

CIP-in-Brief

Hampton Roads Transit's
FY2024-FY2033
Capital Improvement Plan





Hampton Roads Transit (HRT) is Virginia's largest public transportation agency outside of Washington Metro, supporting millions of trips annually on bus, ferry, light rail, paratransit, and Transportation Demand Management services.

These services are vital for a growing, inclusive, and prosperous region. And just like roads need paving and bridges need repair, public transportation requires ongoing investment to maintain a State of Good Repair and to expand quality transportation options across 6 of Virginia's 10 largest cities.

The Capital Improvement Plan (CIP) is a blueprint for \$567 million in capital investments over the next ten years. It's a "living document", updated annually.

For FY2024-2033, HRT is strategically planning for transformational investments in the Electrification of fleet and facilities infrastructure, in addition to addressing core needs like ongoing bus replacements, safety and security, technology upgrades, and customer amenities.

Mission

To connect Hampton Roads with transportation solutions that are reliable, safe, efficient, and sustainable.

Vision

A progressive mobility agency that promotes prosperity across Hampton Roads through collaboration and teamwork.

CIP Highlights

Among 63 projects total, a handful represent a large share of the agency's 10-year CIP:

- **Fleet Investments:** Bus replacements, repowers, and fleet expansion make up the largest share (40%) of HRT's capital plan. The agency currently has an electric bus pilot program, and the updated plan provides for strategically phasing the expansion of HRT's electric vehicle fleet – a total of 60 new Battery Electric Buses by 2033.
- **New Bus Stop Amenities:** As part of the ongoing implementation of the "757 Express", HRT is upgrading over 600 stops with new passenger amenities such as shelters, seating, and solar lighting. This ongoing project represents the single largest investment in bus stop assets in the region's history.
- **Facilities Electrification:** In addition to funding the replacement of the old Parks Avenue bus storage and maintenance facility with the new Southside Operating Division, the CIP includes the electrification of HRT's main base on the Peninsula (3400 Victoria Blvd) and the Norfolk facilities at 18th Street – all three facilities will be equipped to charge and maintain a future all-electric bus fleet.
- **Light Rail State of Good Repair:** Light rail investments are the third largest investment category. Over the next 10 years, HRT expects to fully fund all light rail state of good repair needs, based on projected funding.
- **Technology State of Good Repair:** HRT has a wide range of technology assets, from software and hardware to complex back-end IT infrastructure. These assets will be replaced on a regular basis to keep pace with changing technological, user, and security requirements.
- **Evelyn T. Butts Transfer Center and Robert Hall Transfer Center:** These two facilities, in Norfolk and Chesapeake respectively, are slated to be replaced with larger and higher-quality transfer centers as part of the "757 Express" implementation.



CIP Development and Funding

Projects go through a robust screening, scoring, ranking, and prioritization process to be included in the financially constrained CIP. A mix of funding sources make the CIP possible.

Federal

Federal formula funds (5307, 5337, 5339 programs) are a core capital funding source. Other sources include federal Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) grants. Finally, HRT strategically pursues competitive discretionary grant funds. The 10-year CIP makes assumptions for federal discretionary awards, especially to support the phased Electrification of fleet and facilities.

State

Virginia's "Making Responsible Investments in Transit" (MERIT) program is administered through the Virginia Department of Rail and Public Transportation. MERIT provides essential funding for different types of projects: State of Good Repair (up to 68% match), Minor Enhancement (up to 68% match), and Major Expansion (up to 50% match). DRPT also administers technical assistance and other grant funds.

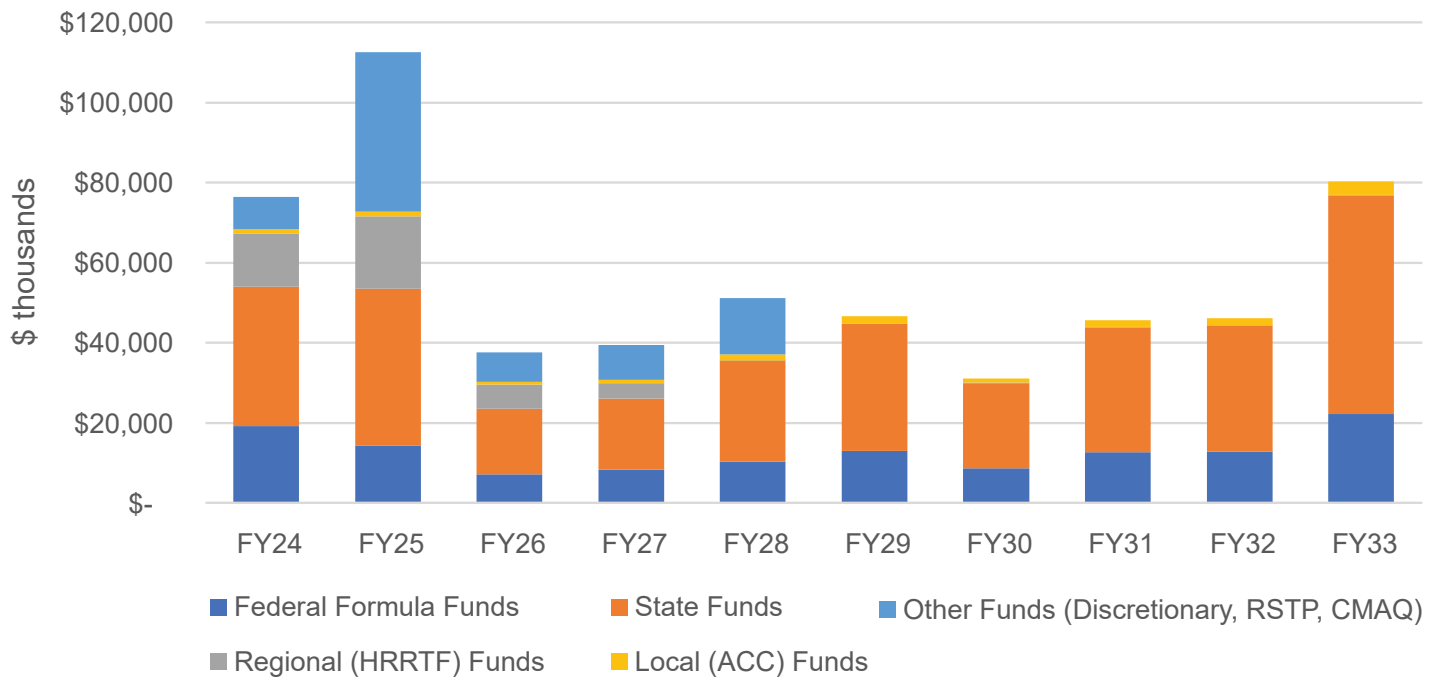
Regional

The Hampton Roads Regional Transit Fund (HRRTF) is administered through the Hampton Roads Transportation Accountability Commission (HRTAC). This funding supports projects for the 757 Express program.

Local Funding

Local funding (Advanced Capital Contributions or "ACC") is modest but important to leverage state and federal grants. HRT receives a total of \$2 million annually in ACC.

Funding by Source and Year



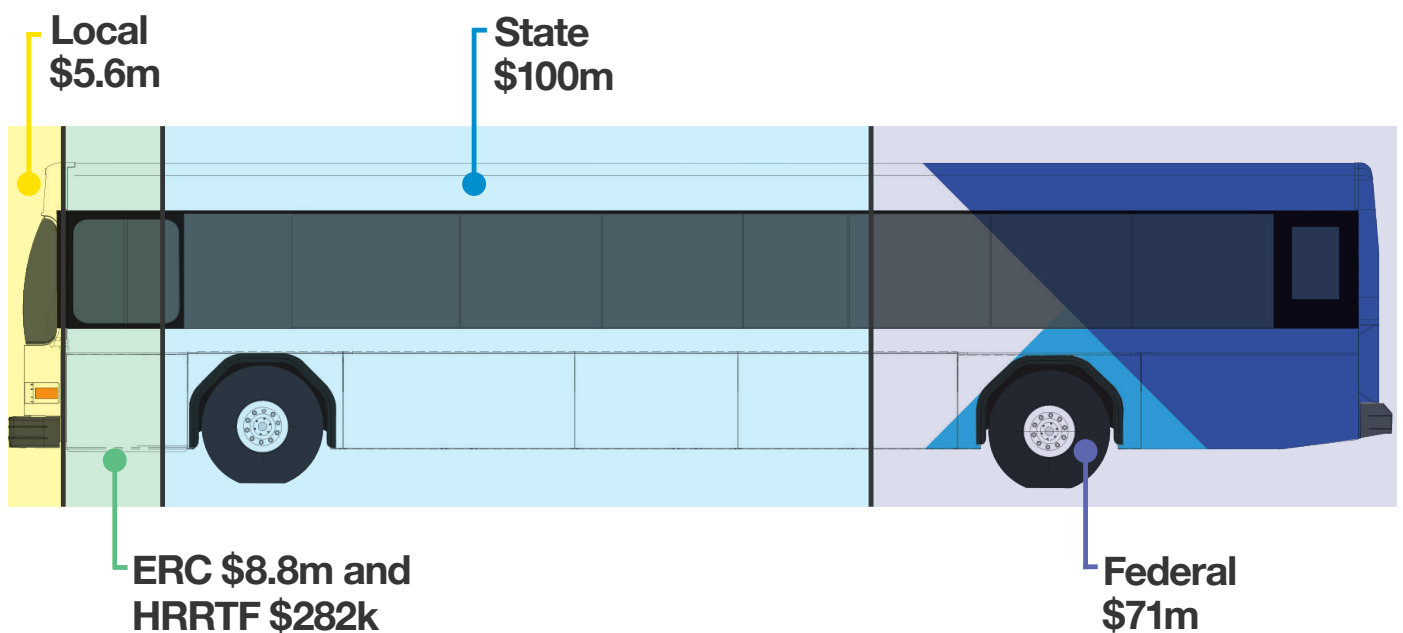
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Spotlight: Supporting a Reliable Fleet

Reliable public transportation requires a reliable fleet of vehicles.

Between buses (currently covering more than 180,000 miles in scheduled weekly service), paratransit vehicles, ferries, and non-revenue support vehicles, HRT is responsible for a significant number of fleet assets.

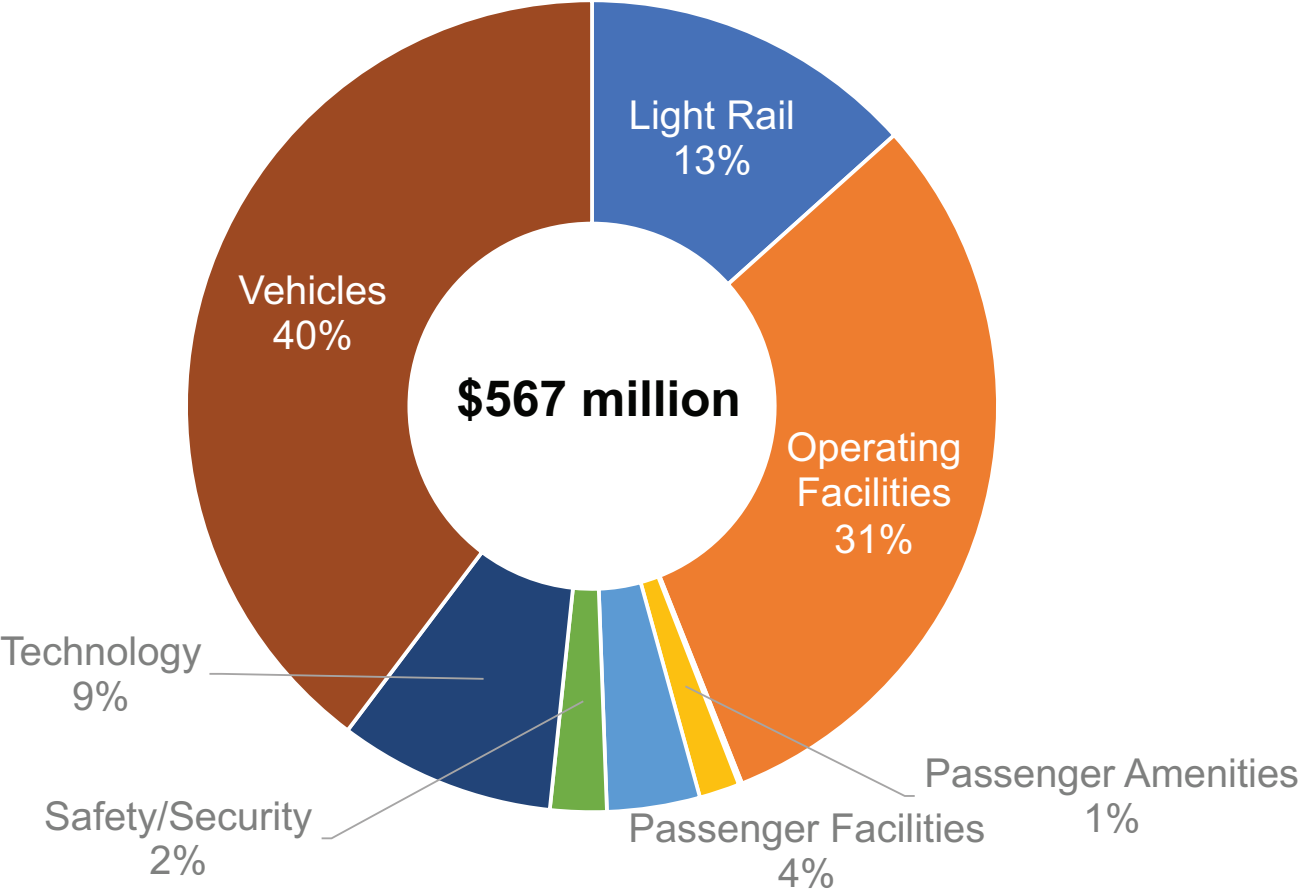
Bus Replacement and Mid-Life Overhauls in the FY2024-2033 CIP illustrate HRT's capital funding mix, and the important role that Local funding (ACC) plays in matching and leveraging other resources.



Over the 10-year period, Local Funding (\$5.6 million) – equal to the cost of just 9 diesel buses – is programmed to match other funding for **158 new replacement buses (including 60 Battery Electric Buses)** and overhaul over 200 buses for mid-life upkeep.

Regular vehicle maintenance and replacement help minimize breakdowns, allowing HRT to provide quality service across the region.

Breakdown of Ten-Year Program by Summary Project Category



Fleet

Bus vehicle replacement, rehabilitation, and expansion make up the largest share of HRT’s FY2024-FY2033 CIP. Maintaining investments in HRT’s existing bus fleet help ensure that vehicles remain in a state of good repair. Bus SGR helps reduce maintenance costs and minimizes service disruptions for customers due to breakdowns.

Replacement and rehabilitation needs are identified using useful life benchmarks for vehicle miles and age. The chart below shows the projected average fleet age over the next ten years. Fleet age projections are based on funding allocation year. The timing of grant programming and procurement lead times may impact how soon HRT reaches its average useful life target of 7.5 years. HRT typically sees a two-year lead time between allocation of funds and delivery of buses.

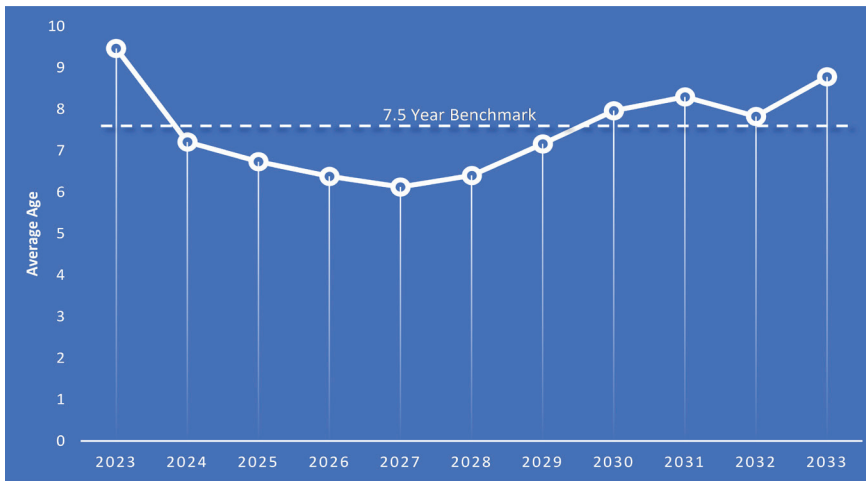
Fleet Capital Projects by the Numbers

10

fleet projects

\$225.3 million

in capital needs (year of expenditure dollars) from FY2024 to FY2033



HRT Transit Bus Fleet Projected Average Age



Fleet

Project List

UID	Project Name	Cost (\$ thousands)
OP01	Transit Bus Replacement	\$152,112
OP02	Transit Bus Mid-Life Repower Project	\$26,858
OP03	RTS Bus Mid-Life Repower	\$7,053
OP11	Paratransit Fleet Replacement	\$19,852
OP12	RTS Paratransit	\$1,737
OP13	Paratransit Vehicle Mid-Life Overhaul/Repowers	\$596
OP30	Ferry Boat State of Good Repair	\$259
OP31	Paratransit Fleet Expansion	\$8,308
NR01	Non-Revenue Fleet Replacement	\$7,016
NR02	RTS Non-Revenue Fleet	\$1,472
	Total	\$225,263

Transit Bus Replacement, FY24-FY33

Project to replace transit buses at the end of the vehicles' useful life. Project includes plans to replace at least 60 diesel buses with battery- electric buses.

Transit Bus Mid-Life Repower Project, FY24-FY33

Project to conduct a repower of HRT's transit passenger buses at roughly half of their useful life to maintain the vehicles' reliability.

RTS Bus Mid-Life Repower, FY30-FY32

Conduct mid-life overhauls of transit buses that are part of HRT's dedicated RTS fleet.

Paratransit Fleet Replacement, FY24-FY33

Project to replace HRT-owned paratransit vehicles at the end of their useful life.

RTS Paratransit, FY28, FY32

Project to expand and replace paratransit vehicles dedicated to HRT's RTS fleet.

Paratransit Vehicle Mid-Life Overhaul/Repowers, FY24-FY25

Project to conduct mid-life repowers of paratransit vehicles. Repowers will help extend the useful life of HRT's paratransit fleet, enabling the agency to better space out vehicle replacements.

Ferry Boat State of Good Repair, FY24

Project to conduct routine state-of-good-repair investments on HRT's ferry fleet. Projects include modification to windows, installing AC in the pilot house, electrical system upgrade, and new pressure release valves.

Paratransit Fleet Expansion, FY24-FY25, FY28-FY29, FY33

The HRT paratransit fleet is accruing excessive miles due to current service demand and more vehicles are needed to maintain acceptable service levels for our certified customers.

Non-Revenue Fleet Replacement, FY24-FY33

Project to replace non-revenue support vehicles at the end of their useful life. Project includes replacement of ten support vehicles with battery electric vehicles.

RTS Non-Revenue Fleet, FY24, FY33

Project to fund the expansion of the non-revenue vehicle fleet dedicated to HRT's RTS service.

Facilities and Electrification

Facilities investments play an important role in the public-facing and behind-the-scenes operations at HRT. Our facilities are often the first point of contact customers have with our systems. Bus stop infrastructure, including shelters, benches, and lighting, enhance the passenger experience by providing protection from harsh weather and a safe place to wait for the bus. Transit center relocations and upgrades both enhance passenger experience and improve operating efficiency by supporting service expansion and improving the transfer experience. Investing in HRT facilities allows the agency to maintain a state of good repair while upgrading existing facilities to ensure that riders, operators, and agency employees are comfortable and safe while taking transit or at work.

Investing in HRT’s facilities is a critical step toward achieving our goal of transitioning fully to a zero-emissions fleet. By investing in the electrification of HRT’s operating facilities, we will have the infrastructure and capacity to charge electric buses. In addition to reducing HRT’s carbon footprint, zero-emission buses will improve local air quality and can reduce the rate of respiratory illnesses. Electric buses will also provide a quieter and more comfortable ride than diesel buses. By investing in electrification, HRT is delivering environmental benefits for the community and improving the overall experience for riders.

Facilities Capital Projects by the Numbers

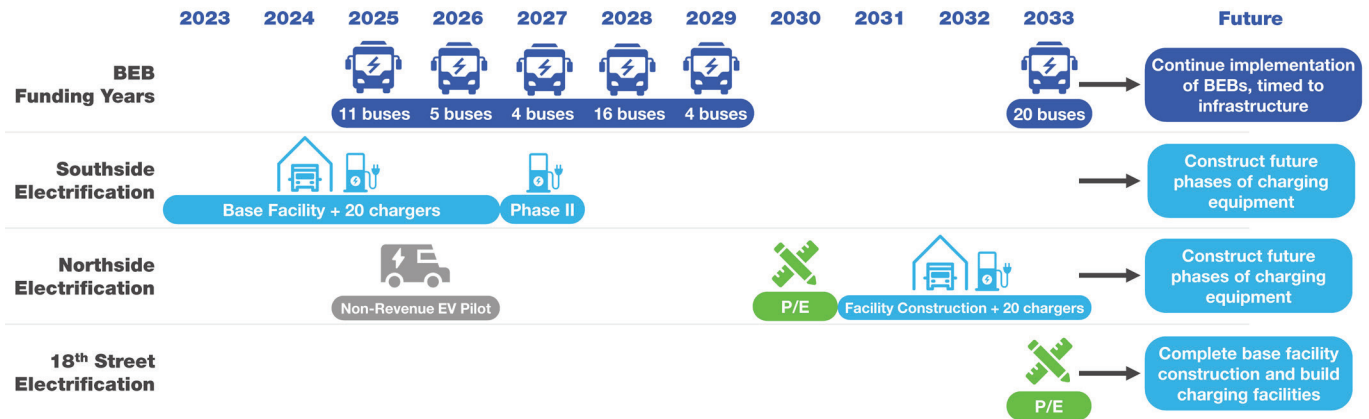
19
facilities projects

\$222.7 million

in capital needs (year of expenditure dollars) from FY2024 to FY2033

60
expanded charging capacity for electric buses to be funded by 2033

Electrification Timeline



Facilities and Electrification

Project List

UID	Project Name	Cost (\$ thousands)
EF01	3400 Victoria Boulevard Renovation: Phase 2	\$9,806
EF02	New Southside Operating Division	*\$130,161
EF03	Bus Stop Amenity Program	\$9,131
EF05	Newport News Transit Center Interior Renovations	\$1,389
EF06	Hampton Transit Center Interior Renovations	\$1,095
EF07	Wards Corner Restroom and Paving Renovation	\$191
EF10	Evelyn T. Butts Transfer Center Replacement	\$8,021
EF11	Silverleaf Transfer Center Upgrades	\$1,594
EF13	Robert Hall Transfer Center Replacement	\$8,021
EF15	Gate Replacement	\$900
EF20	Hampton Facility Electrification	\$47,186
EF21	18th Street Facility Electrification	\$985
EF22	Hampton Facility Non-Revenue Electric Charging Pilot	\$510
EF24	DNTC Restrooms and Operator Lounge Spaces	\$671
EF25	Workspace Renovation and Reconfiguration	\$1,718
EF26	Parks Avenue Re-Use	\$160
EF27	HRT Concrete Repair Work	\$738
EF28	Hampton Oil Water Separator Replacement	\$155
EF29	Hampton Fire Suppression System	\$255
	Total	\$222,687

*Includes \$17.3 million in funds programmed FY23 and prior.

3400 Victoria Boulevard Renovation: Phase 2, FY25-FY27

Project to complete renovations at 3400 Victoria Boulevard. HRT is completing work on Phase I. Phase II will complete renovations to administrative and bus operations buildings.

New Southside Operating Division, FY24-FY27

Project to relocate and replace Virginia Beach's Parks Avenue operating base with new state-of-art facility that can serve the Southside. This project is critical to meet both existing operating and Regional Transit System (RTS) needs. The facility would be designed from the onset to accommodate battery electric buses, with implementation of an initial 40 electric bus chargers. The facility is expected to grow to 115 electric vehicle chargers through future expansions outside the timeframe of this ten-year CIP to align with fleet replacement needs.

Bus Stop Amenity Program, FY24-FY27

Project to upgrade over 600 bus stops across the RTS network, including funding for new shelters, benches, trash cans, and lighting.

Newport News Transit Center Interior Renovations, FY24-FY26

Project to renovate interior spaces of the transit center. The transit center is a high traffic location. The renovation would remodel the interior, renovate the bathrooms, and replace storefront doors.

Hampton Transit Center Interior Renovations, FY24-FY26

Project to renovate interior spaces of the transit center. The transit center is a high traffic location. The renovation would remodel the interior, renovate the bathrooms, and replace storefront doors.

Facilities and Electrification

Wards Corner Restroom and Paving Renovation, FY24-FY25

Project provides state-of-good-repair maintenance for the Wards Corner Transfer Center involving renovation of the operator restroom and repairing damaged paved surfaces.

Evelyn T. Butts Transfer Center Replacement, FY24-FY25

Project replaces the existing Evelyn T. Butts transit center with a new facility that can meet the needs of an expanded RTS network.

Silverleaf Transfer Center Upgrades, FY26-FY28

Project to renovate HRT-owned assets at the Park and Ride to maintain the facility in a state of good repair.

Robert Hall Transfer Center Replacement, FY24-FY25

Project to construct a new transit center as a hub for HRT service in the City of Chesapeake.

Gate Replacement, FY24

This project will replace eight faulty gates at HRT campuses including Norfolk, Hampton, and Norfolk Tide Facility (NTF). HRT is currently completing a study to scope out the design of the gates.

Hampton Facility Electrification, FY30-FY33

This project will provide the base infrastructure necessary to support a fully-electrified revenue bus fleet at the Victoria Boulevard Facility in Hampton, plus twenty battery electric bus chargers. The facility is expected to grow to 100 electric vehicle chargers through future expansions outside the timeframe of this ten-year CIP to align with fleet replacement needs.

18th Street Facility Electrification, FY33

This project will provide the electrical infrastructure necessary to support a fully-electrified revenue bus fleet at the 18th Street Facility in Norfolk. This project will provide the necessary electrical infrastructure to charge a revenue fleet of 144 buses/trolleys.

Hampton Facility Non-Revenue Electric Charging Pilot, FY25-FY26

This project will provide for the pilot installation of electric charging infrastructure at the Hampton Facility for 10 non-revenue vehicles.

DNTC Restrooms and Operator Lounge Spaces Workspace Renovation & Expansion, FY24

This project will study and reconfigure interior space in DNTC to create a new operator restroom area.

Workspace Renovation and Reconfiguration, FY24-FY25

This project will provide up to 60 new workstations for HRT staff, to support an expansion of staff headcount. These new workstations will primarily be located at Hampton and 18th Street facilities.

Parks Avenue Re-Use, FY25

This project will plan for the redevelopment of the Parks Avenue Maintenance Area.

HRT Concrete Repair Work, FY24-FY26

This project will provide funding for annual state-of-good-repair maintenance activities for HRT concrete pavement and structures.

Hampton Oil Water Separator Replacement, FY24

This project will fund state-of-good-repair replacement of a 34 plus year old oil water separator (OWS) at the Hampton facility. It addresses needs identified in HRT's TAM system as having a condition rating of 3 or lower due to industrial wastewater treatment equipment having a standard 20-30 year operating lifespan.

Hampton Fire Suppression System, FY24

State-of-good-repair replacement of the existing fire suppression systems in the server room at the Hampton Facility. The existing server room has a cylinder gas discharge system that has reached the end of its useful life and is no longer in a state of good repair.

Technology

Technology drives the modern transit industry. A customer interacts with HRT technology even before they start their trip. Mobile schedule and arrival information is made possible by a bevy of systems, from onboard Automatic Vehicle Locators (AVLs) that pinpoint where our buses are in real-time, to the network hardware and software that ensures that information makes it to the phones of our customers. Once aboard an HRT vehicle, a suite of technology supports operations, such as fare collection equipment that allows riders to pay for their trip, and various hardware and software systems that allow dispatch to monitor operations. Just as important, are the technology systems that support back-end operations. Systems help automate several critical administrative functions, from asset management and maintenance to payroll and HR.

Investing in HRT’s technology allows the agency to be more responsive to our customers and more efficient in our operations. Much of our technology capital budget is focused on maintaining the systems we currently rely on; most of our hardware and software systems need to be regularly updated and replaced at least every five to ten years. Outdated systems reduce our overall efficiency as an agency and expose HRT to security and safety vulnerabilities. In addition to state of good repair, HRT is constantly investing in new systems to keep up with our changing needs. Many of the critical systems we rely on today, did not exist 10 or 15 years ago. Trends like the widespread adoption of mobile ticketing and trip planning tools, the transition toward battery-electric buses, and emergence of autonomous vehicles, will only accelerate the pace of technological change at HRT.

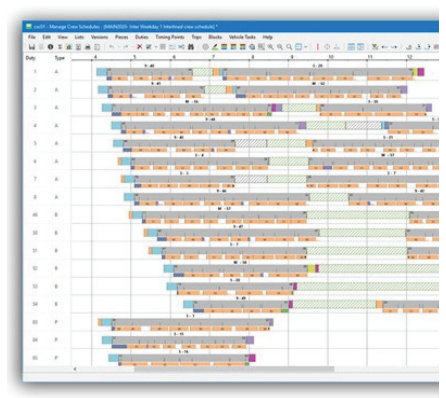
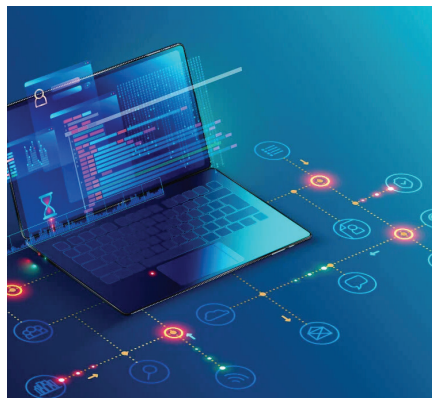
Technology Capital Projects by the Numbers

16

technology projects (excludes safety technology projects)

\$49.0 million

in capital needs (year of expenditure dollars) from FY2024 to FY2033



Technology

Project List

UID	Project Name	Cost (\$ thousands)
IT01	HASTUS	\$4,500
IT03	Large Technology Infrastructure	\$3,432
IT05	Client Technology Systems State of Good Repair	\$4,144
IT06	Bus Facility Passenger Information Displays SGR	\$388
IT07	Passenger Information Displays - Light Rail	\$9,549
IT12	Onboard Network Infrastructure State of Good Repair	\$2,332
IT16	Financial Software System (FSS) Implementation	\$1,032
IT17	HRMS Replacement	\$6,147
IT18	Fixed Side CAD/AVL System	\$3,942
IT22	EAM System State-of-Good-Repair	\$9,366
IT32	Innovations Initiative	\$369
IT35	Transit Center Public Address System	\$88
IT36	Internal Digital Signage System	\$250
IT37	ICS Cyber Security	\$1,332
IT42	IT Security Systems Upgrade	\$1,907
IT43	Contract and Vendor Management Software Replacement	\$218
	Total	\$48,995

HASTUS, FY27, FY32

HASTUS, the planning, scheduling, and daily operations system will be upgraded from version 2011 to the latest available version implemented to conform with the labor agreement in effect at the agency with this project. The upgrade will replace the application including server and kiosk infrastructure, interfaces to CAD-AVL, Financials, EAM, and other ancillary systems.

Large Technology Infrastructure, FY28-FY29

Project to help achieve state of good repair in line with FTA recommendations for Technology Infrastructure Systems that have reached the end of their useful life, including servers and storage, networking, wireless, firewalls, uninterruptible power supply (UPS) and power delivery systems, and backup solutions through replacement of the individual hardware component groups and entire systems.

Client Technology Systems State of Good Repair, FY24-FY32

Project to help achieve state of good repair in line with FTA five- year lifecycle recommendations for Client Technology Systems that have reached the end of their useful life including laptops, desktops, workstations, printers, scanners, collaboration and conference systems, and telephony through the replacement of the individual hardware component groups and entire systems.

Bus Facility Passenger Information Displays SGR, FY28

Project to replace passenger information displays being installed as part of the RTS implementation at the end of their useful life.

Passenger Information Displays - Light Rail, FY27, FY32

Project to purchase and install 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.

Technology

Onboard Network Infrastructure State of Good Repair, FY28-FY33

Project to maintain state of good repair for HRT revenue fleet onboard network equipment through timely replacement at the end of its useful life.

Financial Software System (FSS) Implementation, FY24-FY25

This project will enhance utilization of Microsoft Dynamics 365 Finance and Operations, allowing continued automation of manual processes and adding reporting functionality to analyze data to determine where opportunities exist for additional improvements in customer experience and service delivery.

HRMS Replacement, FY28, FY33

Project to upgrade the Human Resource Management System at the necessary interval to maintain software functionality. This project is critical for a range of human resource functions at HRT.

Fixed Side CAD/AVL System, FY25, FY30

Project to upgrade HRT's fixed-side CAD/AVL systems five years after initial implementation to maintain a state of good repair.

EAM System State-of-Good-Repair, FY28, FY33

Project to upgrade the Enterprise Asset Management (EAM) System within five years of the system's initial implementation to ensure the system continues to be supported.

Innovations Initiative, FY24-FY26

Project to fund a range of innovation initiatives at HRT with the goal of providing dedicated funding to explore and test emerging technology.

Transit Center Public Address System, FY28, FY33

Project to install and upgrade the public address system at HRT Transit Centers (DNTPC, NNTPC, HTPC, and Silverleaf) every five years to maintain a state of good repair on the system. The public address system is used to communicate service-related information to the general public.

Internal Digital Signage System, FY24, FY29

Project to replace and expand existing employee facing Digital Signage System to communicate to HRT employees effectively and consistently.

ICS Cyber Security, FY28

Project to fund ongoing investments in HRT's cyber security, including security assessments, implementation of new tools and software, and system testing. The agency's digital assets are critical for business continuity and this project would help address vulnerabilities as they arise.

IT Security Systems Upgrade, FY28-FY29

This project will support IT security program funding initiated in 2021. This project will acquire and implement next generation process modification, application, and platform and data protection security upgrades to address new and emerging threats, mitigating risk from future unknown cyber threats.

Contract and Vendor Management Software Replacement, FY24, FY29

Project to identify and implement new innovative and effective Contract and Vendor Management Software solution.

Safety and Security

The safety of HRT’s customers and employees drives everything we do. Safety and security assets ensure our vehicles are being properly monitored, secure our facilities from trespassers, allow security officers to better respond to threats, and protect the public and employees from harm and injury. One of the security challenges facing HRT is simply our sheer scale of operations. Our services cover six cities and 1.3 million residents. Safety and security related systems are essential to allow us to rapidly respond to issues as they arise. Many of HRT’s safety and security needs are technology related, such as cameras, card readers, and software systems. Like any technology asset, these systems need ongoing maintenance and upgrades to remain in working order and protected from cyber-security threats.

Safety & Security Capital Projects by the Numbers

10
safety and security projects

\$11.9 million
in capital needs (year of expenditure dollars) from FY2024 to FY2033

Project List

UID	Project Name	Cost (\$ thousands)
SS01	Upgrade the Video Recording Equipment for Buses	\$1,522
SS02	Light Rail Video Recording Equipment	\$257
SS15	Enterprise Video Surveillance System Upgrade	\$999
SS16	Enterprise Access Control System Upgrade	\$3,189
SS17	Safety Management System	\$924
SS19	Mobile Telescoping and Surveillance Tower	\$646
SS20	Mobile Electromagnetic Security Screening Systems and Support Equipment	\$102
SS21	Rail System Surveillance Enhancement	\$3,313
SS22	Emergency Alert Beacons, Sirens, and Strobes	\$532
SS23	NTF Fall Protection Project	\$465
	Total	\$11,949

Upgrade the Video Recording Equipment for Buses, FY28, FY33

Project to replace video recording equipment on HRT’s buses as they reach the end of their recommended useful life.

Light Rail Video Recording Equipment, FY27, FY32

Project to replace video recording equipment on HRT’s light rail trains as they reach the end of their recommended useful life.

Safety and Security

Enterprise Video Surveillance System Upgrade, FY28-FY29, FY33

Project to maintain state of good repair through timely replacements of the components comprising the fixed camera video surveillance system. Addresses known gaps in video surveillance monitoring through fixed camera replacement and additions at HRT facilities.

Enterprise Access Control System Upgrade, FY26, FY31

This project seeks to address state of good repair for enterprise access control platform, components, software, and supporting processes.

Safety Management System, FY29

Project to implement an FTA-mandated safety management system to better track a range of safety related data in one centralized system.

Mobile Telescoping and Surveillance Tower, FY24, FY29

This project initiates the procurement of trailer-mounted mobile telescoping surveillance towers. These can be deployed to address increased security, risk, or safety concerns.

Mobile Electromagnetic Security Screening Systems and Support Equipment, FY24-FY25, FY29-FY30

This project initiates the procurement of mobile security solutions for use with electromagnetic screening in sensitive or controlled areas. Mobile electromagnetic security screening systems provide the ability to detect and deter concealed weapons and other controlled items.

Rail System Surveillance Enhancement, FY25, FY28, FY33

This project includes the procurement, installation, and support of an enhanced video surveillance posture for the Tide Light Rail System and supporting infrastructure.

Emergency Alert Beacons, Sirens, and Strobes, FY26

This project initiates the design, procurement, deployment, testing and active use of building emergency alert tools such as alert beacons, sirens, and strobes.

NTF Fall Protection Project, FY24

A project to design and install additional fall protection engineering controls into the Norfolk Tide Facility. This project will mitigate the dangers of performing maintenance from elevated positions in the shop and on the vehicles.

Light Rail

Opened just over a decade ago, today the Tide Light Rail is HRT's second-most ridden mode, behind only bus. The Tide system is composed of a wide range of capital assets, including many which are invisible to the customer. HRT maintains and manages over 7 miles of rail guideway, including tracks, aerial structures, and catenary, and 11 stations. The agency has a fleet of nine LRT trains that while expected to last over 30-years, need continuous investments to keep them in good condition. Behind the scenes, the agency maintains complex signaling and systems monitoring systems (i.e. SCADA) which ensure continuous safe and reliable operations. The Tide system also has its own maintenance facility where trains are stored and repaired.

To ensure HRT is properly investing in its light rail assets, the agency developed a 30-year light rail state of good repair (SGR) plan that outlines the expected investment needs by asset type and year. While actual capital expenses may differ over time based on differing rates of wear-and-tear, the plan provides HRT a guide to future SGR needs. HRT's CIP, builds off of the plan, by funding all of the capital repair and maintenance needs it identifies over the ten-year timeframe. As the system enters its second decade of operations, trains will need to begin mid-life overhauls, stations will need cosmetic updates, and guideway systems will require additional maintenance and repair.

Light Rail Capital Projects by the Numbers

8

light rail projects

\$75.8 million

in capital needs (year of expenditure dollars) from FY2024 to FY2033



Light Rail

Project List

UID	Project Name	Cost (\$ thousands)
IT29	Light Rail APC System Fixed Side Hardware Software	\$229
LR01	Light Rail Right-of-Way State of Good Repair	\$35,655
LR02	Light Rail Vehicle State of Good Repair	\$23,824
LR04	Light Rail Station Upgrades	\$4,646
LR05	Light Rail Cab Signaling Study	\$102
LR06	Supervisory Control and Data Acquisition (SCADA) System Upgrade	\$6,362
LR48	NTF Foundation Repair	\$3,277
LR50	Light Rail Aerial Structures	\$1,882
	Total	\$75,797

Light Rail APC System Fixed Side Hardware Software, FY28, FY33

Project to upgrade HRT’s fixed-side APC systems for Light Rail every five years, per the equipment’s useful life.

Light Rail Right-of-Way State of Good Repair, FY24-FY33

Project to fund routine state-of-good-repair investments along HRT’s right-of-way such as track structures and overhead power systems. The project scope is based on HRT’s 30-year state-of-good repair plan for light rail.

Light Rail Vehicle State of Good Repair, FY24-FY33

This project maintains light rail vehicles by rehabilitating suspension components, conducting body work, repainting of train sets, replacing brakes and powertrain components, conducting upkeep of train interiors, and other maintenance. The largest component of this project is a mid-life overhaul of Tide trains at a rate of one per year. The project scope is based on HRT’s 30-year state-of-good repair plan for Light Rail.

Light Rail Station Upgrades, FY24-FY33

Project to rehabilitate light rail stations, including replacing and rehabilitating station assets at the end of their useful life. The project scope is based on HRT’s 30-year state-of-good repair plan for light rail.

Light Rail Cab Signaling Study, FY24

Study of cab signaling for the light rail system.

Supervisory Control and Data Acquisition (SCADA) System Upgrade, FY24-FY25

This project provides regular upgrades to The Tide’s Supervisory Control and Data Acquisition (SCADA) System. The system upgrade will replace the SCADA system server infrastructure, upgrade Tide Operations Control Center systems, SCADA networking at the Tide facility and along the Light Rail alignment and replace SCADA hardware along the alignment.

NTF Foundation Repair, FY24-FY26

Project to repair the foundation of the Norfolk Tide Facility. The foundation is subsiding and currently being monitored.

Light Rail Aerial Structures, FY24, FY30-FY32

Project to fund state-of-good-repair maintenance of bridges/aerial structures along the Tide Light Rail. The project scope is based on HRT’s 30-Year Light Rail state-of-good-repair plan.



HAMPTON ROADS
TRANSIT

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