To: Chair Cristol and the VRE Operations Board
From: Doug Allen
Date: September 20, 2019
Re: VRE’s Transit Asset Management Plan Update for 2018-2019

VRE’s Transit Asset Management (TAM) Plan, completed in September 2018, allows us to better monitor and manage assets, such as rolling stock and facilities. Side benefits of the plan, which is required by the Federal Transit Administration (FTA), include improved safety, increased reliability and performance, and more efficient operations. Over the past year, VRE has fulfilled several federal requirements, such as the reporting of asset inventory data, and updated internet and decision-making tools that support plan implementation. The TAM Plan will inform the lifecycle management (LCM) plan for VRE’s rolling stock and facilities.

The intent of VRE’s TAM Plan and associated LCM plan is to minimize the total cost of ownership of an asset while maximizing its performance. Transit asset management integrates activities across VRE departments to optimize resource allocation and support decision-making.

The FTA notes that asset management can enhance the customer experience through improved on-time performance and vehicle cleanliness. It also can improve safety, security, and risk management. Asset management plans provide accountability and allow customers to better understand the performance and condition of assets.

The attached TAM update provides background on VRE’s plan development and implementation and details the additional steps taken since September 2018 to improve the management of assets.
VRE’s TAM Plan development process included a review of federal requirements, the designation of an accountable executive, detailed asset inventories, results of facility and infrastructure condition assessments, and a peer review of other transit agency TAM plan efforts. VRE’s TAM Plan will be an ongoing process, and as federal guidance and VRE’s needs change, the plan will evolve. The TAM Plan covers a horizon period of four years and will be updated at least once during that period. The TAM Plan can be amended at any time during that period.

The final TAM Plan was completed in September 2018, posted on VRE’s website, and made available to the Metropolitan Planning Organizations (MPOs). The next TAM Plan update is required by October 31, 2022.

**2018-2019 ACHIEVEMENTS**

- Completed VRE’s first comprehensive Transit Asset Management (TAM) Plan in September 2018 (due October 31, 2018)
- Organized inventory of VRE’s existing assets and submitted first required report to NTD (October 2018)
- Developed and submitted FY19 asset performance targets to NTD (October 2018)
- Updated DRPT’s asset inventory database and submitted annual TransAM Report (January 2019)
- Completed an Executive Dashboard (October 2018)
- Completed updates to the functionality of the tool (October 2018)
- Developed process diagrams to support project development and decision-making (June 2018)

**COMING SOON**

- Lifecycle Management Plans for VRE’s rolling stock and facility assets.
- VRE asset management internet tool improvements, including incorporation of financial data and feature to identify new assets for NTD and TransAM Reporting.
- Establish FY 2020 asset performance targets, report annual AIM data, and complete first required narrative report for submittal to NTD.
LIFECYCLE MANAGEMENT (LCM) PROCESS

The lifecycle management process, as defined by the FTA, includes five phases: (1) Plan, Design, Construct, and Procure; (2) Use and Operate; (3) Maintain and Monitor; (4) Overhaul and Rehabilitate; and (5) Retire, Dispose, and Decommission. Note that other terms may be used, depending on the asset class in question. For example, facilities are more likely to undergo “rehabilitation”, while vehicles and their components are described as undergoing an “overhaul”. And while facilities may get replaced, only vehicles are typically referred to as “retired” or removed from service.

- **Plan/Design/Construct/Procure** – This includes the scoping of the development and construction or procurement of the asset. The asset management perspective involves considering level of service requirements and total cost of ownership.
- **Use/Operate** – This involves the use (or operation) of the asset. Asset management means the asset is available in the specified condition to be used or operated reliably to deliver the planned level of service.
- **Maintain/ Monitor** – This involves the predictive, preventive, and corrective or reactive activities required to maintain the asset in the condition required to deliver the planned level of service.
- **Overhaul/ Rehabilitate** – This phase involves planned capital expenditures required to replace, refurbish, or reconstruct an asset partially, in-kind, or with an upgrade, to optimize service and minimize lifecycle costs.
- **Retire/ Dispose/ Decommission** – When an asset can no longer perform at its intended level of service, the agency has the choice to retire, dispose, or decommission it. It also must determine if the asset or its components have any residual value and, if so, how best to capture that value. Also by the end of an asset’s lifecycle, agencies must determine whether the function of the asset remains necessary, and whether its function can be met more economically or efficiently by being replaced outright. Note that replacement and/or reconstruction signals the start of lifecycle phase 1 (Plan, Design, Construct and Procure) for a new asset.

ROLLING STOCK LCM PLAN

The Rolling Stock Lifecycle Management (LCM) Plan will build upon VRE’s already formalized asset management program by documenting existing business procedures, system and component useful life assumptions, vehicle history, and other aspects of the program. This LCM Plan will assist VRE in maintaining its rolling stock in a SGR and in a cost-effective manner throughout their useful life. This plan will include a description of lifecycle management best practices and adaptive management strategies for the maintenance and overhaul of revenue vehicles, as well as their systems and components, throughout their useful life.

FACILITIES LCM PLAN

The Facilities LCM Plan will document VRE’s existing business procedures while using components’ and subcomponents’ condition ratings and useful life assumptions, and monthly facility safety inspections to inform the program processes. The Facilities LCM Plan will assist VRE in maintaining facilities and assets in a SGR and in a cost-effective manner. This plan will include a description of the lifecycle management process and how it applies to VRE’s facility assets, as well as identifying the systems in place that can be used for informed decision-making.

VRE ASSET MANAGEMENT INTERNET TOOL

VRE continues to enhance its asset management internet tool, first deployed in 2017. This internet-based tool allows VRE and its consultant partner to manage asset inventories, conduct facility condition assessments, conduct useful life analysis of equipment and vehicles (rolling stock), identify SGR needs, and make informed decisions using the recently developed executive dashboard (below).

This tool is designed to enable user-friendly access to condition assessments and inventories in the office and field. Mobile internet access allows users to input data directly into the database, saving time and eliminating duplication of effort. Forms can be exported to Adobe PDF or Microsoft Excel for use in reports or to conduct additional analyses.

VRE TransAM 2019 ANNUAL UPDATE

VRE is required to report capital assets to the Virginia Department of Rail and Public Transportation (DRPT) via the TransAM reporting program (previously known as OLGA). TransAM is an open-source asset management platform developed under an FTA SGR grant. VRE’s goal is to provide consistency between the FTA’s NTD reporting and the TransAM database, as well as achieve the ability to apply for state funding towards capital assets. VRE’s consultant partner completed the following tasks:

- Reviewed the previous inventory items included in TransAM
- Evaluated the existing data and recommended database updates
- Conducted interviews with VRE’s CFO and Comptroller to identify data needs
- Synchronized data entries with NTD, where applicable
- Coordinated database updates for approval by VRE
- Performed data entry updates by the January 31, 2019 deadline
- Provided VRE with an “After-Action Report” summarizing all activities and making recommendations for future TransAM update efforts

VRE asset management internet tool