

FTA

FEDERAL TRANSIT ADMINISTRATION

2021 Virtual Transit Asset Management Roundtable

Day 2: TAM Plan Updates

June 23, 2021

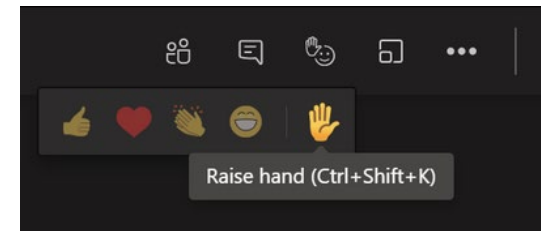


U.S. Department of Transportation
Federal Transit Administration

Teams Logistics



- There is no private chat pod.
- Keep yourself muted unless you're speaking.
- Use the “raise hand” feature to speak during the Q&A.



If anyone is in attendance but hasn't registered, email TAMRoundtable@dot.gov with your name, title, and agency.



Dan Currier
VTrans



Chi Chow
Golden Gate Transit



Si McMurray
Knoxville Area Transit

Vermont Public Transit TAM Plan Update

DAN CURRIER
JUNE 2021



Vermont's Existing TAM

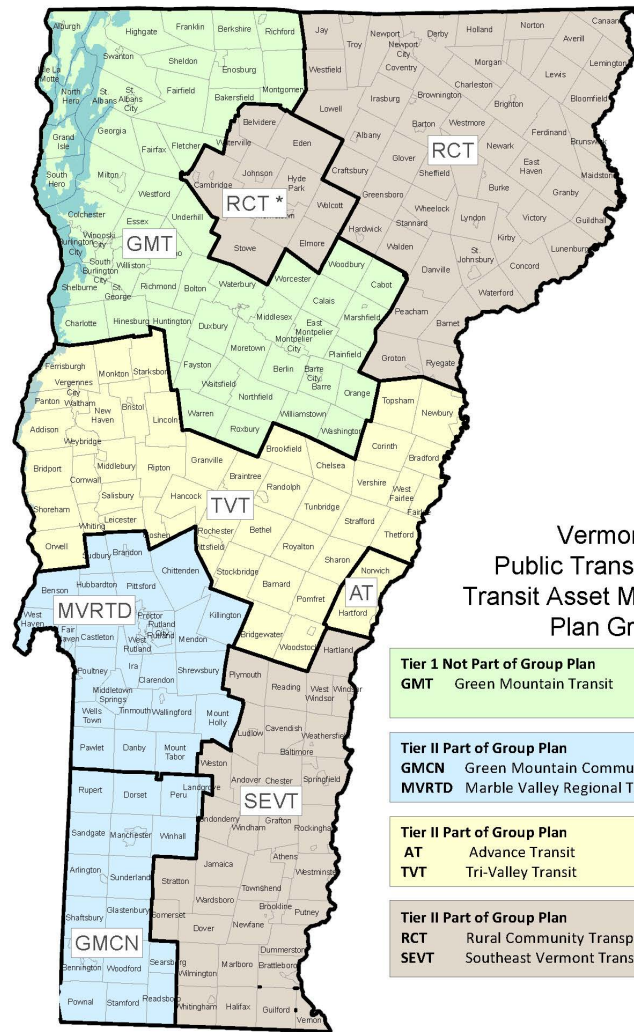
Group Plan

6 Tier II Transit Operators

247 Vehicles

63 Routes

8 Facilities



Vermont's Public Transportation Transit Asset Management Plan Group

Tier 1 Not Part of Group Plan
GMT Green Mountain Transit

Tier II Part of Group Plan
GMCN Green Mountain Community Network
MVRTD Marble Valley Regional Transit District

Tier II Part of Group Plan
AT Advance Transit
TVT Tri-Valley Transit

Tier II Part of Group Plan
RCT Rural Community Transportation
SEVT Southeast Vermont Transit

Map Produced by the Vermont Agency of Transportation Mapping Section - 6/29/2020

Vermont's Existing TAM

Group Plan

Element	Sponsor	Participant
Overarching	<ul style="list-style-type: none"> Write plan 	<ul style="list-style-type: none"> Support plan Accountable Executive approves plan
1. Asset Inventory	<ul style="list-style-type: none"> Coordinate consolidation Develop/modify database or software Define data collection elements and formats 	<ul style="list-style-type: none"> Collect asset data Submit data in format required on schedule
2. Condition Assessment*	<ul style="list-style-type: none"> Define data collection methodology and schedule Manage data (i.e. database/software) Submit data to NTD** 	<ul style="list-style-type: none"> Support/conduct condition assessment Submit data to sponsor in format required on schedule
3. Decision Support Tools	<ul style="list-style-type: none"> Share guiding policies including weighting or ranking priorities Develop tools Analyze and interpret data 	<ul style="list-style-type: none"> Communicate goals and needs Provide information to support tool
4. Investment Prioritization	<ul style="list-style-type: none"> Gather additional data Prioritize projects (iterative step) Generate ranked list of projects 	<ul style="list-style-type: none"> Share info on all funding sources with sponsor Share existing Capital Investment Plans Coordinate with sponsor

Vermont's Existing TAM

Transit Plan Target

Age and Condition

Asset Category	Performance Measure	Target
Rolling Stock <i>All revenue vehicles</i>	Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	No more than 20% of vehicles beyond their useful life and in less than good condition.
Equipment <i>Non-revenue vehicles</i>	Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	No more than 20% of equipment beyond its useful life and in less than good condition.
Facilities <i>All buildings or structures</i>	Condition - % of facilities with a condition rating below 3.0 on a the FTA Transit Economic Requirements Model (TERM) Scale	No more than 20% of facilities beyond their useful life and in less than good condition.

Vermont's
Existing TAM

Transportation

Bridges

Roadways



TRANSPORTATION ASSET MANAGEMENT PLAN

Right Investment, Right Asset, Right Time

2019 Final Version

Vermont's Existing TAM Transportation

How Does Transportation Asset Management Help Vermont?

- Ensures that VTTrans is making the right level of investment in the right asset at the right time.
- Makes preventive maintenance a priority.
- Integrates efforts throughout the Vermont Agency of Transportation (VTTrans), including communication, business practices, and projects—from development through maintenance.
- Focuses investment on an efficient, cost-effective, sustainable transportation system.

How Does Asset Management Help Me?

Asset management helps VTTrans maintain its roads, bridges, sidewalks, bike paths, and other transportation facilities in a cost-effective way. This is coordinated with efforts to support mobility, connectivity, safety, economic access, resiliency, communities, environment, and health access.



Figure 1: Why are Roads and Bridges Important to Me?

Other Agency Plans to Consider



VTTrans Battery-Electric Bus Transition Plan DRAFT Technical Memorandum #1: State of the Industry

Vermont Agency of Transportation
Division of Policy, Planning, and Intermodal

February 28, 2020

2040 Vermont Transportation Plan

PREPARED BY VERMONT AGENCY OF
TRANSPORTATION - 2018



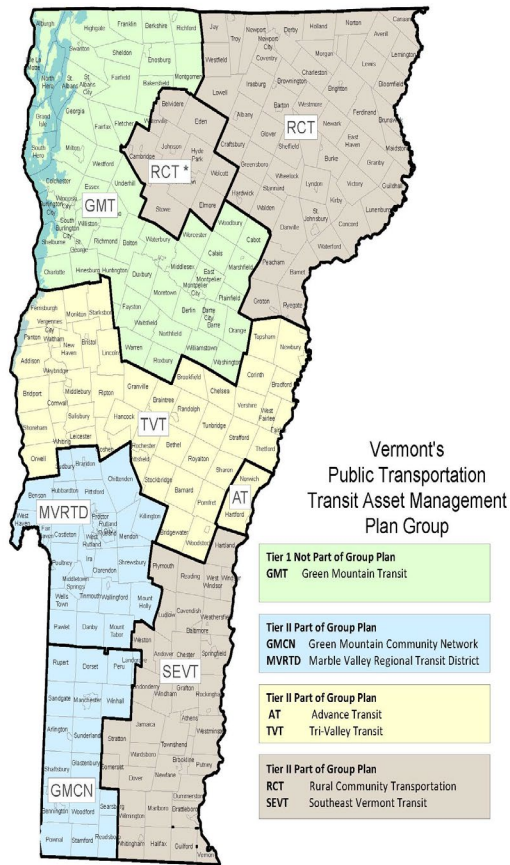
Update

Agency Team:

- Public Transit
- Planning and
- Asset Management

Consultant Assistance

Vermont Public Transit Agencies



Update

Considerations

Resiliency

Electrification Transition

- Fleet Conversion
- Facility Upgrades

Public Transit Policy Plan

- Addressing aging Vermont
- Expansion of transit access
- Outreach and raising awareness
- Using technology to move to next generation of ride scheduling
- Land use planning and investments

Statewide Transportation Improvement Plan

Update

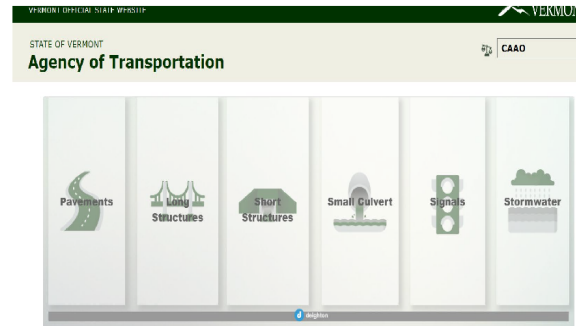
Asset Management System

VAMIS

April- 2021

Vermont Asset Management Information System

Now that we have loaded several of our asset inventories into VAMIS, we are excited to discuss many of the first steps we are taking to roll out this tool around the agency. While our pavement management system has utilized this system for years and continues to refine the process for project selection, many other assets have begun to use the tools within the system.



First steps –

A bridge washing treatment has been added to VAMIS and will be able to generate a program on a two-year cycle allowing us to track district performance.

A small culvert inspection list and treatments will also come from VAMIS based on the outstanding work completed by the districts over the last 5 years. This has given us the opportunity to QC the data to improve both reporting on inspections, but will also allow for crediting work completed by the districts on the road network to reductions in phosphorus for stormwater. We also anticipate using this data to track culvert washing and the necessary budgeting required to plan for culvert replacement.

Signals and Stormwater are also moving forward with developing an OM inspection work program that will capture condition data for their inventory, develop work orders, track work completed and tie it back to the individual assets.

ASSETS BY SPRINT

CURRENT ASSETS IN TRANSITION

- Rail
- Aviation
- ITS Equipment

NEXT UP

- BGS Buildings
- AOT Buildings

8 MONTHS VAMIS PHASE II

- Operations & Management
- Stockpiles & Inventory
- CG Fleet Management
- Rail #2
- Aviation #2
- Transit
- Shoulder Width
- Unstable Slopes

Update

Opportunity:

Policies

Goals

Strategies

Objectives

Element	Sponsor	Participant
Overarching	<ul style="list-style-type: none">• Write plan	<ul style="list-style-type: none">• Support plan• Accountable Executive approves plan
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Transit Goal

To have a safe and marketable fleet that meets the varying mobility needs that can be met by transit.



Now

Transportation asset management helps VTrans invest efficiently in a mix of maintenance and other projects.

This focus provides choices that improve mobility and connectivity, safety, economic access, resiliency, communities, environment, and health access.



Future

Transportation asset management helps Vermont be prepared to meet transportation goals and needs in a rapidly changing world.

This focus will help VTrans engage even more with you and your community's needs and vision.

THANK YOU

PUBLIC TRANSIT COORDINATOR AND GO!VERMONT MANAGER

DAN.J.CURRIER@VERMONT.GOV

802-279-5236



Transit Asset Management Plan 2022 Update



Transit Asset
Management
Round Table

June 23, 2021



Overview of Presentation

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- History of District
- Who do we serve
- TAM Plan and Five Initiatives
- Highlights of the Plan Modules
- Evaluation of Performance and Targets
- Next steps



District Transit Services

- **Population:** 903,524
- **Service area:** 145 square miles
- **Reduce morning commute:** 23%
- **29 bus commuter and regional routes** from Sonoma to San Francisco.
- **On-demand paratransit service.**
- **Four ferry routes** between San Francisco and Marin.

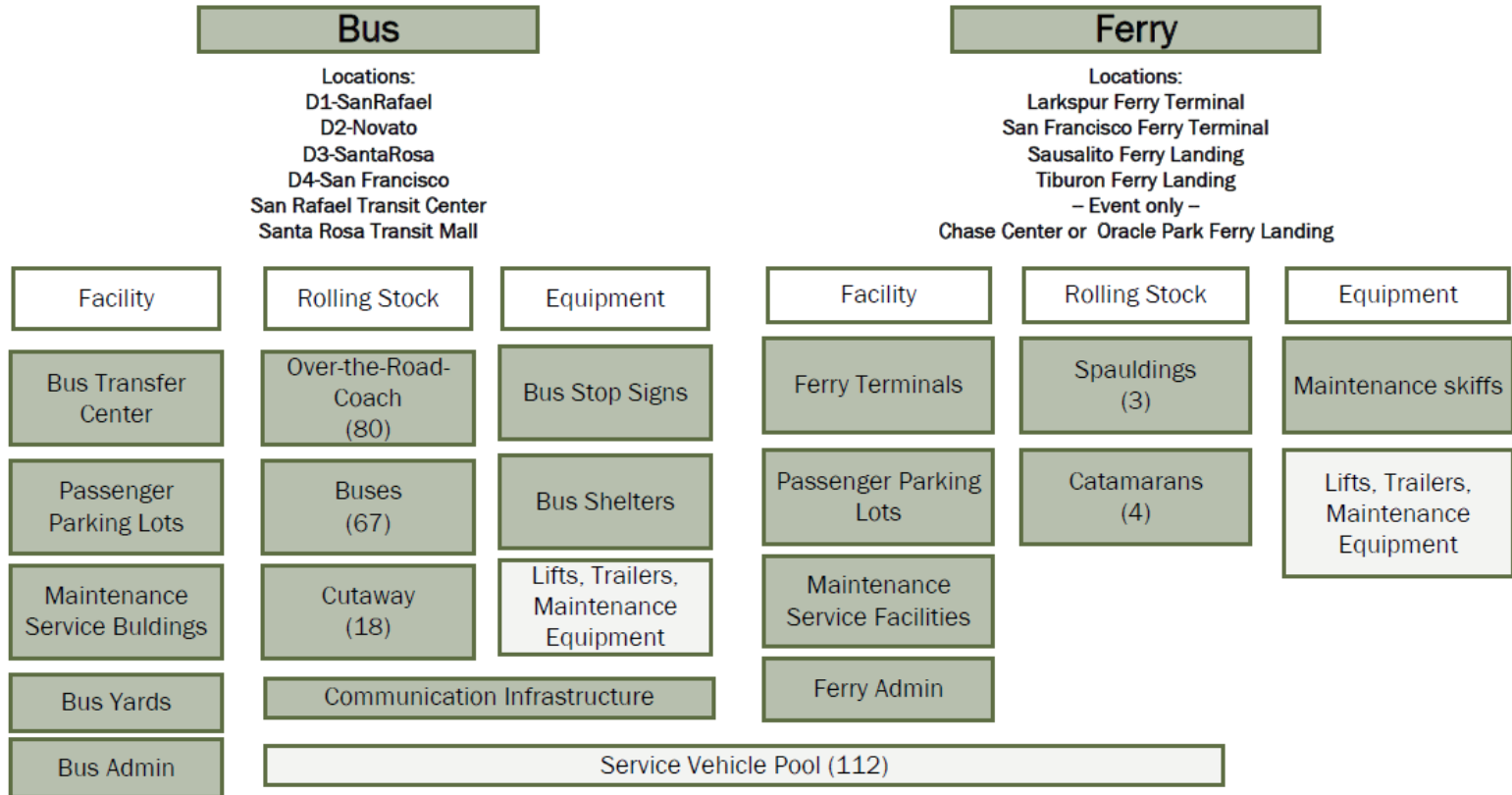


District TAM Plan and Five Initiatives

20

- Inventory *(Expanded)*
- Condition Assessment *(Expanded)*
- Decision Support Tools *(Expanded)*
- Prioritization Investments *(Expanded)*
- TAM and SGR Policy *(Compliance)*
- Implementation Strategy *(Compliance)*
- Key Activities *(Expanded)*
- Resources *(Expanded)*
- Evaluation Plan *(Compliance)*
- *One set of data*
- *An integrated system of record*
- *TERM Lite lifecycle management and scenarios*
- *Business Metrics – Targets*
- *Communication – integration of plans.*

Inventory



Condition Assessment (maintenance history)



MC15 PREVENTATIVE MAINTENANCE

Asset: 13194

Work Order	Description	Job Plan	Owner Group	Crew
449223	A / B / C / D INSPECTION	A MC15	RIPSMATN	1
446637	A / B / C / D INSPECTIC			
444770	A / B / C / D INSPECTION	A MC15	BUSMAIN	2
441525	A / B / C / D INSPECTION	B MC15	BUSMAIN	2

Vehicles	Poor	Marginal	Adequate	Good	Excellent	Total
Ferry Vessels		2	2	1	2	7
Over Road Coaches			23	57		80
Buses					67	67
Cutaways			1		17	18
Service Automobiles	18		5	1	10	34
Service Trucks	37	3	11	5	8	64
Service Vans	6	1	3		4	14
Grand Total	61	6	45	64	108	284

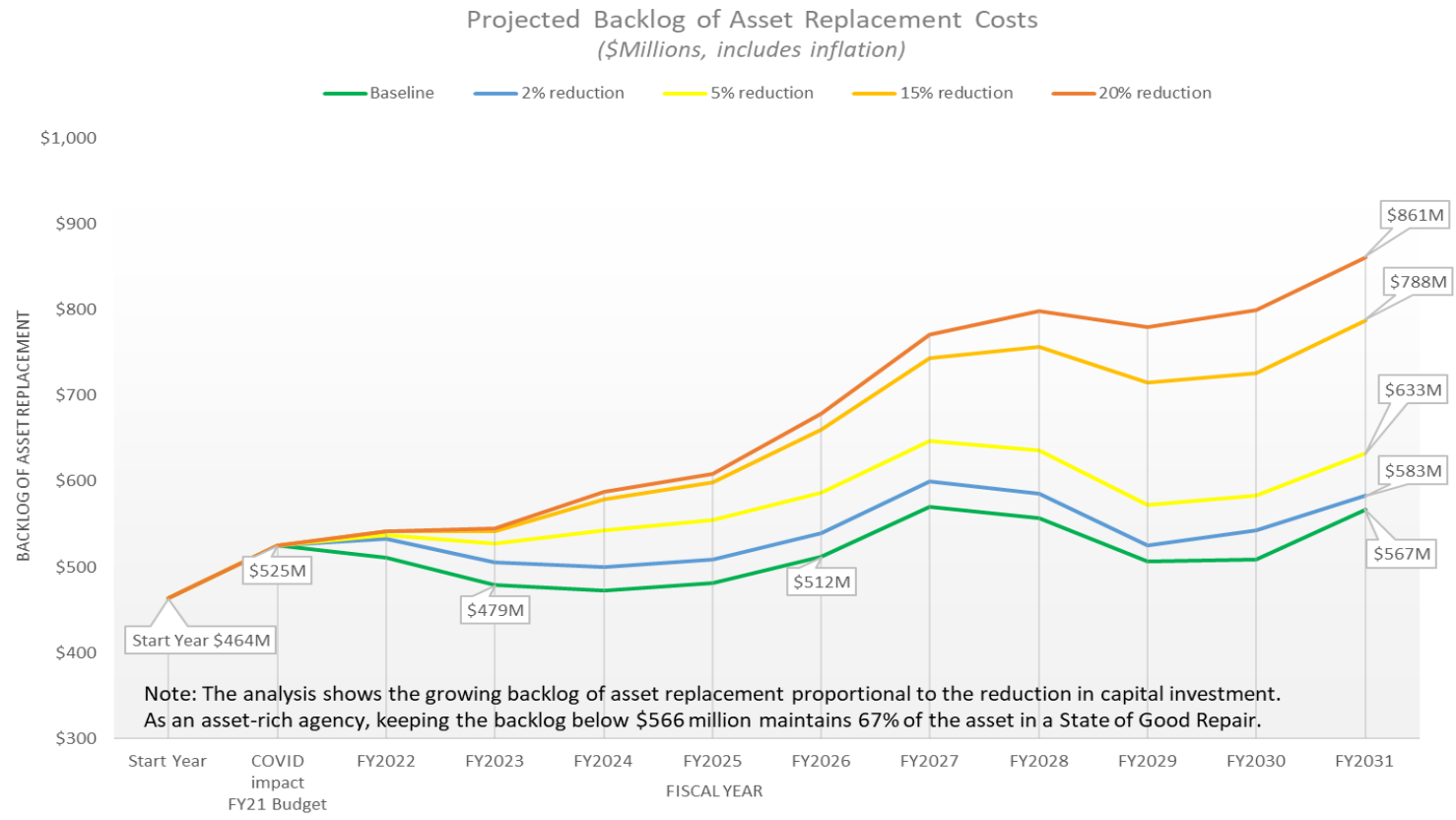
Asset: 13195

Work Order	Description	Job Plan	Owner Group	Crew	Lead	PM Due miles minus the current asset read	Status	Reported Date	Actual Finish	Work Type	GGB Current Mileage of Asset
448289	A / B / C / D INSPECTION	A MC15	BUSMAIN	2	E12565	117.00	COMP	12/7/19 5:02:28 AM	12/9/19 10:14:25 PM	PM	
445864	A / B / C / D INSPECTION	B MC15	BUSMAIN	2	E05251	-16.00	COMP	11/12/19 5:03:14 AM	11/13/19 10:49:04 PM	PM	208,353
442987	A / B / C / D INSPECTION	A MC15	BUSMAIN	2	E04268	196.00	COMP	10/18/19 5:02:45 AM	10/18/19 8:29:46 PM	PM	206,837
439048	A / B / C / D INSPECTION	C MC15	BUSMAIN	3	E05261	-283.00	COMP	9/24/19 5:02:31 AM	9/28/19 6:24:47 AM	PM	205,533

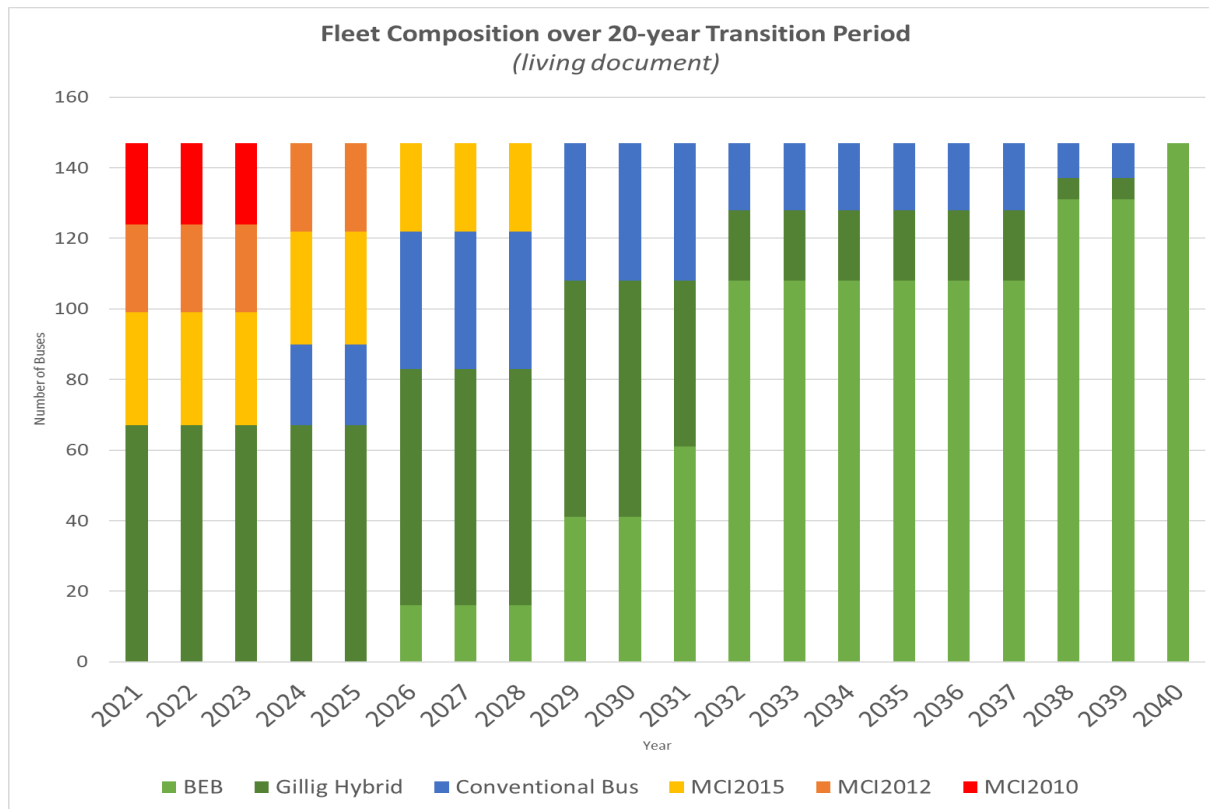
Asset: 13196

Work Order	Description	Job Plan	Owner Group	Crew	Lead	PM Due miles minus the current asset read	Status	Reported Date	Actual Finish	Work Type	GGB Current Mileage of Asset
446732	A / B / C / D INSPECTION	B MC15	BUSMAIN	2	E05251	-19.00	COMP	11/21/19 5:01:28 AM	11/26/19 10:41:15 PM	PM	211,730
444536	A / B / C / D INSPECTION	A MC15	BUSMAIN	3	E06783	-11.00	COMP	10/30/19 5:01:48 AM	10/31/19 12:30:36 AM	PM	210,211
440606	A / B / C / D INSPECTION	C MC15	BUSMAIN	3	E09268	-345.00	COMP	10/3/19 5:01:32 AM	10/10/19 5:02:06 AM	PM	208,700

Decision Support Tools



Bus Investment Priorities



Invest in service

- 1) 100% BEB fleet in 2040

Invest in people

- 1) Extensive Training on BEB technology
- 2) Safety culture

Invest in facilities

- 1) Charging infrastructure
- 2) Facilities improvements for a better employee work environment

TAM and SGR Policy

Mission

“The mission of the Golden Gate Bridge, Highway and Transportation District (District) is to provide safe and reliable operation, maintenance and enhancement of the Golden Gate Bridge and to provide transportation services, as resources allow, for customers within the U.S. Highway 101 Golden Gate Corridor.”

Draft TAM Policy

The District is committed to implementing a strategic and systematic process for operating, maintaining transit service in the Highway 101 corridor. This policy formalizes the support and the implementation of a district-wide Transit Asset Management practice and maintains assets in a State of Good Repair (SGR).



Implementation Strategy

Initiatives 2019 to present

□ *One set of data*

- 1) National Transit Database
- 2) Regional Transit Capitalization Inventory
- 3) NTD data in the District's systems

□ *An integrated system of record*

- 1) Maximo – asset location, condition, and maintenance
- 2) Financial Enterprise – asset value, addition/disposal

□ *TERM Lite Analysis and Investment Priorities*

- 1) Capital program for different COVID recovery scenarios
- 2) Investment prioritization for zero-emission buses and ferries



Evaluation – Assets in State of Good Repair

Percentage of assets exceeding useful life or below adequate condition

	RY2018 Performance	RY2019 Performance	RY2020 Performance	RY2021 Target
Ferry Vessels-FB	43%	43%	33%	33%*
Over the Road Coach-BR	SGR	SGR	SGR	SGR
Bus-BU	55%	73%	SGR	SGR
Cutaway	22%	SGR	SGR	SGR
Automobile	52%	81%	62%	75%**
Trucks and Vans	52%	49%	38%	40%
Passenger Stations and Parking	32%	44%	38%	40%
Admin and Maintenance Facilities	40%	30%	21%	30%

Note*: Ferry 2021 target shows a possible increase due to CARB requirements.

Note**: Reduced automobile fleet with leased vehicles; 2021 targets include only owned vehicles.



Lessons Learned

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- ❑ Inventory requires time and discovery
- ❑ Condition assessment and data confidence improves over time
- ❑ TAM tools allowed District to focus on critical assets and develop budget scenarios
- ❑ TAM Plan initiatives improved tools and processes throughout the District
- ❑ Incremental improvements can lead to meaningful change for people and policy



Thank you !

Transit Asset Management Plan “EVOLUTION”



Transit Asset Management Plan

- “Home Grown” Excel Spreadsheet Format
- TAM Asset Listing **AND** Property Inventory Requirements (FTA Cir 5010.1e)
- Designed to:
 - Record Condition Assessment of Current Assets
 - Identify Lifecycle Investment Requirements
 - Forecast Asset Replacement Funding Requirements
 - Forecast Funding Requirements for New Assets
- “Living Document”; frequent asset/financial record updates

Active Use by Staff Drove the Need for Updates

- Financial Management Staff
- Maintenance Staff
- State DOT & Regional TPO
- Up to TAM Version 2.5.2

Prioritized List of Investments *by Functional Area*



Prioritized Asset Projects for Funding								
Funding Code	Asset ID	Asset Tag #	Project Description	Justification	ICE	Priority	Project Year	Grant Application
63186	63186	3011	<30' Heavy-Duty Bus or 35' Electric Bus???	3011 Functionality Problem	\$753,000.00	Medium	FY-2023	FY-2020 LSTBG / FY-2021 LSTBG
63187	63187	3012	<30' Heavy-Duty Bus or 35' Electric Bus???	3012 Functionality Problem	\$753,000.00	Medium	FY-2023	FY-2021 LSTBG
63142	63142	1005	Para-Transit Cutaway Lift Van	1005 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
63143	63143	1006	Para-Transit Cutaway Lift Van	1006 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
63144	63144	1007	Para-Transit Cutaway Lift Van	1007 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
51225	51225	T-31	35' Heavy-Duty Trolley Bus	T-31 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51226	51226	T-32	35' Heavy-Duty Trolley Bus	T-32 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51229	51229	T-33	35' Heavy-Duty Trolley Bus	T-33 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51228	51228	T-34	35' Heavy-Duty Trolley Bus	T-34 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
NB003	N/A	N/A	Para-Transit Cutaway Lift Van	Growth Lift Van	\$75,371.00	High	FY-2022	FY-21 5339
NB004	N/A	N/A	Para-Transit Cutaway Lift Van	Growth Lift Van	\$75,371.00	High	FY-2022	FY-21 5339

Prioritized Projects for Procurement												
Funding Code	Asset ID	Asset Tag #	Investment Project Description	Justification	Priority	ICE	Contract Price	Project Acquisition Fiscal Year	Grant ID			
NE004	N/A	N/A	Electric Bus									
45827	45827	213	Market									
45824	45824	216	Market									
48770	48770	224	Ford 4X4 Explor									
83797	83797	227	Ford 4X4 Explor									
83798	83798	228	Ford 4X4 Explor									
83800	83800	230	Ford 4X4 Explor									
			52433	52433	4002	35' Heavy-Duty Electric Lowfloor Bus	4002 has met or is near service life	Medium	\$887,247.72	FY-2021	507054	
			52434	52434	4003	35' Heavy-Duty Electric Lowfloor Bus	4003 has met or is near service life	Medium	\$887,247.72	FY-2021	507054/507076	
			57129	57129	4009	35' Heavy-Duty Electric Lowfloor Bus	4009 has met or is near service life	Medium	\$887,247.72	FY-2021	507076	
			52431	52431	5006	35' Heavy-Duty Electric Lowfloor Bus	5006 has met or is near service life	Medium	\$887,247.72	FY-2021	507076	
666003	666003	N/A	He	58507	3001	35' Heavy-Duty Electric Lowfloor Bus	3001 in SGR Backlog	High	\$887,247.72	FY-2021	507076/507081	
NE007	N/A	N/A	He	58505	3002	35' Heavy-Duty Electric Lowfloor Bus	3002 in SGR Backlog	High	\$887,247.72	FY-2021	507081	
			58508	58508	3004	35' Heavy-Duty Electric Lowfloor Bus	3004 in SGR Backlog	High	\$887,247.72	FY-2021	507081	
			52435	52435	4001	35' Heavy-Duty Electric Lowfloor Bus	4001 has met or is near service life	Medium	\$887,247.72	FY-2021	507081	
			57125	57125	4005	35' Heavy-Duty Electric Lowfloor Bus	4005 has met or is near service life	Medium	\$887,247.72	FY-2021	507081	
			58512	58512	4011	35' Heavy-Duty Electric Lowfloor Bus	4011 has met or is near service life	Medium	\$887,247.72	FY-2021	507081	
			57126	57126	4006	35' Heavy-Duty Electric Lowfloor Bus	4006 has met or is near service life	Medium	\$887,247.72	FY-2021	507081	
			59861	59861	4025	35' Heavy-Duty Electric Lowfloor Bus	4025 has met or is near service life	Medium	\$887,247.72	FY-2021	507081	
			NE003	N/A	N/A	Electric Bus Charging Infrastructure	Electric Bus Support	High	\$2,021,285.00	FY-2021	507076/507081	
			NE005	N/A	N/A	Electric Bus Support Equipment - Mobile Charger & Tow Bar	Electric Bus Support	Medium	\$306,234.95	FY-2021	507081	
			NE006	N/A	N/A	Electric Bus Employee Training	Required for electric bus deployment	High	\$261,546.30	FY-2021	507081	
			NE009	N/A	N/A	Electric Bus Start-up Parts	Required for maint support of new vehicle	Medium	\$197,979.11	FY-2021	507081	
			58506	58506	3003	<30' Heavy-Duty Hybrid Bus	3003 in SGR Backlog	High	\$741,589.00	FY-2022	507083	
			63182	63182	3007	<30' Heavy-Duty Hybrid Bus	3007 near svc life. Functionality problem	Medium	\$741,589.00	FY-2022	507083	
			63184	63184	3009	<30' Heavy-Duty Hybrid Bus	3009 near svc life. Functionality problem	Medium	\$741,589.00	FY-2022	507084	
			63185	63185	3010	<30' Heavy-Duty Hybrid Bus	3010 Functionality Problem	Medium	\$741,589.00	FY-2022	507084	
			58511	58511	4010	<30' Heavy-Duty Hybrid Bus	4010 near service life	Medium	\$741,589.00	FY-2022	507084	
			56693	56693	1507	DRW Ford Transit Lift Van	1507 in SGR Backlog	High	\$71,389.80	FY-2022	507083	
			56687	56687	1509	DRW Ford Transit Lift Van	1509 in SGR Backlog	High	\$71,389.80	FY-2022	507083	
			NE002	N/A	N/A	Freon Recovery Machine	Required for ebus future HVAC servicing	Low	\$8,000.00	FY-2021	507078	
			59221	59221	N/A	Advanced Transit Intelligent Technology System (AVL+)	AVL no longer supported	High	\$3,435,376.00	FY-2021	507061, 507064, 507065, 507074	

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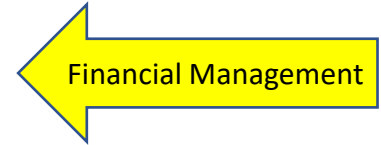
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52435	52435	4001	35' Heavy-Duty Electric Lowfloor Bus	4001 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
57125	57125	4005	35' Heavy-Duty Electric Lowfloor Bus	4005 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
58512	58512	4011	35' Heavy-Duty Electric Lowfloor Bus	4011 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
57126	57126	4006	35' Heavy-Duty Electric Lowfloor Bus	4006 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
59861	59861	4025	35' Heavy-Duty Electric Lowfloor Bus	4025 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
NE003	N/A	N/A	Electric Bus Charging Infrastructure	Electric Bus Support	High		\$2,021,285.00	FY-2021	507076/507081			
NE005	N/A	N/A	Electric Bus Support Equipment - Mobile Charger & Tow Bar	Electric Bus Support	Medium		\$306,234.95	FY-2021	507081			
NE006	N/A	N/A	Electric Bus Employee Training	Required for electric bus deployment	High		\$261,546.30	FY-2021	507081			
NE009	N/A	N/A	Electric Bus Start-up Parts	Required for maint support of new vehicle	Medium		\$197,979.11	FY-2021	507081			
58506	58506	3003	<30' Heavy-Duty Hybrid Bus	3003 in SGR Backlog	High		\$741,589.00	FY-2022	507083			
63182	63182	3007	<30' Heavy-Duty Hybrid Bus	3007 near svc life. Functionality problem	Medium		\$741,589.00	FY-2022	507083			
63184	63184	3009	<30' Heavy-Duty Hybrid Bus	3009 near svc life. Functionality problem	Medium		\$741,589.00	FY-2022	507084			
63185	63185	3010	<30' Heavy-Duty Hybrid Bus	3010 Functionality Problem	Medium		\$741,589.00	FY-2022	507084			
58511	58511	4010	<30' Heavy-Duty Hybrid Bus	4010 near service life	Medium		\$741,589.00	FY-2022	507084			
56693	56693	1507	DRW Ford Transit Lift Van	1507 in SGR Backlog	High		\$71,389.80	FY-2022	507083			
56687	56687	1509	DRW Ford Transit Lift Van	1509 in SGR Backlog	High		\$71,389.80	FY-2022	507083			
NE002	N/A	N/A	Freon Recovery Machine	Required for ebus future HVAC servicing	Low	\$8,000.00		FY-2021	507078			
59221	59221	N/A	Advanced Transit Intelligent Technology System (AVL+)	AVL no longer supported	High	\$3,435,376.00		FY-2021	507061, 507064, 507065, 507074			



Prioritized List of Investments *by Functional Area*



Prioritized Asset Projects for Funding								
Funding Code	Asset ID	Asset Tag #	Project Description	Justification	ICE	Priority	Project Year	Grant Application
63186	63186	3011	<30' Heavy-Duty Bus or 35' Electric Bus???	3011 Functionality Problem	\$753,000.00	Medium	FY-2023	FY-2020 LSTBG / FY-2021 LSTBG
63187	63187	3012	<30' Heavy-Duty Bus or 35' Electric Bus???	3012 Functionality Problem	\$753,000.00	Medium	FY-2023	FY-2021 LSTBG
63142	63142	1005	Para-Transit Cutaway Lift Van	1005 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
63143	63143	1006	Para-Transit Cutaway Lift Van	1006 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
63144	63144	1007	Para-Transit Cutaway Lift Van	1007 eligible for replacement FY-22	\$75,371.00	Medium	FY-2023	FY-21 5339
51225	51225	T-31	35' Heavy-Duty Trolley Bus	T-31 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51226	51226	T-32	35' Heavy-Duty Trolley Bus	T-32 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51229	51229	T-33	35' Heavy-Duty Trolley Bus	T-33 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
51228	51228	T-34	35' Heavy-Duty Trolley Bus	T-34 eligible for replacement FY-24	\$920,000.00	Low	FY-2024	FY-23 LSTBG Request
NB003	N/A	N/A	Para-Transit Cutaway Lift Van	Growth Lift Van	\$75,371.00	High	FY-2022	FY-21 5339
NB004	N/A	N/A	Para-Transit Cutaway Lift Van	Growth Lift Van	\$75,371.00	High	FY-2022	FY-21 5339



Prioritized Projects for Procurement												
Funding Code	Asset ID	Asset Tag #	Investment Project Description	Justification	Priority	ICE	Contract Price	Project Acquisition Fiscal Year	Grant ID			
52433	52433	4002	35' Heavy-Duty Electric Lowfloor Bus	4002 has met or is near service life	Medium		\$887,247.72	FY-2021	507054			
52434	52434	4003	35' Heavy-Duty Electric Lowfloor Bus	4003 has met or is near service life	Medium		\$887,247.72	FY-2021	507054/507076			
57129	57129	4009	35' Heavy-Duty Electric Lowfloor Bus	4009 has met or is near service life	Medium		\$887,247.72	FY-2021	507076			
52431	52431	5006	35' Heavy-Duty Electric Lowfloor Bus	5006 has met or is near service life	Medium		\$887,247.72	FY-2021	507076			
666003	666003	N/A	35' Heavy-Duty Electric Lowfloor Bus	3001 in SGR Backlog	High		\$887,247.72	FY-2021	507076/507081			
NE007	N/A	N/A	35' Heavy-Duty Electric Lowfloor Bus	3002 in SGR Backlog	High		\$887,247.72	FY-2021	507081			
58508	58508	3004	35' Heavy-Duty Electric Lowfloor Bus	3004 in SGR Backlog	High		\$887,247.72	FY-2021	507081			
52435	52435	4001	35' Heavy-Duty Electric Lowfloor Bus	4001 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
57125	57125	4005	35' Heavy-Duty Electric Lowfloor Bus	4005 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
58512	58512	4011	35' Heavy-Duty Electric Lowfloor Bus	4011 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
57126	57126	4006	35' Heavy-Duty Electric Lowfloor Bus	4006 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
59861	59861	4025	35' Heavy-Duty Electric Lowfloor Bus	4025 has met or is near service life	Medium		\$887,247.72	FY-2021	507081			
NE003	N/A	N/A	Electric Bus Charging Infrastructure	Electric Bus Support	High		\$2,021,285.00	FY-2021	507076/507081			
NE005	N/A	N/A	Electric Bus Support Equipment - Mobile Charger & Tow Bar	Electric Bus Support	Medium		\$306,234.95	FY-2021	507081			
NE006	N/A	N/A	Electric Bus Employee Training	Required for electric bus deployment	High		\$261,546.30	FY-2021	507081			
NE009	N/A	N/A	Electric Bus Start-up Parts	Required for maint support of new vehicle	Medium		\$197,979.11	FY-2021	507081			
58506	58506	3003	<30' Heavy-Duty Hybrid Bus	3003 in SGR Backlog	High		\$741,589.00	FY-2022	507083			
63182	63182	3007	<30' Heavy-Duty Hybrid Bus	3007 near svc life. Functionality problem	Medium		\$741,589.00	FY-2022	507083			
63184	63184	3009	<30' Heavy-Duty Hybrid Bus	3009 near svc life. Functionality problem	Medium		\$741,589.00	FY-2022	507084			
63185	63185	3010	<30' Heavy-Duty Hybrid Bus	3010 Functionality Problem	Medium		\$741,589.00	FY-2022	507084			
58511	58511	4010	<30' Heavy-Duty Hybrid Bus	4010 near service life	Medium		\$741,589.00	FY-2022	507084			
56693	56693	1507	DRW Ford Transit Lift Van	1507 in SGR Backlog	High		\$71,389.80	FY-2022	507083			
56687	56687	1509	DRW Ford Transit Lift Van	1509 in SGR Backlog	High		\$71,389.80	FY-2022	507083			
NE002	N/A	N/A	Freon Recovery Machine	Required for ebus future HVAC servicing	Low	\$8,000.00		FY-2021	507078			
59221	59221	N/A	Advanced Transit Intelligent Technology System (AVL+)	AVL no longer supported	High	\$3,435,376.00		FY-2021	507061, 507064, 507065, 507074			



Financial Planning of Bus Midlife Overhaul Forecasts (and Other Lifecycle Investments)

Life Cycle Investment Requirements (Midlife Overhauls)							
Funding Code	Component Category	Rolling Stock Life Cycle Investment Period	Projected Cost (Investment Priority - Funding)	Amount Requested (Grant Submitted IP - Funding)	Amount Funded (Investment Priority-Procurement)	Remarks	INVESTMENT PRIORITY SHEET
EN-FY20	System Overhauls	FY-2020	\$441,768.23	\$390,229.00	\$390,229.00	FY 2020 LSTBG	Funding
EN-FY21	System Overhauls	FY-2021	\$1,066,203.49	\$872,833.00	-	FY 2021 LSTBG	Funding
EN-FY22	System Overhauls	FY-2022	\$638,329.94	\$577,539.00	-	FY 2022 LSTBG	Funding
EN-FY23	System Overhauls	FY-2023	\$916,794.42	\$460,001.00	-	FY 2023 LSTBG	Funding
EN-FY24	System Overhauls	FY-2024	\$514,677.68	-	-		Funding
EN-FY25	System Overhauls	FY-2025	\$624,111.08	-	-		Funding
EN-FY26	System Overhauls	FY-2026	\$672,625.48	-	-		Funding
Funding Code	Asset ID	Equipment Asset Description (Life Cycle Investments)	Projected Cost (Equipment Page)	Amount Requested (Grant Submitted IP - Funding)	Amount Funded (Investment Priority-Procurement)	Remarks	INVESTMENT PRIORITY SHEET
LC-E1	60587	TransitFleet Software	\$7,000.00	-	-	Annual Service Fee	Funding
LC-E2	47128	UST Monitoring System	\$34,500.00	\$34,500.00	-	Spill bucket upgrades	Funding
LC-E3	666008	FleetWatch Fuel Management System	\$15,106.46	-	-	Annual Service Fee	Funding
LC-E4	63377	Ecolane Software	\$40,795.00	-	-	Annual Service Fee	Funding
LC-E5	666006	P25 FM Communications System	\$48,720.00	-	-	E911 Annual Service Fee	Funding

Financial Planning of Bus Midlife Overhaul Forecasts (and Other Lifecycle Investments)

Life Cycle Investment Requirements (Midlife Overhauls)							
Funding Code	Component Category	Rolling Stock Life Cycle Investment Period	Projected Cost (Investment Priority - Funding)	Amount Requested (Grant Submitted IF - Funding)	Amount Funded (Investment Priority-Procurement)	Remarks	INVESTMENT PRIORITY SHEET
EN-FY20	System Overhauls	FY-2020	\$441,768.23	\$390,229.00	\$390,229.00	FY 2020 LSTBG	Funding
EN-FY21	System Overhauls	FY-2021	\$1,066,203.49	\$872,833.00	-	FY 2021 LSTBG	Funding
EN-FY22	System Overhauls	FY-2022	\$638,329.84	\$577,539.00	-	FY 2022 LSTBG	Funding
EN-FY23	System Overhauls	FY-2023	\$916,794.42	\$460,001.00	-	FY 2023 LSTBG	Funding
EN-FY24	System Overhauls	FY-2024	\$514,677.68	-	-		Funding
EN-FY25	System Overhauls	FY-2025	\$624,111.08	-	-		Funding
EN-FY26	System Overhauls	FY-2026	\$672,625.48	-	-		Funding
Funding Code	Asset ID	Equipment Asset Description (Life Cycle Investments)	Projected Cost (Equipment Page)	Amount Requested (Grant Submitted IF - Funding)	Amount Funded (Investment Priority-Procurement)	Remarks	INVESTMENT PRIORITY SHEET
LC-E1	60587	TransitFleet Software	\$7,000.00	-	-	Annual Service Fee	Funding
LC-E2	47128	UST Monitoring System	\$34,500.00	\$34,500.00	-	Spill bucket upgrades	Funding
LC-E3	666008	FleetWatch Fuel Management System	\$15,106.46	-	-	Annual Service Fee	Funding
LC-E4	63377	Ecolane Software	\$40,795.00	-	-	Annual Service Fee	Funding
LC-E5	666006	P25 FM Communications System	\$48,720.00	-	-	E911 Annual Service Fee	Funding

Communicating & Reporting the TAM

	A	B	C	D	E	F	G	H
1								
2	EXPORT TO PDF	NTD Condition Assessment & Performance Targets						
3	<i>Date you entered of 06/30/2021 being used >></i>						6/30/2021	
4	Rolling Stock State of Good Repair							
5	NTD REPORTING YEAR FY- 2021				PERFORMANCE TARGET YEAR FY- 2022			
6	Asset Class	Number of Assets in State of Good Repair (Current Year)	Number of Assets in SGR Backlog	Good Repair Backlog (% in Backlog)	Assets in State of Good Repair (Target Year)	Assets in SGR Backlog (Target Year)	Performance Target (% in Backlog)	
7	BU Bus	64	0	0.00%	64	0	0.00%	
8	CU Cutaway	21	3	12.50%	26	0	0.00%	
9	VN Van	8	0	0.00%	8	0	0.00%	
10								
11								
12								
13								
14								
15								
16								
17	Equipment State of Good Repair (Support Vehicles Only)							
18	NTD REPORTING YEAR FY- 2021				PERFORMANCE TARGET YEAR FY- 2022			
19	Asset Class	Number of Assets in State of Good Repair	Number of Assets in State of Good Repair Backlog	Current State of Good Repair Backlog (% in Backlog)	Number of Assets in State of Good Repair (Target Year)	Number of Assets in SGR Backlog (Target Year)	Performance Target (% in Backlog)	
20	AD Automobile	6	5	45.45%	9	2	18.18%	
21	Other rubber tired vehicle	6	0	0.00%	5	1	16.67%	
22								
23								
24								
25								
26								
27								
28								
29								
30	Facilities State of Good Repair							
31	Facility Type	Asset Description	Current FY Facility Good (TERM Rating)	CURRENT X < TERM 3	Next FY Performance Target (TERM Rating)	TARGET X < TERM 3		
32				0.00%		0.00%		
33	Administrative Facility	Magnolia Facility	3		4			
34	Passenger Facility	Transit Center	4		4			
35								
36								
37								
38								
39								
40								
41								
42								

Communicating & Reporting the TAM

<i>Future Years Projection - Rolling Stock</i>						
Asset Class	FY- 2023			FY- 2024		
	\$GR	Backlog	% Backlog	\$GR	Backlog	% Backlog
BU Bus	60	4	6.25%	51	13	20.31%
CU Cutaway	26	0	0.00%	18	8	30.77%
VN Van	8	0	0.00%	8	0	0.00%
<i>Future Years Projection - Equipment</i>						
Asset Class	FY- 2023			FY- 2024		
	\$GR	Backlog	% Backlog	\$GR	Backlog	% Backlog
AO Automobile	9	2	18.18%	9	2	18.18%
Other rubber tired vehicle	5	1	16.67%	5	1	16.67%
NTD Narrative Report						
Rolling Stock						
<p>No improvement in BU Bus \$GR backlog for FY-20 which was expected. Still expecting improvement and obtainment of 0% buses in \$GR backlog in FY-2021 through anticipated delivery of hybrid and zero emission electric buses by spring/early summer 2021. Currently three Gillig hybrid buses are scheduled for production in February 2021. Contract negotiations with New Flyer for electric buses has experienced delays due to pandemic and shut-down of certain City processes from network malware attack. Regardless, expect New Flyer contract execution by late summer/early fall 2020. FY-2020 cutaway target partially met from replacement of eighteen para-transit vans and three fix-route cutaways. These replacements resulted in an actual \$GR backlog from 54.55% to 25%. Anticipated cutaway replacements in FY-2021 are expected to achieve the FY-2021 0% backlog target.</p>						
Equipment						
<p>FY-2020 equipment target not achieved. Purchase order for two service vehicles not fulfilled due to manufacturer shut-down to protect employees from pandemic.</p>						
Facilities						
<p>Both facilities TERM ratings remain above TERM 3 though current secondary level asset of greatest concern and impacting both facilities includes the security gating system. This secondary level asset remains at TERM 1. Project is funded and procurement action is expected to occur early fall with project completion early FY-2021.</p>						
Other						

Communicating & Reporting the TAM

Condition Assessment Detail and Life-Cycle Requirements

Maintenance States			
Asset Description	TERM Condition	TERM Quantities	
Bus Fleet Condition	Excellent (TERM-5)	17	
	Good (TERM-4)	17	
	Adequate (TERM-3)	30	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		3.80	
Cutaway Fleet Condition	Excellent (TERM-5)	10	
	Good (TERM-4)	0	
	Adequate (TERM-3)	5	
	Marginal (TERM-2)	7	
	Poor (TERM-1)	2	
TERM Score Average:		3.38	
Van Fleet Condition	Excellent (TERM-5)	8	
	Good (TERM-4)	0	
	Adequate (TERM-3)	0	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		5.00	
Mini-Van Fleet Condition	Excellent (TERM-5)	0	
	Good (TERM-4)	0	
	Adequate (TERM-3)	0	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		N/A	
Support Vehicle Condition	Excellent (TERM-5)	8	
	Good (TERM-4)	3	
	Adequate (TERM-3)	2	
	Marginal (TERM-2)	1	
	Poor (TERM-1)	4	
TERM Score Average:		3.56	
Other Equipment Condition	Excellent (TERM-5)	3	
	Good (TERM-4)	15	
	Adequate (TERM-3)	1	
	Marginal (TERM-2)	5	
	Poor (TERM-1)	2	
TERM Score Average:		3.75	

Projected Life-Cycle Investments				
Asset Category	Fiscal Year	Projected Cntr	Amount Requested	Amount Funded
Rolling Stock	FY-2020	\$441,768.23	\$390,229.00	\$390,229.00
	FY-2021	\$1,066,203.49	\$872,833.00	-
	FY-2022	\$638,529.94	\$877,539.00	-
	FY-2023	\$916,734.42	\$460,001.00	-
	FY-2024	\$514,677.68	-	-
	FY-2025	\$624,111.08	-	-
	FY-2026	\$672,626.48	-	-
Equipment	FY-2021	\$34,500.00	\$34,500.00	-
	FY-2022	\$111,621.46	-	-
Facility Life-Cycle Investments (Secondary Assets TERM < 3)				
Admin & Maint	Number of Projects	Projected Cntr	Amount Requested	Amount Funded
Magnolia Facility	6	\$397,081.00		\$331,425.00
Passenger & Parking	Quantity	Projected Cntr	Amount Requested	Amount Funded
Transit Center	3	\$537,300.00	\$187,000.00	\$153,150.00

Additional Remarks
<ul style="list-style-type: none"> - Rolling stock life cycle funding requests reflects amounts listed in TIP #20-2020-210. - Equipment life-cycle fund request in the amount of \$34,500.00 is included within the Program of Projects for FY-2020 5339. - Magnolia and Transit Center life cycle investment involve a combination of projects planned for FY-2020 5339 and unfunded projects recently identified by the Public Building Authority facilities annual condition assessment. - Delays in TDOT match contract for FY-2020 5339 and 2020 LSTBG is negatively affecting our ability to address concerns related to State of Good Repair asset replacements and life cycle investments.

Communicating & Reporting the TAM

Condition Assessment Detail and Life-Cycle Requirements

Maintenance States			
Asset Description	TERM Condition	TERM Quantities	
Bus Fleet Condition	Excellent (TERM-5)	17	
	Good (TERM-4)	17	
	Adequate (TERM-3)	30	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		3.80	
Cutaway Fleet Condition	Excellent (TERM-5)	10	
	Good (TERM-4)	0	
	Adequate (TERM-3)	5	
	Marginal (TERM-2)	7	
	Poor (TERM-1)	2	
TERM Score Average:		3.38	
Van Fleet Condition	Excellent (TERM-5)	8	
	Good (TERM-4)	0	
	Adequate (TERM-3)	0	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		5.00	
Mini-Van Fleet Condition	Excellent (TERM-5)	0	
	Good (TERM-4)	0	
	Adequate (TERM-3)	0	
	Marginal (TERM-2)	0	
	Poor (TERM-1)	0	
TERM Score Average:		N/A	
Support Vehicle Condition	Excellent (TERM-5)	8	
	Good (TERM-4)	3	
	Adequate (TERM-3)	2	
	Marginal (TERM-2)	1	
	Poor (TERM-1)	4	
TERM Score Average:		3.56	
Other Equipment Condition	Excellent (TERM-5)	3	
	Good (TERM-4)	15	
	Adequate (TERM-3)	1	
	Marginal (TERM-2)	5	
	Poor (TERM-1)	2	
TERM Score Average:		3.75	

Projected Life-Cycle Investments				
Asset Category	Fiscal Year	Projected Cntr	Amount Requested	Amount Funded
Rolling Stock	FY-2020	\$441,768.23	\$390,229.00	\$390,229.00
	FY-2021	\$1,066,203.49	\$872,833.00	-
	FY-2022	\$638,529.94	\$877,539.00	-
	FY-2023	\$916,734.42	\$460,001.00	-
	FY-2024	\$514,677.68	-	-
	FY-2025	\$624,111.08	-	-
	FY-2026	\$672,626.48	-	-
Equipment	FY-2021	\$34,500.00	\$34,500.00	-
	FY-2022	\$111,621.46	-	-
Facility Life-Cycle Investments (Secondary Assets TERM < 3)				
Admin & Maint	Number of Projects	Projected Cntr	Amount Requested	Amount Funded
Magnolia Facility	6	\$397,081.00		\$331,425.00
Passenger & Parking	Quantity	Projected Cntr	Amount Requested	Amount Funded
Transit Center	3	\$537,300.00	\$187,000.00	\$153,150.00

Additional Remarks
<ul style="list-style-type: none"> - Rolling stock life cycle funding requests reflects amounts listed in TIP #20-2020-210. - Equipment life-cycle fund request in the amount of \$34,500.00 is included within the Program of Projects for FY-2020 5339. - Magnolia and Transit Center life cycle investment involve a combination of projects planned for FY-2020 5339 and unfunded projects recently identified by the Public Building Authority facilities annual condition assessment. - Delays in TDOT match contract for FY-2020 5339 and 2020 LSTBG is negatively affecting our ability to address concerns related to State of Good Repair asset replacements and life cycle investments.

QUESTIONS?

Si McMurray
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Knoxville Area Transit
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Q&A

Information for Tomorrow

- Day 3 begins at 1:00 PM ET.
- Use the MS Teams link in the calendar invite for tomorrow.
- Email TAMRoundtable@dot.gov if you have issues connecting.