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Cape Ann Transportation Authority

Transit Asset Management Plan for the period of 10/1/2018 to 9/30/2023
Final Plan Prepared: 9/21/2018

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Cape Ann Transportation Authority

The Cape Ann Transportation Authority (CATA) is a political subdivision of the Commonwealth, created in 1973 by Chapter 161B of the Massachusetts General Laws. The Authority is given general responsibility to develop, finance, and contract for the operation of mass transportation facilities and services within its territory. The four Municipalities comprising the Authority are Gloucester, Essex, Rockport, and Ipswich, located in the North Shore area of eastern Massachusetts. Each of these municipalities is represented by their chief executive officer, or designee, and serves as CATA's advisory board. The day-to-day affairs of the Authority are managed by an Administrator who is appointed by the Advisory Board.

CATA oversees operations of fixed route and demand response services in all four communities. Year-round fixed route service is provided in Gloucester and Rockport. Additional fixed route service is provided in the summer in all four communities. All CATA vehicles are wheelchair accessible and comply with the Americans with Disabilities Act (ADA). CATA is an important feeder to several MBTA commuter rail stations, Keolis Inc. provides the rail service for the MBTA.

Although responsible for establishing routes and setting fares, CATA is not involved in the direct operation of public mass transportation services. Rather, it relies on contracts negotiated with private sector transportation providers. CATA contracts with the Cape Ann Transportation Operating Company (CATOC), a privately owned corporation, to operate the transit services.

The Authority owns the buses and vans for the above service and has one Administration/Operations/Maintenance facility located in Gloucester, MA.

The Authority also provides Brokerage Services for MassHealth, the Department of Developmental Disabilities, and the Department of Public Health.

The Authority is a designated recipient of Federal Transit Administration 5307 funds, receives State Operating Assistance, and each Member City/Town receiving service is assessed for its share of service. For the Fiscal Year 2019, 7/1/2018-6/30/2018, the Authority operating budget for transit service is \$2,954,257. The total Authority budget, including Brokerage Services, is \$18,979,759.

Executive Summary

As a recipient of Federal Transit Administration funds, CATA is required to develop and maintain a Transit Asset Management Plan per FTA's Final Rule at 49 CFR Part 625. As defined by the Rule, Transit Asset Management (TAM) is the strategic and systematic practice of processing, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and cost over their life cycles to provide safe, cost effective, and reliable public transportation.

The preparation of the TAM Plan is based on identifying the transit assets which CATA owns and has direct capital responsibility and the performance measures included in the Final

Rule that relate to these identified assets. A complete TAM Plan is required by 9/30/2018. CATA is considered a Tier II Transit Provider as defined in the Final Rule. This definition is as follows:

Tier II Provider: Means a recipient that owns, operates, or manages (1) one hundred (100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a sub recipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

The consequences of an asset not being in a State of Good Repair (SGR) include: safety risks (increase in accidents per 100,000 revenue miles); decreased system reliability (poor on-time performance); higher maintenance costs per miles of service and/or lower system performance (missed trips due to increased frequency of breakdowns).

Section 1: Introduction & Applicability

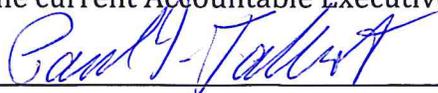
Time Frame of TAM Plan

This document covers the period of 10/1/2018 to 9/30/2023 beginning with the completion of the initial TAM Plan 9/30/2018. This TAM Plan shall be amended during the five year horizon period when there is a significant change to assets and/or operations occurring at the Authority.

The Accountable Executive

As required by the TAM Final Rule, each transit operator receiving FTA funding shall designated an “Accountable Executive” to implement the TAM Plan. The Authority’s Accountable Executive shall be the Administrator, acting as the Chief Executive Officer of the Authority. The Authority’s Accountable Executive must balance transit asset management, safety, day-to-day operations, and expansion needs in approving and carrying out the TAM Plan and a Public Transportation Agency Safety Plan. The Accountable Executive shall be responsible to ensure the development and implementation of the TAM Plan, in accordance with 49 CFR Part 625 (625.25 Transit Asset Management plan requirements). Furthermore, the Accountable Executive shall approve the annual asset performance targets and TAM Plan document. These required approvals shall be self-certified by the Administrator via the annual FTA Certifications and Assurances forms in TrAMS.

The current Accountable Executive is Paul F. Talbot.



Paul F. Talbot, CATA Administrator



Date

TAM Plan Elements

As a Tier II public transit provider, the TAM Plan prepared by the Authority must contain the following elements:

1. Inventory of Assets Portfolio An inventory of the number and type of capital assets to include Rolling Stock, Facilities, and Equipment
2. Condition Assessment of Inventoried Assets A condition assessment of those inventoried assets for which the Authority has direct ownership and capital responsibility
3. Description of Decision-Support Tool A description of the analytical process and decision-support tool the Authority uses to assist in capital asset prioritization
4. Prioritized List of Investments The prioritized list of projects the Authority will use to manage or improve the SGR of capital assets

The following Definitions, as included in the Final Rule, apply to this TAM Plan:

Accountable Executive: Means a single, identifiable person who has ultimate responsibility for carrying out the safety management system of a public transportation agency; responsibility for carrying out transit asset management practices; and control or direction over the human and capital resources needed to develop and maintain both the agency's public transportation agency safety plan, in accordance with 49 U.S.C. 5329(d), and the agency's transit asset management plan in accordance with 49 U.S.C. 5326.

Asset Category: Means a grouping of asset classes, including a grouping of equipment, a grouping of rolling stock, a grouping of infrastructure, and a grouping of facilities.

Asset Class: Means a subgroup of capital assets within an asset category. For example, buses, trolleys, and cutaway vans are all asset classes within the rolling stock asset category.

Asset Inventory: Means a register of capital assets, and information about those assets.

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

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

Direct Recipient: Means an entity that receives Federal financial assistance directly from the Federal Transit Administration.

Equipment: Means an article of nonexpendable, tangible property having a useful life of at least one year.

Exclusive-Use Maintenance Facility: Means a maintenance facility that is not commercial and either owned by a transit provider or used for servicing their vehicles.

Facility: Means a building or structure that is used in providing public transportation.

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

Horizon Period: Means the fixed period of time within which a transit provider will evaluate the performance of its TAM plan. FTA standard horizon period is four years.

Implementation Strategy: Means a transit provider's approach to carrying out TAM practices, including establishing a schedule, accountabilities, tasks, dependencies, and roles and responsibilities.

Infrastructure: Means the underlying framework or structures that support a public transportation system.

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

Key Asset Management Activities: Means a list of activities that a transit provider determines are critical to achieving its TAM goals.

Life-Cycle Cost: Means the cost of managing an asset over its whole life.

Participant: Means a tier II provider that participates in a group TAM plan.

Performance Measure: Means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets (*e.g.*, a measure for on-time performance is the percent of trains that arrive on time, and a corresponding quantifiable indicator of performance or condition is an arithmetic difference between scheduled and actual arrival time for each train).

Performance Target: Means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Public Transportation System: Means the entirety of a transit provider's operations, including the services provided through contractors.

Public Transportation Agency Safety Plan: Means a transit provider's documented comprehensive agency safety plan that is required by 49 U.S.C. 5329.

Recipient: Means an entity that receives Federal financial assistance under 49 U.S.C. Chapter 53, either directly from FTA or as a subrecipient.

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

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

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

Subrecipient: Means an entity that receives Federal transit grant funds indirectly through a State or a direct recipient.

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

Tier I Provider: Means a recipient that owns, operates, or manages either (1) one hundred and one (101) or more vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode, or (2) rail transit.

Tier II Provider: Means a recipient that owns, operates, or manages (1) one hundred (100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a subrecipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

Transit Asset Management (TAM): Means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.

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

Transit Asset Management (TAM) Policy: Means a transit provider's documented commitment to achieving and maintaining a state of good repair for all of its capital assets. The TAM policy defines the transit provider's TAM objectives and defines and assigns roles and responsibilities for meeting those objectives.

Transit Asset Management (TAM) Strategy: Means the approach a transit provider takes to carry out its policy for TAM, including its objectives and performance targets.

Transit Asset Management (TAM) System: Means a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively, throughout the life cycles of those assets.

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

Useful life: Means either the expected life cycle of a capital asset or the acceptable period of use in service determined by FTA.

Useful life benchmark (ULB): Means the expected life cycle or the acceptable period of use in service for a capital asset, as determined by a transit provider, or the default benchmark provided by FTA.

State of Good Repair (SGR) Standards Policy

CATA's SGR policy is as follows:

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

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

The TAM Plan allows CATA to predict the impact of its policies and investment justification decisions on the condition of its assets throughout the asset's life cycle, and enhances the

abilities to maintain a SGR by proactively investing in an asset before the asset’s condition deteriorates to an unacceptable level.

Useful Life Benchmark

As previously mentioned, the Useful Life Benchmark (ULB) is defined as the expected life cycle or acceptable period of use in service for a capital asset as determined by a transit provider.

For the purposes of this TAM Plan, CATA utilized FTA standards for vehicle replacement found in FTA Circular 5010.E, as assets acquired by CATA are funded in part with Federal transit funds.

Minimum Service Life for Buses and Vans

Category	Length	Minimum Life	
		whichever comes first	
		Years	Miles
Heavy-Duty Large Bus	35-45 ft	12	500,000
Heavy-Duty Small Bus	30 ft	10	350,000
Medium-Duty Transit Bus	30 ft.	7	200,000
Light-Duty Mid-Sized Bus	25-35 ft.	5	150,000
Light Duty Small Bus (cutaways, modified van)	16-28 ft.	4	100,000

Condition Assessment

As part of the TAM Plan, each vehicular and facility asset will have a physical condition assessment conducted on an annual basis. See Section 3 regarding condition assessment.

SGR Performance Measures and Targets

Under the Tam Final Rules, FTA established three performance measures for Tier II transit providers to approximate the State of Good Repair (SGR) for three categories of capital assets. Calculating performance measures will assist in quantifying the condition of assets, which will facilitate setting targets that will support funding prioritization. These three performance measures are as follows:

- **Rolling Stock-Age:** The SGR performance measure for rolling stock is the percentage of revenue vehicles (fixed route and paratransit) within a particular asset class that have either met or exceeded their UBL
- **Equipment-Age:** The SGR performance measure for non-revenue, support service, and maintenance vehicles is the percentage of those vehicles that have either met or exceeded their UBL
- **Facilities-Condition:** The SGR performance measure for facilities is the percentage of facilities within an asset class rated below condition 3 on the FTA TERM rating scale

Section 2: Asset Inventory Portfolio

The following capital asset items that are owned by CATA, and for which CATA has a direct Capital responsibility, are included in the TAM Plan asset inventory. Rolling Stock (buses/vans), Support Vehicles, and Facilities. CATA is not a grantee that operates passenger rail service, therefore CATA does not have any associated rail infrastructure in its asset portfolio.

Rolling Stock

Rolling stock (buses and vans) owned by CATA are considered revenue service vehicles used in the provision of public transportation. Data for rolling stock is maintained in TransAm software. The following required data fields are maintained for each rolling stock asset:

External Vehicle ID
 Description
 Vehicle Type
 Mileage
 Manufacturer
 Plate
 Vehicle Weight
 Vehicle Features
 Capacity: Seating/Standing/Wheelchair
 Current State of Vehicle
 Storage location
 Disposition Date, Cost, and Buyer
 Grant Source Used for Purchase (State/Fed/%); Grant Number
 Purchase State (new/used)
 Asset Tag #
 Classification
 Vehicle Title
 VIN Number
 Anticipate Replacement/Rehab
 Year built/in Service Date/Age License

Reported Condition Assessment Gross
Purchase Cost, Date, Source (Dealer/Vendor)
Fuel Type Make/Model
Length of Vehicle

Non-Revenue Service Vehicles

CATA owns and has direct capital responsibility for four non-revenue service vehicles. One is assigned to the Maintenance Department, two to the Operations/Administration, and one for Administrative purposes.

Data for non-revenue service vehicles is maintained in TramsAM software. The following required data fields are maintained for each non-revenue service vehicle:

External Vehicle ID
Description
Vehicle Type
Mileage
Manufacturer
Plate
Vehicle Weight
Vehicle Features
Capacity: Seating
Current State of Vehicle
Storage location
Classification
Last Maintenance Performed
Disposition Date, Cost, and Buyer
Grant Source Used for Purchase (State/Fed/%); Grant Number
Purchase State (new/used)
Asset Tag #
Classification
Vehicle Title
VIN Number
Anticipate Replacement
Year built/in Service Date/Age License
Reported Condition Assessment Gross
Purchase Cost, Date, Source (Dealer/Vendor)
Fuel Type Make/Model

Facilities

Facilities are any structure used in providing public transportation which CATA owns and has a direct capital responsibility. Facilities utilized and owned include one administration/operations/maintenance facilities.

Data for facility assets is maintained and updated in the TransAM software. The following required data fields are maintained for each facility asset.

Asset Ownership
Asset Description/Name
Physical Location/Address
Asset Tag #
External ID
Classification
Asset Type
Status
Age/Year Built
Reported Condition
Last Maintenance
Book Value
Rehab Year
Number of Parking Spaces (public, private, ADA)
Vendor/Builder
FTA facility classification
Interior (sqft)
Lot Size
Grant Source Used (State/Fed/%)
Build Cost
Purchase Date
In Service Date
Purchase State (new/used)
Expected useful life
Land owner
Building owner
Facility Size
Section of larger facility
Percent Operational
Number of structures, floors, elevators/escalators
Replacement year
Line number
Features and amenities (ADA)
Disposition Date/Cost/Buyer
Grant Number
SGR Status

Agency	Type	Asset Tag	Description	Location	Status	Age	Condition	Replace	Mileage
CATA	Bus Trolley Std	101	CCI 1C9S2HF	Administration Building: CATA	I	18	3	FY 20-21	47,969
CATA	Bus Trolley Std	301	CCI 1C9S2HS	Administration Building: CATA	I	16	3	FY 20-21	82,914
CATA	Bus 30 FT	1001	GIL 15GGE271	Administration Building: CATA	I	9	4	FY 20-21	251,561
CATA	Bus 30 FT	1002	GIL 15GGE271	Administration Building: CATA	I	9	4	FY 20-21	230,786
CATA	Bus 30 FT	1201	GIL 15GGE271	Administration Building: CATA	I	7	4	FY 21-22	174,835
CATA	Bus 30 FT	1202	EDN AEROTECH	Administration Building: CATA	I	6	4	FY 22-23	101,053
CATA	Bus 30 FT	1203	EDN AEROTECH	Administration Building: CATA	I	6	4	FY 22-23	77,266
CATA	Bus 30 FT	1501	INT HC	Administration Building: CATA	I	3	5	FY 24-25	71,060
CATA	Bus 30 FT	1502	INT HC	Administration Building: CATA	I	3	5	FY 24-25	61,849
CATA	Bus 30 FT	1601	INT HC	Administration Building: CATA	I	1	5	FY 26-27	51,230
CATA	Bus 30 FT	1602	INT HC	Administration Building: CATA	I	1	5	FY 26-27	42,172
CATA	Bus 30 FT	1603	INT HC	Administration Building: CATA	I	1	5	FY 26-27	45,197
CATA	Bus 30 FT	1604	INT HC	Administration Building: CATA	I	1	5	FY 26-27	46,926
CATA	Bus < 30 FT	248	ELK ECII	Administration Building: CATA	I	6	4	FY 20-21	110,773
CATA	Bus < 30 FT	249	ELK ECII	Administration Building: CATA	I	6	4	FY 20-21	132,692
CATA	Bus < 30 FT	250	ELK ECII	Administration Building: CATA	I	6	4	FY 20-21	71,173
CATA	Bus < 30 FT	251	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	58,101
CATA	Bus < 30 FT	252	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	41,000
CATA	Bus < 30 FT	253	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	67,557
CATA	Bus < 30 FT	254	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	21,985
CATA	Bus < 30 FT	255	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	23,258
CATA	Bus < 30 FT	256	ELK ECII	Administration Building: CATA	I	2	5	FY 20-21	36,760
CATA	Bus 30 FT	1701	GIL TRABUS	Administration Building: CATA	I	1	5	FY 26-27	55,697
CATA	Bus 30 FT	1702	GIL TRABUS	Administration Building: CATA	I	1	5	FY 26-27	29,856
CATA	Bus 30 FT	1703	GIL TRABUS	Administration Building: CATA	I	1	5	FY 26-27	46,014
CATA	Bus Std 35 FT	1801	GIL TRABUS	Administration Building: CATA	I	0	5	FY 30-31	3,357
CATA	Bus Std 35 FT	1802	GIL TRABUS	Administration Building: CATA	I	0	5	FY 30-31	3,582
CATA	Bus < 30 FT	257	FRD PHOENIX	Administration Building: CATA	I	1	5	FY 22-23	622
CATA	Bus < 30 FT	258	ELK EC-II	Administration Building: CATA	I	1	5	FY 21-22	14,131
CATA	Bus < 30 FT	259	ELK EC-II	Administration Building: CATA	I	1	5	FY 21-22	17,049
CATA	Bus < 30 FT	260	FRD PHOENIX	Administration Building: CATA	I	0	5	FY 23-24	1,530
CATA	Bus < 30 FT	261	ELK ECII	Administration Building: CATA	I	0	5	FY 23-24	2,844
CATA	Bus < 30 FT	262	ELK ECII	Administration Building: CATA	I	0	5	FY 23-24	2,112

Agency	Type	Asset Tag	Description	Location	Status	Age	Condition	Replace	Vendor	Mileage
CATA	Sports Utility Vehicle	EQUINOX 6	CMD EQUINOX	Administration Building: CATA	I	1	5	FY 20-21	LIBERTY CHEVROLET	12,986
CATA	Sports Utility Vehicle	EQUINOX 7	CMD EQUINOX	Administration Building: CATA	I	1	5	FY 20-21	LIBERTY CHEVROLET	3,939
CATA	Sedan/Station Wagon	MALIBU	CMD MALIBU	Administration Building: CATA	I	8	3.5	FY 19-20	-	101,388
CATA	Pickup/Utility Truck	ST-1	CMD 2016	Administration Building: CATA	I	2	5	FY 19-20	LIBERTY CHEVROLET	1,929

Agency	Type	Asset Tag	Description	Location	Status	Age	Condition	FTA Facility
CATA	Administration Building	CATA	Administration and Operations Facility	Administration Building: CATA	I	14	4	Combined Administrative and

Section 3: Asset Condition Assessment

CATA assess the condition of its assets by utilizing a condition rating assessment scale. This rating scale assigns a numerical value based on the physical condition of each asset. The rating scale is based on numbers 5.0 to 1.0, with 5.0 being new and 1.0 being poor. Assets with a rating of 3.0 or higher are considered to be in a SGR.

The inspection process and documentation forms utilized to assess facility and vehicle assets are detailed in the CATA Vehicle Maintenance and Facility Maintenance Plans.

Rolling Stock (Revenue Vehicles)

The TAM Plan condition assessment consists of assigning a condition rating to all rolling stock assets (revenue vehicles) for which CATA owns and has a direct capital responsibility.

The bus and van revenue vehicle condition assessment is as follows:

Condition	Ratings	Description
Excellent	5.0-4.8	New asset; no visible defects
Good	4.7-4.0	Asset showing minimal signs of wear; some slightly defective or deteriorated components
Adequate	3.9-3.0	Asset has reached its mid-life (condition 3.5); some moderately defective or deteriorate components
Marginal	2.9-2.0	Asset reaching or just past the end of its useful life;; increasing number of defective or deteriorated components and increasing maitnenacne needs
Poor	1.9-1.0	Asset is past its useful life and is in need of immediate repair or replacement; may have critically damaged components

Example evaluation methods are:

Engine	Evaluate available compression testes, oil usage, oil analysis, and noise
Drive-Train	Evaluate transmission and rear-end based on fluid analysis, shift quality, fluid leaks, and noises
Electrical	Evaluate lights, switches, gauges, and other electrical mechanisms relative to general working conditions; evaluate wiring condition especially front to back wiring
Suspension/Steering	Evaluate suspension and steering capability
A/C, Heating	Evaluate cooling and heating capability throughout the bus in order to maintain passenger and driver comfort
Structure	Evaluate extent of cracks and rust involvement in structure
Body Interior	Evaluate condition of floor, windows, seats, side and modesty panels and other interior items

Non-Revenue Service Vehicles

The same evaluation of condition used for Revenue Vehicles is used for Non-Revenue Vehicles for which CATA owns and has direct capital responsibility. Non-Revenue Vehicles include supervisory and maintenance vehicles.

Condition	Ratings	Description
Excellent	5.0-4.8	New asset; no visible defects
Good	4.7-4.0	Asset showing minimal signs of wear; some slightly defective or deteriorated components
Adequate	3.9-3.0	Asset has reached its mid-life (condition 3.5); some moderately defective or deteriorate components
Marginal	2.9-2.0	Asset reaching or just past the end of its useful life;; increasing number of defective or deteriorated components and increasing maitnenacne needs
Poor	1.9-1.0	Asset is past its useful life and is in need of immediate repair or replacement; may have critically damaged components

Facilities

CATA's one Administration/Operations/Maintenance Facilities is inspected as scheduled in the Facilities Maintenance Plan. Components inspected are listed below and the inspection forms are also included.

Component	Sub-components		Component	Sub-components
Substructure	Foundation		HVAC	Energy Supply
	Basement			Generation/Distribution
Shell	Superstructure			Controls
	Roof			Chimneys/Vents
	Exterior		Sprinklers	
Interiors	Partitions		Fire Protection	Hydrants
	Stairs			Standpipes
	Finishes		Electrical	Distribution
Conveyance	Elevators			Wiring
	Escalators			Communications
	Lifts			Other
Plumbing	Fixtures		Site	Roadways/Driveways
	Water Distribution			Signage
	Sanitary Waste			Parking Lots
	Rain Water Drainage			Pedestrian Areas
				Fences/Walls
				Landscaping
				Site Utilities

Condition	Ratings	Description
Excellent	5.0-4.8	New asset; no visible defects
Good	4.7-4.0	Asset showing minimal signs of wear; some slightly defective or deteriorated components
Adequate	3.9-3.0	Asset has reached its mid-life (condition 3.5); some moderately defective or deteriorate components
Marginal	2.9-2.0	Asset reaching or just past the end of its useful life;; increasing number of defective or deteriorated components and increasing maitnenacne needs
Poor	1.9-1.0	Asset is past its useful life and is in need of immediate repair or replacement; may have critically damaged components

Monthly Maintenance						Year						
Maintenance Item	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Elevator (contractor)												
NOTES												
Quarterly Maintenance						Year						
Maintenance Item	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Building walk-through												
HVAC (contractor) PM												
Security												
Bus Area												
Maintenance Area												
Bus Wash												
Exterior walk-around												
NOTES												
Semi-Annual Maintenance							Year					
Maintenance Item	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Backflow (City)												
Garage Walkthrough												
NOTES												
Annual Maintenance							Year					
Maintenance Item	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Boiler/Compressor (state)												
Security-fire ext, alarms, sprinklers (contractors)												
Stormwater (contractor)												
Elevator (state)												
Oil/Water Separator (contractor)												
Fuel Tanks (contractor)												
NOTES												

Section 4: Description of Decision Support Tools

CATA uses the following support tools to prepare its Transit Asset Management Plan:

- A. **TransAm** A software product purchased from Cambridge Systematics in conjunction with 14 other Regional Transit Authorities. This product allows for the creation of asset inventories as well as the setting of asset policy (ULB, replacement costs, etc).
- B. **Vehicle Maintenance Plan and Facility Maintenance Plan** These plans detail all policies and procedures related to the Authority-owned vehicles and facilities. It includes maintenance department responsibilities, PM schedules, work order process, inspection needs, etc.
- C. **CATA Procurement Manual** The Procurement Manual lists all FTA purchasing policies, contract/bidding requirements and regulations, asset purchasing procedures, and asset disposal procedures.
- D. **TAM Plan** CATA's Transit Asset Management Plan contains the condition of assets used in the provision of public transportation services and to keep CATA in a State of Good Repair (SGR). The TAM Plan also contains information related to Asset Inventory, Asset Condition Assessment, Decision Support Tools, Investment Prioritization List (Program of Projects), and NTD annual reporting.
- E. **Public Transportation Agency Safety Plan (PTASP)** Final Rule 49 CFR Part 673 (effective date 7/19/2019, Final Plan due 7/20/2020).
- F. **Adopted Five Year Capital Plan/List of Prioritization of Projects/Programs** The Capital Plan includes projects needed to maintain SGR.
- G. **Boston Region Metropolitan Planning Organization** The Boston MPO TIP includes the transit projects adopted from the adopted CATA Capital Plan.

Section 5: Prioritized List of Investments

CATA's adopted five year Capital Plan FFY19-FFY23 represents the prioritized list of capital projects over this time period, including any that will address State of Good Repair asset replacement. The plan includes Federal and State funding anticipated over the time period.

Cape Ann Transportation Authority (CATA):
DRAFT FFYs 2019-23 Transportation Improvement Program (TIP) Project List

Boston Region MPO Meeting,
 March 22, 2018

Fiscal Year	Federal Program Name	Project #	ALI	Project Name	Project Description	Program	Federal \$	RTA/CRP \$	Local \$	County Drive	Total Cost
2019	Section 5307: Urbanized Area Formula	BCG0006569	114220	PREVENTIVE MAINTENANCE	FY19 PM Expenses	N/A	\$ 265,000	\$ -	\$ 71,250	2019 - \$265,000	\$ 356,250
2019		BCG0007348	111202	BUY REPLACEMENT 35-FT BUS (2)	ORIGINALLY RTD0004373 (BCG0004373)	RTA: Vehicle Replacement	\$ -	\$ 900,000	\$ -		\$ 900,000
2019	Section 5307: Urbanized Area Formula	BCG0006800	300901	ACQUIRE - SHOP EQ/COMPUTER/SFTWR	COMPUTER UPGRADE AND SOFTWARE MAINTENANCE	RTA: Facility and System Modernization	\$ 65,000	\$ 13,750	\$ -	2019 - \$65,000	\$ 68,750
2020	Section 5307: Urbanized Area Formula	BCG0006802	114220	PREVENTIVE MAINTENANCE	FY20 PM Expenses	N/A	\$ 265,000	\$ -	\$ 71,250	2019 - \$265,000	\$ 356,250
2020	Section 5307: Urbanized Area Formula	BCG0006803	117A00	ACQUIRE - SHOP EQ/COMP/SFTWR		RTA: Facility and System Modernization	\$ 65,000	\$ 13,750	\$ -	2019 - \$65,000	\$ 68,750
2021	Section 5307: Urbanized Area Formula	BCG0006806	442400	ACQUIRE - SHOP EQ/COMP/SFTWR		RTA: Facility and System Modernization	\$ 65,000	\$ 13,750	\$ -	2020 - \$65,000	\$ 68,750
2021	Section 5307: Urbanized Area Formula	BCG0006805	111240	PREVENTIVE MAINTENANCE	FY21 PM Expenses	RTA: Facility and Vehicle Maintenance	\$ 265,000	\$ -	\$ 71,250	2020 - \$265,000	\$ 356,250
2022	Section 5307: Urbanized Area Formula	BCG0006807	111240	PREVENTIVE MAINTENANCE	PREVENTIVE MAINTENANCE	N/A	\$ 265,000	\$ -	\$ 71,250	2021 - \$265,000	\$ 356,250
2022	Section 5307: Urbanized Area Formula	BCG0006808	300901	ACQUIRE - SHOP EQUIPMENT	SHOP EQ/COMPUTER/SFTWR	RTA: Facility and System Modernization	\$ 65,000	\$ 13,750	\$ -	2021 - \$65,000	\$ 68,750
2023	Section 5307: Urbanized Area Formula	BCG0007184	442400	PREVENTIVE MAINTENANCE	Preventive Maintenance	RTA: Facility and Vehicle Maintenance	\$ 265,000	\$ -	\$ 71,250	2022 - \$265,000	\$ 356,250
2023	Section 5307: Urbanized Area Formula	BCG0007189	111240	Rehab/Reno-repave parking lot (maton in 24)	Complete repaving of CATA's parking lot	RTA: Facility and Vehicle Maintenance	\$ 80,000	\$ -	\$ -		\$ 80,000
2023	Section 5307: Urbanized Area Formula	BCG0007197	111202	Replace Two 30-FT BUS	Replacement of two 30-ft low floor buses that will have reached the end of their	RTA: Vehicle Replacement	\$ 700,000	\$ 175,000	\$ -	2019 - \$175,000; 2020 - \$175,000; 2022 - \$175,000	\$ 875,000

Section 6: Annual Performance Targets and Measures

As a recipient of Federal Transit Administration funds, CATA is required to develop and maintain a Transit Asset Management Plan per FTA's Final Rule 49 CFR Part 625. As defined by the Rule, Transit Asset Management (TAM) is the strategic and systematic practice of processing, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs of the life cycle to provide safe, cost effective, and reliable public transportation.

The preparation of the TAM Plan is based on identifying the transit assets which CATA owns and has direct Capital responsibility and the performance measures included in the Final Rule that related to these identified assets. A completed TAM Plan is required by 9/30/2018.

Equipment Non-Revenue support-service and maintenance vehicles	Performance Measure Percentage of vehicles met or exceeded Useful Life Benchmark
Rolling Stock Revenue Vehicles by mode, bus/van	Performance Measure Percentage of vehicles met or exceeded Useful Life Benchmark

Facilities Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities	Performance Measure Percentage of Assets with condition rating below 3.0 on FTA TERM Scale
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Using the above Performance Measures leads to the setting of targets against the defined Useful Life Benchmark (ULB). FTA defines as “the expected lifecycle of a capital asset for a particular Transit Provider’s operating environment, or the acceptable period of use in service for a particular Transit Provider’s operating environment.”

CATA has defined the ULB as presented in FTA Circular C 5010.1E for buses and vans.

Category	Length	Minimum Life	
		whichever comes first	
		Years	Miles
Heavy-Duty Large Bus	35-45 ft	12	500,000
Heavy-Duty Small Bus	30 ft	10	350,000
Medium-Duty Transit Bus	30 ft.	7	200,000
Light-Duty Mid-Sized Bus	25-35 ft.	5	150,000
Light Duty Small Bus (cutaways, modified van)	16-28 ft.	4	100,000

For this first TAM Plan, CATA has prepared the following targets.

Asset Information		FFY19	FFY20 (Target)		FFY21 (Target)		FFY22 (Target)		FFY23 (Target)		
Agency	Vehicle Type	Number of Assets	Percent of Assets ≥ ULB	Anticipate d Number of Assets	Target Percentag e of Baseline Assets ≥ ULB	Anticipate d Number of Assets	Target Percentag e of Baseline Assets ≥ ULB	Anticipate d Number of Assets	Target Percentag e of Baseline Assets ≥ ULB	Anticipate d Number of Assets	Target Percentag e of Baseline Assets ≥ ULB
CATA	Non-revenue vehicles	4	25%	3	0%	3	33%	3	100%	3	100%
CATA	Bus	7	0%	7	0%	7	29%	7	29%	7	14%
CATA	Cutaway Vehicles ^a	24	0%	24	0%	24	0%	24	0%	24	0%
CATA	Trolley (simulated)	2	100%	2	100%	2	100%	2	100%	2	0%

CATA plans to purchase two replacement buses (FY23) and two replacement trolleys (FY23) between FFY19-FFY23. The replacement trolleys are not programmed yet.

Facility-percent of facilities rated below 3 on the condition scale

Administration/Operations/Maintenance Facility 0% 3 Pond Road

Updates to these targets will be done in conjunction with the preparation of the next TAM Plan and the FFY2020-2024 Capital Plan.

Section 7: Recordkeeping and NTD Reporting

CATA shell report, on an annual basis, to the FTA’s National Transit Database (NTD)

- Asset Inventory data
- SGR performance targets for the next fiscal year
- Condition assessments and performance measures of capital assets
- Narrative that provides a description of any change in the condition of the Authority’s transit system or operations from the previous year and describes progress made during the reporting year to meet the performance targets set in the previous reporting year

Section 8: Conclusion

This TAM Plan will be reviewed on an annual basis, updated, and incorporated into CATA’s capital and budget planning and reporting process.

This document shall cover a “horizon period” of time (starting 10/1/2018 to 9/30/2023). Projected Fleet Replacement will change annually as new data is entered into the TAM Plan planning and update process.