

8 Capital Improvements

There are a number of capital improvements that are needed to support Metro Bus in implementing this plan. The primary needs are buses to operate the system, but that is not the only need. To maintain a reliable fleet a well-funded preventive maintenance program, along with maintenance tools, and a place to store and maintain vehicles is needed.

New bus stops will be needed to support two-way service as well as service to new parts of the metropolitan area, such as Sterling Heights and Saint Joseph. Many bus stops will need amenities such as bus shelters or benches.

This chapter highlights the capital needs, with costs presented in the Long-Range Transit Plan presented in a subsequent chapter.

8.1 Buses

The primary capital need is a sufficient number of buses to operate services.

Table 8-1 presents the peak number of buses, along with vehicle type, needed to operate each route during each phase of the plan. Using a 15% spares ratio, the number of spare buses required is also presented. This first table only presents the fixed route needs.

A summary of vehicles needed by vehicle type for all services, including fixed route, Dial-A-Ride, and commuter services (i.e., the Northstar Link) is presented on Table 8-2 for each phase.

Table 8-1 – Peak Period Vehicle Requirements and Vehicle Type

Route	Bus Type	Current	Phase 1	Phase 2	Phase 3
1	35-foot	2	2	2	2
2	35-foot	2	2	2	2
3	35-foot	3	3	3	2
4	35-foot	1	1	2	2
5	35-foot	1	2	2	2
6	35-foot	0.5	1.5	1.5	1.5
7	35-foot	0.5	0.5	0.5	0.5
8	35-foot	0	2	2	2
9	35-foot	1	1	1	1
10	35-foot	1	1	1	1
11	35-foot	1	2	2	2
12	35-foot	1	1	1	1
21	35-foot	1	1	1	1
22	35-foot	1	1	1	1
30	Cutaway	0	0	1	1
31	Cutaway	1 ⁹	1	1	1
32	Cutaway	1	1	1	1
33	35-foot	2	2	2	2
34	Cutaway	0	0	0	1
41	Cutaway	0	0	1	1
Campus Clippers	35-foot	5	0	0	0
Husky Shuttle ¹⁰	40-foot	2	2	2	2
Total Peak Requirements		27	27	30	30
Total Peak Cutaway		1	2	4	5
Total Peak 35-Foot Buses		24	23	24	23
Total Peak 40-Foot Buses		2	2	2	2

Table 8-2 – Total System Vehicle Requirements

Phase	Vehicle Use	Commuter Coach	40-Foot Bus	35-Foot Bus	Cutaway	Dial-A-Ride
Current	Peak Vehicles	4	2	24	1	20
	Spare Vehicles	2	1	4	1	4
	Total Vehicles	6	3	28	2	24
Phase 1	Peak Vehicles	4	2	23	2	22
	Spare Vehicles	2	1	4	1	4
	Total Vehicles	6	3	27	3	26
Phase 2	Peak Vehicles	4	2	24	4	26
	Spare Vehicles	2	1	4	1	4
	Total Vehicles	6	3	28	5	30
Phase 3	Peak Vehicles	4	2	23	5	27
	Spare Vehicles	2	1	4	1	5
	Total Vehicles	6	3	27	6	32

To determine the need for purchasing buses, the tables above were compared to the current fleet and capital plan to provide a vehicle purchase plan. This plan, which is presented on Table 8-3, assumes that

⁹ Current Route 31 between Saint Cloud Transit Center and Sartell operates with a 35-foot bus

¹⁰ Other SCSU Contract services are during off-peak periods

large buses (commuter coach, 40-foot bus, 35-foot bus) have an in-service life of 12 years. The smaller cutaway and dial-a-ride buses have an in-service life of five years.

Table 8-3 – Bus Purchase Requirements

Year	Vehicle Use	Commuter Coach	40-Foot Bus	35-Foot Bus	Cutaway	Dial-A-Ride
Fiscal Year 2017	Replacement Vehicles	6	3	5	3	24
	Expansion Vehicles	0	0	0	0	2
	Total Vehicles	6	3	5	3	26
Fiscal Year 2018	Replacement Vehicles	0	0	0	0	1
	Expansion Vehicles	0	0	0	2	4
	Total Vehicles	0	0	0	2	5
Fiscal Year 2019	Replacement Vehicles	0	0	3	0	0
	Expansion Vehicles	0	0	0	1	2
	Total Vehicles	0	0	0	1	2
Fiscal Year 2020	Replacement Vehicles	0	0	0	0	0
	Expansion Vehicles	0	0	0	0	0
	Total Vehicles	0	0	0	0	0
Fiscal Year 2021	Replacement Vehicles	0	0	0	0	0
	Expansion Vehicles	0	0	0	0	0
	Total Vehicles	0	0	0	0	0
Fiscal Year 2022	Replacement Vehicles	0	0	4	0	0
	Expansion Vehicles	0	0	0	0	0
	Total Vehicles	0	0	4	0	0

Based on the current fleet and planned expansions, there will be no need to expand the large bus fleet, as much of the expansion will utilize vehicles that today are operating on the Campus Clipper services. Large buses will still need to be replaced as buses reach the end of their in-service life. The only exception is if additional Northstar Link buses are needed due to changes in the Northstar Commuter Rail service, although no changes are projected at this time.

Cutaway and Dial-A-Ride vehicles are vehicles that have a five year in-service life. This fleet will both be expanded and there is a need to purchase replacement vehicles as well. The cutaway vehicles for fixed routes would operate on services that have lower ridership. Dial-A-Ride vehicles are needed to support the growth in service and expansion of the service area.

To calculate the need for Dial-A-Ride vehicles, it is assumed that Dial-A-Ride would continue to operate approximately 40% of the hours that fixed route operates, and each Dial-A-Ride vehicle would operate and average of 1,975 hours in a year. This predictive factor was also previously used for the development of additional operating costs for the Dial-A-Ride service.

8.2 Other Major Capital Needs

Beyond vehicles, the other significant capital need is the requirement for an additional operations facility. The site of the current facility will essentially run out of additional space – the facility will meet the needs of Metro Bus throughout the five year duration of this plan (with some expansion of vehicle parking/storage space); however, further growth in the Metro Bus network will require additional maintenance and storage capacity. Planning should start for a new operations and maintenance facility,

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ideally located in the western portions of the service area (near Waite Park) in an effort to reduce deadhead mileage.

Other sections of this report will deal with specific capital needs. These include planning studies that are presented in the Long Range Transportation Plan chapter. Also there are needs for facilities at secondary transit centers, along with the need to find a long-term solution to the constraints for buses at Crossroads Center.