

MATBUS Transit Asset Management Plan

Working Document



November 2016

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EXECUTIVE SUMMARY

This transit asset management (TAM) plan is an examination of the infrastructure renewal requirements of MATBUS. It is based on an inventory and condition assessment of MATBUS assets. The examination was accomplished through the application of the Federal Transit Administration's (FTA's) Transit Economic Requirements Model (TERM Lite), an analytical tool which provides the ability to address the following questions:

1. What is the dollar value of assets beyond their useful life; that is, not at a state of good repair (SGR)? This is also called the SGR backlog.
2. What is the projected annual value of assets reaching their useful life? This is also called future SGR needs.

The following pages provide brief summaries of the current MATBUS asset inventory, the size of the backlog, and the projected 20-year SGR need.

Snapshot of current MATBUS inventory: the current MATBUS inventory of assets consists of 631 line items and has a replacement value of \$51.4 million (2016 \$). As weighted by replacement cost, the average percentage of useful life remaining for all assets systemwide is 43 percent. This indicates that, as a whole, the system has less than half of its useful life remaining, and will require major capital investment in asset replacement in the near term. All assets are owned and maintained by either Fargo, Moorhead, or jointly by both jurisdictions. Capital costs for jointly owned and maintained assets are shared by the jurisdictions (two-thirds of costs to Fargo, one-third of costs to Moorhead).

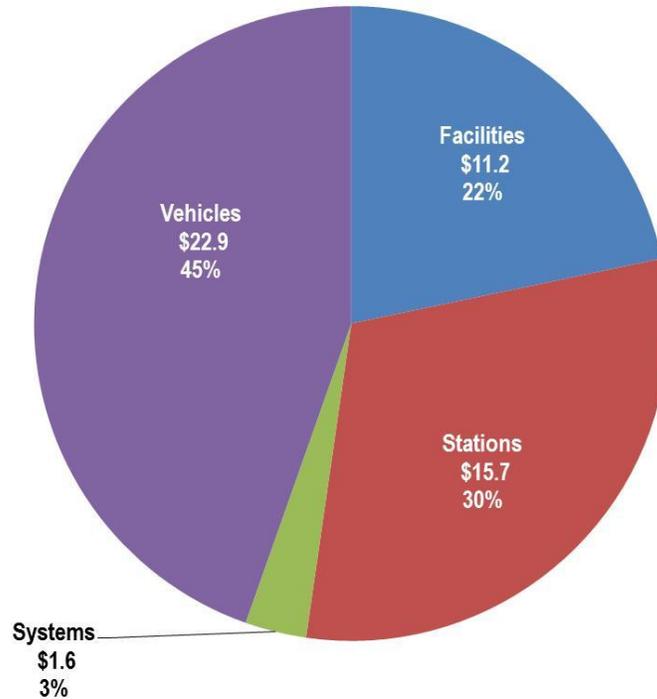
Table ES-1 and Figure ES-1 provide a snapshot of the current MATBUS inventory.

Table ES-1. Snapshot of MATBUS Asset Inventory by Jurisdiction

Measure	MATBUS Total Asset Value	Fargo Asset Value	Moorhead Asset Value	Joint Asset Value
Number of asset line items	631	331	215	85
Total replacement value*	\$ 51.4 M	\$ 34.1 M	\$ 6.8 M	\$ 10.4 M
Facilities*	\$ 11.2 M	\$ 0.7 M	\$ 0.2 M	\$ 10.3 M
Stations*	\$ 15.7 M	\$ 15.1 M	\$ 0.6 M	-
Systems*	\$ 1.6 M	\$ 1.0 M	\$ 0.6 M	\$ 0.0 M
Vehicles*	\$ 22.9 M	\$ 17.4 M	\$ 5.4 M	\$ 0.1 M
Average age of assets (by replacement value)	14 years	17 years	7 years	11 years
Average % of useful life remaining (by replacement value)	43%	34%	45%	68%

*2016 dollars

Figure ES-1. Summary of Replacement Value by Asset Category – All Assets (Millions of 2016 \$)



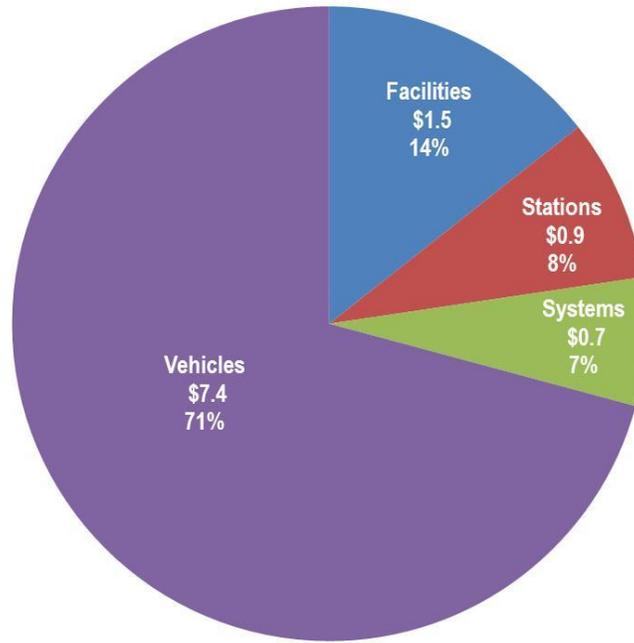
Current SGR Backlog: As projected by TERM Lite, the current SGR backlog—the value of assets beyond their useful lives—is \$10.5 million (2016 \$), 20 percent of the entire inventory replacement value. Table ES-2 and Figure ES-2 provide a snapshot of the current MATBUS SGR backlog.

Table ES-2. Snapshot of Current MATBUS SGR Backlog by Jurisdiction

Measure	MATBUS Total Asset Value	Fargo Asset Value	Moorhead Asset Value	Joint Asset Value
Number of assets in SGR backlog	301	135	117	49
Total current SGR backlog *	\$ 10.5 M	\$ 6.2 M	\$ 3.0 M	\$ 1.4 M
Facilities*	\$ 1.5 M	\$ 0.1 M	\$ 0.1 M	\$ 1.4 M
Stations*	\$ 0.9 M	\$ 0.6 M	\$ 0.2 M	-
Systems*	\$ 0.7 M	\$ 0.4 M	\$ 0.3 M	-
Vehicles*	\$ 7.4 M	\$ 5.1 M	\$ 2.3 M	\$ 0.0 M

*2016 dollars

Figure ES-2. Summary of Backlog by Asset Category – All Assets (2016 \$)



20-Year SGR Need: As projected by TERM Lite, the total SGR need over the 20-year analysis period is \$92.6 million (2016 \$), or about \$4.7 million annually. Table ES-3 and Figure ES-3 provide a summary of the unconstrained 20-year SGR need. Figure ES-4 summarizes the annual spending requirements as projected by TERM Lite.

Table ES-3. Summary of 20-Year SGR Need by Jurisdiction

Measure	MATBUS Total Asset Value	Fargo Asset Value	Moorhead Asset Value	Joint Asset Value
Total 20-year need *	\$ 92.6 M	\$ 66.3 M	\$ 18.9 M	\$ 7.4 M
Facilities*	\$ 9.0 M	\$ 1.5 M	\$ 0.5 M	\$ 7.0 M
Stations*	\$ 17.7 M	\$ 16.0 M	\$ 1.6 M	-
Systems*	\$ 5.4 M	\$ 3.0 M	\$ 2.2 M	\$ 0.1 M
Vehicles*	\$ 60.5 M	\$ 45.8 M	\$ 14.6 M	\$ 0.2 M
Average annual need	\$ 4.7 M	\$ 3.4 M	\$ 0.9 M	\$ 0.4 M
Number of asset replacements over the 20 years	2,009	1,023	691	295

*2016 dollars

Figure ES-3. Summary of 20-Year SGR Need by Asset Category – All Assets (Millions of 2016 \$)

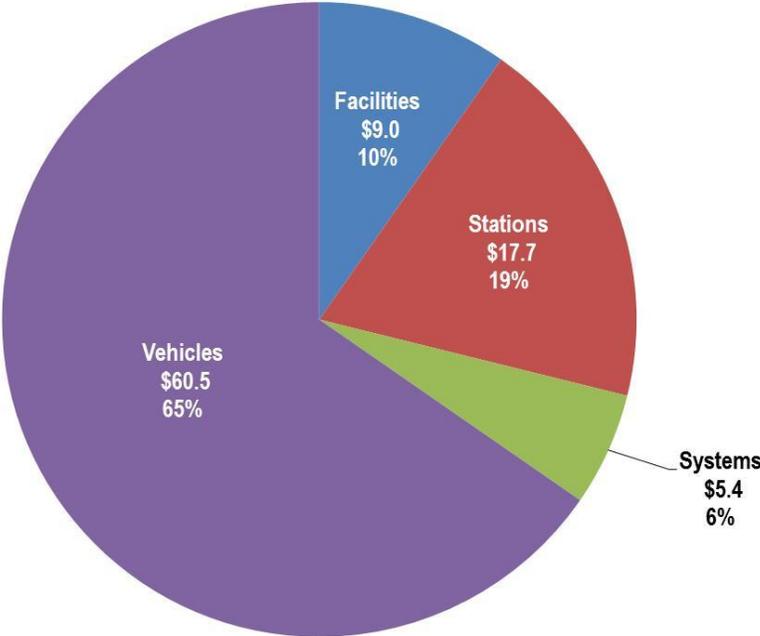
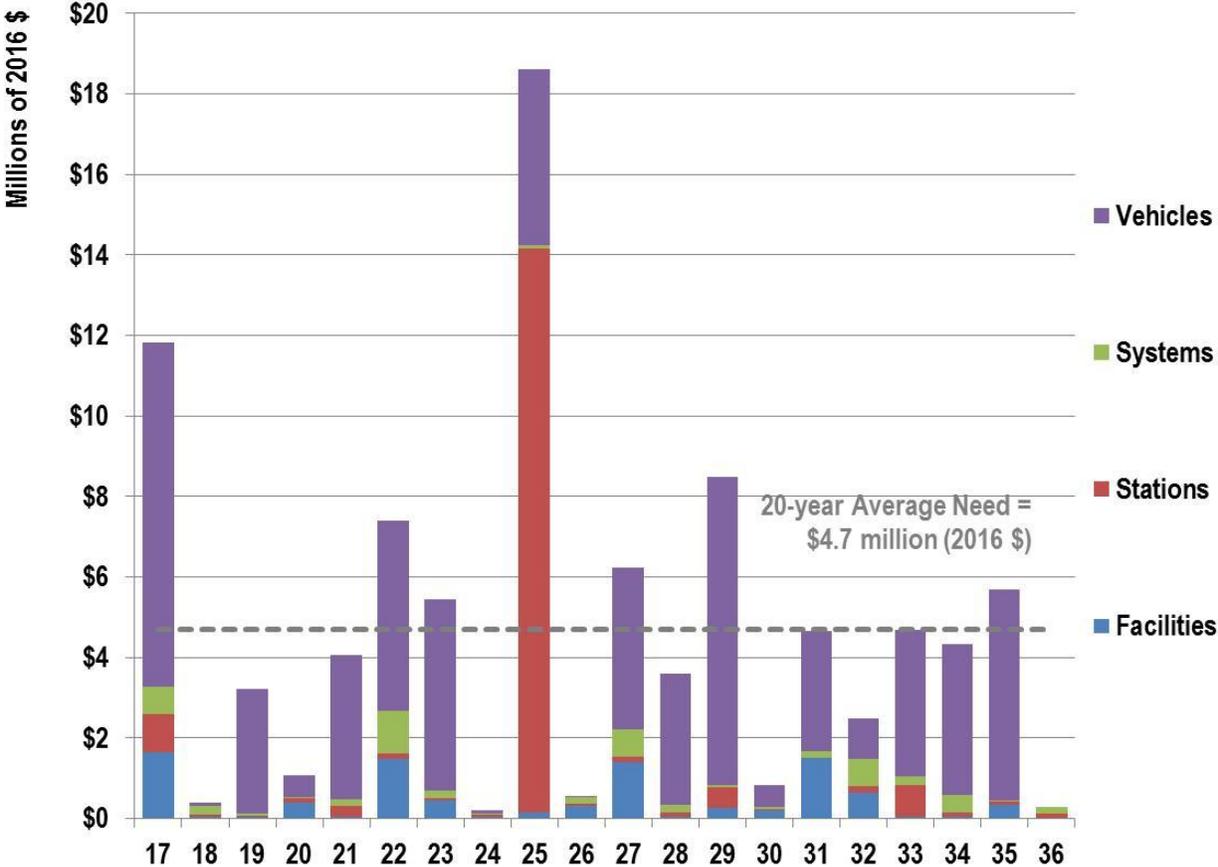


Figure ES-4. Summary of Annual SGR Need



1 INTRODUCTION

This transit asset management (TAM) plan is an examination of the infrastructure renewal requirements of MATBUS. It is based on an inventory and condition assessment of MATBUS assets. The examination was accomplished through the application of the Federal Transit Administration's (FTA's) Transit Economic Requirements Model (TERM Lite), an analytical tool which provides the ability to address the following questions:

1. What is the dollar value of assets beyond their useful life; that is, not at a state of good repair (SGR)? This is also called the SGR backlog.
2. What is the projected annual value of assets reaching their useful life? This is also called future SGR needs.

Section 2: Analytical Process and Methodology describes the analytical process applied. This section examines 1) the inputs used in the analysis (i.e., asset inventory assembly, asset type data); 2) the processes of the analysis tool (TERM Lite); and 3) the output produced by TERM Lite.

Section 3: Current MATBUS Asset Inventory provides a snapshot of the current MATBUS inventory, including the number of line items and asset replacement value by type of asset.

Section 4: SGR Backlog provides a summary of the SGR backlog—the total current value of assets in operation but beyond their useful life—as projected by TERM Lite. The analysis includes the current backlog value by type of asset as well as the total number of assets currently in the backlog.

Section 5: 20-Year summarizes the projected 20-year SGR need by type of asset as determined by TERM Lite. The analysis includes the total investment required by type of asset as well as projected asset replacement schedules over the 20-year analysis period.

2 ANALYTICAL PROCESS AND METHODOLOGY

This section describes the analytical process applied to examine the infrastructure renewal requirements of MATBUS. It is based on an inventory and condition assessment of MATBUS. The examination was accomplished through the application of the of FTA's TERM Lite, an analytical tool which provides the ability to address the following questions:

1. What is the dollar value of assets beyond their useful life; that is, not at a state of good repair (SGR)? This is also called the SGR backlog.
2. What is the projected annual value of assets of assets reaching their useful life? This is also called future SGR needs.

2.1 INPUTS

This section describes the TERM Lite model inputs used in this analysis. There were two primary inputs:

1. **Asset inventory:** comprised of 642 individual asset line items
2. **Asset type list:** comprised of 600 individual asset types (assigned using TERM Lite)

2.1.1 Asset Inventory

MATBUS provided the asset inventories applied in this analysis. The following list summarizes the data required for running TERM Lite.

- **Replacement lives:** the useful life for every asset was suggested in the asset decay curves in the FTA TERM Lite model (the age where each asset type falls below 2.5 on the 1-to-5 condition scale).
- **Service dates/ ages:** asset service dates were provided by MATBUS.
- **Replacement costs:** fully-loaded asset replacement values were provided by MATBUS.
- **Rehabilitation costs:** for applicable assets, rehabilitation costs were determined using TERM Lite as a percentage of replacement cost. These costs were assigned to asset types as a percentage of the assets' replacement costs. These percentages were mapped to each asset based on asset type.
- **Renewal life:** for applicable assets, rehabilitation lives were determined using TERM Lite. These were assigned to asset types as a percentage of the assets' useful life (as determined by MATBUS). These percentages were mapped to each asset based on asset type.
- **Annual capital maintenance cost:** for applicable assets, these costs were assigned to asset types as a percentage of asset replacement cost. These percentages were mapped to each asset based on asset type.

2.1.2 Asset Type Data

Each asset line item included in the inventory was categorized into one of 600 asset types. These asset types are arranged in a hierarchy summarized below:

1. **Asset category:** the five asset categories used in this analysis are facilities, guideway elements, stations, systems, and vehicles.
2. **Asset sub-category:** the five asset categories are further broken out into a total of 32 sub-categories.
3. **Asset element:** the 32 sub-categories are further broken out into a total of 152 elements.
4. **Asset sub-element:** the 152 elements are further broken out into a total of 600 sub-elements.

Note that MATBUS's asset inventory does not include assets in every one of the 600 sub-elements asset types. The asset classification in TERM Lite was created to be comprehensive for all transit agencies nationwide, including all modes.

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Renewal costs, renewal lives, and annual capital costs for each type of asset were defined as a percentage of the asset's replacement cost and replacement life, respectively. Annual capital maintenance costs are defined as a percentage of the asset's replacement cost. These percentages were mapped to the individual asset line items in the asset inventory.

2.2 TRANSIT ECONOMIC REQUIREMENTS MODEL (TERM LITE)

The two inputs to the analysis (asset inventory and asset type data) are applied in TERM Lite to create the output documented in the later sections of this report. TERM Lite is applied in three iterative steps in each year in the TAM plan analysis:

1. Identify required capital activities (replacements, renewals, and annual capital maintenance) based on age in a given year
2. Fund actions
3. Age assets one year

2.2.1 Step 1: Identify Required Capital Activities

TERM Lite first processes the inputs from the asset inventory to identify the required capital actions in a given year. These actions include asset replacements, asset renewals, and annual capital maintenance activities.

- **Asset replacements:** TERM Lite identifies the assets that have reached the end of their useful life (as determined by the service date and useful life specified by MATBUS) in each year of the 20-year analysis period. For assets in the backlog (currently past the end of their useful life) the model will assume the replacement action occurs in 2017 (the first analysis year). For this analysis, the model assumes that all future replacements are done on-time.
- **Asset renewals:** For certain assets, TERM Lite identifies the assets that require a renewal activity (as determined by the age and useful life specified by MATBUS and the TERM Lite asset type assigned to the asset) in each year of the 20-year analysis period. A key assumption of the model is that all past and future renewal actions are done on time.
- **Annual capital maintenance:** For certain assets, TERM Lite identifies the assets that require annual capital maintenance activities (as TERM Lite asset type assigned to the asset) in each year of the 20-year analysis period. A key assumption of the model is that all past and future annual capital maintenance actions are done on time.

2.2.2 Step 2: Fund Actions

Once TERM Lite identifies all required capital activities in a certain year, the model funds these actions and determines the total capital investment required annually—by asset type—to maintain the assets at SGR.

2.2.3 Step 3: Age Assets One Year

Once all required capital actions have occurred, TERM Lite updates the asset inventory by aging the assets one year. Assets that were replaced the previous year are considered new (an age of 0); assets which were not replaced in the previous year will be one year closer to their required replacement. The model repeats steps 1, 2, and 3 in each year of the analysis period.

2.3 OUTPUT

TERM Lite determines the 20-year capital actions and investments required to maintain the assets at SGR (also called the SGR need). This output was used to project 20-year capital investment activities for all MATBUS assets, including asset replacement, renewals, and annual capital maintenance activities. This output was the primary source of data for the TAM plan.

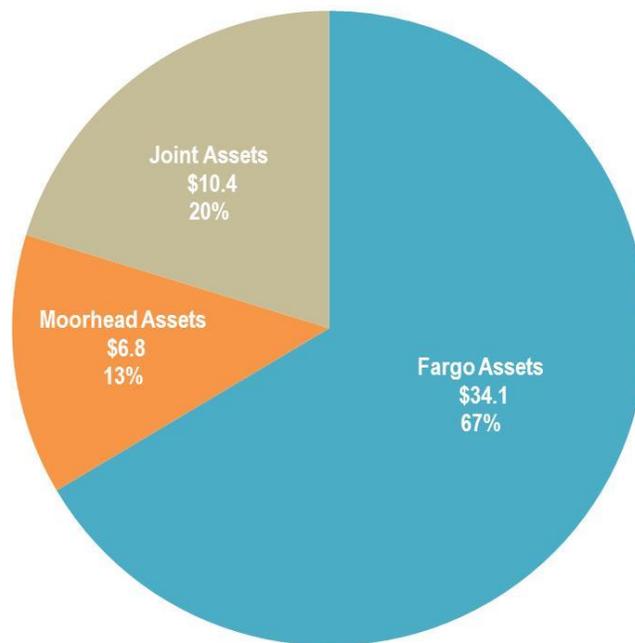
3 CURRENT MATBUS ASSET INVENTORY

This section provides a summary of the current MATBUS asset inventory. The inventory applied in this analysis was provided by MATBUS and contained all the data required for this analysis: asset service dates, useful lives, and replacement costs. Table 3-1 and Figure 3-1 provide a snapshot of the total MATBUS inventory. The complete inventories for Fargo, Moorhead, and jointly owned and maintained assets are found in Table A-1, Table A-2, and Table A-3 in the Appendix.

Table 3-1. Snapshot of Current MATBUS Inventory – All Assets

Measure	MATBUS Total Value	Fargo Value	Moorhead Value	Shared Value
Number of asset line items	631	331	215	85
Total replacement value	\$ 51.4 M (2016 \$)	\$ 34.1 M (2016 \$)	\$ 6.8 M (2016 \$)	\$ 10.4 M (2016 \$)
Average age of asset (by replacement value)	14 years	17 years	7 years	11 years
Average % of useful life remaining (by replacement value)	43%	34%	45%	68%

Figure 3-1. MATBUS Inventory Replacement Value by Jurisdiction (Millions of 2016 \$)



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Table 3-2 summarizes the agency-wide and jurisdictional replacement value of the assets by the asset types assigned by the analysis team.

Table 3-2. Asset Replacement Value by Assigned Asset Type – All Assets (Millions of 2016 \$)

Assigned Asset Type	MATBUS Total Replacement Value	Fargo Replacement Value	Moorhead Replacement Value	Joint Replacement Value
Hardware	\$ 0.03	\$ -	\$ -	\$ 0.03
HVAC	0.07	0.06	-	0.01
Maintenance equipment	1.56	0.24	0.22	1.10
Maintenance facility	8.72	-	-	8.72
Office equipment	0.01	0.00	0.00	0.03
Office furniture	0.29	0.04	0.00	0.25
Software	0.47	0.33	-	0.14
Facilities total	11.61	0.67	0.22	10.28
Bike racks	0.00	-	0.00	-
Building exterior	0.55	0.55	-	-
Building interior	0.61	0.61	-	-
Bus shelters	1.30	0.77	0.53	-
Signage	0.09	0.00	0.07	-
GTC	13.13	13.13	-	-
Stations total	15.70	15.08	0.60	-
Building security	0.01	0.01	-	0.01
Bus GPS	0.41	0.21	0.20	-
CCTV	0.18	0.05	0.11	0.02
PA systems	0.01	-	0.01	-
Radio	0.20	0.16	0.03	0.01
Revenue collection	0.79	0.58	0.22	-
Systems total	1.60	1.00	0.57	0.04
Non-revenue vehicles	0.18	0.00	0.11	0.07
Revenue vehicles	22.72	17.39	5.33	-
Vehicles	22.91	17.39	5.44	0.07

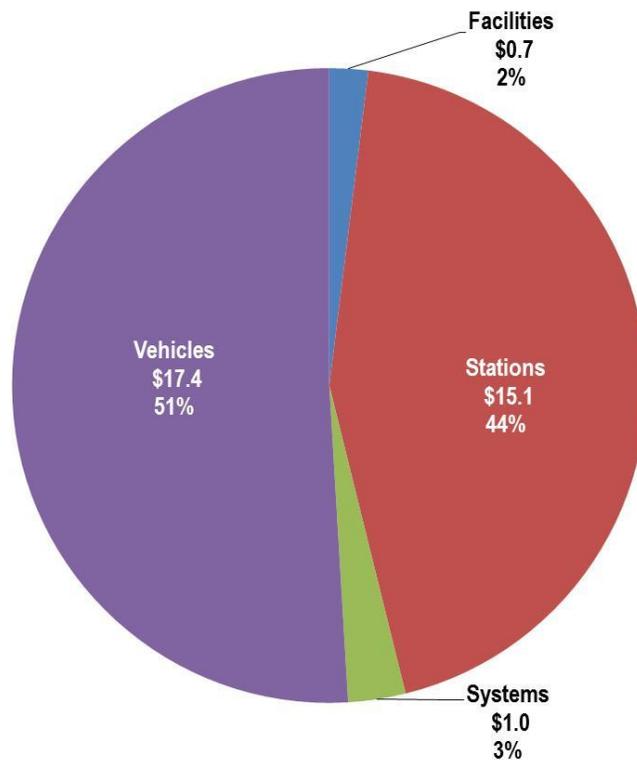
3.1 FARGO OWNED AND MAINTAINED ASSET INVENTORY

The number of total asset line items applied in this analysis—331—represents the number of individual MATBUS assets owned and maintained solely by Fargo.

The average age of all assets is 17 years, weighted by replacement value. This statistic should only be used descriptively, as the useful life of assets vary greatly; so the average age is not necessarily indicative of average asset condition or the overall SGR of the assets. Instead, the average percent useful life remaining—34 percent—is a better way to assess the overall SGR. This indicates that, as a whole, the system has less than half of its useful life remaining, and will require major investment in asset replacement in the near term.

Figure 3-2 breaks down the asset replacement value by TERM Lite asset category.

Figure 3-2. Asset Replacement Value by TERM Lite Asset Category – Fargo Assets (Millions of 2016\$)



The asset type with the largest replacement value is revenue vehicles, which are worth \$17.4 million—51 percent of the total replacement value of all MATBUS assets owned and maintained by Fargo. Other major assets include the Ground Transportation center (GTC), and bus shelters.

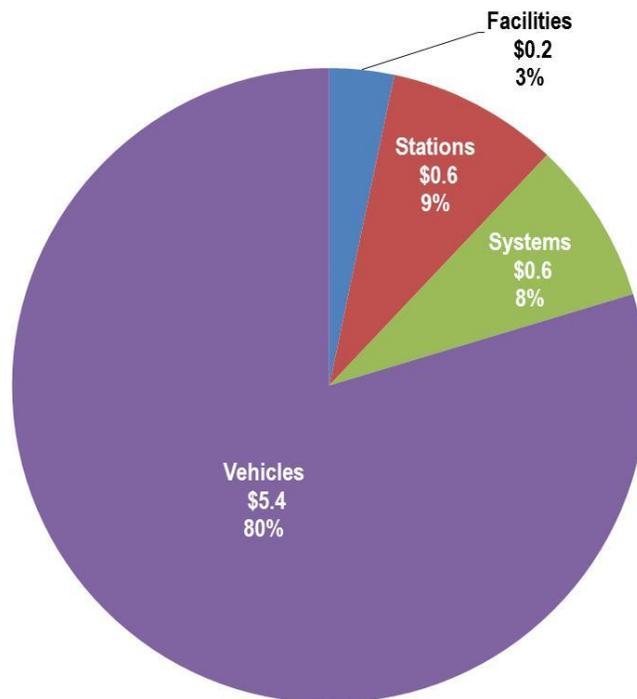
3.2 MOORHEAD OWNED AND MAINTAINED ASSET INVENTORY

The number of asset line items applied in this analysis—215—represents the number of individual MATBUS assets owned and maintained solely by Moorhead.

The average age of all MATBUS assets owned and maintained by Moorhead is 7 years, weighted by replacement value. This statistic should only be used descriptively, as the useful life of assets vary greatly; so the average age is not necessarily indicative of average asset condition or the overall SGR of the assets. Instead, the average percent useful life remaining—45 percent—is a better way to assess the overall SGR. This indicates that, as a whole, the Moorhead assets have less than half of their useful life remaining, and will require major investment in asset replacement in the near term.

Figure 3-3 breaks down the asset replacement value by TERM Lite asset category.

Figure 3-3. Asset Replacement Value by TERM Lite Asset Category – Moorhead Assets (Millions of 2016\$)



The asset type with the largest replacement value is revenue vehicles, which are worth \$5.3 million—78 percent of the total replacement value of all MATBUS assets owned and maintained by Moorhead. Other major assets include bus shelters and maintenance equipment.

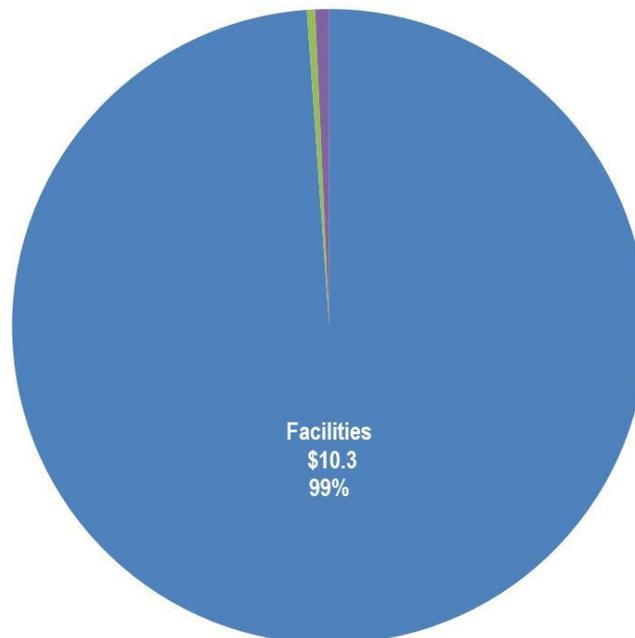
3.3 JOINTLY OWNED AND MAINTAINED ASSET INVENTORY

The number of asset line items applied in this analysis—85—represents the number of individual MATBUS assets owned and maintained jointly by Fargo and Moorhead. The transit maintenance facility and all its components (building, systems, equipment, non-revenue vehicles) are jointly owned and maintained by the two jurisdictions. Per agreement, two-thirds of these capital costs are shared by Fargo and the remaining one-third is shared by Moorhead.

The average age of all MATBUS assets jointly owned and maintained is 11 years, weighted by replacement value. This statistic should only be used descriptively, as the useful life of assets vary greatly; so the average age is not necessarily indicative of average asset condition or the overall SGR of the assets. Instead, the average percent useful life remaining—68 percent—is a better way to assess the overall SGR. This indicates that, as a whole, the jointly owned and maintained assets have a majority of their useful life remaining, and will not require major investment in asset replacement in the near term.

Figure 3-4 breaks down the asset replacement value by TERM Lite asset category.

Figure 3-4. Jointly Owned and Maintained Asset Replacement Value by TERM Lite Asset Category (Millions of 2016\$)



The asset type with the largest replacement value is the maintenance facility itself, which is worth \$8.7 million—84 percent of the total replacement value of all MATBUS assets

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jointly owned and maintained by Fargo and Moorhead. Other major assets include maintenance equipment and office furniture.

4 SGR BACKLOG

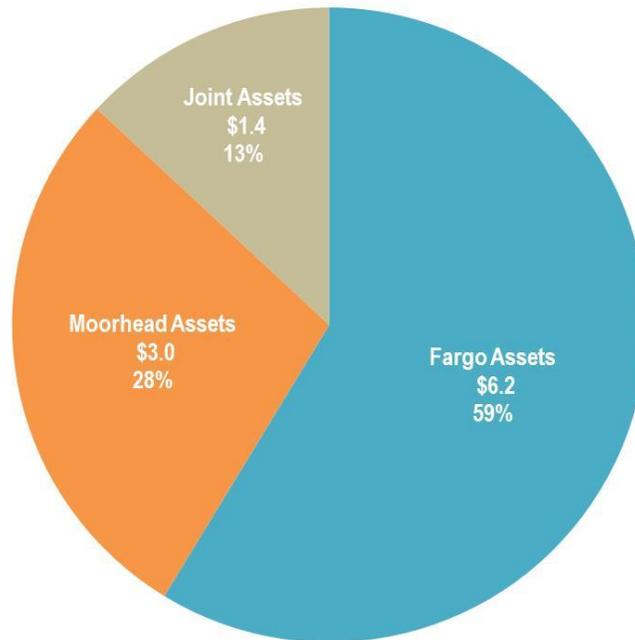
This section provides a summary of the assets currently in the SGR backlog—assets in operation but past the end of their useful life. These assets require immediate replacement. Table 4-1 and Figure 4-1 provide a snapshot of MATBUS’s current SGR backlog.

Table 4-1. Snapshot of Current SGR Backlog – All MATBUS Assets

Measure	MATBUS Total Value	Fargo Value	Moorhead Value	Joint Value
Total current SGR backlog*	\$ 10.5 M (2016 \$)	\$ 6.2 M (2016 \$)	\$ 3.0 M (2016 \$)	\$ 1.4 M (2016 \$)
Number of assets in current backlog	301	135	117	49
TERM Lite Asset category with largest SGR backlog	Vehicles	Vehicles	Vehicles	Facilities

*2016 dollars

Figure 4-1. MATBUS Backlog by Jurisdiction (Millions of 2016 \$)



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Table 4-2 summarizes the agency-wide and jurisdictional SGR backlog by the asset types assigned by the analysis team.

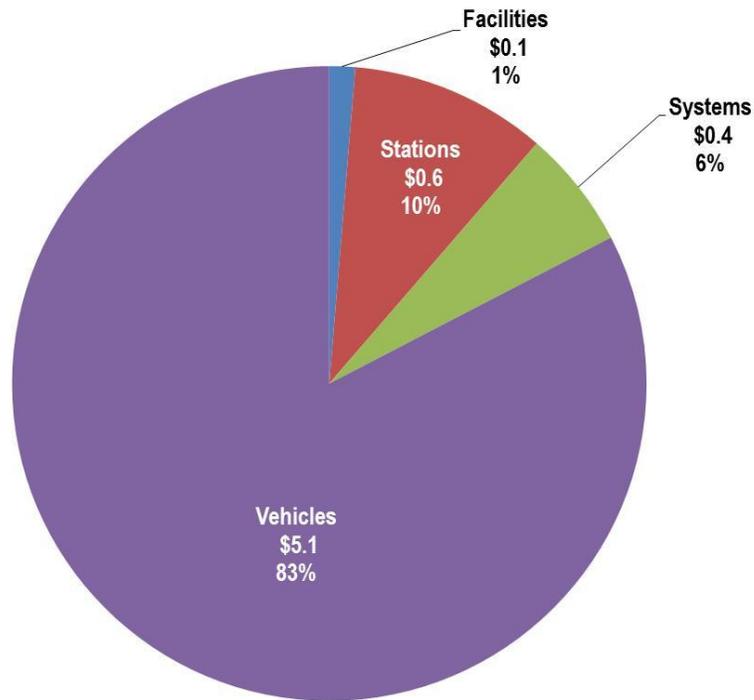
Table 4-2. Current SGR Backlog by Assigned Asset Type (Millions of 2016 \$)

Assigned Asset Type	MATBUS Total Backlog Value	Fargo Backlog Value	Moorhead Backlog Value	Joint Backlog Value
Hardware	\$ 0.00	\$ -	\$ -	\$ 0.00
HVAC	-	-	-	-
Maintenance equipment	1.04	0.01	0.07	0.96
Maintenance facility	-	-	-	-
Office equipment	0.01	0.00	0.00	0.02
Office furniture	0.29	0.04	0.00	0.25
Software	0.17	0.03	-	0.14
Facilities total	1.51	0.08	0.08	1.36
Bike racks	0.00	-	0.00	-
Building exterior	-	-	-	-
Building interior	0.01	0.01	-	-
Bus shelters	0.81	0.60	0.21	-
Signage	0.04	0.00	0.03	-
GTC	-	-	-	-
Stations total	0.87	0.62	0.24	-
Building security	-	-	-	-
Bus GPS	0.22	0.21	0.01	-
CCTV	0.14	0.05	0.10	-
PA systems	0.01	-	0.01	-
Radio	0.01	-	0.01	-
Revenue collection	0.31	0.12	0.19	-
Systems total	0.69	0.37	0.31	-
Non-revenue vehicles	0.07	-	0.05	0.02
Revenue vehicles	7.38	5.10	2.28	-
Vehicles	5.10	5.10	2.33	0.02

4.1 FARGO BACKLOG

Figure 4-2 breaks out the SGR backlog for Fargo owned and maintained assets by TERM Lite asset category.

Figure 4-2. Current SGR Backlog by TERM Lite Asset Category – Fargo Assets (Millions of 2016\$)

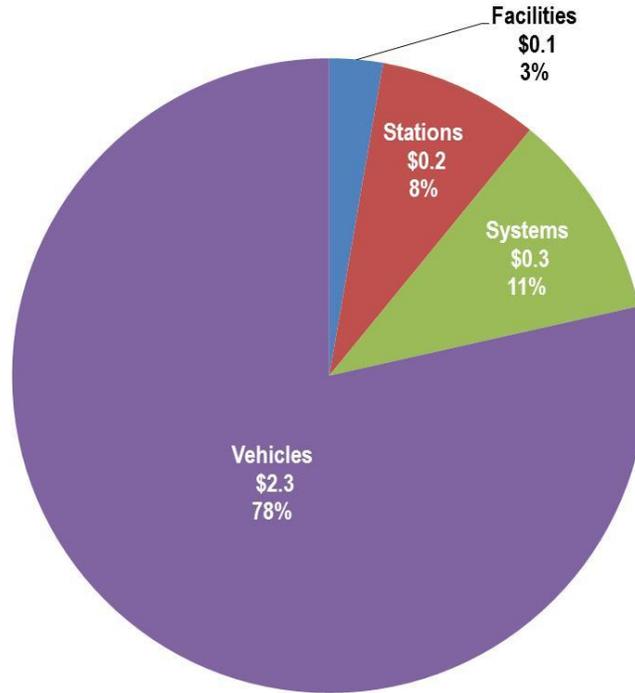


The asset type with the largest SGR backlog is revenue vehicles, which has \$5.1 million worth of assets beyond their useful lives—83 percent of the total Fargo owned and maintained asset backlog. Other notable assets beyond their useful lives include bus shelters, GPS equipment, and revenue collection equipment.

4.2 MOORHEAD SGR BACKLOG

Figure 4-3 breaks out the SGR backlog for Moorhead owned and maintained assets by TERM Lite asset category.

Figure 4-3. Current SGR Backlog by TERM Lite Asset Category – Moorhead Assets (Millions of 2016\$)

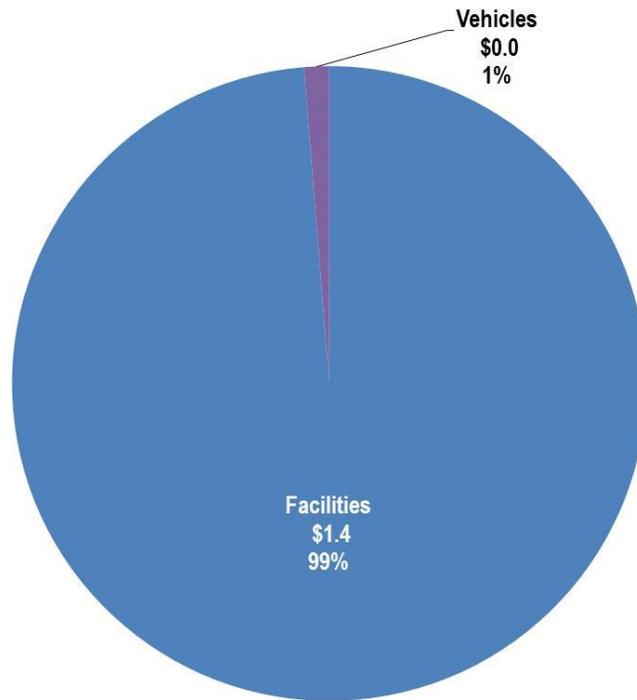


The asset type with the largest SGR backlog is revenue vehicles, which has \$2.3 million worth of assets beyond their useful lives—77 percent of the total Moorhead owned and maintained asset backlog. Other notable assets beyond their useful lives include bus shelters, and revenue collection equipment.

4.3 JOINT SGR BACKLOG

Figure 4-4 breaks out the SGR backlog by TERM Lite asset category for assets jointly owned and maintained by the jurisdictions (two-thirds to Fargo, one-third to Moorhead).

Figure 4-4. Current SGR Backlog by TERM Lite Asset Category – Joint Assets (Millions of 2016\$)



The asset type with the largest SGR backlog is maintenance equipment, which has \$1.0 million worth of assets beyond their useful lives—69 percent of the total joint owned and maintained asset backlog. Other notable assets beyond their useful lives include office furniture and software.

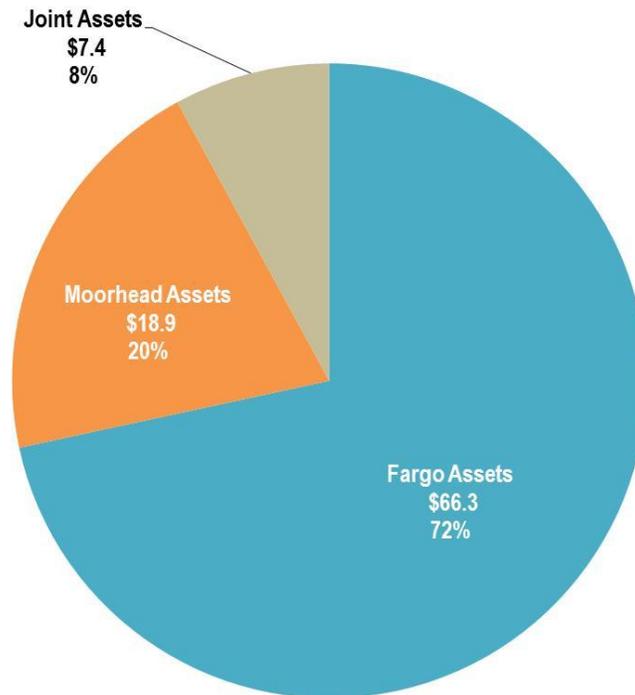
5 20-YEAR CAPITAL INVESTMENT NEEDS

This section provides a summary of the 20-year capital investment requirement as projected by TERM Lite. For each asset, the model projected future replacements, renewals, and annual capital maintenance, where applicable. The model assumes all assets are replaced at the end of their useful life and all renewal and annual capital maintenance activities occur on time. Table 5-1 and Figure 5-1 provide a snapshot of MATBUS’s total 20-year capital investment need.

Table 5-1. Snapshot of MATBUS 20-Year Capital Investment Need – All Assets

Measure	MATBUS Total Value (2016\$)	Fargo Value (2016\$)	Moorhead Value (2016\$)	Shared Value (2016\$)
Total 20-year need	\$ 92.6 M	\$ 66.3 M	\$ 18.9 M	\$ 7.4 M
Average annual need	\$ 4.7 M	\$ 3.4 M	\$ 0.9 M	\$ 0.4 M
Asset category with the largest 20-year need	Vehicles	Vehicles	Vehicles	Facilities
Number of asset replacements over the 20 years	2,009	1,023	691	295

Figure 5-1. 20-Year Capital Investment Need by Jurisdiction (Millions of 2016 \$)



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Table 5-2 summarizes the agency-wide and jurisdictional 20-year capital investment need by the asset types as assigned by the analysis team.

Table 5-2. 20-Year Capital Investment Need by Assigned Asset Type (Millions of 2016 \$)

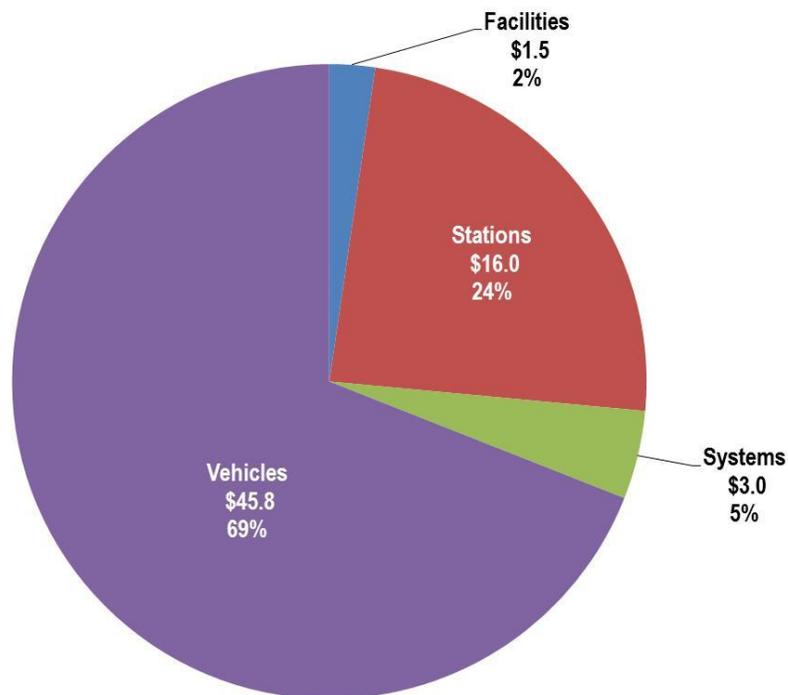
Asset Type	MATBUS Total Investment Need	Fargo Investment Need	Moorhead Investment Need	Joint Investment Need
Hardware	\$ 0.13	\$ -	\$ -	\$ 0.13
HVAC	0.00	0.00	-	0.00
Maintenance equipment	3.08	0.37	0.51	2.20
Maintenance facility	3.01	-	-	3.01
Office equipment	0.05	0.01	0.01	0.12
Office furniture	1.16	0.14	0.01	1.01
Software	1.57	1.02	-	0.56
Facilities total	9.00	1.54	0.53	7.02
Bike racks	0.01	-	0.01	-
Building exterior	0.14	0.14	-	-
Building interior	0.04	0.04	-	-
Bus shelters	4.09	2.70	1.38	-
Signage	0.32	0.01	0.22	-
GTC	13.13	13.13	-	-
Stations total	17.72	16.02	1.61	-
Building security	0.01	0.01	-	0.01
Bus GPS	1.64	0.83	0.81	-
CCTV	0.70	0.18	0.45	0.08
PA systems	0.03	-	0.03	-
Radio	0.81	0.64	0.13	0.05
Revenue collection	2.15	1.33	0.81	-
Systems total	5.35	2.99	2.23	0.14
Non-revenue vehicles	0.56	-	0.36	0.20
Revenue vehicles	59.96	45.76	14.20	-
Vehicles	60.52	45.76	14.56	0.20

5.1 FARGO 20-YEAR CAPITAL INVESTMENT NEED

The total 20-year capital investment need is \$66.3 million. An average annual capital investment of \$3.4 million is required over the next 20 years to maintain assets at SGR (that is, all assets within their useful life).

Figure 5-2 breaks out the total capital investment need by TERM Lite asset category. Vehicles make up the largest share of the need, with stations, systems, and facilities making up smaller shares of the total need.

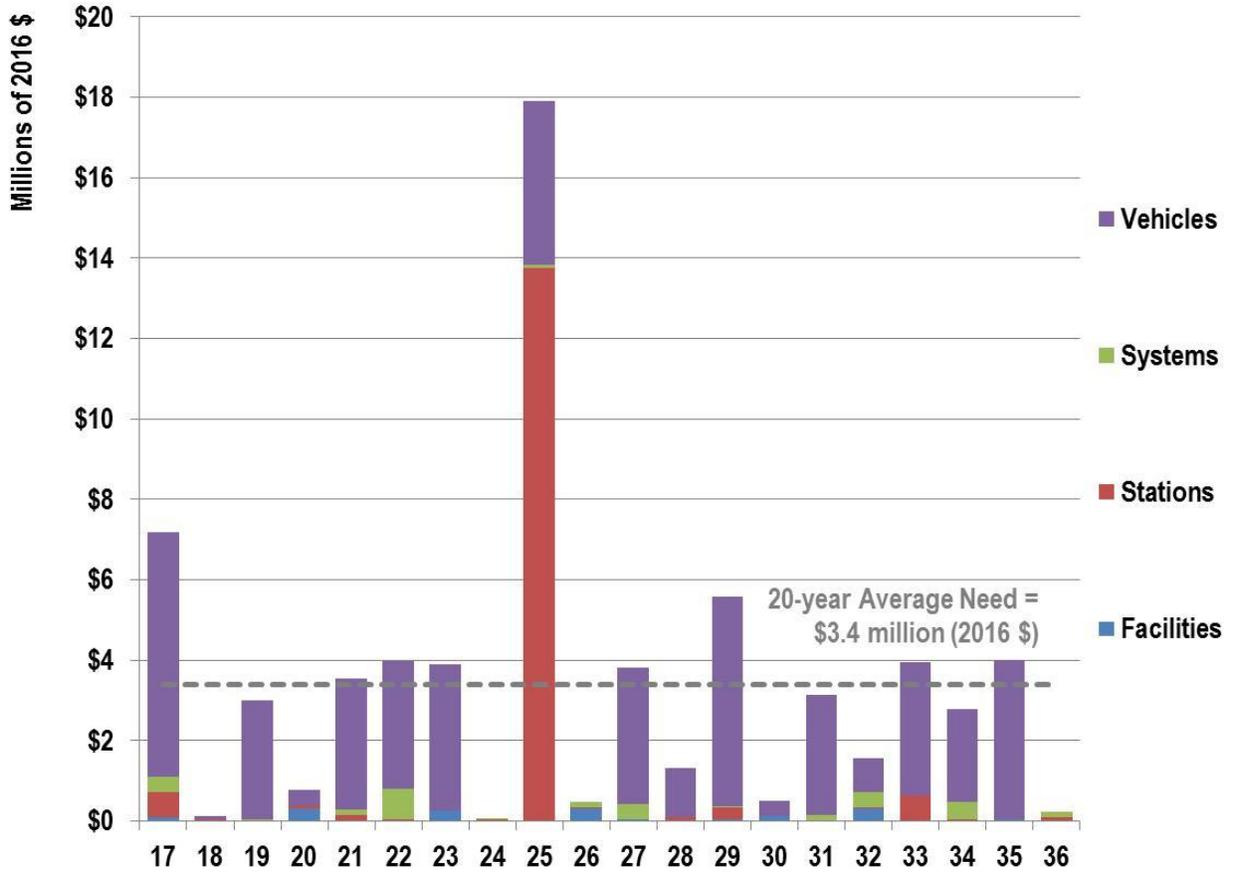
Figure 5-2. 20-Year Capital Investment Need by TERM Lite Asset Category – Fargo Assets (Millions of 2016\$)



The asset type with the largest need is revenue vehicles, which requires \$45.8 million in investment over the 20 years—69 percent of the total need. Other major asset types include the GTC, bus shelters, and revenue collection equipment.

Figure 5-3 summarizes capital investments required by year.

Figure 5-3. 20-Year Capital Investment Requirements by TERM Lite Asset Category by Year – Fargo Assets



The following subsections provide a more-detailed analysis of the capital investments required to maintain the Fargo MATBUS assets at SGR over the 20-year analysis period.

5.1.1 Fargo Facilities

Facilities assets include HVAC systems, maintenance equipment, office equipment, office furniture, and software. These assets have a combined replacement value of \$672,000 and have a projected 20-year capital investment need of \$1.5 million.

Table 5-3 through Table 5-6 and Figure 5-4 summarize the projected 20-year capital replacement activities for Fargo facilities assets. Major capital investments in facilities assets over the 20-year analysis are projected to include:

- Replacement of the AVA/AVL system for fixed routes in 2020, 2026, and 2032 projected to cost \$298,000 each year
- Bus part inventory replacements in 2023 projected to cost \$222,000

Note that the totals in Table 5-5, Table 5-6, and Figure 5-4 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-3. Facilities Asset Replacement Forecast by Asset Type, 2017 – 2026 – Fargo Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	-	-	-	-	1	-	5	-	-	-
Maintenance Equipment	Lathe	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Oil Filter	-	-	1	-	-	-	-	-	-	-
Maintenance Equipment	Tool	1	-	-	-	-	-	-	-	-	-
Office Equipment	Safe	1	-	-	-	-	1	-	-	-	-
Office Equipment	Wheelchair	1	-	-	-	-	1	-	-	-	-
Office Furniture	Gazebo	1	-	-	-	-	1	-	-	-	-
Office Furniture	Lockers	1	-	-	-	-	1	-	-	-	-
Office Furniture	Office Furniture	2	1	-	-	-	1	1	1	-	-
Software	Transit Software	2	-	-	1	-	-	2	-	-	1

Table 5-4. Facilities Asset Replacement Forecast by Asset Type, 2027 – 2036 – Fargo Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	-	-	-	-	-	-	-	-	1	-
Maintenance Equipment	Lathe	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Oil Filter	-	-	1	-	-	-	-	-	-	-
Maintenance Equipment	Tool	1	-	-	-	-	-	-	-	-	-
Office Equipment	Safe	1	-	-	-	-	1	-	-	-	-
Office Equipment	Wheelchair	1	-	-	-	-	1	-	-	-	-
Office Furniture	Gazebo	1	-	-	-	-	1	-	-	-	-
Office Furniture	Lockers	1	-	-	-	-	1	-	-	-	-
Office Furniture	Office Furniture	1	1	-	-	1	1	1	-	-	-
Software	Transit Software	-	-	2	-	-	1	-	-	2	-

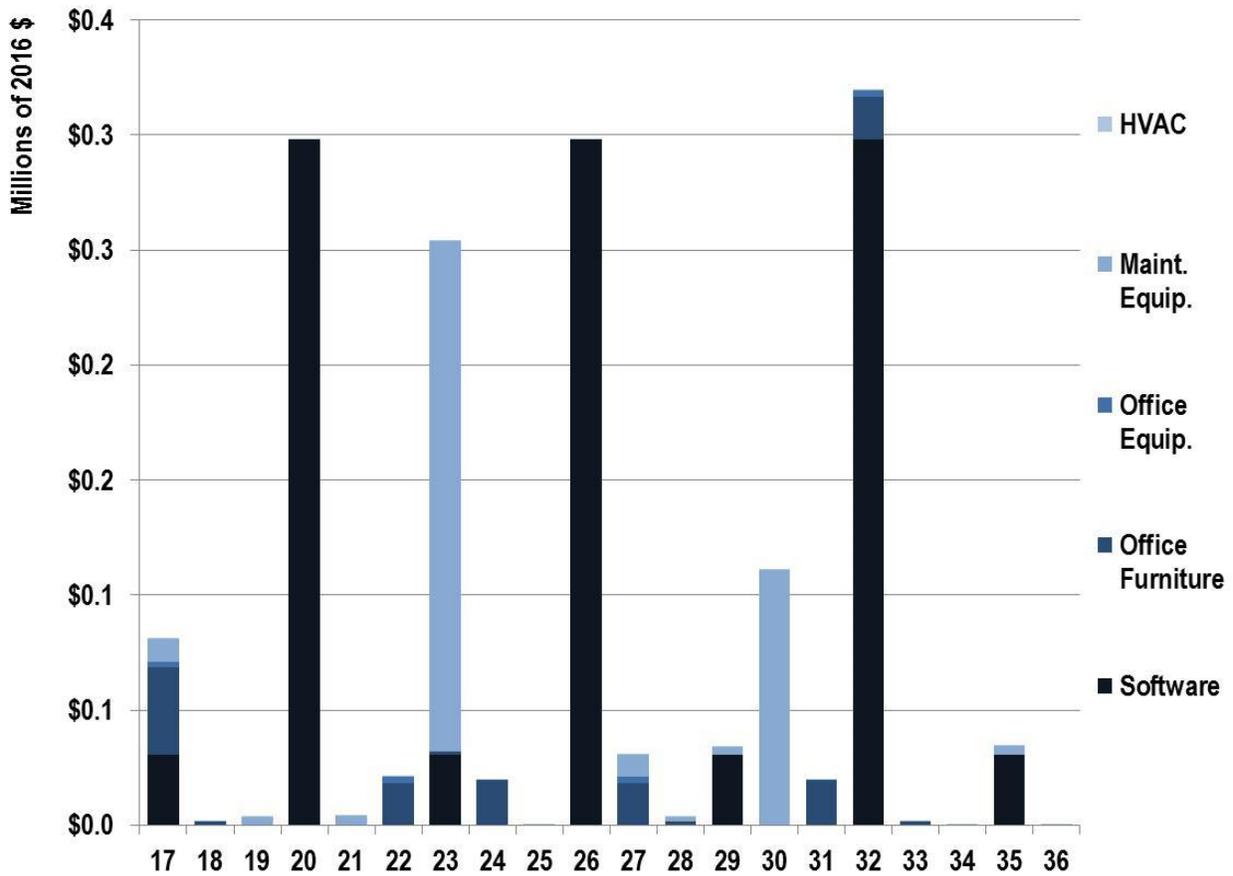
Table 5-5. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Fargo Assets (2016 \$)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	-	-	-	-	4,000	-	222,000	-	-	-
Maintenance Equipment	Lathe	7,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Oil Filter	-	-	3,000	-	-	-	-	-	-	-
Maintenance Equipment	Tool	3,000	-	-	-	-	-	-	-	-	-
Office Equipment	Safe	2,000	-	-	-	-	2,000	-	-	-	-
Office Equipment	Wheelchair	-	-	-	-	-	-	-	-	-	-
Office Furniture	Gazebo	5,000	-	-	-	-	5,000	-	-	-	-
Office Furniture	Lockers	5,000	-	-	-	-	5,000	-	-	-	-
Office Furniture	Office Furniture	28,000	1,000	-	-	-	9,000	1,000	20,000	-	-
Software	Transit Software	30,000	-	-	298,000	-	-	30,000	-	-	298,000
Total		1,631,000	31,000	37,000	389,000	26,000	1,472,000	455,000	42,000	140,000	320,000

Table 5-6. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Fargo Assets (2016 \$)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	-	2,000	-	111,000	-	-	-	-	4,000	-
Maintenance Equipment	Lathe	7,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Oil Filter	-	-	3,000	-	-	-	-	-	-	-
Maintenance Equipment	Tool	3,000	-	-	-	-	-	-	-	-	-
Office Equipment	Safe	2,000	-	-	-	-	2,000	-	-	-	-
Office Equipment	Wheelchair	-	-	-	-	-	-	-	-	-	-
Office Furniture	Gazebo	5,000	-	-	-	-	5,000	-	-	-	-
Office Furniture	Lockers	5,000	-	-	-	-	5,000	-	-	-	-
Office Furniture	Office Furniture	9,000	1,000	-	-	20,000	9,000	1,000	-	-	-
Software	Transit Software	-	-	30,000	-	-	298,000	-	-	30,000	-
Total		1,384,000	33,000	260,000	208,000	1,503,000	648,000	31,000	32,000	345,000	22,000

Figure 5-4. 20-Year Facilities Capital Investment Need Forecast by Assigned Asset Type – Fargo Assets



5.1.1.1 HVAC

HVAC assets include AC units located at passenger facilities. These assets have a replacement value of \$62,000. Over the next 20 years, only minor annual capital maintenance investments are required to maintain the assets at SGR.

5.1.1.2 Maintenance Equipment

Maintenance equipment includes bus replacement parts, lathes, oil filters, and other miscellaneous tools. These assets have a replacement value of \$239,000. Over the next 20 years, a projected investment of \$369,000 is required to maintain these assets at SGR, including an immediate investment of \$10,000 for assets in the backlog.

5.1.1.3 Office Equipment

Office equipment includes safes and wheelchairs. These assets have a replacement value of \$3,000. Over the next 20 years, a projected investment of \$8,000 is required to maintain these assets at SGR, including an immediate investment of \$3,000 to replace assets in the backlog..

5.1.1.4 Office Furniture

Office furniture includes gazebos, lockers, and other miscellaneous furniture. These assets have a replacement value of \$40,000. Over the next 20 years, a projected investment of \$139,000 is required to maintain these assets at SGR, including an immediate investment of \$38,000 for assets in the backlog.

5.1.1.5 Software

Facility software includes fleet and maintenance management software. These assets have a replacement value of \$329,000. Over the next 20 years, a projected investment of \$1.0 million is required to maintain these assets at SGR, including an immediate investment of \$30,000 to replace the assets in the backlog.

5.1.2 Fargo Stations

Station assets include the building interior and exterior assets, bus shelters, signage, and the Ground Transportation Center (GTC). These assets have a combined replacement value of \$15.1 million and have a projected 20-year capital investment need of \$16.0 million.

Table 5-7 through Table 5-10 and Figure 5-5 summarize the projected 20-year capital replacement activities for station assets. Major capital investments in stations assets over the 20-year analysis are projected to include:

- Complete in-kind replacement of the Ground Transportation Center (GTC) in 2025 projected to cost \$13.1 million
- Immediate replacement of 57 bus shelters in the backlog (or entering the backlog in 2017) and subsequent replacement 57 bus shelters in 2025 and again in 2033 projected to cost \$627,000 each year.

Note that the totals in Table 5-9, Table 5-10, and Figure 5-5 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-7. Station Asset Replacement Forecast by Asset Type, 2017 – 2026 – Fargo Assets (Number of Asset Replacements)

Station Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Exterior	GTC Deck	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Gate	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Flooring	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lounge	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Remodel	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Seating	1	-	-	-	-	-	-	-	-	-
Bus Shelter	Bus Shelter	57	8	3	11	-	-	-	-	57	8
Signage	GTC Signage	1	-	-	-	-	1	-	-	-	-
Transportation Center	GTC	-	-	-	-	-	-	-	-	1	-

Table 5-8. Station Asset Replacement Forecast by Asset Type, 2027 – 2036 – Fargo Assets (Number of Asset Replacements)

Station Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Exterior	GTC Deck	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Gate	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Flooring	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lounge	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Remodel	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Seating	-	-	1	-	-	-	-	-	-	-
Bus Shelter	Bus Shelter	3	11	-	-	-	-	57	8	3	11
Signage	GTC Signage	1	-	-	-	-	1	-	-	-	-
Transportation Center	GTC	-	-	-	-	-	-	-	-	-	-

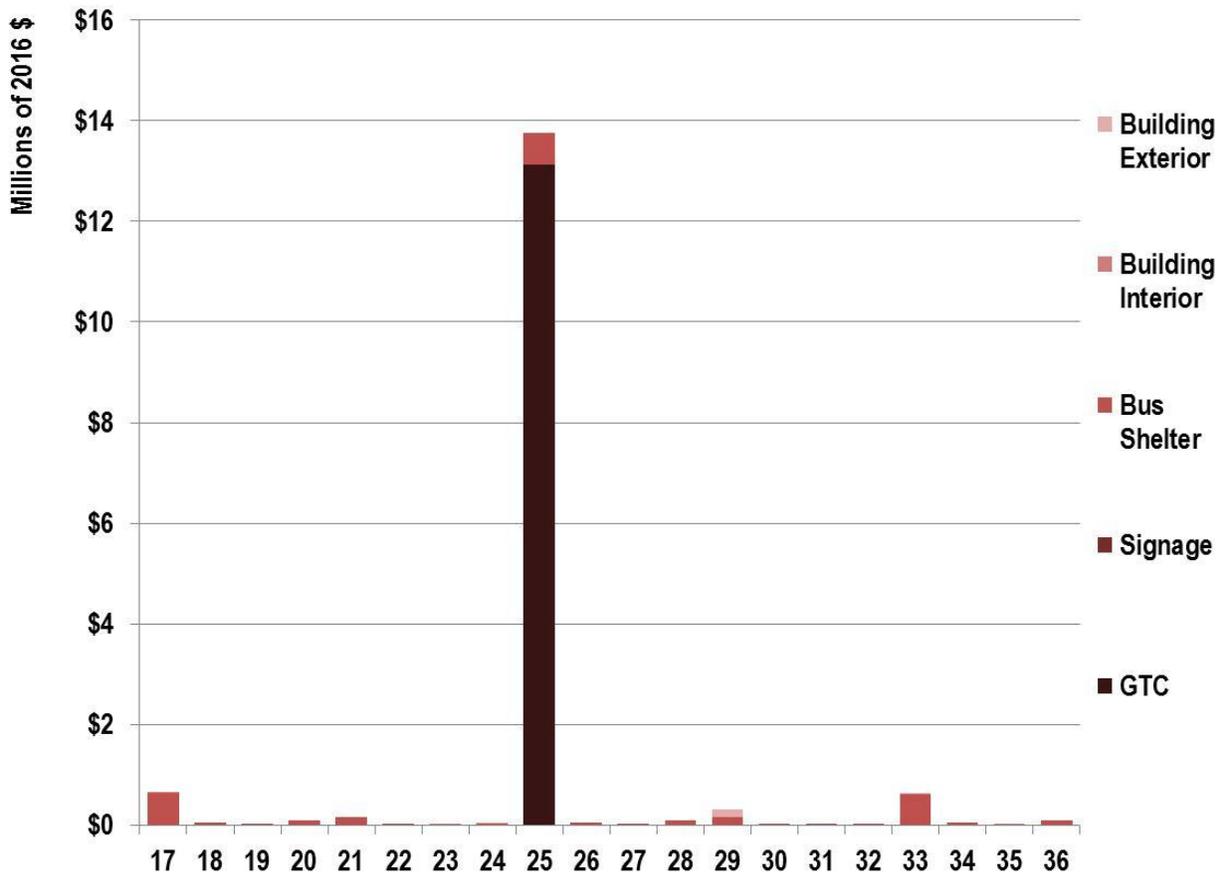
Table 5-9. Station Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Fargo Assets (2016 \$)

Station Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Exterior	GTC Deck	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Gate	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture	-	-	-	-	-	-	-	4,000	-	-
Building Exterior	GTC Sculpture Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Flooring	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lounge	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Remodel	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Seating	14,000	-	-	-	-	-	4,000	-	-	-
Bus Shelter	Bus Shelter	627,000	44,000	11,000	90,000	157,000	11,000	3,000	22,000	627,000	44,000
Signage	GTC Signage	3,000	-	-	-	-	3,000	-	-	-	-
Transportation Center	GTC	-	-	-	-	-	-	-	-	13,134,000	-
Total		644,000	44,000	11,000	90,000	157,000	14,000	7,000	26,000	13,761,000	44,000

Table 5-10. Station Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Fargo Assets (2016 \$)

Station Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Exterior	GTC Deck	-	-	133,000	-	-	-	-	-	-	-
Building Exterior	GTC Gate	-	-	-	-	-	-	1,000	-	-	-
Building Exterior	GTC Sculpture	-	-	-	-	-	-	-	-	-	-
Building Exterior	GTC Sculpture Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Flooring	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lighting	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Lounge	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Remodel	-	-	-	-	-	-	-	-	-	-
Building Interior	GTC Seating	-	-	14,000	-	-	-	-	-	4,000	-
Bus Shelter	Bus Shelter	11,000	90,000	157,000	11,000	3,000	22,000	627,000	44,000	11,000	90,000
Signage	GTC Signage	3,000	-	-	-	-	3,000	-	-	-	-
Transportation Center	GTC	-	-	-	-	-	-	-	-	-	-
Total		14,000	90,000	304,000	11,000	3,000	25,000	634,000	44,000	15,000	90,000

Figure 5-5. 20-Year Station Capital Investment Need Forecast by Assigned Asset Type – Fargo Assets



5.1.2.1 Building Exterior

Station building exterior assets include sculptures, lighting, decks, and gates located at the GTC. These assets have a replacement value of \$554,000. Over the next 20 years, a projected investment of \$138,000 is required to maintain these assets at SGR.

5.1.2.2 Building Interior

Station building interior assets include lounges, lighting, flooring, seating, and remodeling at the GTC. These assets have a replacement value of \$614,000. Over the next 20 years, a projected investment of \$35,000 is required to maintain these assets at SGR, including an immediate investment of \$14,000 to replace assets currently in the backlog.

5.1.2.3 Bus Shelters

Fargo has 79 bus shelters with a total replacement value of \$773,000. Over the next 20 years, a projected investment of \$2.7 million is required to maintain these assets at SGR, including an immediate investment of \$601,000 to replace 54 bus shelters in the backlog.

5.1.2.4 Station Signage

Signage assets have a replacement value of \$3,000. Over the next 20 years, a projected investment of \$12,000 is required to maintain these assets at SGR.

5.1.2.5 GTC

The GTC has a replacement value of \$13.1 million. Over the next 20 years, a projected investment of \$13.1 million is required to maintain the station assets at SGR. This includes a complete in-kind replacement of the station in 2025.

5.1.3 Fargo Systems

Systems assets include building security systems, bus GPS, CCTV, radio systems, and revenue collection equipment. These assets have a combined in-kind replacement value of \$997,000 and have a projected 20-year capital investment need of \$3.0 million.

Table 5-11 through Table 5-14, and Figure 5-6 summarize the projected 20-year capital replacement activities for systems assets. Major capital investments in systems assets over the 20-year analysis are projected to include:

- Replacement of 39 fareboxes in 2022 and 2034 projected to cost \$394,000 each year
- Replacement of 58 mobile radio units in 2021, 2026, 2031, and 2036 projected to cost \$131,000 each year.

Note that the totals in Table 5-13, Table 5-14, and Figure 5-6 include all capital investments: replacement, rehabilitations and annual capital maintenance.

Table 5-11. Systems Asset Replacement Forecast by Assigned Asset Type, 2017 – 2026 – Fargo Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Security	GTC Security Access	-	-	-	-	-	-	-	-	-	-
Bus GPS	GPS Hardware	3	-	-	-	-	3	-	-	-	-
Bus GPS	GPS Software	2	-	-	-	-	2	-	-	-	-
Bus GPS	GPS Unit	12	-	-	-	-	12	-	-	-	-
CCTV	CCTV Camera	21	-	-	-	-	21	-	-	-	-
Radio	Base Radio	-	-	-	-	2	-	-	-	-	2
Radio	Mobile Radio Unit	-	-	6	-	58	-	-	6	-	58
Radio	Vehicle Radio	-	-	6	-	-	-	-	6	-	-
Revenue Collection	Farebox	-	-	-	-	-	39	-	-	4	-
Revenue Collection	Farebox Software	1	-	-	-	-	1	-	-	-	-

Table 5-12. Systems Asset Replacement Forecast by Assigned Asset Type, 2027 – 2036 – Fargo Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Security	GTC Security Access	-	-	-	-	-	-	1	-	-	-
Bus GPS	GPS Hardware	3	-	-	-	-	3	-	-	-	-
Bus GPS	GPS Software	2	-	-	-	-	2	-	-	-	-
Bus GPS	GPS Unit	12	-	-	-	-	12	-	-	-	-
CCTV	CCTV Camera	21	-	-	-	-	21	-	-	-	-
Radio	Base Radio	-	-	-	-	2	-	-	-	-	2
Radio	Mobile Radio Unit	-	-	6	-	58	-	-	6	-	58
Radio	Vehicle Radio	-	-	6	-	-	-	-	6	-	-
Revenue Collection	Farebox	-	-	-	-	-	-	-	39	-	-
Revenue Collection	Farebox Software	1	-	-	-	-	1	-	-	-	-

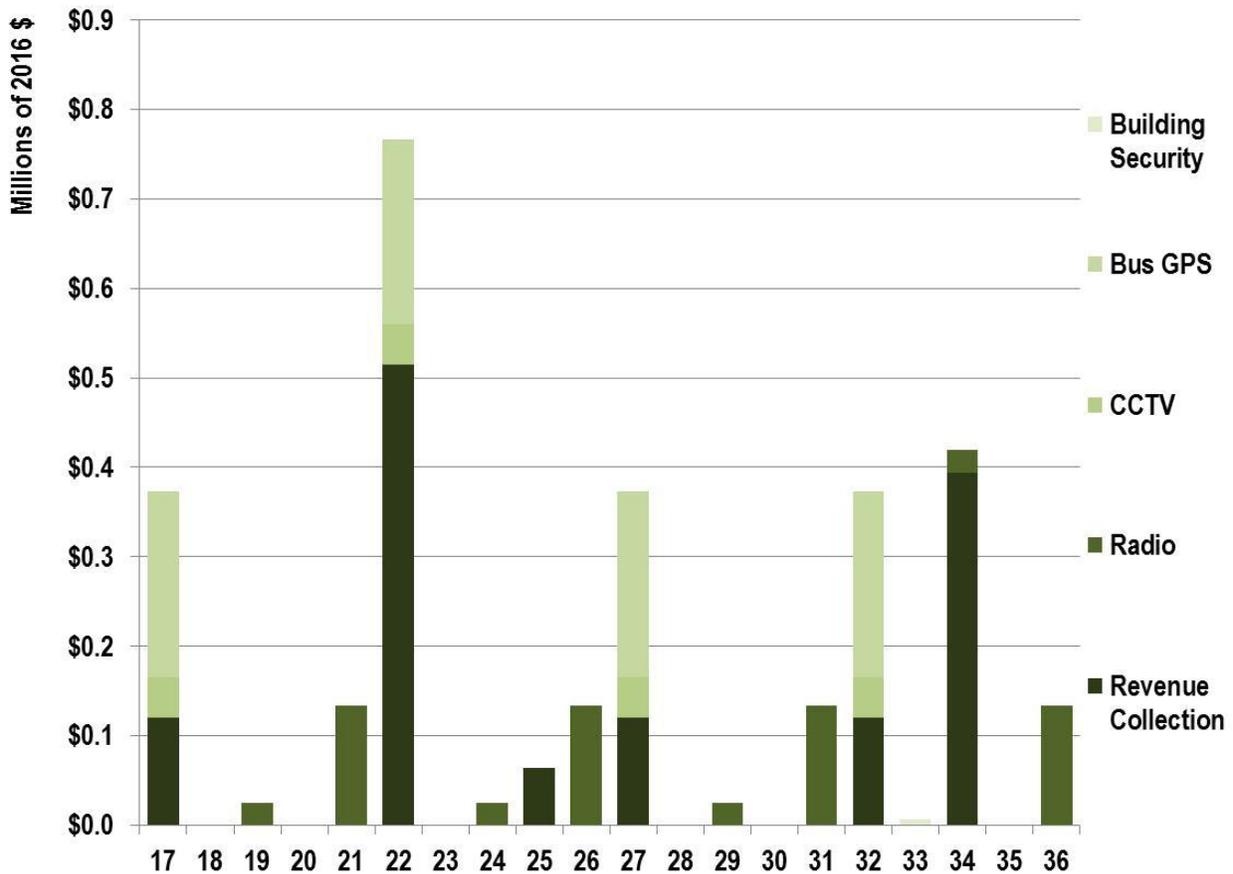
Table 5-13. Systems Capital Investment Need Forecast by Asset Type (2016 \$)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Security	GTC Security Access	-	-	-	-	-	-	-	-	-	-
Bus GPS	GPS Hardware	12,000	-	-	-	-	12,000	-	-	-	-
Bus GPS	GPS Software	129,000	-	-	-	-	129,000	-	-	-	-
Bus GPS	GPS Unit	66,000	-	-	-	-	66,000	-	-	-	-
CCTV	CCTV Camera	45,000	-	-	-	-	45,000	-	-	-	-
Radio	Base Radio	-	-	-	-	4,000	-	-	-	-	4,000
Radio	Mobile Radio Unit	-	-	10,000	-	131,000	-	-	10,000	-	131,000
Radio	Vehicle Radio	-	-	15,000	-	-	-	-	15,000	-	-
Revenue Collection	Farebox	-	-	-	-	-	394,000	-	-	64,000	-
Revenue Collection	Farebox Software	120,000	-	-	-	-	120,000	-	-	-	-
Total		372,000	-	25,000	-	135,000	766,000	-	25,000	64,000	135,000

Table 5-14. Systems Capital Investment Need Forecast by Asset Type (2016 \$)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Security	GTC Security Access	-	-	-	-	-	-	6,000	-	-	-
Bus GPS	GPS Hardware	12,000	-	-	-	-	12,000	-	-	-	-
Bus GPS	GPS Software	129,000	-	-	-	-	129,000	-	-	-	-
Bus GPS	GPS Unit	66,000	-	-	-	-	66,000	-	-	-	-
CCTV	CCTV Camera	45,000	-	-	-	-	45,000	-	-	-	-
Radio	Base Radio	-	-	-	-	4,000	-	-	-	-	4,000
Radio	Mobile Radio Unit	-	-	10,000	-	131,000	-	-	10,000	-	131,000
Radio	Vehicle Radio	-	-	15,000	-	-	-	-	15,000	-	-
Revenue Collection	Farebox	-	-	-	-	-	-	-	394,000	-	-
Revenue Collection	Farebox Software	120,000	-	-	-	-	120,000	-	-	-	-
Total		372,000	-	25,000	-	135,000	372,000	6,000	419,000	-	135,000

Figure 5-6. 20-Year Systems Capital Investment Need Forecast by Assigned Asset Type – Fargo Assets



5.1.3.1 Building Security

Building security assets include secured access systems at the GTC. These assets have a replacement value of \$6,000. Over the next 20 years, a projected investment of \$6,000 is required to maintain these assets at SGR.

5.1.3.2 Bus GPS

Bus GPS assets include GPS hardware, software, and in-vehicle GPS units. These assets have a replacement value of \$207,000. Over the next 20 years, a projected investment of \$828,000 is required to maintain these assets at SGR, including an immediate investment of \$207,000 to replace assets in the backlog.

5.1.3.3 CCTV

CCTV assets include cameras, software, hardware, and support systems. These assets have a replacement value of \$45,000. Over the next 20 years, a projected investment of \$180,000 is required to maintain these assets at SGR, including an immediate investment of \$45,000 to replace all CCTV assets that are currently in the backlog.

5.1.3.4 Radio

Radio assets include base radios, mobile unit radios, and in-vehicle radios. These assets have a replacement value of \$159,000. Over the next 20 years, a projected investment of \$640,000 is required to maintain these assets at SGR.

5.1.3.5 Revenue Collection

Revenue collection assets include fareboxes, farebox encoding machines, software, and revenue vaults. These assets have a replacement value of \$579,000. Over the next 20 years, a projected investment of \$1.3 million is required to maintain these assets at SGR, including an immediate investment of \$120,000 to replace assets in the backlog.

5.1.4 Fargo Vehicles

Fargo vehicles include paratransit vehicles, senior service vehicles, 29- and 30-foot buses, 35-foot buses, and 40-foot buses. These assets have a combined in-kind replacement value of \$17.4 million and have a projected 20-year capital investment need of \$47.2 million.

Table 5-15 through Table 5-18 and Figure 5-7 summarize the projected 20-year capital replacement activities for vehicles. Major capital investments in vehicles over the 20-year analysis are projected to include:

- Immediate replacement of 7 29- and 30-foot buses projected to cost \$3.0 million
- Subsequent replacement of 7 29- and 30-foot buses in 2029 projected to cost \$3.0 million
- Replacement of 4 40-foot buses in 2025 projected to cost \$2.6 million
- Replacement of 5 35-foot buses in 2022 and 2034 projected to cost \$2.3 million each year
- Replacement of 5 35-foot buses in 2021 and 2033 projected to cost \$2.3 million each year
- Replacement of 4 35-foot buses in 2019 and 2031 projected to cost \$1.6 million each year.

Note that the totals in Table 5-17, Table 5-18, and Figure 5-7 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-15. Vehicle Replacement Forecast by Vehicle Type, 2017 – 2026 – Fargo Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Revenue Vehicle	Senior Service	14	-	3	-	12	2	3	-	12	-
Revenue Vehicle	29 - 30 Foot Bus	7	-	-	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	3	-	4	-	5	5	-	-	-	-
Revenue Vehicle	40 Foot Bus	-	-	-	-	-	-	2	-	4	-
Revenue Vehicle	Paratransit Vehicle	8	1	-	6	-	8	1	-	6	-

Table 5-16. Vehicle Replacement Forecast by Vehicle Type, 2027 – 2036 – Fargo Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Revenue Vehicle	Senior Service	5	-	12	-	3	2	12	-	3	-
Revenue Vehicle	29 - 30 Foot Bus	-	-	7	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	-	-	3	-	4	-	5	5	-	-
Revenue Vehicle	40 Foot Bus	2	-	-	-	-	-	-	-	2	-
Revenue Vehicle	Paratransit Vehicle	8	1	-	6	-	8	1	-	6	-

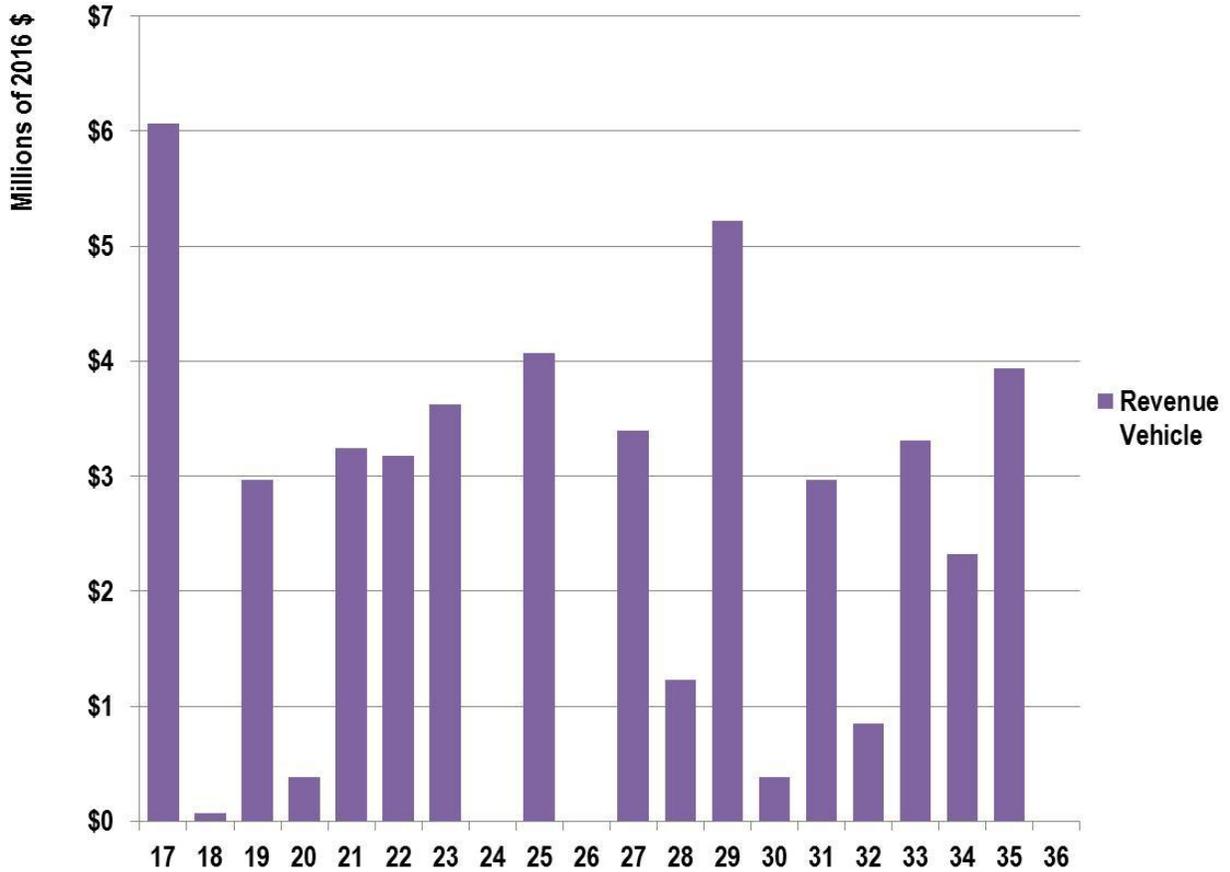
Table 5-17. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Fargo Assets (2016 \$)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Revenue Vehicle	Senior Service	\$445,000	\$-	\$71,000	\$-	\$309,000	\$136,000	\$71,000	\$-	\$309,000	\$-
Revenue Vehicle	29 - 30 Foot Bus	2,982,000	-	-	-	-	-	1,491,000	-	-	-
Revenue Vehicle	35 Foot Bus	1,236,000	-	1,607,000	-	2,265,000	2,322,000	618,000	-	803,000	-
Revenue Vehicle	40 Foot Bus	689,000	-	1,288,000	-	670,000	-	1,378,000	-	2,577,000	-
Revenue Vehicle	Paratransit Vehicle	718,000	69,000	-	381,000	-	718,000	69,000	-	381,000	-
Total		6,070,000	69,000	2,966,000	381,000	3,244,000	3,176,000	3,627,000	-	4,070,000	-

Table 5-18. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Fargo Assets (2016 \$)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Revenue Vehicle	Senior Service	\$207,000	\$-	\$309,000	\$-	\$71,000	\$136,000	\$309,000	\$-	\$71,000	\$-
Revenue Vehicle	29 - 30 Foot Bus	-	-	2,982,000	-	-	-	-	-	1,491,000	-
Revenue Vehicle	35 Foot Bus	1,133,000	1,161,000	1,236,000	-	1,607,000	-	2,265,000	2,322,000	618,000	-
Revenue Vehicle	40 Foot Bus	1,340,000	-	689,000	-	1,288,000	-	670,000	-	1,378,000	-
Revenue Vehicle	Paratransit Vehicle	718,000	69,000	-	381,000	-	718,000	69,000	-	381,000	-
Total		3,398,000	1,230,000	5,216,000	381,000	2,966,000	854,000	3,313,000	2,322,000	3,939,000	-

Figure 5-7. 20-Year Vehicle Capital Investment Need Forecast by Assigned Asset Type – Fargo Assets



5.1.4.1 Senior Service Vehicles

Fargo has 17 senior service vehicles. These assets have a replacement value of \$516,000. Over the next 20 years, a projected investment of \$2.4 million is required to maintain these assets at SGR, including an immediate investment of \$445,000 to replace 21 vehicles currently in the backlog.

Table 5-19 summarizes the current inventory of senior service vehicles, including service dates, useful lives, and projected overhauls and retirements.

Table 5-19. Current Senior Service Vehicle Inventory – Fargo Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul(s)	Projected Retirement
1163	Dodge Caravan	2004	4	Yes	n/a	2017
1165	Dodge Caravan	2004	4	Yes	n/a	2017
1160	Chevy Uplander	2007	4	Yes	n/a	2017
1161	Chevy Uplander	2007	4	Yes	n/a	2017
1192	Dodge Caravan	2009	4	Yes	n/a	2017
1193	Dodge Caravan	2009	4	Yes	n/a	2017
1206	Dodge Caravan	2009	4	Yes	n/a	2017
1213	Dodge Caravan	2011	4	Yes	n/a	2017
1212	Dodge Caravan	2011	4	Yes	n/a	2017
1216	Dodge Caravan	2011	4	Yes	n/a	2017
1215	Dodge Caravan	2011	4	Yes	n/a	2017
1214	Dodge Caravan	2011	4	Yes	n/a	2017
12310	Dodge Caravan	2015	4	No	n/a	2019
12312	Dodge Caravan	2015	4	No	n/a	2019
12313	Dodge Caravan	2015	4	No	n/a	2019
1211	Ford E450 Bus	2011	5	Yes	n/a	2017

5.1.4.2 29- and 30-Foot Buses

Fargo has a fleet of seven 29- and 30-foot buses. These assets have a replacement value of \$3.0 million. Over the next 20 years, a projected investment of \$8.9 million is required to maintain these assets at SGR, including an immediate investment of \$3.0 million to replace all seven buses that are currently in the backlog.

Table 5-20 summarizes the current inventory of 29- and 30-foot buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-20. Current 29- and 30-Foot Bus Inventory – Fargo Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul(s)	Projected Retirement
1126	Gillig Low Floor Bus	2002	12	Yes	n/a	2017
1127	Gillig Low Floor Bus	2002	12	Yes	n/a	2017
1128	Gillig Low Floor Bus	2002	12	Yes	n/a	2017
1139	Gillig Expansion Bus	2004	12	Yes	n/a	2017
1140	Gillig Low Floor Bus	2004	12	Yes	n/a	2017
1141	Gillig Low Floor Bus	2004	12	Yes	n/a	2017
1142	Gillig Low Floor Bus	2004	12	Yes	n/a	2017

5.1.4.3 35-Foot Buses

Fargo has a fleet of 16 35-foot buses. These assets have a replacement value of \$7.4 million. Over the next 20 years, a projected investment of \$19.1 million is required to

maintain these assets at SGR, including an immediate investment of \$1.2 million to replace 2 buses currently in the backlog.

Table 5-21 summarizes the current inventory of 35-foot buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-21. Current 35-Foot Bus Inventory – Fargo Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul(s)	Projected Retirement
1124	Transit Coach	1997	12	Yes	n/a	2017
1125	Transit Coach	1997	12	Yes	n/a	2017
1173	Transit Coach	2007	12	No	n/a	2019
1174	Transit Coach	2007	12	No	n/a	2019
1175	Transit Coach	2007	12	No	n/a	2019
1176	Transit Coach	2007	12	No	n/a	2019
1184	New Flyer Lowfloor	2009	12	No	n/a	2021
1185	New Flyer Lowfloor	2009	12	No	n/a	2021
1186	New Flyer Lowfloor	2009	12	No	n/a	2021
1187	New Flyer Lowfloor	2009	12	No	n/a	2021
1188	New Flyer Lowfloor	2009	12	No	n/a	2021
1195	New Flyer Lowfloor	2010	12	No	n/a	2022
1196	New Flyer Lowfloor	2010	12	No	n/a	2022
1197	New Flyer Lowfloor	2010	12	No	n/a	2022
1198	New Flyer Lowfloor	2010	12	No	n/a	2022
1199	New Flyer Lowfloor	2010	12	No	n/a	2022

5.1.4.4 40-Foot Buses

Fargo has a fleet of eight 40-foot buses. These assets have a replacement value of \$5.3 million. Over the next 20 years, a projected investment of \$12.0 million is required to maintain these assets at SGR.

Table 5-22 summarizes the current inventory of 40-foot buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-22. Current 40-Foot Bus Inventory – Fargo Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul	Projected Retirement
1200	New Flyer Hybrid Bus	2011	12	No	2017	2023
1201	New Flyer Hybrid Bus	2011	12	No	2017	2023
1220	New Flyer Hybrid Bus	2013	12	No	2019	2025
1221	New Flyer Hybrid Bus	2013	12	No	2019	2025
1222	New Flyer Hybrid Bus	2013	12	No	2019	2025
1223	New Flyer Hybrid Bus	2013	12	No	2019	2025
4151	New Flyer Hybrid Bus	2015	12	No	2021	2027
4152	New Flyer Hybrid Bus	2015	12	No	2021	2027

5.1.4.5 Paratransit Vehicles

Fargo has 15 paratransit vehicles. These assets have a replacement value of \$1.2 million. Over the next 20 years, a projected investment of \$4.7 million is required to maintain these assets at SGR, including an immediate investment of \$435,000 to replace 6 vehicles currently in the backlog.

Table 5-23 summarizes the current inventory of paratransit buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-23. Current Paratransit Bus Inventory – Fargo Assets

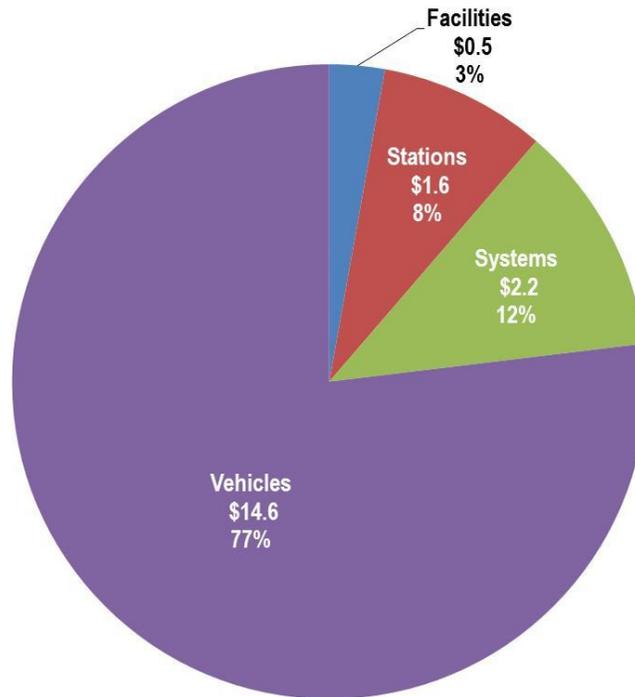
MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul	Projected Retirement
1180	Ford Supreme	2008	5	Yes	n/a	2017
1189	Chevy Bus	2008	5	Yes	n/a	2017
1191	Ford E450	2010	5	Yes	n/a	2017
1207	Ford Hybrid	2012	5	No	n/a	2017
1208	Ford Hybrid	2012	5	No	n/a	2017
1217	Ford E450	2011	5	Yes	n/a	2017
1224	Ford Goshen GCII	2013	5	No	n/a	2018
1228	Ford Goshen GCII	2015	5	No	n/a	2020
1229	Ford Goshen GCII	2015	5	No	n/a	2020
1230	Ford Goshen GCII	2015	5	No	n/a	2020
1236	Ford Goshen GCII	2015	5	No	n/a	2020
1237	Ford Goshen GCII	2015	5	No	n/a	2020
1238	Ford Goshen GCII	2015	5	No	n/a	2020
1919	Fargo Paratransit	2008	5	Yes	n/a	2017
6948	Ford E-450 Goshen	2006	5	Yes	n/a	2017

5.2 MOORHEAD 20-YEAR CAPITAL INVESTMENT NEED

The total 20-year capital investment need is \$18.9 million. An average annual capital investment of \$0.9 million is required over the next 20 years to maintain a full SGR for all assets (that is, all assets within their useful life).

Figure 5-8 breaks out the total capital investment need by TERM Lite asset category. Vehicles make up the largest share of the need, with stations, systems, and facilities making up smaller shares of the total need.

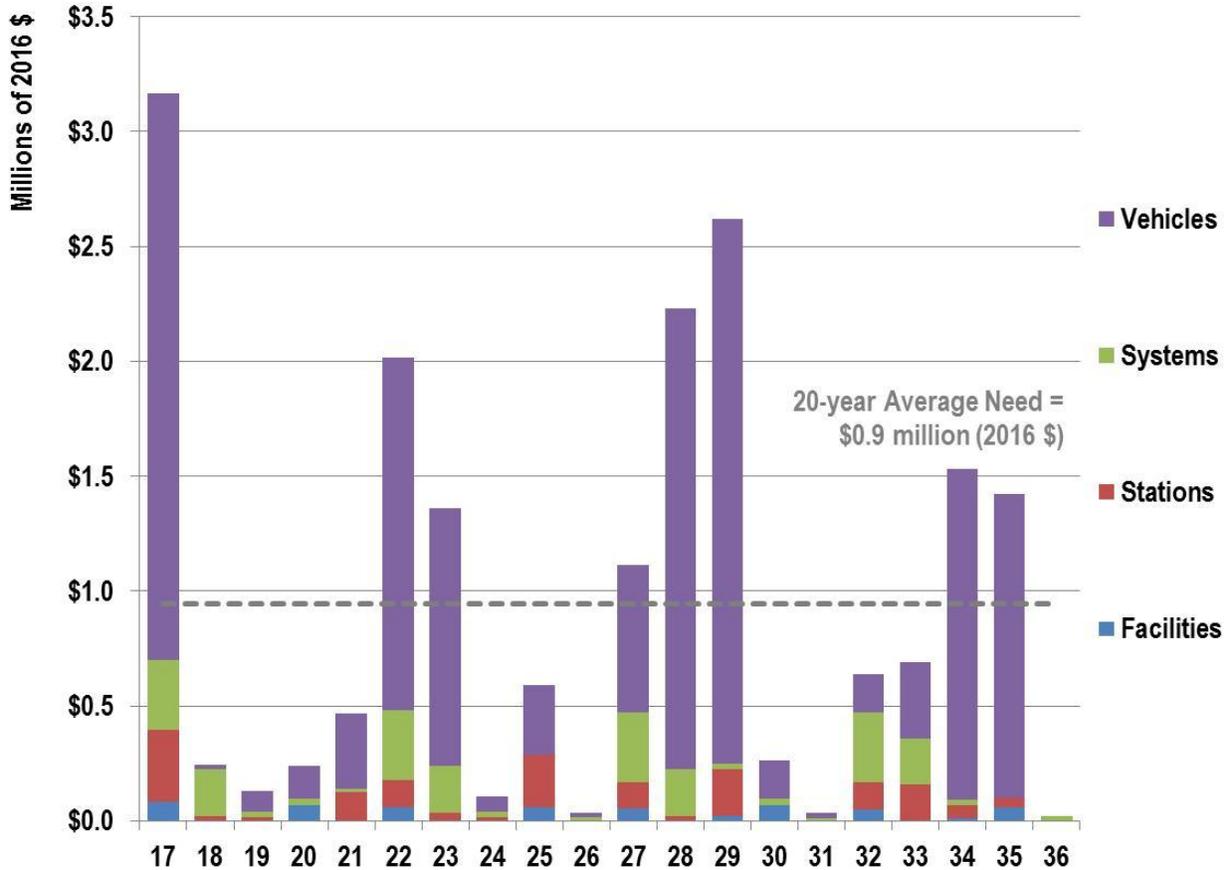
Figure 5-8. 20-Year Capital Investment Need by TERM Lite Asset Category – Moorhead Assets (Millions of 2016\$)



The asset type with the largest need is revenue vehicles, which requires \$14.2 million in investment over the 20 years—75 percent of the total need. Other major asset types include bus shelters, bus GPS equipment, revenue collection equipment, and maintenance equipment.

Figure 5-9 summarizes capital investments required by year.

Figure 5-9. 20-Year Capital Investment Requirements by TERM Lite Asset Category by Year – Moorhead Assets



The following subsections provide a more-detailed analysis of the capital investments required to maintain the Moorhead MATBUS assets at SGR over the 20-year analysis period.

5.2.1 Moorhead Facilities

Facilities assets include maintenance equipment, office equipment, and office furniture. These assets have a combined in-kind replacement value of \$225,000 and have a projected 20-year capital investment need of \$532,000.

Table 5-24 through Table 5-27 and Figure 5-10 summarize the projected 20-year capital replacement activities for Moorhead facilities assets. Note that the totals in Table 5-26, Table 5-27, and Figure 5-10 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-24. Facilities Asset Replacement Forecast by Asset Type, 2017 – 2026 – Moorhead Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Maintenance Equipment	Bus Replacement Parts	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Maintenance Equipment	1	-	-	-	-	1	-	-	-	-
Maintenance Equipment	Snow Plow	-	-	-	1	-	-	-	-	-	-
Maintenance Equipment	Tool	22	-	-	-	-	6	-	-	-	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	-	-	-	-	-	-	-	-	1	-
Office Equipment	AV Equipment	5	-	-	-	-	5	-	-	-	-
Office Equipment	Calculator	1	-	-	-	-	-	-	-	-	-
Office Furniture	Office Furniture	2	-	-	-	-	1	-	-	-	-

Table 5-25. Facilities Asset Replacement Forecast by Asset Type, 2027 – 2036 – Moorhead Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Maintenance Equipment	Bus Replacement Parts	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Maintenance Equipment	1	-	-	-	-	1	-	-	-	-
Maintenance Equipment	Snow Plow	-	-	-	1	-	-	-	-	-	-
Maintenance Equipment	Tool	14	-	4	-	-	6	-	1	-	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	-	-	-	-	-	-	-	-	1	-
Office Equipment	AV Equipment	5	-	-	-	-	5	-	-	-	-
Office Equipment	Calculator	1	-	-	-	-	-	-	-	-	-
Office Furniture	Office Furniture	1	-	1	-	-	1	-	-	-	-

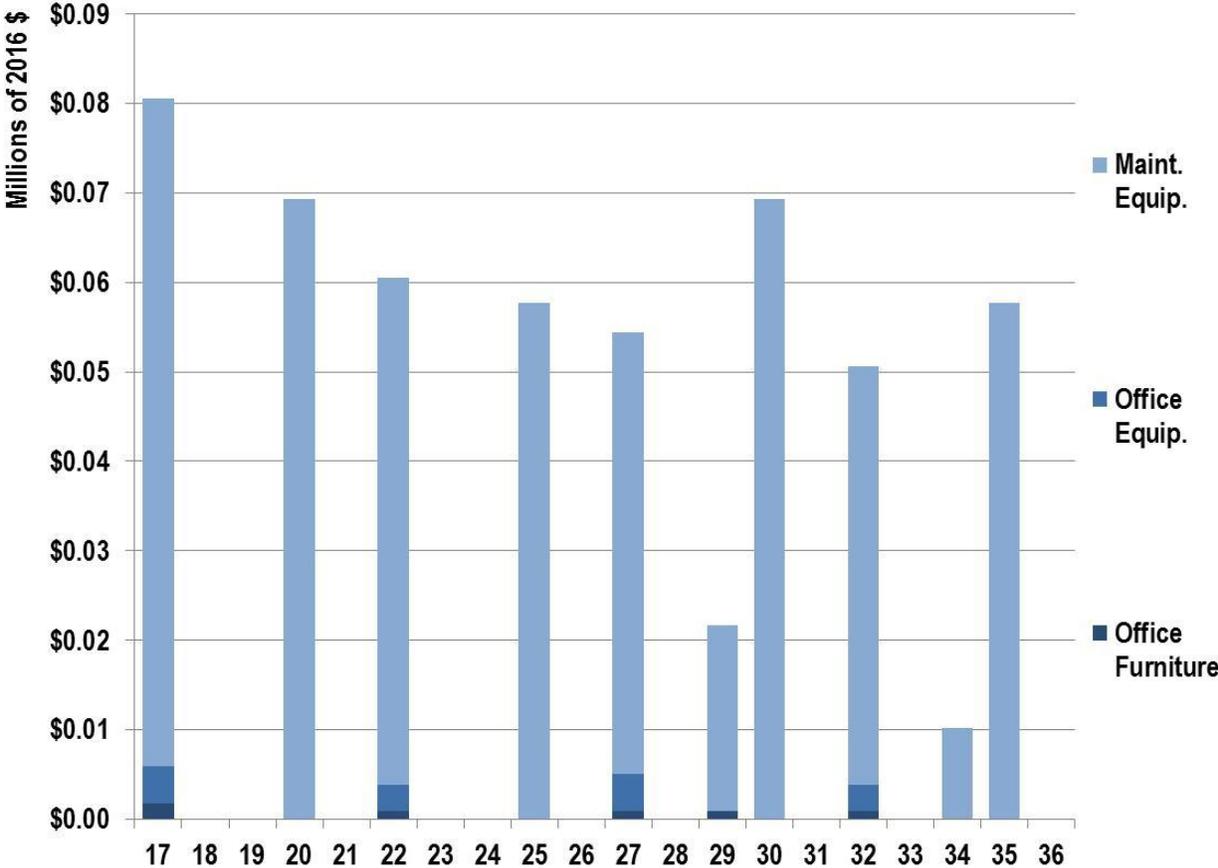
Table 5-26. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Moorhead Assets (2016 \$)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Maintenance Equipment	Bus Replacement Parts	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Maintenance Equipment	5,000	-	-	-	-	5,000	-	-	-	-
Maintenance Equipment	Snow Plow	-	-	-	69,000	-	-	-	-	-	-
Maintenance Equipment	Tool	69,000	-	-	-	-	51,000	-	-	-	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	-	-	-	-	-	-	-	-	58,000	-
Office Equipment	AV Equipment	3,000	-	-	-	-	3,000	-	-	-	-
Office Equipment	Calculator	1,000	-	-	-	-	-	-	-	-	-
Office Furniture	Office Furniture	2,000	-	-	-	-	1,000	-	-	-	-
Total		80,000	-	-	69,000	-	60,000	-	-	58,000	-

Table 5-27. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Moorhead Assets (2016 \$)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Maintenance Equipment	Bus Replacement Parts	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Maintenance Equipment	5,000	-	-	-	-	5,000	-	-	-	-
Maintenance Equipment	Snowplow	-	-	-	69,000	-	-	-	-	-	-
Maintenance Equipment	Tool	44,000	-	21,000	-	-	41,000	-	10,000	-	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	-	-	-	-	-	-	-	-	58,000	-
Office Equipment	AV Equipment	3,000	-	-	-	-	3,000	-	-	-	-
Office Equipment	Calculator	1,000	-	-	-	-	-	-	-	-	-
Office Furniture	Office Furniture	1,000	-	1,000	-	-	1,000	-	-	-	-
Total		54,000	-	22,000	69,000	-	50,000	-	10,000	58,000	-

Figure 5-10. 20-Year Facilities Capital Investment Need Forecast by Assigned Asset Type – Moorhead Assets



5.2.1.1 Maintenance Equipment

Maintenance equipment includes bus replacement parts, snowplows, and other miscellaneous equipment and tools. These assets have a replacement value of \$219,000. Over the next 20 years, a projected investment of \$513,000 is required to maintain these assets at SGR, including an immediate investment of \$75,000 for assets in the backlog.

5.2.1.2 Office Equipment

Office equipment includes AV equipment and calculators. These assets have a replacement value of \$4,000. Over the next 20 years, a projected investment of \$14,000 is required to maintain these assets at SGR, including an immediate investment of \$4,000 to replace assets in the backlog.

5.2.1.3 Office Furniture

Office furniture has a replacement value of \$2,000. Over the next 20 years, a projected investment of \$5,000 is required to maintain these assets at SGR, including an immediate investment of \$1,000 for assets in the backlog.

5.2.2 Moorhead Stations

Station assets include bike racks, bus shelters, and signage. These assets have a combined in-kind replacement value of \$599,000 and have a projected 20-year capital investment need of \$1.6 million.

Table 5-28 through Table 5-31 and Figure 5-11 summarize the projected 20-year capital replacement activities for station assets. Note that the totals in Table 5-30, Table 5-31, and Figure 5-11 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-28. Station Asset Replacement Forecast by Asset Type, 2017 – 2026 – Moorhead Assets (Number of Asset Replacements)

Station Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Bike Racks	Bike Rack	4	-	-	-	-	2	-	-	-	-
Bus Shelter	Bus Shelter	40	2	1	-	6	10	1	-	13	1
Signage	GTC Signage	8	1	-	-	-	9	1	-	-	-

Table 5-29. Station Asset Replacement Forecast by Asset Type, 2027 – 2036 – Moorhead Assets (Number of Asset Replacements)

Station Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Bike Racks	Bike Rack	4	-	-	-	-	2	-	-	-	-
Bus Shelter	Bus Shelter	14	1	20	-	1	10	13	6	1	-
Signage	GTC Signage	8	1	-	-	-	9	1	-	-	-

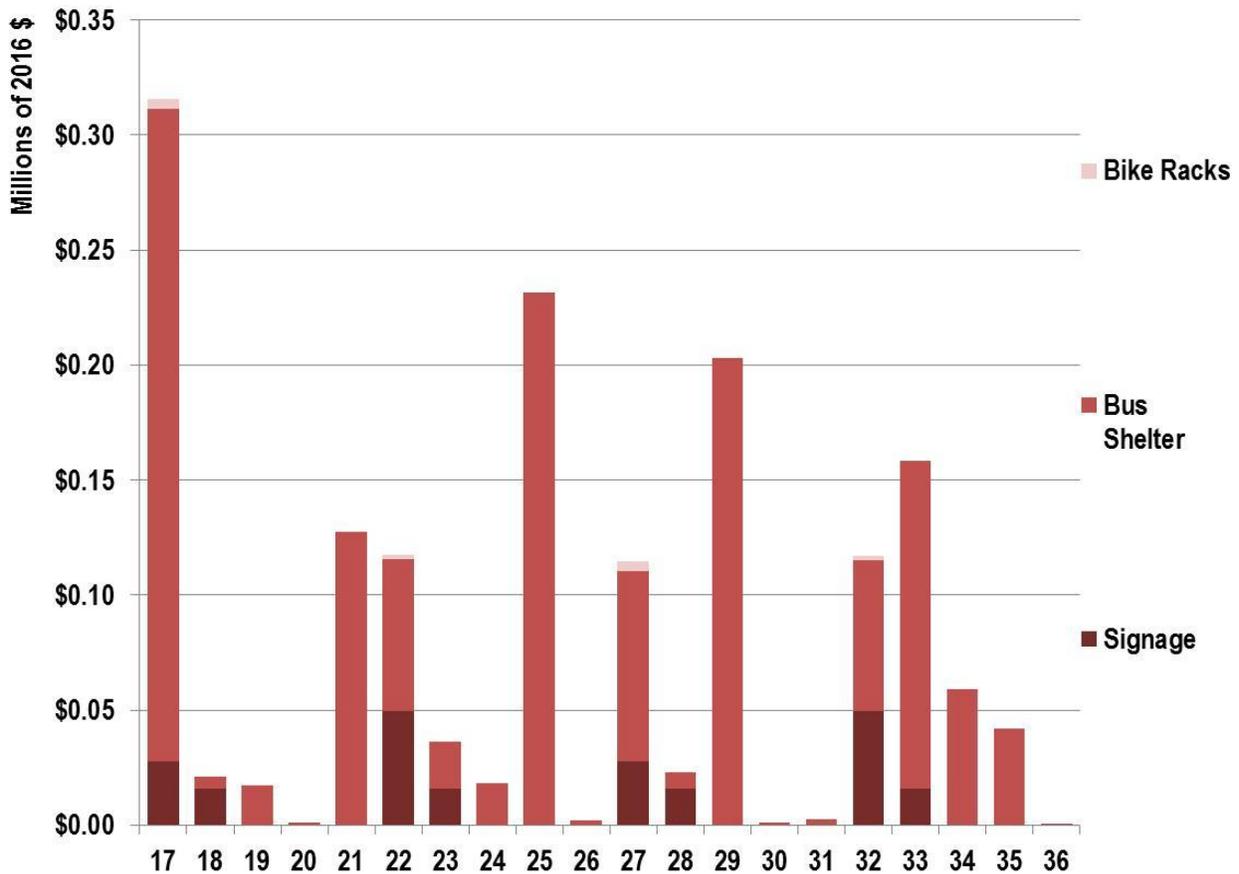
Table 5-30. Station Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Moorhead Assets (2016 \$)

Station Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Exterior	GTC Deck	4,000	-	-	-	-	2,000	-	-	-	-
Building Exterior	GTC Gate	284,000	6,000	17,000	1,000	128,000	66,000	21,000	18,000	232,000	2,000
Building Exterior	GTC Sculpture	28,000	16,000	-	-	-	49,000	16,000	-	-	-
Total		316,000	22,000	17,000	1,000	128,000	117,000	37,000	18,000	232,000	2,000

Table 5-31. Station Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Moorhead Assets (2016 \$)

Station Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Exterior	GTC Deck	4,000	-	-	-	-	2,000	-	-	-	-
Building Exterior	GTC Gate	83,000	7,000	203,000	1,000	2,000	66,000	143,000	59,000	42,000	-
Building Exterior	GTC Sculpture	28,000	16,000	-	-	-	49,000	16,000	-	-	-
Total		115,000	23,000	203,000	1,000	2,000	117,000	159,000	59,000	42,000	-

Figure 5-11. 20-Year Station Capital Investment Need Forecast by Assigned Asset Type – Moorhead Assets



5.2.2.1 Bike Racks

Moorhead has four bike racks with a total replacement value of \$4,000. Over the next 20 years, a projected investment of \$12,000 is required to maintain these assets at SGR, including an immediate investment of \$4,000 to replace the bike racks in the backlog.

5.2.2.2 Bus Shelters

Moorhead has 58 bus shelters with a total replacement value of \$529,000. Over the next 20 years, a projected investment of \$1.4 million is required to maintain these assets at SGR, including an immediate investment of \$211,000 to replace 27 bus shelters in the backlog.

5.2.2.3 Station Signage

Signage assets include AVL kiosks and TVs and have a replacement value of \$65,000. Over the next 20 years, a projected investment of \$217,000 is required to maintain these assets at SGR, including an immediate investment of \$28,000 to replace the assets currently in the backlog.

5.2.3 Moorhead Systems

Systems assets include bus GPS, CCTV, PA system, radio systems, and revenue collection equipment. These assets have a combined in-kind replacement value of \$566,000 and have a projected 20-year capital investment need of \$2.2 million.

Table 5-32 through Table 5-35, and Figure 5-12 summarize the projected 20-year capital replacement activities for systems assets. Note that the totals in Table 5-34, Table 5-35, and Figure 5-12 include all capital investments: replacement, rehabilitations and annual capital maintenance.

Table 5-32. Systems Asset Replacement Forecast by Assigned Asset Type, 2017 – 2026 – Moorhead Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Bus GPS	GPS Hardware	3	-	-	-	-	3	-	-	-	-
Bus GPS	GPS Software	1	2	-	-	-	1	2	-	-	-
Bus GPS	GPS Unit	7	7	-	-	-	7	7	-	-	-
CCTV	CCTV Camera	-	-	11	-	-	-	-	11	-	-
CCTV	CCTV Hardware	3	-	-	1	-	2	1	-	-	1
CCTV	CCTV Software	-	-	1	-	-	-	-	1	-	-
CCTV	CCTV Systems	1	-	-	-	-	1	-	-	-	-
PA System	PA Hardware	3	-	-	1	-	2	1	-	-	1
Radio	Mobile Radio Unit	-	-	5	-	-	-	-	5	-	-
Radio	Vehicle Radio	-	3	1	-	16	-	3	1	-	16
Revenue Collection	Farebox	11	-	-	-	-	11	-	-	-	-
Revenue Collection	Farebox Encoding Machine	2	-	-	-	-	2	-	-	-	-
Revenue Collection	Farebox Software	3	1	-	1	-	3	1	-	-	-
Revenue Collection	Revenue Vault	1	-	-	1	-	1	-	-	-	-

Table 5-33. Systems Asset Replacement Forecast by Assigned Asset Type, 2027 – 2036 – Moorhead Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Bus GPS	GPS Hardware	3	-	-	-	-	3	-	-	-	-
Bus GPS	GPS Software	1	2	-	-	-	1	2	-	-	-
Bus GPS	GPS Unit	7	7	-	-	-	7	7	-	-	-
CCTV	CCTV Camera	-	-	11	-	-	-	-	11	-	-
CCTV	CCTV Hardware	2	-	1	-	-	3	-	-	1	-
CCTV	CCTV Software	-	-	1	-	-	-	-	1	-	-
CCTV	CCTV Systems	1	-	-	-	-	1	-	-	-	-
PA System	PA Hardware	2	-	1	-	-	3	-	-	1	-
Radio	Mobile Radio Unit	-	-	5	-	-	-	-	5	-	-
Radio	Vehicle Radio	-	3	1	-	16	-	3	1	-	19
Revenue Collection	Farebox	11	-	-	-	-	11	-	-	-	-
Revenue Collection	Farebox Encoding Machine	2	-	-	-	-	2	-	-	-	-
Revenue Collection	Farebox Software	3	1	-	1	-	3	1	-	-	-
Revenue Collection	Revenue Vault	1	-	-	1	-	1	-	-	-	-

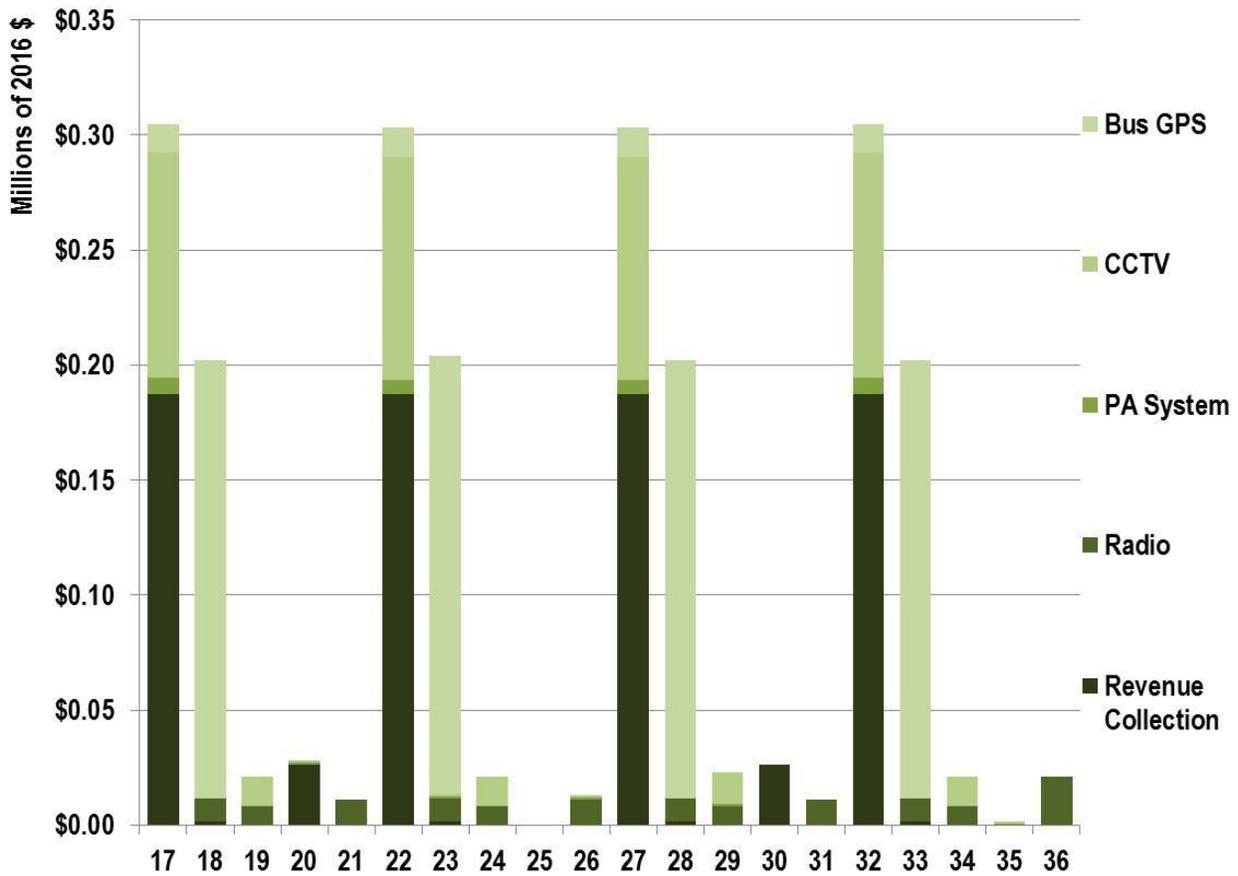
Table 5-34. Systems Capital Investment Need Forecast by Asset Type (2016 \$)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Bus GPS	GPS Hardware	4,000	-	-	-	-	4,000	-	-	-	-
Bus GPS	GPS Software	1,000	17,000	-	-	-	1,000	17,000	-	-	-
Bus GPS	GPS Unit	7,000	173,000	-	-	-	7,000	173,000	-	-	-
CCTV	CCTV Camera	-	-	11,000	-	-	-	-	11,000	-	-
CCTV	CCTV Hardware	26,000	-	-	1,000	-	25,000	1,000	-	-	1,000
CCTV	CCTV Software	-	-	2,000	-	-	-	-	2,000	-	-
CCTV	CCTV Systems	72,000	-	-	-	-	72,000	-	-	-	-
PA System	PA Hardware	7,000	-	-	1,000	-	6,000	1,000	-	-	1,000
Radio	Mobile Radio Unit	-	-	7,000	-	-	-	-	7,000	-	-
Radio	Vehicle Radio	-	10,000	1,000	-	11,000	-	10,000	1,000	-	11,000
Revenue Collection	Farebox	155,000	-	-	-	-	155,000	-	-	-	-
Revenue Collection	Farebox Encoding Machine	9,000	-	-	-	-	9,000	-	-	-	-
Revenue Collection	Farebox Software	23,000	2,000	-	8,000	-	23,000	2,000	-	-	-
Revenue Collection	Revenue Vault	1,000	-	-	18,000	-	1,000	-	-	-	-
Total		305,000	202,000	21,000	28,000	11,000	303,000	204,000	21,000	-	13,000

Table 5-35. Systems Capital Investment Need Forecast by Asset Type (2016 \$)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Bus GPS	GPS Hardware	4,000	-	-	-	-	4,000	-	-	-	-
Bus GPS	GPS Software	1,000	17,000	-	-	-	1,000	17,000	-	-	-
Bus GPS	GPS Unit	7,000	173,000	-	-	-	7,000	173,000	-	-	-
CCTV	CCTV Camera	-	-	11,000	-	-	-	-	11,000	-	-
CCTV	CCTV Hardware	25,000	-	1,000	-	-	26,000	-	-	1,000	-
CCTV	CCTV Software	-	-	2,000	-	-	-	-	2,000	-	-
CCTV	CCTV Systems	72,000	-	-	-	-	72,000	-	-	-	-
PA System	PA Hardware	6,000	-	1,000	-	-	7,000	-	-	1,000	-
Radio	Mobile Radio Unit	-	-	7,000	-	-	-	-	7,000	-	-
Radio	Vehicle Radio	-	10,000	1,000	-	11,000	-	10,000	1,000	-	21,000
Revenue Collection	Farebox	155,000	-	-	-	-	155,000	-	-	-	-
Revenue Collection	Farebox Encoding Machine	9,000	-	-	-	-	9,000	-	-	-	-
Revenue Collection	Farebox Software	23,000	2,000	-	8,000	-	23,000	2,000	-	-	-
Revenue Collection	Revenue Vault	1,000	-	-	18,000	-	1,000	-	-	-	-
Total		303,000	202,000	23,000	26,000	11,000	305,000	202,000	21,000	2,000	21,000

Figure 5-12. 20-Year Systems Capital Investment Need Forecast by Assigned Asset Type – Moorhead Assets



5.2.3.1 Bus GPS

Bus GPS assets include GPS hardware, software, and in-vehicle GPS units. These assets have a replacement value of \$203,000. Over the next 20 years, a projected investment of \$812,000 is required to maintain these assets at SGR, including an immediate investment of \$13,000 to replace assets in the backlog.

5.2.3.2 CCTV

CCTV assets include cameras, software, hardware, and support systems. These assets have a replacement value of \$111,000. Over the next 20 years, a projected investment of \$447,000 is required to maintain these assets at SGR, including an immediate investment of \$97,000 to replace assets in the backlog.

5.2.3.3 PA System

PA system assets have a replacement value of \$7,000. Over the next 20 years, a projected investment of \$30,000 is required to maintain these assets at SGR, including an immediate investment of \$7,000 to replace assets in the backlog.

5.2.3.4 Radio

Radio assets include base radios, mobile unit radios, and in-vehicle radios. These assets have a replacement value of \$29,000. Over the next 20 years, a projected investment of \$128,000 is required to maintain these assets at SGR, including an immediate investment of \$10,000 to replace assets in the backlog.

5.2.3.5 Revenue Collection

Revenue collection assets include fareboxes, farebox encoding machines, software, and revenue vaults. These assets have a replacement value of \$216,000. Over the next 20 years, a projected investment of \$811,000 is required to maintain these assets at SGR, including an immediate investment of \$188,000 to replace assets in the backlog.

5.2.4 Moorhead Vehicles

Moorhead vehicle include paratransit vehicles, senior service vehicles, 29- and 30-foot buses, 35-foot buses, and non-revenue service vehicles. These assets have a combined in-kind replacement value of \$5.4 million and have a projected 20-year capital investment need of \$14.6 million.

Table 5-36 through Table 5-39 and Figure 5-13 summarize the projected 20-year capital replacement activities for vehicles. Major capital investments in vehicles over the 20-year analysis are projected to include:

- Immediate replacement of 4 29- and 30-foot buses projected to cost \$1.8 million (these buses will be replaced with 35-foot buses)
- Replacement of 4 35-foot buses in 2029 projected to cost \$2.2 million
- Replacement of 4 35-foot buses in 2028 projected to cost \$1.8 million
- Mid-life overhaul of 4 35-foot buses in 2023 and 2035 projected to cost \$890,000 each year.

Note that the totals in Table 5-38, Table 5-39, and Figure 5-13 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-36. Vehicle Replacement Forecast by Vehicle Type, 2017 – 2026 – Moorhead Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Non-Revenue Vehicle	Service Vehicle	2	-	-	-	2	-	-	-	3	-
Revenue Vehicle	29 - 30 Foot Bus	4	-	-	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	1	-	-	-	-	1	-	-	-	-
Revenue Vehicle	Paratransit Vehicle	2	-	1	2	-	2	-	1	2	-
Revenue Vehicle	Senior Service	2	1	1	-	2	1	1	-	2	1

Table 5-37. Vehicle Replacement Forecast by Vehicle Type, 2027 – 2036 – Moorhead Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Non-Revenue Vehicle	Service Vehicle	-	-	2	-	-	-	2	-	1	-
Revenue Vehicle	29 - 30 Foot Bus	-	-	4	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	1	4	1	-	-	-	-	1	-	-
Revenue Vehicle	Paratransit Vehicle	2	-	1	2	-	2	-	1	2	-
Revenue Vehicle	Senior Service	1	-	2	1	1	-	2	1	1	-

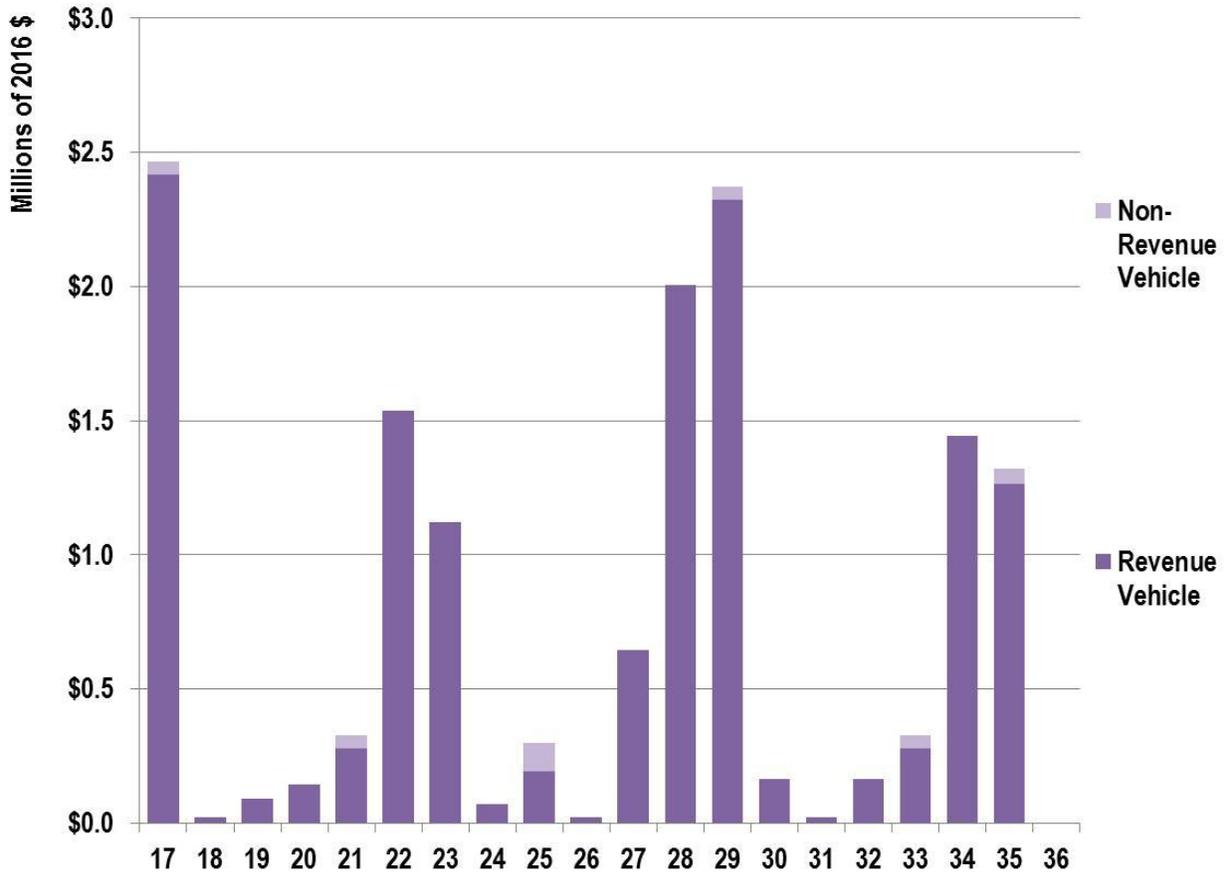
Table 5-38. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Moorhead Assets (2016 \$)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Non-Revenue Vehicle	Service Vehicle	49,000	-	-	-	49,000	-	-	-	106,000	-
Revenue Vehicle	29 - 30 Foot Bus	1,781,000	-	-	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	421,000	-	-	-	229,000	1,351,000	1,101,000	-	-	-
Revenue Vehicle	Paratransit Vehicle	164,000	-	69,000	143,000	-	164,000	-	69,000	143,000	-
Revenue Vehicle	Senior Service	50,000	22,000	21,000	-	50,000	22,000	21,000	-	50,000	22,000
Total		2,465,000	22,000	90,000	143,000	328,000	1,537,000	1,121,000	69,000	299,000	22,000

Table 5-39. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Moorhead Assets (2016 \$)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Non-Revenue Vehicle	Service Vehicle	-	-	49,000	-	-	-	49,000	-	58,000	-
Revenue Vehicle	29 - 30 Foot Bus	-	-	-	-	-	-	-	-	-	-
Revenue Vehicle	35 Foot Bus	458,000	2,004,000	2,202,000	-	-	-	229,000	1,351,000	1,101,000	-
Revenue Vehicle	Paratransit Vehicle	164,000	-	69,000	143,000	-	164,000	-	69,000	143,000	-
Revenue Vehicle	Senior Service	21,000	-	50,000	22,000	21,000	-	50,000	22,000	21,000	-
Total		643,000	2,004,000	2,370,000	165,000	21,000	164,000	328,000	1,442,000	1,322,000	-

Figure 5-13. 20-Year Vehicle Capital Investment Need Forecast by Assigned Asset Type – Moorhead Assets



5.2.4.1 Non-Revenue Service Vehicles

Moorhead has three non-revenue service vehicles. These assets have a replacement value of \$106,000. Over the next 20 years, a projected investment of \$359,000 is required to maintain these assets at SGR, including an immediate investment of \$49,000 to replace two vehicles currently in the backlog.

5.2.4.2 29- and 30-Foot Buses

Moorhead has a fleet of four 29- and 30-foot buses. These assets have a replacement value of \$1.7 million. Over the next 20 years, a projected investment of \$5.3 million is required to maintain these assets at SGR, including an immediate investment of \$1.7 million to replace all four buses that are currently in the backlog. Note that MATBUS plans to replace these buses with 35-foot buses; this is reflected in the replacement projections.

Table 5-40 summarizes the current inventory of 29- and 30-foot buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-40. Current 29- and 30-Foot Bus Inventory – Moorhead Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul(s)	Projected Retirement
590	Orion VII	2004	12	Yes	n/a	2017
591	Orion VII	2004	12	Yes	n/a	2017
592	Orion VII	2004	12	Yes	n/a	2017
593	Orion VII	2004	12	Yes	n/a	2017

5.2.4.3 35-Foot Buses

Moorhead has a fleet of seven 35-foot buses. These assets have a replacement value of \$3.1 million. Over the next 20 years, a projected investment of \$6.9 million is required to maintain these assets at SGR, including an immediate investment of \$421,000 to replace one bus currently in the backlog.

Table 5-41 summarizes the current inventory of 35-foot buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-41. Current 35-Foot Bus Inventory – Moorhead Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul(s)	Projected Retirement
2161	New Flyer	2016	12	No	2022	2028
2162	New Flyer	2016	12	No	2022	2028
2163	New Flyer	2016	12	No	2022	2028
2164	New Flyer	2016	12	No	2022	2028
370	Orion VII	2004	12	Yes	n/a	2017
1020	New Flyer	2010	12	No	n/a	2022
2151	New Flyer	2015	12	No	2021	2027

5.2.4.4 Paratransit Vehicles

Moorhead has five paratransit vehicles. These assets have a replacement value of \$376,000. Over the next 20 years, a projected investment of \$1.5 million is required to maintain these assets at SGR, including an immediate investment of \$84,000 to replace one vehicle currently in the backlog.

Table 5-42 summarizes the current inventory of paratransit buses, including service dates, useful lives, and projected overhauls and retirements.

Table 5-42. Current Paratransit Bus Inventory – Moorhead Assets

MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul	Projected Retirement
1177	Ford Supreme	2008	5	Yes	n/a	2017
1218	Ford Goshen GCII	2012	5	No	n/a	2017
1225	Ford Goshen GCII	2014	5	No	n/a	2019
1231	Ford Goshen GCII	2015	5	No	n/a	2020
1232	Ford Goshen GCII	2015	5	No	n/a	2020

5.2.4.5 Senior Service Vehicles

Moorhead has four senior service vehicles. These assets have a replacement value of \$93,000. Over the next 20 years, a projected investment of \$465,000 is required to maintain these assets at SGR, including an immediate investment of \$27,000 to replace one vehicle currently in the backlog.

Table 5-43 summarizes the current inventory of senior service vehicles, including service dates, useful lives, and projected overhauls and retirements.

Table 5-43. Current Paratransit Bus Inventory – Moorhead Assets

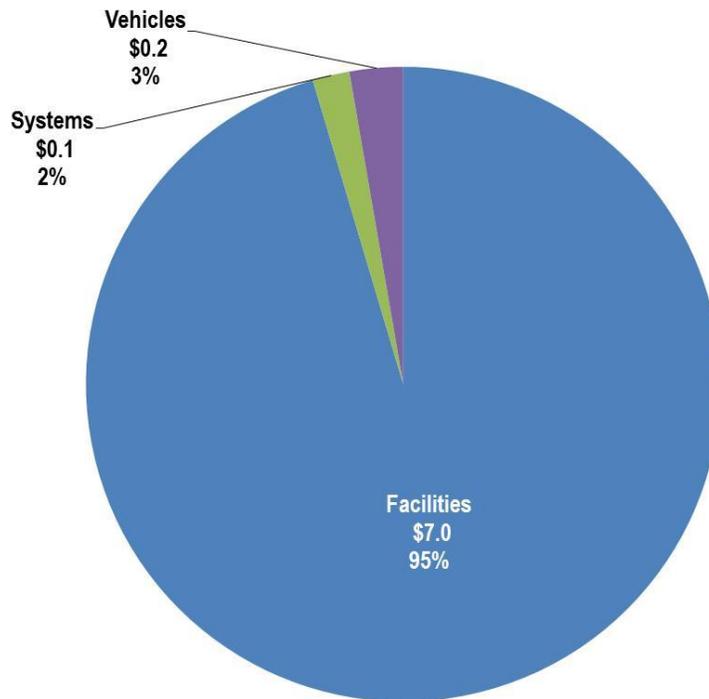
MATBUS Vehicle No.	Make/ Model	Service Date	Useful Life	Backlog	Projected Overhaul	Projected Retirement
1226	Dodge Caravan	2014	4	No	2022	2018
1167	Ford Windstar	2008	4	Yes	2023	2017
1209	Dodge Caravan	2013	4	No	2024	2017
5151	Dodge Caravan	2015	4	No	2025	2019

5.3 JOINT 20-YEAR CAPITAL INVESTMENT NEED

The total 20-year capital investment need is \$7.4 million. An average annual capital investment of \$0.4 million is required over the next 20 years to maintain a full SGR for all assets (that is, all assets within their useful life). For joint assets, which include the maintenance facility and related equipment, capital costs are split between Fargo and Moorhead (two-thirds of the costs for Fargo, one-third for Moorhead)

Figure 5-14 breaks out the total capital investment need by TERM Lite asset category. Facilities assets make up by far the largest share of the need, with stations and systems making up smaller shares of the total need.

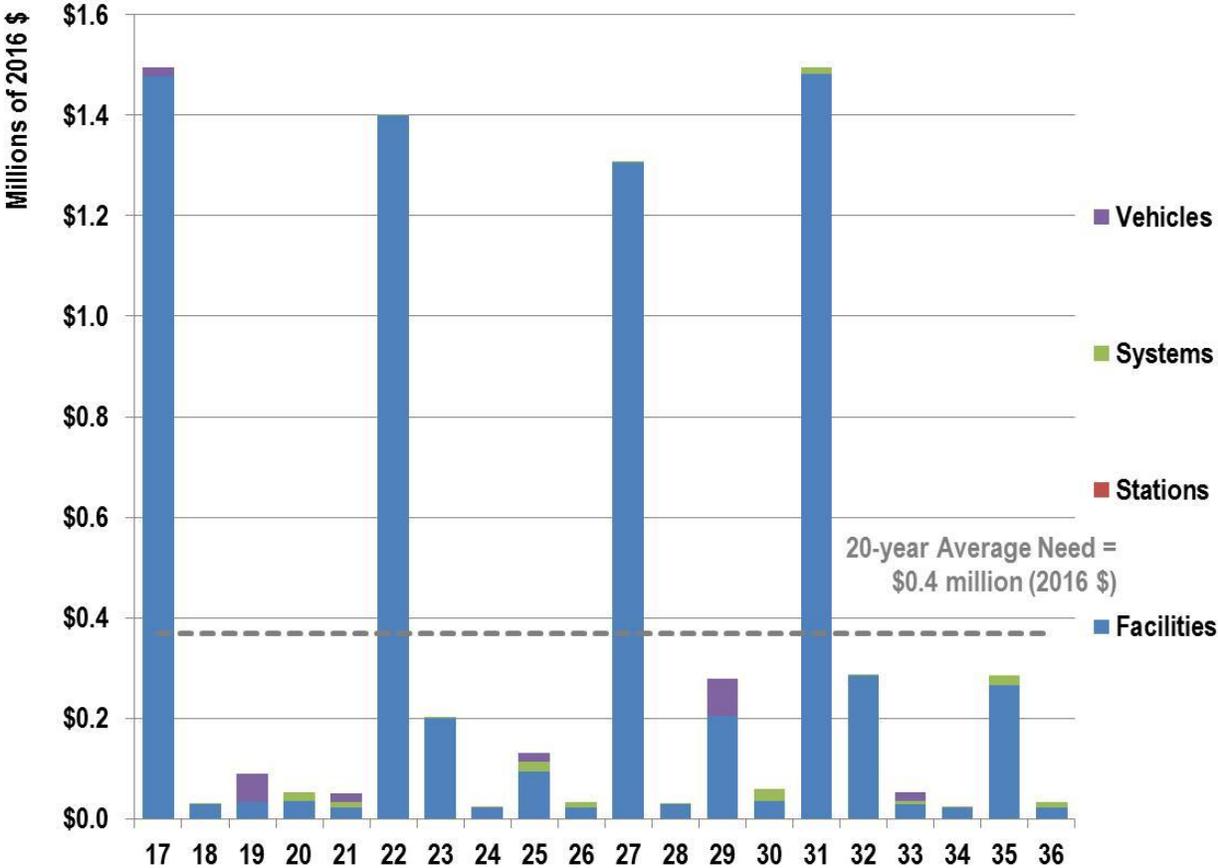
Figure 5-14. 20-Year Capital Investment Need by TERM Lite Asset Category – Joint Assets (Millions of 2016\$)



The asset type with the largest need is the maintenance facility building, which requires \$3.0 million in investment over the 20 years—40 percent of the total need. Other major asset types include maintenance equipment, office furniture, software, non-revenue service vehicles, and hardware.

Figure 5-15 summarizes capital investments required by year.

Figure 5-15. 20-Year Capital Investment Requirements by TERM Lite Asset Category by Year – Joint Assets



The following subsections provide a more-detailed analysis of the capital investments required to maintain the jointly owned and maintained MATBUS assets at SGR over the 20-year analysis period.

5.3.1 Joint Facilities

Facilities assets include the maintenance facility building as well as hardware, HVAC components, maintenance equipment, office equipment, office furniture, and software located at the maintenance facility. These assets have a combined in-kind replacement value of \$10.3 million and have a projected 20-year capital investment need of \$7.0 million.

Table 5-44 through Table 5-47 and Figure 5-16 summarize the projected 20-year capital replacement activities for Joint facilities assets. Major capital investments include:

- Rehabilitations of the maintenance facility building in 2022 and 2031 projected to cost \$1.1 million and \$1.5 million, respectively
- Replacement of bus part inventories in 2017 and 2027 projected to cost \$725,000 each year.

Note that the totals in Table 5-46, Table 5-47, and Figure 5-16 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-44. Facilities Asset Replacement Forecast by Asset Type, 2017 – 2026 – Joint Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Hardware	Copier	1	-	-	-	-	-	1	-	-	-
Hardware	Office Hardware	2	-	-	-	-	-	2	-	-	-
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Air Compressor	-	-	1	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Washer	2	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Fueler	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Lathe	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Tool	4	1	-	-	-	-	1	-	1	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	1	-	-	-	-	-	-	-	1	-
Maintenance Facility	Maintenance Facility	-	-	-	-	-	-	-	-	-	-
Office Equipment	GTC Signage	1	-	-	1	-	1	-	-	1	-
Office Equipment	Paper Folder	1	-	-	-	-	1	-	-	-	-
Office Equipment	Recycler	1	-	-	-	-	1	-	-	-	-
Office Furniture	Office Furniture	38	1	-	-	-	38	1	-	-	-
Office Furniture	Office Tiles	1	-	-	-	-	1	-	-	-	-
Software	Transit Software	3	-	-	-	-	-	3	-	-	-

Table 5-45. Facilities Asset Replacement Forecast by Asset Type, 2027 – 2036 – Joint Assets (Number of Asset Replacements)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Hardware	Copier	-	-	1	-	-	-	-	-	1	-
Hardware	Office Hardware	-	-	2	-	-	-	-	-	2	-
HVAC	AC Unit	-	-	-	1	-	-	-	-	-	-
Maintenance Equipment	Air Compressor	-	-	1	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Washer	2	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Fueler	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Lathe	1	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Tool	4	1	-	-	-	-	1	-	1	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	1	-	-	-	-	-	-	-	1	-
Maintenance Facility	Maintenance Facility	-	-	-	-	-	-	-	-	-	-
Office Equipment	GTC Signage	1	-	-	1	-	1	-	-	1	-
Office Equipment	Paper Folder	1	-	-	-	-	1	-	-	-	-
Office Equipment	Recycler	1	-	-	-	-	1	-	-	-	-
Office Furniture	Office Furniture	38	1	-	-	-	38	1	-	-	-
Office Furniture	Office Tiles	1	-	-	-	-	1	-	-	-	-
Software	Transit Software	-	-	3	-	-	-	-	-	3	-

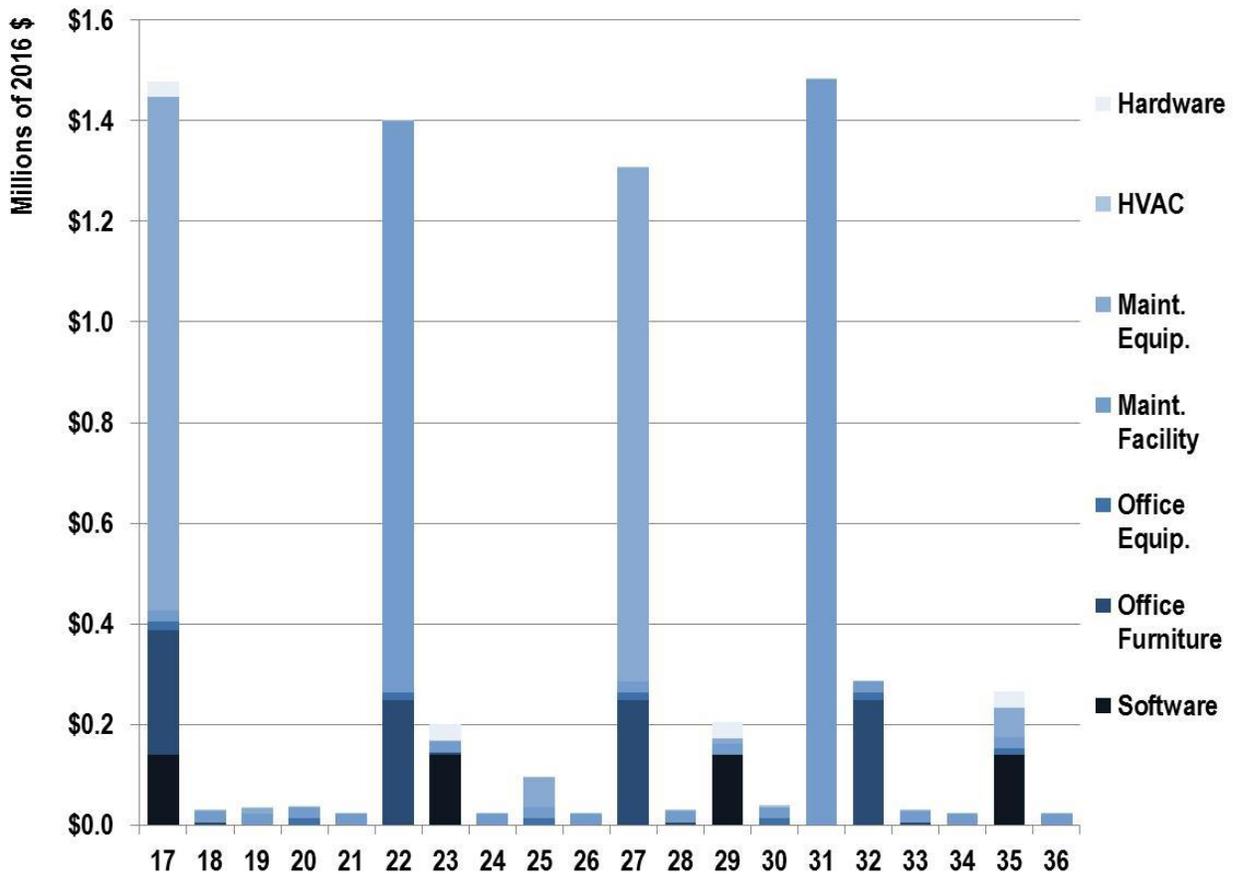
Table 5-46. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Joint Assets (2016 \$)

Facility Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Hardware	Copier	20,000	-	-	-	-	-	20,000	-	-	-
Hardware	Office Hardware	11,000	-	-	-	-	-	11,000	-	-	-
HVAC	AC Unit	-	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Air Compressor	-	-	12,000	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	725,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Washer	143,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Fueler	56,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Lathe	27,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Tool	18,000	3,000	-	-	-	-	3,000	-	2,000	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	52,000	-	-	-	-	-	-	-	58,000	-
Maintenance Facility	Maintenance Facility	22,000	22,000	22,000	22,000	22,000	1,134,000	22,000	22,000	22,000	22,000
Office Equipment	GTC Signage	8,000	-	-	13,000	-	8,000	-	-	13,000	-
Office Equipment	Paper Folder	1,000	-	-	-	-	1,000	-	-	-	-
Office Equipment	Recycler	7,000	-	-	-	-	7,000	-	-	-	-
Office Furniture	Office Furniture	214,000	5,000	-	-	-	214,000	5,000	-	-	-
Office Furniture	Office Tiles	35,000	-	-	-	-	35,000	-	-	-	-
Software	Transit Software	139,000	-	-	-	-	-	139,000	-	-	-
Total		1,478,000	30,000	34,000	35,000	22,000	1,399,000	200,000	22,000	95,000	22,000

Table 5-47. Facilities Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Joint Assets (2016 \$)

Facility Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Hardware	Copier	-	-	20,000	-	-	-	-	-	20,000	-
Hardware	Office Hardware	-	-	11,000	-	-	-	-	-	11,000	-
HVAC	AC Unit	-	-	-	6,000	-	-	-	-	-	-
Maintenance Equipment	Air Compressor	-	-	12,000	-	-	-	-	-	-	-
Maintenance Equipment	Bus Replacement Parts	725,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Bus Washer	143,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Fueler	56,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Lathe	27,000	-	-	-	-	-	-	-	-	-
Maintenance Equipment	Tool	18,000	3,000	-	-	-	-	3,000	-	2,000	-
Maintenance Equipment	Warehouse Vacuum/Scrubber	52,000	-	-	-	-	-	-	-	58,000	-
Maintenance Facility	Maintenance Facility	22,000	22,000	22,000	22,000	1,483,000	22,000	22,000	22,000	22,000	22,000
Office Equipment	GTC Signage	8,000	-	-	13,000	-	8,000	-	-	13,000	-
Office Equipment	Paper Folder	1,000	-	-	-	-	1,000	-	-	-	-
Office Equipment	Recycler	7,000	-	-	-	-	7,000	-	-	-	-
Office Furniture	Office Furniture	214,000	5,000	-	-	-	214,000	5,000	-	-	-
Office Furniture	Office Tiles	35,000	-	-	-	-	35,000	-	-	-	-
Software	Transit Software	-	-	139,000	-	-	-	-	-	139,000	-
Total		1,308,000	30,000	204,000	41,000	1,483,000	287,000	30,000	22,000	265,000	22,000

Figure 5-16. 20-Year Facilities Capital Investment Need Forecast by Assigned Asset Type – Joint Assets



5.3.1.1 Hardware

Office hardware at the maintenance facility has a replacement value of \$31,000. Over the next 20 years, a projected investment of \$126,000 is required to maintain these assets at SGR, including an immediate investment of \$2,000 for assets in the backlog.

5.3.1.2 HVAC

HVAC systems at the maintenance facility have a replacement value of \$12,000. Over the next 20 years, only minor investments in annual capital maintenance are required to maintain these assets at SGR.

5.3.1.3 Maintenance Equipment

Maintenance equipment includes air compressors, bus replacement parts, bus washers, fuelers, lathes, vacuums, scrubbers, and miscellaneous maintenance tools housed at the maintenance facility. These assets have a replacement value of \$1.1 million. Over the next 20 years, a projected investment of \$2.2 million is required to maintain these assets at SGR, including an immediate investment of \$955,000 to replace assets in the backlog.

5.3.1.4 Maintenance Facility

The maintenance facility building itself has a replacement value of \$8.7 million. Over the next 20 years, a projected investment of \$3.0 million is required to maintain the facility at SGR, including two major rehabilitations and annual capital maintenance.

5.3.1.5 Office Equipment

Office equipment includes facility signage and other miscellaneous equipment. These assets have a replacement value of \$29,000. Over the next 20 years, a projected investment of \$115,000 is required to maintain these assets at SGR, including an immediate investment of \$16,000 to replace assets in the backlog.

5.3.1.6 Office Furniture

Office furniture at the maintenance facility has a replacement value of \$254,000. Over the next 20 years, a projected investment of \$1.0 million is required to maintain these assets at SGR, including an immediate investment of \$245,000 for assets in the backlog.

5.3.1.7 Software

Software at the maintenance facility has a replacement value of \$139,000. Over the next 20 years, a projected investment of \$558,000 is required to maintain these assets at SGR, including an immediate investment of \$139,000 to replace all software which is currently in the backlog.

5.3.2 Joint Systems

Systems assets include the security systems, CCTV, and radio systems at the maintenance facility. These assets have a combined in-kind replacement value of \$38,000 and have a projected 20-year capital investment need of \$132,000.

Table 5-48 through Table 5-51, and Figure 5-17 summarize the projected 20-year capital replacement activities for systems assets. Note that the totals in Table 5-50, Table 5-51, and Figure 5-17 include all capital investments: replacement, rehabilitations and annual capital maintenance.

Table 5-48. Systems Asset Replacement Forecast by Assigned Asset Type, 2017 – 2026 – Joint Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Security	Security Access	-	-	-	-	-	-	-	-	-	-
CCTV	CCTV Camera	-	-	-	3	-	-	-	-	3	-
Radio	Mobile Radio Units	-	-	-	-	11	-	-	-	-	11

Table 5-49. Systems Asset Replacement Forecast by Assigned Asset Type, 2027 – 2036 – Joint Assets (Number of Asset Replacements)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Security	Security Access	-	-	-	-	-	-	1	-	-	-
CCTV	CCTV Camera	-	-	-	3	-	-	-	-	3	-
Radio	Mobile Radio Units	-	-	-	-	11	-	-	-	-	11

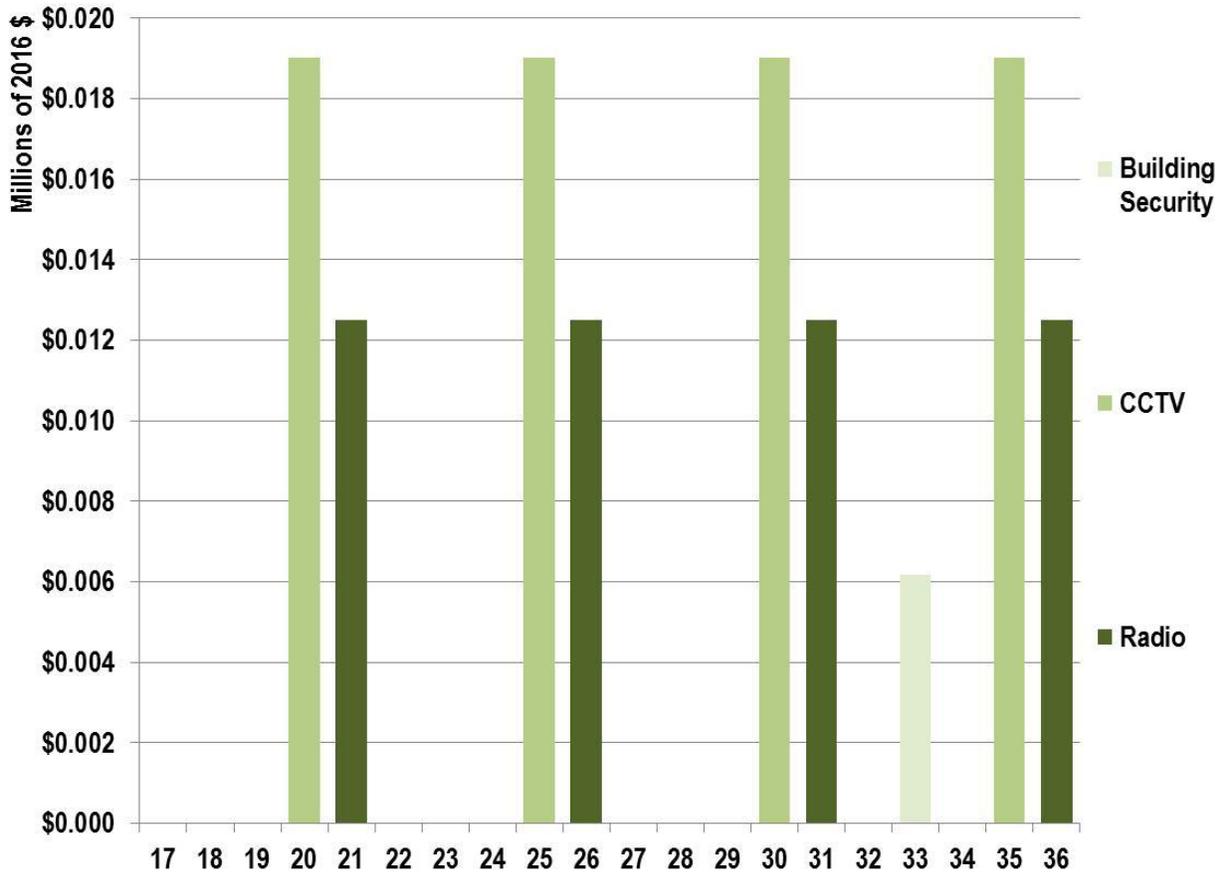
Table 5-50. Systems Capital Investment Need Forecast by Asset Type – Joint Assets (2016 \$)

Systems Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Building Security	Security Access	-	-	-	-	-	-	-	-	-	-
CCTV	CCTV Camera	-	-	-	19,000	-	-	-	-	19,000	-
Radio	Mobile Radio Units	-	-	-	-	12,000	-	-	-	-	12,000
Total		-	-	-	19,000	12,000	-	-	-	19,000	12,000

Table 5-51. Systems Capital Investment Need Forecast by Asset Type – Joint Assets (2016 \$)

Systems Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Building Security	Security Access	-	-	-	-	-	-	6,000	-	-	-
CCTV	CCTV Camera	-	-	-	19,000	-	-	-	-	19,000	-
Radio	Mobile Radio Units	-	-	-	-	12,000	-	-	-	-	12,000
Total		-	-	-	19,000	12,000	-	6,000	-	19,000	12,000

Figure 5-17. 20-Year Systems Capital Investment Need Forecast by Assigned Asset Type – Joint Assets



5.3.2.1 Building Security

The security system at the maintenance facility has a replacement value of \$6,000. Over the next 20 years, a projected investment of \$6,000 is required to maintain these assets at SGR.

5.3.2.2 CCTV

CCTV cameras at the maintenance facility have a replacement value of \$19,000. Over the next 20 years, a projected investment of \$76,000 is required to maintain these assets at SGR.

5.3.2.3 Radio

Mobile radio units at the maintenance facility have a replacement value of \$12,000. Over the next 20 years, a projected investment of \$50,000 is required to maintain these assets at SGR.

5.3.3 Joint Vehicles

Joint vehicle include two service vehicles located at the maintenance facility. These assets have a combined in-kind replacement value of \$74,000 and have a projected 20-

year capital investment need of \$200,000, including an immediate investment of \$18,000 to replace a vehicle in the backlog.

Table 5-52 through Table 5-55 and Figure 5-18 summarize the projected 20-year capital replacement activities for vehicles. Note that the totals in Table 5-54, Table 5-55, and Figure 5-18 include all capital investments: replacement, rehabilitations, and annual capital maintenance.

Table 5-52. Vehicle Replacement Forecast by Vehicle Type, 2017 – 2026 – Joint Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Non-Revenue Vehicle	Service Vehicle	1	-	1	-	1	-	-	-	1	-

Table 5-53. Vehicle Replacement Forecast by Vehicle Type, 2027 – 2036 – Joint Assets (Number of Asset Replacements)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Non-Revenue Vehicle	Service Vehicle	-	-	2	-	-	-	1	-	-	-

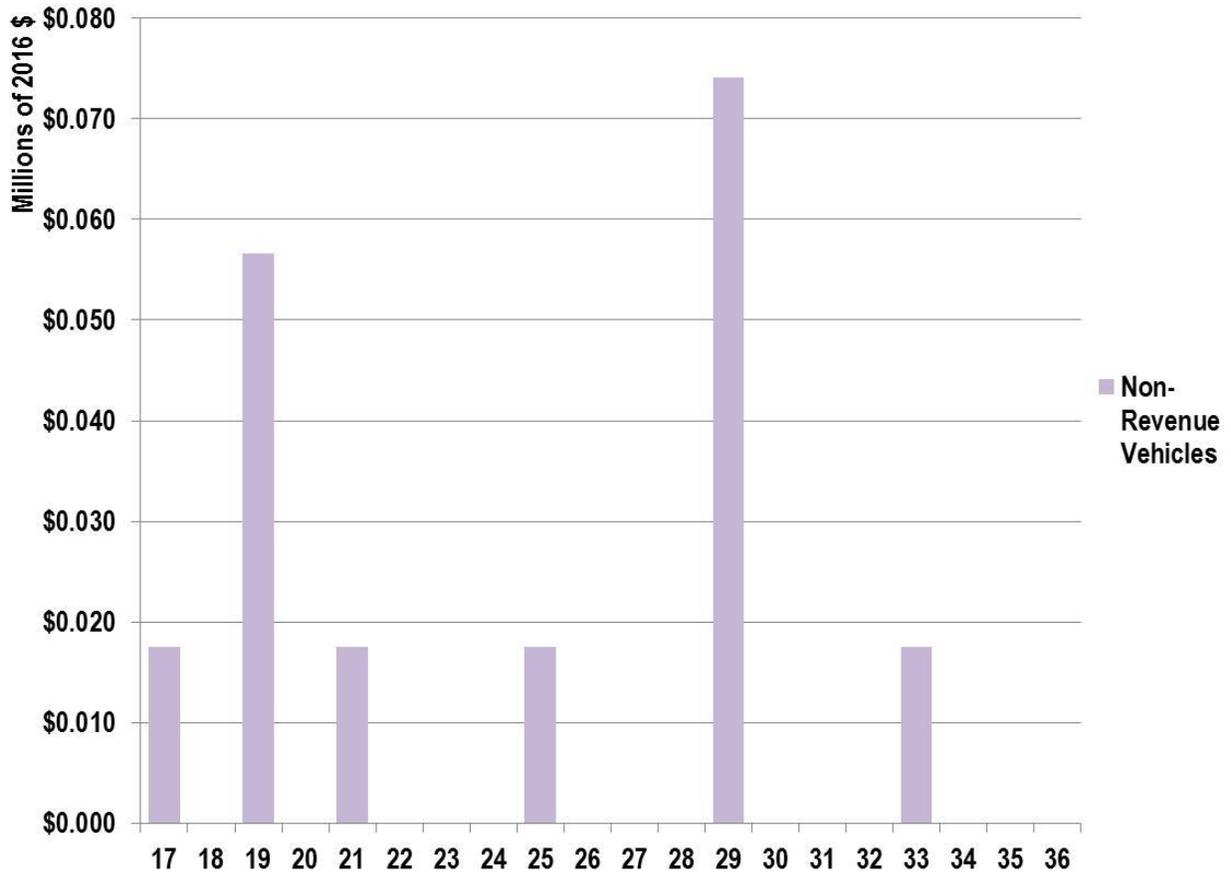
Table 5-54. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2017 – 2026 – Joint Assets (2016 \$)

Vehicle Asset Type	Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Non-Revenue Vehicle	Service Vehicle	18,000	-	57,000	-	18,000	-	-	-	18,000	-

Table 5-55. Vehicle Capital Investment Need Forecast by Assigned Asset Type, 2027 – 2036 – Joint Assets (2016 \$)

Vehicle Asset Type	Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Non-Revenue Vehicle	Service Vehicle	-	-	74,000	-	-	-	18,000	-	-	-

Figure 5-18. 20-Year Vehicle Capital Investment Need Forecast by Assigned Asset Type – Joint Assets



APPENDIX: COMPLETE ASSET INVENTORY

Table A-1. MATBUS Asset Inventory – Fargo Owned and Maintained Assets

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
5871	Facilities	HVAC	AC Unit	ROBINAIRE A/C RECHARGE STATION	2002	14	40	\$9,295
9576	Facilities	HVAC	AC Unit	2 12.5 TON MCQUAY A/C UNITS	2010	6	40	\$37,872
12291	Facilities	HVAC	AC Unit	HVAC METASYS UPGRADE	2015	1	40	\$14,661
7355	Facilities	Maintenance Equipment	Bus Replacement Parts	BATTERY TESTOR SNAP-ON	2007	9	14	\$3,840
8942	Facilities	Maintenance Equipment	Bus Replacement Parts	CUMMINS EPA 2007 BUS ENGINE	2009	7	14	\$44,432
8943	Facilities	Maintenance Equipment	Bus Replacement Parts	CUMMINS EPA 2007 BUS ENGINE	2009	7	14	\$44,432
8944	Facilities	Maintenance Equipment	Bus Replacement Parts	CUMMINS EPA 2007 BUS ENGINE	2009	7	14	\$44,432
8945	Facilities	Maintenance Equipment	Bus Replacement Parts	CUMMINS EPA 2007 BUS ENGINE	2009	7	14	\$44,432
8946	Facilities	Maintenance Equipment	Bus Replacement Parts	CUMMINS EPA 2007 BUS ENGINE	2009	7	14	\$44,432
700	Facilities	Maintenance Equipment	Lathe	AMCO BRADE LATHE	1991	25	10	\$6,981
8807	Facilities	Maintenance Equipment	Oil Filter	DOW OIL FILTER CRUSHER/STAND	2009	7	10	\$3,307
10903	Facilities	Maintenance Equipment	Tool	MAN LIFT MEC 2548HT	2002	14	10	\$2,631
3168	Facilities	Office Equipment	Safe	MAJOR SAFE WIDE TOP DEPST SLOT	1984	32	5	\$2,189
3226	Facilities	Office Equipment	Wheelchair	USED MANUAL WHEELCHAIR	1993	23	5	\$442
3176	Facilities	Office Furniture	Gazebo	BABY GRAND GAZEBO	1999	17	5	\$5,117
7481	Facilities	Office Furniture	Lockers	VERTICAL LOCKERS	2007	9	5	\$4,832
6247	Facilities	Office Furniture	Office Furniture	GTC FIXED ROUTE DISP FURNITURE	2003	13	5	\$8,515
11295	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE	2013	3	5	\$1,422
6246	Facilities	Office Furniture	Office Furniture	MODULR FURNITURE-PARA TRANSIT	2003	13	7	\$19,656
3191	Facilities	Software	Transit Software	TRANSIT SYSTEM PBX EXPANSION	1999	17	6	\$23,698
7511	Facilities	Software	Transit Software	TRAKIT AVL SOFTWARE PACKAGE	2007	9	6	\$6,773
11736	Facilities	Software	Transit Software	AVA/AVL SYSTEM FOR FIXED ROUTE	2014	2	6	\$298,179
9259	Stations	Building Exterior	GTC Deck	GTC DECK REPAIR PROJECT	2009	7	40	\$531,559
11417	Stations	Building Exterior	GTC Gate	ROD IRON GATE - GTC	2013	3	40	\$2,656
6567	Stations	Building Exterior	GTC Sculpture	SCULPTURE EAST SIDE OF GTC	2004	12	40	\$16,500
6603	Stations	Building Exterior	GTC Sculpture Lighting	LIGHTING AROUND GTC SCULPTURE	2005	11	80	\$3,569
9437	Stations	Building Interior	GTC Flooring	FLOORING IN DISPATCH AREA	2010	6	80	\$4,048
9258	Stations	Building Interior	GTC Lighting	GTC LIGHTING PROJECT	2009	7	80	\$93,372
6249	Stations	Building Interior	GTC Lounge	DRIVER'S LOUNGE ADDTN TO GTC	2003	13	80	\$397,726
3178	Stations	Building Interior	GTC Remodel	REMODEL AT GTC BUS TERMINAL	2000	16	80	\$104,506
6248	Stations	Building Interior	GTC Seating	GTC LOBBY SEATING	2003	13	12	\$14,318
3014	Stations	Bus Shelter	Bus Shelter	PASSENGR SHELTR-UNIV DR&7AVE N	1992	24	8	\$10,072
3015	Stations	Bus Shelter	Bus Shelter	PASSENGR SHELTR-32 AVE&30 ST S	1992	24	8	\$10,072
3018	Stations	Bus Shelter	Bus Shelter	BUS SHELTER@17TH AVE S & GATEW	1993	23	8	\$6,884
3019	Stations	Bus Shelter	Bus Shelter	PASSENGR SHELTR BRDWY&25 AVE N	1993	23	8	\$6,884
3062	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-13TH AVE. @WESTRAC	1980	36	8	\$6,264
3063	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-13 AVE.S & 32 STR	1980	36	8	\$6,264
3064	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-13 AVE.S. @25TH STR	1980	36	8	\$6,264
3065	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-13 AVE.S@23TH STR	1980	36	8	\$6,264
3066	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-N.UNIV@CENTL BLVD	1980	36	8	\$6,264

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
3067	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17 AVE.S.@ 12TH ST	1980	36	8	\$6,264
3068	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17 AVE.S @ 12TH ST	1980	36	8	\$6,264
3069	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-6TH AVE.S@23RD STR	1980	36	8	\$6,264
3070	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-21ST AVE N. @ ELM	1980	36	8	\$6,264
3071	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-8TH AVE.S @UNIVSTY	1980	36	8	\$6,264
3072	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-6TH AVE.S @4TH STR	1980	36	8	\$6,264
3074	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-4TH ST & 9TH AVE S	1980	36	8	\$6,264
3075	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-2ND AVE N& 12TH ST	1980	36	8	\$6,264
3076	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-12TH AVE.N & 10TH	1980	36	8	\$6,264
3077	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17TH AVE.@10TH STR	1980	36	8	\$6,264
3078	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17TH STR.N & UNIV.	1980	36	8	\$6,264
3080	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-27TH AVE S&15TH ST	1980	36	8	\$6,264
3081	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 31ST AVE N	1981	35	8	\$6,280
3082	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-25TH AVE & 14 STR	1981	35	8	\$6,280
3083	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-19TH AVE N @ BRDWY	1981	35	8	\$6,280
3084	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 17TH AVE N	1981	35	8	\$6,280
3085	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 15TH AVE N	1981	35	8	\$6,280
3086	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 8TH AVE N	1981	35	8	\$6,280
3087	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 6TH AVE N	1981	35	8	\$6,280
6028	Stations	Bus Shelter	Bus Shelter	TRANSIT CENTER @ WEST ACRES	2003	13	8	\$278,439
6271	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-2624 9TH AVE S.	2004	12	8	\$7,955
6272	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-16TH ST&17TH AVE S	2004	12	8	\$3,736
6273	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV.& 31ST AVE S	2004	12	8	\$3,736
6274	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV & 26TH AVE S	2004	12	8	\$3,736
6275	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV & 19TH AVE N	2004	12	8	\$3,736
6276	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-32ND AVE&23RD ST S	2004	12	8	\$3,736
6277	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV & 3RD AVE S	2004	12	8	\$3,736
6278	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV & 18TH AVE S	2004	12	8	\$3,736
6279	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-33RD ST&31TH AVE S	2004	12	8	\$3,736
6280	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-10TH ST&2ND AVE S	2004	12	8	\$3,736
6281	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-BRDWY & 8TH AVE N	2004	12	8	\$3,736
6453	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV & 15TH AVE N	2004	12	8	\$2,992
7458	Stations	Bus Shelter	Bus Shelter	CONCRETE/LABOR FOR SHELTER PAD	2007	9	8	\$4,026
7507	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-4TH ST & 6TH AVE S	2007	9	8	\$4,992
7508	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-1ST AVE N & 12TH ST	2007	9	8	\$4,992
7509	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-6TH AVE&28TH ST S	2007	9	8	\$4,992
7510	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-18TH ST N (NDSU)	2007	9	8	\$4,992
7549	Stations	Bus Shelter	Bus Shelter	CONCRETE PAD FOR BUS SHELTER	2007	9	8	\$4,933
7655	Stations	Bus Shelter	Bus Shelter	KIOSK FOR AVL PROJECT AT NDSU	2007	9	8	\$22,261
8378	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NDSU WALLMAN CTR	2008	8	8	\$7,707
8379	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NDSU HIGH RISES	2008	8	8	\$7,707
8380	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NDSU PAY LOT	2008	8	8	\$7,707
8381	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NDSU ENGINEERING	2008	8	8	\$5,828
8382	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-20TH ST & 3RD AV N	2008	8	8	\$5,232
8383	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-42ND ST & 14 AVE S	2008	8	8	\$5,232
8962	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17 ST & 12 AVE N	2009	7	8	\$8,547
8963	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-14 ST & 12 AVE N	2009	7	8	\$8,547

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
8964	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17TH AVE N&12TH ST	2009	7	8	\$8,547
9579	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV DR&19TH AVE N	2010	6	8	\$4,652
9580	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-16TH ST N&DKTA DR	2010	6	8	\$4,652
9581	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-UNIV DR & 12 AVE N	2010	6	8	\$5,142
9582	Stations	Bus Shelter	Bus Shelter	2 BUS SHELTER-14TH ST&25TH AVE S	2010	6	8	\$5,264
9584	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-32ND ST&12TH AVE N	2010	6	8	\$4,267
9585	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-31ST AVE&32ND ST S	2010	6	8	\$4,267
9586	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-8TH AVE& 10TH ST S	2010	6	8	\$4,267
9650	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NISKANEN NDSU	2010	6	8	\$11,624
10479	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-37TH ST & 55TH AV	2011	5	8	\$4,729
10688	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-17TH AVE & 35TH ST	2012	4	8	\$6,289
10689	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-13TH AVE N & BRDWY	2012	4	8	\$6,289
10690	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-ALBRECHT & CENTENN	2012	4	8	\$7,181
10691	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-11TH AVE N & 18TH	2012	4	8	\$7,181
10692	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-11TH AVE S & 47TH	2012	4	8	\$17,395
10800	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-25 AVE & BROADWAY	2012	4	8	\$6,220
10801	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-42ND AVE & 9TH AVE	2012	4	8	\$6,220
10802	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-9TH AVE&9TH AVE CR	2012	4	8	\$6,220
10803	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-40TH AVE S@HORNAC	2012	4	8	\$8,932
10804	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-VETERANS BLVD&40TH	2012	4	8	\$8,932
10805	Stations	Bus Shelter	Bus Shelter	BUS SHELTER-NDSU RESEARCH PARK	2012	4	8	\$8,783
10976	Stations	Bus Shelter	Bus Shelter	CONCRETE PAD EXT FOR BUS SHLTR	2011	5	8	\$2,131
10977	Stations	Bus Shelter	Bus Shelter	CONCRETE PAD FOR BUS SHELTER	2011	5	8	\$4,616
6250	Stations	Signage	GTC Signage	INFORMATN FRAME 4 GTC EXTERIOR	2003	13	5	\$3,299
755	Stations	Transportation Center	GTC	GROUND TRANSPORTATION CENTER	1985	31	40	\$13,133,918
11416	Systems	Building Security	GTC Security Access	CARD ACCESS SECURITY GTC	2013	3	20	\$6,171
10289	Systems	Bus GPS	GPS Hardware	CEHAWK VEU2 OMAP MDC	2011	5	5	\$3,964
10290	Systems	Bus GPS	GPS Hardware	CEHAWK VEU2 OMAP MDC	2011	5	5	\$3,964
10302	Systems	Bus GPS	GPS Hardware	CEHAWK MDC	2009	7	5	\$4,241
6884	Systems	Bus GPS	GPS Software	GREYHAWK GATEWAY MDC PROGRAM	2005	11	5	\$23,548
9436	Systems	Bus GPS	GPS Software	ROUTEMATCH PARATRANSIT SFTWARE	2010	6	5	\$105,225
6875	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6876	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6877	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6878	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6879	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6880	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6881	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6882	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
6883	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2005	11	5	\$5,673
8174	Systems	Bus GPS	GPS Unit	CEHAWK MOBILE DATA COMPUTER	2006	10	5	\$5,744
8278	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2008	8	5	\$4,805
8279	Systems	Bus GPS	GPS Unit	CEHAWK 1040 MOBILE DATA COMPTR	2009	7	5	\$4,646
8389	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
8390	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
8391	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
8392	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
8393	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
8394	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
8395	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8396	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8397	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8398	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8399	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8400	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8401	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8402	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8403	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8404	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8405	Systems	CCTV	CCTV Camera	FORWARD FACING CAMERA	2008	8	5	\$1,128
8406	Systems	CCTV	CCTV Camera	MISC CAMERA PARTS	2008	8	5	\$1,868
9315	Systems	CCTV	CCTV Camera	MOBILEVIEW III INNER DVR	2009	7	5	\$3,726
9316	Systems	CCTV	CCTV Camera	MOBILEVIEW III INNER DVR	2009	7	5	\$3,726
10478	Systems	CCTV	CCTV Camera	MOBILEVIEW VIDEO RECORDER	2008	8	5	\$3,356
10312	Systems	Radio	Base Radio	MOTOROLA BASE RADIO	2011	5	5	\$1,775
10314	Systems	Radio	Base Radio	MOTOROLA BASE RADIO	2011	5	5	\$1,775
3023	Systems	Radio	Mobile Radio Unit	PORTABLE HAND HELD RADIO	1993	23	5	\$1,349
7460	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7461	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7462	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7463	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7464	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7465	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2007	9	5	\$1,720
7830	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,075
7831	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,075
7832	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,075
7833	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,075
7834	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,075
7970	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
7971	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
7972	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
7973	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
7974	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
7975	Systems	Radio	Mobile Radio Unit	MOTOROLA XTL1500 MOBILE RADIO	2008	8	5	\$2,116
8165	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8166	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8167	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8168	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8169	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8170	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8171	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8172	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8173	Systems	Radio	Mobile Radio Unit	XTL1500 35 WATT RADIO	2008	8	5	\$2,037
8913	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
8914	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8915	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8916	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8917	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8918	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8919	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8920	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8921	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8922	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8923	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8924	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8925	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8926	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8927	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8928	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8929	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
8930	Systems	Radio	Mobile Radio Unit	XTL1500 MOTOROLA MOBILE RADIO	2009	7	5	\$2,628
9439	Systems	Radio	Mobile Radio Unit	MTX8250 PORTABLE 2-WAY RADIO	2010	6	5	\$1,098
9970	Systems	Radio	Mobile Radio Unit	XTL 1500 MOBILE RADIO	2010	6	5	\$2,016
10134	Systems	Radio	Mobile Radio Unit	XPR 4580 10-35W MOBILE RADIO	2011	5	5	\$1,415
10135	Systems	Radio	Mobile Radio Unit	XPR 4580 10-35W MOBILE RADIO	2011	5	5	\$1,415
10291	Systems	Radio	Mobile Radio Unit	XPR 4580 10-35W MOBILE RADIO	2011	5	5	\$1,553
10292	Systems	Radio	Mobile Radio Unit	XPR 4580 MOBILE RADIO AVL	2011	5	5	\$1,553
10293	Systems	Radio	Mobile Radio Unit	XPR 4580 MOBILE RADIO AVL	2011	5	5	\$1,553
10295	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10296	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10297	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10298	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10299	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10300	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10301	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10303	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10304	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10305	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10306	Systems	Radio	Mobile Radio Unit	MOTOROLA GTX MOBILE RADIO	2003	13	5	\$2,558
10313	Systems	Radio	Mobile Radio Unit	MOTOROLA RADIO	2011	5	5	\$1,775
7256	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
7257	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
7258	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
7259	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
7260	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
7261	Systems	Radio	Vehicle Radio	VEHICLE RADIO	2006	10	5	\$2,451
9874	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9875	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9876	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9877	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9878	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
9879	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9880	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9881	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9882	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9883	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9884	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9885	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9886	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9887	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9888	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9889	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9890	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9891	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9892	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9893	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9894	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9895	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9896	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9897	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9898	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9899	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9900	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9901	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9902	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9903	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9904	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9905	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9906	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9907	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9908	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9909	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9910	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9911	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
9912	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2010	6	12	\$10,108
11411	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2013	3	12	\$16,113
11412	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2013	3	12	\$16,113
11413	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2013	3	12	\$16,113
11414	Systems	Revenue Collection	Farebox	ODYSSEY FAREBOX	2013	3	12	\$16,113
9913	Systems	Revenue Collection	Farebox Software	FAREBOX SYSTEM FOR FIXED ROUTE	2010	6	5	\$120,409
1189	Vehicles	Revenue Vehicle	Paratransit Vehicle	2008 CHEVY BUS - HANDI-WHEELS	2008	8	5	\$69,673
1191	Vehicles	Revenue Vehicle	Paratransit Vehicle	2010 FORD E450 HANDI-WHLS BUS	2010	6	5	\$74,715
1217	Vehicles	Revenue Vehicle	Paratransit Vehicle	2011 FORD E450 HANDI-WHLS BUS	2011	5	5	\$71,886
1163	Vehicles	Revenue Vehicle	Senior Service	'05 DODGE CARAVAN-TRANSFER VAN	2004	12	4	\$29,299
1165	Vehicles	Revenue Vehicle	Senior Service	'05 DODGE CARAVAN-TRANSFER VAN	2004	12	4	\$29,299
1160	Vehicles	Revenue Vehicle	Senior Service	SR VAN - 2007 CHEVY UPLANDER	2007	9	4	\$23,364
1161	Vehicles	Revenue Vehicle	Senior Service	SR VAN - 2007 CHEVY UPLANDER	2007	9	4	\$23,364
1192	Vehicles	Revenue Vehicle	Senior Service	2009 DODGE CARAVAN - SR COMM	2009	7	4	\$26,383

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
1193	Vehicles	Revenue Vehicle	Senior Service	2009 DODGE CARAVAN - SR COMM	2009	7	4	\$26,383
1206	Vehicles	Revenue Vehicle	Senior Service	2010 DODGE CARAVAN - SR SVCS	2009	7	4	\$25,321
1213	Vehicles	Revenue Vehicle	Senior Service	2011 DODGE CARAVAN - SNR SVCS	2011	5	4	\$25,059
1212	Vehicles	Revenue Vehicle	Senior Service	2011 DODGE CARAVAN - SNR SVCS	2011	5	4	\$25,059
1216	Vehicles	Revenue Vehicle	Senior Service	2011 DODGE CARAVAN - SNR SVCS	2011	5	4	\$25,059
1215	Vehicles	Revenue Vehicle	Senior Service	2011 DODGE CARAVAN - SNR SVCS	2011	5	4	\$25,059
1214	Vehicles	Revenue Vehicle	Senior Service	2011 DODGE CARAVAN - SNR SVCS	2011	5	4	\$25,059
12310	Vehicles	Revenue Vehicle	Senior Service	2016 DODGE CARAVAN - SNR SVCS	2015	1	4	\$23,682
12312	Vehicles	Revenue Vehicle	Senior Service	2016 DODGE CARAVAN - SNR SVCS	2015	1	4	\$23,682
12313	Vehicles	Revenue Vehicle	Senior Service	2016 DODGE CARAVAN - SNR SVCS	2015	1	4	\$23,682
1211	Vehicles	Revenue Vehicle	Senior Service	2011 FORD E450 BUS - SR COMM	2011	5	5	\$70,508
1210	Vehicles	Revenue Vehicle	Senior Service	2011 FORD E450 BUS - SR COMM	2011	5	5	\$65,518
1126	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	29 FT. GILLIG LOW FLOOR BUS	2002	14	12	\$420,686
1127	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	29 FT. GILLIG LOW FLOOR BUS	2002	14	12	\$420,686
1128	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	29 FT. GILLIG LOW FLOOR BUS	2002	14	12	\$420,686
1139	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	'04 29' GILLIG EXPSN BUS	2004	12	12	\$429,971
1140	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	'04 29FT GILLIG LOW FLR BUS	2004	12	12	\$429,971
1141	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	'04 GILLIG 29' LOW FLOOR BUS	2004	12	12	\$429,971
1142	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	'04 GILLIG 29' LOW FLOOR BUS	2004	12	12	\$429,971
1124	Vehicles	Revenue Vehicle	35 Foot Bus	35' TRANSIT COACH	1997	19	12	\$618,231
1173	Vehicles	Revenue Vehicle	35 Foot Bus	35' FOOT TRANSIT COACH	2007	9	12	\$401,636
1174	Vehicles	Revenue Vehicle	35 Foot Bus	35' FOOT TRANSIT COACH	2007	9	12	\$401,636
1175	Vehicles	Revenue Vehicle	35 Foot Bus	35' FT TRANSIT COACH	2007	9	12	\$401,636
1176	Vehicles	Revenue Vehicle	35 Foot Bus	35' FT TRANSIT COACH	2007	9	12	\$401,636
1184	Vehicles	Revenue Vehicle	35 Foot Bus	2009 NEW FLYER LOWFLOOR	2009	7	12	\$453,005
1185	Vehicles	Revenue Vehicle	35 Foot Bus	2009 NEW FLYER LOWFLOOR	2009	7	12	\$453,005
1186	Vehicles	Revenue Vehicle	35 Foot Bus	2009 NEW FLYER LOWFLOOR	2009	7	12	\$453,005
1187	Vehicles	Revenue Vehicle	35 Foot Bus	2009 NEW FLYER LOWFLOOR	2009	7	12	\$453,005
1188	Vehicles	Revenue Vehicle	35 Foot Bus	2009 NEW FLYER LOWFLOOR	2009	7	12	\$453,005
1195	Vehicles	Revenue Vehicle	35 Foot Bus	2010 NEW FLYER 35'LOWFLOOR BUS	2010	6	12	\$464,370
1196	Vehicles	Revenue Vehicle	35 Foot Bus	2010 NEW FLYER 35'LOWFLOOR BUS	2010	6	12	\$464,370
1197	Vehicles	Revenue Vehicle	35 Foot Bus	2010 NEW FLYER 35'LOWFLOOR BUS	2010	6	12	\$464,370
1198	Vehicles	Revenue Vehicle	35 Foot Bus	2010 NEW FLYER 35'LOWFLOOR BUS	2010	6	12	\$464,370
1199	Vehicles	Revenue Vehicle	35 Foot Bus	2010 NEW FLYER 35'LOWFLOOR BUS	2010	6	12	\$464,370
1125	Vehicles	Revenue Vehicle	35 Foot Bus	35' TRANSIT COACH	1997	19	12	\$323,127
3059	Vehicles	Revenue Vehicle	35 Foot Bus	35'TRANST COACH - ADDL COST	1997	19	12	\$295,104
1200	Vehicles	Revenue Vehicle	40 Foot Bus	Fargo Bus	2011	5	12	\$689,130
1201	Vehicles	Revenue Vehicle	40 Foot Bus	2011 NEW FLYER HYBRID BUS	2011	5	12	\$689,130
1220	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2013	3	12	\$644,185
1221	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2013	3	12	\$644,185
1222	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2013	3	12	\$644,185
1223	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2013	3	12	\$644,185
4151	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2015	1	12	\$670,089
4152	Vehicles	Revenue Vehicle	40 Foot Bus	40 FT NEW FLYER HYBRID BUS	2015	1	12	\$670,089
1224	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2013	3	5	\$69,174
1228	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477
1229	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
1230	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477
1236	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477
1237	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477
1238	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$63,477
1919	Vehicles	Revenue Vehicle	Paratransit Vehicle	Fargo Paratransit	2008	8	5	\$86,597
6948	Vehicles	Revenue Vehicle	Paratransit Vehicle	2006 FORD E-450 GOSHEN BUS	2006	10	5	\$47,768
1180	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Supreme	2008	8	5	\$84,543
1207	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Hybrid	2012	4	5	\$141,593
1208	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Hybrid	2012	4	5	\$141,593

Table A-2. MATBUS Asset Inventory – Moorhead Owned and Maintained Assets

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
3959	Facilities	Maintenance Equipment	Bus Replacement Parts	24 VOLT BATTERY CHARGER/	1994	22	10	\$472
10296	Facilities	Maintenance Equipment	Maintenance Equipment	EQUIPMENT - TV MOUNTING & VGA INSTALL	2010	6	5	\$5,246
9789	Facilities	Maintenance Equipment	Snow Plow	EQUIPMENT - TOOLCAT UTILITY VEH W/60" SNOW	2010	6	10	\$69,289
3958	Facilities	Maintenance Equipment	Tool	SAE TAP AND DIE ST	1994	22	10	\$609
9662	Facilities	Maintenance Equipment	Tool	TOOL - HVAC DIGITAL CONTROLLER AND THERMOSTAT (1/3)	2012	4	10	\$6,910
9918	Facilities	Maintenance Equipment	Tool	TOOL - 2010 MAN AXLE TOOL KIT	2010	6	12	\$10,236
10655	Facilities	Maintenance Equipment	Tool	EQUIPMENT - PAINT STRIPING MACHINE	2011	5	5	\$3,750
10656	Facilities	Maintenance Equipment	Tool	TOOL - OIL TESTER	2011	5	5	\$23,332
913017	Facilities	Maintenance Equipment	Tool	TORQUE WRENCH	1981	35	10	\$810
913017	Facilities	Maintenance Equipment	Tool	TORQUE WRENCH	1981	35	10	\$810
913018	Facilities	Maintenance Equipment	Tool	3/4 SOCKET SET	1981	35	10	\$1,204
913018	Facilities	Maintenance Equipment	Tool	3/4 SOCKET SET	1981	35	10	\$1,204
913021	Facilities	Maintenance Equipment	Tool	WISE 10"	1981	35	10	\$1,326
913021	Facilities	Maintenance Equipment	Tool	WISE 10"	1981	35	10	\$1,326
913024	Facilities	Maintenance Equipment	Tool	JACK STANDS - 4 EACH, 10 TON	1981	35	20	\$839
913025	Facilities	Maintenance Equipment	Tool	WHEEL DOLLY - 1 1/4 TON	1981	35	20	\$1,684
913025	Facilities	Maintenance Equipment	Tool	WHEEL DOLLY - 1 1/4 TON	1981	35	20	\$1,684
913173	Facilities	Maintenance Equipment	Tool	AIR GRINDER 7"	1984	32	15	\$356
913176	Facilities	Maintenance Equipment	Tool	SANDER	1984	32	10	\$178
913285	Facilities	Maintenance Equipment	Tool	WISE	1981	35	12	\$523
913285	Facilities	Maintenance Equipment	Tool	WISE	1981	35	12	\$523
913287	Facilities	Maintenance Equipment	Tool	INJECTOR TESTER	1982	34	5	\$2,188
n/a	Facilities	Maintenance Equipment	Tool	TOOL - DIAGNOSTIC TOOL	2004	12	12	\$7,580
n/a	Facilities	Maintenance Equipment	Tool	TOOL - SPECIAL COMPUTERIZED	2004	12	12	\$12,124
n/a	Facilities	Maintenance Equipment	Tool	MULTIPLIER 3/4" TORQUE WRENCH	2001	15	10	\$928
n/a	Facilities	Maintenance Equipment	Tool	TORQUE WRENCH	2001	15	10	\$1,189
7541	Facilities	Maintenance Equipment	Tool	TOOL - WHEEL PULLER	2000	16	5	\$4,819
n/a	Facilities	Maintenance Equipment	Warehouse Vacuum/Scrubber	RIDER SWEEPER/SCRUBBER	2015	1	10	\$57,739
10339	Facilities	Office Equipment	AV Equipment	MTG CONFERENCE-AUDIO & VISUAL SYSTEM	2010	6	5	\$386
10340	Facilities	Office Equipment	AV Equipment	MTG CONFERENCE-AUDIO & VISUAL SYSTEM	2010	6	5	\$443

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
10341	Facilities	Office Equipment	AV Equipment	MTG CONFERENCE-AUDIO & VISUAL SYSTEM	2010	6	5	\$184
10342	Facilities	Office Equipment	AV Equipment	MTG CONFERENCE-AUDIO & VISUAL SYSTEM	2010	6	5	\$1,025
10343	Facilities	Office Equipment	AV Equipment	MTG CONFERENCE-AUDIO & VISUAL SYSTEM	2010	6	5	\$917
913015	Facilities	Office Equipment	Calculator	CALCULATOR	1976	40	10	\$1,180
913277	Facilities	Office Furniture	Office Furniture	REMOTE DESK SET	1982	34	5	\$881
913278	Facilities	Office Furniture	Office Furniture	REMOTE DESK SET	1982	34	12	\$881
7164	Stations	Bike Racks	Bike Rack	BIKE RACK W/INSTALLATION	1998	18	10	\$1,047
7165	Stations	Bike Racks	Bike Rack	BIKE RACK W/ INSTALLATION	1998	18	10	\$1,047
7172	Stations	Bike Racks	Bike Rack	BIKE RACK W/ INSTALLATION	1998	18	5	\$1,047
7173	Stations	Bike Racks	Bike Rack	BIKE RACK	1998	18	5	\$970
4161	Stations	Bus Shelter	Bus Shelter	SHELTER #114 - CONCRETE PADS	1994	22	5	\$6,920
4162	Stations	Bus Shelter	Bus Shelter	SHELTER #111 - CONCRETE PADS	1994	22	5	\$6,920
4163	Stations	Bus Shelter	Bus Shelter	SHELTER #112 - CONCRETE PADS	1994	22	5	\$6,920
10297	Stations	Bus Shelter	Bus Shelter	SHELTER #126 - BUS SHELTER SLIMLINE	2012	4	5	\$4,262
10298	Stations	Bus Shelter	Bus Shelter	SHELTER #125 - BUS SHELTER SLIMLINE	2012	4	5	\$4,262
10299	Stations	Bus Shelter	Bus Shelter	SHELTER-BUS SHELTER SLIMLINE	2013	3	5	\$4,121
10335	Stations	Bus Shelter	Bus Shelter	SHELTER-BUS SHELTER SLIMLINE	2011	5	5	\$4,409
10336	Stations	Bus Shelter	Bus Shelter	SHELTER #124 - SLIMLINE	2010	6	5	\$5,233
300147	Stations	Bus Shelter	Bus Shelter	SHELTER #123 - INSTALL CONCRETE PAD	2011	5	10	\$1,894
913040	Stations	Bus Shelter	Bus Shelter	SHELTER #109	1982	34	5	\$5,379
913041	Stations	Bus Shelter	Bus Shelter	SHELTER #106	1982	34	8	\$6,096
913042	Stations	Bus Shelter	Bus Shelter	SHELTER #114	1982	34	8	\$7,417
913043	Stations	Bus Shelter	Bus Shelter	SHELTER #123	1982	34	8	\$5,379
913044	Stations	Bus Shelter	Bus Shelter	SHELTER #104	1982	34	8	\$6,841
913045	Stations	Bus Shelter	Bus Shelter	SHELTER #120	1982	34	8	\$7,157
913046	Stations	Bus Shelter	Bus Shelter	SHELTER #119	1980	36	8	\$7,923
913047	Stations	Bus Shelter	Bus Shelter	SHELTER #121	1980	36	8	\$9,154
913048	Stations	Bus Shelter	Bus Shelter	SHELTER #116	1980	36	8	\$8,149
913049	Stations	Bus Shelter	Bus Shelter	SHELTER #107	1980	36	8	\$8,106
913050	Stations	Bus Shelter	Bus Shelter	SHELTER #117	1982	34	8	\$7,305
913051	Stations	Bus Shelter	Bus Shelter	SHELTER #115	1980	36	5	\$8,359
913052	Stations	Bus Shelter	Bus Shelter	SHELTER #113	1982	34	10	\$7,305
913053	Stations	Bus Shelter	Bus Shelter	SHELTER #112	1980	36	10	\$9,023
913054	Stations	Bus Shelter	Bus Shelter	SHELTER #122	1982	34	5	\$7,962
913055	Stations	Bus Shelter	Bus Shelter	SHELTER #111	1980	36	8	\$9,024
913281	Stations	Bus Shelter	Bus Shelter	SHELTER #110	1980	36	12	\$9,052
913283	Stations	Bus Shelter	Bus Shelter	SHELTER #103	1980	36	12	\$6,204
913284	Stations	Bus Shelter	Bus Shelter	SHELTER	1982	34	12	\$5,379
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #101	2005	11	12	\$6,251
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #101 - INSTALL SHELTER, BENCH, DISPLAY, ELECT.,GRILLE #101	2005	11	12	\$1,756
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #102	2005	11	12	\$6,251
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #102 - INSTALL SHELTER, BENCH, DISPLAY, ELECT.,GRILLE #102	2005	11	12	\$1,756
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #103 - CONCRETE PAD	2002	14	10	\$3,964
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #110 - LABOR TO MOVE SHELTER	2011	5	8	\$2,018
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #118	1997	19	8	\$33,878
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #118 - PANEL & SKIRT FOR MARRIOTT SHELTER	2010	6	8	\$1,438
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #118 -BUS TRANSFER STATION-MARRIOTT	2005	11	20	\$91,916

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #121 - CONCRETE PAD	2003	13	12	\$1,704
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #121 - LABOR TO MOVE	2005	11	12	\$611
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #127 - BUS SHELTER SLIMLINE	2005	11	12	\$4,306
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #127 - CONCRETE & INSTALLATION	2013	3	8	\$10,954
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #127, #128, #129- ENGINEERING FOR COLLEGE SHELTER PROJECT	2013	3	8	\$18,257
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #128 - BUS SHELTER SLIMLINE	2013	3	30	\$12,541
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #128 - CONCRETE & INSTALLATION	2013	3	8	\$29,908
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #129 - BUS SHELTER SLIMLINE	2013	3	8	\$10,353
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #129 - CONCRETE & INSTALLATION	2013	3	8	\$19,734
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #129 - FRONT WALL PANEL	2014	2	20	\$615
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #131 - BUS SHELTER SLIMLINE	2014	2	20	\$5,857
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #131 - CONCRETE & INSTALLATION	2014	2	30	\$11,714
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #132	2014	2	20	\$5,857
n/a	Stations	Bus Shelter	Bus Shelter	SHELTER #132 - CONCRETE & INSTALLATION	2014	2	30	\$10,671
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-(18) 4 FOOT BENCHES	2005	11	12	\$5,650
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-(9) SCHEDULE HOLDERS	2005	11	12	\$2,005
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-CONCRETE REHAB (4)	2009	7	25	\$27,495
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-CONCRETE SLABS FOR GARBAGE & BENCHES	2009	7	25	\$2,532
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-INSTALL (18) BENCHES	2005	11	12	\$3,848
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-INSTALL (9) SCHEDULE HOLDERS	2005	11	12	\$5,112
n/a	Stations	Bus Shelter	Bus Shelter	SHELTERS-PASSENGER SHELTER	2005	11	12	\$4,306
10282	Stations	Signage	GTC Signage	AVL SYSTEM-KIOSK	2013	3	5	\$15,658
10283	Stations	Signage	GTC Signage	AVL SYSTEM - KIOSKS W/GPS MODEM	2011	5	5	\$18,186
10289	Stations	Signage	GTC Signage	AVL SYSTEM--TV LG (55")	2010	6	5	\$1,934
10290	Stations	Signage	GTC Signage	AVL SYSTEM--TV W/ SCREEN PROTECTOR (46")	2010	6	5	\$1,468
10291	Stations	Signage	GTC Signage	AVL SYSTEM--TV (46")	2010	6	5	\$1,212
10292	Stations	Signage	GTC Signage	AVL SYSTEM--TV (46")	2010	6	5	\$1,212
10293	Stations	Signage	GTC Signage	AVL SYSTEM--TV (46")	2010	6	5	\$1,212
10294	Stations	Signage	GTC Signage	AVL SYSTEM--TV (46")	2010	6	5	\$1,212
10295	Stations	Signage	GTC Signage	AVL SYSTEM--TV (46")	2010	6	5	\$1,212
10657	Stations	Signage	GTC Signage	DESTINATION SIGNS FOR BUSES (REAR & FRONT WINDOW)	2012	4	10	\$21,753
10355	Systems	Bus GPS	GPS Hardware	AVL SYSTEM--PC	2010	6	5	\$1,079
10356	Systems	Bus GPS	GPS Hardware	AVL SYSTEM--PC	2010	6	5	\$1,079
10652	Systems	Bus GPS	GPS Hardware	AVL SYSTEM--BASE RADIO	2011	5	5	\$1,789
10281	Systems	Bus GPS	GPS Software	AVL SYSTEM--PROGRAMMING	2013	3	5	\$14,937
10284	Systems	Bus GPS	GPS Software	AVL SYSTEM--SERVER & VIDEO CARD	2010	6	5	\$1,132
10288	Systems	Bus GPS	GPS Software	AVL SYSTEM--GPS MUTIPOINT SERVER	2013	3	5	\$2,213
9921	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2009	7	5	\$910
9922	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2009	7	5	\$910
10275	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2010	6	5	\$1,131
10276	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2010	6	5	\$1,131
10277	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2010	6	5	\$1,131
10278	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2010	6	5	\$1,131
10279	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS UNIT WITH ANTENNA	2010	6	5	\$1,131
10285	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS BASE UNIT	2013	3	5	\$963
10287	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS BASE UNIT	2013	3	5	\$963
n/a	Systems	Bus GPS	GPS Unit	AUTO VOICE ANNOUNCEMENT & AUTO VEHICLE LOCATION (AVA/AVL) SYSTEM	2013	3	5	\$165,840

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
n/a	Systems	Bus GPS	GPS Unit	AUTO VOICE ANNOUNCEMENT & AUTO VEHICLE LOCATION (AVA/AVL) SYSTEM - (15) TABLET CHARGERS FOR PARATRANSIT	2013	3	5	\$427
n/a	Systems	Bus GPS	GPS Unit	AUTO VOICE ANNOUNCEMENT & AUTO VEHICLE LOCATION (AVA/AVL) SYSTEM - (17) TABLET CRADLES & MOUNTS FOR PARATRANSIT	2013	3	5	\$1,176
n/a	Systems	Bus GPS	GPS Unit	AUTO VOICE ANNOUNCEMENT & AUTO VEHICLE LOCATION (AVA/AVL) SYSTEM - (20) MOTOROLA DROID TABLETS FOR PARATRANSIT	2013	3	5	\$2,987
n/a	Systems	Bus GPS	GPS Unit	AVL SYSTEM--GPS BASE UNIT	2013	3	5	\$963
11520	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 370	2014	2	5	\$709
11521	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 371	2014	2	5	\$709
11522	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 380	2014	2	5	\$709
11523	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 381	2014	2	5	\$709
11524	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 382	2014	2	5	\$709
11525	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 590	2014	2	5	\$709
11526	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 591	2014	2	5	\$709
11527	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 592	2014	2	5	\$709
11528	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 593	2014	2	5	\$709
11529	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 1020	2014	2	5	\$709
n/a	Systems	CCTV	CCTV Camera	SECURITY CAMERA SYSTEM - UNIT 1225	2014	2	5	\$3,679
9661	Systems	CCTV	CCTV Hardware	CAMERA SYSTEM-3 CAMERAS & 1	2009	7	5	\$5,072
n/a	Systems	CCTV	CCTV Hardware	SECURITY CAMERA SYSTEM - COMPUTER SERVER	2014	2	3	\$890
10338	Systems	CCTV	CCTV Hardware	SECURITY CAMERA SYSTEM #2	2010	6	5	\$20,069
n/a	Systems	CCTV	CCTV Software	SECURITY CAMERA SYSTEM - LICENSING, WIFI CABLING & SOFTWARE	2014	2	5	\$2,339
9475	Systems	CCTV	CCTV Systems	CAMERA SYSTEMS FOR 10 FIXED	2007	9	5	\$71,875
n/a	Systems	PA System	PA Hardware	EQUIPMENT - TIGHTROPE SOFTWARE & HARDWARE FOR GTC PA SYSTEM	2010	6	5	\$5,005
3359	Systems	PA System	PA Hardware	PUBLIC ADDRESS SYSTEM	1992	24	3	\$909
3364	Systems	PA System	PA Hardware	PUBLIC ADDRESS SYSTEM	1992	24	5	\$909
5928	Systems	Radio	Mobile Radio Unit	RADIO, MOBILE	1998	18	5	\$1,038
5929	Systems	Radio	Mobile Radio Unit	RADIO, MOBILE	1998	18	5	\$1,038
7540	Systems	Radio	Mobile Radio Unit	800MHZ TRUNK RADIO	2000	16	5	\$1,216
913279	Systems	Radio	Mobile Radio Unit	RADIO - MOBILE	1979	37	12	\$1,989
913280	Systems	Radio	Mobile Radio Unit	RADIO - MOBILE	1979	37	12	\$1,989
11504	Systems	Radio	Vehicle Radio	RADIO - UNIT 370	2014	2	5	\$709
11505	Systems	Radio	Vehicle Radio	RADIO - UNIT 371	2014	2	5	\$709
11506	Systems	Radio	Vehicle Radio	RADIO - UNIT 380	2014	2	5	\$709
11507	Systems	Radio	Vehicle Radio	RADIO - UNIT 381	2014	2	5	\$709
11508	Systems	Radio	Vehicle Radio	RADIO - UNIT 382	2014	2	5	\$709
11509	Systems	Radio	Vehicle Radio	RADIO - UNIT 590	2014	2	5	\$709
11510	Systems	Radio	Vehicle Radio	RADIO - UNIT 591	2014	2	5	\$709
11511	Systems	Radio	Vehicle Radio	RADIO - UNIT 592	2014	2	5	\$709
11512	Systems	Radio	Vehicle Radio	RADIO - UNIT 593	2014	2	5	\$709
11513	Systems	Radio	Vehicle Radio	RADIO - UNIT 1020	2014	2	5	\$709
11514	Systems	Radio	Vehicle Radio	RADIO - UNIT 1177	2014	2	5	\$709
11515	Systems	Radio	Vehicle Radio	RADIO - UNIT 1202	2014	2	5	\$709
11516	Systems	Radio	Vehicle Radio	RADIO - UNIT 1203	2014	2	5	\$709
11517	Systems	Radio	Vehicle Radio	RADIO - UNIT 1167	2014	2	5	\$709
11518	Systems	Radio	Vehicle Radio	RADIO - UNIT 5151 (8) - VAN	2014	2	5	\$709
11519	Systems	Radio	Vehicle Radio	RADIO - UNIT 1209 (6) - VAN	2014	2	5	\$709
913060	Systems	Radio	Vehicle Radio	RADIO - MOBILE (BUS #23)	1982	34	5	\$3,298

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
913061	Systems	Radio	Vehicle Radio	RADIO - MOBILE (BUS #20)	1982	34	5	\$3,298
913063	Systems	Radio	Vehicle Radio	RADIO - MOBILE (BUS #12)	1982	34	5	\$3,298
n/a	Systems	Radio	Vehicle Radio	BUS - UNIT 1225 - RADIO & INSTALLATION -PARATRANSIT	2014	2	5	\$913
9907	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9908	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9909	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9910	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9911	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9912	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9913	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9914	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9915	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9916	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
9917	Systems	Revenue Collection	Farebox	FAREBOX-ODYSSEY FAREBOX	2010	6	5	\$14,079
10270	Systems	Revenue Collection	Farebox Encoding Machine	FAREBOX-PRINTING & ENCODING MACHINE	2010	6	5	\$4,661
10271	Systems	Revenue Collection	Farebox Encoding Machine	FAREBOX-PRINTING & ENCODING MACHINE	2010	6	5	\$4,661
10268	Systems	Revenue Collection	Farebox Software	FAREBOX-TRAINING	2010	6	5	\$4,144
10269	Systems	Revenue Collection	Farebox Software	FAREBOX-PROBE LANE	2010	6	5	\$1,629
10273	Systems	Revenue Collection	Farebox Software	FAREBOX SYSTEM-TEST SIMULATOR	2010	6	5	\$16,833
10653	Systems	Revenue Collection	Farebox Software	FAREBOX-DATA SYSTEM SOFTWARE	2010	6	10	\$8,081
10654	Systems	Revenue Collection	Farebox Software	FAREBOX SYSTEM CONNECTED TO	2013	3	5	\$1,803
9906	Systems	Revenue Collection	Revenue Vault	FAREBOX-SPARE CASH BOXES	2010	6	5	\$821
10272	Systems	Revenue Collection	Revenue Vault	FAREBOX SYSTEM-STATIONARY VAULT	2010	6	10	\$18,364
1204	Vehicles	Non-Revenue Vehicle	Service Vehicle	Dodge Caravan	2009	7	4	\$24,380
1205	Vehicles	Non-Revenue Vehicle	Service Vehicle	Dodge Caravan	2009	7	4	\$24,380
961	Vehicles	Non-Revenue Vehicle	Service Vehicle	Advance Rider Sweeper/Scrubber CS 7000 Hybrid	2015	1	10	\$57,739
590	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	Orion VII - 30'	2004	12	12	\$437,116
591	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	Orion VII - 30'	2004	12	12	\$437,116
592	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	Orion VII - 30'	2004	12	12	\$437,116
593	Vehicles	Revenue Vehicle	29 - 30 Foot Bus	Orion VII - 30'	2004	12	12	\$437,116
2161	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2016	-	12	\$443,127
2162	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2016	-	12	\$443,033
2163	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2016	-	12	\$442,826
2164	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2016	-	12	\$442,995
370	Vehicles	Revenue Vehicle	35 Foot Bus	Orion VII - 35'	2004	12	12	\$420,992
1020	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2010	6	12	\$464,851
2151	Vehicles	Revenue Vehicle	35 Foot Bus	New Flyer - 35'	2015	1	12	\$458,466
1177	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Supreme	2008	8	5	\$84,543
1218	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2012	4	5	\$79,149
1225	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2014	2	5	\$69,247
1231	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$71,454
1232	Vehicles	Revenue Vehicle	Paratransit Vehicle	Ford Goshen GCII	2015	1	5	\$71,367
1226	Vehicles	Revenue Vehicle	Senior Service	Dodge Caravan	2014	2	4	\$21,718
1167	Vehicles	Revenue Vehicle	Senior Service	Ford Windstar	2008	8	4	\$26,589
1209	Vehicles	Revenue Vehicle	Senior Service	Dodge Caravan	2013	3	4	\$23,486
5151	Vehicles	Revenue Vehicle	Senior Service	Dodge Caravan	2015	1	4	\$21,220

Table A-3. MATBUS Asset Inventory – Jointly Owned and Maintained Assets

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
10277	Facilities	Hardware	Copier	KONICA MINOLTA KM423 COPIER	2011	5	6	\$20,122
7732	Facilities	Hardware	Office Hardware	TOSHIBA IP CAMERA	2008	8	6	\$1,645
10427	Facilities	Hardware	Office Hardware	PANASONIC WJ-ND400 NVR	2011	5	6	\$9,666
3012	Facilities	HVAC	AC Unit	#6079 ROBIN AIRE HEATR A/C STN	1990	26	40	\$5,885
7354	Facilities	HVAC	AC Unit	ROBINAIRE W/DUST COVER	2007	9	40	\$6,521
8910	Facilities	Maintenance Equipment	Air Compressor	GOODALL START ALL W/ AIR COMPR	2009	7	10	\$12,155
3225	Facilities	Maintenance Equipment	Bus Replacement Parts	BUS PARTS INVENTORY	1988	28	10	\$724,600
7012	Facilities	Maintenance Equipment	Bus Washer	BUS WASHER - FM TRANSIT FACLTY	2006	10	10	\$135,115
7323	Facilities	Maintenance Equipment	Bus Washer	VACUUM CONTROLS IN BUS WASH	2007	9	10	\$7,431
7646	Facilities	Maintenance Equipment	Fueler	FUELMASTER FUEL MNGMT SYSTEM	2007	9	10	\$55,895
3218	Facilities	Maintenance Equipment	Lathe	BRAKE LATHE	1984	32	10	\$27,206
6670	Facilities	Maintenance Equipment	Tool	SYSTEM 1 PARTS WASHER	2005	11	10	\$1,306
6976	Facilities	Maintenance Equipment	Tool	55 TON PRESS - OTC	2006	10	10	\$7,336
7178	Facilities	Maintenance Equipment	Tool	3 PHASE CUDA PARTS WASHER	2006	10	10	\$7,523
7493	Facilities	Maintenance Equipment	Tool	BEAD BLASTER	2007	9	10	\$2,174
7785	Facilities	Maintenance Equipment	Tool	HDS POWER WASHER	2008	8	10	\$3,082
11296	Facilities	Maintenance Equipment	Tool	ROTARY ARC FILE	2013	3	10	\$2,900
12371	Facilities	Maintenance Equipment	Tool	TORQUE WRENCH	2015	1	10	\$2,125
7225	Facilities	Maintenance Equipment	Warehouse Vacuum/Scrubber	VACUUM SYSTEM	2006	10	10	\$52,103
12375	Facilities	Maintenance Equipment	Warehouse Vacuum/Scrubber	WAREHOUSE SWEEPER/SCRUBBER	2015	1	10	\$57,739
6926	Facilities	Maintenance Facility	Maintenance Facility	TRANSIT MAINT FACILITY	2006	10	50	\$8,721,887
10980	Facilities	Office Equipment	Paper Folder	MARTIN YALE 1601 PAPER FOLDER	2010	6	5	\$765
7721	Facilities	Office Equipment	Recycler	SYSTEM ONE 571 RECYCLER UNIT	2008	8	5	\$6,535
3204	Facilities	Office Furniture	Office Furniture	BORROUGH WORK BENCHES	1984	32	5	\$3,015
3208	Facilities	Office Furniture	Office Furniture	ENG STAND & ADAPTER	1984	32	5	\$6,280
7176	Facilities	Office Furniture	Office Furniture	MODULR STORAGE EQUIP-LOT LISTA	2006	10	5	\$46,397
7316	Facilities	Office Furniture	Office Furniture	CONF ROOM SIDE CHAIRS (8)	2007	9	5	\$5,356
7317	Facilities	Office Furniture	Office Furniture	CONF ROOM MAIN CHAIRS (17)	2007	9	5	\$11,681
7319	Facilities	Office Furniture	Office Furniture	SHELVES IN MTG ADMIN STORAGE	2007	9	5	\$3,787
7353	Facilities	Office Furniture	Office Furniture	SHELVING FOR THE PARTS ROOM	2007	9	5	\$2,286
7401	Facilities	Office Furniture	Office Furniture	CONFERENCE TABLE	2007	9	5	\$7,964
7574	Facilities	Office Furniture	Office Furniture	MTG RECEPTION WORKSTATIONS	2007	9	5	\$15,577
7576	Facilities	Office Furniture	Office Furniture	TABLES & CHAIRS FOR WAITING RM	2007	9	5	\$1,158
7577	Facilities	Office Furniture	Office Furniture	TABLES & CHAIRS FOR LUNCH ROOM	2007	9	5	\$2,550
7578	Facilities	Office Furniture	Office Furniture	TABLE & CHAIRS FOR LOCKER ROOM	2007	9	5	\$1,117
7579	Facilities	Office Furniture	Office Furniture	TABLES & CHAIRS FOR LUNCH ROOM	2007	9	5	\$2,550
7580	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 106	2007	9	5	\$756
7581	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 105	2007	9	5	\$8,887
7582	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 109	2007	9	5	\$8,032
7583	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 104	2007	9	5	\$5,914
7584	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 108	2007	9	5	\$7,217
7585	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 103	2007	9	5	\$5,405
7586	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 111	2007	9	5	\$5,059
7587	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 116	2007	9	5	\$7,217
7588	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 115	2007	9	5	\$19,842

MATBUS Asset ID	TERM Lite Asset Category	Assigned Asset Type	Asset	MATBUS Asset Description	Service Date	Current Age	Useful Life	Replacement Value (2016 \$)
7589	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 118	2007	9	5	\$10,239
7590	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE-PARTS OFFICE	2007	9	5	\$6,628
7591	Facilities	Office Furniture	Office Furniture	OFFICE FURNITURE FOR ROOM 142	2007	9	5	\$8,085
10963	Facilities	Office Furniture	Office Furniture	EMBODY OFFICE CHAIR	2012	4	5	\$857
10964	Facilities	Office Furniture	Office Furniture	EMBODY OFFICE CHAIR	2012	4	5	\$857
10965	Facilities	Office Furniture	Office Furniture	EMBODY OFFICE CHAIR	2012	4	5	\$857
10966	Facilities	Office Furniture	Office Furniture	EXECUTIVE HIGH-BACK OFFICE CHA	2012	4	5	\$562
10967	Facilities	Office Furniture	Office Furniture	LEAP OFFICE CHAIR STEELCASE	2006	10	5	\$981
10968	Facilities	Office Furniture	Office Furniture	LEAP OFFICE CHAIR STEELCASE	2006	10	5	\$981
10969	Facilities	Office Furniture	Office Furniture	LEAP OFFICE CHAIR STEELCASE	2006	10	5	\$981
10970	Facilities	Office Furniture	Office Furniture	EUROTECH OFFICE CHAIR	2012	4	5	\$651
10971	Facilities	Office Furniture	Office Furniture	AERON OFFICE TASK CHAIR	2007	9	5	\$825
10972	Facilities	Office Furniture	Office Furniture	AERON OFFICE TASK CHAIR	2006	10	5	\$881
10973	Facilities	Office Furniture	Office Furniture	AERON OFFICE TASK CHAIR	2006	10	5	\$881
10974	Facilities	Office Furniture	Office Furniture	AERON OFFICE TASK CHAIR	2006	10	5	\$881
10975	Facilities	Office Furniture	Office Furniture	AERON OFFICE TASK CHAIR	2006	10	5	\$881
11410	Facilities	Office Furniture	Office Furniture	OFFICE WORKSTATION ROOM 106	2013	3	5	\$4,696
10426	Facilities	Office Furniture	Office Tiles	TILE REPLACEMENT PROJECT	2011	5	5	\$34,918
7177	Facilities	Software	Transit Software	CCURE HARDWARE & SOFTWARE	2006	10	6	\$19,541
7696	Facilities	Software	Transit Software	FLEET MANAGEMENT SOFTWARE	2007	9	6	\$112,092
7799	Facilities	Software	Transit Software	C-CURE 800 UPGRADE	2008	8	6	\$7,853
9257	Facilities	MTG – Office Equipment	GTC Signage	MTG MONUMENT SIGN	2009	7	5	\$8,357
12314	Facilities	MTG – Office Equipment	GTC Signage	TOUCHPANEL MESSAGE	2015	1	5	\$13,150
11415	Systems	Building Security	MTG Security Access	CARD ACCESS SECURITY MTG	2013	3	20	\$6,171
12218	Systems	CCTV	CCTV Camera	CAMERA ON BUS	2015	1	5	\$6,336
12223	Systems	CCTV	CCTV Camera	CAMERA ON BUS	2015	1	5	\$6,336
12224	Systems	CCTV	CCTV Camera	CAMERA ON BUS	2015	1	5	\$6,336
8911	Systems	Radio	Mobile Radio Unit	MTX850 HANDHELD 800 MHZ RADIO	2009	7	5	\$939
8912	Systems	Radio	Mobile Radio Unit	MTX850 HANDHELD 800 MHZ RADIO	2009	7	5	\$939
9440	Systems	Radio	Mobile Radio Unit	MTX8250 PORTABLE 2-WAY RADIO	2010	6	5	\$1,098
10307	Systems	Radio	Mobile Radio Unit	PORTABLE HAND HELD RADIO	1993	23	5	\$1,349
10308	Systems	Radio	Mobile Radio Unit	PORTABLE HAND HELD RADIO	1993	23	5	\$1,349
10309	Systems	Radio	Mobile Radio Unit	PORTABLE HAND HELD RADIO	1993	23	5	\$1,349
10310	Systems	Radio	Mobile Radio Unit	MTX8250 PORTABLE 2-WAY RADIO	2010	6	5	\$1,098
10311	Systems	Radio	Mobile Radio Unit	MTX8250 PORTABLE 2-WAY RADIO	2010	6	5	\$1,098
12325	Systems	Radio	Mobile Radio Unit	2-WAY RADIO	2015	1	5	\$1,090
12326	Systems	Radio	Mobile Radio Unit	2-WAY RADIO	2015	1	5	\$1,090
12327	Systems	Radio	Mobile Radio Unit	2-WAY RADIO	2015	1	5	\$1,090
1250	Vehicles	Non-Revenue Vehicle	Service Vehicle	GMC Sierra 3500 4WD (Shop Truck)	2009	7	10	\$56,584
7276	Vehicles	Non-Revenue Vehicle	Service Vehicle	2007 CHEV MAILBU	2007	9	4	\$17,524