2017

MONTANA GROUP TRANSIT CAPITAL MANAGEMENT PLAN

MONTANA MDT DEPARTMENT OF TRANSPORTATION

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1. INTRODUCTION AND BACKGROUND

A Transit Asset Management Plan is a strategic and systematic planning tool to manage transit capital assets based on careful planning and improved decision-making. A Transit Asset Management Plan uses transit asset condition to guide how to manage capital assets and prioritize funding to improve or maintain the overall transit fleet and facilities to a target level of State of Good Repair (SGR). It is essentially a business model that evaluates asset condition to develop a prioritized asset replacement strategy.

A Transit Asset Management Plan is required of all providers by the Federal Transit Administration (FTA). FTA rules categorize all 37 of the Section §5311 (Formula Grants for Rural Areas – 5311) providers in Montana as Tier II systems, which allows the Montana Department of Transportation to sponsor a single group plan covering all these providers.

This plan, called Montana Group Transit Capital Management Plan (TCMP) hereinafter, meets the FTA requirements for transit asset management plans. The Montana Tier II transit systems included in this TCMP are shown in Figure 1 and listed in Figure 2.

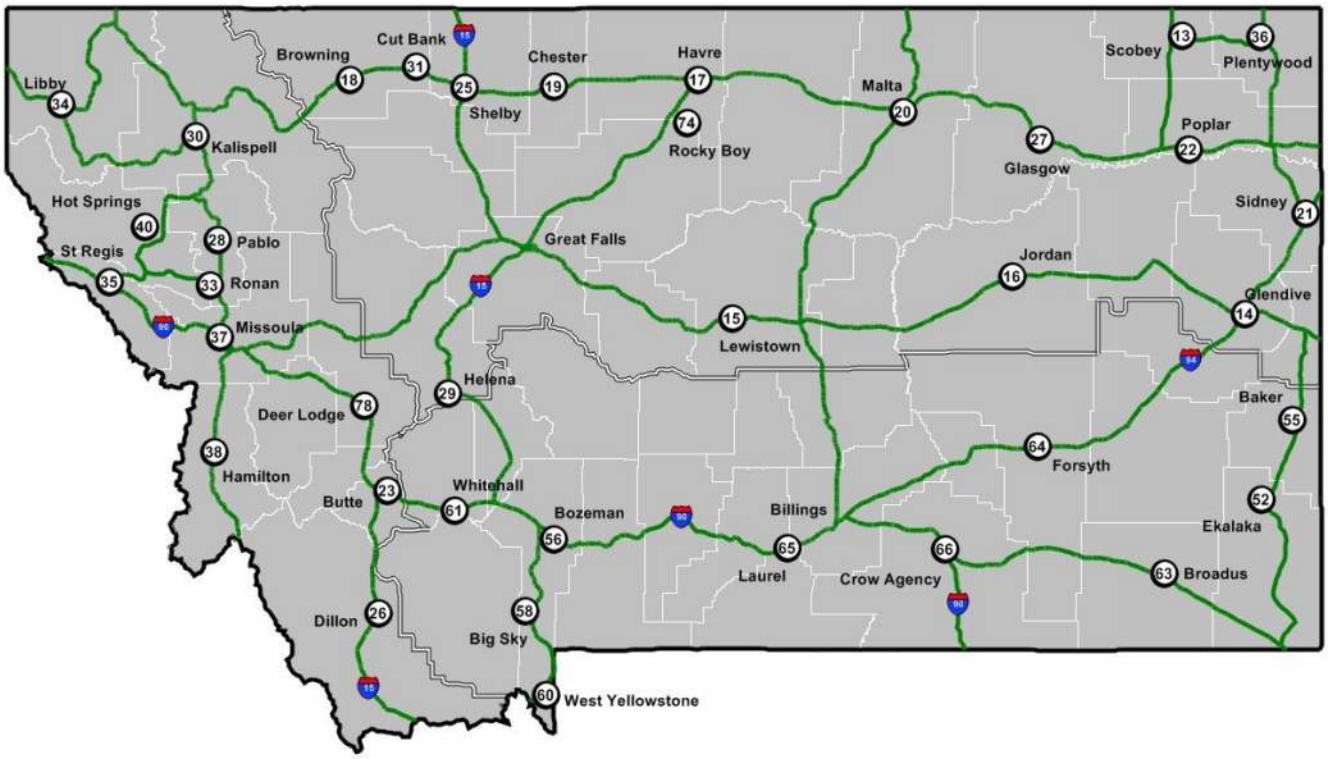

Figure 1. Map of Montana Tier II Transit Providers

Northern Region	Southern Region	Western Region
13 Daniels County Transportation	52 Carter Charter	23 Butte - Silver Bow Transit System
14 Dawson County Transit Authority	55 Fallon County COA	26 City of Dillon
15 Fergus County COA	56 District IX HRDC Galavan	28 Confederated Salish & Kootenai Tribes
16 Big Dry Transit - Garfield County	58 Big Sky Transit District	30 Eagle Transit - Flathead County
17 North Central Montana Transit	60 West Yellowstone Foundation	31 Glacier County Transit
18 Blackfeet Transit System	61 Liberty Place - Whitehall	33 Lake County COA
19 Liberty County COA	63 Powder River Transportation	34 Lincoln County Transit Service
20 Phillips Transit Authority	64 Rosebud Transportation	35 Mineral County Pioneer Council
21 Richland County Transportation	65 Laurel Transit Authority	37 Missoula Ravalli
22 Fort Peck Transit	66 Crow Nation Reservation Transit System	38 Ravalli County COA
25 Toole County & Northern Transit Interlocal		40 Sanders County Transportation
27 Valley County Transit		78 Powell County Public Transportation
29 Helena Area Transit System		
36 Glen-Wood Inc		
74 Chippewa Cree Rocky Boy's Transit Service		

Figure 2. Montana Tier II Transit Providers

1.1 The Purpose of a Transit Capital Management Plan (TCMP)

Transit providers in Montana have a wide variety of capital assets to operate and maintain, including revenue vehicles, backup vehicles, non-revenue vehicles, equipment, and facilities. These providers, as stewards of these assets and providers of transit service to the public, must maintain, rehabilitate, and replace these physical assets to sustain a State of Good Repair (SGR) at their agencies, and to provide reliable, safe service to their passengers. Transit Asset Management (TAM) provides a set of tools and plans to guide MDT and its transit providers in managing their assets, in prioritizing their capital investment, and in achieving and maintaining SGR.

A TCMP is built upon certain fundamental questions a transit provider needs to answer when planning their capital investment. These questions are:

- What is the minimum level of budget needed to perform recommended asset rehabilitation and replacement work?
- How will the asset rehabilitation and replacement impact transit performance?
- What if this level of budget is increased or cut? What if no money is available to invest in the system? What will be the impact of these scenarios on the performance of the system?
- How should the budget be prioritized to get the most optimum performance improvement? Which assets should be replaced or rehabilitated first, and why?

The transit provider relies heavily on the available data for the asset inventory, asset condition, current performance, and budgetary data to answer these questions, and therefore having accurate, quality, comprehensive data is a pillar

of a successful transit asset management planning. Figure 3 illustrates these fundamental questions and how answering them will help the transit provider with their prioritized capital investment plan.

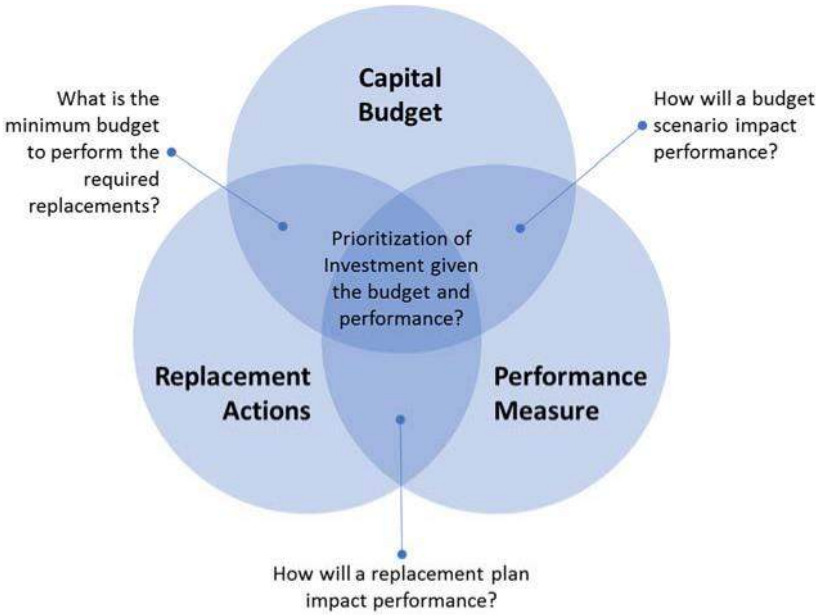

Figure 3. Elements of an SGR Framework to Prioritize Asset Replacement (Adopted from TCRP Report 157[1])

1.2 Context of the TCMP and Public Transportation Providers in Montana

The requirements for a TCMP fit within the overall context of transportation planning and the emphasis on performance planning that was established by MAP-21. Table 1 lists eight topic areas for performance planning as mandated by MAP-21 and carried forward by the FAST ACT. The development of a Transit Asset Management Plan is just one of the linked planning efforts to be developed under the FTA and the FHWA.

Table 1. Performance Planning Mandated by MAP-21

FTA	FHWA
Transit Asset Management Plan	Highway Asset Management Plan
National Public Transit Safety Plan	Pavement and Bridge Condition
Public Transportation Agency Safety Plan	Safety Performance
	Highway Safety Improvement Plan
	System Performance and CMAQ

The two performance planning efforts to be developed under the FTA, the TCMP and the Public Transportation Agency Safety Plan, are also linked together to provide comprehensive and efficient transportation planning. Figure 4 shown the linkages between the elements of both plans, and shows how they contribute to MPO and statewide

[1] TCRP Report 157, "State of Good Repair: Prioritizing the Rehabilitation and Replacement of Existing Capital Assets and Evaluating the Implications for Transit," Transportation Research Board (TRB), Sponsored by Federal Transit Administration, 2012.

planning. Both plans contribute to prioritized project selection for the MPO Transportation Improvement Program (TIP) and the Statewide Transportation Improvement Program (STIP), which are five-year planning and project programming documents.

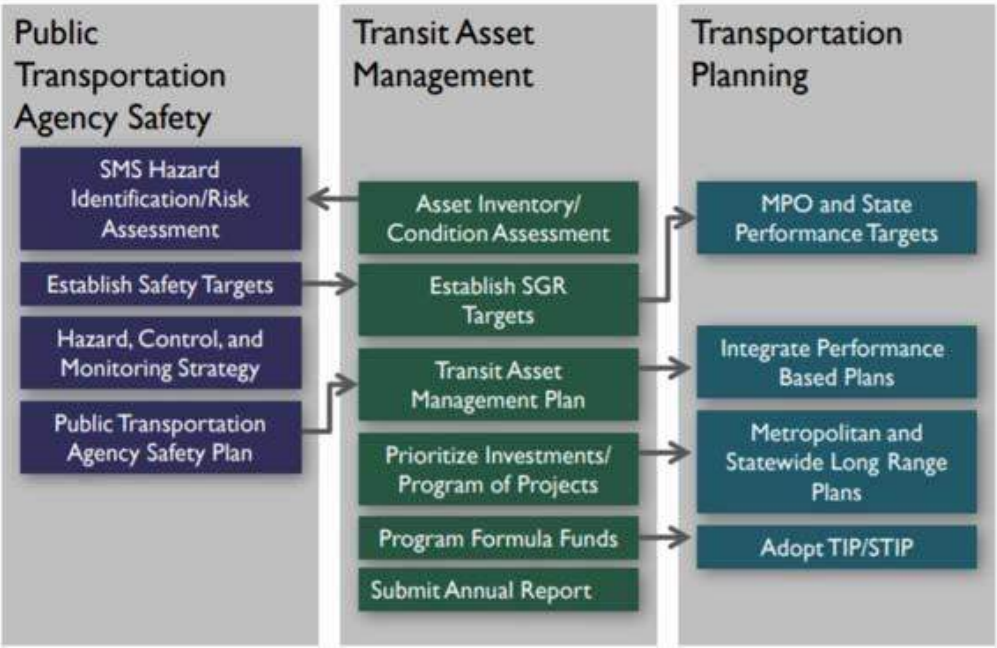

Figure 4: Linkage Between Elements of FTA Performance Planning Programs[2]

1.3 FTA Requirements for a Group TCMP

The TCMP process is illustrated in TCRP Report 172[3], which proposed a framework for developing a TCMP as a logical, multi-step approach which can be tailored to the needs and size of the transit provider agency. The same approach has been used to develop this TCMP. Figure 5 shows how TCRP Report 172 charts the flow and the relationship between TCMP elements.

Figure 5. Multi-Step Approach in Developing a Transit Capital Management Plan (TCMP)[3]

[2] "Transit Asset Management Final Rule", presentation by FTA at the APTA TAM Workshop, September 14, 2016.

[3] TCRP Report 172, "Guidance for Developing a Transit Asset Management Plan," Transportation Research Board (TRB), Sponsored by Federal Transit Administration, 2014.

1.4 Goals of the Group TCMP and its Processes

The Group TCMP is meant to be a management tool for monitoring the assets owned by Montana's §5311 (Formula Grants for Rural Areas – 5311) providers. The overall goals of the tool are to:

- Improve the efficiency of the system by providing more accurate and timely data to communicate with oversight boards and customers
- Develop a more current and more reliable set of data on the condition of transit assets.
- Develop a condition-based approach to transit asset management. This is to include the supporting data, predictive tools to manage preventative maintenance, a tool to prioritize asset replacements, and a decision-making tool for selecting projects.
- All data, tools, and processes to be developed for the Group TCMP should consider the requirements of the upcoming implementation of the WebGrants system in Montana.
- This is the first TCMP in Montana and one of the first in the nation. This first iteration of the plan will of course meet the new FTA requirements, but it is expected to reveal issues and opportunities which will best be addressed in subsequent updates. All issues and ideas will be documented for future consideration.

Addressing the fundamental questions on prioritized capital investment, meeting all applicable FTA requirements, and developing a process that provides a useful and beneficial tool to MDT and Montana §5311 transit providers defines the purposes of a TCMP. Table 2. Purposes of a lists some of the characteristics of what a TCMP is intended to be, and to not be.

Table 2. Purposes of a Transit Capital Management Plan (TCMP)

A TCMP is NOT....	A TCMP IS....
An isolated new planning tool that is unrelated to other planning efforts.	One aspect of coordinated performance-based planning as implemented in MAP-21 and the FAST ACT.
A simple list of best practices in asset management.	A plan outlining specific steps for Montana to improve their asset management practices and results.
A pointless planning exercise with no useful real-world application.	A framework to support decisions for optimized asset management within a given budget scenario.
A reference tool applicable only for the occasional tough decision.	A comprehensive tool supporting all asset management decisions.
A one-time effort to check off Federal requirements.	A foundation for optimizing long-term asset management.
A static plan.	A base plan with annual reports on progress and a four-year update cycle.

1.5 Time Horizon

Beginning in January 2018, MDT must submit ongoing annual data and reports to the FTA's National Transit Database (NTD), which must include updated information on:

- Condition assessments and analysis of asset performance.
- A narrative report on changes in the fleet's condition and the progress which has been made in achieving the annual targets.
- Targets for the next fiscal year.

In addition, the MDT Group TCMP is required to be updated in its entirety at least every four years and amended whenever there is a significant change in the asset inventory or management conditions. The four-year cycle for the TCMP update was specifically designed to coincide with the cycle for the State Transportation Improvement Program (STIP). Although coordination between the TCMP and the STIP is not required, it is encouraged as a way to minimize duplication of effort.

The time horizons for the first round of TCMP development, the annual updates and narrative reports, and the four-year full update are listed in Table 3. Time Horizons for TCMP Implementation and Ongoing Updates.

Table 3. Time Horizons for TCMP Implementation and Ongoing Updates

Task	Time Horizon
Submit FY 2017 asset inventory data to NTD	January 2018
Complete the first TCMP	October 2018
Submit FY 2018 asset inventory data to NTD	January 2019
Submit FY 2019 targets to NTD	January 2019
Submit FY 2019 asset inventory data to NTD	January 2020
Submit FY 2020 targets to NTD	January 2020
Submit Narrative Report to NTD	January 2020
Submit FY 2020 asset inventory data to NTD	January 2021
Submit FY 2021 targets to NTD	January 2021
Submit Narrative Report to NTD	January 2021
Complete the TCMP full update	October 2022

1.6 Roles & Responsibilities

Table 4 lists the 37 §5311 public transportation providers covered by this Group TCMP. The table lists the official provider name as well as its DBA (Doing Business As) common name. The providers' ID numbers are the numbers assigned in the PTMS system.

FTA requirements call for each provider to designate a single Accountable Executive, who is ultimately responsible for carrying out the plan. Note that in two cases, a single person serves as the Accountable Executive for multiple providers. This shared accountability affects Daniels County Transportation and Valley County Transit in one instance, and Toole County Transit and Glacier County in the other instance.

While this group TCMP is sponsored and developed by MDT, the individual Accountable Executives for each §5311 provider is responsible to self-certify the TCMP. FTA will update their Certifications and Assurances to reflect the TCMP requirements. The current TCMP and its annual Narrative Reports and data submittals to NTD will be reviewed by FTA as part of their Triennial Reviews, State Management Reviews, and MPO Certification Reviews.

Table 4. Section 5311 (Formula Grants for Rural Areas) Transit Providers in Montana Covered by the Group TCMP

ID	Provider Name	DBA	City	MDT Region	Accountable Executive
13	Daniels Memorial Healthcare Foundation	Daniels County Transportation	Scobey	North	Colleen Pankratz
14	Urban Transportation District of Dawson County	Dawson County UTD	Glendive	North	Leslie Hunter
15	Fergus County Council on Aging	Central Montana Shuttle	Lewistown	North	Nancy Fry-Moline
16	Garfield County Council on Aging	Big Dry Transit	Jordan	North	Jeana Stanton
17	Opportunity Link	North Central Montana Transit	Havre	North	Jim Lyons
18	Blackfeet Nation, Department of Transportation		Browning	North	Sharyl Wells
19	Liberty County Council on Aging	Liberty County Transit	Chester	North	Glenda Hanson
20	Phillips Transit Authority		Malta	North	Betty Hasler
21	Richland County	Richland County Transportation Service	Sidney	North	Jodi Berry
22	Fort Peck Assiniboine & Sioux Tribes	Fort Peck Transit	Poplar	North	Leta Atkinson
23	Butte-Silver Bow County	The Bus	Butte	West	Gary Keeler
25	Toole County	Toole County Transit	Shelby	North	David Irvin
26	City of Dillon		Dillon	West	Glen Morenz
27	Valley County	Valley County Transit	Glasgow	North	Colleen Pankratz
28	Confederated Salish and Kootenai Tribes	Flathead Transit	Pablo	West	Corky Silas
29	City of Helena	Capital T	Helena	North	Barb Sheridan
30	Flathead County	Eagle Transit	Kalispell	West	Jim Boyd
31	Glacier County	Northern Transit	Cut Bank	North	David Irvin
33	Lake County Council on Aging		Ronan	West	Dara Rodda
34	Lincoln County Transportation Service, Inc.		Libby	West	Ona Steward
35	Mineral County Pioneer Council, Inc.		St. Regis	West	Patt Liston
36	Glen-Wood, Inc.	Quality Transit	Plentywood	North	Hope Ereth
37	Missoula Ravalli Transportation Management Association	MRTMA	Missoula	West	Lynn Hellegaard
38	Ravalli County Council on Aging	Bitterroot Bus	Hamilton	West	Sharna Paddock
40	Sanders County Council on Aging	Sanders County Transportation	Hot Springs	West	Ayla Blasius
52	Carter County	Carter Charter	Ekalaka	South	Karen Carroll
55	Fallon County	Fallon County COA Transportation System	Baker	South	Carla Brown
56	Human Resource Development Council District IX, Inc.	Streamline / Galavan	Bozeman	South	Lee Hazelbaker
58	Big Sky Transportation District	Skyline	Big Sky	South	David Kack
60	West Yellowstone Foundation		West Yellowstone	South	Carrie Pope
61	Liberty Place Inc.	Whitehall Public Transportation	Whitehall	South	Paula Hippert
63	Powder River County	Powder River Transportation	Broadus	South	John Robinson
64	Rosebud Community Hospital, Inc.		Forsyth	South	Ryan Tooke
65	City of Laurel	Laurel Transit	Laurel	South	Noel Eaton
66	Crow Tribe of Indians of Montana	Crow Nation Reservation Transit System	Crow Agency	South	Oliver Hill
74	Chippewa Cree Tribe	Rocky Boy's Transit Service	Rock Boy	North	John Johnson
78	Powell County Executive Board on Aging		Deer Lodge	West	Dodie Rennfield

A second group with responsibility for transit asset management in Montana is the Capital Assistance Review (CAR) Committee. The CAR Committee operates jointly with the MDT Transit Section to score project funding requests based on need, program management, and TAC prioritization. The program considers capital needs for both replacement and system expansion, and explicitly considers maintenance history, useful life, provider's spare vehicle ratio, and safety concerns in system operations. The Transit Asset Prioritization Tool (TAPT) developed under this TCMP is intended as a tool to assist MDT and the CAR Committee in scoring and selecting capital asset projects.

1.7 State of Good Repair

State of Good Repair (SGR) is defined by FTA as the condition in which assets are fit to perform at their full level. A SGR is considered to be met for a particular asset when:

- The asset is able to perform its designed function.
- The asset does not pose an unacceptable safety risk. In practice, for a transit vehicle this means that the vehicle must not only be operable, but must be reliable in order to not run the risk of stranding passengers in unsafe or unhealthy situations.
- The lifecycle investments for the asset must have been met or recovered.

SGR is defined by the FTA in their TAM final rule and detailed in TCRP Report 172. SGR is explained in more detail under Section 3.1 of this report.

1.8 Useful Life Benchmark

The Useful Life Benchmark (ULB) is the expected lifecycle of an asset. ULBs for mileage and age for defined vehicle types are set by MDT, as shown in Table 5. The ULB by vehicle class is the measure used to track the condition of each vehicle relative to its maximum expected service life. It estimates the age and mileage remaining for each vehicle to stay in service and still be in a State of Good Repair (SGR).

Table 5. Useful Life Benchmarks

Useful Life Benchmarks Defined by MDT			
Classification Weight	Vehicle Type	Mileage	Years
Light Duty	Minivan or Conversion Van	100,000	8
	Gas Extended Van	100,000	8
	Diesel Extended Van	150,000	8
	Gas Cutaway Bus	100,000	10
	Diesel Cutaway Bus	150,000	10
	Low Floor Cutaway Bus	150,000	10
	Hybrid Cutaway Bus	150,000	10
	Sprinter Van	175,000	8
Medium Duty	Raised Floor Transit Bus	300,000	14
	Low Floor Transit Bus	300,000	14
	Hybrid Transit Bus	300,000	14
Heavy Duty	HD LF Transit Bus (Gillig)	350,000	14

The ULB is a useful performance measure that helps determine whether it is cost effective to continue to maintain and repair a vehicle, or whether it is preferable to replace the vehicle. Table 5 shows the default ULBs which have been provided by FTA and the mileage ULB values which have been developed specifically for MDT. While it is recognized that vehicles in Montana's operating environment with mountainous roads, severe weather, and long trip lengths may have a shorter service life, the national-level default values were used in the analysis as a more conservative measure.

1.9 Content of this TCMP and Compliance with FTA Rule

Even though this document serves as a group TCMP for Tier II transit providers in Montana, the content of the TCMP goes beyond the minimum requirements for Tier II providers outlined in the FTA rule and addresses some of the requirements for Tier I providers as well, as summarized in Table 6.

Required TCMP element #1, the Inventory of Capital Assets, is addressed by Section 2 in this TCMP. This Task involved a survey of all 37 Montana §5311 transit providers to develop an accurate inventory of their revenue vehicles, back-up vehicles, non-revenue vehicles, equipment, and facilities.

Required TCMP element #2 is a condition assessment of all inventoried assets. This element is documented as part of the inventory under Section 2, but also depends on the Performance Targets and Measures as defined under Section 3 in this TCMP.

Required TCMP element #3 is a decision support tool, which is documented as Section 4 of this TCMP. This Task uses a customized Transit Asset Prioritization Tool (TAPT) that is based on the TAPT developed by FTA.

Required TCMP element #4 is the resulting list of prioritized asset replacement projects by year. This element of the TCMP is addressed in Section 5, which calculates pipelined prioritized projects for current funding levels and for three additional investment scenarios for comparison.

The implementation strategy and list of key annual activities is not required for Tier II providers, but is included as Section 7 in order to provide MDT with a more comprehensive and complete TCMP process. That Task includes fourteen recommendations to guide the initial implementation and the long-term improvement of the TCMP. Each recommendation includes a time frame for implementation, a classification of whether it requires a one-time or a continuous implementation, and a note on whether or not it is required for Tier II providers.

Monitoring the ongoing performance of the TCMP is part of the Evaluation Plan listed as TCMP element #8 for Tier I providers only. Although this element is not required for Tier II providers, it is included as Section 8 of this TCMP to provide guidance on how MDT will monitor and evaluate implementation, how to prepare the required annual progress reports, and how to develop the required four-year full update of the TCMP.

Table 6. Summary of the TCMP Sections Meeting FTA Rule Requirements

		At Minimum Applies To		
#	FTA Rule Requirement	Tier I & II	Tier I	Section of this TCMP
1	Inventory of Capital Assets	●		Section 2 – Asset Inventory
2	Condition Assessment	●		Section 2 – Asset Inventory
3	Decision Support Tool	●		Section 4 – Asset Replacement and Decision Support Tool
4	Investment Prioritization	●		Section 5 – Investment Prioritization
5	TAM and SGR Policy		●	Section 3 – Performance Targets and Measures
6	Implementation Strategy		●	Section 7 - Implementation of TCMP
7	List of Key Annual Activities		●	Section 7 - Implementation of TCMP
8	Evaluation Plan		●	Section 6 - Performance Evaluation Plan and TCMP Updates Section 7.2 – Continuous Improvement Plan (CIP) of TAM Practices

2. ASSET INVENTORY

2.1 Asset Inventory Data Collection Effort and Results

The required asset inventory is a listing of providers' assets which meet certain criteria as specified in TCMP rules. Assets include vehicles, facilities, and equipment that support the delivery of public transportation services. Unlike some other FTA programs such as PTMS, all assets must be reported in the TCMP regardless of whether or not they were purchased with FTA funds or are still under lien. Defined assets include:

- Revenue vehicles
- Backup revenue vehicles
- Non-revenue vehicles
- Facilities with a replacement value of $50,000 or greater
- Equipment with a replacement value of $50,000 or greater

The Group TCMP and the data inventory effort were introduced at the October 2016 MDT Fall Workshop in Helena. The workshop included in-person interviews, group discussions, surveys, and display boards as varied methods to gather information. Following up, a survey template was developed to gather more detailed information from each provider to meet TCMP requirements. Information was gathered over the phone and by e-mailing the survey template to the provider. Four additional narrative questions asked about maintenance plans and costs, tracking costs, and facility condition ratings. The data portion of the survey template is shown in Figure 6, showing the data that was requested from each provider.

	Attributes		Condition			Annual Maintenance Costs			Breakdowns	
Asset Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	SGR Condition	Warranty	Routine Preventative	Repairs	Number	Duration
Revenue Vehicles										
Backup Revenue Vehicles										
Non-Revenue Vehicles										

	Attributes	Condition			Annual Maintenance Costs		
Asset Class	ADA Compliant	Facility Age	Major Equipment Age	Condition	Warranty	Routine Preventative	Repairs
Facilities							

TEMPLATE

Figure 6. Group TCMP Provider Survey Template

Since most of the information on the survey is already asked in the quarterly PTMS submittals, it was anticipated that data collection would not be a burden on the providers and could occur very quickly. However, while all providers were cooperative and did their best to be helpful, it was found that some did not keep their data in readily-available forms. Some appeared to just keep paper notes in various places, and some had different people tracking different vehicles. As a result, most providers had to be contacted multiple times. With these issues, the data collection effort took 2 full months.

The quarterly and annual PTMS submittals from providers was used as a source to cross-check their information. However, there was often a mismatch between the PTMS vehicle inventories and the inventories given by the providers. There were also instances of differences in the class descriptions for specific vehicles.

Summaries of the inventory results are shown under Section 2 of this report. The detailed inventory is included as Appendix A.

2.2 Best Practices, Ideas, and Issues from the Provider Surveys

While data collection was the major focus of the provider surveys, open-ended questions were also asked to stimulate conversations with individual transit manages to determine the issues facing them, innovative responses, and potential ideas for addressing transit operating issues.

- The suggestion for coordination and sharing of facilities, administration, or maintenance with other transit providers was readily accepted by providers, and some have implemented sharing to a limited extent. Additional opportunities for sharing depend on the specific needs, opportunities, and operating environment of each provider.

- Many providers do not have a backup vehicle, though several addressed this need in innovative ways. One provider leases additional vehicles for their seasonal peak demand. One provider has an agreement with the local school district to borrow a short school bus and a driver when a backup is needed.

- While most providers were aware of the templates provided by MDT for a vehicle maintenance plan and for facility maintenance, many just used their own form or kept only paper copies of records.

- Almost every provider has their drivers do a pre-trip inspection to look for maintenance issues. All providers reported that they were meticulous in tracking manufacturer's warranty maintenance requirements.

- MDT currently has an innovative agreement with Motor Carrier Services to conduct transit vehicle inspections. This is a great precedent and an example of interagency cooperation with shared resources and expertise.

- Wheelchair lifts were often cited as needing specialized maintenance and adjustments, which sometimes was not available locally. The idea of a "circuit riding mechanic", who would receive training in lift maintenance and who could visit the providers to provide those services, was well-received. MDT and MCS both have offices and mechanics throughout the state, and may provide a basis for the "circuit riding mechanic" implementation.

- School districts also have mechanics, and one provider used the school district for their wheelchair lift maintenance. Some providers have contracted with the prison system to provide general maintenance for their vehicles.

- Some providers are physically remote, and have to travel a long distance to access vehicle dealers for warranty work. Some providers had issues with their cutaway vehicles being too large to fit in dealers' maintenance bays. One provider had a dealer tell them that their vehicle was modified (low-floor conversion), which voided the warranty. Several providers noted that they had specialized equipment, so they had multiple dealers for warranties in multiple locations.

- One provider keeps a running tally of maintenance costs in a spreadsheet, with a formula to automatically generate graphs of costs for each vehicle. They find this useful in making presentations to their board.

- Maintenance records show that there are some vehicles in the fleet which have expenses which are out of bounds. Several providers reported maintenance issues with diesel engines, and with the Ford F-550 cutaway in particular. The Sprinter van was also noted as having issues with availability of parts and with mechanics not being familiar with their unique requirements.

2.3 Data Collection Initiatives

The issues with data collection are significant because the FTA requirements call for an annual update of data and an annual narrative of progress made in attaining the program targets. Replicating the current process annually would be a burden on the providers and on MDT. Three data-related initiatives are therefore proposed to address these issues and to prepare for the annual data updates and the four-year plan update. These initiatives are not TCMP requirements, but are suggested as a way to make meeting TCMP requirements less burdensome and more efficient.

2.3.1 Data Template

Since many providers had issues with reporting their data, some sort of data organizing tool would be useful. Given that MDT is currently implementing its WebGrants program to be accessible to all providers, a spreadsheet-style data collection template may be an appropriate solution for vehicle and facilities data. Such a template could track inventory and performance at the same time. Using the WebGrants capabilities, the template could be formatted to directly port to PTMS formats, making the quarterly submittals easier for the providers.

The template could be envisioned as customized for each provider. It could list each vehicle and provide for the entry of performance data and costs. Including historic data for comparison can identify trends and will help trap errors in data entry. Including benchmark data can help flag data for further review: for example, benchmarks on maintenance costs and vehicle mileage can identify vehicles whose costs are out of line, or identify vehicles whose mileage is approaching the level where vehicle replacement may be a better option than vehicle repair.

2.3.2 PTMS Reconciliation

PTMS data can serve as a valuable and easily accessible source for cross-checking providers' data and for accessing historic data. If the providers' inventories and PTMS are reconciled on a regular basis, PTMS can then serve as a source for the annual Group TCMP reports and narratives. This data-sharing effort would reduce the burden on the providers and on MDT staff.

An important consideration is that PTMS is required to only record vehicles and facilities under lien, while the TCMP is required to cover all vehicles and facilities. The data template for each provider should therefore include all vehicles, but flag those vehicles which are not entered in PTMS.

Once the WebGrants system is fully implemented, PTMS may also serve as a data source to provide MCS inspectors with accurate inventories of the vehicles which they are to inspect.

2.3.3 Condition Ratings

The survey asked providers to rate the condition of their vehicles and facilities as excellent, good, fair, or poor. However, this rating was entirely subjective, and did not distinguish between the condition of the engine, running gear, body, and general appearance, or components of facilities. Further, some vehicles in fair to poor condition were noted as having received new engines, which should have an impact on their condition rating.

MDT already uses Montana Motor Carrier Services (MCS) officers to perform inspections of transit vehicles using the MCS Onsite Vehicle Inspection Form, and the vast majority of providers already comply with the vehicle manufacturers' maintenance requirements and have their drivers perform daily pre-trip inspections of their vehicles. Expanding the MCS inspections and reporting forms to support TCMP vehicle condition assessments is therefore a practical task. Additionally, providing vehicle rating based on the Critical Safety elements of the MCS Onsite Vehicle Inspection Form evaluations will identify safety and reliability issues to be immediately addressed, regardless of the overall condition of the vehicle.

MDT also provides a building inspection form and a template for a facility maintenance plan. An expansion of these existing efforts to provide scores for the condition rating of facilities and equipment would be helpful to the TCMP by making the condition ratings more detailed, more objective, and more reliable. A modification of the template to conform to the Transit Economic Requirements Model (TERM) rating would assist in integrating the condition rating into the TCMP.

2.4 Revenue Vehicles

The provider's inventory showed a total of 241 revenue vehicles. Most providers run a mix of vehicle types. Three providers have only one revenue vehicle, and six providers have two revenue vehicles. At the other end of the scale, five providers run more than 10 revenue vehicles, with the largest provider having 25. The condition of revenue vehicles by their vehicle class is shown in Table 7.

Table 7. Tally of Revenue Vehicles by Class

	Vehicles	Vehicles > Benchmark Mileage	Vehicles > Benchmark Age	Vehicles > Benchmark Condition	Average Mileage	% Mileage	Average Age	% Age	Average Condition
Automobile (AO)	2	1	1	0	105,421	105%	12	171%	Excellent
Bus (BU)	14	0	0	3	57,109	16%	2	24%	Excellent
Cutaway (CU)	111	54	34	38	117,318	117%	6	87%	Good
Minivan (MV)	65	19	11	6	72,688	73%	4	63%	Excellent
Sport Utility (SV)	2	0	0	0	87,270	87%	4	57%	Excellent
Van (VN)	47	22	10	13	93,518	94%	5	78%	Good
Totals	241	96	56	60	96,794	97%	5	76%	Good

Three benchmarks were assessed for vehicles: mileage, age, and condition. As previously mentioned, mileage and age are objective measures and their data can be relied upon. On the other hand, vehicle condition is currently a purely subjective measure. While it is generally considered to be accurate, the providers' assessments of their vehicle conditions can be improved upon with additional guidance.

Table 7 shows that:

- 96 vehicles exceed the benchmark for mileage. The fleet-wide average mileage of 96,794 is slightly below the benchmark mileage of 100,000 for most vehicle classes.
- 56 vehicles exceed the benchmark for age. The average age of 5 years is less than the benchmark age of 7 years for most vehicle classes.
- 60 vehicles exceed the benchmark condition of "good". The average condition for all vehicles is "good".

The composition of the overall fleet with respect to vehicle benchmarks are shown in Figure 7 through Figure 10.

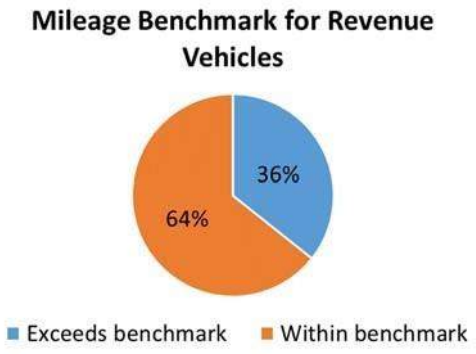

Figure 7. Mileage Benchmark for Revenue Vehicles

Figure 7 shows the fleet composition of the mileage benchmark. Overall, 155 revenue vehicles meet the benchmark and 86 vehicles exceed it. Considered by class, 54 of the 111 cutaways exceed the benchmark, with an average mileage of 117% of the benchmark for the entire fleet. For minivans, 19 of 65 total vehicles exceed the mileage benchmark. The minivans in the fleet have an average mileage of 75% of the benchmark. Vans have an overall average mileage at 94% of the benchmark, showing that these vehicles are at risk, while 22 of the total of 47 vehicles have exceeded the benchmark value.

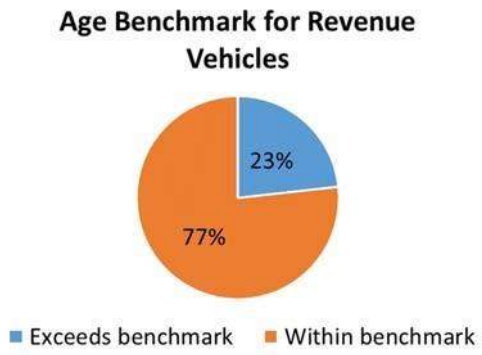

Figure 8. Age Benchmark for Revenue Vehicles

The age benchmark composition of the fleet is shown in Figure 8. Age is shown to be generally less of an issue with vehicle condition in Montana, with 56 vehicles exceeding the benchmark and 185 meeting it. Considered by class, cutaways have 34 of 111 vehicles exceeding the benchmark, minivans have 11 of 65, and vans have 10 of 47. None of the average ages for vehicles by class are over the benchmark (except for automobile with 2 total vehicles), but several classes are high. Cutaways average 87% of benchmark age, minivans are at 63%, and vans are at 78% of the benchmark age.

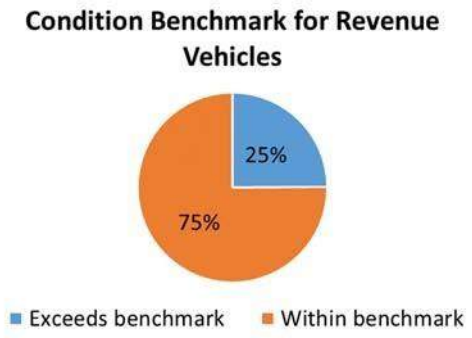

Figure 9. Condition Benchmark for Revenue Vehicles

Vehicle conditions were converted to numeric values (excellent =1 through poor=4) to enable calculations. As seen in Figure 9, 60 of the total of 241 vehicles exceed the benchmark condition rating of "good". By class, cutaways had 38 of 114 vehicles exceeding the benchmark, which is 35% of that class. Only 6 of 65 minivans were in excess of the benchmark, while 13 of 47 vans were. All vehicle classes had an overall average rating of "excellent" or "good".

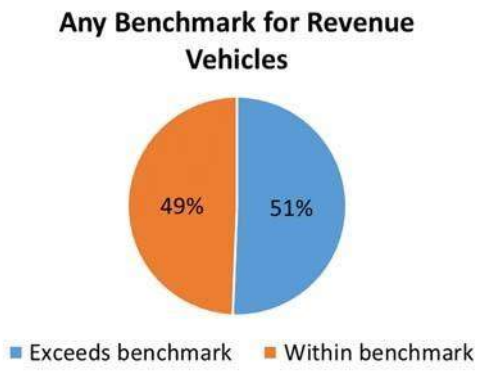

Figure 10. Any Benchmark for Revenue Vehicles

Figure 10 shows the tally of vehicles that exceed any of the 3 benchmarks for mileage, age, or condition. Just over half of all vehicles, totaling 122 of the 241, exceed one or more benchmark.

In general, mileage is the benchmark that was most often exceeded by revenue vehicles. It was the sole benchmark exceeded for 32 vehicles, and appeared in combination with one or more others 86 times. Mileage was a factor for 69% of vehicles that exceeded one or more benchmarks. Age was the sole benchmark exceeded only 16 times, and condition only 17 times.

2.5 Backup Vehicles

Of the 37 §5311 transit providers in Montana, 18, or 49%, owned backup vehicles. Of these, 8 had only 1 backup vehicle, another 5 had only 2, and 3 had 3 vehicles. At the other end of the scale, 1 provider had 5 backup vehicles and 1 had 9. The composition of the backup vehicle fleet is mostly cutaways, with 22 vehicles, followed by 12 minivans and 7 vans. The condition of backup vehicles by their vehicle class is shown in Table 8.

Table 8. Tally of Backup Vehicles by Class

	Vehicles	Vehicles > Benchmark Mileage	Vehicles > Benchmark Age	Vehicles > Benchmark Condition	Average Mileage	% Mileage	Average Age	% Age	Average Condition
Automobile (AO)									
Bus (BU)									
Cutaway (CU)	22	17	10	152,917	153%	8	119%		Good
Minivan (MV)	12	10	4	184,037	184%	8	107%		Good
Sport Utility (SV)									
Van (VN)	7	7	2	159,111	159%	9	122%		Fair
Totals	41	34	16	163,083	163%	8	116%		Good

Table 8 shows that:

- 34 vehicles exceed the benchmark for mileage. The average mileage of 163,083 is greater than the benchmark mileage of 100,000 for most vehicle classes. This illustrates how providers shift high-mileage vehicles for use as backups.
- 16 vehicles exceed the benchmark for age. The average age of 8 years is greater than the benchmark age of 7 years for most vehicle classes.
- 19 vehicles exceed the benchmark condition of "good". For all backup vehicles, the average condition is "good".

The composition of the overall fleet with respect to vehicle benchmarks are shown in Figure 11 through Figure 14.

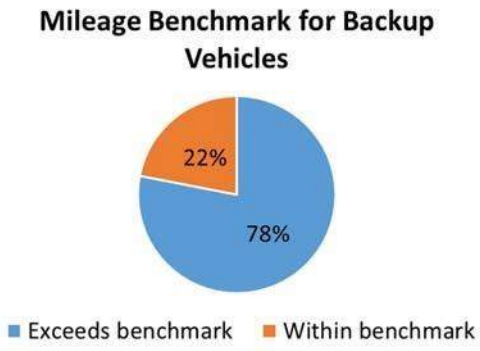

Figure 11. Mileage Benchmark for Backup Vehicles

Figure 11 shows the backup fleet composition of the mileage benchmark. Overall, 9 backup vehicles meet the benchmark and 32 vehicles, or 78%, exceed it. Considered by class, 77% of cutaways exceed the benchmark, with an average mileage of 152,917. For minivans, 83% of backup vehicles exceed the benchmark, with an average mileage of 184,037. All 7 of the backup vans exceed the mileage benchmark, with an average mileage of 159,111.

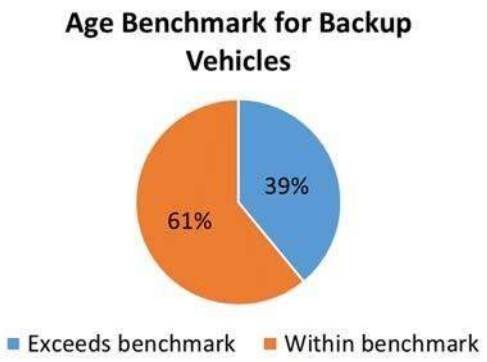

Figure 12. Age Benchmark for Backup Vehicles

The composition of the backup fleet for the age benchmark is shown in Figure 12. While the majority of backup vehicles (71%) exceeded the mileage benchmark, only 39% exceed the age benchmark. 45% of cutaways exceeded the benchmark, compared to 33% of minivans and 29% of the vans. Average ages were slightly over the benchmark, hitting 8 years for cutaways and minivans and 9 years for vans.

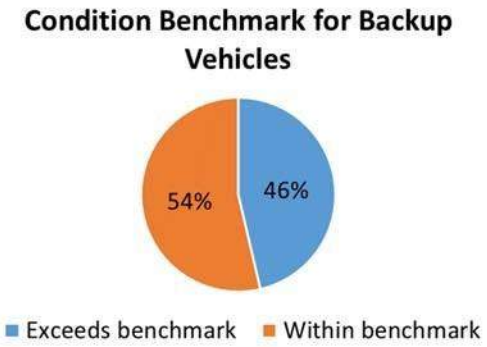

Figure 13. Condition Benchmark for Backup Vehicles

Figure 13 shows the condition benchmark for the backup fleet. Slightly less than half, of 46%, of backup vehicles exceed the condition benchmark. Considered by class, 45% of cutaways and 33% of minivans exceed the condition benchmark. Only the vans have the majority of vehicles over the benchmark, with 71%. The average condition for cutaways and minivans was "good", while the average for vans was "fair".

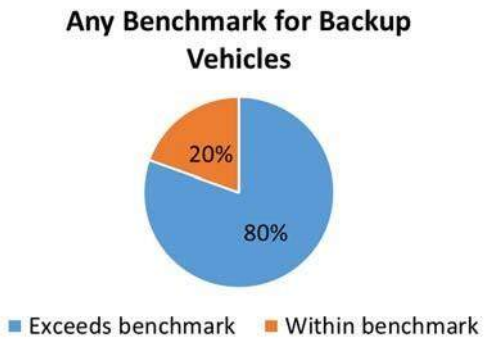

Figure 14. Any Benchmark for Backup Vehicles

The composition of the backup fleet for any of the three benchmarks is shown in Figure 14. Fully 80% of the 41 backup vehicles exceed one or more benchmarks: 32 exceed for mileage, 16 for age, 19 for condition, and 33 for any of the 3 benchmarks.

As with revenue vehicles, mileage was the benchmark most often exceeded for backup vehicles. Discussion with providers revealed that in many cases they purposefully set aside their high-mileage vehicles for use as backups, so the data pattern is not surprising.

2.6 Non-Revenue Vehicles

Of the 37 providers in Montana, only 3 had non-revenue vehicles: a 2003 minivan and a 2009 minivan for general use, and a 1993 pickup truck with a snowplow. The tally is shown in Table 9.

Table 9. Tally of Non-Revenue Vehicles by Class

	Vehicles	Vehicles > Benchmark Mileage	Vehicles > Benchmark Age	Vehicles > Benchmark Condition	Average Mileage	% Mileage	Average Age	% Age	Average Condition
Automobile (AO)	1	1	1	1	130,436	130%	23	329%	Fair
Bus (BU)									
Cutaway (CU)									
Minivan (MV)	2	1	1	1	108,500	109%	10	143%	Good
Sport Utility (SV)									
Van (VN)									
Totals	3	2	2	2	115,812	116%	14	205%	Good

Three vehicles are not sufficient to generate trends or statistics, since the data from a single vehicle can dramatically skew the statistics. Based on the data in Table 9, 2 of the 3 vehicles, or 67%, exceed each of the 3 benchmarks and exceed any benchmark. This reflects the 2003 minivan meeting all benchmarks and the other 2 vehicles exceeding all benchmarks.

2.7 Facilities & Equipment

Questions on facilities and equipment were part of the provider survey, but the results of the survey were problematic. Of the 37 providers, 15 reported as having ownership of some sort of facility or equipment, while the rest reported being housed by some other agency and having no financial responsibility for maintenance or replacement of their facilities. However, actual ownership is not certain. This is again an area for potential improvement with a data template tied to the new WebGrants system and ongoing verification.

2.7.1 Facilities

Once the WebGrants system is implemented, the TCMP could categorize facilities into three asset classes for Administrative, Maintenance, and Access & Parking. The asset classes could then be further stratified into asset groups such as HVAC, roof, surveillance systems, and so on in order to support condition ratings and milestones. The tally of facilities by the three asset classes is shown in Table 10.

Table 10. Tally of Facilities by Class

	Facilities	Facilities ADA Compliant	% ADA Compliant	Average Age	Average Condition
Administrative	10	7	70%	11	Excellent
Maintenance	7	6	86%	17	Excellent
Access & Parking	14	8	57%	9	Excellent
Totals	31	21		12	Excellent

The tally for facilities is affected by the smaller number of responses and the uncertainty about their completeness.

Average age for facilities is just under 12 years. Without the two oldest facilities, the average age is 7 years. With this relatively young age for facilities, the average condition is excellent. No providers reported large maintenance costs, and most said that they had very little or no maintenance and repair costs.

Overall, 68% of all facilities were reported as being ADA compliant. Maintenance facilities reported as being 86% in compliance, which may be a factor of their being newer construction. Some of the older facilities (40 and 50 years old) reported that they were in compliance, which demonstrates how well providers are striving to comply with federal regulations. ADA compliance cannot be supported as a general target because some facilities are not required to be compliant. However, it can be tracked and referenced as a prioritization factor.

2.7.2 Equipment

One provider in the survey reported having a diesel storage tank, but did not know if the cost of this equipment met the $50,000 threshold for inclusion in the TCMP. None of the providers were certain about their inventory of equipment that might be reportable, such as HVAC systems, lifts, or maintenance equipment. This is therefore another area in which a more rigorous inspection and inventory system would be helpful in order to gain a more exact knowledge of the inventory.

2.7.3 TERM Scale

FTA's Transit Economics Requirements Model (TERM) scale is used by their template condition-based model to evaluate facilities, so it would be a useful measure to employ in the TCMP. The TERM rates the physical condition of an asset on a 5-point scale ranging from poor (scored as 1) to excellent (scored as 5). The TERM rating is then used to determine the level of investment required to improve the condition of assets.

3. PERFORMANCE TARGETS AND MEASURES

Condition assessment can be a systematic process of inspecting and evaluating the condition of transit assets. A well-established condition assessment process can directly support proactive planning for the investments required to maintain good condition and good performance of transit assets. Condition assessment provides the tools to help predict failure, identify unacceptable safety risks, and evaluate the root causes of premature asset failures.

The core of element of condition assessment is to establish a performance target for an asset class, and then assess each asset's condition against the set target. If a gap exists between the target and the condition of assets, then strategies and programs can be developed to bring the assets up to the targeted condition.

3.1 State of Good Repair (SGR)

Helping transit providers maintain bus systems in a State of Good Repair (SGR) is one of MDT's highest priorities. Having well maintained, reliable transit assets will help ensure safe, dependable and accessible services. According to the FTA, SGR is "*the condition in which a capital asset is able to operate at a full level of performance*." (TAM Final Rule 49 USC 625, §625.5) This means the asset can perform its designed function, b) does not pose a known unacceptable safety risk, and c) its lifecycle investments have been met or recovered. This definition of SGR has been developed based on a condition or performance assessment, rather than on maintenance or replacement activities.

The SGR definition from the FTA's TAM Final Rule has been adopted for this TCMP. The definition of SGR is important because it relates to the appropriate targets and measure progress relative to a set benchmark. The SGR therefore provides direction and guidance for the entire TCMP process of systematic and data-driven asset management.

The TAM Final Rule established three performance measures which are a minimum national standard for transit operators. These performance measures are:

- **Rolling Stock:** The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB).
- **Equipment:** The percentage of non-revenue service vehicles (by type) that exceed the ULB.
- **Facilities:** The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale

The purpose of MDT's group TAM Plan is to keep the states assets in a SGR through setting these targets for its providers, and optimizing the capital investment plan to achieve these targets. Failure to achieve or maintain a SGR leads to:

- Safety risks for the users of public transit
- Decreased system reliability, more road calls, and shorter distances between failures
- Higher maintenance costs
- Lower system performance and eventually lower customer satisfaction.

Through a review of the state's transit asset inventory, summary of asset conditions, transit provider outreach, and MDT central office meetings, the following SGR performance targets were set. These targets meet the requirements of FTA final rulemaking on transit asset management, and also are achievable and reasonable for MDT and transit providers. The following section outlines these performance targets for different asset classes.

3.1.1 Vehicle Condition Targets

The inventory of vehicles revealed asset condition for three potential condition targets: mileage, age, and condition. Based on the data, these three characteristics are strongly correlated but are not identical, so an examination of all three measures is recommended. Based on existing conditions revealed in the provider survey and maintaining the Useful Life Benchmarks (ULB) currently defined by MDT, the following condition targets are recommended for vehicles:

3.1.1.1 Revenue Vehicles

Mileage Mileage is the benchmark most frequently exceeded, and is an objective measure. Based on the provider surveys, 64% of revenue vehicles currently meet the mileage benchmark.

A suggested appropriate target for a revenue vehicle mileage benchmark is 75%. With a total of 241 revenue vehicles currently in the fleet, meeting this target would require having an additional 26 vehicles meet the benchmark. In comparison, a target of 70% would require 14 new vehicles; meeting a target of 80% would require 38.

Age The age benchmark is currently being met by 77% of revenue vehicles, or 185 of the 241 total. Of the 56 vehicles exceeding the age benchmark, 35 also exceed the mileage benchmark. There is therefore some overlap between the two benchmarks, but they are not identical.

A suggested appropriate goal for an age target is 75%. The fleet currently meets this benchmark.

Condition Condition is the most subjective benchmark, but is still useful. Currently, 75% of revenue vehicles meet the benchmark of "excellent" or "good" condition. This rating may vary once more robust guidance on assessing vehicle condition is established.

Establishing a condition target of 75% would be consistent with the other benchmarks and would recognize the uncertainty associated with this measure. The fleet currently meets this benchmark.

In practice, since the survey shows that 51% of all revenue vehicles exceed one or more benchmark, there will be some overlap in replacing vehicles and meeting goals. Meeting the mileage target will go a long way towards meeting the other two targets. However, since the targets are not identical, the two additional

targets can serve to help set the prioritization to select vehicles to be replaced. A vehicle exceeding multiple targets could have priority over a vehicle that exceeds only one target.

3.1.1.2 Backup Revenue Vehicles

Mileage Similar to revenue vehicles, mileage is also the benchmark most frequently exceeded for backup vehicles. Because of the practice of selecting high-mileage vehicles as backups, only 22% of vehicles currently meet the benchmark.

Since these vehicles are backups, a lower target is appropriate. With 41 backup vehicles in the fleet, setting the target at 40% would require an additional 7 vehicles meeting the standard. A target of 50% would require 12 vehicles; a target of 60% would require 16.

A suggested appropriate goal for an age target is 50%, requiring 12 new vehicles or vehicles passed down from the revenue vehicle fleet. This would be a 28% increase in the standard for backup vehicles.

Age The age benchmark is currently being met by 61% of backup vehicles, or 25 of 41. a suggested target for age would be 50% to be compatible with the suggested target for mileage. Since the fleet already exceeds this target, this makes age more of a prioritization factor for backup vehicles.

Condition Currently, 54% of backup vehicles meet the benchmark of “excellent” or “good” condition.

Establishing a condition target of 50% would be consistent with the other targets and would recognize the uncertainty associated with this measure. The backup vehicle fleet currently meets this target.

3.1.1.3 Non-Revenue Vehicles

There are only 3 non-revenue vehicles in the fleet, so a change in any one vehicle causes a 33% change in the statistics. This makes generalizations based on aggregate statistics less useful. Setting a target for this vehicle class should recognize that they do not carry passengers, so there is less risk associated with their State of Good Repair conditions. Additionally, the target should not be set so high that the program recommends replacement of a non-revenue vehicle when a revenue vehicle or backup should have higher priority.

Currently, one backup vehicle meets all its benchmarks and two vehicles exceed all theirs. This gives a statistic of meeting the benchmark for 33% for all categories.

Mileage Setting the mileage target at 50% for non-revenue vehicles would require updating one vehicle. This recognizes that non-revenue vehicles make a contribution to operations, but are not as vital as revenue vehicles or backups.

Age Setting the age target at 50% for non-revenue vehicles would require updating one vehicle.

Condition Setting the condition target at 50% for non-revenue vehicles would require updating one vehicle.

3.2 Facilities & Equipment Condition Targets

The most important finding of the provider survey is that providers were unsure about the inventory, ownership, value, and condition of their facilities and equipment. Developing objective and reliable data should be a goal in order to make the performance targets more meaningful and ultimately more useful. More detailed data to enable more reliable classification of a facility as an administrative, maintenance, or access & parking facility is also desirable.

3.2.1 Facilities

Currently, 100% of facilities were reported as meeting the benchmark of "excellent" or "good" condition. With a range in age of from 2 to 50 years, age did not seem to be a factor in facility condition, and so is not necessary as a target. The recommendation is therefore to use facility condition as the target for all facility classes.

3.2.2 Administrative Facilities

Administrative facilities include offices for receiving calls, booking trips, and dispatching vehicles, and are therefore as critical to operations as the vehicles themselves. In the current inventory, four facilities were reported in excellent condition and five in good condition. Recognizing the importance of this facility class and their current condition, setting a target of 100% in good condition seems appropriate.

3.2.3 Maintenance Facilities

Maintenance facilities are vital to long-term operation of the fleet, but are somewhat less critical for day-to-day operations. The availability of commercial mechanics provides a back-up maintenance function, and some providers rely on them exclusively. The target for maintenance facilities can therefore safely be set lower than the target for administrative facilities. Currently two maintenance facilities are listed in excellent condition and five in good condition for 100% compliance with the benchmark. A target of 90% is suggested for maintenance facilities in order to prioritize administrative facilities.

3.2.4 Access & Parking Facilities

This asset class includes storage sheds, bus shelters, and bus barns. Of the 14 facilities reported in this class, eight were reported in excellent condition and six in good condition, for 100% compliance with the benchmark. Bus parking is important to preserving vehicle condition and appearance in the Montana climate, particularly for cutaway vehicles with vulnerable body seams. However, the condition target should recognize the fact that this asset class is less critical to long-term and day-to-day operations, and can be set lower in order to prioritize other asset classes. The suggested condition target for access & parking facilities is 80%.

3.3 Equipment Condition Targets

Only one provider reported having equipment (a diesel storage tank), and they did not know if its value exceeded $50,000 to meet the threshold for inclusion in the TCMP. This first version of the TCMP for

Montana should therefore recognize this data need, and set an initial target that is generous and that does not conflict with setting priorities for other critical assets.

With only a single piece of equipment reported, the data does not support an evaluation of State of Good Repair (SGR) based on age. A diesel storage tank, with few operating parts, has a longer operating life than a complex piece of machinery like a vehicle lift, so setting a common age standard for both may not be appropriate. With this in mind, the suggested target for equipment would be based on condition. The recommended upgrade of data collection and assessment should therefore include provisions for a more rigorous and objective inventory and condition assessment of equipment.

Similar to maintenance facilities, equipment can have a lower target because commercial maintenance facilities are available for back-up. The suggested condition target for equipment is 80%.

3.4 Summary of Group SGR Performance Targets

Table 11 and Table 12 provides summaries of performance targets for different asset classes.

Table 11. SGR Performance Targets for Rolling Stocks and Non-Revenue Vehicles

Asset Category	Asset Class	Performance Measure	Default ULB (Years)	FY 18 Target
Revenue Vehicles	Automobile	Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	8	25%
	Bus		14	25%
	Cutaway		10	25%
	Minivan		8	25%
	Van		8	25%
Equipment (Non-Revenue Vehicles)	Automobiles		8	50%
	Trucks		14	50%

Table 12. SGR Performance Targets for Facilities

	Performance Measure	FY 18 Target
Passenger / Parking Facilities	% of Facilities that meet or exceed a TERM Condition of 3.0	0%
Administrative / Maintenance Facilities		0%

4. ASSET REPLACEMENT AND DECISION SUPPORT TOOL

This section outlines the current capital investment decision process, refinement to MDT's prioritization (or replacement) scoring, the decision support tool that is used for the development of this TCMP, and MDT-specific refinements to the decision support tool to address the new replacement scoring system.

4.1 Vehicle Capital Investment Process at MDT

Capital awards are reviewed and scored by the Capital Assistance Review (CAR) committee and the Transit Section. Scoring is based on 100 total points. The CAR, which is made up of members whom represent all facets of transit systems in the state, scores a total of 80 points and the Transit Section scores a total of 20 points. Of the 80 points, the CAR scores a total of 60 points for "Capital Need" and a total of 20 points for "Program Management." Of the 20 points, the Transit Section scores a total of 10 points for "Program Management" and a total of 10 points for "TAC Prioritization." The breakdown of scoring points from the Transit Section and from the CAR is shown in Figure 15.

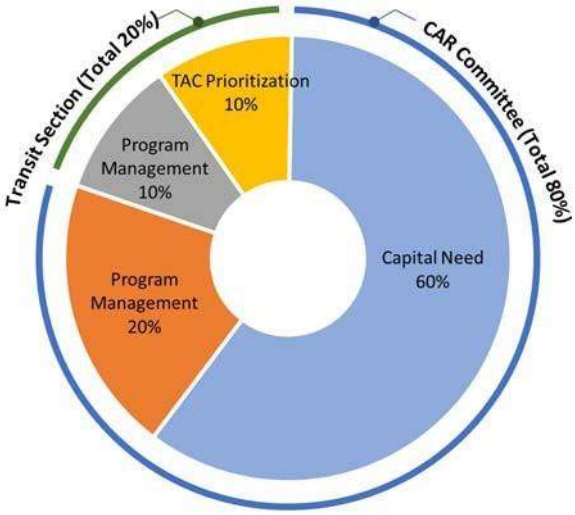

Figure 15. Capital Assistance Review (CAR) Committee Scoring Breakdown for Vehicles

The 20 points scored by the Transit Section are formula generated and represent required meetings attendance, timeliness of quarterly report submittals, and prioritization by the Transportation Advisory Committee (TAC) for each local transportation service area.

Guidance for the Vehicle Capital Investment Process at MDT state that it is the applicant's responsibility to state their program's capital need and provide a general statement of their program administration. Capital need statements shall clearly define the need and circumstances or logic in which each capital request is necessary to continue adequate transportation services. Excellent statements may include supporting documents such as planning studies, surveys, meeting minutes, public input, detailed vehicle service records, or facility improvement quotes. Need statements should consider both expansion and replacement. Need statements shall include application characteristics for each capital item such as expansion or replacement, service type (i.e. fixed route, demand response, etc.), and trip purpose (health care, employment, nutrition, recreation, etc.). Expansion and replacement statements may include the following information:

Expansion:

- Consumer demand vs. vehicle availability and capacity
- Expansion of service hours or service area
- Benefits of new technology or of bus or passenger shelter

Replacement:

- Maintenance history of the replacement item

- Useful life and current miles and years of the replacement item
- Spare ratio, defined as the ratio of service vehicles to backup vehicles
- Safety concerns (i.e. breakdowns, risky service area)

Program management refers to the administration of the transportation program which has applied for the capital items. The applicant shall clearly explain their level of local coordination and capital maintenance program management. The applicant will provide a brief program management narrative describing their transportation service, current and prospective level of coordination, a brief description of their capital maintenance program, and any other pertinent supporting information they find relevant. Capital maintenance refers to the mechanical and physical upkeep of an agency's vehicle fleet and facilities. Coordination and maintenance statements may include the following information:

Coordination:

- Annual petitioning and participation of local interest groups
- General summary of the cooperative agreements
- Future anticipated cooperative agreements
- Frequency of TAC meetings

Maintenance:

- Basic maintenance policies and practices structure
- Staff and contractor duties related to maintenance
- Cooperative maintenance agreements with local service providers
- Fleet replacement forecasting
- Fleet and facility conditions

After the committee has evaluated all capital items the scores are averaged and prioritized into a spreadsheet. Based on the available amounts of funding and the MDT management approval process, agencies are funded from the highest priority down until the available funding is completely spent.

4.1.1 Replacement Prioritization Scoring (RPS) for Vehicles

To inform the decisions of the CAR Committee and provide them with a data-driven prioritization scoring, MDT developed the Replacement Prioritization Scoring (RPS) system for vehicles based on a combination of age, mileage, condition, and maintenance issues for specific makes or models. The RPS is on a scale of 100 in which the higher scores mean higher priority for replacement. The RPS is used to refine the prioritized capital program that is obtained through the Transit Asset Prioritization Tool (TAPT) tool, as explained in the next section.

4.1.1.1 Vehicle Mileage Rating

To rate the vehicles for their mileage, the RPS rating uses the Vehicle Mileage Milestone (VMM), which is listed in Table 13 for MDT vehicle assets. The VMM recognizes the expiration of vehicle warranties and the threshold for the third major preventative service occurrence. After a vehicle has exceeded its VMM, recommended service schedules begin to repeat, requiring major service every 30,000 to 40,000 miles. At the same time, wear on the vehicle's other systems tend to make major service or repairs less cost-effective than vehicle replacement. Table 14 provides the rating system details for vehicle mileage, based on a 1-5 scale, with 1 representing the vehicles that still have more than 20,000 miles until exceeding the VMM (best mileage rating), and 5 representing the vehicles which have exceeded the VMM for more than 30,000 miles (worst mileage rating).

Table 13. Default VMMs for MDT Vehicle Asset Classes

Type	Asset Subclass	Default VMM
Automobile	Automobile	100,000
Bus	HD Bus	350,000
Cutaway	Low-floor Cutaway	150,000
Cutaway	MD Cutaway	150,000
Cutaway	Truck Cutaway	150,000
Cutaway	Van Cutaway	150,000
Minivan	Minivan	100,000
Van	Accessible Van	100,000
Van	Extended Van	100,000

Table 14. Vehicle Mileage Rating Criteria for RPS

Criteria	Rating
Mileage ≤ VMM - 20,000	1
VMM - 20,000 < Mileage ≤ VMM	2
VMM < Mileage ≤ VMM + 15,000	3
VMM + 15,000 < Mileage ≤ VMM + 30,000	4
VMM + 30,000 < Mileage	5

4.1.1.2 Vehicle Age Rating

FTA has suggested using Useful Life Benchmark (ULB) as a measure to track performance of vehicles. According to FTA, "*each vehicle type's ULB estimates how many years that vehicle can be in service and still be in a state of good repair. The ULB considers how long it is cost effective to operate an asset before ongoing maintenance costs outweigh replacement costs.*[4]" FTA has developed default ULBs that are listed in Table 15 for the assets owned and operated by MDT transit providers. Alternatively, FTA allows agencies to develop their own ULBs based on operating conditions, warranty information, and any other criteria that would affect assets' maximum useful life in the specific regions where providers operate. MDT made the

[4] "Transit Asset Management: Frequently Asked Questions", https://www.transit.dot.gov/TAM/gettingstarted/htmlFAQs, accessed on July 10, 2017.

decision to use the FTA default ULBs, and thus the rating system outlined in Table 16 is based on the FTA ULBs. In this rating scale of 1-4, rating of 1 represents the vehicles that have more than 2 years until exceeding their ULB (best age rating), and 4 represents vehicles that have exceeded their ULBs for more than 5 years (worst age rating).

Table 15. Default FTA ULBs for MDT Vehicle Classes

Type	Asset Subclass	Default ULB
Automobile	Automobile	8
Bus	HD Bus	14
Cutaway	Low-floor Cutaway	10
Cutaway	MD Cutaway	10
Cutaway	Truck Cutaway	10
Cutaway	Van Cutaway	10
Minivan	Minivan	8
Van	Accessible Van	8
Van	Extended Van	8

Table 16. Vehicle Age Rating Criteria for RPS

Criteria	Rating
Age ≤ ULB- 2	1
ULB - 2 < Age ≤ ULB	2
ULB < Age ≤ ULB + 5	3
ULB + 5 < Age	4

4.1.1.3 Vehicle Condition Rating

MDT providers use a condition rating system on a scale of 1-4 to report condition of their revenue- and non-revenue vehicles, with 1 representing "excellent" condition, and 4 representing "poor" condition. This is summarized in Table 17. As discussed under Section 3.1.1., the current system for assessing vehicle condition is based on providers' input from the surveys. As such, this measure can be considered as subjective, and does not distinguish the difference between the condition of various vehicle components such as the engine, running gear, body, and general appearance. The Data Initiatives in Section 2.3.3. present the need to develop a more comprehensive and objective evaluating system for vehicle condition.

Table 17. Vehicle Condition Rating for RPS

Condition	Rating
Excellent	1
Good	2
Fair	3
Poor	4

4.1.1.4 Taking Maintenance Issues into Account

According the MDT transit providers, certain makes or models of vehicles have been causing maintenance or operation issues in different regions of the state of Montana. To capture these issues, and to prioritize replacement of these "problematic" assets, a "Maintenance Issues" factor was introduced, on a scale of 0-2, with 0 for models with no issues, 1 for moderate issues, and 2 for problematic models (Table 18).

Table 18. Maintenance Issues Factor for RPS

Criteria	Rating
No issues	0
Moderate Issues	1
Problematic Model	2

4.1.1.5 Equation for RPS and Priority Categories

Based on the importance of the abovementioned factors to the decision-making process at MDT, weighting factors were assigned to these factors, as summarized in Table 19. Composition of RPS is also illustrated in Figure 16. In addition, Table 20 summarizes different replacement priority categories based on RPS range, for high, medium, and low priorities. These priorities will be used to refine the capital investment programs in the TAPT tool, described in the next sections.

Table 19. Weight Factors for RPS Factors

Criteria	Scale	Weight	Max. Criteria Score
Mileage	1-5	10	50
Age	1-4	7	28
Condition	1-4	4	16
Maintenance Issues	0-2	3	6
		Total RPS	**100**

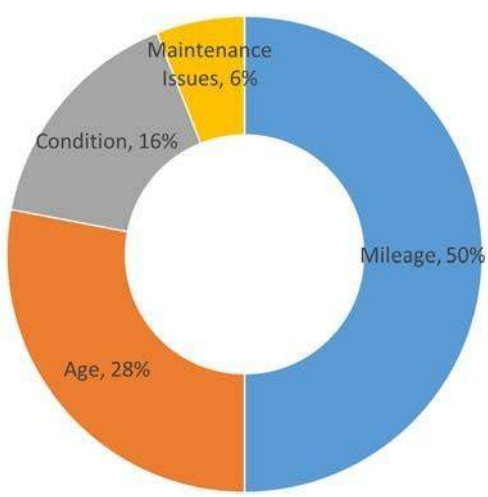

Figure 16. Composition of RPS and its Contributing Components

Table 20. RPS-Based Replacement Priority Categories

RPS Range	Replacement Priority
RPS ≥ 80	High
60 ≤ RPS < 80	Medium
RPS < 60	Low

4.2 Transit Asset Prioritization Tool (TAPT)

Transit Cooperative Research Program (TRCP) Reports 157[5] (Phase 1) and 172[6] (Phase 2) (both sponsored by FTA) outlined the outcomes of a two-phased research program that developed a framework for transit SGR and described a set of steps in applying the framework, including development of an investment plan. The framework was then further developed into the TAPT spreadsheet, that can be utilized to develop a prioritized capital investment plan for vehicles and facilities. According to TCRP 172, the TAPT tool "*can assist a transit agency in developing its TCMP but the fundamental goal of the tool is to help transit agencies optimize their asset rehabilitation and replacement decisions*."[6]

TAPT tool is used for the purpose of this report for developing the investment plan. However, certain refinements were implemented to the prioritization process using RPS scoring system for MDT assets. This is described in the next sections.

Chapter 3 of TCRP Report 172 provides step-by-step instructions for using TAPT, and TCRP Report 157 provides information on the modeling approach and defaults used in the model. Therefore, the current TCMP will not cover those details.

4.2.1 Asset Deterioration Models and Prioritization Framework

The objective of the prioritization is to recommend a set of alternatives to maximize the return on capital investment in replacement rolling stocks and service vehicles, and rehabilitating the facilities while meeting the SGR performance targets and budget constraints. For this purpose, a set of deterioration models is needed to forecast the condition of assets in the future based on the analysis year data and historic information. National averages and experiences of other agencies can be instrumental in developing useful deterioration models.

The TAPT has multiple models built in that can be customized based on the specific needs and experiences on the agency. At the same time, the analysis can also use the default values which are based on national averages. These are explained in TCRP Report 172. In this section, two types of models are described; one is a mileage-based model for vehicles, and the other is a condition-based model for facilities.

[5] TCRP Report 157, "State of Good Repair: Prioritizing the Rehabilitation and Replacement of Existing Capital Assets and Evaluating the Implications for Transit," Transportation Research Board (TRB), Sponsored by Federal Transit Administration, 2012.

[6] TCRP Report 172, "Guidance for Developing a Transit Asset Management Plan," Transportation Research Board (TRB), Sponsored by Federal Transit Administration, 2014.

4.2.1.1 Mileage-Based Deterioration Model for Vehicles

The TAPT model for vehicles is adapted from the FTA publication *Useful Life of Transit Buses and Vans*[7]. This model is based on the assumptions that:

- Vehicles deteriorate primarily as a function of accumulated mileage.
- As vehicle deteriorates, the agency cost increases.
- The probability of breakdowns (also known as "failures" or "road calls") increase as vehicle deteriorates. This means less mileage travelled between failures.
- More frequent road calls lead to longer delays and higher user costs.

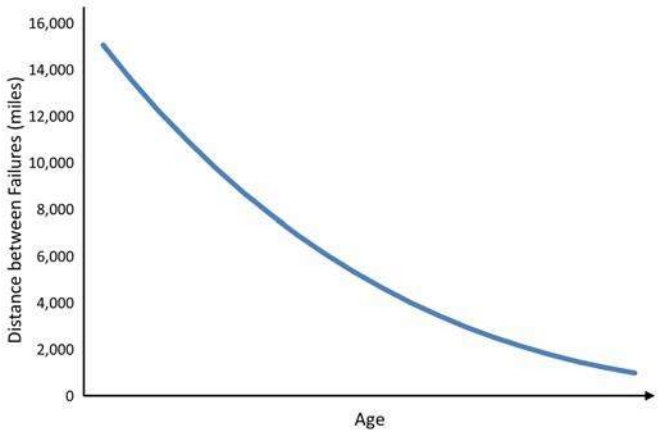

Figure 17. Sample Mileage-Based Vehicle Deterioration Model

In addition, mileage-based deterioration models can help in planning preventive or corrective maintenance or rehabilitation actions for vehicles, which can be very helpful in capital investment planning. It is fact that, once a vehicle has exceeded its useful life (or cost-minimizing mileage), the transit provider will have to spend more money to keep the vehicle operational that it would to replace the asset. Figure 17 illustrates a sample mileage-based deterioration model for vehicles.

4.2.1.2 Condition-Based Deterioration Model for Facilities

This type of model is more suitable for assets other than vehicles, such as facilities, in which assessment and capital investment are conducted based on the condition of these assets and their components. The TAPT has a condition-based model that uses Markov Decision Support. For such models, a set of condition states needs to be defined for the asset (In this case, facilities), as well as transition probabilities for deteriorating from a condition state to a lower state over time, and cost of improving the condition from one state to a higher state. The default model in TAPT has been developed using the condition states and deteriorating data from FTA's TERM (Transit Economic Requirements Model). Figure 18 illustrates a sample condition-based deterioration model for facilities.

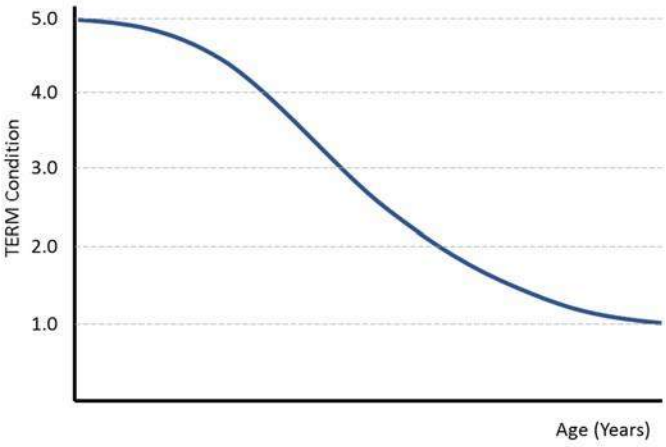

Figure 18. Sample Condition-Based Facility Deterioration Model

[7] "Useful Life of Transit Buses and Vans", Technical Report FTA VA-26-7229-07.1, Federal Transit Administration, 2007.

4.2.2 MDT-Specific RPS-Based Refinement to TAPT for Vehicles

The capital investment prioritization for vehicles in TAPT tool is based on vehicle's accumulated mileage. As discussed in Section 4.1.1, to better inform the CAR Committee for their decision-making, MDT developed the RPS scoring system for prioritization of vehicle replacement. To utilize RPS as part of the TAPT framework, the analysis was first conducted based solely on vehicle mileage to get the first cut of the vehicle replacement schedule, and then the list was re-prioritized based on RPS values. The "pipelining" feature of TAPT allows for overriding the prioritization analysis and schedules replacement of specific vehicles for a specific year.

To do this, RPS was calculated for all vehicles, and then vehicles with "high" replacement prioritization (Table 20, RPS ≥ 80) were "pipelined" for replacement within the first two years from the analysis year, and vehicles with "medium" replacement prioritization were "pipelined" for replacement within the first four years from the analysis year. This analysis gave a more refined prioritization result.

A second round of refinement was conducted by "re-pipelining" the asset replacement to meet the second objective of MDT for the transit asset management plan which was to maximize the use of $2m capital replacement budget to maintain the SGR and meet the performance targets.

Outcomes of this approach are:

- Prioritization based on MDT-specific RPS system, and thus addressing the high-risk assets first.
- Maximizing utilization of the capital investment budget over the analysis period.
- Meeting the performance targets and maintaining the SGR

This process is illustrated in Figure 19, and the results of the analysis are presented in the next section.

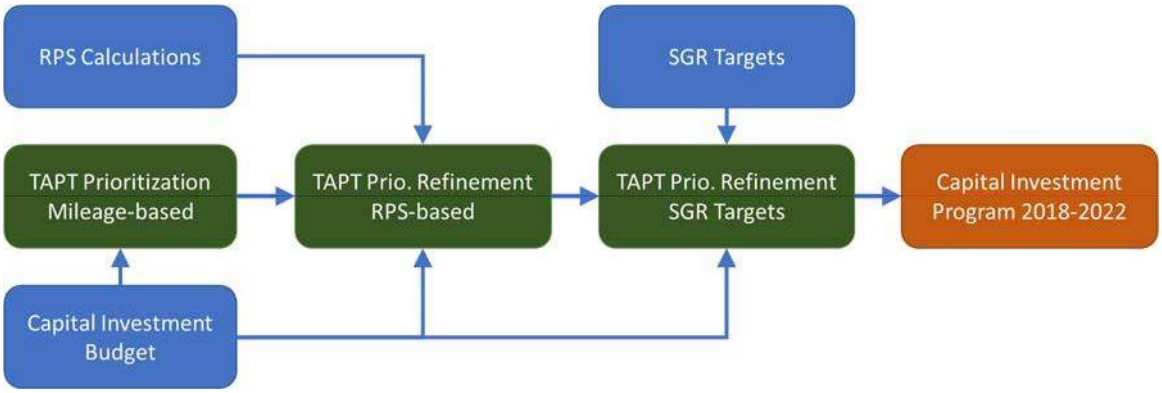

Figure 19. MDT-Specific Prioritization Framework based on RPS and SGR Targets

5. INVESTMENT PRIORITIZATION

This section outlines the investment prioritization task, results of the analysis, and a refined capital investment program for the next five years of this study (2018-2022). The prioritization framework is described in the previous section, and thus this section focuses on the results of the analysis.

5.1 Capital Investment Scenarios

An objective of the transit asset management plan for MDT was looking at how different annual capital investment levels would impact the long-term performance of the transit assets. For this purpose, in addition to the current level of capital budget ($2m annually), three levels of capital investment (also called "scenarios") were considered and the results were compared to those of the current capital budget level. These additional scenarios were:

- Current capital investment budget + 15%
- Current capital investment budget – 15%
- "Do nothing" scenario (zero capital investment budget)

The first two scenarios were included to see the impacts of increased and decreased budgets, and the last one to see how system-level performance would deteriorate without any maintenance and renewal activities, to highlight the need for capital investment.

5.2 Factors for TAPT Analysis

For the most part, the analysis used the default values in the TAPT tool, which, as described in Section 4.2, are based on national averaged. However, MDT decided to use its specific values for revenue vehicle replacement costs and Mean Distance Between Failures (MDBF), as outlined in Table 21.

It should be noted that currently MDT transit providers do not collect comprehensive MDBF data, and thus the information in the database was not accurate enough for this analysis. A literature search of other agency data for similar types and classes of assets revealed a reasonable range that could be used for the analysis. Moving forward, as indicated in Section 7, one of the recommendations to improve the transit asset management practice for MDT transit providers is to collect timely and accurate road call or failure data for their revenue and non-revenue vehicles that can inform the future revisions of this TCMP.

Table 21. Default FTA ULBs for MDT Vehicle Classes

Type	Asset Subclass	Replacement Cost	MDBF[⌘] (mile)
Automobile	Automobile	$25,000	6,000
Bus	HD Bus	$400,000	6,000
Cutaway	Low-floor Cutaway	$150,000	6,000
Cutaway	MD Cutaway	$195,000	6,000
Cutaway	Truck Cutaway	$111,000	6,000
Cutaway	Van Cutaway	$67,000	6,000
Minivan	Minivan	$29,000	6,000
Van	Accessible Van	$40,000	6,000
Van	Extended Van	$51,000	6,000

[⌘] Mean Distance Between Failures

For facilities, the deterioration models and the condition transition probabilities in the TAPT were adopted as the analysis model (see Section 4.2). However, the replacement costs and rehabilitation costs were changed to MDT specific numbers, as outlined in Table 22.

Table 22. MDT Facilities Replacement and Rehabilitation Costs

Facility Class	Total Replacement Cost	Rehabilitation Cost[⌘]
Administration	$1,000,000	$25,000
Maintenance	$1,000,000	$25,000
Access & Parking	$29,000	$10,000

[⌘] Cost of improving the condition by 1 rating in TERM scale

5.3 Prioritization of Investments, and SGR Targets for Current Budget Level

During the early interviews with the MDT staff, it was indicated that the average annual budget for capital improvements is $2m per year. This level was the basis for prioritization of capital investments over the 5-year period of this study, 2018 through 2022.

The analysis was conducted using the TAPT tool, with SGR targets (Table 11, Table 12) and the RPS for MDT assets (Appendix E) as constraints, based on the framework outlined in Section 4.2.2. This iterative prioritization process led to optimization of the capital investment while meeting the SGR targets.

Figure 20 and Figure 21, summarizing the capital investment needs and the percentage of revenue vehicles exceeding their ULB, respectively, illustrate the outcomes of the prioritization process under the current budget scenario. The initial analysis, which was based on mileage only, is shown by the blue bars. This analysis met the targets, but did not use the budget efficiently; some years had much higher expenditures than others. The first prioritization run using the RPS modifications, shown by the orange bars, improved the budget utilization, but compromised the overall performance of the scenario: in 2018, about 25% of revenue vehicles would exceed their ULB, which is right at the SGR target. By incorporating the budget limits and SGR targets as analysis constraints, the second prioritization analysis, shown with green bars, yielded much better results, optimizing the budget utilization while remaining below the SGR targets.

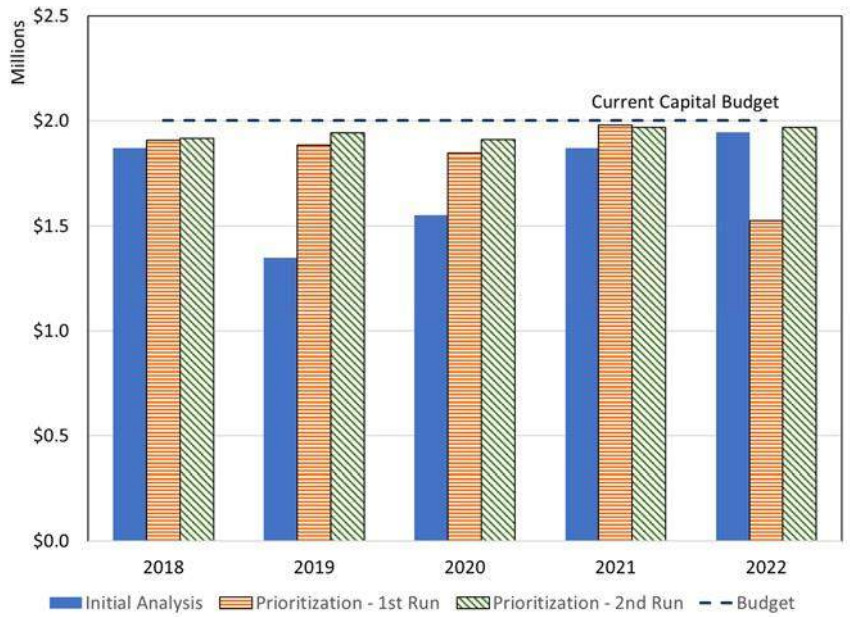

Figure 20. Results of Prioritization Analysis – Capital Investment Needs for Revenue Vehicles for the Current Budget

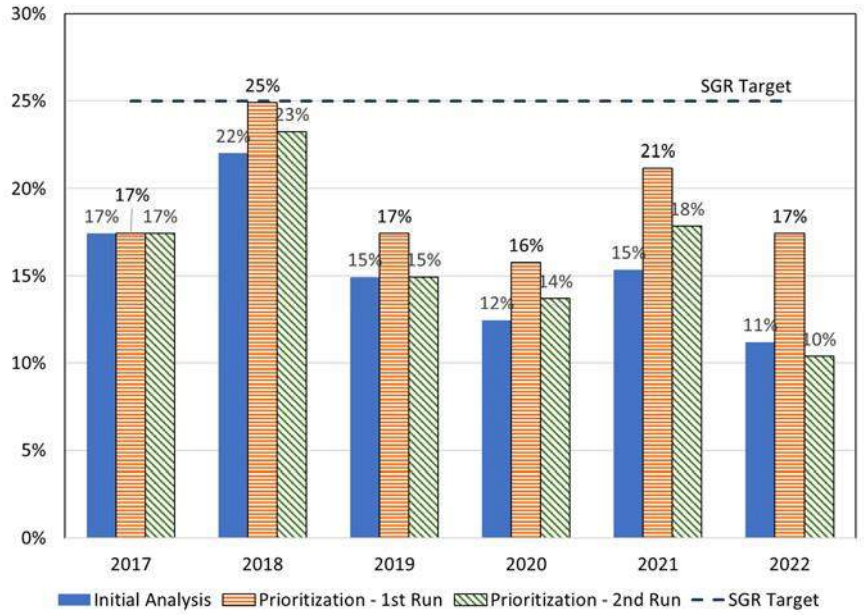

Figure 21. Results of Prioritization Analysis – Percentage of Revenue Vehicles Exceeding ULBs for the Current Budget

As a result of this asset prioritization process, overall condition of revenue vehicles will improve at the state level, from 52% with low RPS and 18% with high RPS in 2017, to 81% with low RPS and only 1% with high RPS in 2022, as shown in Figure 22.

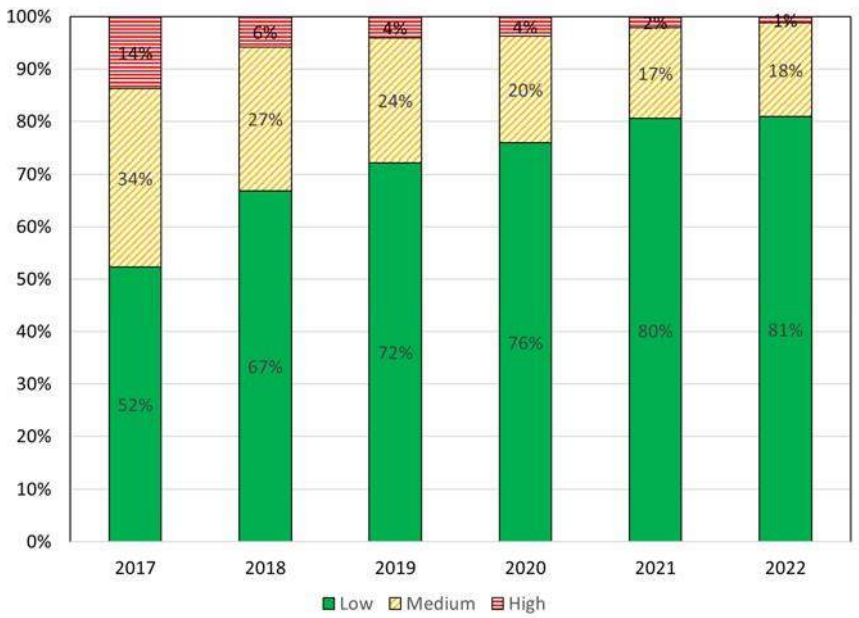

Figure 23. Trend of State-Level Revenue Vehicle RPS Categories over the Analysis Period for the Current Budget

The benefits of the prioritization process are also illustrated in Figure 23, which shows that the average RPS at the state level will drop by about 48% from 52.4 in 2017 to 27.2 in 2022. This demonstrable improvement in the number of vehicles meeting the SGR targets while operating under the current budget scenario for asset replacement vividly demonstrates the benefits of having a systematic asset management process.

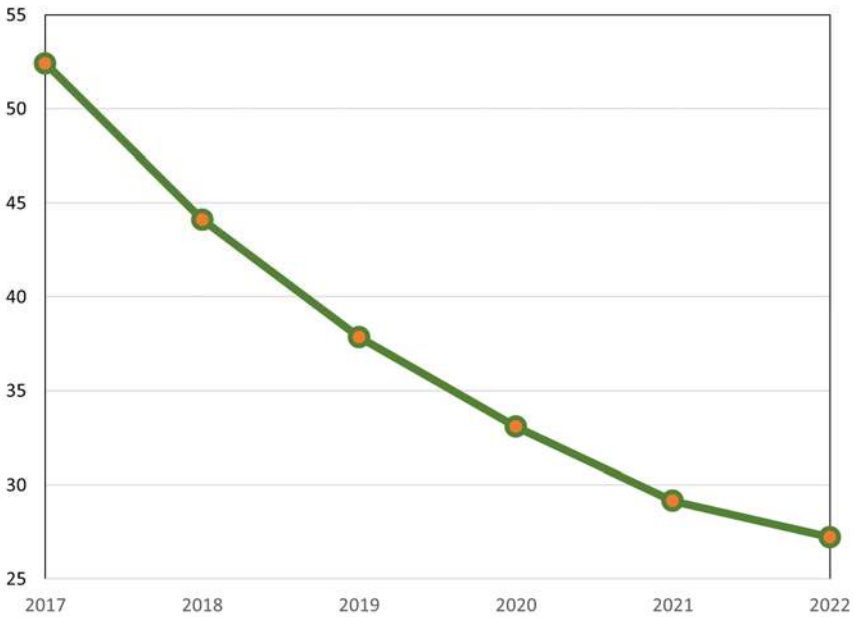

Figure 22. Average State-Level Revenue Vehicle RPS over Analysis Period for the Current Budget

In the case of facilities, they are generally in "excellent" or "good" condition, with minimal need for rehabilitation over the analysis period. The average TERM condition rating for facilities will stay above 3.0 (the minimum acceptable level), with a slight change from 4.43 in 2017 to 4.29 in 2022, as shown in Figure 24.

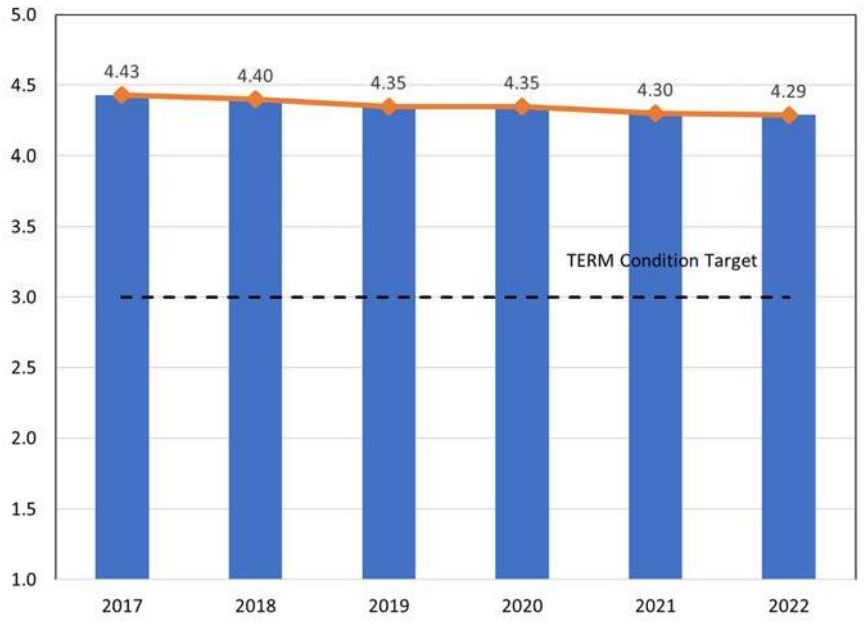

Figure 24. Average Condition of Facilities (TERM Scale) for the Current Budget

Another performance measure that transit agencies monitor as an indication of their performance improvement is the Mean Distance Between Failures (MDBF). The trend for the state-level revenue vehicles is shown in Figure 25, which demonstrates the improved system performance associated with a higher proportion of vehicles meeting their ULB. With the prioritized investments program, MDBF improves by 37%, from 3,725 miles between failures in 2017 to 5,111 in 2022.

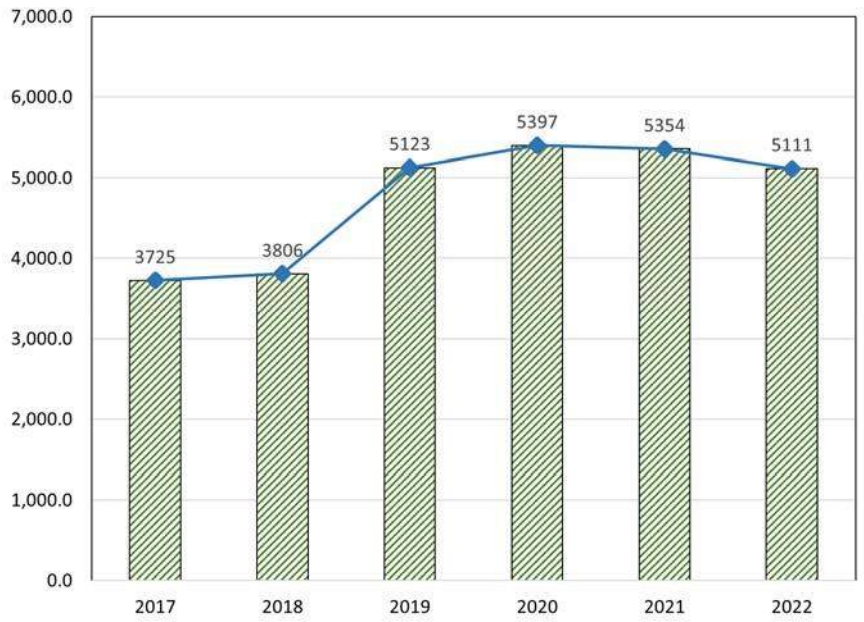

Figure 25. Mean Distance Between Failures (MDBF) in Miles for the Current Budget

Appendix F provides a full listing of the components of this comprehensive and systematic asset management process for capital replacements. The list displays the results of the pipelined replacements for specific vehicles and facility rehabilitations for FY 2018 through 2022.

5.4 Comparison with Other Investment Scenarios

As explained in Section 5.1, three additional investment scenarios were considered to analyze the impacts of increased budgets (current budget + 15%), reduced budgets (current budget – 15%), and no investment at all ("do nothing" or no capital budget), on the performance of the system over the analysis period.

The performance of the capital asset prioritization and replacement system with no budget is shown in Figure 26. This budget scenario essential shuts down the system to show the need for capital asset replacement and to provide a baseline to gauge its effectiveness.

The current budget scenario reduced the number of vehicles with a high RPS from 14% in 2017 to 1 % in 2022. In comparison, the "do nothing" scenario doubled this number to 28%. For vehicles with a medium RPS, the current budget scenario reduced the number of vehicles from 34% to 18%, while the "do nothing" scenario increased it to 41%. Vehicles with a low RPS were increased from 52% in 2017 to 81% in 2022 with the current budget scenario, while with the "do nothing" scenario they were decreased to 31%, far below the SGR target of 75%.

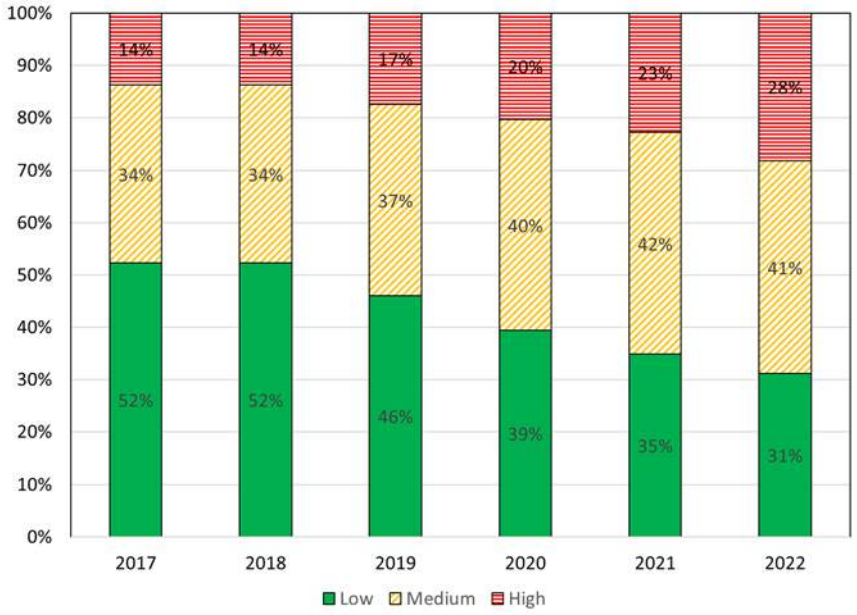

Figure 26: Trend of State-Level Revenue Vehicle RPS Categories over the Analysis Period for "Do Nothing" or Zero Investment Scenario

This "do nothing" scenario clearly demonstrates both the need for asset replacement and the severity of the issue. Complementing this view, two additional budget scenarios were prepared to show the effects of a 15% reduction and a 15% increase in the baseline budget.

As evident from Figure 27 and Figure 28, ±15% difference in the current budget levels will not make a significant impact on the overall performance of the system. Where the process under the current budget scenario reduced the number of vehicles with a high RPS from 14% in 2017 to 1 % in 2022, the +15% scenario and the -15% scenario both reduced the number to 2% over the same period. For the number of vehicles with a medium RPS, the current scenario showed a reduction from 34% to 18%, while the +15% scenario reduced the number of vehicles to 14% and the -15% demonstrated a reduction to 15%.

It is also notable that for all three funded scenarios, that the first year of the program (2018) shows the most dramatic improvements; subsequent years show improvements but are more incremental. This demonstrates that the implementation of a systematic program of capital asset prioritization and replacement has an impact on vehicle SGR targets that is even more beneficial than the general funding level. While the results of the do-nothing scenario demonstrated the need for a capital asset replacement program, the current budget scenario and the ±15% scenarios demonstrated the benefits of implementing a systematic and efficient program. The efficiency of the program itself is a benefit to the asset management system.

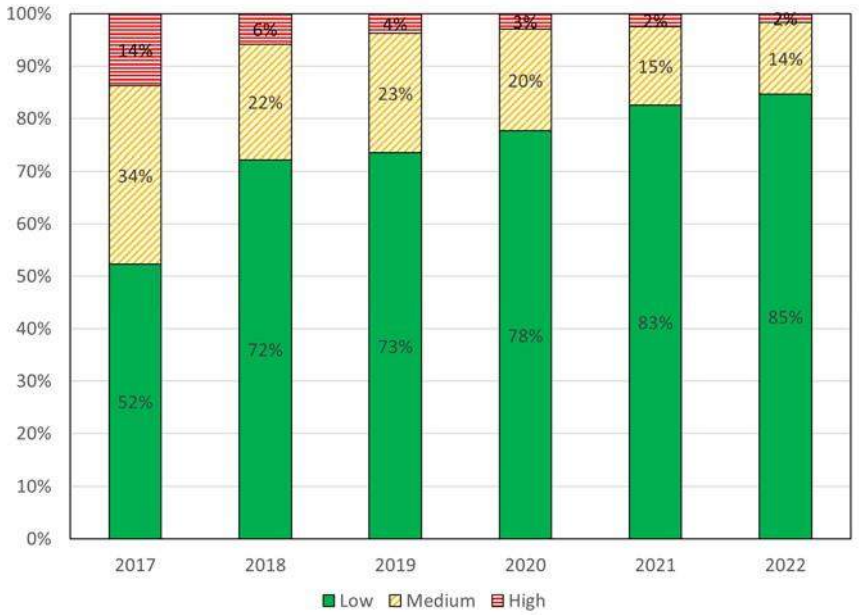

Figure 27. Trend of State-Level Revenue Vehicle RPS Categories over the Analysis Period for Current Budget + 15%

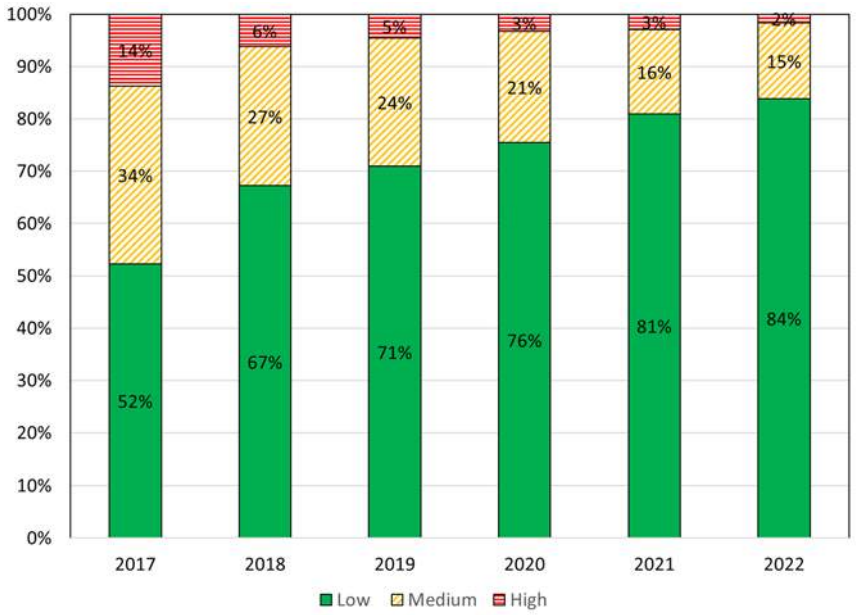

Figure 28. Trend of State-Level Revenue Vehicle RPS Categories over the Analysis Period for Current Budget - 15% Scenario

6. PERFORMANCE EVALUATION PLAN AND TCMP UPDATES

6.1 Performance Monitoring Dashboard

To provide MDT and its providers with the latest transit network performance, the project developed a proposed outline for a Performance Monitoring Dashboard that can be used in decision-making or for monitoring system performance to determine the impact of certain decisions, such as the capital investment planning. The proposed dashboard includes trends over time for transit network ridership, transit network mileage, road call, mean distance between failures (MDBF) for the system, and the forecasted vehicle condition trends, as well as mileage benchmark and age benchmark for revenue vehicles. By monitoring these, the stakeholders can evaluate the outcomes of their decisions and can revise their strategies accordingly. A mockup of the proposed dashboard is presented in Figure 29.

The dashboard can be accompanied by additional details by provider or by asset class, and can be updated on the MDT website on a monthly basis. Note that this dashboard is a tool to display the effects of the asset management system developed by this group plan, and so only relates to the thirty-seven §5307 transit providers. Data from other providers could also be added to the dashboard to present a comprehensive picture of transit in Montana, but should be kept separate so that the effects of the TCMP can be seen.

6.2 Annual Progress Reports

According to the national transit asset management final rule (published in July 2016) each entity developing a TAM Plan will have to report annually to FTA's National Transit Database (NTD). This submission should include:

1) projected targets for the next fiscal year.
2) condition assessments and performance results.
3) a narrative report on changes in transit system conditions and the progress toward achieving previous performance targets.

It is recommended that MDT add this submission to their calendar to ensure all data required for this annual report are collected in the quality and format necessary for the report, in a timely manner, throughout the year.

6.3 4-Year Full Update

According to the FTA rule, TMAP should be updated in its entirety at least every 4 years and may coincide with relevant (Statewide) Transportation Improvement Program (TIP). The plan should cover at least 4 years.

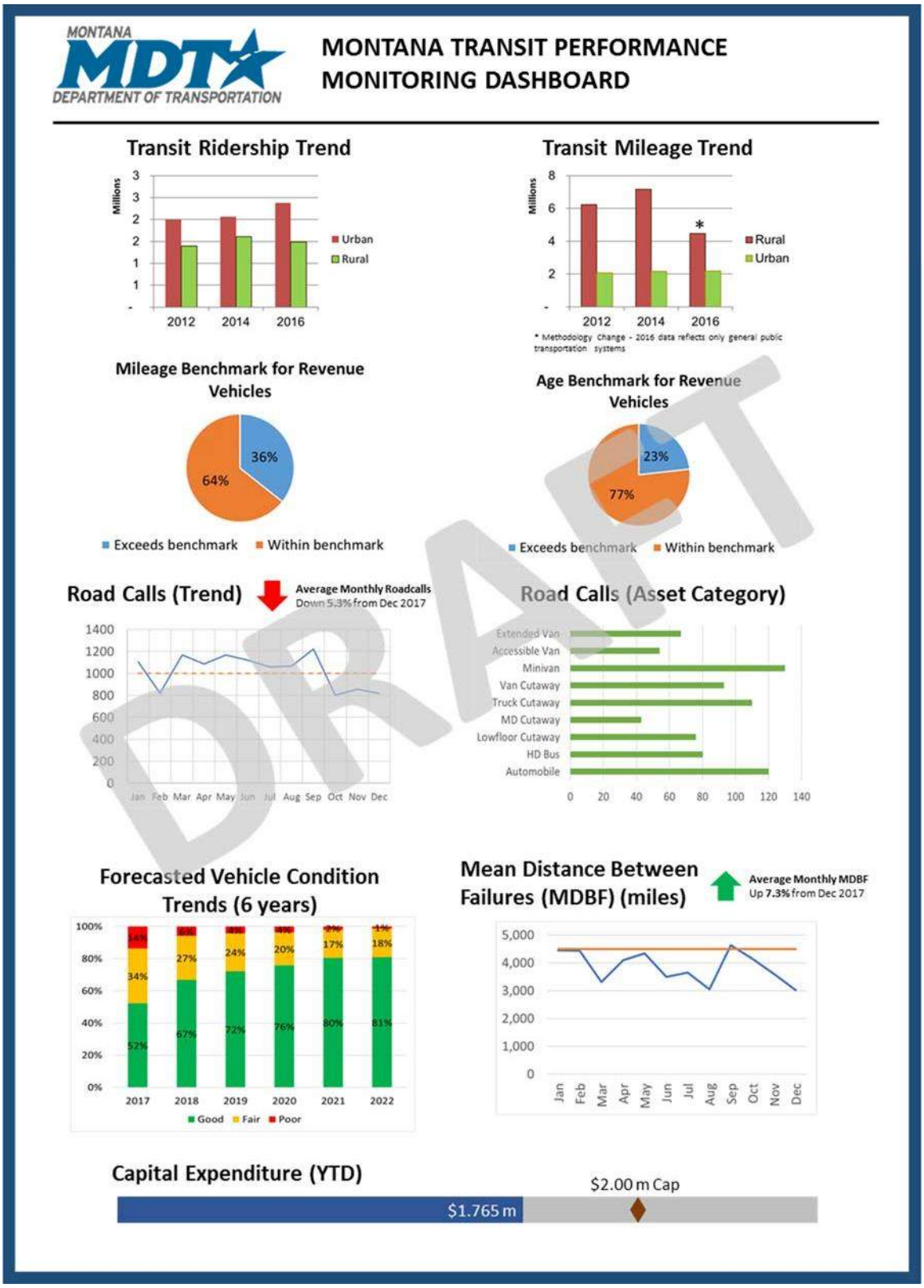

Figure 29. Proposed Transit Performance Monitoring Dashboard for MDT

7. IMPLEMENTATION OF TCMP

7.1 Implementation Strategy

This TCMP establishes measurable objectives for moving the providers toward the objective of the TCMP, which is establishing a strategic and systematic method for the transit providers to operate, manage, maintain, rehabilitate, and replace their capital assets. The plan also identifies a series of implementing actions to address this objective.

This section presents an implementation plan for the TCMP that includes a set of requirements and recommendations to improve MDT's transit asset management practice. The task descriptions are followed by an initial Implementation timeframe, and also are identified as required for complying with FTA's transit asset management rule (Requirement), or not required for complying (Recommendation). Tasks not required for compliance are recommended to support a comprehensive asset management approach, but do not directly impact performance reporting or Transit Capital Management Plan (TCMP) development required by the rule. The implementation plan lists five requirements and nine recommendations.

Requirement #1
Establish Asset Hierarchies

This task involves defining a hierarchy of assets and sub-assets for use in day-to-day asset management activities, including inventory tracking, condition assessment, and maintenance tracking. The task should address the hierarchy for revenue vehicles (including category, class, and subclass), equipment and non-revenue vehicles, and administrative and maintenance facilities. It is suggested the hierarchies be based on best practices used by other transit agencies or FTA's TERM Lite Tool.

Time Frame: 6 months
Type of Implementation: Once
Required for Compliance with FTA Requirements: Yes

Requirement #2
Implement TERM Condition Rating for Facilities

Currently condition assessment of facilities is based on subjective methods. MDT and its transit providers are encouraged to use FTA's Transit Economic Requirements Model (TERM) or TERM-Lite tool for measuring and reporting facility conditions of administrative, maintenance, and passenger facilities to the National Transit Database (NTD). This task will utilize the facility asset hierarchies established in 6.1.1, and will also fulfill the reporting requirements for the Transit Asset Management Performance targets. MDT's transit providers and MDT's headquarters are encouraged to adopt the guidelines outlined in FTA's Facility Condition Assessment Guidelines (2017) for assessment of their facilities.

Time **Frame**: 1 year
Type of Implementation: Once
Required for Compliance with FTA Requirements: Yes

Requirement #3
Utilize a Transit Capital Investment Decision Support Tool

Planning the capital investment program for the four-year period should take into account capital budget constraints, replacement prioritization (based on RPS, Recommendation No. 8), and other agency-specific factors. These can be accomplished by utilizing a transit capital investment prioritization tool that can be tailored the policies and practices of MDT. The Transit Asset Prioritization Tool (TAPT) is a tool developed as

part of a Transit Cooperative Research Program (TRCP) project, sponsored by FTA. This tool and the framework based on which this tool is developed are described in Section 4.2 of this plan. In addition, FTA's TERM Lite tool can be utilized for similar purposes.

Time Frame: 1 year
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: Yes

Requirement #4
Annual Reporting to NTD

According to the national transit asset management final rule (published in July 2016) each entity developing a TAM Plan will have to report annually to FTA's National Transit Database (NTD). This submission should include:

1) projected targets for the next fiscal year.
2) condition assessments and performance results.
3) a narrative report on changes in transit system conditions and the progress toward achieving previous performance targets.

It is recommended that MDT add this submission to their calendar to ensure all data required for this annual report are collected in the quality and format necessary for the report, in a timely manner, throughout the year.

Time Frame: 1 year
Type of Implementation: Ongoing Continuous every year
Required for Compliance with FTA Requirements: Yes

Requirement #5
Update TCMP in Its Entirety Every 4 Years

According to the FTA rule, TMAP should be updated in its entirety at least every 4 years and may coincide with relevant (Statewide) Transportation Improvement Program (TIP). The plan should cover at least 4 years.

Time Frame: 3 years
Type of Implementation: Ongoing Continuous every 4 years
Required for Compliance with FTA Requirements: Yes

Recommendation #1
Establish a Transit Asset Management Working Group

This working group coordinates implementation of the TCMP across all providers and will provide feedback and input to the plan's implementation. The group will encompass representatives from MDT, the transit providers across the state, and other stakeholders involved with managing transit assets, and will streamline the communication between these stakeholders. This group will also oversee continuous improvement plan for transit asset management and will meet on a regular basis, for example quarterly or semi-annually. The Working Group will also be responsible for implementing the best practices and ideas identified in the providers surveys under Section 2.2 of this report.

Time Frame: 1 year
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: No

Recommendation #2
Implement Vehicle Condition Assessment Protocols

Similar to facilities, vehicle condition assessments are conducted based on subjective methods. Condition of vehicles is one of factors of Replacement Priority Score (RPS) and should be unified across the state. MDT and its transit providers are encouraged to develop and implement a comprehensive, objective methodology for rating vehicle condition. This task will utilize the vehicle asset hierarchies established in 6.1.1. As recommended under the data initiative 2.3.3. for condition ratings, the existing Montana Motor Carrier Services (MCS) On-Site Vehicle Inspection Forms (Appendix C) may be expanded to meet this recommendation.

Time Frame: 1 year
Type of Implementation: Once
Required for Compliance with FTA Requirements: No

Recommendation #3
Digital Data Collection for Facility and Vehicle Condition Assessment

For more reliable, efficient condition data collection for facilities and vehicles across the state, it is suggested that mobile digital data collection platforms be implemented and be made available to the transit providers so they can utilize such systems to report the condition of their assets more efficiently and directly to the MDT. Examples of these systems are applications on tablets or other mobile devices of inspection of facilities. These systems will utilize the asset hierarchies established in 6.1.1, and condition assessment protocols implemented in 6.1.2 and 6.1.3. Mobile data collection systems should be compliant with the MDT WebGrants system.

Time **Frame**: 2 years
Type of Implementation: Once
Required for Compliance with FTA Requirements: No

Recommendation #4
Improve Asset Performance Data Reporting

Sound asset management practice depends heavily of the quality and timeliness of asset data. This includes inventory, condition, maintenance, and operation information such as road-calls and asset failure frequency. Reporting such data on a routine basis based on the recommendations of this TCMP will help in monitoring the performance improvements as a result of capital investments. The MDT can then adjust its capital investment strategy based on the system performance, to meet its performance targets.

Time **Frame**: 1 year
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: No

Recommendation #5
Implement Preventive Maintenance Plans for Vehicles and Facilities

Preventive maintenance (PM) can significantly improve performance and reliability of transit operations. Transit providers are encouraged to implement MDT's preventive maintenance plan and provide feedback to MDT about specific maintenance or operation issues so the PM plan can be revised and improved. This is outlined in Appendix B.

In addition, MDT has a maintenance plan for facilities. This program (outlined in Appendix D) can be expanded into a more comprehensive preventive maintenance plan that the transit providers can implement and follow.

Time Frame: 2 years
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: No

Recommendation #6
Incorporate Performance in Capital Investment Decisions

Currently, the Capital Assistance Review (CAR) committee scores the capital replacement awards based on combination of capital needs, program management and TAC prioritization. Part of the decision is based on useful life or current miles of the asset as well as safety concerns. This TCMP developed a Replacement Prioritization Score (RPS) that incorporates mileage, age, condition, and maintenance concerns into one score that can be used for prioritization of vehicles. It is recommended that the CAR committee considers the RPS in their decision making, making the capital replacements more targeted toward replacements that would have the highest impact on improving the performance of the transit system across the state. This is outlined in Section 4.1 of this TCMP.

Time Frame: 1 year
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: No

Recommendation #7
Integration with WebGrants System

The State of Montana MDT use the Montana Grants and Loans System (WebGrants) as a data entry and submittal platform for a variety of programs. To reduce the burden of data collection and reporting on its providers, MDT is adopting the WebGrants system for financial assistance and competitive grants. Adopting WebGrants for TCMP data collection and submittal and for PTMS and NTD data collection means that the providers have to learn only one set of formatting requirements, one set of definitions, and can keep shared data item in one file rather than in multiple files for multiple applications. It is recommended that all data collection for the TCMP annual progress reports and narratives and the four-year update be configured to use the MDT WebGrants system. The Data Template recommended as a data initiative under Section 2.3.1. of this report should comply with the WebGrants system. Common use of the WebGrants system will also aid in the reconciliation of different data elements such as PTMS and TCMP, recommended as a data initiative in Section 2.3.2.

Time Frame: 1 year
Type of Implementation: Once
Required for Compliance with FTA Requirements: No

Recommendation #8
Implement Performance Monitoring Dashboard

A performance monitoring dashboard is a great way of visualizing the data and monitor the progress of the state's transit system toward the performance targets. In addition, other information can be added to the dashboard to provide the executives, managers, and other stakeholders with the insight into how the transit system is performing. This dashboard is described in Section 6.

Time Frame: 1 year
Type of Implementation: Once
Required for Compliance with FTA Requirements: No

Recommendation #9
Include Asset Management Discussions in the Fall Transit Workshops

A TCMP is successful when it becomes part of the institutional culture and gains buy-in and commitment from across the agency at all levels, and also from the transit providers. This will require an ongoing dialog between the stakeholders and those who are involved with day-to-day maintenance, operation, and management of the state's transit capital assets, from revenue vehicles to equipment and facilities. MDT's Fall Transit Workshop is an appropriate venue to have this dialog as it brings together representatives of transit providers from across the state.

Time Frame: 1 year
Type of Implementation: Ongoing Continuous
Required for Compliance with FTA Requirements: No

Figure 30 illustrates the schedule for this proposed implementation plan, showing the requirements in orange and the recommendations in green. The grey bars indicate that an action is continuous over time, rather than being implemented and completed.

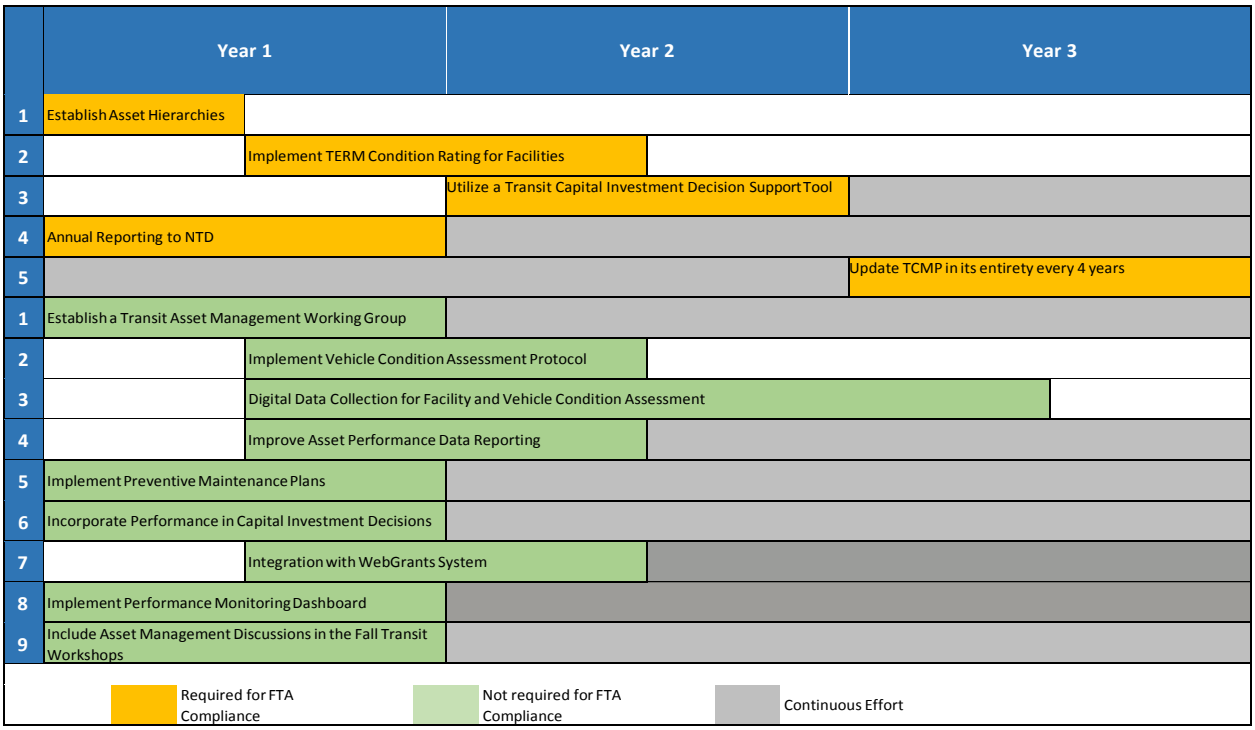

Figure 30. Schedule for the Proposed Implementation Plan

7.2 Continuous Improvement Plan (CIP) of TAM Practices

MDT's vision which is reflected in this TCMP sets the objectives, strategies, and performance measures for continually improving how MDT and its transit providers manage their capital assets. Successfully implementing this TCMP by following the recommendations provided in the previous section will assist the agency in improving its TCMP maturity. Annual review of progress and performance measures will inform the revision of this document and the direction of MDT's capital investment strategies to better align the agency with its TCMP vision. Also, it is important to ensure that any future revisions to the document will be aligned with the agency's other strategic plans.

Engagement of the executive management (especially the accountable executives) for each transit provider, will play a strong role in the success of this implementation, and in aligning the continuous improvement of MDT's TCMP practice with the agency-side vision and mission.

According to the FTA final rulemaking, TCMP should be reviewed and revised on an annual basis, and should be revised in its entirety every four years. These revisions will require input from various internal and external stakeholders. The Transit Asset Management Working Group (See Recommendation #1 under Implementation Strategy in Section 7.1) will be instrumental in coordination between the internal and external parties.

As part of the annual review process, it is recommended that MDT review the performance of the statewide transit fleet to identify areas for improvement and inform the refinement of TCMP objectives, strategies, and implementation actions for future revisions of this TCMP.

APPENDIX A – PROVIDER SURVEYS AND ASSET INVENTORY

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2005	Ford	cutaway	yes	back	11	78,914	fair		494	1,265				Light duty gas cutaway	100,000	7	13910661
2010	Dodge	minivan	no		6	103,452	good		125	2,000				Light duty minivan	100,000	7	13900771
2016	Dodge	minivan	ramp	side	1	1,368	excellent			666				Light duty minivan	100,000	7	13901008
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs					Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment TERM Age	Condition	Major Equipment Warranty	Routine Preventative	Repairs				PTMS Description	Mileage Milestone	Age Milestone
Facilities															
	Cold storage shed		no	2		excellent									

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Vehicles have established preventative maintenance based on manufacturer and repair shop recommendations; all work is done locally through local repair shops

2 Do you track maintenance costs by vehicle, or by the total amounts?
By vehicle

3 How do you track maintenance costs on your facilities?
Total amount

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
Entire building all at once

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2004	Chevy 13 pax	cutaway	yes	side	12	167,200	good			3,500				Light duty low floor cutaway	150,000	7	14100001
2007	Chevy 13 pax	cutaway	yes	side	9	143,000	good			5,300			air conditioner repairs	Light duty gas cutaway	100,000	7	14950713
2010	Ford F 450 13 pax	cutaway	yes	side	6	107,500	good			9,150			lots of issues with air conditioner leaks, transmissi	Light duty gas cutaway	100,000	7	14900820
2015	Ford F 450 13 pax	cutaway	yes	side	1	20,000	excellent			400				Light duty gas cutaway	100,000	7	14900979
Backup Revenue Vehicles																	
2002	Chevy 13 pax	cutaway	yes	side	14	196,000	fair			3,400				Light duty low floor cutaway	150,000	7	14100002
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Milestones based on specs for each bus. Oil change place does a PM inspection
Drivers and staff each keep track
Drivers do a pre-trip inspection
have a place in town does a good job of wheelchair lift maintenance.
Closest warranty work is Bismarck, ND for lift work. Other warranty work done locally, but have had issues.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts in a folder, file on each bus, summary sheet.

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns			Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration	Notes	PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2001	Chevrolet 12 pax	cutaway	yes	side	15	104,319	fair							Light duty gas cutaway	100,000	7	15100001
2006	Ford 6 pax	minivan	no		10	156,786	fair		379					Light duty minivan	100,000	7	15930664
2009	Ford Transtar 20 pax	cutaway	yes	side	7	77,420	good		1,115		1		diesel, still in shop in Billings waiting on funding, i	Light duty diesel cutaway	150,000	7	15990752
2010	Ford 18 pax	cutaway	no	side	6	78,939	good		757	521				Light duty gas cutaway	100,000	7	15900830
2010	Dodge 5 pax	minivan	ramp		6	94,123	good		787	1,097				Light duty minivan	100,000	7	15900805
2015	Ford 12 pax	cutaway	yes	side	1	29,051	good		507	681				Light duty gas cutaway	100,000	7	15900953
2016	Dodge 5 pax	minivan	ramp		1	7,340	excellent		74					Light duty minivan	100,000	7	15901006
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Have a plan, PM and warranty on file. Warranty not a problem. Done at dealership locally, have to go to Great Falls if something major.
can't get large bus in the door; they're too tall.
Breakdowns happen very rarely.
Drivers do pre-trip inspection with a check
sheet. major repairs done in Billings.
local school district helps with wheelchair lift and general maintenance.
2009 Ford cutaway: horrible bus, lots of issues with engine, too large to fit in local shops, local mechanic couldn't find issue, injector issues, lift battery issues

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts, tally at the end of the quarter.

3 How do you track maintenance costs on your facilities?
N/A

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
N/A

lots of long trip with older folks, would be nice to have options
comfortable seats
arm rests
8" - 12" ruts are common; 4-wheel drive would be very useful

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2007	Chevrolet 7 pax	minivan	ramp	side	9	69,000	good	No		1,793				Light duty minivan	100,000	7	16950699
2007	Chevrolet 10 pax	cutaway	yes	side	9	46,000	good	No						Light duty gas cutaway	100,000	7	16950698
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
We have 5,000 miles on tires, Oil changed at every 3,000 miles along with the brake fluid, windshield wiper fluid, etc.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Each vehicle has its own maintenance plan. They are serviced at different times.

3 How do you track maintenance costs on your facilities?
We don't pay to maintenance the facility we are out of the COA building.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2007	Freightliner chassis 34 pax	cutaway	yes	side	9	159,080	excellent							Light duty diesel cutaway	150,000	7	17100001
2010	Ford F 550 23 pax Goshen	cutaway	yes	side	5	170,784	excellent						turbo and turbo fan issues, covered by warranty	Light duty diesel cutaway	150,000	7	17900836
2010	Ford F 550 23 pax Goshen	cutaway	yes	side	5	154,572	excellent						turbo and turbo fan issues, covered by warranty	Light duty diesel cutaway	150,000	7	17900837
Backup Revenue Vehicles																	
2009	Dodge Sprinter 15 pax	van	yes	side	6	149,296	excellent						Mercedes engine is hard to find mechanics, parts, tools	Light duty sprinter van	175,000	8	17900794
2011	Ford F 550 23 pax	cutaway	yes	side	5	153,480	excellent						turbo and turbo fan issues, covered by warranty	Light duty diesel cutaway	150,000	7	17900871
Non-Revenue Vehicles																	

			Attributes	Condition				Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs			PTMS Description	Mileage Milestone	Age Milestone
Facilities														

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Follow maintenance plan
run synthetic oil
drivers do pre-trip and keep written log

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track and log for each vehicle in spreadsheet

3 How do you track maintenance costs on your facilities?
Keep a maintenance log
costs about 3500 per year per vehicle for all maintenance

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

Regenerative exhaust system is problematic for long idles
Goshen bodies on F 550s have leaks at hoses. Aftermarket parts are not good quality
all diesel

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimated.

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2016	Ford Sprinter F 350 12-14 pax	bus	yes	side	1	15,236	excellent							Heavy duty transit bus	350,000	10	18100001
2016	Ford Sprinter F 350 12-14 pax	bus	yes	side	1	11,672	excellent							Heavy duty transit bus	350,000	10	18100002
2016	Ford Sprinter F 350 12-14 pax	bus	yes	side	1	15,236	excellent							Heavy duty transit bus	350,000	10	18100003
2016	Ford Sprinter F 350 12-14 pax	bus	yes	side	1	11,672	excellent							Heavy duty transit bus	350,000	10	18100004
Backup Revenue Vehicles																	
2009	Ford	cutaway	yes	side	7	95,000	fair						currently in the shop	Light duty diesel cutaway	150,000	7	18990747
Non-Revenue Vehicles																	
2009	Dodge	minivan	no		7	79,000	good						general errands	Light duty minivan	100,000	7	18920739

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	office & garage		yes	4		good							

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
No established maintenance plan. Have a maintenance log, but don't have milestones.
Drivers do a pre-trip inspection.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep track of receipts

3 How do you track maintenance costs on your facilities?
hasn't been a problem yet.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulations.
Relevant additional information will help us develop a Plan that is practical and useful.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Dodge 6pax	minivan	yes	side	6	14,157	good						Lots of warranty issues	Light duty minivan	100,000	7	19900803
2011	Dodge	minivan	no		5	50,125	good						Lots of warranty issues	Light duty minivan	100,000	7	19900846
2013	12 pax Ford E 450	cutaway	yes	side	3	46,772	good							Light duty gas cutaway	100,000	7	19900907
2013	Dodge 6pax	minivan	no		3	38,059	good						Lots of warranty issues	Light duty minivan	100,000	7	19900935
Backup Revenue Vehicles																	
2005	Ford 12 pax	cutaway	yes	side	11	80,748	good							Light duty gas cutaway	100,000	7	19910646
Non-Revenue Vehicles																	
2003	Chevy Venture	minivan			13	138,000	fair						general use	Light duty minivan	100,000	7	19100001

			Attributes	Condition			Annual Maintenance Costs					Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs				PTMS Description	Mileage Milestone	Age Milestone
Facilities															
	2-stall garage, wash bay, office		yes	5	good	good						other facilities are part of the COA			

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Do have a plan
Have a mechanic at the county, use dealer for warranty work. Nearest is 60 miles.
Old mechanic was pretty good with the lifts, but retired.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Just keep receipts, no formal tracking.

3 How do you track maintenance costs on your facilities?
Just keep receipts, no formal tracking.
Annual cost per vehicle is 800 to 2,400 on all maintenance and repairs

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
don't use

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Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2009	Dodge Sprinter	van	yes	side	7	105,133	poor				Several	month	Several breakdowns. This is a lemon. Everything fr	Light duty sprinter van	175,000	8	20900793
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes.....Warranty work is done as we receive them, repairs and breakdowns are handled immediately. Routine maintenance, i.e.: oil changes are scheduled according to pre-trip as needed.
Average yearly costs for maintenance on all buses between $11,000 and $15,000.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Total amounts

3 How do you track maintenance costs on your facilities?
N/A

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
N/A

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2014	9 pax	van	yes	back	2	11,669	good	0	103	335				Light duty gas van	100,000	7	21100004
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	Bus parking shelter		yes	5		good		0	0	Shelters are cold storage, they are regularly inspected			
	Bus parking shelter		yes	5		good		0	0	but we have had no need for maintenance so far			
	Bus parking shelter		yes	5		good		0	0				

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes, we have an established maintenance plan. Routine maintenance and service are performed at specific mile intervals or number of hours--whichever comes first. We have little warranty work but when something falls in that category we take it to the authorized facility for that vehicle.

2 Do you track maintenance costs by vehicle, or by the total amounts?
By vehicle

3 How do you track maintenance costs on your facilities?
By building

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
Our facilities are cold storage so there are not a lot of components. We evaluate the entire building all at once.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2002	Chevy Transtar	cutaway	yes	side	14	380,000	poor						engine knocks. Lift doesn't work	Light duty gas cutaway	100,000	7	22100001
2002	Chevy Transtar	cutaway	yes	side	14	350,000	poor						don't drive it out of town too far. Lift doesn't work	Light duty gas cutaway	100,000	7	22100002
2007	Ford Starcraft E 450 12 pax	cutaway	yes	side	9	177,599	fair						just put in a new engine. 6.0 l Diesel	Light duty diesel cutaway	150,000	7	22940695
2011	Ford F 550 Goshen	cutaway	yes	side	5	178,000	fair						wheelchair lifts have to be run manually.	Light duty gas cutaway	100,000	7	22900833
2011	Ford F 550 Goshen	cutaway	yes	side	5	194,000	fair						wheelchair lifts have to be run manually.	Light duty gas cutaway	100,000	7	22900834
2014	Global Titan	cutaway	yes	side	2	63,566	excellent							Light duty gas cutaway	100,000	7	22100003
2014	Global Titan	cutaway	yes	side	2	50,230	excellent							Light duty gas cutaway	100,000	7	22100004
2014	Ford E 150	van	yes	side	2	36,577	excellent							Light duty gas van	100,000	7	22100005
Backup Revenue Vehicles																	
1998	Ford E Super Duty	cutaway			18	234,783	poor						Engine is weak, won't let it leave town	Light duty diesel cutaway	150,000	7	22100006
2007	Ford Starcraft E 450 21 pax	cutaway	yes	side	9	135,721	fair							Light duty diesel cutaway	150,000	7	22940696
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
follow a plan by mileage for oil change, oil, tires, etc.
Do pre-inspection.
Do have maintenance plan with milestones, use the MDT template, works well.

2 Do you track maintenance costs by vehicle, or by the total amounts?
File folder for each vehicle.

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

need training on wheelchair lifts. Worked as a mechanic for 30 years, but can't handle the lifts. There are so many controls. have to go to Billings for real repairs to lifts.
circuit rider would work for them. Lifts are the only real problem.
bodies are in good shape

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Ford Econoline	cutaway			6	52,751	excellent							Light duty hybrid cutaway	150,000	7	23900806
2011	International general 23 pax	bus	yes	side	5	108,710	poor						crack in frame	Heavy duty transit bus	350,000	10	23900861
2013	Gillig 30 pax	bus	ramp	side	3	78,427	excellent							Heavy duty transit bus	350,000	10	23900937
2013	Gillig 30 pax	bus	ramp	side	3	78,252	excellent							Heavy duty transit bus	350,000	10	23900938
2013	Gillig 30 pax	bus	ramp	side	3	83,093	excellent							Heavy duty transit bus	350,000	10	23900939
2013	Gillig 30 pax	bus	ramp	side	3	70,931	excellent							Heavy duty transit bus	350,000	10	23900940
2013	Gillig 30 pax	bus	ramp	side	3	84,811	excellent							Heavy duty transit bus	350,000	10	23900944
2015	Dodge	van			1	37,694	excellent							Light duty van	100,000	7	23900963
2015	Dodge	van			1	43,950	excellent							Light duty van	100,000	7	23900964
2015	Dodge	van			1	3,000	excellent							Light duty van	100,000	7	23900998
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	Bus transfer center			14		good							
	Bus storage & wash			13		excellent							
	Bus storage			6		excellent							

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
They have a full time mechanic. They have a maintenance plan based on manufacturer's guidelines for service.
Drivers do a pre-trip inspection, pass paper to mechanic with any issues.
Gillig low-floor buses with ramps are a big improvement over the lifts. They were touchy, hard to deploy.
Cummins diesel engine is starting to develop issues with clogged filters

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track individually in a spreadsheet

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2008	Dodge Sprinter	cutaway	yes	back	8	182,567	good							Light duty diesel cutaway	150,000	7	25100001
2009	Ford Starcraft Allstar	cutaway	yes	side	7	158,229	good							Light duty diesel cutaway	150,000	7	25920753
2009	Ford Starcraft Allstar	cutaway	yes	side	7	152,852	good							Light duty diesel cutaway	150,000	7	25100002
2009	Ford	van	yes	side	7	199,342	poor						Being replaced any day	Light duty gas van	100,000	7	25100003
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	office & bus storage 5 bays		yes	9	9	excellent				very little maintenance costs, annual maintenance plan on			

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Use their own maintenance plan.
Drivers do a pre-trip and post-trip inspections, and wheelchair lift inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep maintenance costs on a graph to help display to the board, more visual is more easily perceived

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2001	Chevy 12 pax	van	yes	side	15	71,000	excellent							Light duty gas van	100,000	7	26100001
2009	Transtar 15 pax	cutaway	ramp	side	7	30,000	excellent						pulled seats out so don't need a chauffeurs license	Light duty diesel cutaway	150,000	7	26100002
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	Storage		yes	50		good				Garage; old fire station with 4 bays			
	Shop		no	50		good				5 bays			

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes, by miles and by hours. Have to go to Whitehall for any major repairs to a bus company, otherwise just around town.
Drivers to pre-trip inspection.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Give receipts to office.

3 How do you track maintenance costs on your facilities?
City hall handles

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2015	Ford	van	yes	side	1	34,566	excellent		816	711				Light duty gas extended van	100,000	7	27900982
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	Offices & garage		yes	40		good							

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Vehicles have established preventative based on manufacturer and repair shop recommendations; all work is done locally through local repair shops

2 Do you track maintenance costs by vehicle, or by the total amounts?
Yes, both

3 How do you track maintenance costs on your facilities?
Not tracked, but could be put together
Building has established inspections

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
I believe that major components would be separately evaluated.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2011	Chevy 120	cutaway	yes	side	5	196,144	excellent		1,400	650			950 for tires for buses 60 for oil changes	Light duty diesel cutaway	150,000	7	28100001
2011	Chevy 121	cutaway	no		5	158,615	excellent		1,400	600				Light duty diesel cutaway	150,000	7	28100002
2014	Ford 130	cutaway	yes	side	2	42,532	excellent		975	225				Light duty gas cutaway	100,000	7	28100003
2014	Chevy 131	cutaway	ramp	side	2	77,374	excellent		1,300	400				Light duty gas cutaway	100,000	7	28100004
2014	Chevy 132	cutaway	ramp	side	2	185,204	excellent		1,960	1,400	3		flathead transit route, 400 miles per day	Light duty gas cutaway	100,000	7	28100005
2015	Dodge Caravan 30	minivan	no		1	49,811	excellent		1,000	375				Light duty minivan	100,000	7	28100006
2015	Dodge Caravan 31	minivan	no		1	62,196	excellent		1,000	340				Light duty minivan	100,000	7	28100007
2015	Dodge Caravan 32	minivan	no		1	56,976	excellent		900	375				Light duty minivan	100,000	7	28100008
2015	Dodge Caravan 33	minivan	no		1	56,172	excellent		900	360				Light duty minivan	100,000	7	28100009
2015	Dodge Caravan 34	minivan	no		1	63,553	excellent		950	225				Light duty minivan	100,000	7	28100010
2015	Dodge Caravan 35	minivan	no		1	51,395	excellent		900	250				Light duty minivan	100,000	7	28100011
2015	Dodge Caravan 36	minivan	no		1	52,964	excellent		900	150				Light duty minivan	100,000	7	28100012
2015	Chevy 140	cutaway	ramp	side	1	42,219	excellent		1,480	150			this bus will be a full time bus/	Light duty gas cutaway	100,000	7	28100013
Backup Revenue Vehicles																	
2000	Ford 105	cutaway	yes	side	7	165,945	good		890	200				Light duty gas cutaway	100,000	7	28100014
2009	Ford 104	cutaway	yes	side	7	250,378	good		850	300				Light duty gas cutaway	100,000	7	28100015
2009	Ford 112	cutaway	yes	side	7	245,044	good		1,250	400	3		ford diesel 6.turbo, hit deer, fuel problems	Light duty diesel cutaway	150,000	7	28100016
2010	Dodge Caravan 20	minivan	no		6	204,681	good		120	150				Light duty minivan	100,000	7	28100017
2010	Dodge Caravan 21	minivan	no		6	269,830	good		120	100				Light duty minivan	100,000	7	28100018
2010	Dodge Caravan 22	minivan	no		6	206,322	good		980	100			average cost 25.00 month for oil , 1 set of tires	Light duty minivan	100,000	7	28100019
2010	Dodge Caravan 23	minivan	no		6	226,676	good		950	200				Light duty minivan	100,000	7	28100020
2010	Dodge Caravan 24	minivan	no		6	211,458	good		975	200				Light duty minivan	100,000	7	28100021
2010	Dodge Caravan 25	minivan	no		6	217,898	good		950	200				Light duty minivan	100,000	7	28100022
Non-Revenue Vehicles																	
1993	Snowplow Dodge pickup	automobile	no		23	130,436	fair		90	50				Light duty gas automobile	100,000	7	28100023

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	offices		no	10	10	good	no	inspected bi yearly	no repairs				
	mechanic shop		yes	6	6	good	no	inspected bi yearly	no repairs				
	diesel storage tank		yes	6	6	good	no	inspected bi yearly	no repairs				
	bus barn		yes	7	7	good	no	inspected bi yearly	no repairs				

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes. Oil change every 5,000 miles. Most mechanic work done in house…oil change, brakes, transmission flush; all the non-major stuff.
Bus has to go to Missoula or Kalispell for warranty work. Chevy dealer is local.
Drivers to pre-trip inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts in folders, mechanics keep a close eye on vehicles.
we discuss vehicles on maintenance with drivers, mechanic and transit manager. The only real problem we have been with the Ford diesels, and we only have only have 1 left in our fleet

3 How do you track maintenance costs on your facilities?
we haven't had any maintenance cost to building, but we have it bi yearly inspection.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

New caravans do well, they are phasing out their older 2010 vans.
Basically use the vehicles with over 200,000 miles as their backups.
Office is not ADA compliant but they have intercoms

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2003	Chevy (605)	cutaway	yes	side	13	247,768	good		41	2,737				Light duty diesel cutaway	150,000	7	29100001
2005	Ford Star Trans (607)	cutaway	yes	side	11	220,857	good		534	11,386				Light duty diesel cutaway	150,000	7	29920639
2007	Ford Star Craft (609)	cutaway	yes	side	9	198,425	good		59	938				Light duty diesel cutaway	150,000	7	29100002
2010	Ford Star Craft (612)	cutaway	yes	side	6	128,959	good		415	9,380				Light duty diesel cutaway	150,000	7	29900817
2010	Ford Star Craft (613)	cutaway	yes	side	6	126,483	good		529	13,225				Light duty diesel cutaway	150,000	7	29900818
2011	Ford Goshen (630)	cutaway	yes	side	5	143,857	fair		933	9,036			extensive repair history	Light duty diesel cutaway	150,000	7	29900869
2012	Ford Glaval (631)	cutaway	yes	side	4	101,942	fair		718	11,995			extensive repair history	Light duty diesel cutaway	150,000	7	29900911
2014	Chevy Elkhart (632)	cutaway	yes	side	2	52,152	excellent		459	1,867				Light duty diesel cutaway	150,000	7	29900934
2015	Ford E450 Super Duty (633)	cutaway	yes	side	1	18,214	excellent		127	779				Light duty diesel cutaway	150,000	7	29900984
2016	Ford E550 Super Duty Glaval (634)	cutaway	yes	side	1	1,768	excellent		0	0				Light duty diesel cutaway	150,000	7	29901040
Backup Revenue Vehicles																	
2006	Ford Star Craft (602)	cutaway	yes	side	10	172,163	good		717	1,228				Light duty diesel cutaway	150,000	7	29940665
2007	Ford Star Craft (608)	cutaway	yes	side	9	152,744	good		126	1,592				Light duty diesel cutaway	150,000	7	29950704
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes				Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs					PTMS Description	Mileage Milestone	Age Milestone
Facilities																
	Bus barn & facility		yes	5	5	excellent										

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
City of Helena Mechanic on site. Needed repair work and preventative maintenance is written up, sent electronically to City shop and assigned to Mechanic on site.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Both

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2006	Chevrolet 10 pax	cutaway	yes		10	229,393	poor			6,000			new engine last year, poor condition is due to bod	Light duty gas cutaway	100,000	7	30940666
2006	Chevrolet 10 pax	cutaway	yes		10	229,000	poor			6,000			new engine last year, poor condition is due to bod	Light duty gas cutaway	100,000	7	30940667
2009	Ford 13 pax	cutaway	yes		7	176,707	fair							Light duty diesel cutaway	150,000	7	30990756
2010	Freightliner 23 pax	cutaway	yes		6	202,527	poor			10,000			engine work, but just worn out	Light duty diesel cutaway	150,000	7	30990764
2010	Freightliner 23 pax	cutaway	yes		6	202,000	poor			10,000			engine work, but just worn out	Light duty diesel cutaway	150,000	7	30990764
2010	El Dorado 7 pax	minivan	ramp		6	56,657	good							Light duty minivan	100,000	7	30900800
2010	International 35 pax	cutaway	ramp		6	134,778	good						Diesel. Been a lemon since the day they got it	Medium duty low floor	300,000	8	30100001
2011	Chevrolet 15 pax	cutaway	yes		5	124,060	fair							Light duty diesel cutaway	150,000	7	30900882
2012	Chevrolet 17 pax	cutaway	yes		4	121,232	fair			5,000			problems with DEF filter, expensive	Light duty diesel cutaway	150,000	7	30900868
2012	Chevrolet 17 pax	cutaway	yes		4	105,169	fair			5,000			problems with DEF filter, expensive	Light duty diesel cutaway	150,000	7	30900883
2012	Chevrolet 17 pax	cutaway	yes		4	78,721	good							Light duty diesel cutaway	150,000	7	30900921
2015	Ford 17 pax	cutaway	yes		1	29,151	excellent							Light duty gas cutaway	100,000	7	30900983
2016	Glaval 27 pax	cutaway	yes		1	1,862	excellent							Light duty diesel cutaway	150,000	7	30100002
Backup Revenue Vehicles																	
2010	Freightliner	cutaway	yes		6	170,000	fair							Light duty diesel cutaway	150,000	7	30100003
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs						Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment TERM Age	Condition	Major Equipment Warranty	Routine Preventative	Repairs					PTMS Description	Mileage Milestone	Age Milestone
Facilities																
	bus barn 12 bay			6	6	excellent										
	bus barn 8 bay			6	6	excellent										
	office 4 offices			6	6	excellent										

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Have their own maintenance plan with milestones

2 Do you track maintenance costs by vehicle, or by the total amounts?
Maintenance pro software

3 How do you track maintenance costs on your facilities?
Minimal

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

	Other vehicles.....operated by Glacier National Park, leased as backup in the summer as required															
724	2007 Optima 23 pax bus		ramp		9	109,288								Heavy duty bus	350,000	10
725	2007 Optima 23 pax bus		ramp		9	91,599								Heavy duty bus	350,000	10
726	2007 Optima 23 pax bus		ramp		9	115,655								Heavy duty bus	350,000	10
727	2007 Optima 23 pax bus		ramp		9	116,888								Heavy duty bus	350,000	10
728	2007 Optima 23 pax bus		ramp		9	78,914								Heavy duty bus	350,000	10
729	2007 Optima 23 pax bus		ramp		9	87,395								Heavy duty bus	350,000	10
730	2007 Optima 23 pax bus		ramp		9	102,107								Heavy duty bus	350,000	10
731	2007 Optima 23 pax bus		ramp		9	128,364								Heavy duty bus	350,000	10

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Ford E 450 super duty	cutaway	yes	side	6	93,646	good		2,130	1,614	1		PVC valve plugged, head gasket leak, replaced injector	Light duty gas cutaway	100,000	7	31900828
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Use their own maintenance plan.
Drivers do a pre-trip and post-trip inspections, and wheelchair lift inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep maintenance costs on a graph to help display to the board, more visual is more easily perceived

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
1995	Ford Escort	automobile	no		21	156,284	good		272	22				Light duty gas automo	100,000	7	33100001
2010	Dodge Caravan	minivan	no		6	124,065	good		272	571				Light duty minivan	100,000	7	33900778
2010	Dodge Caravan	minivan	no		6	123,866	good		272	642				Light duty minivan	100,000	7	33900779
2010	Dodge Caravan	minivan	no		6	114,534	good		272	973				Light duty minivan	100,000	7	33900780
2015	Dodge Caravan	minivan	yes	side	1	15,413	excellent		272	30				Light duty minivan	100,000	7	33900994
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes our Transportation Coordinator monitors mileage and daily inspections. Routine preventative maintenance, repairs, breakdowns, and warranty work is handled by the most cost-effective company eligible to complete the job, where the warranty can be utilized, or which company can help the quickest if we are on a time crunch.

2 Do you track maintenance costs by vehicle, or by the total amounts?
In the past maintenance costs have been tracked by the total amounts but are working on tracking them per vehicle.

3 How do you track maintenance costs on your facilities?
N/A

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
N/A

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift on Side Lift	or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2008	Ford ECS 12 pax	van	no		8	153,058	good	0	189	834				Light duty gas van	100,000	7	34100001
2010	Dodge Caravan	minivan	no		6	172,979	good	0	371	1,677				Light duty minivan	100,000	7	34900768
2010	Ford E450	cutaway	yes	side	6	63,427	good	0	521	1,616				Light duty gas cutaway	100,000	7	34900824
2010	Ford E450	cutaway	yes	side	6	64,805	good	0	140	2,690				Light duty gas cutaway	100,000	7	34900825
2012	Ford Edge	SUV	no		4	91,511	good	0	265	659				Light duty SUV	100,000	7	34100002
2015	Dodge Caravan	minivan	ramp	side	1	32,324	good	0	179	0				Light duty minivan	100,000	7	34100003
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes		Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs			PTMS Description	Mileage Milestone	Age Milestone
Facilities														

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes, milestones
If case of need, coordinator arranges an alternate vehicle: either owned or a rental.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track yearly

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

Office space and 2 garages are owned and maintained by the senior center; no lease or rent

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Ford	van	no		6	68,473	good		1,000					Light duty gas extended van	100,000	7	35900807
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Follow manufactures suggested maintenance schedule or repair when needed.

2 Do you track maintenance costs by vehicle, or by the total amounts?
by vehicle

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Dodge	minivan	no		6	116,670	good		131					Light duty minivan	100,000	7	36100001
2012	Dodge Express	minivan	no		4	108,607	good		979	1,519			Body repair & tires	Light duty minivan	100,000	7	36900887
2013	Ford 26 pax	cutaway	yes	side	3	6,777	excellent		54					Light duty gas cutaway	100,000	7	36900923
2014	Ford 26 pax	cutaway	yes	side	3	39,813	good		2,168					Light duty gas cutaway	100,000	7	36900932
2014	Dodge	minivan	no		2	43,005	excellent		475					Light duty minivan	100,000	7	36900958
2015	Elkhart 13 pax	cutaway	yes	side	1	10,676	excellent		196	519			Body repair	Light duty conversion van	100,000	7	36900975
2015	Elkhart 13 pax	cutaway	yes	side	1	8,273	excellent		292					Light duty conversion van	100,000	7	36900976
Backup Revenue Vehicles																	
2001	Dodge Grand Caravan	minivan	no		15	160,701	fair		100					Light duty minivan	100,000	7	36100002
2006	Chevrolet El Dorado	cutaway	yes	side	10	131,470	fair		0					Light duty gas cutaway	100,000	7	36920672
2010	Ford 13 pax	cutaway	yes	side	6	66,168	good		2,245					Light duty gas cutaway	100,000	7	36100003
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes, have a plan with milestones.
Drivers do a pre-trip inspection
Weekly maintenance plan to schedule PM and repairs.
Warranty work done in Williston; usually able to schedule to coincide with regular trips

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track by vehicle.

3 How do you track maintenance costs on your facilities?
N/A

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
N/A

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2002	Dodge 3500	van			14	145,999	good			1,502				Light duty extended van	100,000	7	37100001
2002	Dodge 3500	van			14	162,277	good			584				Light duty extended van	100,000	7	37100002
2009	Ford E350	van			7	139,073	poor			779				Light duty extended van	100,000	7	37100003
2009	Ford E350	van			7	101,493	poor			2,852			Bearings & O2 sensors	Light duty extended van	100,000	7	37100004
2009	Ford E350	van			7	111,271	poor			547	1			Light duty extended van	100,000	7	37100005
2009	Ford E350	van			7	95,136	poor			765				Light duty extended van	100,000	7	37100006
2009	Ford E350	van			7	111,868	poor			343				Light duty extended van	100,000	7	37100007
2013	Nissan NV	van			3	43,614	excellent			569				Light duty gas extended van	100,000	7	37900942
2014	Nissan NV	van			2	28,009	excellent			171				Light duty gas extended van	100,000	7	37900985
2014	Nissan NV	van			2	35,987	excellent			1,806				Light duty gas extended van	100,000	7	37900986
2016	Nissan NV	van			3	39,943	excellent			336				Light duty gas extended van	100,000	7	37100008
2016	Nissan NV	van			1	3,639	excellent			858				Light duty gas extended van	100,000	7	37901023
2016	Nissan NV	van			1	1,899	excellent			0				Light duty gas extended van	100,000	7	37901024
2016	Nissan NV	van			1	1,626	excellent			40				Light duty gas extended van	100,000	7	37901025
Backup Revenue Vehicles																	
2002	2002 Dodge 3500 van	van			14	130,411	good			105				Light duty gas extended van	100,000	7	37100012
2009	2009 Ford E350	van			7	120,430	poor			738				Light duty gas extended van	100,000	7	37100014
2009	2009 Ford E350	van			7	139,632	poor			1,150				Light duty gas extended van	100,000	7	37100015
2009	2009 Ford E350	van			7	146,471	poor			2,270			2 sets of tires	Light duty gas extended van	100,000	7	37100016
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes			Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs				PTMS Description	Mileage Milestone	Age Milestone
Facilities															
	offices		yes	12	12	good		150							

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Do use a pm plan with milestones.
Contract maintenance to local mechanics.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track individual vehicle

3 How do you track maintenance costs on your facilities?
Track using QuickBooks

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.) Evaluate by individual components: roof, HVAC, etc.
Scheduled repainting of building in 2017

2010 Ford F 350 gas 12 passenger vans have issues; every 6 months have to replace O2 sensors, tires, wheel bearings
No wheelchair lifts; contract out that part of the service
Recently installed Fleetmatics GPS vehicle locators

37 Missoula Ravalli

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns			Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration	Notes	PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2003	Chevrolet	cutaway	yes		13	277,366	good		7,000					Light duty gas cutaway	100,000	7	38100001
2005	Dodge	minivan	no		11	210,369	good		3,000					Light duty minivan	100,000	7	38100002
2013	Dodge	minivan	no		3	59,778	excellent		1,800					Light duty minivan	100,000	7	38900929
2016	Dodge	minivan	ramp		1	9,564	excellent		42					Light duty minivan	100,000	7	38901007
2017	Ford	cutaway	yes		1	953	excellent						Have only had vehicle since Nov. 1, 2016	Light duty gas cutaway	100,000	7	38100003
Backup Revenue Vehicles																	
1996	Ford	cutaway	yes		10	149,473	fair		900					Light duty gas cutaway	100,000	7	38100004
2001	Dodge	minivan	no		5	227,660	fair		400					Light duty minivan	100,000	7	38100005
2010	Ford	cutaway	yes		6	80,527	excellent		200				Vehicle is used mostly as back up as it has no power.	Light duty gas cutaway	100,000	7	38100006
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs				Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs	Notes	PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes. Warranty work is done by a certified service center specializing in the make and model of vehicle. PM, repairs and breakdowns are handled pretty much immediately by an outside certified garage. Also use Fleetmate software to keep track of PM, oil changes and tire rotations.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Vehicle

3 How do you track maintenance costs on your facilities?
Maintenance costs are allocated to specific programs that use the facility. All maintenance is tracked through accounting software.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
We consider major components separately.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2007	Dodge Caravan	minivan	no		9	180,357	poor		312					Light duty minivan	100,000	7	40100001
2007	Chevy Uplander	minivan	yes		9	170,440	poor		3,731		1	Days	hit a mule	Light duty minivan	100,000	7	40100002
2007	Ford Starcraft Allstar	cutaway	yes		7	98,605	poor		4,055		4	Days at a t	Condition described as EXTRA poor we	Light duty gas cutaway	100,000	7	40960722
2009	Ford Starcraft Allstar	cutaway	yes		4	104,531	good		1,474				alternator repair	Light duty gas cutaway	100,000	7	40990748
2010	Dodge Grand Caravan	minivan	no		7	57,213	good		342					Light duty minivan	100,000	7	40900782
2010	Dodge Caravan	minivan	no		6	157,171	poor		1,277				tires	Light duty minivan	100,000	7	40907781
2012	Chevy Starcraft Allstar	cutaway	yes		4	121,533	good		16,787		1	Days	major engine break down but no	Light duty gas cutaway	100,000	7	40907873
2016	Dodge Grand Caravan	minivan	no		1	21,745	excellent		89					Light duty minivan	100,000	7	40901019
2016	Dodge Grand Caravan	minivan	no		1	8,259	excellent		0					Light duty minivan	100,000	7	40100003
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
We use as many local resources and in house personal as possible- our warranty work is done by the associated dealership when appropriate

2 Do you track maintenance costs by vehicle, or by the total amounts?
In Quickbooks

3 How do you track maintenance costs on your facilities?
Our office is in the Council on Aging's building.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
Evaluated by individual components.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Dodge El Dorado 6 pax	minivan	ramp	side	6	92,111	good			308				Light duty minivan	100,000	7	52900802
2012	Ford over cab 13-pax	cutaway	lift	side	3	11,338	good							Light duty gas cutaway	100,000	7	52900922
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Oil change every 2,000 miles $61
warranty, license, insurance paid for by Carter County
rotate tires, drivers let her know any issues
not so busy, when one vehicle is down they just use the other. Most runs are medical appointments.
have sheets and driver does a pre-trip inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
track with a folder for each vehicle

3 How do you track maintenance costs on your facilities?
Keep paper receipts

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

van hit a deer, dinged up on front end
will be asking for a new smaller bus in February. Can't use a very low vehicle, dirt roads are hard on the vehicles

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age	Vehicle ID
Revenue Vehicles																	
2004	Chevy cutaway 12 pax	cutaway	yes	side	12	77,000	good							Light duty gas cutaway	100,000	7	55100001
2009	Dodge 3500 Sprinter 13 pax	van	yes	side	7	65,000	fair		at least double costs of other vehicles				Have put lots of money into it; always something	Light duty Sprinter van	175,000	7	55900795
Backup Revenue Vehicles																	
2010	Dodge Grand Caravan 5 pax	minivan	no		6	3,700	good						Most passengers are elderly, hard to get into	Light duty minivan	100,000	7	55900774
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes, adopted the MDT plan.
do pre-trip inspection.

2 Do you track maintenance costs by vehicle, or by the total amounts?
File for each vehicle, monthly vehicle report compiles to quarterly report to MDT

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2009	Dodge Sprinter 17 pax	van			7	154,749	fair		1,022	2,958				Light duty Sprinter van	175,000	7	56900796
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment TERM Age	Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													
	3-stall garage, bus wash, break room, office		yes	6	6	excellent	none			We share the space with the City of Bozeman maintenance shop and split the costs approximately 50/50.			

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Yes. We follow the manufacturer's maintenance schedule or service at 3,000 or 5,000 miles depending on fuel type. We contract or preventative maintenance and repairs

2 Do you track maintenance costs by vehicle, or by the total amounts?
By vehicle

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
Separately

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2012	Van 520: Chevy Express Van, 13-pax, 4-wd	van	no		4	125,407	good							Light duty gas extended van	100,000	7	58900896
2012	Van 521: Chevy Express Van, 13-pax, 4-wd	van	no		4	143,018	good							Light duty gas extended van	100,000	7	58900897
2012	Van 522: Chevy Express Van, 13-pax, 4-wd	van	no		4	122,548	good							Light duty gas extended van	100,000	7	58900899
2012	Van 523: Chevy Express Van, 13-pax, 4-wd	van	no		4	113,029	good							Light duty gas extended van	100,000	7	58900895
2012	Van 524: Chevy Express Van, 13-pax, 4-wd	van	no		4	81,379	good							Light duty gas extended van	100,000	7	58900898
2015	Van 525: Chevy Express Van, 13-pax, 4-wd	van	no		1	40,406	excellent							Light duty gas extended van	100,000	7	58900977
2015	Van 526: Chevy Express Van, 13-pax, 4-wd	van	no		1	49,152	excellent							Light duty gas extended van	100,000	7	58900978
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Will send plan. Have a peak season in the winter, schedule maintenance in off-peak
warranty work…initially Bozeman Ford had issues with the size of the lift, so they go to Butte and Belgrade
Maintenance is pretty good. They work with mechanics from Karst and Streamline.
No issue with breakdowns, catch issues in the pre-trip inspection.
Routinely do pre-trip inspections
With maintenance done in Bozeman, they have a lot of deadhead miles and have to work the schedule
Drivers complete a weekly status sheet for each vehicle listing mileage, maintenance issues, and estimated return to service date if applicable.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Has a spreadsheet, does totals by vehicle by month, does not report but can summarize by vehicle

3 How do you track maintenance costs on your facilities?
No owned facilities

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
No owned facilities; lease office in Big Sky; 4 open passenger shelters

Contract with Karst Stage to provide some vehicles and drivers, use their facilities in Bozeman
2 buses not performing well replaced engines at 120k miles, replaced again at 85k miles, mostly due to emissions
Ford F550 6.7 liter diesel
deals with some gravel roads and some steep grades
Small systems have an issue in meeting the requirements without adding a lot of staff time. Keeping up with all the regulations is a burden

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2012	Chevrolet Traverse	minivan	no	no	4	83,029	excellent	0	255	611	0	0		Light duty minivan	100,000	7	60100001
2015	Chevrolet Titan 2 cutaway	cutaway	yes	no	1	18,517	excellent	0	302	350	0	0		Light duty diesel cutaway	100,000	7	60100002
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs					Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs				PTMS Description	Mileage Milestone	Age Milestone
Facilities															
	office, 2 bus bays		yes	4	4	excellent									

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
MDT plan template

2 Do you track maintenance costs by vehicle, or by the total amounts?
By vehicle

3 How do you track maintenance costs on your facilities?
Log of all expenses

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
Excellent

2009 Ford cutaway in PTMS # 754 was sold when they acquired the 2015 Chevrolet.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2001	Chevy 12 pax	cutaway	yes	side	15	123,178	poor						hardly ever use, doesn't look nice	Light duty gas cutaway	100,000	7	61100001
2004	Ford 12 pax	cutaway	yes	side	12	74,142	fair							Light duty gas cutaway	100,000	7	61100002
2010	Dodge Grand Caravan	minivan	ramp	side	6	114,414	good							Light duty minivan	100,000	7	61900804
2013	Dodge Caravan 5 pax	minivan	no		3	76,785	excellent							Light duty minivan	100,000	7	61900931
2017	Ford 12 pax	cutaway	yes	side	1	24	excellent						seats fold to get 6 wheelchair stations	Light duty gas cutaway	100,000	7	61100003
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Have a plan.
Warranty work on the 2010 van had to take to Anaconda, they said they don't want to work on it because it was modified (low floor).
No issues with lifts. Have a certified lift mechanic in Whitehall. Madison Mechanics in Waterloo Devon Hobbs.
Do pre trip inspection.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts in a folder for each vehicle, make a spreadsheet.

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

Don't have facilities, but trying to get building for 3-bay storage, wash, driver breakroom.

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2007	Ford F 450 17 pax	cutaway	yes	side	9	67,000	good						use with more than 6 pax or 2 wheelchairs	Light duty gas cutaway	100,000	7	63960723
2010	Dodge Grand Caravan conversion 5 pax	minivan	ramp	side	6	104,000	good						motorized wheelchairs are heavy loads, small	Light duty minivan	100,000	7	63910857
2012	Dodge 6 pax	minivan	no		4	53,000	excellent							Light duty minivan	100,000	7	63910886
2016	Dodge 6 pax	minivan	no		1	7,300	excellent							Light duty minivan	100,000	7	63901020
Backup Revenue Vehicles																	
2007	Dodge 6 pax	minivan	no		9	250,000	fair						use very sparingly	Light duty minivan	100,000	7	63100001
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs				Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs			PTMS Description	Mileage Milestone	Age Milestone
Facilities														
	4 stall garage, bus wash, office		yes	6	6	excellent								

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Maintenance costs are low.
PM is by manufacturer's manual, "keep an eye" on other stuff.
Do pre-trip inspection
80 miles for warranty work in Miles City.
Have to drive to Billings for maintenance on the wheelchair lift if necessary, but haven't done yet.

2 Do you track maintenance costs by vehicle, or by the total amounts?
Track by vehicle with file and receipts, log on each vehicle.

3 How do you track maintenance costs on your facilities?
Yes, file on building. County is lead agency, so they do whatever needs done. No issues so far as it is new.

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number			PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2003	2003 Ford Windstar van 7 pax	van	no		13	96,667	good						Used for out of town trips, not used a lot	Light duty gas van	100,000	7	64100001
2008	2008 Chevy Uplander van 7 pax	van	no		8	94,844	good						Will take it to Miles City 45 mi but not to Billings 1	Light duty gas van	100,000	7	64100002
2008	2008 Chevy Uplander van 7 pax	van	no		8	201,720	fair							Light duty gas van	100,000	7	64100003
2010	2010 Dodge Grand Caravan 5 pax	minivan	ramp	side	6	181,101	good							Light duty minivan	100,000	7	64900858
2010	2010 Ford E 450 cutaway 12 pax	cutaway	yes	side	6	57,867	poor						Lift works only infrequently despite multiple repairs	Light duty gas cutaway	100,000	7	64900819
2013	2013 Ford Edge 4 pax	automobile	no		3	54,558	excellent						Used for out of town long medical trips	Light duty gas automobile	100,000	7	64100004
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Maintenance through commercial mechanics. Do have a maintenance plan.
Have not heard of a pre-trip inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts in a folder, turn in to the county and hospital

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2009	Dodge 15 pax	van	yes	side	7	45,347	good		500	1,500				Light duty Sprinter van	175,000	8	65900792
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Preventative maintenance such as oil changes are taken to Laurel Ford and repairs are handled by the City's mechanic, Mike Mudd.

2 Do you track maintenance costs by vehicle, or by the total amounts?
vehicle

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

No longer have the 2010 Ford 10 pax van that's listed in PTMS

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2011	Ford E350	van	no	side	5	213,842	good		1,700					Light duty gas extended van	100,000	7	66900866
2012	Ford F550	cutaway	yes	side	4	133,897	good		4,129	29,863				Light duty gas cutaway	100,000	7	66100001
2012	Dodge Grand Caravan	minivan	yes	side	4	114,698	good		651					Light duty minivan	100,000	7	66900905
2013	Chevrolet Express	cutaway	yes	side	3	151,872	good		5,149	1,870				Light duty diesel cutaway	100,000	7	66900909
2013	Chevrolet Express	cutaway	yes	side	3	127,266	good		3,117	769				Light duty diesel cutaway	100,000	7	66900909
2013	Chevrolet Express	cutaway	yes	side	3	151,444	good		3,791	5,714				Light duty diesel cutaway	100,000	7	66900910
Backup Revenue Vehicles																	
2009	Ford E450	cutaway	yes	side	7	108,711	fair						normally use as backup, but in the shop now	Light duty diesel cutaway	150,000	7	66900751
2012	Starcraft	cutaway	yes	side	4	149,286	poor		1,839				in the yard , inoperative	Light duty low floor cutaway	150,000	7	66900924
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.
Do pre-trip inspection

2 Do you track maintenance costs by vehicle, or by the total amounts?
Keep receipts

3 How do you track maintenance costs on your facilities?
N/A

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)
N/A

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			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2010	Chevy Express	van	yes	back	6	152,738	fair		2,000	4,500	1	2-Weeks		Light duty gas van	100,000	7	74100001
2013	Chevy Express	van	no		3	160,697	good		2,000					Light duty gas van	100,000	7	74100002
2013	Chevy Express	van	no		3	123,458	good		2,000					Light duty gas van	100,000	7	74100003
2013	Chevy Express	van	no		3	131,161	good		2,000					Light duty gas van	100,000	7	74100004
2016	Dodge Grand Caravan	minivan	ramp	side	1	11,146	excellent		2,000					Light duty minivan	100,000	7	74901017
Backup Revenue Vehicles																	
2004	GMC	van	no		12	200,000	fair		2,000	2,500			Will retire this vehicle in 2017	light duty gas van	100,000	7	74100005
2009	Ford E450 Super Duty	cutaway	yes	side	7	200,000	fair		2,000	3,500	1	1-Week		light duty gas cutaway	100,000	7	74100006
2009	Chevy G3500	van	no		7	226,830	fair		2,000	1,500	2	3-Weeks	Will retire this vehicle in 2017	light duty gas van	100,000	7	74100007
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs			Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs		PTMS Description	Mileage Milestone	Age Milestone
Facilities													

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns.

2 Do you track maintenance costs by vehicle, or by the total amounts?

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

This survey is to provide us with the data to build performance targets for the group Transit Asset Management Plan as required by new FTA regulation
Relevant additional information will help us develop a Plan that is practical and useful

For this survey, we are looking for information to develop general data models, so if the exact data is not available or if it's system-wide instead of vehicle specific, that's fine. Please just make a note for data that is estimate

			Attributes		Condition			Annual Maintenance Costs			Breakdowns		Notes	Condition Milestones			
Year	Vehicle	Class	Wheelchair Lift	Lift on Side or Back	Age	Mileage	Condition	Warranty	Routine Preventative	Repairs	Number	Duration		PTMS Description	Mileage Milestone	Age Milestone	Vehicle ID
Revenue Vehicles																	
2003	Chevrolet Goshen 12 pax	cutaway	yes	side	13	74,550	fair						trouble with leakage in roof from when it was new.	Light duty gas cutaway	100,000	7	78100001
2014	Dodge	minivan	no		2	10,970	excellent						small crack in windshield	Light duty minivan	100,000	7	78900957
Backup Revenue Vehicles																	
Non-Revenue Vehicles																	

			Attributes	Condition			Annual Maintenance Costs					Notes	Condition Milestones		
Year	Asset Class		ADA Compliant	Facility Age	Major Equipment Age	TERM Condition	Major Equipment Warranty	Routine Preventative	Repairs				PTMS Description	Mileage Milestone	Age Milestone
Facilities															

1 Do you have an established maintenance plan with milestones and preventative maintenance? Please briefly describe how you handle your warranty work, routine preventative maintenance, repairs, and breakdowns
Use mechanics from city, have recently teamed with state prison to do maintenance.
Have milestones for oil change, that's it. Don't follow MDT template. Do pre-trip inspection.

2 Do you track maintenance costs by vehicle, or by the total amounts
Keep receipts in a binder for each vehicle

3 How do you track maintenance costs on your facilities?

4 In evaluating the condition of your facilities using the TERM ratings, do you consider major components separately, or evaluate the entire building all at once? (roof, foundation, exterior, HVAC system, etc.)

APPENDIX B – PREVENTIVE MAINTENANCE PROGRAM FOR VEHICLES

EXAMPLE

PLEASE PRINT ON AGENCY LETTERHEAD !!

_____

(Name of Agency)

PREVENTIVE MAINTENANCE PLAN

*Adopted*_____*By*_____*Governing Board*

(Date) ***(Name Of Agency)***

EXAMPLE

Preventive maintenance is a must for all passenger-carrying vehicles and other equipment; there are no exceptions. A strict maintenance and inspection program is as important for providing a dependable service, as is fuel in the tank.

_____ Goal:
(Name of Agency)

- To ensure proper running condition, cleanliness, and proper equipment of all vehicles of_____transit system.
  (Name of Agency)

- To provide less down time of the vehicles and timely maintenance for repairs before a break down can occur.

Objectives:

- To provide proper training classes for all drivers to understand the importance of pre-trip inspections and post-trip checks.

- To perform pre-trip inspections of all vehicles before they make a trip.

- To perform preventive maintenance on all vehicles at 3 months or 3000 miles of use and a once a year or 50,000 mile complete check.

- To have a monitoring system in place to ensure that the preventive maintenance program is being performed.

- To perform preventive maintenance and servicing on new vehicles to maintain warranty coverage and recover costs of warranty repairs.

EXAMPLE

The_____follows the minimum maintenance schedule for
(Name of Agency)

vans and small buses in passenger service:

Every 3,000 miles:

1. Change motor oil
2. Replace oil filter
3. Check chassis and lubricate if needed

Every 10,000-12,000 miles:

1. Rotate tires, replace if necessary
2. Tune engine
3. Replace spark plugs

Every 15,000-20,000 miles:

1. Service Transmission
2. Change Oil in rear axle differential

As needed:

1. Spark Plug and Coil Wires
2. Belts and Hoses

In addition, other items of maintenance are bound to occur:

1. Alternator replacement
2. Starter motor replacement
3. Windshield Wiper motor replacement
4. Exhaust components, including mufflers, manifolds, pipes, hangers, and clamps
5. Headlamps, and bulbs for turn signals, brake lights, and marker lights
6. Vehicle Interior fittings and seat materials
7. Windshield Wiper Blades
8. Wheelchair lift components
9. Wheelchair restraint components

EXAMPLE

PREVENTIVE

MAINTENANCE FORMS

&

CHECKLISTS

PRE-TRIP CHECKLIST

Agency: _____

_____

Vehicle Project No.: MT – _____

Date:_____

Driver: _____

* OK

\+ Adjustment Made

-- Needs Attention

A. Mileage:

Beginning (total miles) _____

Ending (total miles) _____

B. Check:

____ tires

____ lights

- ____ head (high & low)
- ____ tail lights
- ____ flashers, emergency
- ____ parking
- ____ back-up
- ____ turn signal

____ wipers, washers

____ brakes

____ steering

____ transmission fluid

____ oil level

____ radiator level

____ battery level

____ gauges

____ radio

____ cleanliness

____ body damage

____ emergency blanket (present)

_____ first aid kit (full)

____ bio-hazard cleanup kit (full)

C. Fuel:

Gasoline added_____gallons

Oil added_____quarts

Mileage at fueling _____

D. Maintenance performed and by whom:

WHEELCHAIR LIFT

PRE–OPERATIVE SAFETY CHECK

Date _____

Daily:

____ Run the lift through one complete cycle to be sure that it is operable before attempting to pick up a passenger, and also check for seal leakage and the binding of hardware.

____ Check for frayed or damaged lift cables, hydraulic hoses, or chains.

____ Check for physical damage and jerky operation. Look for hazardous protrusions, exposed edges, etc. Make sure that all such protrusions are adequately padded and protected.

____ Check all fasteners. All bolts should be snug.

____ Make sure lift is properly secured to the vehicle when stored.

____ Clean the lift completely of dirt, mud, gravel and corrosive elements such as salt.

____ Make all necessary repairs immediately. Do not use a lift in an unsafe condition.

Date _____

Weekly:

____ Lubricate all rubbing and bearing surfaces.

____ Lubricate sliding extension channel.

____ Check and lubricate manual controls (only lubricate the lift with the manufacturer's specified lubrication material).

PREVENTIVE MAINTENANCE
SUGGESTED GUIDELINE

Date_____ Vehicle No. MT_____ Mileage _____

Every 3,000 miles do the following:

Vehicle Raised:

____ Drain engine oil and change filter
____ Lube front axle spindle pins/ball joints
____ Lube U-joints and check drive shaft components
____ Lube rear axle springs
____ Lube steering linkage
____ Check differential lube level
____ Check transmission oil level
____ Clean differential breather
____ Check for wear and damage on all wheels and tires
____ Inflate tires to proper pressure
____ Fluid leakage of all types at all locations
____ Brake and exhaust system components
____ All springs and attaching parts
____ All shock absorbers and attaching parts
____ Engine and transmission mounts

Vehicle Lowered:

____ Install engine oil
____ Clean air cleaner and oil cap
____ Lube distributor shaft oil cup (if equipped)
____ Lube throttle and kickdown linkage
____ Lube hood hinges and latch
____ Check brake master cylinder fluid level
____ Lube exhaust control valve Check for proper operation.
____ Check radiator coolant level and protection.
____ Check windshield washer reservoir
____ Disconnect battery cables from battery. Clean posts and terminals. Check for volt leakage. Load test battery.
____ Check brake pedal reserve
____ Check vacuum brake assist
____ Check steering wheel play
____ Check power steering reservoir

Start Engine:

____ Check for oil leaks
____ Check transmission fluid level
____ Road test brakes and check for proper operation of all other systems

In addition, every 15,000-20,000 miles do the following:

Vehicle Raised:

____ Lube and adjust parking brake
____ Check steering linkage play
____ Adjust service brakes if necessary
____ Adjust clutch if equipped
____ Drain automatic transmission (if equipped)
____ Adjust automatic transmission bands, both
____ Change fuel filter
____ Repack front wheel bearings if required

Vehicle Lowered:

____ Lube exhaust control valve check for proper operation
____ Lube choke and throttle controls and linkage
____ Lube transmissions shift linkage
____ Lube door locks, hinges, striker plates, and glove box door. Adjust as required.

Vehicle Lowered (continued)

____ Check brake master cylinder fluid level. Refill as required.
____ Check steering gear box oil level and/or power steering reservoir. Refill as required.
____ Check and adjust automatic transmission manual and throttle linkage
____ Check condition of, and adjust, fan belts. Replace if necessary.
____ Torque alternator/generator mounting bolts
____ Clean PCV valve. Replace if necessary.
____ Tighten all vacuum hose clamps and fittings
____ Torque intake manifold bolts
____ Test modulator vacuum
____ Replace fuel filter
____ Pressure test cooling system for leaks
____ Replace spark plugs (ignition points and condenser, if equipped), and compression test cylinders
____ Refill automatic transmission.
____ Align headlights
____ Torque lug nuts
____ Balance wheels
____ Align front end if required
____ Polish bus
____ Scope check engine
____ Check governor setting (if equipped), adjust if required.
____ Check starter amperage. Check alternator output.

In addition, every 24,000 miles do the following:

Vehicle Raised:

____ Check lower speedometer lock. Replace if missing.
____ Lube clutch throw out bearings (if equipped)
____ Torque spring hanger bolts, U-bolts, differential carrier bolts, and drive line bolts
____ Inspect front brakes
____ Repack front wheel bearings, if required
____ Inspect rear brakes

Every 24,000 miles steam clean engine.

PREVENTIVE MAINTENANCE INSPECTION FORM

Vehicle Project No.: MT- _____ * OK

Date: _____ + Adjustment Made

Mileage: _____ -- Needs Attention

Prepare for Inspection

____ Check driver's report
____ Review Maintenance History
____ Wash Vehicle

Start Up and Drive: (Check operation of)

____ Starting
____ Parking brake
____ Service brake
____ Transmission
____ Horn
____ Speedometer

Remain in Vehicle: (Check operation of)

____ Fuel gauge
____ Oil gauge
____ Battery Charging Gauge
____ Windshield washer and wipers
____ Steering wheel (free of play)
____ Registration
____ Headlights, high indicator
____ Headlights, low
____ Turn signal, indicators
____ 4-way flasher, indicators
____ Interior lights
____ Instrument panel lights
____ Heater and defroster
____ Air conditioner
____ All window glass
____ Doors
____ Seats
____ Safety equipment

Outside Inspection: (Check operation of)

____ Hood
____ Bumpers, body damage
____ All lights
____ Front end, king pins, wheel bearings tie rod ends
____ Outside mirrors
____ Wheels and rims, tighten lugs
____ Tires, check wear, cracks and pressure Record_____lbs. per sq. in.

Under Hood: (Check operation of)

____ Air compressor, mounting and belt tension
____ Steering gear and shaft (lube)
____ Power steering hoses and oil level
____ Throttle linkage
____ Water pump and fan belt
____ Water pump and fan hub (lube)
____ PCV valve, clean/change
____ Air filter, change
____ Exhaust system, tighten
____ Engine oil, change
____ Oil filter, change
____ Fuel filter, change
____ Fuel leaks, correct
____ Radiator, check level
____ Radiator, pressure check
____ Radiator, clean front
____ Hoses, check and adjust
____ Antifreeze protected
____ Alternator, belt tension, terminals, check and lube
____ Battery, check water level
____ Battery, clean cables
____ Master cylinder, fill
____ Lubricate all fittings

Under Chassis:

____ Engine and transmission mounting bolts (check and adjust)
____ Body mounting bolts (check and adjust)
____ Transmission, check gear oil level
____ Transmission, check cover, bell and seal areas for leaks
____ Exhaust muffler, tail pipe hangers, tighten if loose
____ Differential, check gear oil level and clean breather
____ Differential, check for leaks
____ Brakes, adjust if needed
____ Springs, shackles, U-bolts, check for cracks, rust B tighten

Drive Off and Park:

____ Engine oil, check level
____ Hood latch, check
____ Record all pertinent information in vehicle records

Special Instruction for Repairs Needed

VEHICLE MAINTENANCE RECORD

VEHICLE PROJECT NO.: MT-_____

DATE	MILEAGE	FUEL FILTER	GREASED	OIL CHANGE	CHECK TRANS. & DIFF.	PACK FRONT WHEELS	PACK U-JOINTS	CHECK BATTERY	CLEAN PCV VALVE	CLEAN AIR FILTER	CHECK COOLING SYSTEM	TUNE MOTOR	POINTS & PLUGS	TIRES, ROTATE	CHECK TIRES & PRESSURE	OIL FILTER	MECHANIC'S SIGNATURE (Last Name)	LOCATION WORK PERFORMED

		OTHER WORK PERFORMED

APPENDIX C – MONTANA MCS ON-SITE VEHICLE INSPECTION FORMS

Montana Department of Transportation
Rail, Transit & Planning Division
Transit Section
PO Box 201001
Helena, MT 59620-1001

MCS Onsite Vehicle Inspection Form

Agency Name:		Vehicle Identification Number:	
Address:		Body Make:	
Contact Person:		Chassis Make:	
Phone:		Year:	
Wheel Chair Lift Equipped:	Yes ☐ No ☐	Fuel Type:	Gas ☐ Diesel ☐ Other ☐
Inspection Date:		Mileage:	

Equipment	Pass	Fail	Description of Failed Equipment - For Some Items Include Specific Location
Exterior:			
Windshield Free of Cracks			
Windshield Wipers Operable	☐	☐	
Drivers Mirrors	☐	☐	
Head Lights (High/Low)	☐	☐	
4-Way Flashers - Front, Rear	☐	☐	
Turn Signals - Front, Rear	☐	☐	
Tail/Brake Lights	☐	☐	
Back-Up Lights	☐	☐	
Marker Lamps (If Applicable)	☐	☐	
Tires - Check Tread Depth, Sidewall Damage	☐	☐	
Window Damage	☐	☐	
Properly Functioning Doors	☐	☐	
Body Damage	☐	☐	
Oil Level	☐	☐	
Brake Fluid	☐	☐	
Power Steering	☐	☐	
Transmission Level	☐	☐	
Radiator Level	☐	☐	
Ground (Free of Fluid Leaks?)	☐	☐	
Interior:			
Drivers Controls & Gauges All Functional			
Horn	☐	☐	
Defroster - Front, Rear (If Applicable)	☐	☐	
Heaters - Front, Rear	☐	☐	
A/C - Front, Rear	☐	☐	
Seats - Stained, Torn, Worn	☐	☐	
Functional Seat Belts - Driver, Passenger	☐	☐	
Interior Lights - Driver, Passenger	☐	☐	
Fire Extinguisher - Charged and Serviced	☐	☐	
First Aid Kit - Present	☐	☐	
Body Fluid Cleanup Kit - Present	☐	☐	
Reflective Triangles	☐	☐	
Fire Blanket	☐	☐	
Belt Cutter	☐	☐	
Wheelchair Equipped Vehicles Only:			
Priority Seating Signs (On All ADA Vehicles)			
Wheelchair Securement Location ADA Sign(s)	☐	☐	
Wheelchair Retractors Present for all Stations	☐	☐	
Operate Wheelchair Lift with Weight	☐	☐	
Wheelchair Lift and Remote Cable Damage	☐	☐	
Lift properly secured when stored (Loose?)	☐	☐	
OVERALL VEHICLE CONDITION:	Excellent	Good	Fair / Poor

Additional Comments:

Montana Department of Transportation
Rail, Transit & Planning Division
Transit Section
PO Box 201001
Helena, MT 59620-1001

MCS Onsite Vehicle Inspection Form
Critical Safety Equipment

Agency Name:	0	Vehicle Identification Number:	0
Address:	0	Body Make:	0
Contact Person:	0	Chassis Make:	0
Phone:	0	Year:	0
Wheel Chair Lift Equipped:	Yes ☐ No ☐	Fuel Type:	☐ Gas ☐ Diesel ☐ Other
Inspection Date:	0-Jan-00	Mileage:	0

EQUIPMENT	PASS	FAIL	REPAIR DATE
1. BRAKE SYSTEM			
a. Service brakes			
b. Parking brake system			
c. Brake drums or rotors			
d. Brake hose			
e. Brake tubing			
f. Low pressure warning device			
g. Air compressor			
h. Hydraulic brakes			
i. Vacuum systems			
2. EXHAUST SYSTEM			
a. Any exhaust system determined to be leaking or damaged at a point forward of or directly below the driver compartment.			
b. No part of the exhaust system of any motor vehicle shall be so located as would be likely or result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the motor vehicle.			
3. FUEL SYSTEM			
a. Visible leak			
b. Fuel tank filler cap missing			
c. Fuel tank securely attached			
4. STEERING MECHANISM			
a. Steering wheel free play			
b. Steering column			
c. Front axle beam and all steering components other than steering column			
d. Steering gear box			
e. Pitman arm			
f. Power steering			
g. Ball and socket joints			
h. Tie rods and drag links			
i. Nuts			
j. Steering System			
5. SUSPENSION			
a. Any U-bolt(s), spring hanger(s), or other axle positioning part(s) cracked, broken, loose or missing resulting in shifting of an axle from its normal position.			
b. Spring assembly			

EQUIPMENT	PASS	FAIL	REPAIR DATE
6. FRAME			
a. Frame members			
b. Tire and wheel clearance			
c. Sliding Subframes			
7. WHEELS AND RIMS			
a. Lock or slide ring			
b. Wheels and rims			
8. EMERGENCY EXITS			
a. Rear emergency door determined to be properly secured and fully functional			
b. Roof hatch(es)			
c. Emergency window(s)			
9. LIGHTING			
a. Headlights			
b. Taillights			

List any other condition which may prevent safe operation of this vehicle:

INSTRUCTIONS: MARK COLUMN ENTRIES TO VARIFY INSPECTION: X PASS, X FAIL, NA IF ITEMS DO NOT APPLY, ____REPAIR DATE

COMPLIANCE STATEMENT: If ANY of the above critical components fail the inspection, the vehicle could be removed from service immediately, until noncompliant component(s) is corrected.

Providers Signature: _____ Date: _____

Inspector: _____ Officer Number: _____

APPENDIX D – PREVENTIVE MAINTENANCE FOR FACILITIES

Facility Maintenance Plan (Sample)

- Air Circulator (boiler room and mechanical room) – Preventive maintenance performed every six months.
- Boilers – Daily check of all items posted on log sheets (should include at a minimum: gauges, circulating pumps and belts). Boiler water analysis performed annually and closed system treatment added, if needed. Clean low water cut off annually.
- Building inspection safety tour – Monthly observation of all features to ensure nothing has occurred to affect the safety of the work place.
- Bus wash – Preventive maintenance performed every six months.
- Bus shelters – cleaned and inspected every two months and repaired as needed.
- Circulating pumps – Preventive maintenance performed every six months.
- Exhaust fans – Preventive maintenance performed every six months.
- Fire extinguishers inspection – Check pressure meter monthly and record on tag mounted on each fire extinguisher. Re-charge fire extinguishers annually and record on tag mounted on each fire extinguisher.
- Fire prevention check list – Weekly observation check of work area to note any changes that may be fire hazards.
- Heating and cooling unit – Preventive maintenance performed every six months. Water analysis performed annually. Replace air filters every four months at a minimum.
- Landscaping and grounds maintenance – Scheduled mowing, watering, trimming, and litter pick up as needed. Winterize lawn sprinklers annually.
- Overhead heaters – Preventive maintenance performed annually.
- Portable generator – Preventive maintenance performed annually.
- Pneumatic/shop compressor – Preventive maintenance performed every six months.
- Signage – Repair immediately if safety or customer sensitive.
- Sumps – Preventative maintenance performed every six months.
- Underground fuel tanks – Leak tests performed weekly. Line and tank tightness checked every year. Cathodic protection to be checked every three years. Alarm status test monthly and functionality test annually.
- Waste oil heater – Preventive maintenance every 500 hours.
- Waste oil heater chimney – Preventive maintenance annually.

APPENDIX E – REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
13 Daniels Co	13910661	2005	Ford	cutaway	van cutaway	12	3	3	1	0	10	43
13 Daniels Co	13900771	2010	Dodge	minivan	minivan	7	2	2	5	0	8	72
13 Daniels Co	13901008	2016	Dodge	minivan	accessible van	1	1	1	1	0	8	21
14 Dawson Co	14100001	2004	Chevy 13 pax	cutaway	van cutaway	13	3	2	5	0	10	79
14 Dawson Co	14950713	2007	Chevy 13 pax	cutaway	van cutaway	10	3	2	4	1	10	72
14 Dawson Co	14900820	2010	Ford F 450 13 pax	cutaway	van cutaway	7	2	2	2	2	10	48
14 Dawson Co	14900979	2015	Ford F 450 13 pax	cutaway	van cutaway	2	1	1	1	0	10	21
15 Fergus Co	15100001	2001	Chevrolet 12 pax	cutaway	van cutaway	16	4	3	1	0	10	50
15 Fergus Co	15930664	2006	Ford 6 pax	minivan	minivan	11	3	3	5	0	8	83
15 Fergus Co	15990752	2009	Ford Transtar 20 pax	cutaway	van cutaway	8	2	2	1	2	10	38
15 Fergus Co	15900830	2010	Ford 18 pax	cutaway	van cutaway	7	2	2	1	0	10	32
15 Fergus Co	15900805	2010	Dodge 5 pax	minivan	accessible van	7	2	2	4	0	8	62
15 Fergus Co	15900953	2015	Ford 12 pax	cutaway	van cutaway	2	1	2	1	0	10	25
15 Fergus Co	15901006	2016	Dodge 5 pax	minivan	accessible van	1	1	1	1	0	8	21
16 Big Dry	16950699	2007	Chevrolet 7 pax	minivan	accessible van	10	3	2	2	0	8	49
16 Big Dry	16950698	2007	Chevrolet 10 pax	van	extended van	10	3	2	1	0	8	39
17 North Central MT	17100001	2007	Freightliner chassis 34 pax	cutaway	md cutaway	10	3	1	5	0	10	75
17 North Central MT	17900836	2010	Ford F 550 23 pax Goshen	cutaway	truck cutaway	7	2	1	5	1	10	71
17 North Central MT	17900837	2010	Ford F 550 23 pax Goshen	cutaway	truck cutaway	7	2	1	5	1	10	71
18 Blackfeet Nation	18100001	2016	Ford Sprinter F 350 12-14 pax	bus	extended van	1	1	1	1	0	8	21
18 Blackfeet Nation	18100002	2016	Ford Sprinter F 350 12-14 pax	bus	extended van	1	1	1	1	0	8	21
18 Blackfeet Nation	18100003	2016	Ford Sprinter F 350 12-14 pax	bus	extended van	1	1	1	1	0	8	21
18 Blackfeet Nation	18100004	2016	Ford Sprinter F 350 12-14 pax	bus	extended van	1	1	1	1	0	8	21
19 Liberty Co	19900803	2010	Dodge 6 pax	minivan	accessible van	7	2	2	1	2	8	38
19 Liberty Co	19900846	2011	Dodge	minivan	minivan	6	2	2	1	2	8	38
19 Liberty Co	19900907	2013	12 pax Ford E 450	cutaway	van cutaway	4	1	2	1	0	10	25
19 Liberty Co	19900935	2013	Dodge 6 pax	minivan	minivan	4	1	2	1	2	8	31
20 Phillips	20100001	2002	Chevy 350	cutaway	van cutaway	15	4	2	1	0	10	46
20 Phillips	20100002	2002	Dodge Caravan	minivan	minivan	15	4	3	5	0	8	90
20 Phillips	20100003	2003	Chevrolet Goshen	cutaway	van cutaway	14	3	2	1	0	10	39
20 Phillips	20100004	2004	Ford F450	cutaway	van cutaway	13	3	2	4	0	10	69
20 Phillips	20100005	2008	Chevy Uplander	minivan	accessible van	9	3	2	4	0	8	69
20 Phillips	20900793	2009	Dodge Sprinter	van	extended van	8	3	4	5	2	8	93
20 Phillips	20900966	2015	Dodge Caravan	minivan	accessible van	2	1	2	1	0	8	25
21 Richland Co	21100001	2007	5 pax	minivan	accessible van	10	3	2	1	0	8	39
21 Richland Co	21100002	2008	Ford 12 pax	cutaway	van cutaway	9	2	4	3	0	10	60
21 Richland Co	21930755	2009	Ford 10 pax	van	extended van	8	3	2	1	0	8	39
21 Richland Co	21900822	2010	Ford 12 pax	cutaway	van cutaway	7	2	3	1	0	10	36
21 Richland Co	21900906	2012	Dodge 6 pax	minivan	accessible van	5	2	2	2	0	8	42
21 Richland Co	21100003	2013	13 pax	cutaway	van cutaway	4	1	2	1	0	10	25
21 Richland Co	21900952	2014	Ford 12 pax	cutaway	van cutaway	3	1	2	1	0	10	25

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
21 Richland Co	21900981	2014	Ford 6 pax	minivan	accessible van	3	1	2	1	0	8	25
21 Richland Co	21100004	2014	9 pax	van	extended van	3	1	2	1	0	8	25
22 Fort Peck	22100001	2002	Chevy Transtar	cutaway	van cutaway	15	4	4	5	2	10	100
22 Fort Peck	22100002	2002	Chevy Transtar	cutaway	van cutaway	15	4	4	5	1	10	97
22 Fort Peck	22940695	2007	Ford Starcraft E 450 12 pax	cutaway	van cutaway	10	3	3	5	0	10	83
22 Fort Peck	22900833	2011	Ford F 550 Goshen	cutaway	truck cutaway	6	1	3	5	1	10	72
22 Fort Peck	22900834	2011	Ford F 550 Goshen	cutaway	truck cutaway	6	1	3	5	1	10	72
22 Fort Peck	22100003	2014	Global Titan	cutaway	van cutaway	3	1	1	1	0	10	21
22 Fort Peck	22100004	2014	Global Titan	cutaway	van cutaway	3	1	1	1	0	10	21
22 Fort Peck	22100005	2014	Ford E 150	van	extended van	3	1	1	1	0	8	21
23 Butte-Silver Bow	23900806	2010	Ford Econoline	cutaway	van cutaway	7	2	1	1	0	10	28
23 Butte-Silver Bow	23900861	2011	International general 23 pax	bus	Low floor cutaway	6	1	4	3	2	10	59
23 Butte-Silver Bow	23900937	2013	Gillig 30 pax	bus	hd bus	4	1	1	1	0	14	21
23 Butte-Silver Bow	23900938	2013	Gillig 30 pax	bus	hd bus	4	1	1	1	0	14	21
23 Butte-Silver Bow	23900939	2013	Gillig 30 pax	bus	hd bus	4	1	1	1	0	14	21
23 Butte-Silver Bow	23900940	2013	Gillig 30 pax	bus	hd bus	4	1	1	1	0	14	21
23 Butte-Silver Bow	23900944	2013	Gillig 30 pax	bus	hd bus	4	1	1	1	0	14	21
23 Butte-Silver Bow	23900963	2015	Dodge	van	accessible van	2	1	1	3	0	8	41
23 Butte-Silver Bow	23900964	2015	Dodge	van	accessible van	2	1	1	5	0	8	61
23 Butte-Silver Bow	23900998	2015	Dodge	van	accessible van	2	1	1	1	0	8	21
25 Toole Co	25100001	2008	Dodge Sprinter	cutaway	extended van	9	3	2	5	0	8	79
25 Toole Co	25920753	2009	Ford Starcraft Allstar	cutaway	van cutaway	8	2	2	5	0	10	72
25 Toole Co	25100002	2009	Ford Starcraft Allstar	cutaway	van cutaway	8	2	2	5	0	10	72
25 Toole Co	25100003	2009	Ford	van	extended van	8	3	4	5	2	8	93
26 City of Dillon	26100001	2001	Chevy 12 pax	van	van cutaway	16	4	1	1	0	10	42
26 City of Dillon	26100002	2009	Transtar 15 pax	cutaway	van cutaway	8	2	1	1	0	10	28
27 Valley Co	27100001	2004	Chevy	cutaway	van cutaway	13	3	3	5	0	10	83
27 Valley Co	27950701	2007	Chevy	minivan	accessible van	10	3	2	4	0	8	69
27 Valley Co	27930643	2008	2008 International	cutaway	md cutaway	9	2	1	1	0	10	28
27 Valley Co	27900838	2010	Ford	cutaway	van cutaway	7	2	2	3	0	10	52
27 Valley Co	27900831	2010	Ford	cutaway	van cutaway	7	2	2	2	0	10	42
27 Valley Co	27900832	2010	Ford	cutaway	van cutaway	7	2	2	1	0	10	32
27 Valley Co	27900877	2011	Ford	cutaway	van cutaway	6	1	1	2	0	10	31
27 Valley Co	27100002	2013	Ford Elkhart	cutaway	van cutaway	4	1	1	2	0	10	31
27 Valley Co	27900982	2015	Ford	van	extended van	2	1	1	3	0	8	41
27 Valley Co	27901021	2016	Dodge	minivan	minivan	1	1	1	1	0	8	21
28 CS & KT	28100001	2011	Chevy 120	cutaway	van cutaway	6	1	1	5	0	10	61
28 CS & KT	28100002	2011	Chevy 121	cutaway	van cutaway	6	1	1	5	0	10	61
28 CS & KT	28100003	2014	Ford 130	cutaway	van cutaway	3	1	1	1	0	10	21
28 CS & KT	28100004	2014	Chevy 131	cutaway	van cutaway	3	1	1	3	0	10	41
28 CS & KT	28100005	2014	Chevy 132	cutaway	van cutaway	3	1	1	5	0	10	61

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
28 CS & KT	28100006	2015	Dodge Caravan 30	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100007	2015	Dodge Caravan 31	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100008	2015	Dodge Caravan 32	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100009	2015	Dodge Caravan 33	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100010	2015	Dodge Caravan 34	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100011	2015	Dodge Caravan 35	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100012	2015	Dodge Caravan 36	minivan	minivan	2	1	1	5	0	8	61
28 CS & KT	28100013	2015	Chevy 140	cutaway	van cutaway	2	1	1	1	0	10	21
29 City of Helena	29100001	2003	Chevy (605)	cutaway	van cutaway	14	3	2	5	0	10	79
29 City of Helena	29920639	2005	Ford Star Trans (607)	cutaway	van cutaway	12	3	2	5	0	10	79
29 City of Helena	29100002	2007	Ford Star Craft (609)	cutaway	van cutaway	10	3	2	5	0	10	79
29 City of Helena	29900817	2010	Ford Star Craft (612)	cutaway	van cutaway	7	2	2	4	0	10	62
29 City of Helena	29900818	2010	Ford Star Craft (613)	cutaway	van cutaway	7	2	2	4	0	10	62
29 City of Helena	29900869	2011	Ford Goshen (630)	cutaway	van cutaway	6	1	3	5	1	10	72
29 City of Helena	29900911	2012	Ford Glaval (631)	cutaway	van cutaway	5	1	3	3	1	10	52
29 City of Helena	29900934	2014	Chevy Elkhart (632)	cutaway	van cutaway	3	1	1	1	0	10	21
29 City of Helena	29900984	2015	Ford E450 Super Duty (633)	cutaway	truck cutaway	2	1	1	1	0	10	21
29 City of Helena	29901040	2016	Ford E550 Super Duty Glaval (634)	cutaway	truck cutaway	1	1	1	1	0	10	21
30 Flathead Co	30940666	2006	Chevrolet 10 pax	van	extended van	11	3	4	5	1	8	90
30 Flathead Co	30940667	2006	Chevrolet 10 pax	van	extended van	11	3	4	5	1	8	90
30 Flathead Co	30990756	2009	Ford 13 pax	cutaway	van cutaway	8	2	3	5	0	10	76
30 Flathead Co	30990764	2010	Freightliner 23 pax	cutaway	md cutaway	7	2	4	5	2	10	86
30 Flathead Co	30990764	2010	Freightliner 23 pax	cutaway	md cutaway	7	2	4	5	2	10	86
30 Flathead Co	30900800	2010	El Dorado 7 pax	minivan	accessible van	7	2	2	1	0	8	32
30 Flathead Co	30100001	2010	International 35 pax	cutaway	md cutaway	7	2	2	4	2	10	68
30 Flathead Co	30900882	2011	Chevrolet 15 pax	cutaway	van cutaway	6	1	3	4	0	10	59
30 Flathead Co	30900868	2012	Chevrolet 17 pax	cutaway	van cutaway	5	1	3	5	2	10	75
30 Flathead Co	30900883	2012	Chevrolet 17 pax	cutaway	van cutaway	5	1	3	3	2	10	55
30 Flathead Co	30900921	2012	Chevrolet 17 pax	cutaway	van cutaway	5	1	2	1	0	10	25
30 Flathead Co	30900983	2015	Ford 17 pax	cutaway	van cutaway	2	1	1	1	0	10	21
30 Flathead Co	30100002	2016	Glaval 27 pax	cutaway	truck cutaway	1	1	1	1	0	10	21
31 Glacier Co	31900828	2010	Ford E 450 super duty	cutaway	van cutaway	7	2	2	1	2	10	38
33 Lake Co	33100001	1995	Ford Escort	automobile	automobile	22	4	2	5	0	8	86
33 Lake Co	33900778	2010	Dodge Caravan	minivan	minivan	7	2	2	5	0	8	72
33 Lake Co	33900779	2010	Dodge Caravan	minivan	minivan	7	2	2	5	0	8	72
33 Lake Co	33900780	2010	Dodge Caravan	minivan	minivan	7	2	2	5	0	8	72
33 Lake Co	33900994	2015	Dodge Caravan	minivan	accessible van	2	1	1	1	0	8	21
34 Lincoln Co	34100001	2008	Ford ECS 12 pax	van	extended van	9	3	2	5	0	8	79
34 Lincoln Co	34900768	2010	Dodge Caravan	minivan	minivan	7	2	2	5	0	8	72
34 Lincoln Co	34900824	2010	Ford E450	cutaway	van cutaway	7	2	2	1	0	10	32
34 Lincoln Co	34900825	2010	Ford E450	cutaway	van cutaway	7	2	2	1	0	10	32

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
34 Lincoln Co	34100002	2012	Ford Edge	SUV	automobile	5	2	2	5	0	8	72
34 Lincoln Co	34100003	2015	Dodge Caravan	minivan	accessible van	2	1	2	2	0	8	35
35 Mineral Co	35900807	2010	Ford	van	extended van	7	2	2	2	0	8	42
36 Glen-Wood	36100001	2010	Dodge	minivan	minivan	7	2	2	5	0	8	72
36 Glen-Wood	36900887	2012	Dodge Express	minivan	minivan	5	2	2	5	1	8	75
36 Glen-Wood	36900923	2013	Ford 26 pax	cutaway	truck cutaway	4	1	1	1	0	10	21
36 Glen-Wood	36900932	2014	Ford 26 pax	cutaway	truck cutaway	3	1	2	1	0	10	25
36 Glen-Wood	36900958	2014	Dodge	minivan	minivan	3	1	1	2	0	8	31
36 Glen-Wood	36900975	2015	Elkhart 13 pax	cutaway	van cutaway	2	1	1	1	1	10	24
36 Glen-Wood	36900976	2015	Elkhart 13 pax	cutaway	van cutaway	2	1	1	1	0	10	21
37 Missoula Ravalli	37100001	2002	Dodge 3500	van	extended van	15	4	2	5	0	8	86
37 Missoula Ravalli	37100002	2002	Dodge 3500	van	extended van	15	4	2	5	0	8	86
37 Missoula Ravalli	37950687	2007	Dodge Caravan	minivan	minivan	10	3	2	1	0	8	39
37 Missoula Ravalli	37930743	2009	Dodge Caravan	minivan	minivan	8	3	2	1	0	8	39
37 Missoula Ravalli	37930744	2009	Dodge Caravan	minivan	minivan	8	3	2	5	0	8	79
37 Missoula Ravalli	37100003	2009	Ford E350	van	extended van	8	3	4	5	0	8	87
37 Missoula Ravalli	37100004	2009	Ford E350	van	extended van	8	3	4	5	0	8	87
37 Missoula Ravalli	37100005	2009	Ford E350	van	extended van	8	3	4	5	0	8	87
37 Missoula Ravalli	37100006	2009	Ford E350	van	extended van	8	3	4	4	0	8	77
37 Missoula Ravalli	37100007	2009	Ford E350	van	extended van	8	3	4	5	0	8	87
37 Missoula Ravalli	37900891	2012	Dodge Caravan	minivan	minivan	5	2	2	3	0	8	52
37 Missoula Ravalli	37900892	2012	Dodge Caravan	minivan	minivan	5	2	2	2	0	8	42
37 Missoula Ravalli	37900893	2012	Dodge Caravan	minivan	minivan	5	2	2	4	0	8	62
37 Missoula Ravalli	37900894	2012	Dodge Caravan	minivan	minivan	5	2	2	1	0	8	32
37 Missoula Ravalli	37900942	2013	Nissan NV	van	extended van	4	1	1	1	0	8	21
37 Missoula Ravalli	37900941	2014	Dodge Caravan	minivan	minivan	3	1	2	2	0	8	35
37 Missoula Ravalli	37900985	2014	Nissan NV	van	extended van	3	1	1	1	0	8	21
37 Missoula Ravalli	37900986	2014	Nissan NV	van	extended van	3	1	1	1	0	8	21
37 Missoula Ravalli	37100008	2016	Nissan NV	van	extended van	1	1	1	4	0	8	51
37 Missoula Ravalli	37100009	2016	Dodge Caravan	minivan	minivan	1	1	1	1	0	8	21
37 Missoula Ravalli	37100010	2016	Dodge Caravan	minivan	minivan	1	1	1	1	0	8	21
37 Missoula Ravalli	37100011	2016	Dodge Caravan	minivan	minivan	1	1	1	1	0	8	21
37 Missoula Ravalli	37901023	2016	Nissan NV	van	extended van	1	1	1	1	0	8	21
37 Missoula Ravalli	37901024	2016	Nissan NV	van	extended van	1	1	1	1	0	8	21
37 Missoula Ravalli	37901025	2016	Nissan NV	van	extended van	1	1	1	1	0	8	21
38 Ravalli Co	38100001	2003	Chevrolet	cutaway	van cutaway	14	3	2	5	0	10	79
38 Ravalli Co	38100002	2005	Dodge	minivan	minivan	12	3	2	5	0	8	79
38 Ravalli Co	38900929	2013	Dodge	minivan	minivan	4	1	1	2	0	8	31
38 Ravalli Co	38901007	2016	Dodge	minivan	accessible van	1	1	1	1	0	8	21
38 Ravalli Co	38100003	2017	Ford	cutaway	van cutaway	0	1	1	1	0	10	21
40 Sanders Co	40100001	2007	Dodge Caravan	minivan	minivan	10	3	4	5	0	8	87

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
40 Sanders Co	40100002	2007	Chevy Uplander	minivan	accessible van	10	3	4	5	0	8	87
40 Sanders Co	40960722	2007	Ford Starcraft Allstar	cutaway	van cutaway	10	3	4	1	2	10	53
40 Sanders Co	40990748	2009	Ford Starcraft Allstar	cutaway	van cutaway	8	2	2	2	1	10	45
40 Sanders Co	40900782	2010	Dodge Grand Caravan	minivan	minivan	7	2	2	1	0	8	32
40 Sanders Co	40907781	2010	Dodge Caravan	minivan	minivan	7	2	4	5	0	8	80
40 Sanders Co	40907873	2012	Chevy Starcraft Allstar	cutaway	van cutaway	5	1	2	5	1	10	68
40 Sanders Co	40901019	2016	Dodge Grand Caravan	minivan	minivan	1	1	1	1	0	8	21
40 Sanders Co	40100003	2016	Dodge Grand Caravan	minivan	minivan	1	1	1	1	0	8	21
52 Carter Co	52900802	2010	Dodge El Dorado 6 pax	minivan	accessible van	7	2	2	4	0	8	62
52 Carter Co	52900922	2012	Ford over cab 13-pax	cutaway	van cutaway	5	1	2	1	0	10	25
55 Fallon Co	55100001	2004	Chevy cutaway 12 pax	cutaway	van cutaway	13	3	2	1	0	10	39
55 Fallon Co	55900795	2009	Dodge 3500 Sprinter 13 pax	van	extended van	8	3	3	2	2	8	59
56 District IX	56100001	2002	Chevrolet 16 pax	cutaway	van cutaway	15	4	4	5	0	10	94
56 District IX	56100002	2005	Chevy 12 pax	cutaway	van cutaway	12	3	4	5	0	10	87
56 District IX	56100003	2006	Chevy 12 pax	cutaway	van cutaway	11	3	4	5	0	10	87
56 District IX	56950716	2007	International 22 pax	cutaway	Low floor cutaway	10	3	1	1	0	10	35
56 District IX	56950718	2007	International 23 pax	cutaway	Low floor cutaway	10	3	4	5	0	10	87
56 District IX	56950719	2007	International 23 pax	cutaway	Low floor cutaway	10	3	4	5	0	10	87
56 District IX	56960719	2007	International 23 pax cutaway	cutaway	Low floor cutaway	10	3	4	5	0	10	87
56 District IX	56960720	2007	International 23 pax	cutaway	Low floor cutaway	10	3	4	5	0	10	87
56 District IX	56960721	2007	International 35 pax	cutaway	Low floor cutaway	10	3	4	5	0	10	87
56 District IX	56100004	2008	Chevy Uplander 5 pax	minivan	accessible van	9	3	4	3	1	8	70
56 District IX	56900796	2009	Dodge Sprinter 17 pax	van	extended van	8	3	3	5	0	8	83
56 District IX	56900867	2009	Freightliner Sprinter 17 pax	cutaway	extended van	8	3	3	5	1	8	86
56 District IX	56900920	2012	Ford EC-11 13 pax	cutaway	van cutaway	5	1	2	1	0	10	25
56 District IX	56900859	2012	ICRP 23 pax	bus	Low floor cutaway	5	1	3	1	0	10	29
56 District IX	56900860	2012	ICRP 35 pax	bus	Low floor cutaway	5	1	3	5	0	10	69
56 District IX	56100005	2013	Champion 23 pax	cutaway	Low floor cutaway	4	1	3	5	0	10	69
56 District IX	56100006	2013	Champion 23 pax	cutaway	Low floor cutaway	4	1	3	5	1	10	72
56 District IX	56100007	2013	Champion 35 pax	cutaway	Low floor cutaway	4	1	3	5	0	10	69
56 District IX	56100008	2014	Ford E450 13 pax	cutaway	van cutaway	3	1	2	1	0	10	25
58 Big Sky	58950703	2007	Bus 505: Int'l/TMC, 35-pax cutaway	cutaway	md cutaway	10	3	4	4	0	10	77
58 Big Sky	58900835	2011	Bus 503: Ford 550/Goshen, 25-pax	cutaway	truck cutaway	6	1	3	5	0	10	69
58 Big Sky	58100001	2011	Bus 504:Ford 550/Goshen, 25-pax	cutaway	truck cutaway	6	1	3	5	0	10	69
58 Big Sky	58900870	2011	Bus 507: Ford F550/Goshen, 23-pax cutaway	cutaway	truck cutaway	6	1	2	4	0	10	55
58 Big Sky	58900896	2012	Van 520: Chevy Express Van, 13-pax, 4-wd	van	extended van	5	2	2	5	0	8	72
58 Big Sky	58900897	2012	Van 521: Chevy Express Van, 13-pax, 4-wd	van	extended van	5	2	2	5	0	8	72
58 Big Sky	58900899	2012	Van 522: Chevy Express Van, 13-pax, 4-wd	van	extended van	5	2	2	5	0	8	72
58 Big Sky	58900895	2012	Van 523: Chevy Express Van, 13-pax, 4-wd	van	extended van	5	2	2	5	0	8	72
58 Big Sky	58900898	2012	Van 524: Chevy Express Van, 13-pax, 4-wd	van	extended van	5	2	2	4	0	8	62
58 Big Sky	58900926	2013	Bus 506: Int'l/Champion, 35-pax	cutaway	md cutaway	4	1	2	5	0	10	65

REPLACEMENT PRIORITIZATION SCORES (RPS) FOR VEHICLES

Provider	Vehicle ID	Year	Vehicle	Class	Subclass	Age in 2017	Age Rating	Condition Rating	Mileage Rating	Mait. Issue Factor	ULB	RPS
58 Big Sky	58900977	2015	Van 525: Chevy Express Van, 13-pax, 4-wd	van	extended van	2	1	1	4	0	8	51
58 Big Sky	58900978	2015	Van 526: Chevy Express Van, 13-pax, 4-wd	van	extended van	2	1	1	5	0	8	61
58 Big Sky	58901013	2016	Bus 508: IC Rear-engine bus, 45-pax	bus	md cutaway	1	1	1	1	0	10	21
58 Big Sky	58901014	2016	Bus 509: IC Rear-engine bus, 45-pax	bus	md cutaway	1	1	1	1	0	10	21
58 Big Sky	58901039	2016	Bus 510: Ford 550/Glaval 27-pax	cutaway	truck cutaway	1	1	1	1	0	10	21
60 West Yellowstone	60100001	2012	Chevrolet Traverse	SUV	automobile	5	2	1	4	0	8	58
60 West Yellowstone	60100002	2015	Chevrolet Titan 2 cutaway	cutaway	van cutaway	2	1	1	1	0	10	21
61 Liberty Place	61100001	2001	Chevy 12 pax	cutaway	van cutaway	16	4	4	2	0	10	64
61 Liberty Place	61100002	2004	Ford 12 pax	cutaway	van cutaway	13	3	3	1	0	10	43
61 Liberty Place	61900804	2010	Dodge Grand Caravan	minivan	accessible van	7	2	2	5	0	8	72
61 Liberty Place	61900931	2013	Dodge Caravan 5 pax	minivan	minivan	4	1	1	4	0	8	51
61 Liberty Place	61100003	2017	Ford 12 pax	cutaway	van cutaway	0	1	1	1	0	10	21
63 Powder River Co	63960723	2007	Ford F 450 17 pax	cutaway	van cutaway	10	3	2	1	0	10	39
63 Powder River Co	63910857	2010	Dodge Grand Caravan conversion 5 pax	minivan	accessible van	7	2	2	5	1	8	75
63 Powder River Co	63910886	2012	Dodge 6 pax	minivan	minivan	5	2	1	1	0	8	28
63 Powder River Co	63901020	2016	Dodge 6 pax	minivan	minivan	1	1	1	1	0	8	21
64 Rosebud	64100001	2003	2003 Ford Windstar van 7 pax	van	minivan	14	4	2	3	0	8	66
64 Rosebud	64100002	2008	2008 Chevy Uplander van 7 pax	van	minivan	9	3	2	4	0	8	69
64 Rosebud	64100003	2008	2008 Chevy Uplander van 7 pax	van	minivan	9	3	3	5	0	8	83
64 Rosebud	64900858	2010	2010 Dodge Grand Caravan 5 pax	minivan	accessible van	7	2	2	5	0	8	72
64 Rosebud	64900819	2010	2010 Ford E 450 cutaway 12 pax	cutaway	van cutaway	7	2	4	1	2	10	46
64 Rosebud	64100004	2013	2013 Ford Edge 4 pax	automobile	automobile	4	1	1	2	0	8	31
65 City of Laurel	65900792	2009	Dodge 15 pax	van	extended van	8	3	2	1	0	8	39
66 Crow Tribe	66900866	2011	Ford E350	van	extended van	6	2	2	5	0	8	72
66 Crow Tribe	66100001	2012	Ford F550	cutaway	van cutaway	5	1	2	5	0	10	65
66 Crow Tribe	66900905	2012	Dodge Grand Caravan	minivan	accessible van	5	2	2	5	0	8	72
66 Crow Tribe	66900909	2013	Chevrolet Express	cutaway	van cutaway	4	1	2	5	0	10	65
66 Crow Tribe	66900909	2013	Chevrolet Express	cutaway	van cutaway	4	1	2	5	0	10	65
66 Crow Tribe	66900910	2013	Chevrolet Express	cutaway	van cutaway	4	1	2	5	0	10	65
74 Chippewa Cree Tribe	74100001	2010	Chevy Express	van	extended van	7	2	3	5	0	8	76
74 Chippewa Cree Tribe	74100002	2013	Chevy Express	van	extended van	4	1	2	5	0	8	65
74 Chippewa Cree Tribe	74100003	2013	Chevy Express	van	extended van	4	1	2	5	0	8	65
74 Chippewa Cree Tribe	74100004	2013	Chevy Express	van	extended van	4	1	2	5	0	8	65
74 Chippewa Cree Tribe	74901017	2016	Dodge Grand Caravan	minivan	accessible van	1	1	1	1	0	8	21
78 Powell Co	78100001	2013	Chevrolet Goshen 12 pax	cutaway	van cutaway	14	3	3	1	2	10	49
78 Powell Co	78900957	2014	Dodge	minivan	minivan	3	1	1	1	0	8	21

APPENDIX F – PRIORITIZED CAPITAL REPLACEMENT PROGRAM FY 2018-2022

Prioritized Capital Investment Program (2018-2022)											
Program Year	Description	Replacement Costs	Pipe-Lined?	Asset ID	RPS	ULB	Mileage	Mileage Rate	Condition Rating	Age Rating	Main. Issue Rating
FY 2018											
2018	Accessible Van	$ 40,000		27950701	69	8	98,806	4	2	3	0
2018	Accessible Van	$ 40,000		40100002	87	8	170,440	5	4	3	0
2018	Accessible Van	$ 40,000		64900858	72	8	181,101	5	2	2	0
2018	Medium Duty Cutaway	$ 195,000	Yes	17100001	75	10	159,080	5	1	3	0
2018	Medium Duty Cutaway	$ 195,000	Yes	30990764-2	86	10	202,000	5	4	2	2
2018	Cutaway Truck	$ 111,000	Yes	17900836	71	10	170,784	5	1	2	1
2018	Cutaway Van	$ 67,000		22100001	100	10	380,000	5	4	4	2
2018	Cutaway Van	$ 67,000		22100002	97	10	350,000	5	4	4	1
2018	Cutaway Van	$ 67,000		27100001	83	10	246,607	5	3	3	0
2018	Cutaway Van	$ 67,000		29100001	79	10	247,768	5	2	3	0
2018	Cutaway Van	$ 67,000		38100001	79	10	277,366	5	2	3	0
2018	Minivan	$ 29,000		15930664	83	8	156,786	5	3	3	0
2018	Minivan	$ 29,000		20100002	90	8	221,473	5	3	4	0
2018	Minivan	$ 29,000		33900778	72	8	124,065	5	2	2	0
2018	Minivan	$ 29,000		33900779	72	8	123,866	5	2	2	0
2018	Minivan	$ 29,000		33900780	72	8	114,534	5	2	2	0
2018	Minivan	$ 29,000		34900768	72	8	172,979	5	2	2	0
2018	Minivan	$ 29,000		36100001	72	8	116,670	5	2	2	0
2018	Minivan	$ 29,000		37930744	79	8	167,653	5	2	3	0
2018	Minivan	$ 29,000		38100002	79	8	210,369	5	2	3	0
2018	Minivan	$ 29,000		40100001	87	8	180,357	5	4	3	0
2018	Minivan	$ 29,000		40907781	80	8	157,171	5	4	2	0
2018	Minivan	$ 29,000		64100003	83	8	201,720	5	3	3	0
2018	Extended Van	$ 51,000	Yes	20900793	93	8	105,133	5	4	3	2
2018	Extended Van	$ 51,000		25100001	79	8	182,567	5	2	3	0
2018	Extended Van	$ 51,000		25100003	93	8	199,342	5	4	3	2
2018	Extended Van	$ 51,000		30940666	90	8	229,393	5	4	3	1
2018	Extended Van	$ 51,000		30940667	90	8	229,000	5	4	3	1
2018	Extended Van	$ 51,000		37100001	86	8	145,999	5	2	4	0
2018	Extended Van	$ 51,000		37100002	86	8	162,277	5	2	4	0
2018	Extended Van	$ 51,000	Yes	37100004	87	8	101,493	5	4	3	0
2018	Extended Van	$ 51,000	Yes	37100005	87	8	111,271	5	4	3	0
2018	Extended Van	$ 51,000	Yes	37100006	77	8	95,136	4	4	3	0
2018	Extended Van	$ 51,000	Yes	37100007	87	8	111,868	5	4	3	0

Prioritized Capital Investment Program (2018-2022)											
Program Year	Description	Replacement Costs	Pipe-Lined?	Asset ID	RPS	ULB	Mileage	Mileage Rate	Condition Rating	Age Rating	Main. Issue Rating
2018	Extended Van	$ 51,000		66900866	72	8	213,842	5	2	2	0
FY 2019											
2019	Accessible Van	$ 40,000		15900805	62	8	94,123	4	2	2	0
2019	Accessible Van	$ 40,000		20100005	69	8	94,797	4	2	3	0
2019	Accessible Van	$ 40,000		61900804	72	8	114,414	5	2	2	0
2019	Accessible Van	$ 40,000		63910857	75	8	104,000	5	2	2	1
2019	Accessible Van	$ 40,000		66900905	72	8	114,698	5	2	2	0
2019	Low Floor Cutaway	$ 150,000	Yes	56900860	69	10	152,652	5	3	1	0
2019	Low Floor Cutaway	$ 150,000	Yes	56100006	72	10	157,284	5	3	1	1
2019	Medium Duty Cutaway	$ 195,000	Yes	58950703	77	10	142,613	4	4	3	0
2019	Cutaway Van	$ 67,000		14100001	79	10	167,200	5	2	3	0
2019	Cutaway Van	$ 67,000		22940695	83	10	177,599	5	3	3	0
2019	Cutaway Van	$ 67,000		28100001	61	10	196,144	5	1	1	0
2019	Cutaway Van	$ 67,000		29920639	79	10	220,857	5	2	3	0
2019	Cutaway Van	$ 67,000		29100002	79	10	198,425	5	2	3	0
2019	Cutaway Van	$ 67,000		30990756	76	10	176,707	5	3	2	0
2019	Cutaway Van	$ 67,000	Yes	55100001	39	10	77,000	1	2	3	0
2019	Cutaway Van	$ 67,000		56100001	94	10	209,462	5	4	4	0
2019	Cutaway Van	$ 67,000		56100002	87	10	205,464	5	4	3	0
2019	Cutaway Van	$ 67,000		56100003	87	10	215,478	5	4	3	0
2019	Maintenance Building	$ 25,000		18-Fac-Garage							
2019	Maintenance Building	$ 25,000		19-Fac-Wash Bay							
2019	Maintenance Building	$ 25,000		26-Fac-Shop							
2019	Maintenance Building	$ 25,000		27-Fac-Garage							
2019	Maintenance Building	$ 25,000		28-Fac-Mech							
2019	Minivan	$ 29,000		13900771	72	8	103,452	5	2	2	0
2019	Minivan	$ 29,000		36900887	75	8	108,607	5	2	2	1
2019	Minivan	$ 29,000		37900893	62	8	84,384	4	2	2	0
2019	Minivan	$ 29,000		64100001	66	8	96,667	3	2	4	0
2019	Minivan	$ 29,000		64100002	69	8	94,844	4	2	3	0
2019	Extended Van	$ 51,000		34100001	79	8	153,058	5	2	3	0
2019	Extended Van	$ 51,000		37100003	87	8	139,073	5	4	3	0
2019	Extended Van	$ 51,000		56900796	83	8	154,749	5	3	3	0
2019	Extended Van	$ 51,000		58900897	72	8	143,018	5	2	2	0
2019	Extended Van	$ 51,000		74100001	76	8	152,738	5	3	2	0

Prioritized Capital Investment Program (2018-2022)											
Program Year	Description	Replacement Costs	Pipe-Lined?	Asset ID	RPS	ULB	Mileage	Mileage Rate	Condition Rating	Age Rating	Main. Issue Rating
2019	Extended Van	$ 51,000		74100002	65	8	160,697	5	2	1	0
FY 2020											
2020	Accessible Van	$ 40,000		21900906	42	8	59,226	2	2	2	0
2020	Accessible Van	$ 40,000		52900802	62	8	92,111	4	2	2	0
2020	Accessible Van	$ 40,000		56100004	70	8	88,166	3	4	3	1
2020	Low Floor Cutaway	$ 150,000		56950719	87	10	263,985	5	4	3	0
2020	Low Floor Cutaway	$ 150,000		56960721	87	10	266,459	5	4	3	0
2020	Low Floor Cutaway	$ 150,000	Yes	56100005	69	10	124,382	5	3	1	0
2020	Low Floor Cutaway	$ 150,000	Yes	56100007	69	10	158,493	5	3	1	0
2020	Cutaway Truck	$ 111,000		22900834	72	10	194,000	5	3	1	1
2020	Cutaway Truck	$ 111,000		58900835	69	10	200,990	5	3	1	0
2020	Cutaway Truck	$ 111,000		58100001	69	10	209,537	5	3	1	0
2020	Cutaway Van	$ 67,000		14950713	72	10	143,000	4	2	3	1
2020	Cutaway Van	$ 67,000		20100004	69	10	152,187	4	2	3	0
2020	Cutaway Van	$ 67,000		25920753	72	10	158,229	5	2	2	0
2020	Cutaway Van	$ 67,000		25100002	72	10	152,852	5	2	2	0
2020	Cutaway Van	$ 67,000		28100002	61	10	158,615	5	1	1	0
2020	Cutaway Van	$ 67,000		29900869	72	10	143,857	5	3	1	1
2020	Cutaway Van	$ 67,000		66900910	65	10	151,444	5	2	1	0
2020	Minivan	$ 29,000		61900931	51	8	76,785	4	1	1	0
2020	Extended Van	$ 51,000		56900867	86	8	122,676	5	3	3	1
2020	Extended Van	$ 51,000		58900896	72	8	125,407	5	2	2	0
2020	Extended Van	$ 51,000		58900899	72	8	122,548	5	2	2	0
2020	Extended Van	$ 51,000		58900895	72	8	113,029	5	2	2	0
2020	Extended Van	$ 51,000	Yes	58900978	61	8	49,152	5	1	1	0
2020	Extended Van	$ 51,000		74100003	65	8	123,458	5	2	1	0
2020	Extended Van	$ 51,000		74100004	65	8	131,161	5	2	1	0
FY 2021											
2021	Accessible Van	$ 40,000		23900964	61	8	43,950	5	1	1	0
2021	Low Floor Cutaway	$ 150,000		56960719	87	10	235,025	5	4	3	0
2021	Low Floor Cutaway	$ 150,000		56960720	87	10	234,814	5	4	3	0
2021	Medium Duty Cutaway	$ 195,000	Yes	58900926	65	10	142,613	5	2	1	0
2021	Cutaway Truck	$ 111,000		17900837	71	10	154,572	5	1	2	1
2021	Cutaway Truck	$ 111,000		22900833	72	10	178,000	5	3	1	1

Prioritized Capital Investment Program (2018-2022)											
Program Year	Description	Replacement Costs	Pipe-Lined?	Asset ID	RPS	ULB	Mileage	Mileage Rate	Condition Rating	Age Rating	Main. Issue Rating
2021	Cutaway Van	$ 67,000		14900820	48	10	107,500	2	2	2	2
2021	Cutaway Van	$ 67,000		15100001	50	10	104,319	1	3	4	0
2021	Cutaway Van	$ 67,000		20100003	39	10	97,788	1	2	3	0
2021	Cutaway Van	$ 67,000		21100002	60	10	125,639	3	4	2	0
2021	Cutaway Van	$ 67,000		27900838	52	10	115,550	3	2	2	0
2021	Cutaway Van	$ 67,000		29900817	62	10	128,959	4	2	2	0
2021	Cutaway Van	$ 67,000		29900818	62	10	126,483	4	2	2	0
2021	Cutaway Van	$ 67,000		30900868	75	10	121,232	5	3	1	2
2021	Cutaway Van	$ 67,000		30900883	55	10	105,169	3	3	1	2
2021	Cutaway Van	$ 67,000	Yes	40960722	53	10	98,605	1	4	3	2
2021	Cutaway Van	$ 67,000		40907873	68	10	121,533	5	2	1	1
2021	Cutaway Van	$ 67,000		61100001	64	10	123,178	2	4	4	0
2021	Cutaway Van	$ 67,000		66100001	65	10	133,897	5	2	1	0
2021	Cutaway Van	$ 67,000		66900909	65	10	151,872	5	2	1	0
2021	Cutaway Van	$ 67,000		66900909	65	10	151,872	5	2	1	0
2021	Maintenance Building	$ 25,000		18-Fac-Garage							
2021	Maintenance Building	$ 25,000		19-Fac-Wash Bay							
2021	Maintenance Building	$ 25,000		26-Fac-Shop							
2021	Maintenance Building	$ 25,000		27-Fac-Garage							
2021	Maintenance Building	$ 25,000		28-Fac-Mech							
2021	Minivan	$ 29,000		38900929	31	8	59,778	2	1	1	0
2021	Extended Van	$ 51,000	Yes	58900898	62	8	81,379	4	2	2	0
FY 2022											
2022	Accessible Van	$ 40,000	Yes	16950699	49	8	69,000	2	2	3	0
2022	Accessible Van	$ 40,000	Yes	21100001	39	8	16,932	1	2	3	0
2022	Low Floor Cutaway	$ 150,000		56950718	87	10	204,107	5	4	3	0
2022	Medium Duty Cutaway	$ 195,000		30990764-1	86	10	202,527	5	4	2	2
2022	Medium Duty Cutaway	$ 195,000	Yes	30100001	68	10	134,778	4	2	2	2
2022	Cutaway Truck	$ 111,000		58900870	55	10	118,427	4	2	1	0
2022	Cutaway Van	$ 67,000		13910661	43	10	78,914	1	3	3	0
2022	Cutaway Van	$ 67,000		15990752	38	10	77,420	1	2	2	2
2022	Cutaway Van	$ 67,000		15900830	32	10	78,939	1	2	2	0
2022	Cutaway Van	$ 67,000	Yes	20100001	46	10	53,463	1	2	4	0
2022	Cutaway Van	$ 67,000	Yes	26100001	42	10	71,000	1	1	4	0
2022	Cutaway Van	$ 67,000	Yes	26100002	28	10	30,000	1	1	2	0

Prioritized Capital Investment Program (2018-2022)											
Program Year	Description	Replacement Costs	Pipe-Lined?	Asset ID	RPS	ULB	Mileage	Mileage Rate	Condition Rating	Age Rating	Main. Issue Rating
2022	Cutaway Van	$ 67,000		27900831	42	10	107,482	2	2	2	0
2022	Cutaway Van	$ 67,000		27900877	31	10	106,200	2	1	1	0
2022	Cutaway Van	$ 67,000	Yes	30900882	59	10	124,060	4	3	1	0
2022	Cutaway Van	$ 67,000	Yes	40990748	45	10	104,531	2	2	2	1
2022	Cutaway Van	$ 67,000		61100002	43	10	74,142	1	3	3	0
2022	Cutaway Van	$ 67,000		63960723	39	10	67,000	1	2	3	0
2022	Cutaway Van	$ 67,000		78100001	49	10	74,550	1	3	3	2
2022	Administration Facilities	$ 25,000		18-Fac-Office							
2022	Administration Facilities	$ 25,000		19-Fac-Office							
2022	Administration Facilities	$ 25,000		27-Fac-Office							
2022	Administration Facilities	$ 25,000		28-Fac-Office							
2022	Administration Facilities	$ 25,000		37-Fac-Office							
2022	Minivan	$ 29,000		19900846	38	8	50,125	1	2	2	2
2022	Minivan	$ 29,000	Yes	37950687	39	8	62,766	1	2	3	0
2022	Minivan	$ 29,000	Yes	37930743	39	8	49,601	1	2	3	0
2022	Extended Van	$ 51,000	Yes	16950698	39	8	46,000	1	2	3	0
2022	Extended Van	$ 51,000	Yes	21930755	39	8	53,320	1	2	3	0
2022	Extended Van	$ 51,000	Yes	55900795	59	8	65,000	2	3	3	2