

Capital Improvement Plan

FY2021-FY2026





December 2019

Acknowledgements

Hampton Roads Transit

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Acronyms and Definitions

- ACC Advance Capital Contribution
- ADA Americans with Disabilities Act
- CIP Capital Improvement Plan
- CMAQ Congestion Mitigation and Air Quality grant program
- DRPT Virginia Department of Rail and Public Transportation
- EDO Extra-Duty Officer
- ERC Elizabeth River Crossing
- FMO Financial Management Oversight
- PM Preventive Maintenance
- RSTP Regional Surface Transportation Program grant
- SET HRT Senior Executive Team
- SGR State of Good Repair
- TDP Transit Development Plan
- ULB Useful Life Benchmark

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1. Introduction

BACKGROUND

Hampton Roads Transit's (HRT) Capital Improvement Plan (CIP) is a six-year capital program that guides how the agency will spend its limited future capital funding. The Plan is developed to capture all agency capital needs and allows HRT to communicate those needs to stakeholders and the public. The plan focuses on the six years, from Fiscal Years (FY) 2021 to 2026. FY2020, the current fiscal year, is included as a baseline but is not a focus of this plan, as its capital expenditure program has already been set last year.

HRT developed its first comprehensive six-year CIP in 2012 and has committed to updating the plan on an annual basis. The CIP is developed collaboratively with input from every department in the agency and capital projects are prioritized for funding based on an objective evaluation. This CIP is financially constrained by anticipated capital revenue over the next six-years, however it also shows the full list of capital needs and their anticipated costs for future funding.

When developing evaluation criteria, it was important to consider Virginia's competitive process for allocating statewide transit capital funds. This policy was adopted in October of 2018, and states that transit capital needs will be evaluated in one of three categories. Project applications compete statewide against all other submitted capital needs in a category. The categories are:

- 1. State of Good Repair (SGR) Refers to projects to replace or rehabilitate an existing asset. Projects are assessed by "condition" of asset based on age and mileage (if applicable) and an impact score determined solely based on the type of asset (predefined by the State).
- Minor Expansion (Non-SGR) Refers to projects to add capacity, new technology, or customer enhancements that are less than \$2 million or, for expansion vehicles, an increase of less than five vehicles or 5 percent of fleet size (whichever is greater). Project scored based on impact score (same impact score as SGR projects).
- Major Expansion Refers to projects to add, expand, or improve service with a cost exceeding \$2 million or, for expansion vehicles, an increase greater than five vehicles or 5 percent fleet expansion (whichever is greater).

The CIP is intended to function as a living document. This means that as needs emerge, or external conditions change throughout the year, HRT will adapt its capital investment strategies as warranted. The plan is updated annually to capture any new projects and changes to capital funding.

APPROACH

HRT's CIP is developed in a systematic way. With consultant support, HRT identifies, prioritizes, and develops costs for a full spectrum of capital needs for the agency over the mid-range planning horizon. The current CIP was developed following the main steps outlined in **Figure 1**. **Table 1** lists the HRT Senior Executive Team and other key staff who were the key participants in developing the capital plan.



Table 1: HRT CIP Development: Key Staff

- William Harrell President and CEO
- Ray Amoruso Chief Planning and Development Officer
- Kim Wolcott Chief Human Resource Officer
- Conner Burns Chief Financial Officer
- Erin Glenn Interim Chief Information/Technology Officer
- Gene Cavasos Director of Marketing and Communications
- Sibyl Pappas Chief Engineering and Facilities Officer
- Jim Price Chief Transit Operations Officer

- Angela Glass Director of Budgets & Financial Analysis
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Figure 1: Process for Developing the HRT CIP



KEY FINDINGS

HRT identified \$287 million in capital needs1 over the next six years. Through a combination of federal, state, and local funding, HRT was able to identify a financially constrained \$219 million capital program. This program assumes the maximum state match for all projects eligible for state funding. The state accounts for 51% of projected capital funding. However, unlike in previous years, the amount of funding HRT will actually receive from state sources over the course of the six-year horizon will depend largely on how projects compete against those of other transit agencies statewide. HRT will need to continue to adjust the plan as actual funding levels are awarded. The program includes major investments in the agency's fleet that will allow HRT to reach FTA's recommended average fleet age of six years by 2023.

While the CIP is a capital plan, the capital budget is inextricably linked to the operating budget because as more federal formula funds are kept for capital needs, fewer funds are available for operations. Likewise, expending federal formula funds for preventive maintenance in support of the operating budget means that there is less available for capital needs. Lower levels of capital investments can increase operating costs over time, as the maintenance needs of aging assets can increase significantly each year. HRT's anticipated revenues do not keep pace with growing costs. There is inadequate capital funding for the agency to meet recurring core capital needs. From a planning perspective, this is true even with assumptions of continued state capital grant funding. Meanwhile, the agency's operating budget (discussed in greater detail in HRT's Transit Development Plan), continues to depend heavily on federal formula funds underwriting preventive maintenance activities.

Without any source of dedicated funding, HRT will continue to struggle to adequately fund capital needs and its daily operations. An outsized reliance on state and federal funding means that the agency's financial future is tied to sources over which HRT and local and regional partners have no control. This adds uncertainty to the sustainability of reliable transit service for the region and makes it more challenging to develop a stable long-range capital program.

¹ Year of expenditure (YOE) dollars



2. Agency Overview

Hampton Roads Transit (HRT) provides more than 13 million passenger trips2 annually to jobs and destinations across a vast region. By 2045, the population of the Hampton Roads region is expected to increase by more than 15 percent to over 2 million people,3 and residents will face increased congestion and greater difficulty traveling to work. HRT's 2017 Transit Development Plan envisioned a network of frequent transit routes (Core 20), built mostly upon the current route network, that would facilitate region-wide connectivity. However, funding for such a network is not identified, and previous work stopped short of prioritization or potential phasing of future investments in a high frequency bus network. HRT is currently working on a Strategic Regional Transit Transformation Project and Transit Strategic Plan that is evaluating the performance of the current system and taking a "blank slate" approach to designing a bus network and mix of services that could be more efficient and effective than current operations. This project will also identify specific actions that would be required to implement organizational and operational changes to transform the current system over time.

To meet current and future challenges, HRT will need to maintain its existing infrastructure while laying the groundwork for future growth. However, the agency's current capital funding sources fall short in meeting the costs to rehabilitate and replace its existing capital assets, let alone to purchase new assets and expand services. A state of underinvestment in capital assets challenges the ability of the agency to maintain its assets in a State of Good Repair (SGR) and can lead to costly unplanned maintenance when systems break down.

To provide quality service now and in the future, these assets must remain functional, up-to-date, and well-maintained. The FY2021 Hampton Roads Transit Capital Improvement Plan (CIP) includes 85 projects that maintain the agency's buses, light rail, and paratransit fleet, as well as its wide array of supporting assets in operations, facilities, technology, and safety and security.

OPERATIONS

HRT's mission is to provide high-quality, safe, efficient, and sustainable transit service across a service area of more than 400 square miles. This Capital Improvement Plan includes projects that are customer-facing, such as replacing and repairing buses, along with back-end investments in the necessary equipment to ensure the system is in a state of good repair.

Funding shortages have resulted in HRT operating with an aging fleet of buses. In recent years, HRT has struggled to deliver bus services because of the large number of buses that are out of order or undergoing maintenance at any one time. In the most unfortunate circumstances, vehicles frequently break down while in service.

As a result, projects to replace, rehabilitate, and overhaul HRT's fleet—from buses to The Tide to paratransit vehicles to ferries—are high priorities in this Capital Improvement Plan. Operating a worn-out bus is expensive, as older vehicles tend to cost more to service and maintain than newer or rehabilitated

² Hampton Roads Transit Ridership Data 2018

³ HAMPTON ROADS 2045 Socioeconomic Forecast. Hampton Roads Planning District Commission, 2017

vehicles. Unreliable service caused by an aging fleet can also deter customers from using HRT services, leading to declining fare revenues and ridership.

Just as the fleet ages and old buses require ongoing replacement, so do non-revenue (support) vehicles and maintenance equipment. While unseen by most customers, non-revenue vehicles are an essential part of HRT's operations. The non-revenue fleet includes a range of vehicle types from sedans for security staff to service trucks and heavy-duty vehicles. For example, maintenance staff rely on these vehicles to make repairs to buses on the road and to help maintain the agency's 7.4 miles of light rail track, as well as its transit centers and other facilities. HRT's 102 non-revenue vehicles have traveled an average of over 94,000 miles, and 35 of those vehicles have traveled over 110,000 miles. When these vehicles break down, it undermines the ability of HRT staff to service buses, The Tide, and other vehicles on which customers depend. Projects to replace and expand the non-revenue vehicle fleet, as well as to purchase other critical maintenance equipment, are included in the Capital Improvement Plan.

TECHNOLOGY

Technology underlies every part of the HRT system, from scheduling and dispatching buses, to customer service, to tracking the condition of the agency's assets. The CIP prioritizes significant overhauls of HRT's critical technology assets, as well as new software and hardware that improve agency efficiency and the customer experience. These investments enable HRT to provide real time arrival information to customers, a vital component of the passenger experience. These investments also improve disaster recovery, on board bus safety, and IT network security.

Projects in the CIP would roll out customer facing technological improvements to riders in more of the HRT system, in part through significant improvements to the agency's back-end technology infrastructure. For instance, providing real-time arrival information at bus stops and stations would require not only electronic displays, but also compatible automatic vehicle locator devices on every bus and light rail vehicle, as well as software to process and distribute location data. Likewise, the introduction of new bus fareboxes and ticket vending machines will require new systems to document passenger boardings and process payments. Investments in such improvements build off previous investments made by HRT in real-time systems and fare payment technology. In the future, HRT would like to explore options for advanced and/or mobile ticketing systems comparable to those used by other agencies. HRT is piloting a mobile ticketing program for Virginia Beach Wave Trolleys. Riders are able to purchase tickets and passes through the HRT mobile app. HRT hopes to move forward with a full roll-out of mobile ticketing in the next few years.

Inside HRT offices, continued investments are also needed in critical software and hardware, which are increasingly under strain, out of date, and at risk of failure. For example, HRT's accounting and human resources software packages automate processes that otherwise would be performed by hand, reducing the costs of running the agency. If investments in these systems are postponed, HRT will see a decline in agency productivity and growth in future year costs of procuring software. Finally, new technology tools are needed where none currently exist. Systems like a transportation statistics database would automate data collection and support streamlined federal reporting, thereby reducing administrative costs for the agency.

Large technology infrastructure projects, like laying network cable between facilities, help to ensure that HRT maintains the correct foundation to support all of the agency's current and future needs. Investments



in these foundational projects ensures that the agency is capable of growing as technology improves and services expand.

FACILITIES

Recently upgraded facilities like the Downtown Norfolk Transit Center show that HRT facilities can be points of pride in the community. Still, other facilities illustrate the system's many capital needs. At busy transfer locations like the Evelyn T. Butts facility, customers do not have access to enough shelters, lighting, or places to sit. At many bus stops, customers may wait for the bus in the elements.

The CIP includes several proposed projects to improve existing transfer centers and park & rides with new pavement, restrooms for customers and operators, and better, more energy efficient lighting. Also included in this plan are new customer amenities at bus stops and improvements to bus stop accessibility for wheelchair users and others. These upgrades and State of Good Repair investments also reduce the agency's costs in the future; for instance, if pavement goes unrepaired and significantly degrades, it can become more expensive to repair or replace later.

HRT's fleet must be serviced and stored in one of the agency's maintenance facilities. These facilities and their equipment are used by HRT staff to maintain and repair vehicles and to store a fleet that will continue to grow as HRT service expands. For example, the Capital Improvement Plan includes a project for the Parks Avenue (Virginia Beach) garage replacement, a long-standing need to replace an outdated and too small facility to support existing operations. Planning, finance, human resources, and other administrative staff also rely on well-maintained facilities in which to work. To this end, the Capital Improvement Plan prioritizes continued Phase II renovations at 3400 Victoria Boulevard, a facility used for both fleet maintenance and the agency's administrative functions.

SAFETY AND SECURITY

A cornerstone of HRT's mission is to provide transportation services that are safe from accidents and secure against harm. The CIP includes projects focused on improving the safety and security of HRT customers, employees, and the community as a whole.

The increased popularity of The Tide during major sports and cultural events has brought new safety and security challenges for HRT. Officers of local police agencies who provide assistance to HRT (known as "extra duty officers") frequently use HRT equipment to oversee these events and conduct additional security throughout the system. Investments contained in the CIP would ensure HRT that has sufficient police equipment for extra duty officers. If investments like these are foregone, existing equipment will be stretched even further in the years to come.

Though police officers are perhaps the most visible aspect of the agency's safety and security efforts, capital assets play a lesser-known but important role. For example, if an HRT vehicle is involved in a collision or a crime occurs onboard, investigators rely on video recording equipment to review the events. With current technology, reviewing these videos requires tape to be manually removed from the bus, leaving the bus without any video recording capability. As a result, until the equipment is returned, the bus must be kept out of service. Investments in the Capital Improvement Plan would upgrade recording equipment to allow for digital download of footage, helping to keep buses and light rail vehicles in service, thereby precluding service disruptions, and speeding investigation of incidents.



While a broad array of proposed capital improvements would improve safety conditions for HRT workers, some are specifically focused on that purpose. For instance, one proposed capital improvement project would upgrade devices that warn workers about oncoming Tide trains, allowing needed track work to be conducted safely.

3. Developing HRT's Capital Project Priorities

The HRT Capital Improvement Plan for FY2021 to FY2026 utilizes an objective process to determine the priority of projects. The prioritization methodology in this CIP has changed slightly from previous years, adding another layer of evaluation to better match the new state funding landscape.

IDENTIFYING CAPITAL IMPROVEMENT PROJECTS

Project Screening

As in prior years, the process began with the initial compilation and screening of projects to be prioritized. The CIP consultant team met individually with project "owners" from all departments and with the Senior Executive Team to identify capital projects to be included in the CIP and evaluated further in the prioritization process. Projects that are already funded and underway are not included in the CIP; the plan considers a project as underway once it has been awarded all expected grant money, even if actual work has not started on the investment.

To be included in the CIP, a project must meet the following standards:

- A project must be a capital improvement. It should represent a discrete investment that results in a tangible product, be it a system, physical asset, or plan. Ongoing incremental maintenance is considered an operating expense and is not funded through the CIP process.
- 2) The project should include a scope defined clearly enough to allow assessment under the prioritization criteria. A project must include a cost estimate to be evaluated in the CIP, though a rough estimate is acceptable for projects slated for later years of the plan.
- 3) For projects proposed for FY21, the submitter must provide a higher degree of information to meet the requirements of federal and state grant applications as compared to projects in the later years of the plan. Including:
 - a. Asset level description of project
 - b. Information on asset age
- 4) A project must require funding beyond any existing grants that have been programmed and awarded matching funds by the state. Even if a project has not yet commenced, if its funding is already in place it is considered complete from the perspective of the CIP.

Beginning with the list of projects left unfunded in last year's CIP, HRT further refined the list of capital projects to be considered in the CIP. These refinements to the list of possible CIP projects included:

- Adding new capital needs;
- Removing projects that were completed;
- Removing projects that the Senior Executive Team determined were no longer needed;

- Removing projects that could instead be implemented in the course of normal agency operations;
- Reconciling, combining and removing duplicative projects;
- Splitting projects to accommodate upgrades and phasing schedules; and
- Modifying the scopes of previously proposed projects.

Projects Included in the FY2021 - FY2026 CIP

There are 85 capital needs included in this year's CIP (Table 2), compared to 82 in last year's CIP. The increase in the number of projects is largely due to an increase in the number of technology and security hardware and software needs. Of the 85 projects included in this year's CIP, five do not require prioritization because they have a full funding commitment; the CIP focuses on prioritizing and funding the remaining 80 needs as they compete for the limited amount of funding that is unallocated to specific projects.

Throughout this document project Unique IDs (UIDs) refer to specific line-item projects. Relative to the previous year's CIP, UIDs have been updated for each project to better indicate the relationship of individual projects to Project Groups:

- The two characters at the beginning of the UID specify under which department the project falls.4
- The first two numerical digits are shared among any interrelated projects.
- Any project which ends in 99 is an upgrade to an existing or ongoing investment.

Unique ID	Name	Description	Assigned Priority Score?
EF0120	3400 Victoria Boulevard Renovation: Phase 2	Complete renovations of 3400 Victoria Boulevard initiated in Phase 1. This work will encompass the administrative building on site, including a renovation of administrative space to meet the current needs of the agency. The funded portion of this project will not meet all needs at the site. If additional funding becomes available, HRT would like to: upgrade IT switches, cables, conference room space, wireless, emergency power systems; expand the server room to accommodate additional equipment; replacement of bus lifts; renovate lobby; renovate paint booth and other adjacent structures.	Yes
EF0900	Parks Avenue Garage Relocation and Replacement	Relocates Virginia Beach's Parks Avenue maintenance facility. The current facility is too small and lacks the proper clearance to allow for use of a bus lift. Because of these restrictions, HRT can only use the facility during the peak season. In the winter, buses must deadhead from Norfolk, costing the agency money and reducing operating efficiencies. A new facility will allow for all-year operations and be large enough to accommodate maintenance work locally. HRT is exploring whether a modular facility can be built out to meet minimum needs at the site.	Yes

Table 2: Projects Included in the FY2021 - FY2026 CIP

⁴ EF = Engineering and Facilities; IT = Technology; NR = Non-Revenue; OP = Operations; PD = Planning; SS = Safety and Security.



Unique ID	Name	Description	Assigned Priority Score?
EF2400	ADA Bus Stop Access Upgrades	Program to enhance accessibility at bus stops to meet Americans with Disabilities Act standards. The majority of HRT passenger facilities are located on property controlled by our partner jurisdictions. This funding would fund ADA improvements at bus stops in conjunction with improvements made by partner jurisdictions to ensure barrier- free access to bus stops.	Yes
EF3300	Bus Stop Amenity Program	Supports an agency-wide bus shelter amenity program, including funding for new shelters, benches, trash cans, and lighting.	Yes
EF3600	HRT Paving Program	Establishes a capital fund to repair paved services. HRT is responsible for maintaining hundreds of thousands of square feet of paved area, including parking lots, transit centers, and at maintenance facilities. The agency lacks a dedicated fund for paving, leading to the deterioration of paved services due to a growing maintenance backlog.	Yes
EF3805	Newport News Transit Center Upgrades (Phase II)	Upgrades the existing facility by resurfacing/repaving the bus loop, augmenting and improving the efficiency of lighting, repurposing office space, and conducting additional rehabilitation on heavily used restrooms and waiting areas. The project will address public facilities in need of repair, lighting, and degradation of the bus loop.	Yes
EF3806	Hampton Transit Center Upgrades (Phase II)	Upgrades the existing facility by resurfacing/repaying the bus loop, replacing shelters, augmenting and improving the efficiency of lighting, repurposing office space, and conducting additional rehabilitation on heavily used restrooms and waiting areas. The project will address public facilities in need of repair, lighting, and degradation of the bus loop.	Yes
EF3807	Wards Corner Transfer Center Upgrades	Upgrades the Wards Corner Transfer Center with improved landscaping, better lighting, and customer restrooms.	Yes
EF3810	Evelyn T Butts Transfer Center Upgrades	Replaces the existing Evelyn T. Butts transit center with a new facility on the scale of Wards Corner transfer center. The goals of the project are to provide HRT customers a more conveniently located transit center with upgraded amenities. This project includes the procurement of land and build-out of the facility. The existing transit center serves a large number of riders but is poorly located and provides minimal amenities like lighting and shelters.	Yes
EF3811	Silverleaf Transfer Center Upgrades	Upgrades the existing facility by replacing bus lanes and bays with concrete pads, improving the energy efficiency of lighting, and enhancing the aesthetic appearance of the site. TRAFFIX vanpools and MAX service will benefit, as there is little local bus activity at this site. These upgrades may require a new agreement with the Virginia Department of Transportation (VDOT) or the City of Virginia Beach for HRT to proceed with improvements.	Yes



Capital Improvement Plan Update: FY2021 to FY2026

Unique ID	Name	Description	Assigned Priority Score?
EF3818	Victory Crossing Safety Upgrades	Improves safety and security at the Victoria Crossing transit center by improving lighting.	Yes
EF3819	Greenbrier Park and Ride	Upgrades a portion of the parking lot at the Greenbrier Mall into a Park & Ride. The site will see the installation of new bus pads and a passenger waiting area with shelters, lighting, and seating.	Yes
EF3822	Reon Drive Transfer Center Upgrades	Creates a transit center with two bus bays to provide customers with parking and a sheltered waiting area, along with layover space and operator restrooms. The project will create an aesthetically appealing area for customers and be similar, but smaller, to the Wards Corner transfer center.	Yes
EF3823	Warwick and Elmhurst Transfer Center	Upgrades site into a dedicated bus transfer facility. The location serves as the only link between HRT and WATA. The project would include a new bus loop, three bus shelters, amenities like lighting seating and trash cans, and restrooms. Project will include land acquisition.	Yes
EF3824	Net Center Replacement	This project will relocate the Net Center to a new location and will require the construction of concrete pads, lighting, and signage.	Yes
EF3825	Robert Hall Transfer Center Replacement	This project would replace the current curb-side bus stops at Robert Hall Blvd with a transit center on a scale similar to Wards Corner. Chesapeake currently lacks a suitable transit center to provide a hub for services in the City. This facility would include covered waiting areas and additional bus bays. New facility would have safety benefits by redirecting passengers away from driving aisle at shopping center.	Yes
EF3900	18th Street Building 1 and 2 Rehab	This project will rehabilitate the Building 1 and Building 2 facilities at 18th Street. It finishes the items still in need of updating like carpet, tile, flooring, and furniture.	Yes
EF4000	Gate Replacement Project	The project replaces gates at Norfolk, Hampton, NTF transit centers. There are 8 gates total that need to be replaced. This project includes the gates and updated readers necessary for them to work. This project would fix a faulty asset that uses a lot of maintenance time and resources.	Yes
EF4100	18th Street GFI Vault Relocation	Relocate the GFI Vault at the 18th Street Garage to eliminate conflicts with the bus wash. Due to proximity to the bus wash entrance, staff and equipment are exposes to vapor emitted from the wash. The present location poses a health and safety hazard, as well as negatively impacts the productivity of the wash.	Yes
IT0100	HASTUS (Scheduling Software)	Replaces HASTUS scheduling software for bus operations with a newer version of the software. HASTUS is the scheduling software used by HRT for bus operations. The existing software has reached the end of its useful life and needs to be replaced as soon as possible. Delaying implementation will result in reduced scheduling capabilities at HRT along with escalating replacement costs.	Yes

Unique ID	Name	Description	Assigned Priority Score?
IT0200	Bus CAD AVL System Upgrades	Replaces and upgrades HRT's on-board computer-aided dispatch/automatic vehicle locator (CAD/AVL) systems. These systems allow the agency to track vehicle location and passenger boardings. This upgrade is a prerequisite for the agency to provide real-time passenger information.	Yes
IT0300	Large Technology Infrastructure	This project would build a private WAN connection between the Norfolk Tide Facility and the Southside Operations Facility, and a connection between Hampton HQ Facility and Southside Operations Facility. Agency is challenged with running distributed line of business applications that span multiple sites. In many instances co-locating these systems in a single data center either not feasible nor appropriate due to the business needs and BCDR requirements. While there is a possibility of increasing the throughput of existing WAN by paying higher premiums to the telco providers, to achieve the desired throughput a private WAN is required.	Yes
IT0500	Technology Hardware, Mobile and Network Equipment	Replace IT hardware, including: Wi-Fi at facilities; firewall upgrade; network monitoring system upgrade; upgrade of phone system; and, Oracle virtualization. These investments will ensure that staff have the propererty tools to support operations and will improve HRT's resilience to future security threats.	Yes
ІТ0700	Bus Technology Fare Payment Upgrade	Investment in HRT's fare collection systems to enable the adoption of mobile ticketing. This project includes procurement of a system, validation and implementation of technology, and procurement of any necessary equipment. HRT is currently pursuing a pilot to help determine the optimal technological solution.	Yes
IT0910	Passenger Information Displays - Bus Facilities	Purchases and installs digital signs that will display bus arrival information and system alerts. HRT plans to eventually have displays at all major transfer locations. The top priority locations are HRT's busiest transfer hubs: Downtown Norfolk Transit Center, Hampton Transit Center, and Newport News Transit Center. IT1910 is a perquisite to implementing the project.	Yes
IT0920	Passenger Information Displays - Light Rail	Purchases and installs digital signs that will display light rail arrival information and system alerts. HRT plans for a total of 22 displays to be located at all existing Tide stations.	Yes
IT1200	Onboard Wi-Fi	Implements on-board Wi-Fi across HRT's bus fleet.	Yes
IT1310	Audio Monitoring System (Phone + Control Room)	Replacement of HRT's existing out-of-date voice logger system. The new system will record bus operations communication, along with monitoring customer service calls. The current system was installed in 2006 and has surpassed its useful life.	Yes



Unique ID	Name	Description	Assigned Priority Score?
IT1699	Financial Information Software (Upgrade)	Upgrades Financial Information Software (IT1610) to ensure the future system is maintained properly and continues to be supported by the software vendor. This project is slated to occur at least 5 years after the initial implementation of the system that is currently underway.	Yes
IT1799	PeopleSoft HCM (Upgrade)	Upgrades PeopleSoft HCM software to ensure the future system is maintained properly and continues to be supported by the software vendor.	Yes
IT1999	Real-Time System (Upgrade)	Upgrades HRT's real-time systems (IT1910) five years after initial implementation to maintain a state of good repair	Yes
IT2110	Replace Ticket Vending Machines for Bus Facilities	Replaces existing ticket vending machines (TVMs) and installs new expansion TVMs at key transfer locations. Planned locations include: HTC, NNTC, Portsmouth High Street, Naval Base Norfolk, DNTC, and 18th Street.	Yes
IT2120	Replace Ticket Vending Machines for Ferry Docks	Installs ticket vending machines at or near HRT's ferry docks. Locations include Norfolk Waterside, Harbor Park, High Street and North Landing	No
IT2130	Ticket Vending Machines for Light Rail	Replace Ticket Vending Machines at Light Rail Stations	Yes
IT2140	Upgrade TVM PIN Pads	PIN pads used to enable credit/debit card payment are no longer supported by manufacturer and may stop working for all TVMs in HRT's system. This project would upgrade the PIN pads to current standards, including chip-based payment.LRT PIN pads at the end of their useful life in 2026.	Yes
IT2219	Transit Asset Management System (Upgrade)	Upgrades the Transit Asset Management System (IT2210) within five years of the system's initial implementation to ensure the system continues to be supported.	Yes
IT2220	Enterprise Data Integration Planning	This project will review legacy and current data sources to plan and facilitate agency-wide information management. This will include consultation, enterprise data mapping, master data management policies, data mining, data architecture, and possible uses of artificial intelligence. This will equip the agency with the tools to make data driven decisions.	Yes
IT2300	Transportation Statistics Database	Purchases and implements transit statistics database software that will allow HRT to automate reporting of statistics for the National Transit Database (NTD) and other purposes.	Yes



Unique ID	Name	Description	Assigned Priority Score?
IT2700	Mass Notification System	HRT is seeking to establish an integrated Emergency and Mass Notification System covering all of the HRT facilities and locations for the purposes of: Performing agency wide readiness notifications, broadcasting alerts in emergency situations across all HRT properties, multicasting targeted alerts to key HRT staff for alert notification, response, and recovery purposes, and integrating disparate security, facilities, and technology systems.	Yes
IT2900	INIT Light Rail APC System Fixed Side Hardware Software	INIT Automatic Passenger Counting System – an automatic passenger counting system used by HRT for counting passenger boardings and alightings on light rail vehicles. This system is used for light rail ridership analysis by the Planning department. This project will include upgrade of the existing fixed-side hardware (servers, network equipment, wireless access point) and software (OS, database, and INIT MobileStatistics) to the latest available version. This project does not include upgrade of the APC equipment installed on the light rail vehicles	Yes
IT2920	Onboard APC Replacement for LRT	This project will include upgrade of the existing on-board APC equipment (sensors, network equipment, computer) to the latest available equipment. This project does not include upgrade of the fixed-side APC computing system and network equipment installed at HRT.	Yes
IT3000	Technology Planning Project	Provide technology program and project management services supporting contract creation and execution throughout the project life cycle. Ensure a staffing process that coordinates sourcing, identifies skilled personnel, and submits qualified candidates.	Yes
IT3200	Innovations Initiative	Provides funding to perform research and development of innovative products and services assisting HRT in better defining and meeting the needs of its customers utilizing emerging technology opportunities. Activities include: Research, development, demonstration and deployment projects, and evaluation of technology pertinent to advancing HRT's innovative, mobility, connectivity, and transit transformation programs.	Yes
IT3300	Timesheet Software Solution	Project to replace time clocks and related software due to end of life and unsupported clocks. Customer is maintenance union employees, if clocks die it is a direct impact to Technology resources to support payroll, significant delay in being able to process their payroll, manual operations, high risk for inaccurate pay (financial impact).	Yes
LR0120	Light Rail Systems SGR	Maintains light rail systems and right-of-way in a state of good repair, including ballast resurfacing, motor replacement and overhaul, repairs to track elements.	Yes
LR0130	Light Rail Vehicle SGR	Maintains Light Rail Vehicles by rehabilitating suspension components, conducting body work and repainting of train sets, replacing brakes and powertrain components, conducting upkeep of train interiors, and other maintenance.	Yes

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Unique ID	Name	Description	Assigned Priority Score?
LR0140	Light Rail Radio Upgrades	Replaces radio system on Tide Light Rail vehicles.	Yes
LR0160	Light Rail Station Upgrades	Conduct renovations and state-of-good repair investments to light rail stations at key maintenance intervals.	Yes
LR0200	Light Rail Cab Signaling	Purchases and installs cab signaling for light rail vehicles, which improves the safety of the light rail system by regulating the speed and movement of light rail vehicles.	Yes
LR0210	Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade	The Light Rail Radio Tower and support building located at 18th street needs restoration. Tower requires new FAA lighting and repainting. Support facility needs new painting, insulation, HVAC, and generator. The existing servers for Light Rail Operations have exceeded their useful life. Servers need to be upgraded from 32-bit technology to 64 but technology. HRT utilizes three servers; Database, Train Control, and SCADA servers. This project would replace the SCADA servers, workstations, upgrade OS technology, and replace application software for each workstation and overview screens.	Yes
LR3100	Light Rail Vehicle Paint and Body Shop	Constructs a paint booth and body shop for HRT light rail vehicles. This facility would greatly expand the agency's ability to conduct light rail maintenance in-house.	Yes
LR4700	Norfolk Tide Facility Track Embedding	Embeds the tracks at the Norfolk Tide Facility to allow trucks and heavy equipment to access the light rail vehicles. Vehicles require access approximately four to five times a year.	Yes
LR4800	OCC Uninterrupted Power source Upgrade	Upgrade to the current emergency power supply at the LRT Operations Control Center (OCC) to allow for more time in case of an interruption to the power supply. This upgrade is important to the safety of customers and operators during these events. The project would replace the current unit and relocate the unit to a better location.	Yes
LR4820	NTF Foundation Repair	Foundation of the Norfolk Tide Facility (NTF) is unstable due to sinking soil. The issue is leading to structural failure. and increasing the likelihood of facility funding.	Yes
LR5000	Smith Creek Bridge Repair	Maintenance project to ensure the Smith Creek Bridge on the Norfolk Tide remains in a state of good repair. The structure received minor repairs in 2019 to address the most pressing maintenance issues but HRT has identified other repairs to make in the mid-term.	Yes
NR0100	Non-Revenue Fleet Replacement – General	Replaces existing HRT non-revenue vehicles used for general services and administration.	Yes



Unique ID	Name	Description	Assigned Priority Score?
NR0110	Non-Revenue Fleet Replacement - LRT	Replaces existing HRT non-revenue vehicles used for LRT operations and maintenance	Yes
NR0120	Non-Revenue Fleet Replacement – Operations	Replace existing HRT non-revenue vehicles used for operations such as street supervisors and dispatch.	Yes
NR0130	Non-Revenue Fleet Replacement - Bus Maintenance	Replaces existing HRT non-revenue vehicles used for bus maintenance.	Yes
NR0140	Non-Revenue Fleet Replacement - Facilities	Current facilities non-revenue vehicles do not appropriately match the duties of Facilities staff. Additionally, HRT pays unforeseen, high-demand emergency vendor pricing for snow removal services during winter storms every year. These high costs could be significantly reduced if Facilities staff had the necessary equipment to either take over or supplement vendor provided snow removal services. This project would replace inappropriate vehicles with more safe and efficient vehicles and expand the facilities non-revenue fleet to better meet the demands of the department.	Yes
NR0150	Non-Revenue Fleet Replacement - Radio/Revenue	Replaces existing HRT non-revenue vehicles used for farebox/radio functions	Yes
NR0160	Non-Revenue Fleet Replacement - Safety and Security	Replaces existing HRT non-revenue vehicles used by security.	Yes
NR0220	Non-Revenue Fleet Expansion - Facility	Project to expand the fleet of non-revenue vehicles supporting facilities.	Yes
NR0230	Store Room Fork Lifts	This project is a replacement of end-of-life Fork Trucks for efficient warehouse operations.	Yes
NR0240	V-Plow for Norfolk Tide Operations	Purchase a V-Plow for Norfolk Tide Operations that would be used to clear the right-of-way during winter snow and ice storms.	Yes
OP0110	Transit Bus Replacement	Replaces buses at the end of their useful life with new vehicles. This project includes a range of bus models, all of which will be equipped with the necessary fare collection and communication equipment.	Yes



Unique ID	Name	Description	Assigned Priority Score?
OP0120	Transit Bus Mid- Life Repower Project	Conducts a mid-life repower of HRT's bus fleet roughly six years into a vehicle's life. A repower includes a major overhaul of a vehicle's powertrain, helping to increase vehicle reliability and to ensure that HRT buses reach their maximum useful life.	Yes
OP0140	Electric Bus Pilot	Procure vehicles and charging infrastructure to pilot electric buses in HRT's fleet. Projected funded through existing LOMO grant award/.	No
OP0150	Transit Bus Expansion	Procure new buses for system expansions	Yes
OP0910	Centralized Command and Control Center	Creates a centralized command center for HRT operations. The facility would accommodate bus dispatch and oversight, the light rail command center, emergency operations command center, paratransit dispatch, and paratransit eligibility screening.	Yes
OP0920	Paratransit Operations Center	Creates a centralized facility to operate and administer paratransit services.	Yes
OP1110	Paratransit Fleet Replacement	Replaces HRT's existing paratransit fleet when vehicles reach the end of their useful life.	Yes
OP1120	Paratransit Fleet Expansion	Expands HRT's existing paratransit fleet to meet ever-growing paratransit demand.	Yes
OP2800	Bus Operator Driving Simulator	Procures a bus training simulator to be used to train HRT bus operators.	Yes
PD0200	Corridor Studies	Funding for corridor studies, design, and environmental work	No
PD0300	Autonomous Vehicles	Study to explore implementation of and coordination with emerging autonomous vehicle technology.	No
PD0400	Emerging Technologies	Funding to support adoption of emerging technologies that may impact HRT service.	No
SS0200	Upgrade the Video Recording Equipment for Buses	Replaces video cameras on buses to allow for streamlined downloading and saving of accurate video footage. Video footage is used to validate customer complaints about operators, justify employee discipline and/or termination, and verify workers' compensation claims and auto claims from drivers involved in crashes with HRT buses.	Yes
SS0210	Upgrade the Video Recording Equipment for Light Rail	Procures video recording equipment for light rail vehicles.	Yes
SS0400	Mobile Camera Units for Transfer Centers	Purchases four mobile camera units for transfer centers, likely to be used at Evelyn T. Butts, Wards Corner, 20th and Seaboard, and other transfer centers with security issues. Existing cameras will be mounted to a Safety and Security Surveillance Trailer that will be portable and easily deployed by HRT safety and security staff when temporary surveillance is necessary.	Yes



Unique ID	Name	Description	Assigned Priority Score?
SS0799	Wayside Advance Warning Device Upgrade	Purchases and installs wayside advance warning devices. The wayside warning devices provide early warning of approaching trains to track work crews, track inspectors, walkers, and signal personnel. The devices that were purchased in FY16 will need to be replaced four years later.	Yes
SS1510	Expansion Fixed-Cameras	Install new fixed cameras at HRT passenger facilities to improve customer safety and security.	Yes
SS1520	Replacement of Fixed-Camera Equipment	Replacement of facility surveillance equipment at HRT	Yes
SS1600	Replacement of Key Card Readers	After March 2018, the current HRT Badge system will no longer be supported by the vendor. This project will replace the un supported readers and/or replace the entire system if needed.	Yes
SS1610	Safety Management System	Responds to Federal mandate by procuring a safety management system for the agency. HRT is still developing a scope and final cost.	Yes

Project Costs

The 85 projects in this year's CIP, represent a six-year capital need of \$287 million (YOE \$s) HRT's capital costs in this document represent only the un-programmed needs of a project as of October 2019. An un-programmed need represents the value of a project after existing active funding sources have been considered. For the purposes of the CIP, a project is considered active once its funding has been awarded.

In reality, once funds have been obligated by the grantor, they may not be immediately spent by HRT for various reasons ranging from procurement lead time (e.g., the average bus takes 18 months to procure) to delays in assembling the necessary funding to complete a project.

Measuring State of Good Repair

To analyze the budget needs and implications of attaining a State of Good Repair for its assets (vehicles, facilities, etc.), HRT has begun implementing the Transit Economic Requirements Model (TERM) Lite, an FTA-designed asset management and analysis tool. TERM Lite measures:

- State of Good Repair (SGR) backlog (total dollar value and by asset type)
- Level of annual investment to attain SGR or other investment objective
- Impact of variations in funding on future asset conditions and reinvestment needs
- Investment priorities by mode and asset type

The use of TERM Lite will improve HRT's ability to make investment decisions that best support its midand long-term State of Good Repair goals and performance targets. HRT has made significant progress in developing the databases required to use TERM Lite with the completion of the facilities asset database. Over time, HRT will record all investments in capital assets directly into the database, improving the quality of data and making the system a better predictor of investment needs. This asset level tracking will



also be necessary to ensure accurate and simple reporting for state funding under the new evaluation process. A second score was developed for this year's CIP that takes into account these asset details.

SCORING AND RANKING PROJECTS

Figure 2 provides an overview of the FY21 to FY26 CIP's project selection, evaluation, and prioritization process. Once the list of projects was compiled, each project was scored based on 13 criteria across four themes. Finally, the raw score was normalized based on the project cost to more fairly compare projects of varying size, cost, and scope. This normalized score was then translated into a rating of one to five, with five representing the highest priority projects.

In addition to HRT's internal rating, the CIP calculates a second score (where possible) that simulates the State scoring process for capital projects. This score was used to help guide programming decisions but did not directly influence the prioritization of a project.







Project Scoring

Each project competing for un-committed funds was evaluated using the rubric in **Table 3.** Projects receive points according to whether they meet the criteria for each of 13 measures. These measures are grouped within four themes, and points in these themes are weighted and scaled to reflect HRT's priorities for the CIP. This evaluation process, described in detail below led to the prioritization results that follow in **Table 4.**

Themes

Capital projects were evaluated according to four themes, which are based on HRT's strategic goals and objectives:

- 1. Customer Experience and Service Delivery
- 2. Efficiency and Effectiveness
- 3. State of Good Repair
- 4. Risk Reduction

Measures

Within each theme, between two and five measures are used to evaluate the degree to which a project advances the themes. For instance, under Theme Four: Risk Reduction, projects are evaluated on two measures: 4.1 "Meets agency mandate, requirement, or audit finding" and 4.2 "Addresses safety, security, or other risk."

Criteria

A project receives points based on the criteria it meets for each measure. In many cases, projects with quantified benefits received an additional point compared to projects with only qualitative justifications. For instance, a project whose sponsor estimated the reduction in operating costs in dollars as a result of the project would receive an additional point in measure 2.1, "Reduces Operating Costs", relative to a project whose sponsor only stated that a reduction in operating costs would be likely. In addition, a project that increases the agency's operating costs would receive negative one point in measure 2.1.

Weighting by Theme

To produce a project score, points in each theme are reweighted to account for the different number of measures in each theme in order to weigh each theme equally. This means that a project that received a perfect score on the three measures in Theme Four would be ranked the same as a project with a perfect score on the five measures in Theme One, all else being equal. After this weighting, the sum of a project's points across all themes becomes the project's "raw" score.

Scaling by Cost

The raw score for each project is divided by the logarithm of each project's cost (in current year dollars) to produce a cost-scaled score that is comparable across large and small projects. Without this re-scaling, a multi-million-dollar project will likely have a higher score than a project that costs a few thousand dollars due to the larger impact of the costlier project. However, on a dollar by dollar basis, the lower cost project may represent the best return on investment. Because the distribution of project costs is many times greater than distribution of project scores, a log-based normalization was selected. This has the effect of condensing the range of project costs to be comparable to the range of raw scores.



Theme	Measure	Criteria			
	1.1 Project improves customer satisfaction	 2 points: Directly addresses a documented complaint 1 point: Indirectly addresses customer demand 			
TIO	1.2 Supports expansion of service	 2 points: Directly supports expansion of service 1 point: Indirectly supports expansion of service 			
Customer Experience and Service Delivery	1.3 Makes it easier to use HRT	 2 points: Improves accessibility by making the system easier to use and/or addressing mobility barriers. 1 point: Indirect benefit to accessibility 			
	1.4 Protects against service disruption	0-3 points: Varies based on frequency and severity of failure			
	1.5 Benefits many HRT customers	 Subtotal of the Theme One points multiplied by a factor that varies based on the number of affected HRT customers. 			
	2.1 Reduces operating costs	 2 points: Quantified decrease in costs 1 point: Expected decrease in costs but no analysis conducted to quantify -1 points: Increase in costs 			
Theme Two: Efficiency and	2.2 Improves operational efficiency	 2 points: Quantified increase in efficiency 1 point: Expected increase in efficiency but no analysis conducted to quantify -1 points: Decrease in efficiency 			
Enectiveness	2.3 Represents the best alternative	 2 points: Cost/benefit analysis conducted to support project 1 point: Only identified alternative (no CBA provided) -1 points: Negative return on investment 			
Theme Three: State	3.1 Replaces or rehabilitates an existing asset	 2 points: replaces or rehabilitates a capital asset AND ensures maintenance of HRT's operational capacity 1 point: Replaces and rehabilitates an existing asset OR ensures maintenance of HRT's operational capacity 			
of Good Repair	3.2 Prolongs the life of an existing asset	1 point: Prolongs life of another asset			
	3.3 Completes or enhances an existing capital investment	 2 points: Completes an existing capital investment 1 point: Enhances an existing capital investment 			
	4.1 Meets agency mandate,requirement, or audit finding4.2 Addresses safety, security, or	 2 points: Project meets mandate, audit finding or compliance requirement 3 points: Project reduces risk of loss of life or 			
Theme Four: Risk Reduction	other risk	 serious injury on HRT service 2 points: Project addresses security or safety risk to HRT customers and employees; project closes security vulnerability at agency 1 point: Project addresses any other security impacts. 			

Table 3 : Evaluation Criteria and Scoring Rubric



Prioritization Results

Once the scores were scaled by cost, each project was assigned a rating based on the quintile within which the project score fell. For example, projects that scored at the top 20th percentile or better received a rating of 5, projects within the 21st to 40th percentiles a rating of 4, and so forth.

The cost-scaled scores for submitted capital projects differed extensively; the highest scoring project in the CIP earned a score of 100 out of 100, while the lowest scoring project received a zero. **Table 4** provides a list of each project (by project family), rating, and total cost (year of expenditure dollars).

The prioritization system is intended to guide the development of a constrained capital plan but is not the sole input in creating a constrained capital plan. Certain projects may not achieve a high score but are necessary to meet regulatory requirements. In other instances, a lower ranked project may be partially or fully funded through a specific grant or funding source and therefore moved forward. Finally, certain projects are simply disadvantaged in the project rating process but are still considered important to meeting the agency's strategic objectives.

The Senior Executive Team workshops give agency leadership the opportunity review the priority ranking and arrive at consensus on what projects to include in the final constrained CIP.

Table 4: Phontization Results and Year of Expenditure Cost (\$ thousands)				
ID	Project Name	Total Cost	Priority	
			Score	
EF0120	3400 Victoria Boulevard Renovation: Phase 2	\$10,000	5	
EF0900	Parks Avenue Garage Relocation and Replacement	\$44,500	5	
EF4100	18th Street GFI Vault Relocation	\$152	5	
IT0200	Bus CAD AVL System Upgrades	\$1,038	5	
IT0300	Large Technology Infrastructure	\$1,732	5	
IT1699	Financial Information Software (Upgrade)	\$1,273	5	
IT1799	PeopleSoft HCM (Upgrade)	\$2,203	5	
IT2220	Enterprise Data Integration Planning	\$350	5	
LR0120	Light Rail Systems SGR	\$1,031	5	
OP0110	Transit Bus Replacement	\$68,086	5	
OP0120	Transit Bus Mid-Life Repower Project	\$9,753	5	
OP1110	Paratransit Fleet Replacement	\$7,120	5	
OP1120	Paratransit Fleet Expansion	\$4,109	5	
SS0200	Upgrade the Video Recording Equipment for Buses	\$5,943	5	
SS0210	Upgrade the Video Recording Equipment for Light Rail	\$113	5	
EF2400	ADA Bus Stop Access Upgrades	\$939	4	
EF3600	HRT Paving Program	\$12,641	4	
IT0100	HASTUS	\$1,555	4	
IT0500	Technology Hardware, Mobile and Network Equipment	\$2,065	4	
IT0700	Bus Technology Fare Payment Upgrade	\$3,096	4	
IT1999	Real-Time System (Upgrade)	\$1,626	4	
IT2219	Transit Asset Management System (Upgrade)	\$2,258	4	

Table 4: Prioritization Results and Year of Expenditure Cost (\$ thousands)



ID	Project Name	Total Cost	Priority Score
IT2920	Onboard APC Replacement for LRT	\$457	4
LR0130	Light Rail Vehicle SGR	\$18,764	4
LR0210	Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade	\$4,882	4
LR4820	NTF Foundation Repair	\$2,254	4
LR5000	Smith Creek Bridge Repair	\$525	4
NR0120	Non-Revenue Fleet Replacement - Operations	\$698	4
NR0130	Non-Revenue Fleet Replacement - Bus Maintenance	\$335	4
NR0140	Non-Revenue Fleet Replacement - Facilities	\$129	4
SS0799	Wayside Advance Warning Device Upgrade	\$109	4
EF3805	Newport News Transit Center Upgrades (Phase II)	\$1,794	3
EF3806	Hampton Transit Center Upgrades (Phase II)	\$1,032	3
EF3825	Robert Hall Transfer Center Replacement	\$2,305	3
EF4000	Gate Replacement Project	\$1,000	3
IT1310	Audio Monitoring System (Phone + Control Room)	\$372	3
IT2140	Upgrade TVM PIN Pads	\$329	3
IT2300	Transportation Statistics Database	\$300	3
IT2900	INIT Light Rail APC System Fixed Side Hardware Software	\$41	3
LR0140	Light Rail Radio Upgrades	\$203	3
LR0160	Light Rail Station Upgrades	\$936	3
LR4800	OCC Uninterrupted Power source Upgrade	\$105	3
NR0110	Non-Revenue Fleet Replacement - LRT	\$700	3
NR0150	Non-Revenue Fleet Replacement - Radio/Revenue	\$235	3
NR0160	Non-Revenue Fleet Replacement -Safety and Security	\$233	3
NR0240	V-Plow for Norfolk Tide Operations	\$27	3
OP2800	Bus Operator Driving Simulator	\$358	3
SS1520	Replacement of Fixed-Camera Equipment	\$1,376	3
SS1600	Replacement of Key Card Readers	\$378	3
EF3807	Wards Corner Transfer Center Replacement	\$2,298	2
EF3810	Evelyn T Butts Transfer Center Upgrades	\$5,279	2
EF3818	Victory Crossing Upgrades	\$395	2
EF3824	Net Center Replacement	\$531	2
IT0910	Passenger Information Displays - Bus Facilities	\$631	2
IT2110	Replace Ticket Vending Machines for Bus Facilities	\$502	2
IT2130	Replace Ticket Vending Machines for Light Rail	\$2,083	2
IT2700	Mass Notification System	\$774	2
IT3300	Time Collection Solution	\$558	2
LR0200	Light Rail Cab Signaling	\$8,976	2
NR0100	Non-Revenue Fleet Replacement - General	\$687	2

ID	Project Name	Total Cost	Priority Score
NR0220	Non-Revenue Fleet Expansion - Facility	\$155	2
NR0230	Store Room Fork Lifts	\$42	2
OP0150	Transit Bus Expansion	\$9,319	2
SS0400	Mobile Camera Units for Transfer Centers	\$210	2
SS1510	Expansion Fixed-Cameras	\$102	2
EF3300	Bus Stop Amenity Program	\$2,400	1
EF3811	Silverleaf Transfer Center Upgrades	\$1,027	1
EF3819	Greenbrier Park and Ride	\$361	1
EF3822	Reon Drive Transfer Center Upgrades	\$1,691	1
EF3823	Warwick and Elmhurst Transfer Center	\$1,030	1
EF3900	18th Street Building 1 and 2 Rehab	\$610	1
IT0920	Passenger Information Displays - Light Rail	\$1,698	1
IT1200	Onboard Wi-Fi Replacement	\$826	1
IT3000	Technology Planning Project	\$760	1
IT3200	Innovations Initiative	\$152	1
LR3100	Light Rail Vehicle Paint and Body Shop	\$5,332	1
LR4700	Norfolk Tide Facility Track Embedding	\$271	1
OP0910	Centralized Command and Control Center	\$11,968	1
OP0920	Paratransit Operations Center	\$5,066	1
SS1610	Safety Management System	\$0	1
OP0140	Electric Bus Pilot	\$0	0

State Condition and Impact Score

Beginning in FY2020, the Commonwealth of Virginia has evaluated applications for state transit capital funding by scoring and prioritizing projects in three categories:

- 1. State of Good Repair (SGR) Refers to projects to replace of rehabilitate an existing asset. Project assessed by "condition" of asset based on age and mileage (if applicable) and an impact score determined solely based on the type of asset (predefined by the State).
- Minor Expansion (Non-SGR) Refers to projects to add capacity, new technology, or customer enhancements that are less than \$2 million or, for expansion vehicles, an increase of less than five vehicles or 5 percent of fleet size (whichever is greater). Project scored based on impact score (same impact score as SGR projects).
- 3. Major Expansion Refers to projects to add, expand, or improve service with a cost exceeding \$2 million or, for expansion vehicles, an increase greater than five vehicles or 5 percent fleet expansion (whichever is greater).

Depending on the category, different scoring applies—condition score and impact score—as described below.



Condition Score (Asset Level Score)

The condition scoring process is only applicable for state of good repair projects and is applied at an asset level. Each asset in a project is given a score from 0-60 based on the asset's age or mileage compared to the industry standard useful life benchmark (ULB). **Table 5** illustrates how an asset's age and mileage translate into a numerical score. Combined with the impact score, SGR projects can receive up to 100 points in the new competitive scoring process, ensuring that they will tend to score higher than comparable minor enhancement projects, which can only receive up to 40 points.

Age of Asset Relative to Useful Life Benchmark		Mileage of Vehicle Relative to Useful Life	
(ULB)	Points	Benchmark	Points
< 95% of ULB Age	0	< 95% of ULB Mileage	0
+/- 5% ULB Age	30	+/- 5% ULB Mileage	30
5-10% > ULB Age	35	5-10% > ULB Mileage	35
10-20% > ULB Age	40	10-20% > ULB Mileage	40
20-30% > ULB Age	45	20-30% > ULB Mileage	45
30-40%> ULB Age	50	30-40%> ULB Mileage	50
40-50%> ULB Age	55	40-50%> ULB Mileage	55
>50% ULB Age	60	>50% ULB Mileage	60

Table 5: State of Good Repair Condition Assessment

Impact Score

The Impact Score is based on 4 categories and is predetermined by the State based on the asset type. Each type ranks from No Impact to High Impact in each category and is assigned a score (1-10) for each. The maximum score a project can receive is 40 and the lowest is 0. All project types will be evaluated on their impact: state of good repair, minor expansion, and major expansion projects. The state has already predetermined the project impact based on the type of asset being purchased (**Table 6**). While the state reserves some discretion on how many points they award to a project, it plans to assign low-impact projects one point, medium impact projects five points, and high impact projects the full ten points.

		Impact on				
Asset Primary Type	Asset Secondary Type	Operating Efficiency	Frequency, Travel Time and/or Reliability	Accessibility and/or Customer Experience	Safety and Security	
	Admin/Main Facilities -Construction	Medium Impact	Medium Impact	Low Impact	Medium Impact	
Administrative / Maintenance	Admin/Main Facilities -Maintenance	High Impact	Medium Impact	Low Impact	Medium Impact	
Facilities	Maintenance Materials	Medium Impact	Low Impact	Low Impact	Medium Impact	
Bus Shelters / Customer Facilities	Bus Shelter - New Installation	No Impact	No Impact	High Impact	Medium Impact	

Table 6: State Determined Impact Rankings



		Impact on				
Asset Primary Type	Asset Secondary Type	Operating Efficiency	Frequency, Travel Time and/or Reliability	Accessibility and/or Customer Experience	Safety and Security	
	Bus Shelter Installation - Maintenance/Parts	No impact	No Impact	Medium Impact	Medium Impact	
	Transit Centers/Stations	Medium Impact	Medium Impact	High Impact	Medium Impact	
	Wayfinding Aids - Signage	No Impact	No Impact	High Impact	Medium Impact	
	Fueling Station	High Impact	Medium Impact	No Impact	Low Impact	
Maintenance	Maintenance Inspection	No Impact	No Impact	No Impact	High Impact	
Equipment and Parts	Purchase Bus Replacement Batteries	Medium Impact	Medium Impact	Low Impact	High Impact	
	Vehicle Maintenance - Overhaul	High Impact	High Impact	Medium Impact	Medium Impact	
Rail Infrastructure	Facility Maintenance - Infrastructure - Rail	High Impact	High Impact	Medium Impact	High Impact	
Technology –	Admin Computer Hardware Purchase (Computers/Laptops/ Tablets, etc.)	Medium Impact	Low Impact	Low Impact	Low Impact	
	Software Purchase - Administrative	Medium Impact	Low Impact	Low Impact	Low Impact	
	Admin and Operations Software Renewal	Medium Impact	Medium Impact	Low Impact	No Impact	
	Operations Software - Complaint Tracking	Medium Impact	Low Impact	High Impact	Medium Impact	
	Operations Software - Ridership Information	Medium Impact	Medium Impact	No Impact	No Impact	
	Rider Support Hardware - Fare Collection	High Impact	Low Impact	Medium Impact	Low Impact	
Technology – Operations	Rider Support Hardware - ITS	Medium Impact	Medium Impact	Medium Impact	Medium Impact	
	Rider Support Hardware - Safety	No Impact	No Impact	Medium Impact	High Impact	
	Software Purchase - Scheduling	High Impact	High Impact	Medium Impact	Low Impact	
	Software Purchase - Vehicle Maintenance	High Impact	Medium Impact	Low Impact	High Impact	
	Graphics Package for Vehicles	No Impact	No Impact	Medium Impact	High Impact	



		Impact on				
Asset Primary Type	Asset Secondary Type	Operating Efficiency	Frequency, Travel Time and/or Reliability	Accessibility and/or Customer Experience	Safety and Security	
	Engine Replacement	High Impact	High Impact	Medium Impact	High Impact	
	Paratransit Vehicle Purchase	High Impact	High Impact	High Impact	Low Impact	
Vehicles – Revenue Vehicles	Purchase Expansion Bus	Medium Impact	High Impact	High Impact	Low Impact	
	Purchase Replacement Bus	High Impact	High Impact	High Impact	Medium Impact	
	Purchase Support Vehicles	Medium Impact	Medium Impact	Low Impact	Low Impact	

Final Project Scoring

Table 7 shows the final score for each project for both HRT's internal process and the simulated State score. These two scores were considered when programming the constrained capital plan.

ID	Project Name	Priority Score	Simulated State Score
EF0120	3400 Victoria Boulevard Renovation: Phase 2	5	-
EF0900	Parks Avenue Garage Relocation and Replacement	5	-
IT0200	Bus CAD AVL System Upgrades	5	78
IT0300	Large Technology Infrastructure	5	16
IT1699	Financial Information Software (Upgrade)	5	-
IT1799	PeopleSoft HCM (Upgrade)	5	56
LR0120	Light Rail Systems SGR	5	59
OP0110	Transit Bus Replacement	5	76
OP0120	Transit Bus Mid-Life Repower Project	5	72
OP1110	Paratransit Fleet Replacement	5	91
OP1120	Paratransit Fleet Expansion	5	31
SS0200	Upgrade the Video Recording Equipment for Buses	5	-
SS0210	Upgrade the Video Recording Equipment for Light Rail	5	_
LR4820	NTF Foundation Repairs	5	-
EF4100	18th Street GFI Vault Relocation	5	-
IT2220	Enterprise Data Integration Planning	5	-
SS0799	Wayside Advance Warning Device Upgrade	4	-

Table 7: HRT Project Priority and Simulated State Score

ID	Project Name	Priority Score	Simulated State Score
EF2400	ADA Bus Stop Access Upgrades	4	15
IT0100	HASTUS	4	71
EF3600	HRT Paving Program	4	21
IT0500	Technology Hardware, Mobile and Network Equipment	4	68
IT0700	Bus Technology Fare Payment Upgrade	4	-
IT1999	Real-Time System (Upgrade)	4	-
IT2219	Transit Asset Management System (Upgrade)	4	-
IT2920	Onboard APC Replacement for LRT	4	-
LR0130	Light Rail Vehicle SGR	4	28
LR0210	Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade	4	-
NR0120	Non-Revenue Fleet Replacement – Operations	4	53
NR0130	Non-Revenue Fleet Replacement - Bus Maintenance	4	54
EF4000	Gate Replacement Project	4	41
NR0140	Non-Revenue Fleet Replacement - Facilities	4	67
LR5000	Smith Creek Bridge Repair	4	-
SS1520	Replacement of Fixed-Camera Equipment	3	71
IT2140	Upgrade TVM PIN Pads	3	17
EF3805	Newport News Transit Center Upgrades (Phase II)	3	55
EF3806	Hampton Transit Center Upgrades (Phase II)	3	70
OP2800	Bus Operator Driving Simulator	3	-
IT2300	Transportation Statistics Database	3	8
IT2900	INIT Light Rail APC System	3	-
LR0140	Light Rail Radio System Upgrade	3	-
LR0160	Light Rail Station Upgrades	3	-
LR4800	OCC Uninterrupted Power Source Upgrade	3	-
IT1310	Audio Monitoring System (Phone + Control Room)	3	38
NR0110	Non-Revenue Fleet Replacement - LRT	3	53
NR0150	Non-Revenue Fleet Replacement - Radio/Revenue	3	53
NR0160	Non-Revenue Fleet Replacement -Safety and Security	3	45
SS1600	Replacement of Key Card Readers	3	61
NR0240	V-Plow for Norfolk Tide Operations	3	-
EF3825	Robert Hall Transfer Center Replacement	3	-
EF3810	Evelyn T Butts Transfer Center Upgrades	2	-
EF3807	Wards Corner Transfer Center Replacement	2	25

ID	Project Name	Priority Score	Simulated State Score
EF3818	Victory Crossing Upgrades	2	25
EF3824	Net Center Replacement	2	25
NR0220	Non-Revenue Fleet Expansion - Facility	2	-
IT0910	Passenger Information Displays - Bus Facilities	2	-
IT2110	Replace Ticket Vending Machines for Bus Facilities	2	-
IT2130	Replace Ticket Vending Machines for Light Rail	2	-
IT2700	Mass Notification System	2	-
LR0200	Light Rail Cab Signaling	2	-
NR0100	Non-Revenue Fleet Replacement - General	2	54
NR0230	Store Room Fork Lifts	2	59
SS0400	Mobile Camera Units for Transfer Centers	2	-
SS1510	Expansion Fixed-Cameras	2	-
IT3300	Timesheet Software Solution	2	-
OP0150	Transit Bus Expansion	2	-
EF3300	Bus Stop Amenity Program	1	15
EF3811	Silverleaf Transfer Center Upgrades	1	25
EF3819	Greenbrier Park and Ride	1	25
EF3822	Reon Drive Transfer Center Upgrades	1	-
EF3823	Warwick and Elmhurst Transfer Center	1	25
EF3900	18th Street Building 1 and 2 Rehab	1	21
IT0920	Passenger Information Displays - Light Rail	1	-
IT1200	Onboard Wi-Fi Replacement	1	-
IT3000	Technology Planning Project	1	-
LR3100	Light Rail Vehicle Paint and Body Shop	1	-
LR4700	Norfolk Tide Facility Track Embedding	1	-
OP0910	Centralized Command and Control Center	1	-
OP0920	Paratransit Operations Center	1	-
IT3200	Innovations Initiative	1	-
SS1610	Safety Management System	1	-

*HRT only calculated the state score for projects with sufficient asset-level detail.



4. Funding for Capital Improvements

To constrain spending in the plan, HRT projected how much capital funding will be available to the agency between FY2021 and FY2026. HRT's budget projections show that the agency has up to \$219 million to spend on capital projects between FY2021 and FY2026. This figure assumes HRT will receive its maximum awarded amount in state funding based on the new state evaluation criteria for eligible projects contained in the CIP.

FUNDING AVAILABLE FOR CAPITAL PROJECTS

HRT relies primarily on four sources of funding for capital projects:

- Local Funding: HRT relies on advanced capital contributions (ACC) to fund the local share of capital project costs. ACC funds provide only a modest funding stream to the agency, and HRT must approach funding partners for annual discretionary allocations for these matching funds.
- State Funding: Under the latest competitive transit capital funding program, the Commonwealth of Virginia will fund SGR and minor enhancement projects (under \$2 million) at a 68% match. A minimum of a 4% local match of total project cost, is required for all capital projects. Unlike in previous years, the state plans to provide full matching funds (up to the eligible match rate) to ensure projects are completely funded, each project is to be funded in order of ranking, based on scoring, until all available capital funds in the fiscal year are accounted for. Large capital projects are funded through a separate competitive process, using factors taken from the state's SMART SCALE program. with the state providing a 50% match.
- Federal Grants: The federal government distributes capital funding to transit agencies through both grants and formula funds. Federal grants are assigned to specific projects and cannot be reallocated to another project without permission from the federal government. Unlike formula funds and state funding, federal grants do not always require a local match. The two most common grant sources for HRT are Congestion Mitigation and Air Quality (CMAQ) grants and Regional Surface Transportation Program (RSTP) grants.
- Federal Formula Funds: Formula funds are the most vital component of federal capital funding and provide eligible transit agencies a fixed amount of capital funds each year. These funds have several spending restrictions based on the formula program to which they belong. Federal formula funds in some cases can be diverted out of capital budgets to fund certain expenses such as preventive maintenance and Americans with Disabilities Act (ADA) programs. Formula funds require a minimum 20 percent match that is funded through a mix of local and state funding.

Figure 4 and **Figure 5** show HRT's projected capital revenue, by source, from FY2021 to FY2026, a total of \$219 million.



Figure 3: Projected Capital Revenue by Source and Year (\$1,000s)






HRT's funding situation has seen significant changes over the last several years. This is the second year the state is evaluating projects based on their condition (for state of good repair projects) and their impact on service (direct or indirect) and to what extent an asset affects the rider experience and system efficiency. The condition takes into account the useful life benchmark of all assets in a project.

Table 8 provides a summary of HRT's federal formula funding allocation in Federal Fiscal Year (FFY) 2020 and each program's spending restrictions. Note that due to the difference between the federal and state fiscal years, FFY 2020 funding is applied to the FY21 capital program. Not all the federal allocation is ultimately assigned to the capital budget as these funds support other needs such as preventative maintenance.

Formula Funding Program	Description	Limitations	Federal Fiscal Year 2020 Allocation to HRT
5307 –	This is the largest and most flexible	One percent of funds	\$18,893,000
Urbanized Area	source of federal formula funds. 5307	must be spent on safety	
Formula Funds	funds can be used for any capital	and security projects.	
	expense. 5307 funds can be used for		
	operating expenses such as preventive		
	maintenance and some ADA programs.		
5337 – State of	This funding source is for maintaining	At HRT, funds can only	\$3,809,000
Good Repair	the assets of fixed guideway and "high	be used for projects that	
	intensity" bus systems that operate in	help to maintain light	
	high-occupancy vehicle (HOV) lanes.	rail, ferry, and certain	
		bus assets, in a state of	
		good repair.	
5339 – Bus and	This funding program is for replacing	Funds may be only used	\$2,117,000
Bus Facilities	and expanding bus fleets and bus	on bus-related capital	
	facilities.	projects.	

Table 8: Federal Formula Funding Programs

Table 9: Capital Funding by Source (in \$1,000s)

				1 1 = = = = 1		
	FY21	FY22	FY23	FY24	FY25	FY26
Federal 5307 Urbanized Area	4,369	2,887	3,430	3,994	4,577	3,272
Federal 5337 Fixed Guideway	672	2,143	1,062	1,536	1,166	1,711
Federal 5339 Bus and Bus Facility	1,965	2,427	2,252	1,725	2,779	2,484
Federal 5339 Discretionary	-	-	-	2,285	5,096	-
RSTP & CMAQ Grants	14,371	12,281	5,740	5,955	5,000	-
Transportation Alternative Grants	-	250	-	250	-	250
State Funds	13,097	20,148	10,865	23,680	24,857	18,166
ACC Funds	1,163	2,376	1,348	2,748	3,374	1,098
Total	35,637	42,513	24,697	42,172	46,849	26,982



FACTORS INFLUENCING THE LEVEL AND STABILITY OF CAPITAL FUNDING

Not only is HRT concerned with the level of funding support for capital improvements, but also the stability of these funding sources. Without any stable sources of dedicated funding at the local or regional levels, HRT faces systemic funding challenges. The agency's capital needs require long-term planning, but year-over-year instability in revenues contributes to deferred maintenance and the degradation of assets and services over time.

Uncertainty in Capital Funding Without a Dedicated Local Source

HRT faces a great deal of uncertainty in its capital funding. New dedicated local or regional funding would provide greater stability to the agency's capital budget, allowing the region to plan better for its future and maintain a State of Good Repair throughout the transit system. Dedicated funding would also expand the local dollars available for state capital matches and federal discretionary grant programs, expanding the overall capital budget and funding leverage of the agency. Funding stability is critical for any transit agency, but especially for larger agencies like HRT which have extensive assets like bus and rail infrastructure, rolling stock, and enterprise technology systems that require regular replacement and maintenance.

Tension Between the Operating and Capital Budgets

HRT's capital and operating budgets are inextricably linked to project capital revenues forward to FY2026, HRT developed an operating budget forecast that highlights the extent to which HRT relies on federal formula funds that could otherwise be used for capital projects. The 5307 Urbanized Area funding program, the largest of the federal funding programs, allows transit agencies to use up to 98 percent of their annual federal capital allocation on operating budget items that qualify as preventive maintenance (PM) or expenses related to Americans with Disabilities Act (ADA) compliance. In addition to PM and ADA, federal capital funds help pay for such items as certain agency staff salaries and public participation. As a policy, HRT has elected to retain a minimum of 12.5 percent of 5307 (Urbanized Formula Funds) and 10 percent of 5337 (Bus and Bus Facilities) funding for capital projects.

Potential Changes to Matching Funds and Discretionary Grant Programs

The agency relies on state matching funds, federal discretionary grants (such as CMAQ and RSTP), and federal formula funds for the majority of its funding. As noted above, this mix of revenue sources exposes HRT to long-term funding instability. Federal funding is projected to remain flat or decline in the long-run, and each new funding re-authorization brings changes to how projects are funded. For example, CMAQ and RSTP, two critical sources of support for HRT's planning and fleet capital projects, always risk elimination in new federal transportation bills. The loss of these two sources would expose HRT to a major capital shortfall that would impact its ability to rehabilitate and replace the bus fleet.

Lack of Flexibility in Capital Funding Dollars

The amount of funding available for different kinds of projects varies considerably. About a quarter of the six-year Capital Budget funding is tied to specific projects and cannot be reallocated to another project if a new need arises. The remaining unallocated funds, consisting of federal formula funds, state, and local funding carry additional limitations. For example, federal funds coming out of the 5339 program may only be used for bus and bus facilities. Finally, Virginia's capital funding prioritization process does not align perfectly with agency needs. HRT has several SGR projects that require replacement or significant repairs to an asset that has yet to reach the end of its ULB. Examples include shoring up walls due to erosion or



storm damage and replacing security gates that have been damaged. These projects are essential for service delivery but would be unlikely to receive state support.

5. Capital Program

HRT forecasts it will be able to fund up to \$219 million of the \$287 million in capital needs over the period from FY2021 to FY2026, assuming the agency receives its maximum eligible state match for projects. This revenue will be spent on the most critical capital needs, namely the replacement and repower of HRT's aging bus fleet, replacement and expansion of aging paratransit vehicles, and the replacement and improvement of critical technology software and hardware. To arrive at this plan, HRT undertook a programming process that matched the costs of projects by year with available funding by year, following the priority ratings for the HRT prioritization scores and the anticipated scores for the State condition and impact score.

PROGRAMMING PROJECTS

The agency's constrained capital program is built around the following strategies:

- Meet the agency's highest priorities first HRT's capital project prioritization process helps the agency identify and rank its most critical needs. With a focus on investments essential to daily operations in the agency's fleet, maintenance facilities, and major technology systems, HRT is pragmatic in developing its constrained capital plan.
- Maximize federal and state funding HRT is intent on tapping funding sources to their full
 potential. The agency has worked to prioritize projects with the highest state matches. HRT has
 optimized its allocation of federal funds to projects to ensure no dollar of funding is wasted. The
 simulation of DRPT's new project scoring methodology allows HRT to select capital needs that will
 perform well in the state process.
- Meet HRT's funding requirements Meet existing funding obligations and fulfill funding requirements to ensure the agency is in full compliance with federal, state, and local requirements.

This year the CIP must address additional uncertainty, as FY2021 will be just the second year of the state's new transit capital funding approach. For the sake of the plan, HRT assumed that all projects anticipated to score higher than a 20 in the state process will receive their full state match. HRT expects to receive less than this maximum allowable amount, but until the FY2021 grant period is complete, the agency will not know how its needs compare to other transit needs statewide.

RESULTS OF THE PROGRAMMING PROCESS

Table 9 lists each individual project that is programmed to receive any capital funding over the six years of the CIP and shows when the funding is expected to be made available. Some highlights of the constrained capital plan are:

Expanding and Replacing the paratransit fleet

- Replacing and repowering nearly the entire bus fleet at HRT, bringing fleet condition and age from one of the highest in the industry down to federal standards
- Updating vital operations and administrative software
- Upgrading on-board CAD AVL and camera systems across HRT's fleet
- Completing renovations for the Parks Avenue Garage
- Complete renovations at several transit centers
- Complete state of good repair investments on light rail systems, right-of-way, and vehicles
- Replace non-revenue support vehicles.

Even assuming the maximum allowable state funding contribution, HRT will have a \$69 million shortfall in the agency's six-year capital budget, the majority of which is projected to occur in FY2026. Moreover, some major projects may be funded but delayed past their year of need. The majority of HRT's capital budget over the next six years will be invested in fleet projects (**Figure 6**).



Figure 5: Allocation of Funds by Project Type (\$1,000s)

In addition to fleet projects, the agency has tried to allocate funding to critical state-of-good repair facility, technology, and security projects. Once all forecasted funding is allocated to capital projects, the agency has a significant backlog (**Figure 7**). Some of HRT's top unfunded priorities include

- Purchasing the Transportation Statistics Database Software
- Expanding the Non-Revenue vehicle fleet
- Purchasing a Mass Notification System
- Upgrade to mobile camera units for transfer centers
- Multiple transfer center and park and ride updates
- Create a centralized command center to oversee operations
- Build a paint and body show for Light Rail vehicles.

In addition to these needs, HRT does not have the funding available to purchase buses for any service expansion or increased service frequencies until FY2025.







Tab	le 10: Capital	Investment	Schedule (proposed,	\$1,000s, `	Year of Exp	enditure)
		Dating					

UID	Project Name	Category	Rating Tier	FY21	FY22	FY23	FY24	FY25	FY26	Total
EF2400	ADA Bus Stop Access Upgrades	Amenities	4	-	313	-	313	-	313	939
LR0120	Light Rail Systems SGR	LRT-SGR	5	138	-	-	-	98	796	1,031
	OCC Uninterrupted Power	LRT-SGR	3							105
LR4800	source Upgrade			-	-	105	-	-	-	
LR4820	NTF Foundation Repair	LRT-SGR	5	-	-	-	2,254	-	-	2,254
LR5000	Smith Creek Bridge Repair	LRT-SGR	4	-	-	547	-	-	-	547
LR0130	Light Rail Vehicle SGR	LRT-SGR	4	817	3,255	3,136	3,232	4,067	4,258	18,764
LR0140	Light Rail Radio Upgrades	LRT-SGR	3	203	-	-	-	-	-	203
LR0160	Light Rail Station Upgrades	LRT-SGR	3	-	-	-	-	-	936	936
LR0210	Tide Supervisory Control and	LRT-SGR	4	361	4,401	-	-	-	120	4,882
	Data Acquisition (SCADA)									
	System Upgrade									
LR4700	Norfolk Tide Facility Track	LRT-SGR	1	271	-	-	-	-	-	271
	Embedding									
EF0120	3400 Victoria Boulevard	Ops Facility	5	3,500	6,500	-	-	-	-	10,000
	Renovation: Phase 2									
EF0900	Parks Avenue Garage	Ops Facility	5	1,186	335	2,979	-	-	-	4,500
	Relocation and Replacement									
FF0000	Design		г				20.000			20.000
EF0900	Parks Avenue Garage	Ops Facility	Э	-	-	-	20,000	-	-	20,000
EF0900	Parks Avenue Garage	Ops Facility	5	_	_	-	_	20.000	_	20.000
	Relocation and Replacement	-1	-					-,		-,
	Construction - Smart Scale									
EF4100	18th Street GFI Vault	Ops Facility	5	152	-	-	-	-	-	152
	Relocation									
EF3805	Newport News Transit Center	Pax Facility	3	-	231	-	-	-	1,569	1,800
	Upgrades (Phase II)									
EF3806	Hampton Transit Center	Pax Facility	3	-	252	-	-	-	787	1,039
	Upgrades (Phase II)									



Capital Improvement Plan: FY2021 to FY2026

UID	Project Name	Category	Rating Tier	FY21	FY22	FY23	FY24	FY25	FY26	Total
EF3807	Wards Corner Transfer Center Replacement	Pax Facility	2	-	2,298	-	-	-	-	2,298
EF3825	Robert Hall Transfer Center Replacement	Pax Facility	3	-	-	-	564	1,742	-	2,305
EF3810	Evelyn T Butts Transfer Center Upgrades	Pax Facility	2	-	-	-	564	2,323	2,393	5,279
EF4000	Gate Replacement Project	Safety	4	1,000	-	-	-	-	-	1,000
OP2800	Bus Operator Driving Simulator	Safety	3	-	-	-	370	-	-	370
SS0200	Upgrade the Video Recording Equipment for Buses	Safety	5	2,948	2,996	-	-	-	-	5,943
SS0210	Upgrade the Video Recording Equipment for Light Rail	Safety	5	113	-	-	-	-	-	113
SS0799	Wayside Advance Warning Device Upgrade	Safety	4	-	-	109	-	-	-	109
SS1520	Replacement of Fixed-Camera Equipment	Safety	3	-	185	-	-	-	-	185
IT0100	HASTUS	Technology	4	-	1,555	-	-	-	-	1,555
IT0200	Bus CAD AVL System Upgrades	Technology	5	-	1,038	-	-	-	-	1,038
IT0300	Large Technology Infrastructure	Technology	5	-	207	-	-	-	-	207
IT0500	Technology Hardware, Mobile and Network Equipment	Technology	4	-	2,065	-	-	-	-	2,065
IT0700	Bus Technology Fare Payment Upgrade	Technology	4	3,098	-	-	-	-	-	3,098
IT1310	Audio Monitoring System (Phone + Control Room)	Technology	3	-	372	-	-	-	-	372
IT1699	Financial Information Software (Upgrade)	Technology	5	-	401	424	448	-	-	1,272
IT1799	PeopleSoft HCM (Upgrade)	Technology	5	2,203	-	-	-	-	-	2,203
IT1999	Real-Time System (Upgrade)	Technology	4	-	-	-	-	1,626	-	1,626
IT2140	Upgrade TVM PIN Pads	Technology	3	-	-	-	-	-	329	329



Capital Improvement Plan: FY2021 to FY2026

UID	Project Name	Category	Rating Tier	FY21	FY22	FY23	FY24	FY25	FY26	Total
IT2219	Transit Asset Management System (Upgrade)	Technology	4	-	-	-	2,258	-	-	2,258
IT2220	Enterprise Data Integration Planning	Technology	5	350	-	-	-	-	-	350
IT2300	Transportation Statistics Database	Technology	3	-	-	300	-	-	-	300
IT2900	INIT Light Rail APC System Fixed Side Hardware Software	Technology	3	41	-	-	-	-	-	41
IT2920	Onboard APC Replacement for LRT	Technology	4	457	-	-	-	-	-	457
NR0110	Non-Revenue Fleet Replacement - LRT	Vehicles	3	-	545	-	55	101	-	700
NR0120	Non-Revenue Fleet Replacement - Operations	Vehicles	4	698	-	-	-	-	-	698
NR0130	Non-Revenue Fleet Replacement - Bus Maintenance	Vehicles	4	283	-	-	-	52	-	335
NR0140	Non-Revenue Fleet Replacement - Facilities	Vehicles	4	47	-	-	-	82	-	129
NR0150	Non-Revenue Fleet Replacement - Radio/Revenue	Vehicles	3	-	-	242	-	-	-	242
NR0160	Non-Revenue Fleet Replacement -Safety and Security	Vehicles	3	-	-	240	-	-	-	240
NR0240	V-Plow for Norfolk Tide Operations	Vehicles	3	-	27	-	-	-	-	27
OP0110	Transit Bus Replacement	Vehicles	5	15,999	14,779	12,263	12,116	8,375	4,554	68,086
OP0120	Transit Bus Mid-Life Repower Project	Vehicles	5	747	759	4,353	-	132	3,763	9,754
OP0150	Transit Bus Expansion	Vehicles	2	-	-	-	-	2,710	6,609	9,319
OP1110	Paratransit Fleet Replacement	Vehicles	5	1,024	-	-	-	5,541	555	7,120
Total				35,637	42,513	24,697	42,172	46,849	26,982	218,850

*Due to rounding, total row may not match sum of individual line items in that year. The total represents the true sum of unrounded figures.



6. Next Steps

INCORPORATING CHANGES

It is important to emphasize that many of the unfunded projects are critical to transit operations but could not be funded under the highly constrained capital budget. Deferred investments are simply a different, but no less significant, kind of debt, increasing costs and liabilities for the agency in future years.

The funds available for capital improvements will surely change over the timeframe of this plan. Over the six-year timeframe of the CIP, new federal grant, state, and local funds may increase the total amount of available capital sources and allow HRT to complete additional projects. As previously discussed, the state recently started prioritizing SGR, minor enhancement, and major capital projects differently compared to how they previously were. The passing of the FAST Act in late 2015 made slight changes to the amount of funding available to HRT and associated requirements.

This Capital Improvement Plan is intended to be a living document that changes over time. As with the agency's TDP, HRT updates the CIP on an annual basis to ensure the distribution of funds meets current priorities. The project prioritization framework will remain in use by the agency to assess future capital needs as they emerge.

Between annual CIP updates, new needs will arise, and others will change. HRT's Senior Executive Team collectively discusses any changes needed to the CIP over the course of the year. When assessing whether a project should receive funding outside of an annual CIP update, the following factors are examined:

- Severity: Is the project necessary to make the system safe and secure?
- Urgency: Does the project need to be completed as soon as possible?
- Completeness: Is the suggested investment a complete solution to a need, or will additional funds be needed to address the need?
- Funding Alternatives: Can the project be completed with present funding allocations?
- Service Delivery: Does the project sustain or expand the existing system?

WORKING TOWARD SUSTAINABLE CAPITAL FUNDING

Because HRT's capital budget completely relies on federal formula funds, state funding, and a local advance capital contribution (ACC) used to provide a local match for state and federal funding, the agency is in a precarious and uncertain financial position. A shortage of funding in one source also decreases the amount of funding available from other sources. HRT's small amount of local capital funding limits its ability to tap state capital funding, even with state matching funds that are currently generous but have an uncertain future. HRT's current capital budget is disproportionately reliant on federal funds, which face even higher levels of uncertainty in the coming years. HRT has sought to stabilize its levels of capital funding with a policy that keeps 12.5 percent of federal formula funds for capital expenditures, rather than on preventive maintenance and other qualified expenditures. Regardless, too little funding remains for capital needs.

Dedicated funding sources of some kind, for both capital and operating needs, would dramatically improve the agency's ability to provide high quality, attractive transit service that will not only meet the needs of those who must take transit but also attract new customers and support a sustainable and economically vital region.



Appendices



Appendix 1: Unconstrained Capital Funding Schedule

See tables on following pages.

NOTE: Project costs have been converted from costs in FY2020 dollars to year of expenditure value based on average inflation over the last five years for non-construction (1.62% annually) and construction (3.04% annually) in the Hampton Roads region.



ID	Project Name	FY21	FY22	FY23	FY24	FY25	FY26
EF0120	3400 Victoria Boulevard	\$3,500	\$6,500	\$0	\$0	\$0	\$0
	Renovation: Phase 2						
EF0900	Parks Avenue Garage Relocation and Replacement	\$1,186	\$335	\$2,979	\$20,000	\$20,000	\$0
EF2400	ADA Bus Stop Access Upgrades	\$0	\$313	\$0	\$313	\$0	\$313
EF3805	Newport News Transit Center Upgrades (Phase II)	\$225	\$0	\$0	\$0	\$0	\$1,569
EF3806	Hampton Transit Center Upgrades (Phase II)	\$244	\$0	\$0	\$0	\$0	\$788
EF3807	Wards Corner Transfer Center Replacement	\$0	\$2,298	\$0	\$0	\$0	\$0
EF3810	Evelyn T Butts Transfer Center Upgrades	\$0	\$0	\$0	\$564	\$2,323	\$2,393
EF3811	Silverleaf Transfer Center Upgrades	\$0	\$969	\$58	\$0	\$0	\$0
EF3818	Victory Crossing Upgrades	\$0	\$0	\$0	\$395	\$0	\$0
EF3819	Greenbrier Park and Ride	\$361	\$0	\$0	\$0	\$0	\$0
EF3822	Reon Drive Transfer Center Upgrades	\$0	\$0	\$0	\$1,691	\$0	\$0
EF3823	Warwick and Elmhurst Transfer Center	\$1,030	\$0	\$0	\$0	\$0	\$0
EF3824	Net Center Replacement	\$0	\$531	\$0	\$0	\$0	\$0
EF3825	Robert Hall Transfer Center Replacement	\$0	\$0	\$0	\$563	\$1,741	\$0
EF3900	18th Street Building 1 and 2 Rehab	\$610	\$0	\$0	\$0	\$0	\$0
EF4000	Gate Replacement Project	\$1,000		\$0	\$0	\$0	\$0
EF4100	18th Street GFI Vault Relocation	\$152	\$0	\$0	\$0	\$0	\$0
IT0100	HASTUS	\$0	\$1,555	\$0	\$0	\$0	\$0
IT0200	Bus CAD AVL System Upgrades	\$0	\$1,038	\$0	\$0	\$0	\$0

Table 11: Unconstrained Capital Improvement Plan (\$1,000s; Inflated to Year of Expenditure)

Capital Improvement Plan: FY2021 to FY2026

ID	Project Name	FY21	FY22	FY23	FY24	FY25	FY26
IT0300	Large Technology Infrastructure	\$0	\$207	\$0	\$0	\$1,526	\$0
IT0500	Technology Hardware, Mobile and Network Equipment	\$0	\$2,065	\$0	\$0	\$0	\$0
IT0700	Bus Technology Fare Payment Upgrade	\$3,096	\$0	\$0	\$0	\$0	\$0
IT0910	Passenger Information Displays - Bus Facilities	\$0	\$0	\$0	\$631	\$0	\$0
IT0920	Passenger Information Displays - Light Rail	\$0	\$1,698	\$0	\$0	\$0	\$0
IT1200	Onboard Wi-Fi Replacement	\$0	\$826	\$0	\$0	\$0	\$0
IT1310	Audio Monitoring System (Phone + Control Room)	\$0	\$372	\$0	\$0	\$0	\$0
IT1699	Financial Information Software (Upgrade)	\$0	\$401	\$424	\$448	\$0	\$0
IT1799	PeopleSoft HCM (Upgrade)	\$2,203	\$0	\$0	\$0	\$0	\$0
IT1999	Real-Time System (Upgrade)	\$0	\$0	\$0	\$0	\$1,626	\$0
IT2099	IVR Phone System Upgrade	\$0	\$0	\$0	\$0	\$0	\$0
IT2110	Replace Ticket Vending Machines for Bus Facilities	\$502	\$0	\$0	\$0	\$0	\$0
IT2120	Replace Ticket Vending Machines for Ferry Docks	\$0	\$0	\$0	\$0	\$0	\$0
IT2130	Replace Ticket Vending Machines for Light Rail	\$2,083	\$0	\$0	\$0	\$0	\$0
IT2140	Upgrade TVM PIN Pads	\$0	\$0	\$0	\$0	\$0	\$329
IT2219	Transit Asset Management System (Upgrade)	\$0	\$0	\$0	\$2,258	\$0	\$0
IT2220	Enterprise Data Integration Planning	\$350	\$0	\$0	\$0	\$0	\$0
IT2300	Transportation Statistics Database	\$0	\$0	\$300	\$0	\$0	\$0



ID	Project Name	FY21	FY22	FY23	FY24	FY25	FY26
IT2700	Mass Notification System	\$0	\$774	\$0	\$0	\$0	\$0
IT2900	INIT Light Rail APC System Fixed Side Hardware Software	\$41	\$0	\$0	\$0	\$0	\$0
IT2920	Onboard APC Replacement for LRT	\$457	\$0	\$0	\$0	\$0	\$0
IT3000	Technology Planning Project	\$760	\$0	\$0	\$0	\$0	\$0
IT3200	Innovations Initiative	\$152	\$0	\$0	\$0	\$0	\$0
IT3300	Time Collection Solution	\$0	\$558	\$0	\$0	\$0	\$0
LR0120	Light Rail Systems SGR	\$138	\$0	\$0	\$0	\$98	\$796
LR0130	Light Rail Vehicle SGR	\$817	\$3,255	\$3,136	\$3,232	\$4,067	\$4,258
LR0140	Light Rail Radio Upgrades	\$203	\$0	\$0	\$0	\$0	\$0
LR0160	Light Rail Station Upgrades	\$0	\$0	\$0	\$0	\$0	\$936
LR0200	Light Rail Cab Signaling	\$0	\$0	\$0	\$0	\$0	\$8,976
LR0210	Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade	\$361	\$4,401	\$0	\$0	\$0	\$120
LR3100	Light Rail Vehicle Paint and Body Shop	\$0	\$0	\$0	\$5,332	\$0	\$0
LR4700	Norfolk Tide Facility Track Embedding	\$271	\$0	\$0	\$0	\$0	\$0
LR4800	OCC Uninterrupted Power source Upgrade	\$0	\$0	\$105	\$0	\$0	\$0
LR4810	Light Rail Right-of- Way Structures	\$0	\$0	\$0	\$0	\$0	\$0
LR4820	NTF Foundation Repair	\$0	\$0	\$0	\$2,254	\$0	\$0
LR5000	Smith Creek Bridge Repair	\$0	\$0	\$525	\$0	\$0	\$0
NR0100	Non-Revenue Fleet Replacement - General	\$0	\$655	\$0	\$0	\$33	\$0
NR0110	Non-Revenue Fleet Replacement - LRT	\$0	\$544	\$0	\$55	\$101	\$0
NR0120	Non-Revenue Fleet	\$698	\$0	\$0	\$0	\$0	\$0



ID	Project Name	FY21	FY22	FY23	FY24	FY25	FY26
	Replacement -						
	Operations						
NR0130	Non-Revenue Fleet	\$283	\$0	\$0	\$0	\$52	\$0
	Replacement - Bus						
	Maintenance						
NR0140	Non-Revenue Fleet	\$47	\$0	\$0	\$0	\$82	\$0
	Replacement -						
	Facilities					1-	
NR0150	Non-Revenue Fleet	\$189	\$45	\$0	\$0	\$0	\$0
	Replacement -						
	Radio/Revenue	¢202	¢ つ 1	¢o	¢0	¢o	¢o
NKU160	Non-Revenue Fleet	\$202	\$3 I	۵U	\$U	\$0	۵U
	Replacement -Safety						
NP0210	Non-Poyonuo Floot	¢۵	¢۵	¢۵	¢۵	¢۵	¢۵
INKUZ IU	Fynansion - Security	φU	φU	φU	φU	φU	φU
NR0220	Non-Revenue Fleet	\$0	\$155	\$0	\$0	\$0	\$0
11110220	Expansion - Facility	ΨŪ	ψ133	40	ΨŪ	40	ΨŬ
NR0230	Store Room Fork	\$42	\$0	\$0	\$0	\$0	\$0
	Lifts	· · · ·				+ -	
NR0240	V-Plow for Norfolk	\$0	\$27	\$0	\$0	\$0	\$0
	Tide Operations			·		·	·
OP0110	Transit Bus	\$15,999	\$14,779	\$12,263	\$12,116	\$8,375	\$4,554
	Replacement						
OP0120	Transit Bus Mid-Life	\$747	\$759	\$4,353	\$0	\$132	\$3,762
	Repower Project						
OP0130	Transit Bus Overhaul	\$0	\$0	\$0	\$0	\$0	\$0
	Project						
OP0140	Electric Bus Pilot	\$0	\$0	\$0	\$0	\$0	\$0
OP0150	Transit Bus	\$0	\$0	\$0	\$0	\$2,710	\$6,609
	Expansion						
OP0910	Centralized	\$0	\$0	\$0	\$0	\$0	\$11,968
	Command and						
000000	Control Center	¢0	¢0	¢0	¢0	¢o	¢r occ
000920	Paratransit	\$0	\$U	\$U	\$0	\$0	\$5,066
OP1110	Derations Center	¢1.024	¢∩	¢∩	¢O	¢5 5/1	¢EEE
VEITIV	Replacement	φ1,UZ4	ΨŪ	ΨŪ	ΨU	φ υ, υ4Ι	رررو
OP1120	Paratransit Fleet	\$0	¢0	¢۵	¢۵	\$3,316	¢703
011120	Expansion	ΨŪ	ψŪ	ΨŪ	ΨŪ	ψ3,510	ς, ηφ
OP2800	Bus Operator	\$0	\$358	\$0	\$0	\$0	\$0
0. 2000	Driving Simulator	ΨŪ	4000	ΨŪ	ΨŬ	ΨV	ΨŬ
OP3700	Bus Maintenance	\$0	\$0	\$0	\$0	\$0	\$0
	Training System	, v		, .	, v	, v	
SS0200	Upgrade the Video	\$2,948	\$2,995	\$0	\$0	\$0	\$0
	Recordina						



Capital Improvement Plan: FY2021 to FY2026

ID	Project Name	FY21	FY22	FY23	FY24	FY25	FY26
	Equipment for Buses						
SS0210	Upgrade the Video Recording Equipment for Light Rail	\$113	\$0	\$0	\$0	\$0	\$0
SS0400	Mobile Camera Units for Transfer Centers	\$102	\$108	\$0	\$0	\$0	\$0
SS0799	Wayside Advance Warning Device Upgrade	\$0	\$0	\$109	\$0	\$0	\$0
SS1510	Expansion Fixed- Cameras	\$51	\$52	\$0	\$0	\$0	\$0
SS1520	Replacement of Fixed-Camera Equipment	\$0	\$266	\$271	\$275	\$280	\$284
SS1600	Replacement of Key Card Readers	\$0	\$378	\$0	\$0	\$0	\$0
SS1610	Safety Management System		\$0	\$0	\$0	\$0	\$0
Total*		\$42,587	\$50,324	\$33,336	\$52,870	\$53,609	\$54,469

*Due to rounding, total row may not match sum of individual line items in that year. The total represents the true sum of unrounded figures.



Appendix 2: Unfunded Capital Needs Table

See attached document



CAPITAL IMPROVEMENT PLAN FY21-26

List of Unfunded Capital Needs

(\$ thousands)
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UID	Project Name	Category	Rating Tier	Unfunded Balance
LR0200	Light Rail Cab Signaling	LRT-SGR	2	8,976
LR3100	Light Rail Vehicle Paint and Body Shop	LRT-SGR	1	5,332
EF3900	18th Street Building 1 and 2 Rehab	Ops Facility	1	610
OP0910	Centralized Command and Control Center	Ops Facility	1	11,968
OP0920	Paratransit Operations Center	Ops Facility	1	5,066
EF3600	HRT Paving Program	Other	4	12,641
EF3811	Silverleaf Transfer Center Upgrades	Pax Facility	1	1,027
EF3818	Victory Crossing Upgrades	Pax Facility	2	395
EF3300	Bus Stop Amenity Program	Pax Facility	1	2,400
EF3819	Greenbrier Park and Ride	Pax Facility	1	361
EF3822	Reon Drive Transfer Center Upgrades	Pax Facility	1	1,691
EF3823	Warwick and Elmhurst Transfer Center	Pax Facility	1	1,030
EF3824	Net Center Replacement	Pax Facility	2	531
SS0400	Mobile Camera Units for Transfer Centers	Safety	2	210
SS1510	Expansion Fixed-Cameras	Safety	2	102
SS1520	Replacement of Fixed-Camera Equipment	Safety	3	1,191
SS1600	Replacement of Key Card Readers	Safety	3	378
IT0300	Large Technology Infrastructure	Technology	5	1,526
IT0910	Passenger Information Displays - Bus Facilities	Technology	2	631
IT0920	Passenger Information Displays - Light Rail	Technology	1	1,698
IT1200	Onboard Wi-Fi Replacement	Technology	1	826
IT2110	Replace Ticket Vending Machines for Bus Facilities	Technology	2	502
IT2130	Replace Ticket Vending Machines for Light Rail	Technology	2	2,083
IT2700	Mass Notification System	Technology	2	774
IT3000	Technology Planning Project	Technology	1	760
IT3200	Innovations Initiative	Technology	1	152
IT3300	Time Collection Solution	Technology	2	558
NR0100	Non-Revenue Fleet Replacement - General	Vehicles	2	687
NR0220	Non-Revenue Fleet Expansion - Facility	Vehicles	2	155
NR0230	Store Room Fork Lifts	Vehicles	2	42
OP1120	Paratransit Fleet Expansion	Vehicles	5	4,109
Total				68,412



Appendix 3: Project Sheets

See attached document



HRT Capital Improvement Plan FY2021-FY2026

Capital Project Summary Sheets



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Audio Monitoring System (Phone + Control Room)	
ID: IT1699	17
Financial Information Software (Upgrade)	

ID: IT1799	
PeopleSoft HCM (Upgrade)	
ID: IT1999	
Real-Time System (Upgrade)	
ID: IT2140	
Upgrade TVM PIN Pads	
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INIT Light Rail APC System Fixed Side Hardware Software	
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Onboard APC Replacement for LRT	
ID: LR0120	
Light Rail Systems SGR	
ID: LR0130	
Light Rail Vehicle SGR	
ID: LR0140	
Light Rail Radio Upgrades	
ID: LR0160	
Light Rail Station Upgrades	
ID: LR0210	
Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade	
ID: LR4700	
Norfolk Tide Facility Track Embedding	
ID: LR4800	
OCC Uninterrupted Power source Upgrade	
ID: LR4820	
NTF Foundation Repair	
ID: LR5000	
Smith Creek Bridge Repair	
ID: NR0110	
Non-Revenue Fleet Replacement - LRT	



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ID: NR0140	
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Replacement of Fixed-Camera Equipment	



Glossary

- 5307: Shorthand for FTA Section 5307 Urbanized Area formula funds
- 5337: Shorthand for FTA Section 5337 Fixed Guideway formula funds
- 5339: Shorthand for FTA Section 5339 Bus & Bus Facility formula funds
- ACC: Advanced Capital Contributions provided by local jurisdictions
- CMAQ: Federal Congestion Management and Air Quality grants
- Federal Discretionary: Yet to be awarded federal discretionary grants, notably Bus & Bus Facility discretionary funds
- RSTP: Federal Regional Surface Transportation Program grant
- State: State capital project matching grant
- TAP: Federal Transportation Alternatives Program discretionary grant

Funding Year: Year of grant award. Often differs from the year funding is obligated to a project.



3400 Victoria Boulevard Renovation: Phase 2

Project Background

Description

Complete renovations of 3400 Victoria Boulevard initiated in Phase 1. This work will encompass the administrative and bus operations building. HRT would like to: upgrade IT switches, cables, conference room space, wireless, emergency power systems; expand the server room to accommodate additional equipment; replacement of bus lifts; renovate lobby; renovate paint booth and other adjacent structures.

Project CategoryProject TyOperating FacilityState of Go			pair
Prioritizatio			
Customer Satisfaction and Service Delivery	Agency Effectiveness and Efficiency	State of Good Repair	Risk Exposure
18%	50%	100%	80%
	5		

Funding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$3,500	\$6,500					\$10,000		

Allocated Fund	Allocated Funding source & year; \$ thousands									
FY2021 FY2022		F2023	FY2024	FY2025	FY2026					
RSTP \$3,500 2021	RSTP 2022 \$6,500									



Parks Avenue Garage Relocation and Replacement

Project Background

Description

Relocates Virginia Beach's Parks Avenue maintenance facility. The current facility is too small and lacks the proper clearance to allow for use of a bus lift. Because of these restrictions, HRT can only use the facility during the peak season. In the winter, buses must deadhead from Norfolk, costing the agency money and reducing operating efficiencies. A new facility will allow for all-year operations and be large enough to accommodate maintenance work locally. HRT is exploring whether a modular facility can be built out to meet minimum needs at the site.

Project Category

Operating Facility

Project Type

State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
36%	67%	60%	100%				
	5						

Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
\$1,186	\$335	\$2,979	\$20,000	\$20,000		\$44,500	

Allocated F	Allocated Funding source & year; \$ thousands									
FY2021		FY2022		F2023		FY2024		FY2025		FY2026
5307 \$62 2020	9	5307 2021	\$268	5307 2022	\$2,383	5307 2023	\$2,215	5307 2024	\$2,404	
ACC \$23 2021	7	ACC 2022	\$67	ACC 2023	\$596	ACC 2024	\$1,900	ACC 2025	\$2,500	
5339 \$32 2020	0					State 2024	\$13,600	State 2025	\$10,000	
						Federal Discretionary 2024	\$2,285	Federal Discretionary 2025	\$5,096	



ADA Bus Stop Access Upgrades

Project Background

Description

Program to enhance accessibility at bus stops to meet Americans with Disabilities Act standards. The majority of HRT passenger facilities are located on property controlled by our partner jurisdictions. This funding would fund ADA improvements at bus stops in conjunction with improvements made by partner jurisdictions to ensure barrier-free access to bus stops.

Project Category

Amenities

Project Type Minor Enhancement

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
28%	17%	40%	80%				
	4						

Funding Reques	\$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total			
	\$313		\$313		\$313	\$939			

Allocated Fund	Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026				
	TAP 2022 \$250		TAP \$250 2024		TAP 2026 \$250				
	ACC 2022 \$31		ACC \$31 2024		ACC 2026 \$31				
	State 2022 \$31		State \$31 2024		State 2026 \$31				



Newport News Transit Center Upgrades (Phase II)

Project Background

Description

Upgrades the existing facility by resurfacing/repaving the bus loop, augmenting and improving the efficiency of lighting, repurposing office space, and conducting additional rehabilitation on heavily used restrooms and waiting areas. The project will address public facilities in need of repair, lighting, and degradation of the bus loop.

Project Category

Passenger Facility

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
5%	33%	80%	0%			
	Fin	al Prioritization Rating (out of 5)	3			

Funding Reques	Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$225					\$1,569	\$1,794		

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
	State 2022 \$157				State 2026 \$1,067			
	ACC 2022 \$74				ACC 2026 \$63			
					5307 2025 \$439			



Hampton Transit Center Upgrades (Phase II)

Project Background

Description

Upgrades the existing facility by resurfacing/repaving the bus loop, replacing shelters, augmenting and improving the efficiency of lighting, repurposing office space, and conducting additional rehabilitation on heavily used restrooms and waiting areas. The project will address public facilities in need of repair, lighting, and degradation of the bus loop.

Project Category

Passenger Facility

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
5%	33%	80%	0%			
	3					

Funding Reques	Funding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total			
\$244					\$788	\$1,032			

Allocated Fund	Allocated Funding source & year; \$ thousands									
FY2021	FY2022	F2023	FY2024	FY2025	FY2026					
	State 2022 \$171				State 2026 \$535					
	ACC 2022 \$81				ACC 2026 \$31					
					5307 2025 \$220					





Wards Corner Transfer Center Replacement

Project Background

Description

Upgrades the Wards Corner Transfer Center with improved landscaping, better lighting, and customer restrooms.

Project Category

Passenger Facility

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
28%	0%	40%	40%			
	2					

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
	\$2,298					\$2,298

Allocated Fund	Allocated Funding source & year; \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
	State 2022 \$1,563							
	ACC 2022 \$735							



Evelyn T Butts Transfer Center Upgrades

Project Background

Description

Replaces the existing Evelyn T. Butts transit center with a new facility on the scale of Wards Corner transfer center. The goals of the project are to provide HRT customers a more conveniently located transit center with upgraded amenities. This project includes the procurement of land and build-out of the facility. The existing transit center serves a large number of riders but is poorly located and provides minimal amenities like lighting and shelters.

Project Category

Passenger Facility

Project Type Major Enhancement

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
43%	0%	40%	40%			
	Fin	al Prioritization Rating (out of 5)	2			

Funding Reques	unding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
			\$564	\$2,323	\$2,393	\$5,279		

Allocated Fund	ing source & ye	ear; \$ thousands						
FY2021	FY2022	F2023	F١	/2024	FY20)25	FY20	26
			ACC 2024	\$113	State 2025	\$1,579	State 2026	\$1,627
			5307 2023	\$451	ACC 2025	\$93	ACC 2026	\$96
-					5307 2024	\$650	5307 2025	\$670



Robert Hall Transfer Center Replacement

Project Background

Description

This project would replace the current curb-side bus stops at Robert Hall Blvd with a transit center on a scale similar to Wards Corner. Chesapeake currently lacks a suitable transit center to provide a hub for services in the City. This facility would include covered waiting areas and additional bus bays. A new facility would have safety benefits by redirecting passengers away from driving aisle at shopping center.

Project Category

Passenger Facility

Project Type Minor Enhancement

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
36%	0%	40%	60%					
Final Prioritization Rating (out of 5) 3								

Funding Reques	t \$ thousand	S				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
			\$563	\$1,741		\$2,305

Allocated Fund	ing source & ye	ear; \$ thousands					
FY2021	FY2022	F2023	FY2	2024	FY20)25	FY2026
			ACC	\$113	State 2025	\$1,185	
			2024				
			5307	\$451	ACC 2025	\$70	
			2023				
					5307 2024	\$488	



Project Background

Description

The project replaces gates at Norfolk, Hampton, NTF transit centers. There are 8 gates total that need to be replaced. This project includes the gates and updated readers necessary for the to work. This project would fix a faulty asset that uses a lot of maintenance time and resources.

Project Category

Safety

Project Type State of Good Repair

Gate Replacement Project

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
3%	50%	40%	40%					
Final Prioritization Rating (out of 5) 4								

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$1,000						\$1,000

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$680					
2021					
ACC \$40					
2021					
5307 \$280					
2019					



18th Street GFI Vault Relocation

Project Background

Description

Relocate the GFI Vault at the 18th Street Garage to eliminate conflicts with the bus wash. Due to proximity to the bus wash entrance, staff and equipment are exposes to vapor emitted from the wash. The present location poses a health and safety hazard, as well as negatively impacts the productivity of the wash.

Project Category

Other

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
0%	67%	80%	40%					
Final Prioritization Rating (out of 5) 5								

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$152						\$152

Allocated Fund	Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026				
State \$104									
2021									
ACC \$6									
2021									
5307 \$43									
2020									



ID: IT0100

Project Background

Description

Replaces HASTUS scheduling software for bus operations with a newer version of the software. HASTUS is the scheduling software used by HRT for bus operations. The existing software has reached the end of its useful life and needs to be replaced as soon as possible. Delaying implementation will result in reduced scheduling capabilities at HRT along with escalating replacement costs.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure						
and Service Delivery	Efficiency								
32%	50%	60%	40%						
Final Prioritization Rating (out of 5) 4									

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
	\$1,555					\$1,555

Allocated Funding source & year; \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	
	State 2022 \$1,058					
	ACC 2022 \$62					
	5307 2021 \$435					



ID: IT0200

Bus CAD AVL System Upgrades

Project Background

Description

Replaces and upgrades HRT's on-board computer-aided dispatch/automatic vehicle locator (CAD/AVL) systems. These systems allow the agency to track vehicle location and passenger boardings. This upgrade is a prerequisite for the agency to provide real-time passenger information.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category					
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure		
and Service Delivery	Efficiency				
43%	33%	80%	80%		
	Fin	al Prioritization Rating (out of 5)	5		

Funding Request \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
	\$1,038					\$1,038

Allocated Funding source & year; \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	
	State 2022 \$706					
	ACC 2022 \$42					
	5307 2021 \$291					


Large Technology Infrastructure

Project Background

Description

This project would build a private WAN connection between the Norfolk Tide Facility and the Southside Operations Facility, and a connection between Hampton HQ Facility and Southside Operations Facility. Agency is challenged with running distributed line of business applications that span multiple sites. In many instances co-locating these systems in a single data center either not feasible nor appropriate due to the business needs and BCDR requirements. While there is a possibility of increasing the throughput of existing WAN by paying higher premiums to the telco providers, to achieve the desired throughput a private WAN is required.

Project Category

Technology

Project Type Minor Enhancement

Prioritization Score % of total possible points by category					
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure		
and Service Delivery	Efficiency				
32%	67%	60%	40%		
	5				

Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
	\$207			\$1,526		\$1,732	

Note that funding request amount and years are fiscally unconstrained and may not reflect constrained capital program. FY2025 request remains unfunded.

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
	State 2022 \$140				
	ACC 2022 \$8				
	5307 2021 \$58				



Technology Hardware, Mobile and Network Equipment

Project Background

Description

Replace IT hardware, including: Wi-Fi at facilities; firewall upgrade; network monitoring system upgrade; upgrade of phone system; and, Oracle virtualization. These investments will ensure that staff have the property tools to support operations and will improve HRT's resilience to future security threats.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and State of Good Repair Risk Exposure					
and Service Delivery	Efficiency					
43%	33%	60%	40%			
	4					

Funding Reques	est \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
	\$2,065					\$2,065		

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
	State 2022 \$1,405							
	ACC 2022 \$83							
	5307 2021 \$578							



Bus Technology Fare Payment Upgrade

Project Background

Description

Investment in HRT's fare collection systems to enable the adoption of mobile ticketing. Project includes procurement of system, validation and implementation of technology, and procurement of any necessary equipment. HRT is currently pursuing a pilot to help determine the optimal technological solution.

Project Category

Technology

Project Type Major Enhancement

Prioritization Score% of total possible points by categoryCustomer Satisfaction
and Service DeliveryAgency Effectiveness and
EfficiencyState of Good RepairRisk Exposure43%33%40%40%Final Prioritization Rating (out of 5)

Funding Reques	est \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$3,096						\$3,096		

Allocated Funding source & year; \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026		
State \$1,549							
2021							
ACC \$124							
2021							
5307 \$1,425							
2019							



Audio Monitoring System (Phone + Control Room)

Project Background

Description

Replacement of HRT's existing out-of-date voice logger system. The new system will record bus operations communication, along with monitoring customer service calls. The current system was installed in 2006 and has surpassed its useful life.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
13%	0%	40%	40%			
	3					

Funding Reques	Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
	\$372					\$372		

Allocated Funding source & year; \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026		
	State 2022 \$253						
	ACC 2022 \$119						



Financial Information Software (Upgrade)

Project Background

Description

Upgrades Financial Information Software (IT1610) to ensure the future system is maintained properly and continues to be supported by the software vendor. This project is slated to occur at least 5 years after the initial implementation of the system that is currently underway.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
5%	83%	60%	80%			
	Fin	al Prioritization Rating (out of 5)	5			

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
	\$401	\$424	\$448			\$1,273

Allocated Funding source & year; \$ thousands								
FY2021	FY202	22	F202	.3	FY	′2024	FY2025	FY2026
	State 2022	\$272	State 2023	\$288	State 2024	\$304		
	ACC 2022	\$16	ACC 2023	\$17	ACC 2024	\$18		
	5307 2021	\$112	5307 2022	\$119	5307 2023	\$125		



PeopleSoft HCM (Upgrade)

Project Background

Description

Upgrades PeopleSoft HCM software to ensure the future system is maintained properly and continues to be supported by the software vendor.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
5%	83%	60%	80%					
	5							

Funding Reques	Funding Request \$ thousands									
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total				
\$2,203						\$2,203				

Allocated Fu	unding	source & ye	ear; \$ thousands			
FY2021		FY2022	F2023	FY2024	FY2025	FY2026
State \$1,4	198					
2021						
ACC \$88						
2021						
5307 \$61	7					
2020						



Real-Time System (Upgrade)

Project Background

Description

Upgrades HRT's real-time systems (IT1910) five years after initial implementation to maintain a state of good repair.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
64%	50%	60%	0%				
Final Prioritization Rating (out of 5) 4							

Funding Reques	t \$ thousand	S				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
				\$1,626		\$1,626

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
				State 2025 \$1,106	
				ACC 2025 \$65	
				5307 2024 \$455	



Upgrade TVM PIN Pads

Project Background

Description

This project would replace pinpads at HRT's light rail stations when they reach the end of their life.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
14%	17%	40%	40%				
Final Prioritization Rating (out of 5) 3							

Funding Reques	t \$ thousand	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
					\$329	\$329

Allocated Fund	Allocated Funding source & year; \$ thousands										
FY2021	FY2022	F2023	FY2024	FY2025	FY202	26					
					State 2026	\$224					
					ACC 2026	\$13					
					5307 2025	\$92					



Transit Asset Management System (Upgrade)

Project Background

Description

Upgrades the Transit Asset Management System (IT2210) within five years of the system's initial implementation to ensure the system continues to be supported.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
11%	33%	60%	80%					
	4							

Funding Reques	st \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
			\$2,258			\$2,258		

Allocated Fund	ing source & ye	ear; \$ thousands				
FY2021	FY2022	F2023	FY2	2024	FY2025	FY2026
			State	\$1,535		
			2024			
			ACC	\$90		
			2024			
			5307	\$632		
			2023			



Enterprise Data Integration Planning Project

Project Background

Description

This project will review legacy and current data sources to plan and facilitate agency-wide information management. This will include consultation, enterprise data mapping, master data management policies, data mining, data architecture, and possible uses of artificial intelligence. This will equip the agency with the tools to make data driven decisions.

Project Category

Technology

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
21%	33%	80%	60%			
	5					

Funding Reques	est \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$350						\$350		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$238					
2021					
ACC \$14					
2021					
5307 \$98					
2020					



Transportation Statistics Database

Project Background

Description

Purchases and implements transit statistics database software that will allow HRT to automate reporting of statistics for the National Transit Database (NTD) and other purposes.

Project Category

Technology

Project Type Minor Enhancement

Prioritization Score	Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
11%	50%	40%	0%				
	3						

Funding Reques	lest \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
		\$300				\$300		

Allocated Funding source & year; \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026		
		State \$204					
		2023					
		ACC 2023 \$96					



INIT Light Rail APC System Fixed Side Hardware Software

Project Background

Description

Init Automatic Passenger Counting System – an automatic passenger counting system used by HRT for counting passenger boardings and alightings on light rail vehicles. This system is used for light rail ridership analysis by the Planning department. This project will include upgrade of the existing fixed-side hardware (servers, network equipment, wireless access point) and software (OS, database, and Init MobileStatistics) to the latest available version. This project does not include upgrade of the APC equipment installed on the light rail vehicles

Project Category

Light Rail

Project Type

State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
3%	33%	40%	20%				
	Fin	al Prioritization Rating (out of 5)	3				

Funding Reques	est \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
\$41						\$41	

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
State \$28 2021								
ACC \$2 2021								
5337 \$11 HIMB 2020								



Onboard APC Replacement for LRT

Project Background

Description

This project will include upgrade of the existing on-board APC equipment (sensors, network equipment, computer) to the latest available equipment. This project does not include upgrade of the fixed-side APC computing system and network equipment installed at HRT.

Project Category

LRT

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
0%	67%	60%	20%			
	4					

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$457						\$457

Allocated Fund	Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026				
State \$311									
2021									
ACC \$18									
2021									
5337 \$128									
HIMB									
2020									



Light Rail Systems SGR

Project Background

Description

Maintains light rail systems and right-of-way in a state of good repair, including ballast resurfacing, motor replacement and overhaul, repairs to track elements.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure						
and Service Delivery	Efficiency								
28%	33%	80%	60%						
	Fin	al Prioritization Rating (out of 5)	5						

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$138				\$98	\$796	\$1,031

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$94 2021				State 2025 \$67	State 2026 \$541
ACC \$6 2021				ACC 2025 \$4	ACC 2026 \$32
5337 FG \$39 2020				5337 HIMB \$27 2024	5337 HIMB \$223 2025



Light Rail Vehicle SGR

Project Background

Description

Maintains Light Rail Vehicles by rehabilitating suspension components, conducting body work and repainting of train sets, replacing brakes and powertrain components, conducting upkeep of train interiors, and other maintenance.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
28%	33%	80%	60%					
	Fin	al Prioritization Rating (out of 5)	4					

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$817	\$3,255	\$3,136	\$3,232	\$4,067	\$4,258	\$18,764

Allocate	Allocated Funding source & year; \$ thousands										
FY2C)21	FY202	22	F202	23	FY2	024	FY20	25	FY202	26
State 2021	\$556	State 2022	\$2,213	State 2023	\$2,132	State 2024	\$2,198	State 2025	\$2,766	State 2026	\$2,895
ACC 2021	\$33	ACC 2022	\$130	ACC 2023	\$125	ACC 2024	\$129	ACC 2025	\$163	ACC 2026	\$170
5337 FG 2020	\$229	5337 FG 2021	\$911	5337 FG 2022	\$878	5337 FG 2023	\$905	5337 FG 2024	\$1,011	5337 FG 2025	\$1,029
								5337 HIMB 2024	\$127	5337 HIMB 2025	\$163



Light Rail Radio Upgrades

Project Background

Description

Replaces radio system on Tide Light Rail vehicles.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
21%	17%	40%	20%					
	Fin	al Prioritization Rating (out of 5)	3					

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$203						\$203

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$138					
2021					
ACC \$8 2021					
5337 FG \$57 2020					



Light Rail Station Upgrades

Project Background

Description

Conduct renovations and state-of-good repair investments to light rail stations at key maintenance intervals.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
14%	17%	40%	60%					
Final Prioritization Rating (out of 5) 3								

Funding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
					\$936	\$936		

Allocated Fund	ing source & ye	ar; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
					State 2026 \$637
					ACC 2026 \$37
					5337 HIMB \$262 2025



Tide Supervisory Control and Data Acquisition (SCADA) System Upgrade

Project Background

Description

. The existing servers for Light Rail Operations have exceeded their useful life. Servers need to be upgraded from 32bit technology to 64 but technology. HRT utilizes three servers; Database, Train Control, and SCADA servers. This project would replace the SCADA servers, workstations, upgrade OS technology, and replace application software for each workstation and overview screens.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
21%	33%	80%	60%					
	4							

Funding Reques	\$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$361	\$4,401				\$120	\$4,882		

Allocate	Allocated Funding source & year; \$ thousands							
FY20	21	FY202	22	F2023	FY2024	FY2025	FY202	26
State	\$246	State 2022	\$2,992				State 2026	\$82
2021								
ACC	\$14	ACC 2022	\$176				ACC 2026	\$5
2021								
5337 FG	\$101	5337 FG	\$50				5337 HIMB	\$34
2020		2021					2025	
		5337 FG	\$520					
		2020						
		5337 HIMB	\$662					
		2021						



Norfolk Tide Facility Track Embedding

Project Background

Description

Embeds the tracks at the Norfolk Tide Facility to allow trucks and heavy equipment to access the light rail vehicles. Vehicles require access approximately four to five times a year.

Project Category

Light Rail

Project Type Minor Enhancement

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
4%	33%	20%	0%					
	al Prioritization Rating (out of 5)	1						

Funding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$271						\$271		

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
State \$184 2021								
ACC \$11 2021								
5337 \$76 HIMB 2020								



OCC Uninterrupted Power source Upgrade

Project Background

Description

Upgrade to the current emergency power supply at the LRT Operations Control Center (OCC) to allow for more time in case of an interruption to the power supply. This upgrade is important to the safety of customers and operators during these events. The project would replace the current unit and relocate the unit to a better location.

Project Category

Light Rail

Project Type Minor Enhancement

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
7%	17%	20%	60%					
	3							

Funding Reques	nding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total			
		\$105				\$105			

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
		State \$71 2023			
		ACC 2023 \$34			



NTF Foundation Repair

Project Background

Description

Foundation of the Norfolk Tide Facility (NTF) is unstable due to sinking soil. The issue is leading to structural failure and increasing the likelihood of facility funding.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score	Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure						
and Service Delivery	Efficiency								
7%	33%	80%	80%						
	5								

Funding Reques	t \$ thousanc	\$ thousands					
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
			\$2,254			\$2,254	

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
			State \$1,533		
			2024		
			ACC \$90		
			2024		
			5337 FG \$90		
			2023		
			5337 \$542		
			HIMB		
			2023		



Smith Creek Bridge Repair

Project Background

Description

Maintenance project to ensure the Smith Creek Bridge on the Norfolk Tide remains in a state of good repair. The structure received minor repairs in 2019 to address the most pressing maintenance issues but HRT has identified other repairs to make in the mid-term.

Project Category

Light Rail

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
21%	17%	40%	60%			
	4					

Funding Reques	ding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
		\$525				\$525		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
		State \$372 2023 \$			
		ACC 2023 \$22			
		5337 FG \$100 2022			
		5337 \$53 HIMB 2022			





Non-Revenue Fleet Replacement - LRT

Project Background

Description

Replaces existing HRT non-revenue vehicles used for LRT operations and maintenance

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
28%	17%	40%	40%			
	3					

Funding Reques	est \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
	\$544		\$55	\$101		\$700	

Allocated Fund	Allocated Funding source & year; \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
	State 2022 \$370		State \$37 2024	State 2025 \$69				
	ACC 2022 \$174		ACC \$2 2024	ACC 2025 \$4				
			5307 \$15 2023	5307 2024 \$28				





Non-Revenue Fleet Replacement - Operations

Project Background

Description

Replace existing HRT non-revenue vehicles used for operations such as street supervisors and dispatch.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
36%	33%	40%	40%			
	4					

Funding Reques	est \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
\$698						\$698	

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$475					
2021					
ACC \$28					
2021					
5307 \$195					
2020					



Non-Revenue Fleet Replacement - Bus Maintenance

Project Background

Description

Replaces existing HRT non-revenue vehicles used for bus maintenance.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
27%	33%	40%	40%			
	4					

Funding Reques	est \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$283				\$52		\$335		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State \$192				State 2025 \$36	
2021					
ACC \$11				ACC 2025 \$2	
2021					
5307 \$79				5307 2024 \$15	
2020					



Non-Revenue Fleet Replacement - Facilities

Project Background

Description

Current facilities non revenue vehicles do not appropriately match the duties of Facilities staff. Additionally, HRT pays unforeseen, high-demand emergency vendor pricing for snow removal services during winter storms every year. These high costs could be significantly reduced if Facilities staff had the necessary equipment to either take over or supplement vendor provided snow removal services. This project would replace inappropriate vehicles with more safe and efficient vehicles and expand the facilities non-revenue fleet to better meet the demands of the department.

Project Category

Vehicles

Project Type

State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
18%	33%	40%	40%			
	4					

Funding Reques	Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$47				\$82		\$129		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
State 2021 \$32				State 2025 \$55	
ACC 2021 \$2				ACC 2025 \$3	
5307 2019 \$13				5307 2024 \$23	



Non-Revenue Fleet Replacement - Radio/Revenue

Project Background

Description

Replaces existing HRT non-revenue vehicles used for farebox/radio functions

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
9%	17%	40%	40%			
	3					

Funding Reques	t \$ thousanc	\$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$189	\$45					\$235		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
		State \$164			
		2023			
		ACC 2023 \$10			
		5307 \$68 2022			



Non-Revenue Fleet Replacement -Safety and Security

Project Background

Description

Replaces existing HRT non-revenue vehicles used by security.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
21%	17%	40%	40%			
	3					

Funding Reques	t \$ thousanc	\$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$202	\$31					\$233		

Allocated Fund	ing source & ye	ear; \$ thousands			
FY2021	FY2022	F2023	FY2024	FY2025	FY2026
		State \$163			
		2023			
		ACC 2023 \$10			
		5307 \$67 2022			



V-Plow for Norfolk Tide Operations

Project Background

Description

Purchase a V-Plow for Norfolk Tide operations that would be used to clear the right-of-way during winter snow and ice storms.

Project Category

Vehicles

Project Type Minor Enhancement

Prioritization Score % of total possible points by category						
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure			
and Service Delivery	Efficiency					
14%	17%	20%	40%			
	3					

Funding Reques	Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
	\$27					\$27		

Allocated Fund	Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026				
	State 2022 \$18								
	ACC 2022 \$9								



Transit Bus Replacement

Project Background

Description

Replaces buses at the end of their useful life with new vehicles. This project includes a range of bus models, all of which will be equipped with the necessary fare collection and communication equipment.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
96%	67%	80%	100%				
	5						

Funding Reques	t \$ thousanc	\$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total			
\$15,999	\$14,779	\$12,263	\$12,116	\$8,375	\$4,554	\$68,086			

26
\$3,097
\$182
\$1,275
_



Transit Bus Mid-Life Repower Project

Project Background

Description

Conducts a mid-life repower of HRT's bus fleet roughly six years into a vehicle's life. A repower includes a major overhaul of a vehicle's powertrain, helping to increase vehicle reliability and to ensure that HRT buses reach their maximum useful life.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
75%	83%	100%	100%				
	5						

Funding Reques	t \$ thousanc	\$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total			
\$747	\$759	\$4,353		\$132	\$3,762	\$9,753			

Allocat	ted Fund	ing source	ce & ye	ear; \$ thou	sands					
FY2	2021	FY202	2	F202	23	FY2024	FY20)25	FY202	26
State	\$508	State 2022	\$516	State	\$2,960		State 2025	\$90	State 2026	\$2,559
2021				2023						
ACC	\$30	ACC 2022	\$30	ACC 2023	\$174		ACC 2025	\$5	ACC 2026	\$151
2021										
5339	\$209	5339 2020	\$213	5339	\$426		5339 2023	\$37	5339 2025	\$938
2020				2022						
				5307	\$793				5339 2023	\$115
				2022						
				ĺ						
		ļ								



Transit Bus Expansion

Project Background

Description

Procure new buses for system expansion

Project Category

Vehicles

Project Type

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
53%	0%	40%	0%				
	2						

Funding Reques	est \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
				\$2,710	\$6,609	\$9,319		

Allocated Fund	ing source & ye	ar; \$ thousands					
FY2021	FY2022	F2023	FY2024	FY2025	5	FY202	26
				State 2025	\$1,843	State 2026	\$4,494
				ACC 2025 \$	\$108	ACC 2026	\$264
				5339 2023	\$245	5307 2025	\$1,851
				5307 2024 \$	\$513		





Paratransit Fleet Replacement

Project Background

Description

Replaces HRT's existing paratransit fleet when vehicles reach the end of their useful life.

Project Category

Vehicles

Project Type State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure				
and Service Delivery	Efficiency						
64%	33%	60%	80%				
	5						

Funding Request \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$1,024				\$5,541	\$555	\$7,120		

Allocated Fund	ing source & ye	ear; \$ thousands					
FY2021	FY2022	F2023	FY2024	FY20	25	FY20	26
State \$697				State 2025	\$3,768	State 2026	\$378
ACC \$164				ACC 2025	\$222	ACC 2026	\$22
2021 5307 \$164 2020				5339 2024	\$1,384	5339 2025	\$155
2020				5339 2023	\$167		



Bus Operator Driving Simulator

Project Background

Description

Procures a bus training simulator to be used to train HRT bus operators.

Project Category

Other

Project Type Minor Enhancement

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
11%	50%	0%	60%					
	3							

Funding Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total	
	\$358					\$358	

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
			State \$251					
			2024					
			ACC \$15					
			2024					
			5307 \$103					
			2023					



ID: SS0200

Upgrade the Video Recording Equipment for Buses

Project Background

Description

Replaces video cameras on buses to allow for streamlined downloading and saving of accurate video footage. Video footage is used to validate customer complaints about operators, justify employee discipline and/or termination, and verify workers' compensation claims and auto claims from drivers involved in crashes with HRT buses.

Project Category

Safety

Project Type

State of Good Repair

Prioritization Score % of total possible points by category							
Customer Satisfaction and Service Delivery	Agency Effectiveness and Efficiency	State of Good Repair	Risk Exposure				
32%	67%	60%	80%				
	5						

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
\$2,948	\$2,995					\$5,943

Allocat	Allocated Funding source & year; \$ thousands								
FY2	2021	FY2022	F2023	FY2024	FY2025	FY2026			
State	\$2,004	State 2022 \$2,037							
ACC	\$118	ACC 2022 \$120							
2021	¢ 0 2 5	5207 2021 \$ 820							
2020	\$025	5507 2021 \$637							



ID: SS0210

Upgrade the Video Recording Equipment for Light Rail

Project Background

Description

Procures video recording equipment for light rail vehicles.

Project Category

Safety

Project Type State of Good Repair

Prioritization Score % of total possible points by category								
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure					
and Service Delivery	Efficiency							
21%	67%	60%	80%					
	5							

Funding Reques	ng Request \$ thousands							
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total		
\$113						\$113		

Allocated Funding source & year; \$ thousands								
FY2021	FY2022	F2023	FY2024	FY2025	FY2026			
State \$77 2021								
ACC \$5 2021								
5337 \$32 HIMB 2020								


ID: SS0799

Wayside Advance Warning Device Upgrade

Project Background

Description

Purchases and installs wayside advance warning devices. The wayside warning devices provide early warning of approaching trains to track work crews, track inspectors, walkers, and signal personnel. The devices that were purchased in FY16 will need to be replaced four years later.

Project Category

Safety

Project Type State of Good Repair

Prioritization Score % of total possible points by category					
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure		
and Service Delivery	Efficiency				
0%	17%	40%	100%		
Final Prioritization Rating (out of 5) 4					

Funding Reques	t \$ thousanc	S				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
		\$109				\$109

Note that funding request amount and years are fiscally unconstrained and may not reflect constrained capital program.

Allocated Funding source & year; \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	
		State \$74				
		2023				
		5337 \$31				
		HIMB				
		2022				
		ACC 2023 \$4				



ID: SS1520

Replacement of Fixed-Camera Equipment

Project Background

Description

Replacement of facility surveillance equipment at HRT

Project Category

Safety

Project Type State of Good Repair

Prioritization Score % of total possible points by category					
Customer Satisfaction	Agency Effectiveness and	State of Good Repair	Risk Exposure		
and Service Delivery	Efficiency				
11%	17%	40%	60%		
Final Prioritization Rating (out of 5) 3					

Funding Reques	t \$ thousanc	ls				
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	Total
	\$266	\$271	\$275	\$280	\$284	\$1,376

Note that funding request amount and years are fiscally unconstrained and may not reflect constrained capital program.

Allocated Funding source & year; \$ thousands						
FY2021	FY2022	F2023	FY2024	FY2025	FY2026	
	State 2022 \$126					
	ACC 2022 \$59					





Appendix 4: Detailed Funding Schedule

See attached document



		FY202	1		FY202	22		FY202	3		FY202	4	
	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR
EF0120 3400 Victoria Boulevard	Renova	ation: Phase 2											
Total Need			3,500			6,500							
Total Revenue	2021	RSTP	3,500 3,500	2022	RSTP	6,500 6,500							

EF0900 Parks Avenue Garage F	Relocation and Replacement Construction	SGR				
Total Need					20,000	
Total Revenue					20,000	
			2023	5307	2,215	
			2024	State	13,600	
			2024	ACC	1,900	
			2024	Federal Discretio	2,285	

EF0900 Parks Avenue Garage R	Relocation and Replacement Construction	- Smart Scale		
Total Need				
Total Revenue				
				2024
				2025
				2025
				2025

EF0900 Parks Avenue Garage R	elocation and Replacement Design			
Total Need	1,186	335	2,979	
Total Revenue	1,186	335	2,979	
	2020 5339 320	2021 5307 268	2023 ACC 596	
	2021 ACC 237	2022 ACC 67	2022 5307 2,383	
	2020 5307 629			

EF2400 ADA Bus Stop Access Upgrades					
Total Need			313	313	
Total Revenue			313		313
		2022 TAP	250	2024 TAP	250
		2022 ACC	31	2024 ACC	31
		2022 State	31	2024 State	31

FY2025	FY2026
SOURCE AMOUNT	YEAR SOURCE AMOUNT
20.000	
20,000 5307 2,404 State 10,000 ACC 2,500 Federal Discretic 5,096	
	313
	313 2026 TAP 250 2026 ACC 31 2026 State 31

		FY2021			FY2022			FY2023			FY2024		
	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR
EF3805 Newport News Transit	Center Up	pgrades (Phase	e II)										
Total Need						231							
Total Revenue				2022 2022	State ACC	231 157 74							

EF3806 Hampton Transit Center	r Upgrades (Phase II)				
Total Need			252		
Total Revenue			252		
		2022 State	171		
		2022 ACC	81		

EF3807 Wards Corner Transfer	Center Replacement			
Total Need		2,298		
Total Revenue		2,298		
		2022 State 1,563 2022 ACC 735		

EF3825 Robert Hall Transfer Ce	enter Replacement						
Total Need				564			1,742
Total Revenue				564			1,742
			2024 ACC	113	2025	State	1,185
			2023 5307	451	2025	ACC	70
					2024	5307	488

EF4000 Gate Replacement Proje	ect		
Total Need	1,000		
Total Revenue	1,000 2021 State 680 2021 ACC 40 2019 5307 280		

FY2025		FY202	6
SOURCE AMOUNT	YEAR	SOURCE	AMOUNT
			1,569
			1,569
	2026	State	1,067
	2026	ACC	63
	2025	5307	439
			787
			787
	2026	State	535
	2026	ACC	31
	2025	5307	220
1,742			



	FY20	021		FY2022			FY2023	3		FY2024	1		FY	2025		FY2026	6
	YEAR SOURCE	AMOUNT	YEAR	SOURCE A	MOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAF	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT
EE4100 19th Street CEI Vault D	alagation		_			_											
Total Need	elocation	152							_			_					
									_			_					
Total Revenue		152															
	2021 State	104															
	2021 ACC	6															
	2020 5307	43															
EF3810 Evelyn T Butts Transfer	Center Upgrades																
Total Need											564	ļ		2,323			2,393
Total Revenue											564		- 0	2,323			2,393
									2024	ACC	113	202	5 State	1,579	2026	State	1,627
									2023	5507	40	202	4 5307	9.	2020	ACC 5307	90 670
												202	4 0007	000	2020	0001	010
IT0100 HASTUS																	
									_								
Total Need					1,555				_			_			_		
Total Devenue					1 666												
Toldi Revenue			2022	State	1,555												
			2022	ACC	62												
			2021	5307	435												
IT0200 Bus CAD AVL System I	Upgrades				4.020				_			_			_		
I OTAL NEED					1,038				_			_					
Total Revenue					1.038												
			2022	State	706												
			2022	ACC	42												
			2021	5307	291												

Summary of Capital Project Needs and Total Revenue (*All Figures \$1,000s*)

		FY20)21		FY20)22	FY2023			FY2024			
	YEAR	SOURCE	AMOUNT	YEAF	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR
IT0200 Large Technology Infra	ofructur	•											
TTUSUU Large Technology Infra	structur	e											
Total Need						207							
Total Revenue						207							
				202	2 State	140							
				202	2 ACC	8							
				202	1 5307	58							

IT0500 Technology Hardware, M	lobile and Network Equipment				
Total Need			2,065		
Total Revenue		2022 State 2022 ACC 2021 5307	2,065 1,405 83 578		

IT0700 Bus Technology Fare F	Payment Upgrade
Total Need	3,098
Total Revenue	3,098
	2021 State 1,549
	2021 ACC 124
	2019 5307 1,425

IT1310 Audio Monitoring Syste	em (Phone + Control Room)				
Total Need			372		
Total Revenue			372		
		2022 State	253		
		2022 ACC	119		

IT1699 Financial Information Software (Upgrade)

Total Need		401		424		448
Total Revenue	2022 State 2022 ACC 2021 5307	401 272 16 112	2023 State 2023 ACC 2022 5307	424 288 17 119	2024 State 2024 ACC 2023 5307	448 304 18 125

FY2025			FY2026	i
SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT

	FY2	021	FY20)22	FY20	23	ĺ	FY2024	FY	2025		FY2026	
	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOUR	CE AMOUNT	YEAR SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT
IT1799 PeopleSoft HCM (Upgra	ade)												
Total Need	,	2,203											
Tatal Davanua		0.000											
Iotal Revenue	2021 State	2,203											
	2021 ACC	88											
	2020 5307	617											
IT1999 Real-Time System (Upg	grade)												
Total Need										1,626			
Total Revenue										1 626			
Total Nevenue									2025 State	1,106			
									2025 ACC	65			
									2024 5307	455			
IT2140 Upgrade TVM PIN Pads													
Total Need													329
Total Revenue													329
											2026	State	224
											2026	ACC	13
											2025	5307	92
IT2219 Transit Asset Managen	nent System (Upgrade)											
Total Need								2,258					
Total Revenue								2,258					
							2024 State	1,535					
							2024 ACC 2023 5307	90 632					
							2020 0001						
IT2220 Enterprise Data Integrati	cn Planning	050											
I OTAL NEED		350											
Total Revenue		350											
	2021 State	238											
	2021 ACC 2020 5307	14 98											



	FY202	21	FY202	2	FY2023	3	FY2024	4	FY20	025	FY202	6
	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT
IT2300 Transportation Statistic	s Database										_	
Total Need						300						
Total Revenue					2023 State	300						
					2023 ACC	96						
Total Need	stem Fixed Side Hardwa	are Software										
Total Neeu		41										
Total Revenue		41										
	2021 State	28										
	2021 ACC 2020 5337 HIMB	2										
	2020 0001 111118	11										
IT2920 Onboard APC Replacer	nent for LRT											
Total Need		457										
Total Povonuo		457										
Total Nevenue	2021 State	311										
	2021 ACC	18										
	2020 5337 HIMB	128										
I R0120 I ight Rail Systems SG	8											
Total Need		138								98		796
Total Revenue	and Chata	138							0005 01 1	98		796
	2021 State	94							2025 State	67	2026 State	541
	2020 5337 FG	39							2023 ACC 2024 5337 HIMB	27	2025 5337 HIMB	223
LR0130 Light Rail Vehicle SGR		047		2.055		2.420		2.020		4.007		4.050
I OTAI Need		817		3,255		3,130		3,232		4,067		4,258
Total Revenue		817		3,255		3,136		3,232		4,067		4,258
	2021 State	556	2022 State	2,213	2023 State	2,132	2024 State	2,198	2025 State	2,766	2026 State	2,895
	2021 ACC	33	2022 ACC	130	2023 ACC	125	2024 ACC	129	2025 ACC	163	2026 ACC	170
	2020 33371 0	229	2021 000710	911	2022 000710	010	2023 3337 FG	905	2024 5337 FG 2024 5337 HIMB	127	2025 5337 FG 2025 5337 HIMB	1,029

		FY202	1	FY2022				FY202	3		4		
	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR
LR0140 Light Rail Radio Upgrad	des												
Total Need			203										
Total Revenue	2021 2021 2020	State ACC 5337 FG	203 138 8 57										
LR0160 Light Rail Station Upgra	ades												
Total Need													
Total Revenue													

LR0210 Tide Supervisory Contro	ol and Data Acquisition (SCA	ADA) System U	ograde			
Total Need		361		4,401		
Total Revenue		361		4,401		
	2021 State	246	2022 State	2,992		
	2021 ACC	14	2022 ACC	176		
	2020 5337 FG	101	2021 5337 FG	50		
			2020 5337 FG	520		
			2021 5337 HIMB	662		

LR4700 Norfolk Tide Facility Tra	ick Embedding		
Total Need	271		
Total Revenue	271		
	2021 State 184		
	2021 ACC 11		
	2020 5337 HIMB 76		

FY2025		FY2026	6
SOURCE AMOUNT	YEAR	SOURCE	AMOUNT
			936
			000
	0000	Otata	936
	2026		037 37
	2020	5337 HIMB	262
	2020		202
			120
			120
	2026	State	82
	2026		5
	2025	2321 HIMB	34

	FY2021			FY2022			FY2023			FY2024			FY202	25	FY202	6
	YEAR SOURCE	AMOUNT	YEAR	SOURCE A	MOUNT	YEAR SO	OURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAF	R SOURCE	AMOUNT	YEAR SOURCE	AMOUNT
LR4800 OCC Uninterrupted Pov	ver source Upgrade															
Total Need								105								
Total Revenue								105								
, otar novondo						2023 Sta	ate	71								
						2023 AC	C	34								
LR4820 NTF Foundation Repair																
Total Need											2,254					
Total Povonuo											2 254					
Total Nevenue									2024	State	1,533					
									2024	ACC	90					
									2023	5337 FG	90 542					
									2023		J4Z					
LR5000 Smith Creek Bridge Rep	pair															
Total Need								547								
Total Revenue								547								
						2023 Sta	ate	372								
						2023 AC	C	22								
						2022 53 2022 53	37 FG 37 HIMB	100 53								
NR0110 Non-Revenue Fleet Rep	lacement - LRT															
Total Need					545						55			101		
Total Revenue					545						55			101		
			2022	State	370				2024	State	37	202	25 State	69		
			2022	ACC	174				2024	ACC	2	202	25 ACC	4		
									2023	5307	15	202	24 5307	28		

		FY202	1		FY2022			FY202	3		FY2024			FY202	5		FY2026	5
	YEAR	SOURCE	AMOUNT	YEAR S	OURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR SC	OURCE	AMOUNT	YEAR S	OURCE	AMOUNT	YEAR	SOURCE	AMOUNT
NP0120 Non Poyonus Elect Po	nlacomont	Operations																
Total Need		Operations	698															
Total Revenue			698															
	2021	State	475															
	2021	AUU 5307	28															
	2020	0001	190															
NR0130 Non-Revenue Fleet Re	placement -	Bus Mainten	ance															
Total Need			283												52			
T-4-1 D			000												50			
i otal Revenue	2021	State	283										2025 S	tato	52			
	2021	ACC	132										2025 A	CC	2			
	2020	5307	79										2024 5	307	15			
NR0140 Non-Revenue Fleet Re	placement -	- Facilities	4-															
I otal Need			47												82			
Total Revenue			47												82			
	2021	State	32										2025 S	tate	55			
	2021	ACC	2										2025 A	.CC	3			
	2019	5307	13										2024 5	307	23			
ND0150 Non-Devenue Elect De	nlacomont -	Padio/Povor		_			_			_								
Total Need									242									
Total Revenue									242									
							2023	State	164									
							2023	ACC	10									
							2022	5307	68									
NR0160 Non-Revenue Fleet Re	placement -	Safety and S	ecurity															
Total Need		•	-						240									
Total Revenue								01.1	240									
							2023	State	163									
							2023	AUU 5307	10									
							2022	0001	0/									





		FY2021 YEAR SOURCE AMOUNT			FY2022			FY2023			FY2024			FY2025			FY202	6
	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YE	AR SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT
NR0240 V-Plow for Norfolk Tide	Operatio	ons																
Total Need						27												
Total Revenue				2022 2022	State ACC	27 18 9												
OP0110 Transit Bus Replacemen	nt																	

OP0110 Transit Bus Replacem	ent											
Total Need		15,999		14,779		12,263		12,116		8,375		
Total Revenue		15,999		14,779		12,263		12,116		8,375		4,554
	2021 RSTP	9,159	2022 RSTP	2,432	2023 CMAQ	5,740	2024 RSTP	2,978	2025 RSTP	5,000	2026 State	3,097
	2021 CMAQ	1,712	2022 CMAQ	3,349	2023 State	4,435	2024 CMAQ	2,978	2025 State	2,295	2026 ACC	182
	2021 State	3,487	2022 State	6,118	2023 ACC	261	2024 State	4,190	2025 ACC	135	2025 5339	1,275
	2021 ACC	205	2022 ACC	360	2022 5339	1,826	2024 ACC	246	2024 5339	945		
	2020 5339	1,436	2021 5339	2,214			2023 5339	1,725				
			2021 5307	305								

OP0120 Transit Bus Mid-Life Repower Project																			
Total Need	747		759		759		4,353			132		13		1:		132			3,763
Total Revenue		747		759		4,353			132		3,763								
	2021 State	508	2022 State	516	2023 State	2,960		2025 State	90	2026 State	2,559								
	2021 ACC	30	2022 ACC	30	2023 ACC	174		2025 ACC	5	2026 ACC	151								
	2020 5339	209	2020 5339	213	2022 5339	426		2023 5339	37	2025 5339	938								
					2022 5307	793				2023 5339	115								

OP0150 Transit Bus Expansion					
Total Need			2,710	6,6	
Total Revenue			2,710	F	ô,609
			2025 State 1,843	2026 State 4	4,494
			2025 ACC 108	2026 ACC	264
			2023 5339 245	2025 5307	1,851
			2024 5307 513		

	FY2021			FY2022				FY202	23				
	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR
OP1110 Paratransit Fleet Replace	cement												
Total Need			1,024										
Total Revenue OP2800 Bus Operator Driving S	2021 2021 2020 imulator	State ACC 5307	1,024 697 164 164										2025 2025 2024 2023
Total Need												370	
Total Revenue										2024 2024 2023	State ACC 5307	370 251 15 103	

SS0200 Upgrade the Video Reco	ording Equipment for Buses					
Total Need	2,948		2,996			
Total Revenue		2,948		2,996		
	2021 State	2,004	2022 State	2,037		
	2021 ACC	118	2022 ACC	120		
	2020 5307	825	2021 5307	839		

SS0210 Upgrade the Video Rec	ording Equipment for Light	Rail
Total Need		113
Total Revenue		113
	2021 State	77
	2021 ACC	5
	2020 5337 HIMB	32

FY2025			FY202	6
SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT
	5,541			555
	5 541			555
State	3 768	2026	State	378
ACC	222	2026	ACC	22
5339	1,384	2025	5339	155
5339	167			

	FY2021		FY2022		FY2023			FY2024			FY2025			FY2026		
	YEAR SOURCE	AMOUNT	YEAR SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT	YEAR	SOURCE	AMOUNT
SS0799 Wayside Advance Warn	ning Device Upgrade															
Total Need							109									
Total Revenue					2023 2022 2023	State 5337 HIMB ACC	109 74 31 4									
SS1520 Replacement of Fixed-C	Camera Equipment															
Total Need				185												
Total Revenue			2022 State 2022 ACC	185 126 59												



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