and accessible transportation solutions that are affordable, efficient, reliable, safe, and courteous. In addition, Shoreline Metro believes that by implementing this TAMP, the following State of Good Repair (SGR) indicators will be either maintained or improved upon:

- Safety risks
- Investment justifications
- System reliability and accessibility
- Low maintenance costs
- System performance

Contacts

Derek Muench
Director of Transit & Parking
Shoreline Metro
(920) 459-3140
derek.muench@shorelinemetro.com

Jeffrey Agee-Aguayo
Transportation Planner
Sheboygan MPO/Bay-Lake Regional Planning Commission
(920) 448-2820, Ext. 103
jagee@baylakerpc.org

Adoption and Revision History

Approved for Shoreline Metro by the Sheboygan Transit Commission on August 17, 2021.

Recommended for approval by the Sheboygan MPO Technical and Policy Advisory Committees on September 2, 2021.

Approved for the MPO by the Bay-Lake Regional Planning Commission on September 10, 2021.

Bay-Lake Regional Planning Commission

Commission Members

Brown County

Vacant

Door County

Vacant

Florence County

Edwin Kelley

Larry Neuens

Rich Wolosyn

Kewaunee County

Mary Ellen Dobbins

Tom Romdenne

Donna Thomas

Manitowoc County

Dan Koski, *Chairperson*

James Falkowski

Vacant

Marinette County

Ann Hartnell

Michael Kunesh

Thomas Mandli

Oconto County

Karl Ballestad

Terry Brazeau, *Secretary/Treasurer*

Dennis Kroll

Sheboygan County

Mike Hotz, *Vice-Chairperson*

Ed Procek

Vacant

Staff

Cindy J. Wojtczak

Executive Director

cwojtczak@baylakerpc.org

Brandon G. Robinson

Assistant Director

brobinson@baylakerpc.org

Jeffrey Agee-Aguayo

Transportation Planner

jagee@baylakerpc.org

Nicole Barbiaux

GIS Specialist

nbarbiaux@baylakerpc.org

Adam Christensen

Environmental Planner

achristensen@baylakerpc.org

Sadie DiNatale Burda

Community Assistance Planner

sdinatale@baylakerpc.org

Chris Garcia

Transportation Planner

cgarcia@baylakerpc.org

Jessica Missall

Economic Development Assistant

jmissall@baylakerpc.org

Emily J. Pierquet

Administrative Assistant

letsplan@baylakerpc.org

Sydney Swan

Economic Development Planner

sswan@baylakerpc.org



