VIRGINIA PASSENGER RAIL AUTHORITY

Strengthening Connections.
Planning for Success.

FINANCIAL PLAN
Virginia Passenger Rail Authority

2022

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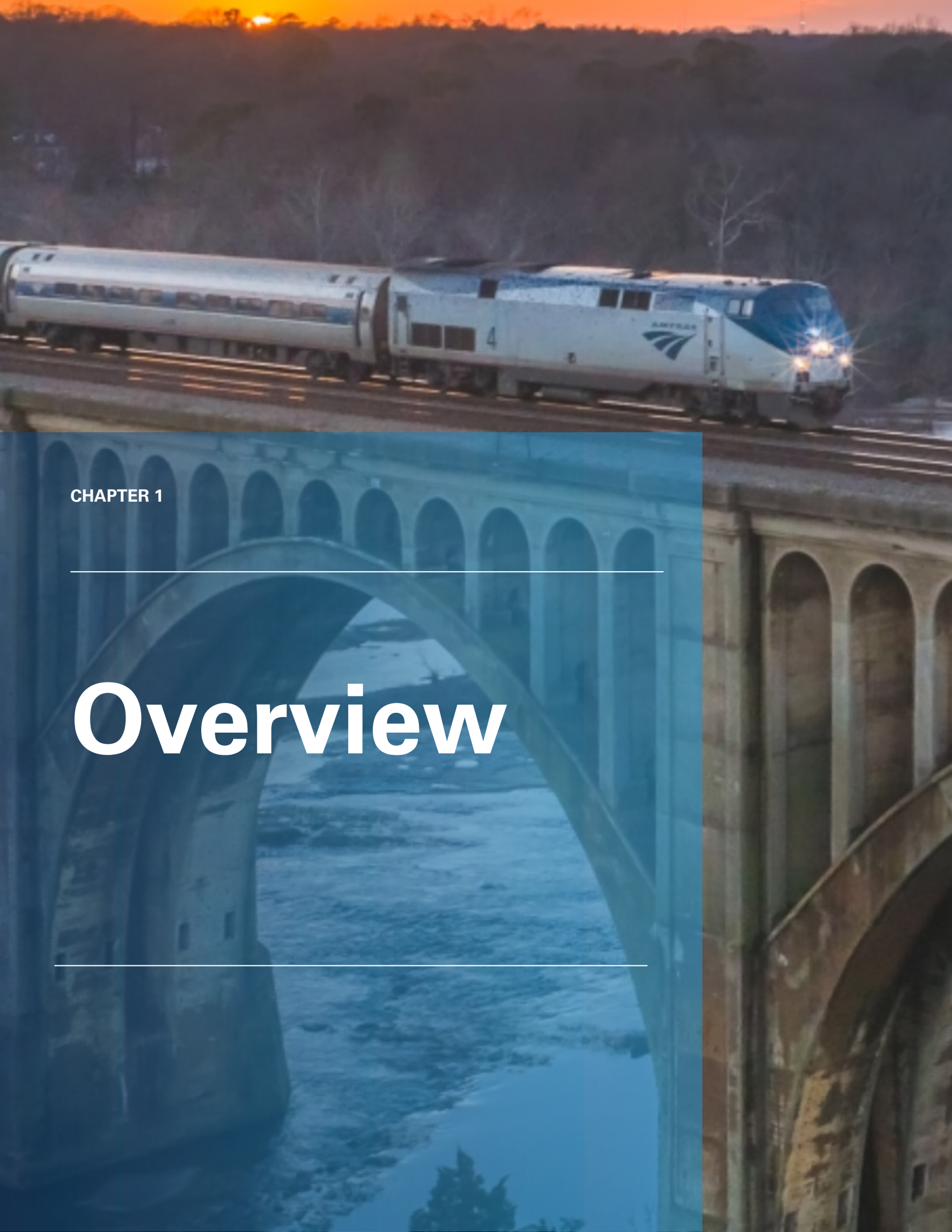


CHAPTER 1

Overview

Overview of the Virginia Passenger Rail Authority and the Financial Plan

Introduction to the Virginia Passenger Rail Authority

The Virginia Passenger Rail Authority (the "Authority" or "VPRA") was established by Section 33.2-287 et seq. of Chapter 1230 of the 2020 Acts of Assembly with a mission to promote, sustain, and expand the availability of passenger and commuter rail service throughout the Commonwealth of Virginia (the "Commonwealth") with an inception date of July 1, 2020. The Commonwealth Rail Fund (the "CRF") was established as part of the same transportation legislative initiative (Code of Virginia Section 33.2-1526.4). Of the 7.5 percent of Commonwealth Transportation Trust Funds deposited into the CRF, 93 percent are dedicated to the Authority (referred to as the "VPRA Fund").

The VPRA Board is made up of 12 voting members, 1 ex-officio member from Amtrak, 1 ex-officio member from VRE, and the Director of DRPT, who serves as Chairperson. VPRA legislation requires that the Board meet quarterly, at a minimum.

The Authority has been tasked with executing major capital programs to enhance passenger rail, to include the I-95 Corridor and Western Rail Corridor capital improvement programs, administering a portfolio of Capital and Operating Grants, and managing the Commonwealth's intercity passenger rail operations.

Our mission is to promote, sustain, and expand the availability of passenger and commuter rail service in the Commonwealth.

Our vision is to deliver passenger rail service as an integrated, affordable, convenient travel option that benefits the Commonwealth.

Key Responsibilities

Capital Projects

I-95 Corridor

In December 2019, Virginia Governor Ralph Northam announced a landmark rail agreement between the Commonwealth and CSX Corporation ("CSX"). The Comprehensive Rail Agreement ("CRA") between DRPT and CSX was finalized on March 26, 2021. Through the CRA, Virginia acquired 384 miles of CSX right-of-way and 223 miles of track in rail corridors paralleling I-95, I-64, and I-85. Over the next 9 years, VPRA will develop this rail corridor through the execution of the I-95 Corridor program. Development of the specific corridor projects is broken down in the CRA into four phases based on the estimated date of completion. The Authority has secured the funding to execute the first two phases with Phase 1 projects to be completed in 2026 and Phase 2 projects to be completed in 2030. In addition to the defined Phase 1 and Phase 2 projects, the Authority has included two projects to be executed along the same timeline due to cost savings and operational benefits. The I-95 Corridor Improvements have a number of vital funding partners contributing to this groundbreaking corridor development.

Western Rail Corridor

In May 2021, Governor Northam announced that the Commonwealth had reached an agreement with Norfolk Southern Railway to expand passenger rail service to southwest Virginia. As part of the agreement, Virginia is acquiring 28.5 miles of the Norfolk Southern owned right-of-way ("V-Line") from the Salem Crossovers to Christiansburg. The acquisition of railroad right-of-way and tracks, along with infrastructure improvements and improved operations, will allow for the expansion of high-quality passenger rail services from Roanoke to Christiansburg. The definitive agreement between VPRA and Norfolk Southern Railway was signed on January 10, 2022 and financial close is expected to occur in Summer 2022. The Western Rail Corridor Capital Projects will include required capital improvements on the newly acquired V-Line, and extending the V-Line to the New River Valley.

Capital and Operating Grants

VPRA will manage a portfolio of Capital and Operating Grants in which capital funding is provided to a third party (such as a Class I Railroad or local government) that executes design and construction utilizing their respective financial control systems. A majority of grants administered by the VPRA are allocated by the Commonwealth Transportation Board ('CTB'). Grantees apply through the CTB process and if awarded Commonwealth funds, the VPRA is tasked with administering passenger rail operations and infrastructure projects. In addition to CTB allocated grants, the VPRA will administer historical grants transferred from prior rail programs and grants approved by the VPRA Board.

Operations

One of the core functions of VPRA is to provide intercity passenger rail service to the citizens of the Commonwealth for which the Authority contracts with Amtrak to deliver the State-sponsored service. As a result of the Capital Projects, passenger service will double in the Commonwealth. These services will be the core responsibility of the Authority once the development of the I-95 Corridor and Western Rail Corridor are completed.

Executive Summary

Financial Plan at a Glance

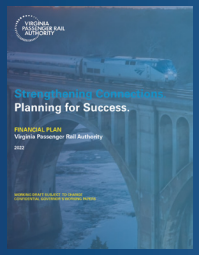
This Financial Plan is based on extensive diligence over the past three years and was developed using standard methodologies for large-scale transportation projects. It is focused on ensuring there is sufficient funding for improvement expenditures and lays the foundation for future investments.

This document presents the current assumptions of VPRA and the most up-to-date information for the Financial Plan as of the date of publication. It is important to note that the Financial Plan will require ongoing financial refinement and analysis as the efforts advance in order to inform responsible delivery. Changes will be reflected in updated financial planning documentation, as needed.

The current outlook for the Financial Plan illustrates a significant investment and involves multiple revenue streams to construct new facilities, fund acquisition of right-of-way, operate and maintain the system, and manage VPRA's portfolio of Capital and Operating Grants.

To date, federal, state, and local/regional funding sources have been identified to fund VPRA's projects. The majority of these funding sources are already committed through budgetary allocations and funding agreements.

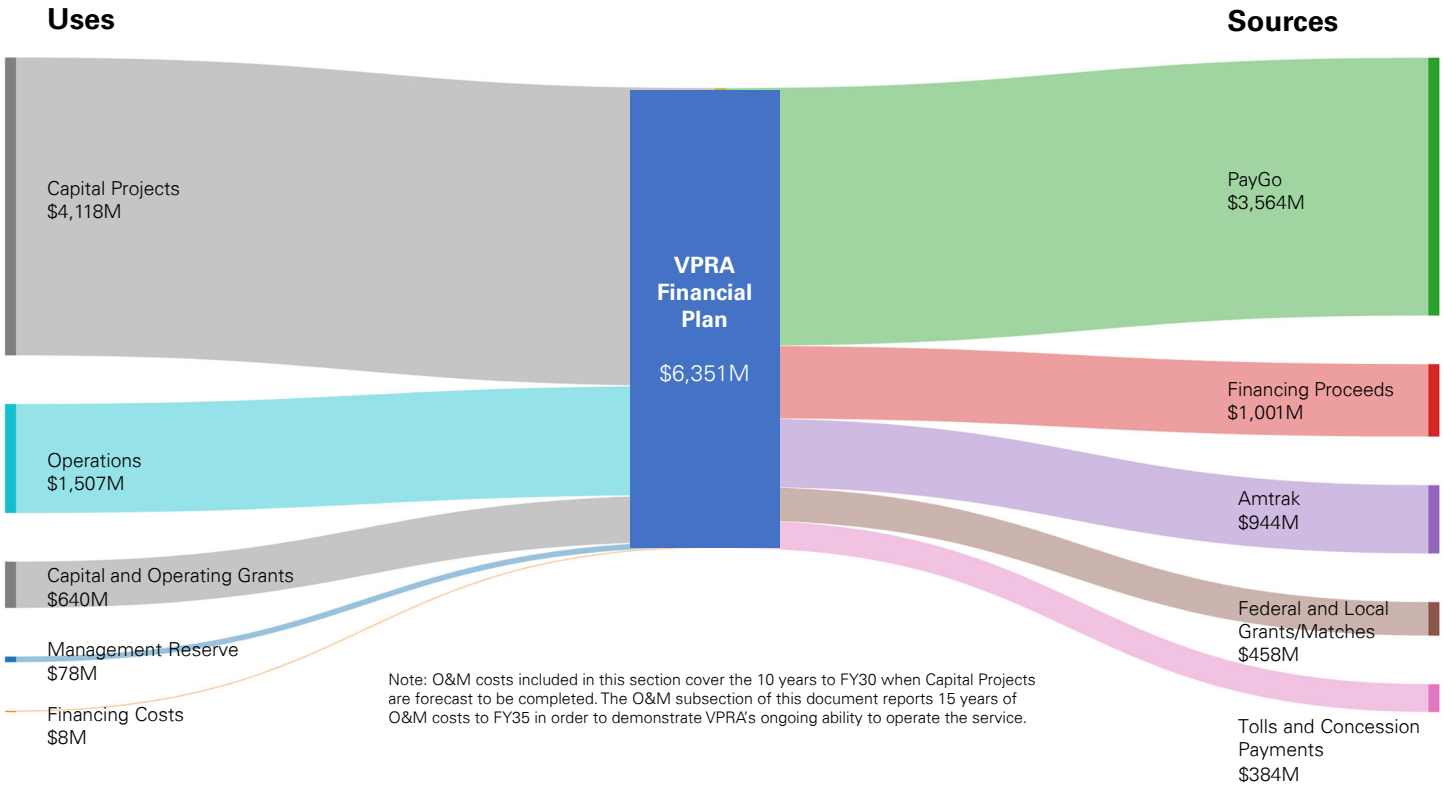
New Long Bridge
The construction of a two-track New Long Bridge is the centerpiece of VPRA's Capital Projects. The current bridge was built in 1904 and renovated in 1949. It is a critical link between Northeast and Southeast rail infrastructure and mobility.



Financial Plan Highlights

- Capital Projects (I-95 Corridor and Western Rail Corridor) are feasible and affordable based on current assumptions of available funding
- Capital and Operating Grants are feasible and affordable based on available funding
- Sustainable operations of system is feasible and affordable through 2035 based on assumptions of available funding

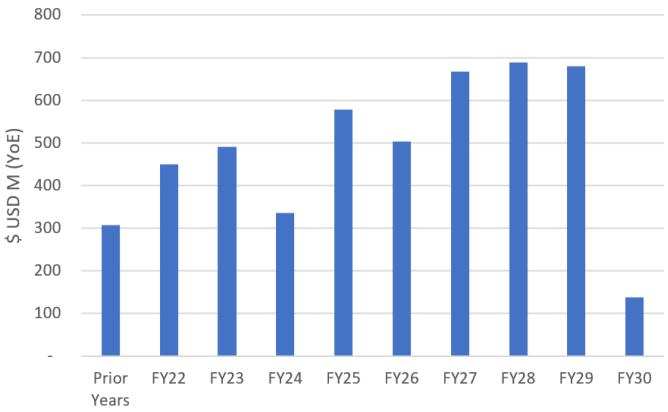
SOURCES AND USES
Overview of all Financial Plan sources and uses



Note: O&M costs included in this section cover the 10 years to FY30 when Capital Projects are forecast to be completed. The O&M subsection of this document reports 15 years of O&M costs to FY35 in order to demonstrate VPRA's ongoing ability to operate the service.

USES OVER TIME
Capital Expenditures

Capital Expenditures vary by year based on the construction being undertaken at that time.

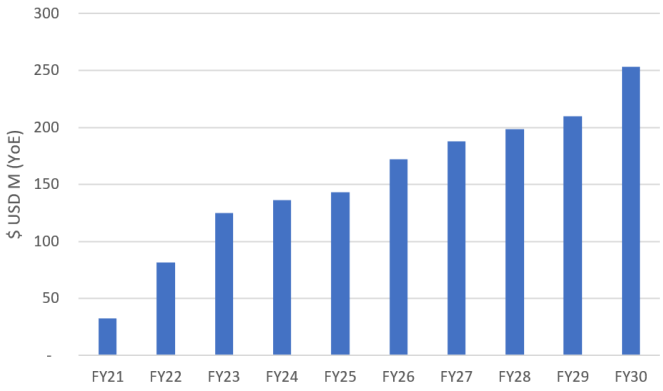


Capital Expenditures include:

- Right-of-way Purchases
- I-95 Corridor Projects
- Western Rail Corridor Projects

USES OVER TIME
Gross Operations and Maintenance

O&M costs increase as new infrastructure is constructed and additional passenger service is initiated



Note that pre-COVID O&M was approximately $120M in 2019 and that FY21 expenses reflect Federal COVID-19 relief funds that Amtrak applied to costs

Operations and Maintenance costs include:

- Amtrak Operations
- Western Rail Track Access Payments
- Administrative Expenses and Maintenance of Way

Purpose and Need

Virginia's population is projected to grow from 8.5 million to 10 million[1] over the next 25 years. As this growth will add pressure to our roads and highways, VPRA's Financial Plan reflects the Commonwealth's strategy to supplement today's congested transportation network with additional rail capacity.

VPRA is executing a Commonwealth-wide effort to improve the reliability and frequency of passenger rail services throughout Virginia and beyond, make the Port of Virginia and Richmond Marine Terminal more competitive through improved freight rail transportation, and address congestion on our interstates, while growing Virginia's economy. The overall effort has multiple parts and envisions phased improvements, subject to available funds, over multiple years. Over time, the people of Virginia can look forward to:

- Increased service along the I-95 Corridor between Richmond, VA and Washington, DC;
- Increased service to Roanoke and new service to New River Valley; and
- Long-term benefits that stem from public purchase of right-of-way along the I-64 Corridor between Doswell, VA and Clifton Forge, VA and the I-85 Corridor between Petersburg, VA and Ridgeway, NC.

As most know all too well, many of Virginia's roads are congested. Even today, as we emerge from the COVID-19 pandemic, traffic nationwide has returned to 90 percent of pre-pandemic levels[2]. Prior to the pandemic, on a daily basis, cars and buses carried more than 350,000 people, trucks carried more than 271,000 tons of freight, trains carried 83,000 tons of freight, and Metro, VRE, and Amtrak trains carried more than 112,000 passengers through the I-95 Corridor.

According to studies developed to assess potential improvements, widening even 50 miles of highway by one lane in each direction for 50 miles had an estimated cost of $12.5B.[3] While the cost was staggering, the most sobering aspect of the analysis was the prediction that by the time construction was completed in 10 years, the I-95 Corridor would be just as congested as it is today. In the desire to increase throughput capacity within Virginia's rail corridors, passenger rail was selected as the most cost-effective solution in the short and long term.

The activities included in VPRA's Financial Plan will expand and improve passenger and commuter rail service in Virginia and create a vital connection in the national rail network between the Northeast and Southeast corridors. The purpose of this document is to demonstrate VPRA's financial capacity for the planned Capital Projects, Capital and Operating Grants, and associated Operations costs.

1 Demographics Research Group, University of Virginia, https://news.virginia.edu/content/population-projections-virginia-expected-become-10th-largest-state-2040
2 http://www.ctb.virginia.gov/projects/major_projects/i-95_study.asp
3 George Mason University I-95 Study

Financial Plan Projects

As previously discussed, a key responsibility of VPRA is to manage the development of relevant Capital Projects on Virginia's railways. Each program within the Financial Plan aims to enhance the passenger experience and improve rail in the Commonwealth to address the needs outlined above.

I-95 Corridor

The population in the I-95 corridor and adjacent urban centers continues to grow, increasing demand for reliable and safe travel options for passengers. In addition to overall population growth, changing demographics in the corridor and adjacent urban centers are increasing the demand for passenger rail service. Demand for freight movement through and within the corridor is also growing.

One of the worst rail bottlenecks along the East Coast is at the Potomac River crossing between Virginia and Washington, DC, known as the Long Bridge. The bridge carries all passenger, commuter, and freight trains along the corridor and is carrying nearly 80 trains a day with capacity at 98 percent during peak hours. The present configuration constrains Amtrak and VRE from adding more trains to accommodate demand which, prior to the pandemic, was reaching record highs.

I-95 Corridor Capital Projects are divided into four phases based on the anticipated timing of completion and commencement of services. The first two of these phases are included in the Financial Plan:

> **Phase 1:** Anticipated for completion in 2026, Phase 1 includes construction of projects totaling 23 miles of new track which will allow for two additional Amtrak round trips along the I-95 Corridor, three additional round trips on VRE's Fredericksburg Line, and the initiation of VRE weekend service.
>
> **Phase 2:** Planned for completion in 2030, Phase 2 includes construction of projects totaling 14 miles of new track, including the New Long Bridge. Completion of Phase 2 projects will allow for three additional Amtrak round trips along the I-95 Rail Corridor and two additional round trips on VRE's Fredericksburg Line.

Western Rail Corridor

Through a partnership with Norfolk Southern, a second passenger train will provide expanded passenger rail service in Western Virginia serving Alexandria, Burke Centre, Manassas, Culpeper, Charlottesville, Lynchburg and Roanoke, and travel to and from Washington, DC, and Amtrak's Northeast Corridor.

This project includes the acquisition of a portion of Norfolk Southern Railway Company's V-Line between a point west of Roanoke at Salem Crossover to Merrimac (Christiansburg. The acquisition will support the expansion of two Amtrak round trips to Christiansburg and provide for a third frequency operating between Roanoke and Christiansburg. VPRA's Financial Plan also includes the funds for improvements to the V-Line including repairs to bring the V-Line tunnels and bridges into a state of good repair and new track, signaling, a passenger station platform and an additional train to Roanoke.

Capital and Operating Grants

The portfolio of Capital and Operating Grants that is administered by the VPRA will fund a wide variety of projects and uses located across the Commonwealth, including upgrades to platforms, stations, track, bridges, and IT infrastructure upgrades.

Operations

Once the Capital Projects are complete, the core responsibility of VPRA will be to provide intercity passenger rail service (currently contracted to Amtrak). The Financial Plan shows the Authority's continued ability to fund the operations of new and existing service to FY35 and beyond.

Benefits of the Financial Plan

The Capital Projects, Capital and Operating Grants and continued operations of the system will provide benefits beyond capacity and congestion-relief to include both economic and environmental value.

Service Improvements

The activities included in the Financial Plan will expand and improve passenger and commuter rail in Virginia and create a vital connection in America's national rail service between the Northeast and Southeast corridors. Through strategic partnerships, investments, and capital improvements, Virginia will nearly double the Amtrak state-supported service and VRE service (including a first-time-ever weekend and late-night service).

Economic Benefits

A study by George Mason University estimates that construction of the New Long Bridge — and the resulting increase in passenger trains — will facilitate more than $6B in additional economic activity.[1] The benefits will range from the direct impacts of construction activity to indirect, secondary impacts such as time savings for commuters and travelers in the Northern Virginia and Washington, DC, region after completion.

The benefits can also be measured by increased access to jobs and improvement in quality of life. The new service for Amtrak and VRE made possible by the completion of the I-95 Corridor Capital Projects includes late-night and weekend service which is critical to the many jobs — especially those in the service sectors — that are not 9 to 5, Monday through Friday.

Environmental Benefits

According to the American Public Transportation Association ("APTA"), rail travel emits up to 83 percent fewer greenhouse gases than driving and up to 73 percent fewer than flying. For example, when CSX moves one ton of freight 508 miles on a single gallon of gas, it provides up to four times the fuel savings and environmental benefits than moving the same ton of freight the same distance on our highways with a truck.

The total Vehicle Miles Traveled ("VMT") for trucks is projected to be reduced by the New Long Bridge alone in the fifth year after construction by 482 million. VMT reduction for cars is projected to be 332 million in that same year. This results in a reduction of 66 million gallons of diesel fuel and 10 million gallons of gas in that year. Additionally, the Western Rail Corridor projects are projected to reduce VMT by 70 million over a 30-year period.

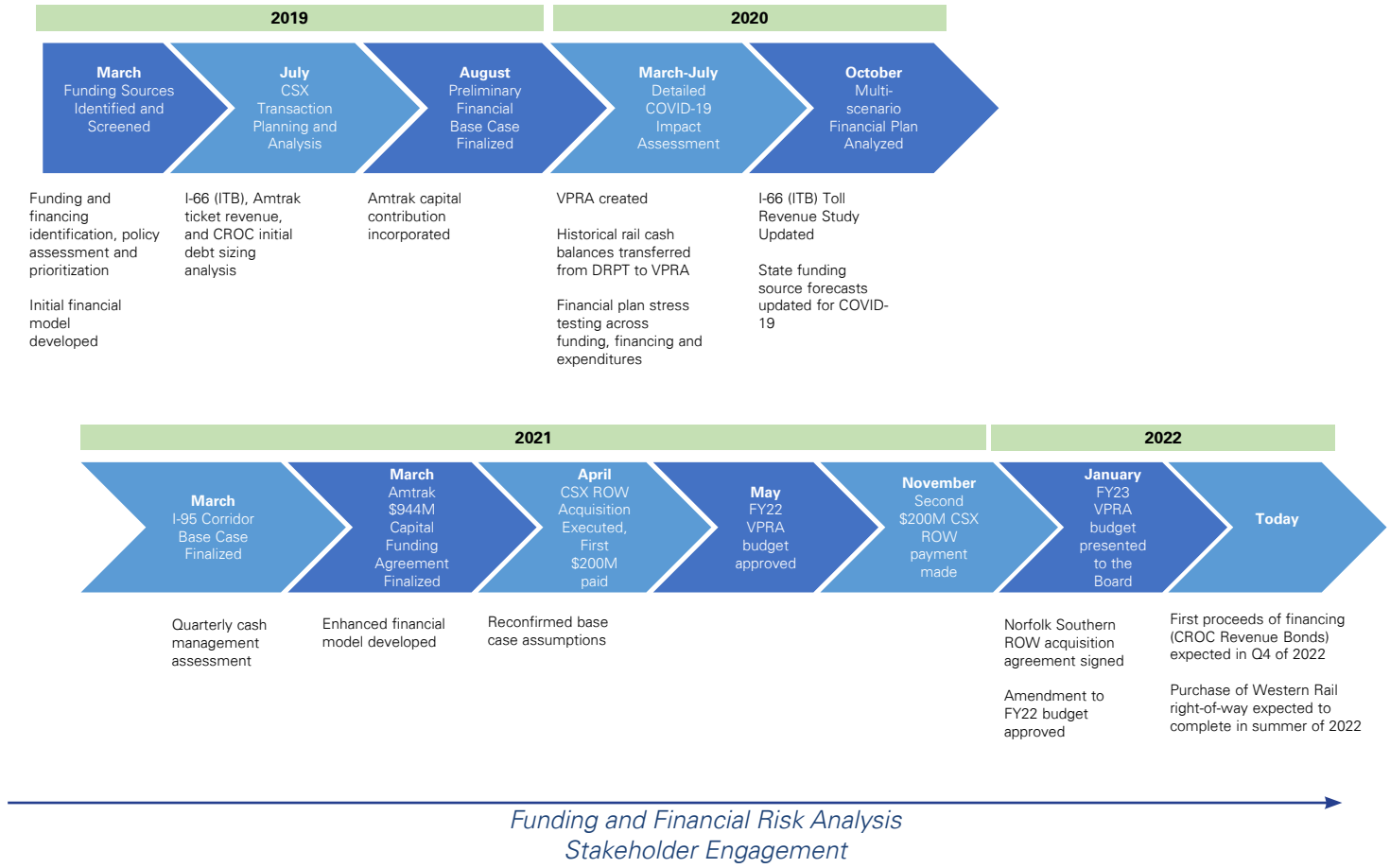
The environmental analysis for the project reveals that in that fifth year, the Commonwealth would experience environmental benefits from the I-95 Corridor Capital Projects in terms of 474,000 metric tons of carbon dioxide emissions avoided due to moving freight by rail, and 90,000 metric tons of carbon dioxide emissions avoided due to passenger rail trips added, for a total value of avoided carbon emissions of 564,000 metric tons.

[1] https://www.congress.gov/117/chrg/CHRG-117hhrg44661/CHRG-117hhrg44661.pdf, pg. 23

Activity to Date

Commercial, Financial, and Stakeholder Activity

From initial financial planning to the establishment of VPRA, a range of work has advanced to begin successful implementation of the Financial Plan activities. During the past three years, robust commercial and financial planning activities have been undertaken by VPRA and their stakeholders. This work is best characterized by a number of key milestones and activities illustrated in the diagram below. In parallel to the financial planning work, VPRA has been collaborating with stakeholders to advance planning and design of improvement projects.



In tandem with the commercial and financial work, planning and design of improvement projects has continued to advance. Various levels of design have been completed for each of the I-95 Corridor and Capital and Operating Grant projects to date, with a majority of I-95 Corridor projects having a minimum of conceptual level design complete. The Western Rail Corridor projects are still in the project development phase.

To date, cost estimates have been developed for each of the Capital Projects based on the current level of design and include estimated construction, right-of-way acquisition, professional services, and contingency costs. All project cost estimates include an unallocated contingency of 20 to 30 percent of the estimated construction cost of the project. Cost estimates will continue to be refined as design progresses.

Over the next 12 to 18 months, design of the Capital Projects, Capital and Operating Grants, and estimates of Operations costs will continue to advance in collaboration with partners.

Document Structure

The remainder of this document consists of two chapters: *Financial Approach* and *Considerations for Success*.

Chapter 2: Financial Approach

This chapter covers the methodology that was used to develop the Financial Plan (including a summary of how flexibility and affordability have been approached) and provides details of each expense and source of funding that is used.

Chapter 3: Considerations for Success

The final chapter outlines the methodology by which VPRA has assessed Financial Plan technical and financial risks to date and looks forward to critical path next steps considerations for key initiatives and VPRA. These include:

- Ongoing financial planning
- Enterprise risk management
- Analysis of project delivery models
- Stakeholder engagement
- Market engagement

CHAPTER 2

Financial Approach

Financial Plan Methodology

A straightforward methodology
Ensuring sufficient funding through 2030 and beyond

The heart of the financial planning methodology is to ensure that there is sufficient funding for VPRA to support the capital and grant expenditures necessary to meet its organizational mandate over the 9 years to FY30 – the planned completion date of the current Capital Project plan. Funding must also be available to continue to sustainably operate and maintain the rail system to FY35 and beyond.

In order to advance the Financial Plan, VPRA has reviewed, prioritized, and allocated funding sources to the planned cost of Capital Projects, Capital and Operating Grants, and Operations. VPRA is continuously monitoring and updating the estimates for these costs and associated revenues.

This Financial Approach chapter outlines:

- The methodology that was used to develop the Financial Plan,
- Details of each cost to VPRA,
- Details of each source of funding,
- The plan for raising finance, and
- A summary of how flexibility and affordability have been built into the Financial Plan.

The diagram below presents each category of costs and revenues that have been included in the Financial Plan and which will be further explored in this chapter. Please note that each source on the right hand side is not directly allocated to each use on the left hand side.

Uses

Capital Projects	$4,118M
Operations	$1,507M
Capital and Operating Grants	$640M
Management Reserve	$78M
Financing Costs	$8M
TOTAL USES	**$6,351M**

Sources

PayGo	$3,564M
Proceeds of Financing	$1,001M
Amtrak	$944M
Federal and Local Grant Awards and Matches	$458M
Tolls and Concession Payments	$384M
TOTAL SOURCES	**$6,351M**

Assumptions

The basis of financial planning

Key assumptions in the Financial Plan are the types of funds available to VPRA or "sources" (funds in) and types of expenditure or "uses" (funds out). For purposes of this Financial Plan sources range from federal grants to financing proceeds and uses include elements such as capital and maintenance costs. Assumptions also must capture potential impacts to affordability (i.e., when funds in are greater than funds out) given changes in assumptions (e.g., increased, decreased, delayed, or accelerated sources and/or uses).

Key assumptions have been included in the relevant sections of this chapter.

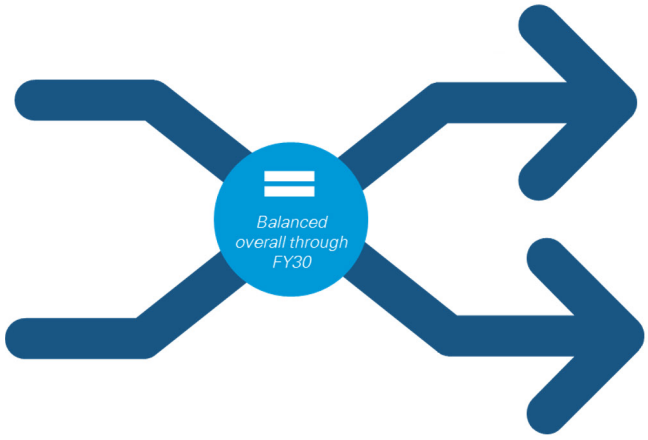
Financial Planning

A tool for projections

Financial planning is a dynamic exercise that involves developing a projection of sources and uses independently (i.e., so that the one does not influence the other) before assessing the data collectively in order to determine affordability.

Methodology

The diagram below illustrates the principal of balancing funding (sources) and expenditure (uses) items. Further detail about the specific sources and uses in this Financial Plan are presented later in this section.



Affordability (or lack thereof) can be ascertained by comparing the collective assessment of sources versus uses. A program is considered affordable if sources and uses are balanced. A program is considered unaffordable where there are shortfalls or insufficient funds to pay for the expected uses in any given period. A sources vs. uses analysis can also helpfully identify areas of key risk to program affordability such as where there are instances of minimal buffer of sources to uses or specific periods within the time horizon analyzed where there is an imbalance of available sources to uses.

To establish this Financial Plan, VPRA performed numerous iterations of sources vs. uses forecasting assessments during the past three years and made updates and refinements as assumptions have evolved and been tested. The subsections below memorialize the activities completed in this process.

Affordability and Feasibility Assessment

Based on more than three years of work to date

In order to construct the Financial Plan, a detailed investigation of numerous sources was conducted. This exercise began in 2019 in close collaboration with stakeholders and Commonwealth leadership, and resulted in a shortlist of approximately 25 key viable funding sources reflected in the Financial Plan today (the sources).

On the other side of the ledger, as project design efforts and negotiations with CSX progressed, capital expenditure and O&M forecasts and profiles (the uses) were refined and updated.

In conjunction with the sources and uses exercise outlined above, VPRA has performed a significant amount of sensitivity and scenario analysis in order to stress test affordability. Analysis involved applying percentage changes to the individual sources and uses forecasts to drive negative affordability outcomes (lower sources, higher uses, delayed uses, and accelerated uses, or delayed uses for which there are insufficient sources) in increasing degrees of intensity. These sensitivities were then combined to test the effect of various scenarios on the outcome of the Financial Plan and inform required risk adjustments and highlight mitigation strategies. This sensitivity and scenario planning became increasingly important and was a primary focus of 2020 financial planning activities in the midst of the COVID-19 pandemic. On the following page, sensitivity work undertaken as a result of pandemic is further described.

Definitions

Affordability
When sources and uses are balanced or sources are larger than uses.

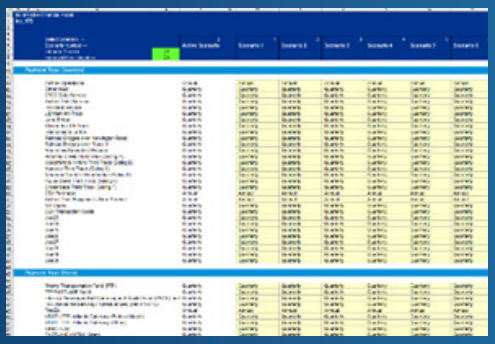
Financial feasibility
Builds on affordability to include a robust assessment of risks within the underlying assumptions used in forecasts (i.e., instances that result in lower sources, higher uses, delayed uses, and accelerated uses, or delayed uses for which there are insufficient sources)

Policy and Timing

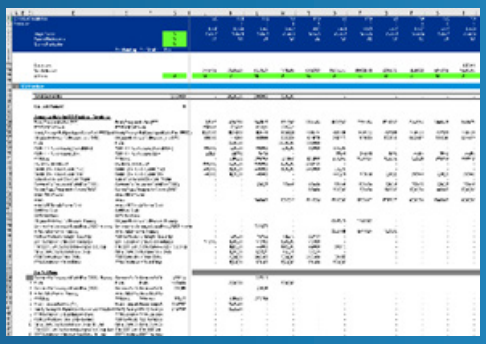
Where multiple sources and uses are considered, VPRA has planned, and confirmed, that each funding source can be utilized for a use, given regulations, policy, intended uses, and other restrictions. The current results of the Financial Plan reflect an intricate assignment of individual sources to uses, driven by timing and policy. A further challenge to Financial Planning is the fact that one has to plan for ongoing cash management, on a more frequent basis than annually. VPRA has analyzed the Financial Plan on a quarterly basis to ensure financial feasibility, and will continue to plan this way.

The Financial Plan Tool

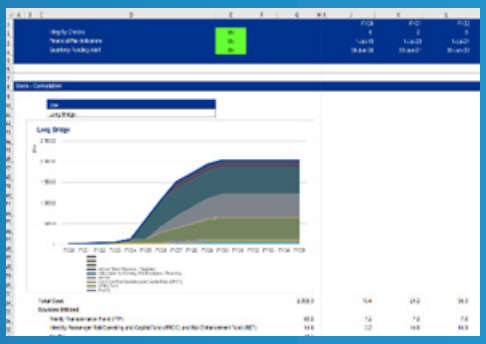
The Financial Plan and related financial feasibility analysis is underpinned by a bespoke financial model tool. This tool is a Microsoft Excel-based model that was constructed in line with leading financial modeling practices. The tool continues to be used and improved by VPRA today, as various analyses advance.



Inputs



Calculations



Outputs

COVID-19 Considerations

The Base Case Financial Plan incorporates sensitivity for pandemic relief and impact to ridership

COVID-19 has significantly impacted public transportation in light of the change in ridership behavior prompted by government lockdowns, employer shifts to remote working, and personal choice. Nationally, transit ridership in 2020 decreased by 79 percent when compared to pre-pandemic levels in 2019. Though the time frame and degree of recovery remains yet unknown, the forecast for ridership in 2022 and 2023 is lower than 2019 levels due to an increase in the acceptance of remote work.

In addition to altering ridership, COVID-19 shifted many rail organizations' focus to address safety concerns and initiate austerity measures. This included service reductions and various other cost-reduction tactics, such as headcount reduction. In addition to cost reduction becoming vital for many transit agencies, transit funding in the form of contributions from the motor fuel tax, a product of vehicle miles of travel declined sharply. VMT in December of 2020 declined 74 percent year over year. Expense escalation also was devastating to many transit agencies with the need for personal protective equipment (PPE) and additional cleaning and disinfecting becoming imperative for safety on remaining and future service. With vaccinations widely available and a trend towards increased office work and leisure travel nationally, VPRA has seen ridership return to approximately 70 percent of pre-pandemic levels as of Fall 2021 and is approaching the near-term with cautious optimism.

VPRA Approach

Since the outbreak of the pandemic, VPRA has worked continuously with key stakeholders, including the Governor's Office, DRPT, Amtrak, VDOT, and VRE to assess the impact that COVID-19 is expected to have on VPRA's Financial Plan forecasts. The latest base case reflects an expenditure and funding plan that incorporates a forecast downside due to the pandemic. This base case came together in three phases:

- **Step One – Pandemic impact investigation:** An initial base case was developed to assess affordability
- **Step Two – COVID-19 sensitivity analysis:** Five financial scenarios with increasingly punitive degrees of recovery were analyzed (base, moderate, severe, more severe, and break even)
- **Step Three – Updated Financial Plan:** An updated, more conservative but still affordable base case was created that incorporates:
    - Updated Commonwealth budgetary allocations reflective of COVID-19 (PTF, VPRA Fund, etc.);
    - Reduced Amtrak ticket revenue with a long term 5 percent decrease;
    - Reduced I-66 (ITB) toll revenue with a long term 15 percent decrease; and
    - A re-structured capital expenditure plan that is still deliverable by FY30.

The VPRA Budget

The VPRA produces annual budgets which provide stakeholders with key information regarding forecasted spending. The budget has three components which form the majority of the uses in the Financial Plan:

- **Capital Projects:** Expenditures for rail infrastructure that will be retained by the Authority as a capital asset.
- **Operations:** Expenditures related to the core passenger rail service operations.
- **Capital and Operating Grants:** Funds provided to third party entities to build and improve their rail infrastructure or operate their rail service.

The following sections detail the costs included in each of these components.

Capital Projects	$4,118M
Operations	$1,507M
Capital and Operating Grants	$640M
Management Reserve	$78M
Financing Costs	$8M
TOTAL	**$6,351M**

PayGo	$3,564M
Proceeds of Financing	$1,001M
Amtrak	$944M
Federal and Local Grant Awards and Matches	$458M
Tolls and Concession Payments	$384M
TOTAL	**$6,351M**

Capital Projects

A phased approach
Multiple, interconnected projects

This Financial Plan presents the funding plan for VPRA's Capital Projects through 2030 as well as the purchase of right-of-way from CSX and Norfolk Southern.

To illustrate the large scope and interconnectedness of the Financial Plan over time, the graphics on the following page depict the distribution of expenditures across each section of the Financial Plan and for each project with individual project costs and their anticipated completion dates. As discussed in Chapter 1, the Financial Plan's Capital Projects can be viewed as a number of elements:

- **I-95 Corridor Phase 1:** Construction of I-95 Corridor projects, totaling 23 miles of new track between Washington, DC and Richmond, VA, with estimated completion in FY26. Phasing of the I-95 Corridor projects is based on construction timing and its effect on available services.

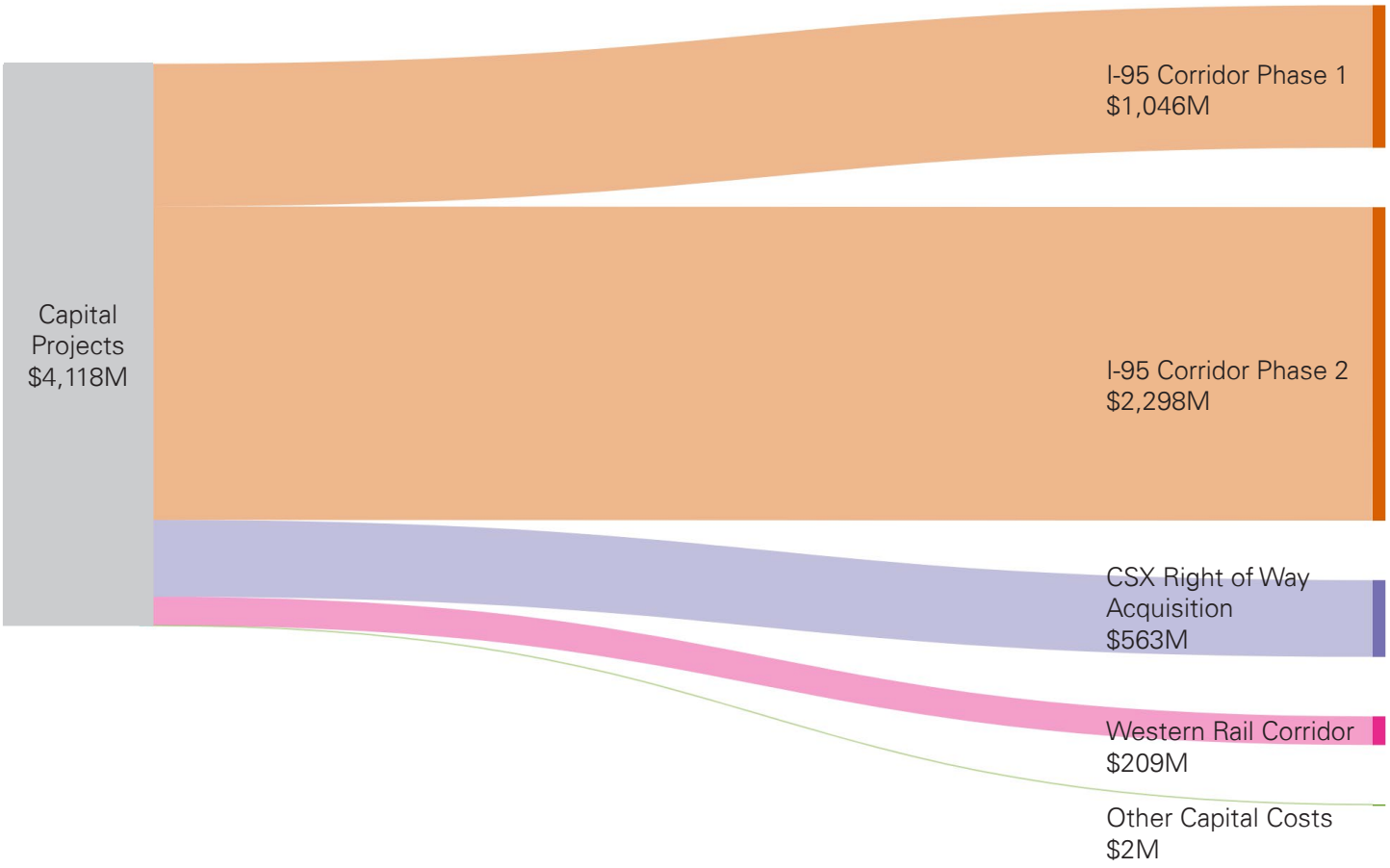
- **I-95 Corridor Phase 2:** Construction of remaining I-95 Corridor projects (estimated completion in FY30) totaling 14 miles of new track between Washington, DC, and Richmond, VA, including the New Long Bridge.

- **CSX Right-of-Way Acquisition:** Acquisition of 384 miles of CSX right-of-way and 223 miles of track in rail corridors paralleling I-95, I-64, and I-85.

- **Western Rail Corridor:** Acquisition of right-of-way and tracks, along with infrastructure improvements and improved operations, to allow for the expansion of high-quality passenger rail services from Roanoke to Christiansburg.

- **Other Infrastructure Improvements:** Purchase of St. Julian's Yard Amtrak Train Service Facility.

Further detail of these elements and individual project costs can be found in the following subsections. Funding of the Financial Plan is discussed in later sections of this document.

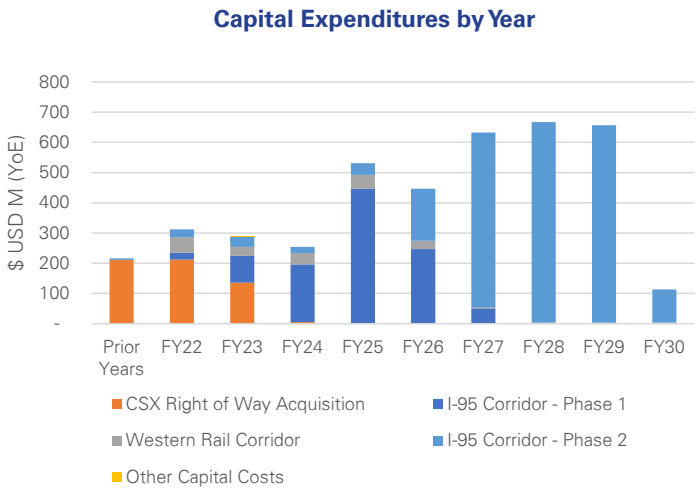


Capital Expenditures over time

The graphic above illustrates the phases for major sections of work and relative total cost. However, the annual costs associated with funding the improvements will be incurred at different levels each year.

The graph to the right illustrates the estimated capital expenditures over time for each Capital Project element.

The I-95 Corridor projects have been allocated to Phase 1 or Phase 2 based on the expected timing of construction completion. Cost estimates for Capital Projects include contingency. The amount of contingency included is based on the maturity of the each project's design development and anticipated level of risk. Risk management is discussed further in the following chapter (Considerations for Success). In addition to the contingency, each Capital Project cost includes the estimated project development expenditure to show the full cost of delivering the project. For purposes of this Financial Plan, inflation is assumed at 3 percent per year. The subsections that follow provide the details for each project within each phase.



I-95 Corridor Phase 1 Capital Expenditures - $1,046M

This subsection includes information on each of the infrastructure projects in Phase 1 of the I-95 Corridor improvements.

Alexandria Fourth Track

Project Budget Estimate: $210M, Delivery Responsibility: CSX

The Alexandria Fourth Track project will construct approximately 6 miles of mainline fourth track between Arlington, VA, and Alexandria, VA. The project will connect to the southern end of the New Long Bridge project and will construct one additional track within existing railroad right-of-way to accommodate more railroad capacity between Northern Virginia and Washington, D.C.

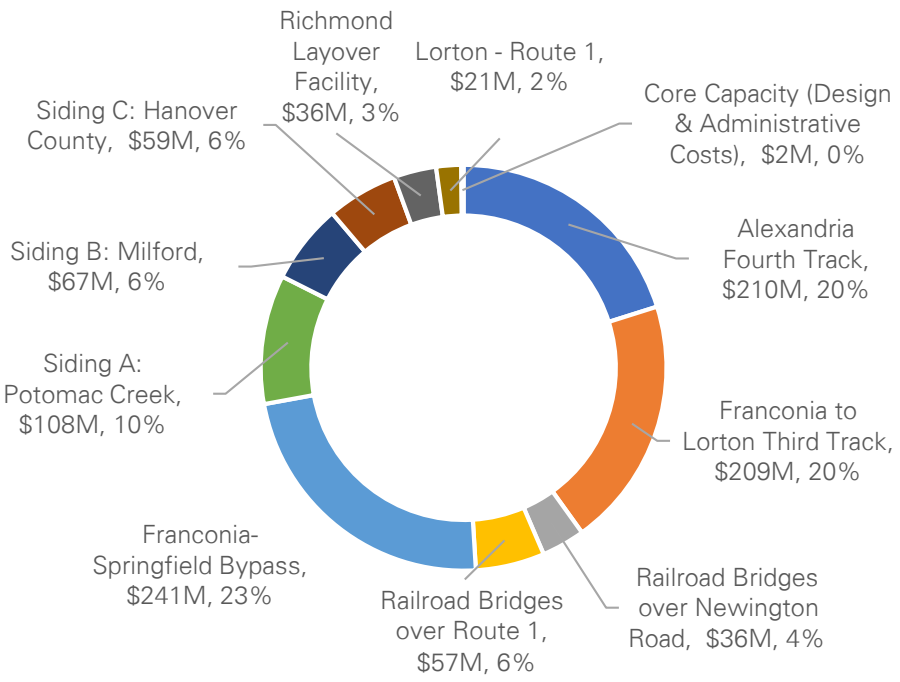
Existing tracks will be shifted to accommodate station and platform improvements, provide space within the right-of-way for the construction of the new tracks, and increase the efficiency of train operations in the corridor. The project also will modify and upgrade the existing railway interlockings. The project is in the final design phase.

Franconia-Lorton Third Track

Project Budget Estimate: $209M, Delivery Responsibility: CSX

The Franconia to Lorton Third Track project is an approximately 6 mile segment that will extend the existing 3rd track between Alexandria and Franconia down to the Lorton Interlocking. This segment involves at-grade track improvements to accommodate the Franconia-Springfield Bypass bridge and new railroad bridges over Pohick Creek and Accotink Creek without impacts to existing bridge structures.

Total Capital Expenditures, I-95 Corridor Phase 1 ($M, %)



Railroad Bridges over Newington Road

Project Budget Estimate: $36M, Delivery Responsibility: CSX

The railroad bridges over Newington Road will replace the existing two-track railroad bridge over Newington Road in Fairfax County with two new two-track railroad bridges. The project will both increase capacity and replace the existing infrastructure. The new bridges also will provide greater vehicle clearance under the bridges and allow for future widening of Newington Road from one lane to four lanes.

Railroad Bridges over Route 1

Project Budget Estimate: $57M, Delivery Responsibility: CSX

The railroad bridges over Route 1 will replace the existing two-track railroad bridge over Route 1 in Fairfax County with two new two-track railroad bridges. The project will increase capacity and replace the infrastructure currently in place. The new bridges will also provide greater vehicle clearance under the bridges and allow for future widening of Route 1 from four lanes to six lanes. Note that the railroad bridges over Route 1 is not a required Phase 1 project but is currently being advanced on the Phase 1 timeline to achieve the service levels in the CSX agreement.

Franconia-Springfield Bypass

Project Budget Estimate: $241M, Delivery Responsibility: VPRA

The Franconia-Springfield Bypass project, located just south of Franconia-Springfield station, will construct a dedicated passenger rail bridge that allows trains to cross between the west side and east side of the rail corridor without interference from freight trains on the existing tracks. The project includes construction of a single track on the bypass bridge, with accommodations for a second track to be added in the future. Currently, passenger trains crossing between the west and east sides of the corridor, which is needed to serve VRE stations, are in conflict with freight trains. The construction of the bypass bridge will allow trains to more safely cross the rail corridor, increase the capacity for service, and improve the reliability of both passenger and freight service.

Siding A: Potomac Creek

Project Budget Estimate: $108M, Delivery Responsibility: CSX

The Potomac Creek Third Track South (Siding A) project will construct approximately 3.9 miles of third track in Stafford County near Leeland station. The project will also include reconstructing the roadway bridge at Leeland Road and constructing a new rail bridge over Harrell Road at Claiborne Run with a single track and accommodations for a future second track. The new bridge over Harrell Road will be built without impacts to the existing bridge structure in place. This project also will include modifications to the existing Dahlgren Junction (DJ) interlocking to accommodate the third track.

Siding B: Milford

Project Budget Estimate: $67M, Delivery Responsibility: CSX

The Woodford to Milford Third Track (Siding B) project will construct approximately 3.1 miles of third track in Caroline County between Woodlane Road and Paige Road.

Siding C: Hanover County

Project Budget Estimate: $59M, Delivery Responsibility: CSX

The Hanover Third Track (Siding C) project will construct approximately 2.9 miles of third track between the South Anna River and Vaughn Road/Henry Street in Hanover County. The project also will include modifications to the at-grade crossing at Vaughn Road/Henry Street to accommodate the third track. The project will include reconstructing the roadway bridge at Washington Highway and constructing a new single-track rail bridge at Elletts Crossing Road.

Richmond Layover Facility

Project Budget Estimate: $36M, Delivery Responsibility: VPRA

The project includes the planning, design, permitting, and construction of a layover facility and tracks for the storage and light servicing of existing Amtrak trains serving Main Street Station that are currently stored at the Staples Mill Station. It will also service future trains that will begin service at the end of Phase 1 and Phase 2 in 2026 and 2030. This project is required as part of the Rail Agreement with CSX, as it will reduce rail congestion in and near CSX's Acca yard between Staples Mill and Main Street Stations. VPRA is working with CSX, Amtrak, and others to select a preferred site for the facility. This project will improve service reliability as well as station access and customer convenience by reducing the current deadhead moves that are delayed by conflicts with freight operations. Note that as is the case with the Railroad Bridges over Route 1, this project is not required for completion of Phase 1 but is currently being advanced on the Phase 1 timeline.

Lorton to Route 1

Project Budget Estimate: $21M, Delivery Responsibility: CSX

The Lorton to Route 1 Third Track project will add approximately 1.2 miles of third track between the southern limit of the Franconia to Lorton Third Track project and the northern limit of the Railroad Bridges over Route 1 project, completing a continuous three-track corridor between Alexandria and Route 1. The project will increase network fluidity and reduce delays due to passenger and freight train interference. This project is not required for the completion of Phase 1. It is being advanced due to its proximity to Phase 1 projects, and long term cost savings and service benefits.

Core Capacity Grant Design and Administration Costs

Project Budget Estimate: $2M, Delivery Responsibility: VPRA

Administrative costs and design costs in relation to the Core Capacity Grant.

I-95 Corridor Phase 2 Capital Expenditures - $2,298M

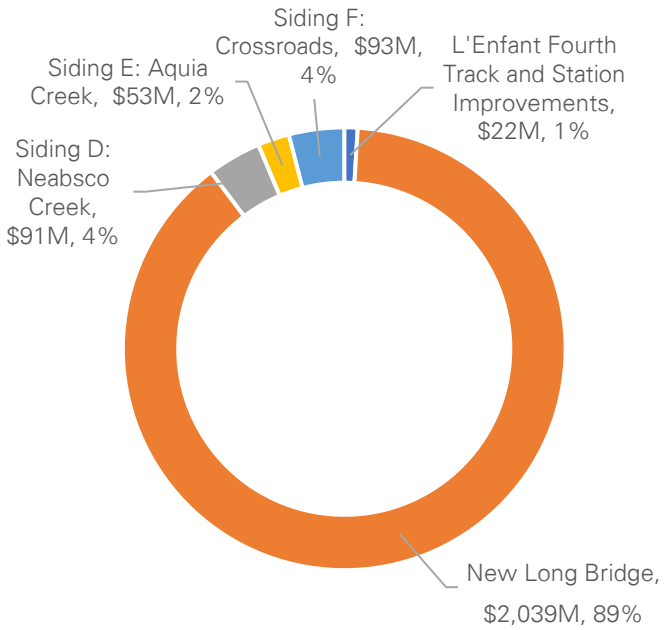
The following subsection includes specific information on each of the infrastructure projects in Phase 2 of the I-95 Corridor improvements.

L'Enfant Fourth Track and Station Improvements

Project Budget Estimate: $22M,
Delivery Responsibility: VRE

The L'Enfant Fourth Track project will consist of the construction of approximately 0.9 mile of mainline fourth track through and around VRE's busiest station, L'Enfant Station, and improvements to the existing station platform. L'Enfant Station platform improvements include converting the existing side platform to an island platform to provide two platform edges and extending the platform to accommodate longer trains. The conversion from a side platform to an island platform will enable simultaneous boarding and alighting of two trains and the extension of the platform will allow the station to accommodate eight car trains. Note that the project budget estimate in the Financial Plan shows the total VPRA contribution to the project. Additional costs will be funded by VRE.

Total Capital Expenditures, I-95 Corridor Phase 2 ($M, %)



New Long Bridge

Project Budget Estimate: $2,039M, Delivery Responsibility: VPRA

The New Long Bridge project is the largest single project in the Program. It will consist of the construction of approximately 1.4 miles of improvements to the bridge and related railroad infrastructure located between Arlington, VA, and Washington, DC, including:

- Construction of a new, two-track railroad bridge over the Potomac River next to the existing Long Bridge
- Construction of seven additional rail bridges
- A new bike-pedestrian bridge will be constructed as part of the mitigation to National Park Service (NPS) parkland and will span the Potomac River and George Washington Memorial Parkway, connecting Long Bridge Park directly to East and West Potomac Parks

The project's purpose is to create greater railroad capacity between Virginia and the District of Columbia while alleviating the rail congestion caused by the existing two-track Long Bridge, which is the greatest pinch-point for rail operations on the East Coast.

Siding D: Neabsco Creek

Project Budget Estimate: $91M, Delivery Responsibility: CSX

The Neabsco Creek to Woodbridge Third Track (Siding D) project will construct approximately 3 miles of third track in Prince William County from south of Dawson Beach Road to north of Neabsco Creek. The project includes modifications to the at-grade crossing at Featherstone Road and the existing Featherstone interlocking to accommodate the third track. The project includes the construction of new two-track railroad bridges over an unnamed creek and Farm Creek. Both bridges will be built without impacts to the existing bridge structures.

Siding E: Aquia Creek

Project Budget Estimate: $53M, Delivery Responsibility: CSX

The Aquia Creek Third Track South (Siding E) project will construct approximately 2.8 miles of third track in Stafford County from the north end of Brooke Station to the existing Aquia Creek bridge.

Siding F: Crossroads

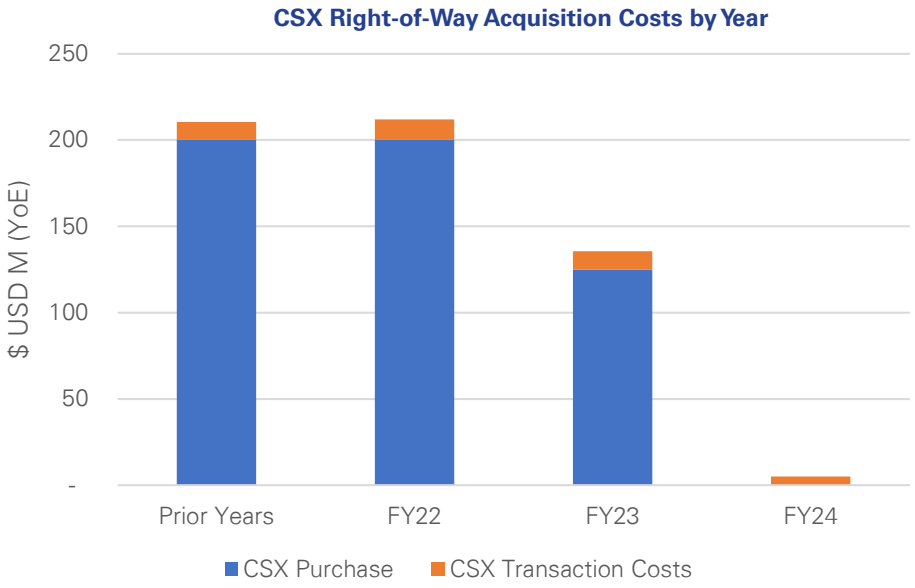
Project Budget Estimate: $93M, Delivery Responsibility: CSX

The Crossroads Third Track (Siding F) project will construct approximately 4.1 miles of third track in Spotsylvania County from south of Spotsylvania Station to Claiborne Crossing Road. The project also will include modifications to the at-grade crossing at Summit Crossing Road and the existing XR interlocking to accommodate the third track.

CSX Right-of-Way Acquisition - $563M

Budget: $525M for ROW, $38M Transaction Costs

The CSX transaction includes the terms for acquisition of $525M worth of right-of-way and track. The CSX agreement also finalizes roles and responsibilities (such as for construction responsibility for specific individual projects) in the two-phase, 10-year buildout of $3.2B in infrastructure improvements to include a new passenger- dedicated Long Bridge, the Alexandria Fourth Track, the Franconia to Lorton Third Track, the Franconia-Springfield Bypass, and six sidings.



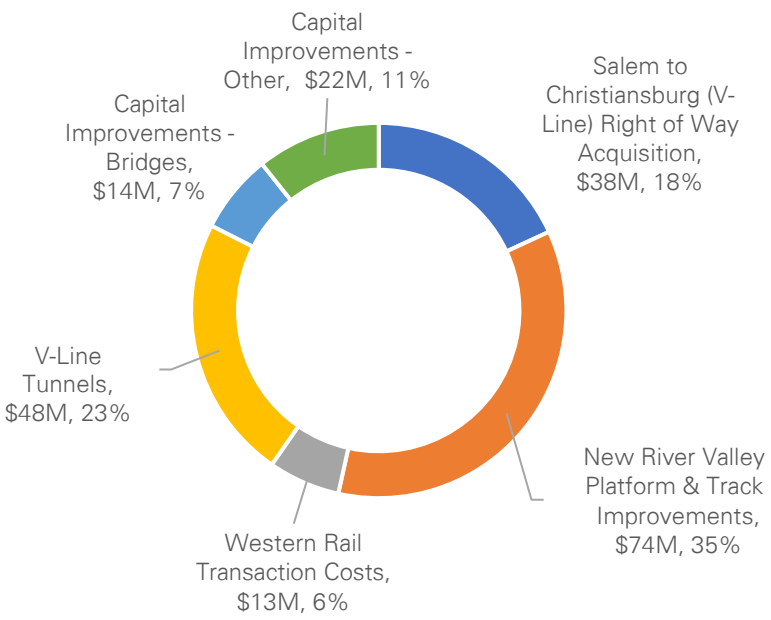
The Program includes Virginia's acquisition of 384 miles of CSX right-of-way and 223 miles of track, including:

- Half of the CSX-owned railroad right-of-way between Washington, DC, and Petersburg, VA
- All of the CSX-owned (but out of service) right-of-way between Petersburg, VA, and Ridgeway, NC
- Nearly all of the CSX-owned right-of- way between Doswell, VA, and Clifton Forge, VA
- Track within the purchased right-of-way also becomes Virginia property

Western Rail Corridor Capital Expenditures - $209M[5]

The following subsection includes specific information on each of the infrastructure projects in the Western Rail Corridor.

Total Capital Expenditures, Western Rail Corridor ($M, %)



Salem to Christiansburg (V-Line) Right-of-Way Acquisition

Project Budget Estimate: $38M, Delivery Responsibility: VPRA

VPRA will acquire a portion of Norfolk Southern Railway Company's V-Line between a point just east of the connection of the Salem Crossovers west of Roanoke, Virginia (approximately milepost 250.5) to Merrimac (Christiansburg), Virginia at milepost 279.0. The acquisition will support the expansion of two Amtrak roundtrips to Christiansburg and provide for a third frequency operating between Roanoke and Christiansburg.

New River Valley Platform & Track Improvements

Project Budget Estimate: $74M, Delivery Responsibility: VPRA

This project will fund infrastructure necessary to operate passenger trains from Roanoke to the New River Valley, including track, signaling, and a passenger station platform. VPRA will work with the community to identify the best location for a passenger station in the New River Valley, and VPRA will fund the planning, design, and construction of a track and platform to serve the rail station. VPRA began community outreach and the Pre-National Environmental Policy Act (NEPA) process for this project in Fall 2021. The scope of this work includes the determination of a Class of Action, which will be moved forward immediately upon the conclusion of the study. VPRA will collaborate planning of the improvements with the localities to ensure proper multi-modal connections. This project will also fund track and signaling improvements from Salem to the New River Valley, including the installation of Positive Train Control.

Western Rail Corridor Transaction Costs

Project Budget Estimate: $13M, Delivery Responsibility: VPRA

This amount is set aside to cover the cost of completing the Western Rail Corridor transaction, including administrative, survey, administration, legal and advisor costs.

V-Line Tunnels

Project Budget Estimate: $48M, Delivery Responsibility: VPRA

Repairs will be made to bring the V-Line tunnels that are along the 28.5 miles of track purchased as part of the Norfolk Southern agreement into a state of good repair. It will also include modifications to bring the tunnels into compliance with the latest safety standards for passenger rail. These improvements will benefit the extension of Amtrak service from Roanoke to the New River Valley.

Capital Improvements – Bridges

Project Budget Estimate: $14M, Delivery Responsibility: VPRA

Funding to perform capital improvements on bridges in the VPRA purchased V-Line corridor to maintain a state of good repair. As bridges reach their useful life, programmed funding will provide for their replacement as needed. This project will ensure bridge assets remain in a state of good repair to support safe, reliable passenger and freight rail operations.

[5] Excluding Western Rail Capital and Operating Grants

Capital Improvements – Other

Project Budget Estimate: $22M, Delivery Responsibility: VPRA

Funding to upgrade track to a standard to accommodate passenger rail service and perform capital improvements of track and culverts in the VPRA purchased V-Line corridor to maintain a state of good repair. As infrastructure reaches its useful life, programmed funding will provide for their replacement as needed. This project will ensure track, tunnels, and culverts along the V-Line remain in a state of good repair to support safe, reliable passenger and freight rail operations.

Western Rail Corridor Capital and Operating Grants

Project Budget Estimate: $169M, Delivery Responsibility: VPRA

Several additional capital elements of the Western Rail Corridor are funded using Capital and Operating Grants, as discussed in the Capital and Operating Grants section on page 39. The following projects are not included in the total Western Rail Corridor Capital Project cost used in this section.

- **The Western Rail Corridor Grant ($132M):** Payments made to Norfolk Southern in equal tranches of $13.2M per year for the ten years following the executed agreement. Norfolk Southern will use the funds from the Western Virginia Rail Initiative to finance capital improvements, capital maintenance, and program maintenance. This work will increase Amtrak services to Roanoke and expand services to the New River Valley.

- **Roanoke Yard Improvements ($37M):** A second mainline track (Main #1) will be added to Roanoke Yard to increase speed and reduce travel time for future passenger trains between Roanoke and the New River Valley. Approximately five miles of new or upgraded track will create this second mainline. Three existing yard ladders will be improved or realigned, and nine crossovers and approximately 27 turnouts will be added or improved. Existing train speeds of 15 mph in the yard will be increased to 40 mph on Main #1 west of the first control point of the Roanoke Station.

Other Capital Expenditures - $2M

The following capital item is not part of the I-95 Corridor Improvements or Western Rail Corridor but does form part of the VPRA Financial Plan.

Purchase of St. Julian's Yard Amtrak Train Service Facility

Project Budget Estimate: $2M, Delivery Responsibility: VPRA

St. Julian's Yard in Norfolk, Virginia is the site on which Amtrak services Virginia state-supported passenger trains that terminate and originate from Norfolk Station. The land and some rail assets are currently owned by Canonie Atlantic, a private company owned by the Accomack-Northampton Transportation District Commission. When Canonie Atlantic considered selling its rail assets on the Norfolk side of the Chesapeake Bay, DRPT began negotiating to secure this property for current and future use as an Amtrak train service facility. This property has been in service since 2012 with service equipment, Amtrak crew quarters, two tracks, and a turning wye. Purchase of this property by Virginia will secure a service facility for Norfolk Amtrak services, with enough room to accommodate the three daily round trips planned as part of the VPRA Financial Plan.

Operations and Maintenance

Operations	$1,507M

Operations and Maintenance

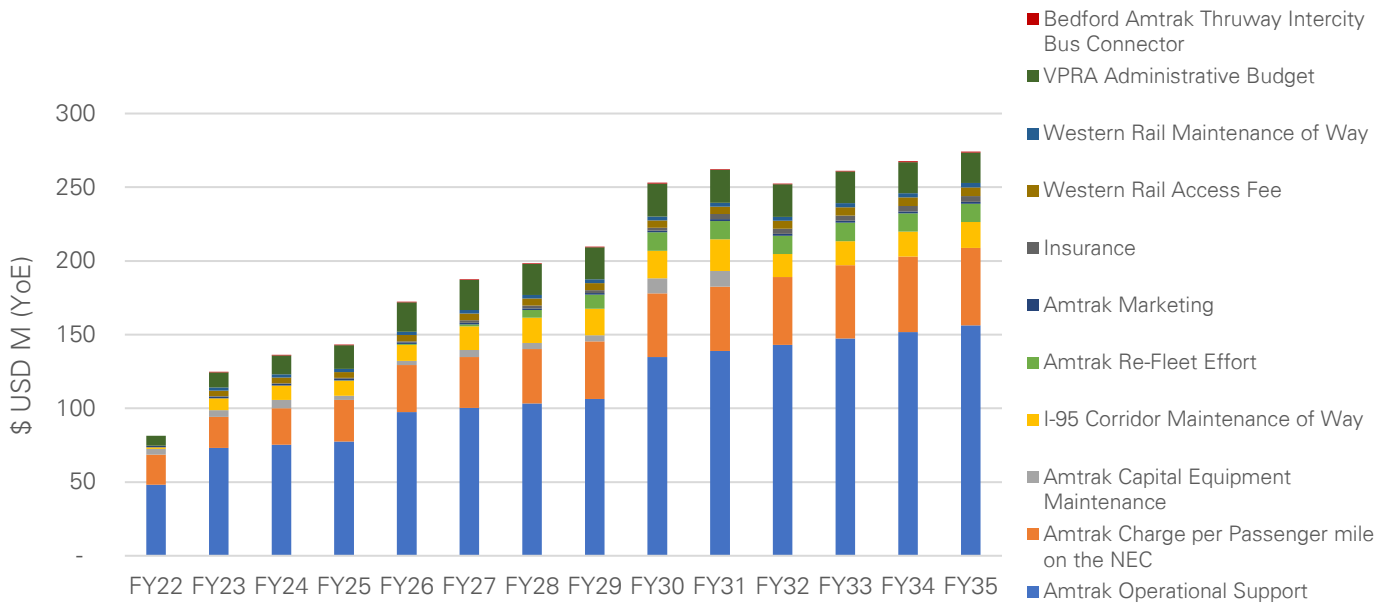
Planning for current and future expenses

The VPRA Financial Plan includes operations and maintenance (O&M) expenditures for current and future increased service levels. O&M expense forecasts were developed using historical unit costs and projected based on increased service levels and additional infrastructure constructed.

To illustrate the total O&M expenses anticipated through FY35, the graphic below depicts the distribution of expenses per category. O&M expenses are presented for an additional five years past the completion of the majority of Capital Projects in order to show that VPRA continues to have budget to sustainably operate the system into the future. Note that for this reason, total costs in this section differ from total O&M costs seen elsewhere in this document where they are shown through FY30 in line with other sources and uses.

O&M expenses are presented here on a gross basis — i.e., without the corresponding operational revenues that result in the net O&M expenses for VPRA. Considerations regarding "gross" vs. "net" are discussed further along in this section.

O&M Expenditures through FY35



Operating Expenses Over Time

As a result of inflation (assumed at 3 percent on relevant O&M costs going forward), and increased service levels over time, O&M expenses will naturally increase on an annual basis.

The sections below describe each of the O&M categories in further detail. Total projected expenses are from FY22 through FY35.

Amtrak Operational Support

Projected Expenses: $1,554M

The Amtrak Operations Expenses estimate includes the total expenses for third party costs, route costs, and additives from Amtrak Operations Pricing. Figures account for all existing and future Amtrak trains, and payments are estimated to increase proportional to additional services added.

The cost is presented here as gross and does not account for Amtrak Operations Revenue (ticket revenue, food and beverage, and other revenue streams). These Amtrak Operations Revenues are reflected in the Funding Sources section. In addition to Amtrak Operations Revenues, Amtrak Operations Expenses are funded using a mix of VPRA funds, COVID relief funds and CMAQ grant funding.

Amtrak Charge per Passenger Mile on the North East Corridor (NEC)

Projected Expenses: $523M

The Amtrak Charge per Passenger Mile on the NEC estimate includes a charge per passenger mile on the NEC from Amtrak Operations Pricing. It accounts for all existing and future Amtrak trains, and payments are estimated to increase proportional to additional service added. The cost is presented gross and does not account for Amtrak NEC Through-Revenue Credit, which is reflected in the Funding Sources section.

Amtrak Capital Equipment Maintenance

Projected Expenses: $54M

The Amtrak Equipment Capital Use Charge estimate includes equipment use charges from Amtrak Operations Pricing. It accounts for all existing and future Amtrak trains, and payments are assumed to increase proportional to additional service added. The cost accounts for credits received for upfront capital expenses related to train set refurbishment.

Amtrak Re-Fleet Effort

Projected Expenses: $92M

All costs associated with the acquisition and phasing in of new Amtrak train sets which will both replace the existing Amtrak train sets and service the increased passenger rail capacity are included in the VPRA Financial Plan. Additional dollars are allocated to purchase Amtrak Train Equipment in the Capital and Operating Grants Section.

Amtrak Marketing

Projected Expenses: $16M

Marketing and advertising costs for promoting Amtrak's passenger rail services in Virginia.

Bedford Amtrak Thruway

Projected Expenses: $6M

VPRA will sponsor an Amtrak Thruway intercity bus connecting riders from Bedford to Lynchburg.

I-95 Corridor Maintenance of Way

Projected Expenses: $197M

Cost to maintain rail infrastructure in the I-95 Corridor. Per the Comprehensive Rail Agreement, CSX will continue to maintain the I-95 corridor, excluding the Long Bridge project and Franconia-Springfield Bypass, through VRE Access Payments until separation of passenger and freight trains can be achieved. VPRA will

be responsible for maintenance costs related to the Long Bridge project and Franconia-Springfield Bypass after those projects are constructed. VRE will be responsible for the full CSX amount until separation occurs. VPRA will cover a significant share of the VRE annual payment and the costs after separation is achieved.

Insurance
Projected Expenses: $28M
Liability insurance costs include estimated premiums for general and premises liability insurance. The forecast also includes estimated structure replacement policies and terrorism insurance for New Long Bridge and the Franconia-Springfield Bypass once those projects are completed.

Western Rail Corridor Access Fee
Projected Expenses: $63M
Per-train-mile lease fee paid to Norfolk Southern for each new Amtrak train moved over Norfolk Southern's Rail system.

Western Rail Corridor Maintenance of Way
Projected Expenses: $32M
Expenses to maintain owned rail infrastructure upon purchase of right-of-way.

VPRA Administrative Budget
Projected Expenses: $259M
VPRA's administrative budget includes salaries and benefits for employees, various professional support consultants, rail studies, support functions, and larger one-time costs such as the acquisition and implementation of an Enterprise Resource Planning ("ERP") system.

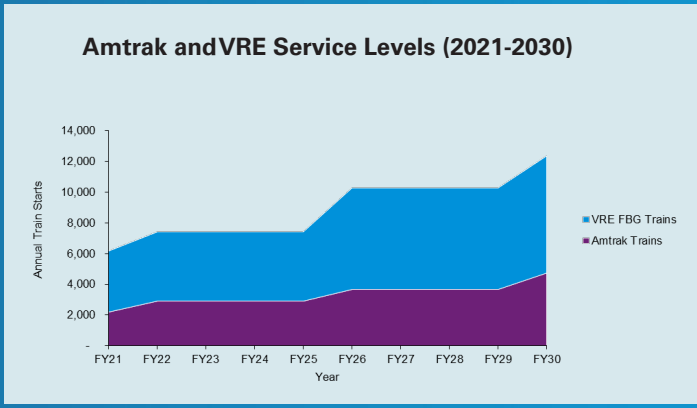
Increased Service levels in the I-95 Corridor will drive increased Operations and Maintenance Expenses

Successful delivery of the improvements to the I-95 Corridor will enable significant additional capacity on rail lines in the Commonwealth. Operation of additional round trip trains as well as additional infrastructure construction will increase operations and maintenance costs. As such, both existing O&M costs (those related to trains currently in operation and existing infrastructure) and new O&M costs (those related to new services that will be added as a result of the additional capacity and new infrastructure constructed) must be funded.

Round trip trains are forecast to increase in 2022, 2026 and 2030...

Total Roundtrip Trains				
	Existing	**Post-acquisition**	**Phase 1 Completion (FY2026)**	**Phase 2 Completion (FY2030)**
VRE Fredericksburg Trains	8 weekday	9 weekday	12 weekday and 3 weekend	14 weekday and 3 weekend
Amtrak Supported Trains	6 daily	8 daily	10 daily	13 daily

... leading to increased service level obligations over time.



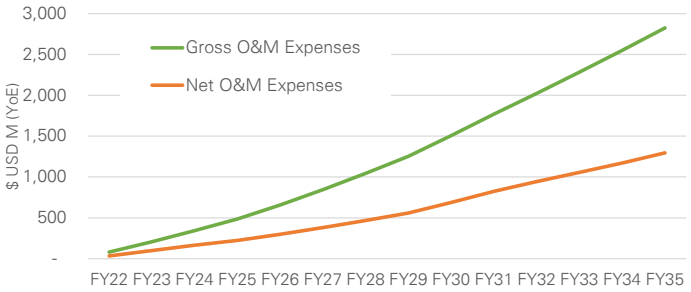
Gross vs. Net O&M Cost

Gross O&M refers to total O&M costs VPRA can expect for the Financial Plan before factoring in receipts from revenue, specifically Amtrak Operations revenue. Distinguishing between gross and net (i.e., after revenue) O&M is helpful for being more transparent about what is driving the cost of operations.

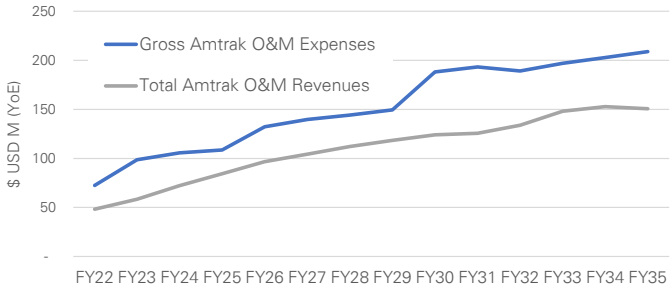
Based on the current financial model, the total 14-year gross O&M cost is $2.8B. This is the amount that VPRA expects to pay. However, when Amtrak operating revenues are accounted for, the net 14-year O&M cost is $1.3B.

The "Gross vs Net O&M" graph (top right) illustrates the difference between the total gross and total net O&M expense. The area between the two cost lines therefore shows the amount of Amtrak operating revenues that VPRA expects to receive. This reduces the total O&M cost that VPRA is responsible to the area below the orange "Net O&M Expenses" line.

Gross vs. Net O&M (Cumulative)



Amtrak Operations Expense

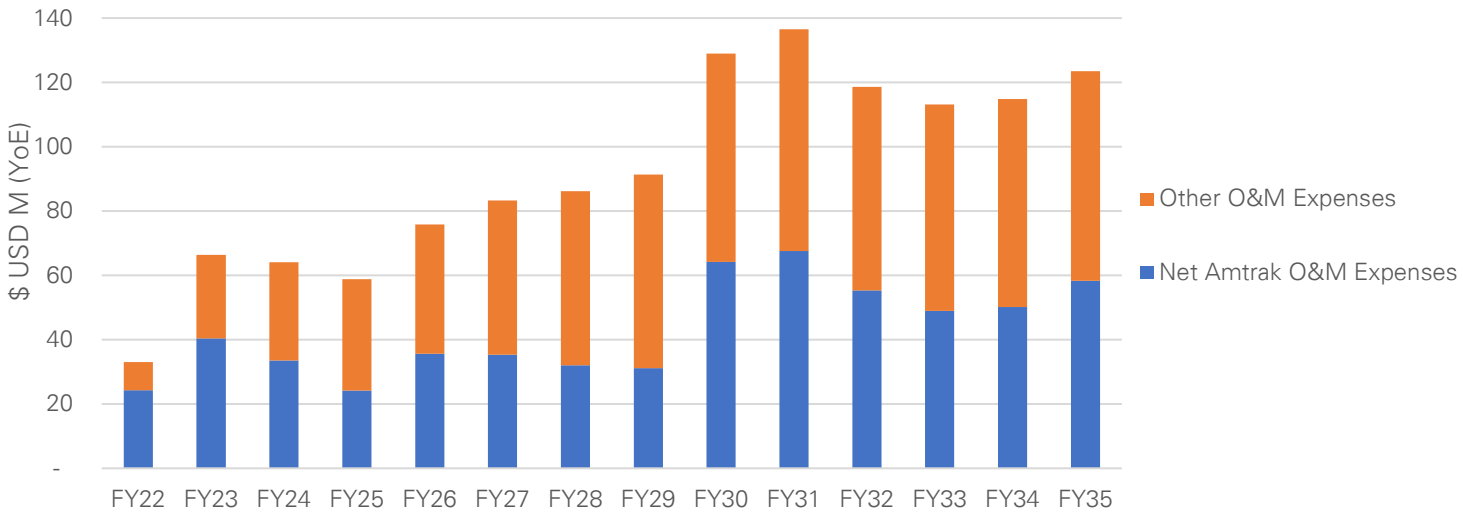


The "Amtrak Operations Expense" graph illustrates the difference between the Amtrak operating revenues and expenses. It demonstrates the significant amount of O&M expense that is covered by Amtrak Ticket Revenues and the Amtrak NEC Through-Revenue Credit. The "Total Amtrak O&M Revenues" line is presented net of Amtrak Ticket Revenue debt service costs of $8M per year from FY30-FY35. All costs are estimates and will be refined as more information is known.

Net O&M Costs over time

The graph below illustrates the net O&M expenses for the full Financial Plan on an annual basis, through 2035. It is important to note that the forecast of Amtrak ticket revenues is assumed to experience a permanent 5 percent decrease long term, relative to pre-pandemic levels. The Amtrak ticket revenue debt service is not illustrated in the below chart (refer to the Financing Plan section for debt service). Importantly, net O&M expenses through FY35 are fully funded. Furthermore, post FY30, the VPRA Fund will no longer need to be used for capital costs and is expected to sufficiently cover net Amtrak and other O&M expenses.

Net O&M Expenditures Through FY35



Capital and Operating Grants

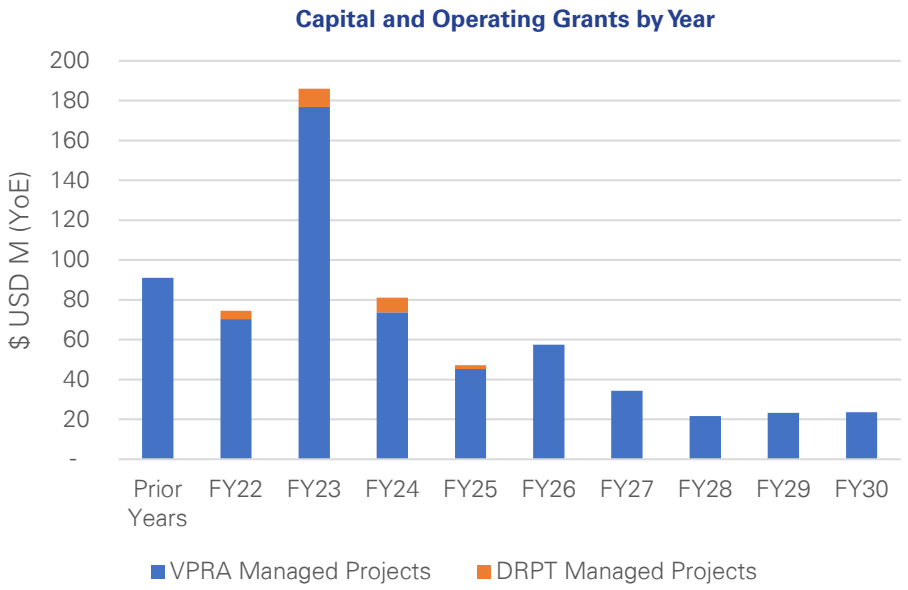
Capital and Operating Grants	$640M

Capital and Operating Grants

A significant responsibility for the Authority

Capital and Operating Grants consist of projects for which VPRA provides capital funding to a third party (such as a Class I Railroad or local government) that executes design, construction, and rail operations utilizing their respective delivery method and financial control system.

Grants allocated by the CTB to grantees will receive funding from CTB sources such as SMARTSCALE, CMAQ or I-66 Concession Funds. VPRA will administer these grants on behalf of the CTB. Capital and Operating Grants cover a wide variety of projects and uses located across the Commonwealth. They include upgrades to infrastructure (including platforms, stations, track, bridges, and IT upgrades), VRE track lease payments, and payments to Amtrak (Positive Train Control, service improvements, and equipment needed for new services). As shown on the graph, the grants are allocated across multiple years.



In addition, VPRA must fund several historical rail grants that are managed by DRPT. As part of the VPRA creation, all historical rail cash balances were transferred to VPRA to assist with cash flow needs of the acquisition of rail assets. If these projects do not proceed, VPRA will retain the funds and the Board may allocate them at their discretion.

The grants can be divided into the following classifications:

— **VPRA Managed Grants:** A majority of grants administered by the VPRA are CTB allocated. Grantees apply through the CTB process and if awarded state funds, the VPRA will be tasked with administering passenger rail operations and infrastructure projects. In addition to CTB allocated grants, the VPRA will administer historical grants transferred from prior rail programs and grants previously approved by the VPRA board.

— **DRPT Managed Grants:** Historical grants that continue to be administered by DRPT in accordance with the Board approved agreement between DRPT and VPRA.

A summary of Capital and Operating Grants is provided in the table below.

	Total VPRA Grant Funding to FY30 ($M)	Grantee
VPRA Managed Projects		
Crystal City Platform	0.7	VRE
L'Enfant Platform	2.2	VRE
Alexandria Station and Pedestrian Tunnel	6.8	VRE
Brooke & Leeland Road Design & Construction	18.2	VRE
Broad Run Station & 3rd Track Improvements	73.2	VRE
Manassas Station Platform Extensions	9.1	VRE
Real Time Multimodal Information	3.5	VRE
Manassas Park Parking Garage and Bridge	23.5	VRE
Quantico Station Improvements	24.1	VRE
Rolling Road Platform Extensions	1.0	VRE
Backlick Road Station Improvement	0.5	VRE
Crossroads Storage Expansion	8.4	VRE
VRE Track Lease Payments to Amtrak	48.3	VRE
VRE Track Lease Payments to Norfolk Southern	23.0	VRE
Newport News Station, Platform, and Train Service Facility	20.5	Newport News
Ettrick Station Improvements – State-of-Good-Repair	11.5	Chesterfield County
Amtrak Passenger Information Display System Installation: Ashland, Richmond Main Street Stations	1.2	Amtrak / DRPT
Station Program and Planning	20.6	Amtrak
Positive Train Control Payment to Amtrak and Other Amtrak Service Improvements	15.6	Amtrak
Amtrak Train Equipment - New Service	34.0	Amtrak
Arkendale to Powell's Creek Third Track Construction and Island Platforms	101.4	CSX
S-Line Corridor Planning and Development	1.5	Various
Roanoke Yard Improvements	37.0	Norfolk Southern
Western Rail Corridor Grant	131.5	Norfolk Southern
Sub-Total	***617.3***	
DRPT Managed Projects		
DC2RVA FRA Grant Match	1.3	Various
DRPT Planning Grants	1.9	Various
Marshalling Yard Expansion	7.8	Port Authority
Central Rail Yard Expansion	5.5	Port Authority
Front Royal Expansion	6.2	Port Authority
Sub-Total	***22.7***	
Total	**640.0**	

Funding Sources

A partnership of support
Diverse funding over time

Capital Project, O&M and Capital and Operating Grant costs are funded through a mix of PayGo government sources, proceeds of financing, federal and state funding, capital contributions and toll/concession revenues.

This section provides an overview of the funds that are included in each of these "sources" categories.

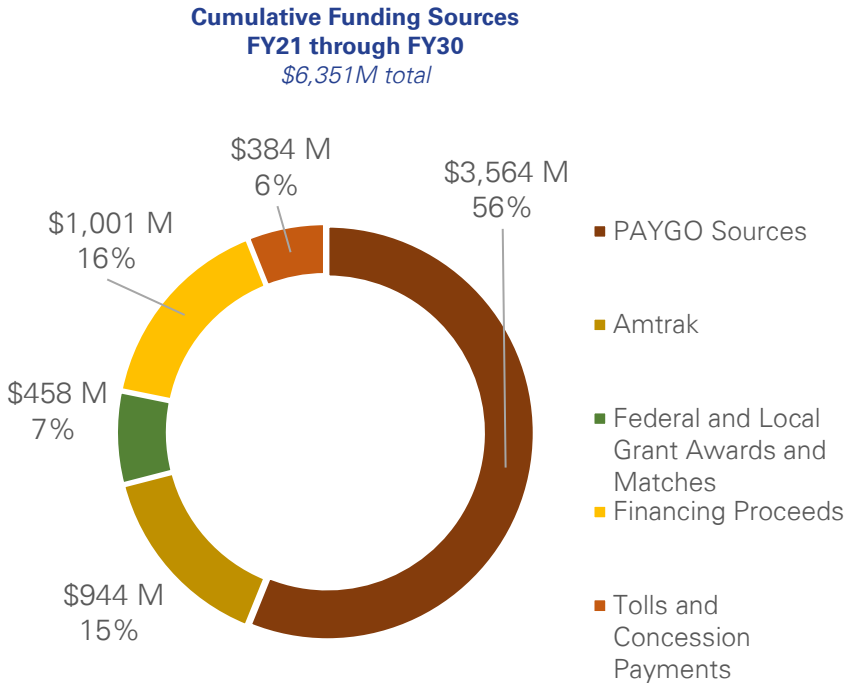
Capital Projects	$4,118M
Operations	$1,507M
Capital and Operating Grants	$640M
Management Reserve	$78M
Financing Costs	$8M
TOTAL USES	**$6,351M**

PayGo	$3,564M
Proceeds of Financing	$1,001M
Amtrak	$944M
Federal and Local Grant Awards and Matches	$458M
Tolls and Concession Payments	$384M
TOTAL SOURCES	**$6,351M**

Funding Overview

In developing the funding sources for the Financial Plan, more than 25 individual revenue sources have been assembled to account for VPRA Capital Project, O&M and Capital and Operating Grant costs. While none of the sources is sufficient in their own right to cover the entirety of the costs, the combination of sources diversifies risk of any one source and creates a funding mix that can support the cost of the Financial Plan to FY30 and beyond.

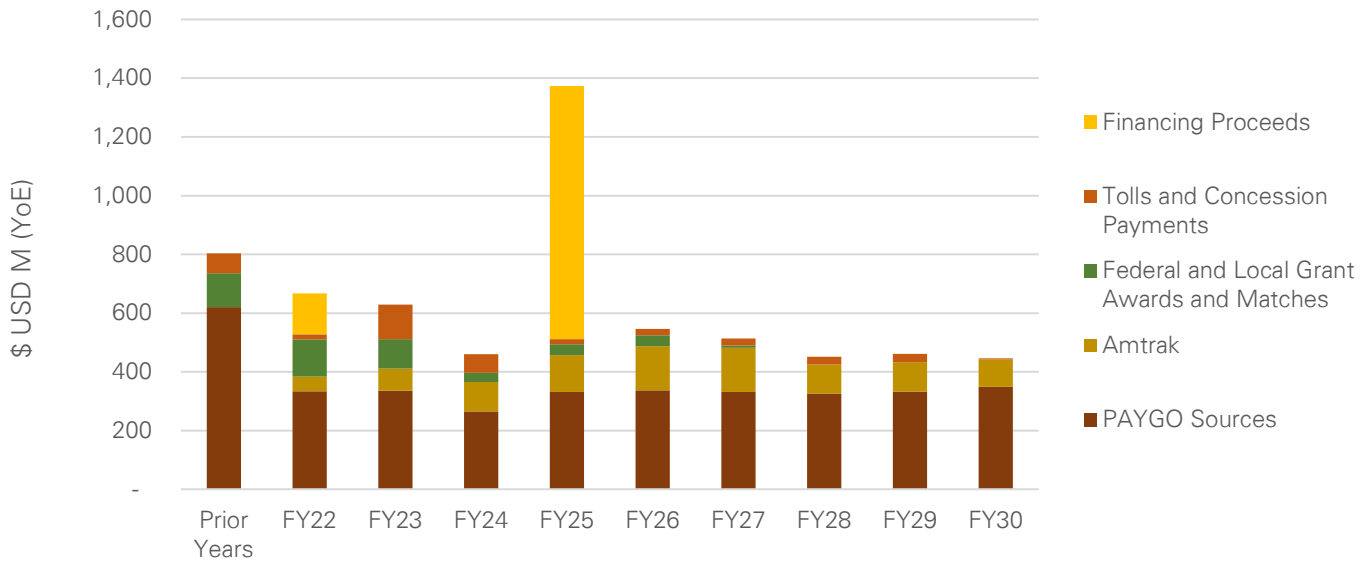
As shown in the graph to the right, five categories of funding—with 72 percent derived from Financing and PayGo— underpin the affordability of the improvements. PayGo funding is a foundational component and accounts for 56 percent of the Financial Plan funding. Financing proceeds are the next critical component and account for 16 percent overall. The Amtrak capital contribution is also a key component, accounting for 15 percent. Federal and local grants, match funding, toll revenues, and concession payments make up the balance of funding.



Projected annual flow of funding through FY30

Illustrates diversity of sources over time

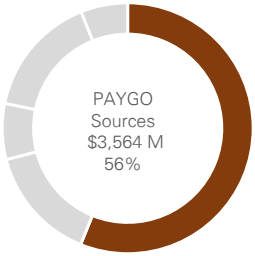
The graph below illustrates the availability of the funding sources over time. Funding sources have been programmed to expenditure on an itemized basis according to regulatory and policy considerations, policy restrictions, and timing of funding availability.



Note: Funds available timing does not necessarily match the timing of uses of funds.

PAYGO FUNDING $3,564M, 56% OF TOTAL FUNDING

Multiple sources, including the following



Priority Transportation Fund (PTF) ($485M, FY22-30)

PTF was created within the Virginia Transportation Trust Fund (TTF) to facilitate the financing of priority transportation projects throughout the Commonwealth. The Board may use the Fund by (i) funding projects directly; (ii) issuing payments to any authority, locality, commission, or other entity; or (iii) using amounts to support, secure, or leverage financing for such projects. For the Financial Plan, funds that have been issued to VPRA are used to fund capex on the New Long Bridge and Railroad Bridge over Route 1 projects, and CSX right-of-way purchase.

Virginia Passenger Rail Authority (VPRA) Fund ($1,458M, FY22-30)

This fund receives 93% of the 7.5% of the Transportation Trust Fund that is dedicated to the Commonwealth Rail Fund. Uses funded from the VPRA Fund include $745M of New Long Bridge capex, $141M of Western Rail capex and $433M of O&M costs.

Commuter Rail Operating and Capital Fund (CROC) ($60M, FY23-30)

CROC is a Commonwealth fund that was created to support the development and continuance of commuter rail operations in Virginia. The Comptroller disburses funds monthly to transportation districts that jointly operate the Virginia Railway Express. CROC funds are received in the amount of $15M annually and will be leveraged against a revenue bond in FY22. Half of the CROC revenue stream is used to pay debt service with the remainder used to fund New Long Bridge capex costs and the CSX right-of-way purchase

Northern Virginia Transportation Authority (NVTA) ($23M, FY23-27)

NVTA will contribute $4.6M per year as part of the NVTA FY 20-25 funding program. The NVTA contribution will be used to fund construction of the Franconia-Springfield Bypass.

State and Local Contributions to Railroad Bridges over Newington Road and Route 1 ($61M, FY23)

The railroad bridges over Newington Road and Route 1

PayGo	$3,564M

projects will be funded exclusively from federal, state and local contributions as detailed in the table below. VPRA will also contribute $18M of PTF funds to the Route 1 Bridge and $16M of match funding to the Newington Road Bridge.

State and Local Contribution to Railroad Bridges over Newington Road and Route 1	
VDOT Contribution to Route 1 Bridge	$24M
Fairfax County Contribution to Route 1 Bridge	$15M
FRA Contribution to Newington Road Bridge (SOGR)	$14M
VDOT Contribution to Newington Road Bridge	$8M
TOTAL	**$61M**

Amtrak Ticket Revenue ($471M, FY22-30)

Amtrak intercity passenger rail ticket revenue is anticipated to generate $471M from FY22-FY30. The ticket revenue will be leveraged against a loan to be raised in FY25. The revenue will be used to pay Amtrak operating costs and debt service.

Amtrak NEC Through-Revenue Credit ($356M, FY22-30)

A revenue credit will be received against the cost of operating Amtrak trains on the NEC. It accounts for all existing and future Amtrak trains, and the credit is estimated to increase proportional to additional service added. The revenue is presented as gross and does not account for Amtrak Charge per Passenger Mile.

Other PayGo Funding ($193M, FY22-FY27)

The remaining PayGo sources consist of Norfolk Southern Car Miles ($9M used for O&M expenses), I-81 Revenues ($100M used for New River Valley Platform & Track Improvements and the Western Rail Corridor Grant) and Budget Bill Item 447.10 ($84M used for the Western Rail Corridor Grant and the V-Line Right-of-Way Acquisition).

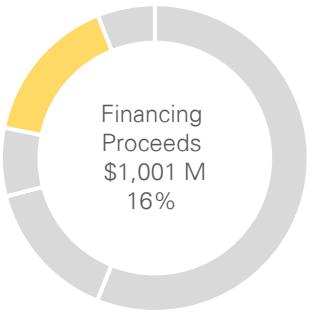
Historical Funds ($457M, Prior Years)

Cash remaining in the historical Intercity Passenger Rail Operating and Capital (IPROC) and Rail Enhancement Fund (REF) funds at the time of the establishment of VPRA was transferred to the Authority and is being used to fund various elements of the Capital Projects, Operations, and Capital and Operating Grants.

Proceeds of Financing	$1,001M

PROCEEDS FROM FINANCING $1,001M, 16% OF TOTAL FUNDING

As discussed throughout this section, several revenue streams will be used as leverage to raise funding. The approach to financing is explored further in the next section of the Financial Plan.

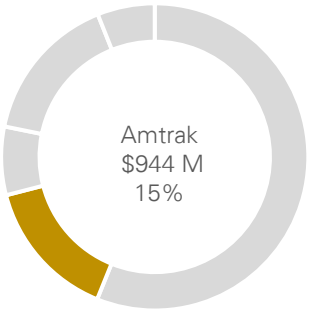


Amtrak	$944M

AMTRAK $944M, 15% OF TOTAL FUNDING

Amtrak Capital

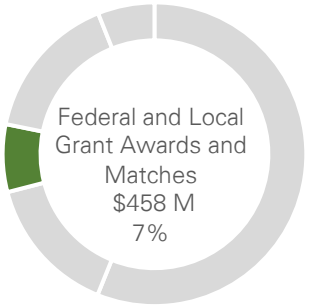
Amtrak will be committing $944M between FY22 to FY30 to fund various capital expenditure costs of the rail improvements. This represents an acknowledgment of how critical these improvements are to its service within the corridor.



Federal and Local Grant Awards and Matches	$458M

FEDERAL AND LOCAL GRANTS AND COMMONWEALTH MATCHES $458M, 7% OF TOTAL FUNDING

Grants already secured include the following



FASTLANE (INFRA) Grant

The Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) grants are competitive grants given to nationally and regionally significant freight and highway projects that align with the Program goals to:

- Improve the safety, efficiency, and reliability of the movement of freight and people;
- Generate national or regional economic benefits and an increase in global economic competitiveness of the U.S;
- Reduce highway congestion and bottlenecks;
- Improve connectivity between modes of freight transportation;
- Enhance the resiliency of critical highway infrastructure and help protect the environment;
- Improve roadways vital to national energy security; and
- Address the impact of population growth on the movement of people and freight.

The FASTLANE grant of $45M has been obligated and will be used to fund capex for the Alexandria Fourth Track.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

CMAQ is a federal-aid highway program that provides funds for transportation projects or programs that will contribute to meeting the requirements of the Clean Air Act. CMAQ funding is used to fund Alexandria Fourth Track capex, Amtrak Operations and Capital and Operating Grants.

SMART SCALE

A Commonwealth program providing funding for Virginia's most critical transportation needs. Potential projects are evaluated based on their ability to meet key factors including safety, congestion reduction, accessibility, economic development, efficient land use, and environmental effects. Projects are scored and ranked based on their anticipated benefits and this information is used by the CTB to help guide and inform their project selection decisions. Grants awarded under this program include I-66 (Outside the Beltway) concession funds. SMART SCALE funds are used for Western Rail and other Capital and Operating Grants.

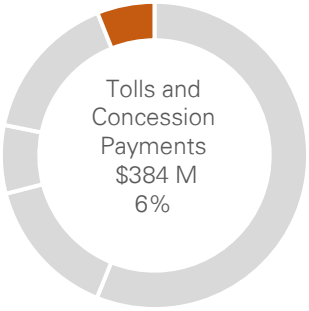
Pandemic Relief Credits

$15M of pandemic relief funds were received by Amtrak from the federal government. These credits were applied by Amtrak to Virginia train operation expenses.

FRA State of Good Repair (SOGR) Grant Contribution to Newington Road Bridge

The Federal Railroad Administration (FRA) SOGR Program provides funding for eligible capital projects within the United States to repair, replace, or rehabilitate qualified railroad assets in order to reduce the state of good repair backlog and improve intercity passenger rail performance. As noted above, FRA SOGR funding in the amount of $14.4M will be contributed to the Railroad Bridges over Newington Road projects.

Tolls and Concession Payments	$384M



TOLLS AND CONCESSION PAYMENTS $384M, 6% OF TOTAL FUNDING

Two key sources

Tolls for users of vehicular roadways are an important source of funds for the rail project. By design, tolls are part of Virginia's strategy of supporting a multi-modal approach to transportation infrastructure.

I-66 (ITB) Toll Revenues (Net of NVTC) ($129M, FY22-30)

Revenues from the I-66 Inside the Beltway (ITB) toll road project have been committed to VPRA for the Financial Plan. The revenue stream will be leveraged against a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan in FY25 and used to pay debt service and capital costs on the New Long Bridge project. Amounts are presented net of debt service and funds owed to the Northern Virginia Transportation Commission (NVTC) as part of the agreement. Note that this amount represents the PayGo revenue only. Information regarding the financing that is raised against this is included in the Financing Plan section.

FredEx ($255M, FY22-24)

Under the I-95 Express Lanes Fredericksburg Extension (FredEx) contractual structure, the concessionaire has pledged an amount of capital to be paid to VDOT. FredEx funding will be used to fund Alexandria Fourth Track capex and the CSX right-of-way purchase.

Financing Plan

Proceeds of Financing	$1,001M
Financing Costs	$8M

Financing Plan

Contingent on strategic use of debt

In conjunction with federal, Commonwealth, and local funding sources, VPRA will partner with its stakeholders to leverage three key revenue streams. VPRA will be responsible for Amtrak ticket revenue debt. VRE and CTB will be responsible for CROC and I-66 toll revenue debt, respectively.

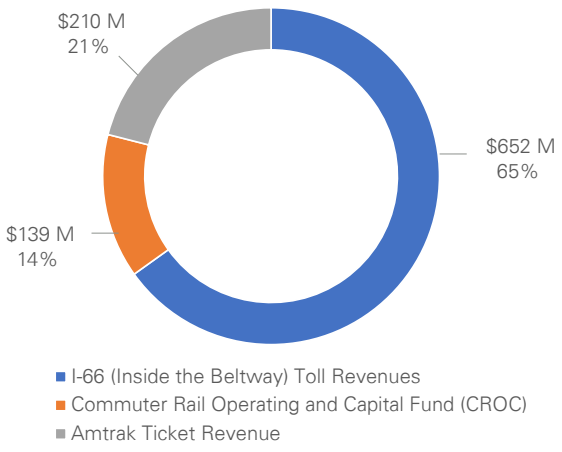
The Financial Plan resulted in the I-66 (ITB) toll revenues, CROC funding, and Amtrak ticket revenues being chosen for financing per the table below. The proceeds of financing will be used to fund the CSX right-of-way purchase, the New Long Bridge project, and other key capital expenditures. The VPRA Fund revenue stream was not considered for financing as this would be prohibited under VPRA's governing code (Code of Virginia, § 33.2-294).

Financing

Total financing proceeds ($1.0B) account for 24 percent of capital expenditures ($4.2B)

While financing proceeds account for 16 percent of total Financial Plan funding over 9 years, approximately 24 percent of capital expenditures will be funded by financing proceeds. Given the criticality of financing proceeds, significant stakeholder coordination has occurred to date to reach consensus on debt issuance responsibility. Each PayGo revenue stream was analyzed to understand which funds can be leveraged and what types of financing mechanisms could be used.

Financing Proceeds



Funding Leveraged	Total Proceeds ($M)	Year Raised	Envisioned Mechanism	Responsible Stakeholder
CROC	$139M	FY22	Revenue Bond	VRE
I-66 Toll Revenue Financing	$652M	FY25	TIFIA Loan	CTB
Amtrak Ticket Revenue	$210M	FY25	RRIF Loan	VPRA

Envisioned Financing Mechanisms

Preliminary mechanism selection for each of the three revenue streams

For each leveraged revenue stream, a different financing mechanism has been considered. Government-backed revenue streams have a critical advantage for sponsors in capital markets: lower cost of debt as a result of a lower risk profile, relative to the private sector.

As part of the financial planning efforts to date, VPRA has analyzed the three revenue streams and assessed the debt capacity of each based on preliminary market-based assumptions, as described in the summary of terms below.

One of the critical drivers of debt capacity is the forecast sufficiency of the revenue stream to cover debt service payments for the proceeds that are borrowed. As discussed in the Funding Sources section, forecast revenue streams have already been sensitized for the impacts of COVID-19 going forward. Notwithstanding this, utilizing financing for the Financial Plan does present risks that need to be managed and mitigated going forward. This is further discussed in the Considerations for Success chapter of this document.

Overview of Envisioned Financing Mechanisms

$139M CROC Financing Mechanism

Revenue Bond

A type of municipal bond (i.e., a debt security that is issued by a state or local government entity) that is leveraged against a revenue stream, in this case the CROC funding stream.

Revenue Bonds are used to fund a specific project or program. Revenue Bonds are considered a higher risk municipal bond as they are backed by a specific revenue stream, rather than the issuing entity's credit.

The proceeds of the CROC Revenue Bonds are expected to be received in Q4 of 2022.

$210M Amtrak Ticket Revenue Financing Mechanism

Railroad Rehabilitation and Improvement Financing (RRIF)

Direct loans and loan guarantees issued by the U.S. Department of Transportation (USDOT) to finance the development of railroad infrastructure. RRIF financing can be raised by entities including railroads, state and local governments, government-sponsored authorities, and corporations.

RRIF loans are considered low cost as interest is charged at the government borrowing rate, it does not begin to accrue until capital is drawn and principal repayments can be deferred up to five years after the substantial completion date. The repayment period on a RRIF loan is up to 35 years.

$652M I-66 Toll Revenue (ITB) Financing Mechanism

Transportation Infrastructure Finance and Innovation Act (TIFIA)

Direct loans, loan guarantees, or standby lines of credit for qualified projects of regional and national significance, usually large-scale, surface transportation projects such as railroads. TIFIA applications can be made by state and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities.

TIFIA loans are considered lower cost as TIFIA interest rates are fixed and equivalent to Treasury rates. Interest costs do not begin to accrue until capital is drawn and principal repayments can be deferred after a project's substantial completion date. The repayment period on a TIFIA loan is up to 35 years. TIFIA loans cannot exceed 33% of eligible project costs, which is consistent with the Financial Plan.

The terms of each funding mechanism vary based on the type of debt that is being raised and the revenue stream that is leveraged. A summary of preliminary terms can be found in the table below. Next steps regarding financing are discussed in the Considerations for Success section.

TERM SHEET SUMMARY			
	CROC Financing	**Amtrak Ticket Financing**	**I-66 (ITB) Toll Revenue Financing**
Financing Mechanism	Revenue Bond	RRIF Loan	TIFIA Loan
Total Proceeds	$139M	$210M	$652M
Timing			
Financing Raised	FY22	FY25	FY25
Interest Capitalization Period	N/A	FY25-FY29 *5 years*	FY25-FY29 *5 years*
Interest Only Period	N/A	FY30-FY34 *5 years*	FY30-FY34 *5 years*
Static Principal Payment Period (Amount)	N/A	FY35-FY39 ($7M) *5 years*	FY35-FY39 ($10M) *5 years*
Loan Term	30 years	35 years	35 years
Interest Rate	3.24%	3.33%	3.33%

**Note that the timing and structure of the TIFIA loan may change as needed, including potentially drawing multiple tranches based on cash need*

Debt Service

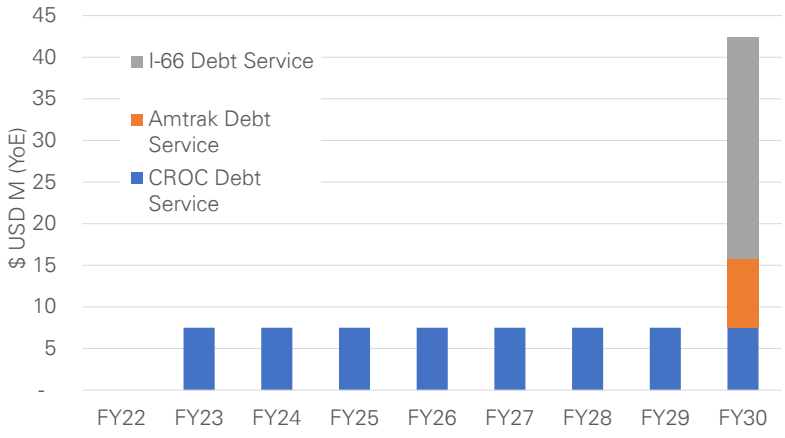
Begins in earnest in 2030

For each loan, the debt will be serviced by the associated revenue stream. The majority of debt service payments will be made in FY30 and onwards. The graph below reflects the total debt service for all three financing proceeds through 2030.

VPRA will be responsible for the Amtrak ticket revenue debt service, while VRE and CTB will pay directly for the CROC and I-66 debt service, respectively. For this reason, the CROC and I-66 (ITB) revenue amounts in the Funding Sources section have been presented net of debt service and the Financial Plan shows Amtrak Ticket Revenue debt service only.

While the graph above only illustrates debt service through 2030, debt service payments will continue to be made from the revenue streams underpinning them through the end of the debt term, as indicated in the term sheet above.

Debt Service through 2030



Modeling Affordability and Feasibility

Management Reserve	$78M

Modeling Affordability and Feasibility
Including flexibility in the Financial Plan

The Financial Plan checks that sources and uses 'balance' and moreover that appropriate sources will be available to fund each type of cost as they come due. The Financial Model includes the flexibility to "reprogram" this matching of sources to uses as the timing and quantum of these inputs change. The Financial Model is a "living document" and is constantly being updated by the VPRA team to reflect the latest assumptions and actual movements

Financial Plan Flexibility

The following tables illustrate the allocation of funding sources to Capital Projects at the time of publication. They also show the expected costs and which sources can be used for which uses, thereby showing the flexibility in the Financial Plan. The empty green boxes identify when funds could possibly be used.

Management Reserve

Additional flexibility has been built into the Financial Plan in the form of a Management Reserve which was established to hold funds that can be used at the Board's discretion for unforeseen capital costs or new opportunities. The reserve has been initially allocated $15M in the FY23 budget which VPRA will continue to add to or draw on as financial planning progresses. It is estimated that the total Management Reserve may increase to $78M by FY30.

Capital Projects	$4,118M
Operations	$1,507M
Capital and Operating Grants	$640M
Management Reserve	$78M
Financing Costs	$8M
TOTAL	**$6,351M**

PayGo	$3,564M
Proceeds of Financing	$1,001M
Amtrak	$944M
Federal and Local Grant Awards and Matches	$458M
Tolls and Concession Payments	$384M
TOTAL	**$6,351M**

Financial Approach Summary

The VPRA Financial Plan presents a robust yet flexible approach to transforming the passenger rail experience in Virginia. Each cost (Capital Project, Operations or Capital and Operating Grant) is balanced with an appropriate source of funding, which has been chosen based on availability, priority and policy constraints. The most appropriate revenue streams for leveraging against financing have been identified and the process of raising financing has begun. The result is a plan that is affordable through FY30 when the majority of Capital Projects will be completed and is sustainable into the operating period.

I-95 Corridor Funding Source Details

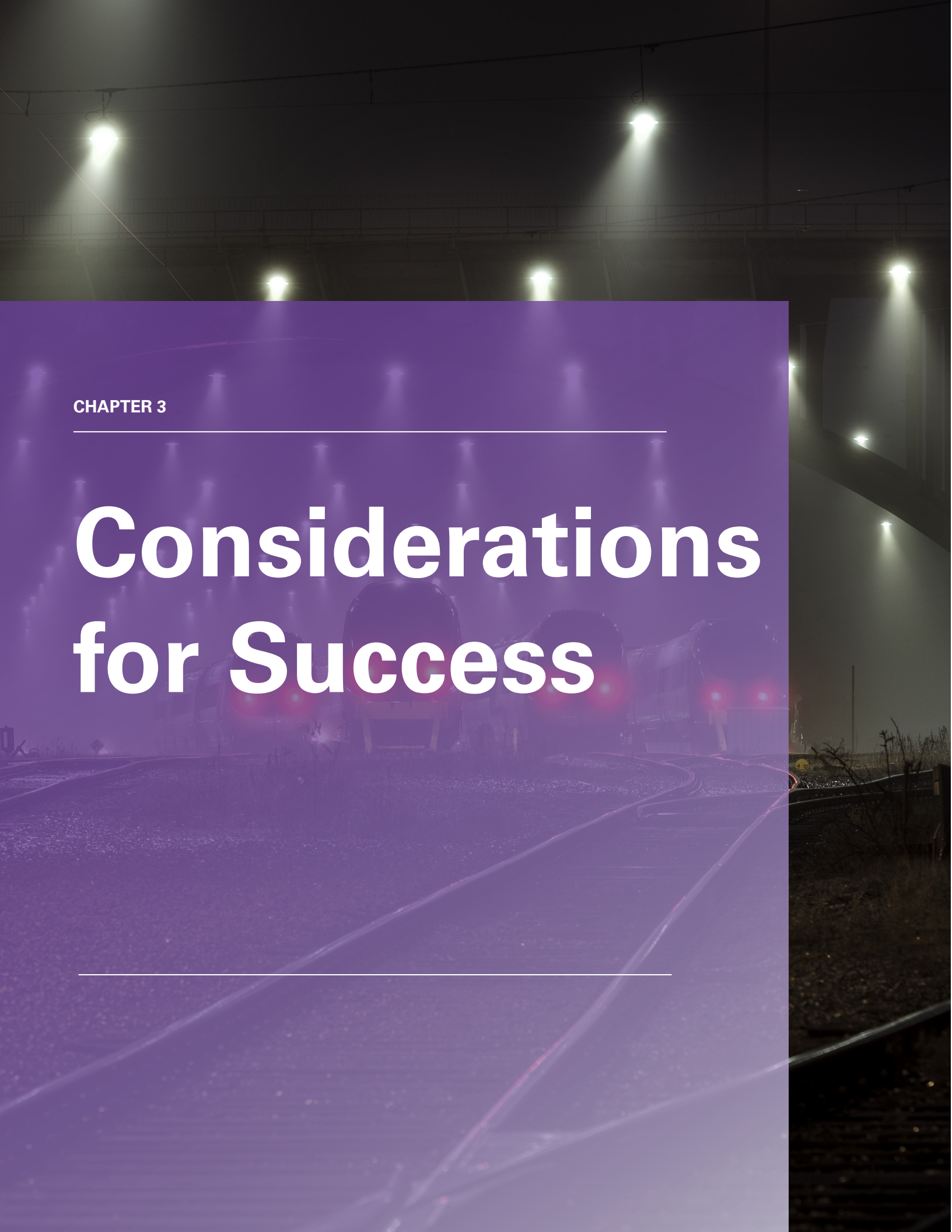
Project Description	I-66 - Financing	CROC - Financing	Amtrak Ticket Revenue - Financing	Priority Transportation Fund (PTF)	I-66 (ITB) Toll Revenues	FredEx	Amtrak Capital Contribution	VPRA Fund	Historical Funds	FASTLANE (INFRA) Grant	CMAQ	CROC	NVTA Contribution	State and Local Contributions to Railroad Bridges	Total Project Budget ($M)
Long Bridge Project	652		151	281	129		48	717	15			47			**2,039**
Alexandria Fourth Track						68	10		18	45	70				**210**
Franconia-Lorton Third Track							209								**209**
Franconia-Springfield Bypass							208		10				23		**241**
Siding A: Potomac Creek							108								**108**
Siding B: Milford							67								**67**
Siding C: Hanover County							59								**59**
Siding D: Neabsco Creek							91								**91**
Siding E: Aquia Creek							53								**53**
Siding F: Crossroads							93								**93**
CSX Right of Way Acquisition		139		185		188			38			13			**563**
Railroad Bridges over Newington Road									14					22	**36**
Railroad Bridges over Route 1				18										39	**57**
L'Enfant Fourth Track and Station Improvements			17					6							**22**
Richmond Layover Facility			27					9							**36**
Lorton to Route 1			16					5							**21**
Core Capacity Grant Design and Administration Costs								2							**2**
Capital Project Budget for I-95 Corridor	**652**	**139**	**210**	**485**	**129**	**255**	**944**	**739**	**95**	**45**	**70**	**60**	**23**	**61**	**3,907**

Western Rail Corridor Funding Source Details

Project Description	SMART SCALE (VPRA)	I-81	DRPT Bonds	Budget Bill	VPRA Fund	Total Project Budget ($M)
Salem to Christiansburg (V-Line) Right-of-Way Acquisition			4	34		**38**
New River Valley Platform & Track Improvements		31			43	**74**
Virginian-Line Tunnels					48	**48**
Capital Improvements - Bridges					14	**14**
Capital Improvements - Other					22	**22**
Western Rail Transaction Costs					13	**13**
Capital Project Budget for Western Rail	-	**31**	**4**	**34**	**141**	**209**
Western Rail Initiative Grant	13	69		50		**132**
Roanoke Yard Improvements	37					**37**
Total Budgeted for Western Rail	***50***	***100***	***4***	***84***	***141***	***378***

Reconciliation to Capital Projects Budget

Program	Total Budget
Capital Project Budget for I-95 Corridor	3,907
Capital Project Budget for Western Rail	209
Other Capital Expenditures	2
Total Capital Budget	***4,118***



CHAPTER 3

Considerations for Success

Risks

Risks

Risk assessments underway

A comprehensive risk assessment and mitigation process is an essential aspect of robust financial planning. To date, with the information available, VPRA has undertaken preliminary risk management activities around a range of risks – including technical, commercial and financial risks – to help ensure the resiliency of its Financial Plan under a variety of factors.

The goal of financial planning risk management is to proactively address and mitigate issues and concerns that—if unaddressed—have the potential to adversely impact on-time and within-budget delivery. Through proactive risk management techniques, VPRA aims to enhance the resiliency of its Financial Plan for the organization in a way that fully meets functional, delivery, operational, performance, reliability, maintainability and safety requirements of all activities included in the Financial Plan.

This section introduces the framework for understanding how risk can be factored into organizational planning for agencies with similar, large capital program mandates, and provides an overview of the risk analysis that has been performed to date.

Based on VPRA's review of comparable agencies, there is strong evidence that a comprehensive assessment of risk is critical to financial planning efforts and to successful delivery of major capital programs. In addition, while risk is inherent to all capital projects, the implications and potential impact of these risks are directly correlated to the scale of the project or program.

Mismanagement of risk can result in cost overruns, schedule delays, scope amendments, change orders, claims, quality issues, impacts to financial feasibility, unforeseen operational issues, or, in the worst cases, failed projects.

INDICATIVE TYPES OF RISK THAT VPRA MAY EVALUATE

Commercial and Financial Risks

- Commercial
- Financial
- Credit
- Market
- Program Delivery

Technical Risks

- Requirements
- Design
- Construction
- Site
- Interface
- Environmental
- Commissioning

Institutional/Other

- Technology
- Data
- Labor/People
- Strategic and Governance
- Ethics and Reputation
- Health, Safety and Security
- Legal, Regulatory, Fraud and Compliance

To avoid that outcome, the Authority is undertaking an ongoing, proactive analysis of risk that can allow the Board to better manage exposure to uncertainty and downside over the life of the program. Risk management strategies under consideration may include risk avoidance, risk transfer, risk mitigation, or acceptance.

Risk Management Terminology

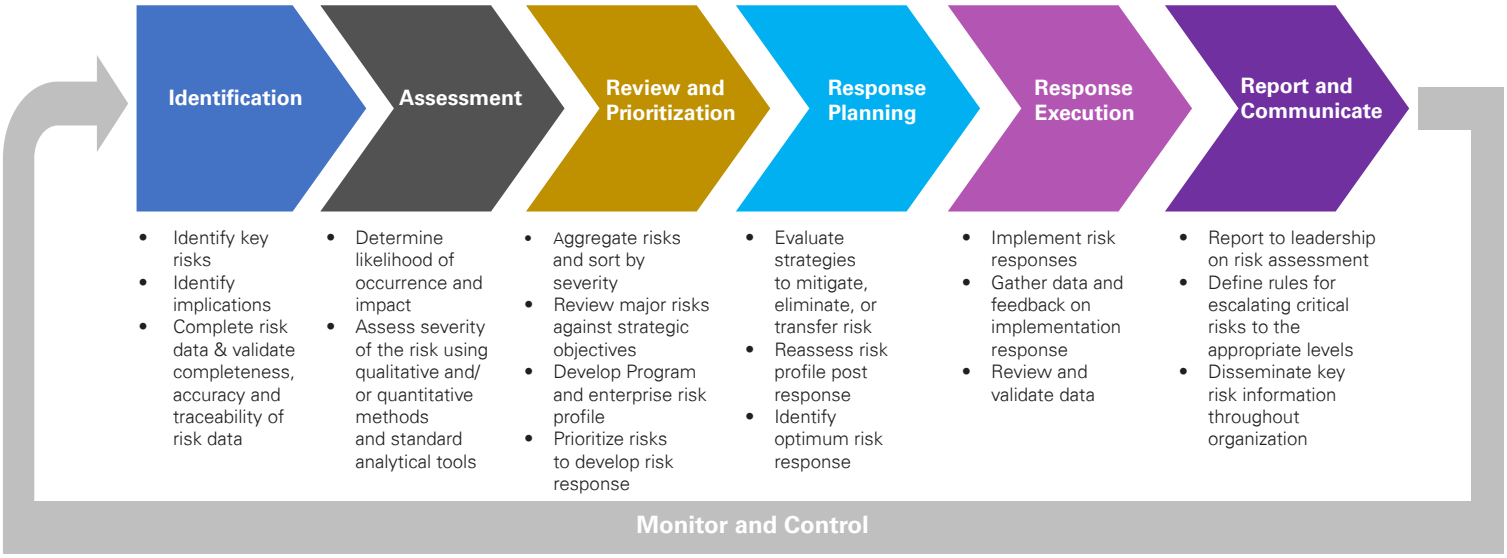
Risk management techniques employ a common risk language that applies to all categories of risk and distinguish between "risk taxonomy" and "risk hierarchy".

- *Risk taxonomy* refers to risks that fall within a given category of related risk. Example risk taxonomies or 'types' generally associated with large-scale capital programs are identified on the previous page. For example, risks related to right-of-way, access, and underlying geological conditions can be categorized as site risks.

- The *risk hierarchy* on the other hand defines the level of impact of a given risk and, in turn, the level of response required. For example, a typical risk hierarchy may reflect where one or more risks are best addressed (i.e., at a contractor level, project level, project phase level, program level, or strategic level).

The risk assessment process for VPRA is iterative and will evolve with refinement of the Financial Plan. Typically, beginning in early stages of financial planning, risk analysis will be initiated at a high-level and focus on technical project risk, contingency, and financial feasibility. However, as financial planning advances, risk analysis will continue to iterate and evolve to address more holistic programmatic considerations and interrelationships.

Overview of an iterative risk assessment process



- Ensure risks is considered and understood
- Review, challenge, monitor, and validate risk data, risk responses and outcomes
- Gather feedback from responsible risk stakeholders to facilitate iterative process improvement
- Continuous engagement with leadership on risk governance, Program risk and impact on Program delivery and objectives
- Independent and objective assurance

Risk Identification

At both the individual project and programmatic levels, risks are identified and individually assigned a risk rating score based on the probability of occurrence in conjunction with the potential impact. Project-level risks are evaluated for cost and schedule impacts and are categorized according to five risk levels as illustrated in the indicative risk matrix pictured to the right.

		Probability of Occurrence				
		Low	Medium	High	Very High	Significant
Potential Impact	Significant	High	High	Very High	Significant	Significant
	Very High	High	High	Very High	Very High	Significant
	High	Medium	Medium	High	High	Very High
	Medium	Low	Medium	Medium	Medium	High
	Low	Low	Low	Medium	Medium	Medium

Risk Mitigation

Once the risk has been identified, it is added to a risk register along with the risk rating it has been assigned. Mitigation strategies are then identified and recorded. Types of mitigation responses include:

- *Risk Avoidance*: Delivering a project through a less-risky process or design, or eliminating the risk altogether
- *Risk Transfer:* Moving all or part of the responsibility for a risk event to another party
- *Risk Reduction:* Reducing the consequence or the likelihood of a risk event
- *Risk Acceptance:* Recognizing that further mitigations would come at the expense of fundamental goals

Ongoing Review

Risk review assessments are periodic and ongoing, and risk register updates will be made as required as project and financial planning advances. Formal risk meetings or workshops with relevant stakeholders may be conducted as required.

For the VPRA Financial Plan, proactive management of risk is essential due to its scale, the range and interrelationship of variables that will determine its success, and the significance of public funding at stake. VPRA and stakeholders acknowledge the necessity of a clear understanding of risks to the activities of the Financial Plan from the outset and robust strategies needed for mitigation and long-term governance and decision making. The sections that follow outline the technical, financial and other risk considerations.

Financial Risk Assessment

The assessment of affordability and financial feasibility for the Financial Plan has been ongoing for more than three years and has included rigorous analyses on the sufficiency of funding. The quantitative methodology used to establish a balanced Financial Plan is described more fully in the Financial Plan Methodology section.

All funding sources in all categories (i.e., PayGo, Financing Proceeds, Amtrak, Federal and Local Grants and Matches, and Toll Revenues and Concession Payments) have been assessed for risks following the methodology as described above. Specifically, each funding source has been assigned a risk rating score according to (i) the probability of occurrence that a funding source will not be realized, and (ii) the potential impact if a funding source fails to be realized. The product of these two factors produces the risk score, or risk rating for that particular funding source. In the context of the financial risk assessment, probability and potential impact are further described below:

- Probability: The probability that a financial risk will occur, or that a funding stream will not be realized as planned, is assessed based on the level of commitment received and the perceived stability of the revenue source.

- Potential Impact: The potential impact – or severity – of a financial risk is assessed based on the effect to the Financial Plan if the funding source is not realized or is realized in a different quantum or time frame than has been assumed in the plan. The severity of a risk is not amended by risk mitigation measures.

The table on the following page provides a summary of the risk considerations identified for each source. Each funding source underwent an initial risk assessment, followed by a sensitization (where applicable) to derive the adjusted risk scores. For example, PTF is considered a low-medium risk funding source before any sensitization. After PTF revenues were adjusted downward due to COVID-19 impacts, it is determined to be a low risk. Importantly, the Financial Plan is still affordable with a sensitized PTF funding source. The revenue sources in the current Financial Plan have been adjusted to reflect the risk analysis where applicable.

The remaining risk levels following sensitization have been absorbed in the Financial Plan and these risks will be managed with pro-active, ongoing monitoring by VPRA going forward. Further funding sufficiency risk mitigations available to VPRA include deployment of contingency funding, application for additional federal grants, delay of capital expenditure, decreased operations and maintenance expenditure by aligning train frequencies to ridership demand, and loans from other stakeholders. In addition, the Board of Directors could choose to utilize funds from the Management Reserve which was established to hold funds that can be used at the Board's discretion for unforeseen capital costs or new opportunities.

Summary of Risk Considerations

Funding Category	Funding Source	Total ($M)	Inherent Funding Risks	Inherent Risk Rating	Funding Sensitization (If Applicable)	Sensitized Risk Rating
PAYGO	**PTF**	485	- Future years allocation uncertainty - PTF highly utilized in early years	Low-Medium	- Revenue streams stress tested to account for decline in Transportation Trust Fund (TTF) allocation and COVID-19 impacts - PTF revenues part of TTF	Low
	Historical Funds	457	- Funding already received and allocated to projects	Low	N/A	Low
	VPRA Fund	1,458	- Budgetary allocation in Code of VA - Budget received dependent on TTF allocation; broad based; long history - Highest single revenue stream	Low-Medium	-Revenue streams stress tested to account for decline in the various contributors to VPRA and COVID-19 impacts	Low-Medium
	CROC	60	- VRE is a trusted, long term partner - CROC Budgetary allocation is a priority for VRE	Low	N/A	Low
	NVTA Contribution	23	- Funding committed	Low	N/A	Low
	Amtrak Ticket Revenue	471	- Reduced revenue due to low ridership on Amtrak routes during and after COVID-19 - Funds to be leveraged for financing in FY25	Medium	-Ticket revenues sensitized for multiple recovery scenarios from pre-COVID-19 levels -Revised revenue forecasts include permanent 5% reduction in ridership	Low-Medium
	Amtrak NEC Through-Revenue Credit	356	- Corresponding NEC costs included in program -Minor subsidy required from VPRA	Low	N/A	Low
	State and Local Contributions to Newington Road and Route 1 Bridges	61	- Funds allocated in the VDOT Six Year Investment Program, the State Transportation Improvement Program allocation for Fairfax County and FRA agreements - State and local entities may be unable to pay committed funds if tax revenues are low - Individual contributions are low	Low-Medium	N/A	Low-Medium
	I-81	100	- Potential for proceeds to be lower than anticipated	Low-Medium	N/A	Low-Medium
	Budget Bill	84	- Funding committed	Low	N/A	Low
AMTRAK	**Amtrak Capital**	944	- Amounts committed per funding agreement - Funding still subject to federal appropriation	Low-Medium	N/A	Low-Medium

Summary of Risk Considerations, *continued*.

Funding Category	Funding Source	Total ($M)	Inherent Funding Risks	Inherent Risk Rating	Funding Sensitization (If Applicable)	Sensitized Risk Rating
FINANCING PROCEEDS	**Amtrak Ticket Revenue**	210	-Financing not secured or secured later than planned	Medium	-Ticket revenues sensitized -Forecast revenues for financing capacity exclude revenue from new ridership unlocked by the I-95 Rail Corridor	Low-Medium
	I-66 (ITB) Toll Revenues	652	-Financing not secured or secured later than planned	Medium	-Toll revenues sensitized for multiple recovery scenarios from pre-COVID-19 levels	Low-Medium
	CROC	139	- Financing has been secured and is expected to be received in Q4 of 2022	Low	N/A	Low
TOLL REVENUES AND CONCESSION PAYMENTS	**I-66 (ITB) Toll Revenues**	129	-Amounts committed per funding agreement - Funding still subject to federal appropriation - Funds to be leveraged for financing in FY25	High	--Toll revenues sensitized for multiple recovery scenarios from pre-COVID-19 levels	Low-Medium
	FredEx	255	-Delays in payment	Low-Medium	N/A	Low-Medium
FEDERAL AND LOCAL GRANTS AND MATCHES	**Pandemic Relief Credits**	15	- Credits received	Low	N/A	Low
	FASTLANE (INFRA) Grant	45	- Grant committed	Low	N/A	Low
	CMAQ	189	- Grant committed	Low	N/A	Low
	SMART SCALE	193	- Grant committed	Low	N/A	Low
	Match Funding and Other Capital & Operating Grants	20	- Grants committed	Low	N/A	Low

The outcomes of the preliminary financial risk assessment by funding category are described below:

PayGo

On average, PayGo funding sources are assessed as a low-medium risk prior to and after adjustment for sensitization on the basis that PayGo funding sources largely come from Commonwealth funds for which the available budgets are reliant on Commonwealth tax revenues. Much of this revenue, such as the VPRA fund, is allocated from a broad tax base, and the tax revenue is recurring and stable, with a long track record of receipts. Various key PayGo revenue streams have been stress tested to account for the potential decline in tax revenues and the effects of COVID-19.

Average risk score before sensitization	Low-Medium
Average risk score after sensitization	Low-Medium
Treatment of funding risks	Sensitization, Absorption

Amtrak ticket revenues are a key PayGo revenue stream to the Financial Plan as they will be leveraged to raise financing in FY25. The risk score of Amtrak ticket revenues has been reduced by sensitizing ticket revenues for multiple recovery scenarios from pre-COVID-19 ridership levels. The revised revenue forecasts that have been incorporated into the Financial Plan include a permanent 5 percent reduction (relative to pre-COVID-19 ridership forecasts) in ridership to reflect a degree of long-term commuter service impact due to COVID-19.

Given the low risk rating for other PayGo items such as IPROC and REF, NVTA Contribution, Amtrak NEC Through-Revenue Credit, and low-medium risk rating for State and Local Contributions to Newington Road and Route 1 Bridges, these risks to the Financial Plan have been absorbed.

*See markers for **P1 - P11** on Financial Risk Heatmaps.*

Amtrak

The $944M capital contribution from Amtrak has been assessed as low-medium risk as it represents a significant amount of capex funding to the overall Financial Plan. Importantly, this capital contribution to the I-95 Rail Corridor Improvements has been committed through the mutual execution of a funding agreement between Amtrak and VPRA; however, the funding remains still subject to federal appropriation. Given the Biden Administration's public indications to-date regarding federal subsidies for Amtrak, VPRA and Amtrak remain optimistic that anticipated appropriations will be made. Mitigation strategies for this risk are not feasible and the risk has therefore been absorbed.

Average risk score before sensitization	Low-Medium
Average risk score after sensitization	Low-Medium
Treatment of funding risks	Absorption Only

*See marker for **A1** on Financial Risk Heatmaps.*

Financing Proceeds

On average, Financing Proceeds are assessed as a medium risk prior to adjustment (medium-low after sensitization) driven by the degree of impact to the Financial Plan if financing cannot be raised as planned. As described in the Financing Plan section, 30 percent of funding for capital expenditure is largely contingent on three financings derived from leveraging recurring revenue streams including I-66 (ITB) tolling, Amtrak passenger ticket revenue and CROC revenue. Due to the importance of these revenue streams, and the further uncertainty introduced by the COVID-19 pandemic, additional risk analysis was conducted.

Average risk score before sensitization	Medium
Average risk score after sensitization	Low-Medium
Treatment of funding risks	Sensitization, Absorption

The risk score for the Amtrak Ticket Revenue and I-66 (ITB) Toll Revenue financing have been reduced by sensitizing and decreasing the revenue streams that have been used to calculate the proceeds of financing. Additionally, the new ridership that is expected to be unlocked by the program has not been included in the Amtrak Ticket Revenue financing assumption. The CROC financing risk has been absorbed given the lower probability rating, which is driven by the fact that it is a tax revenue source and carries a strong commitment from VRE.

*See markers for **L1 - L3** on Financial Risk Heatmaps.*

Tolls and Concessions

Average risk score before sensitization	High
Average risk score after sensitization	Low-Medium
Treatment of funding risks	Absorption Only

Of the various funding sources, tolls and concessions sources on average were assessed as high-risk on the basis of (i) the degree of reliance on the proceeds raised on the back of these revenue streams and (ii) the underlying reliance of the revenue streams themselves on user fees that are subject to ridership/user fluctuation in a post-COVID-19 environment.

I-66 (ITB) Toll Revenues have been sensitized for multiple recovery scenarios from pre-COVID-19 levels, on which basis the relative risk has been reduced to low-medium by revising the financing estimates accordingly. Actual toll revenue collections will be subject to ongoing monitoring in collaboration with VDOT and further mitigation measures, such as additional revenue and ridership studies, will be considered.

The FredEx payment is considered a low-medium risk to the Financial Plan as a delay in FredEx construction could lead to a delay in receiving the funds, which will largely be used for the CSX payments. This risk has been absorbed.

*See markers for **T1 - T2** on Financial Risk Heatmaps.*

Federal and Local Grants and Commonwealth Matches

Average risk score before sensitization	Low
Average risk score after sensitization	Low
Treatment of funding risks	Absorption Only

As grants and match funding have been committed or have already been received, this revenue group is considered to be of the lowest risk. The federal match funding is received from the PTF and TTF funds which carry some budgetary allocation uncertainty. This risk has been reduced by stress testing and decreasing the funding that is assumed to be available where necessary to account for fluctuations in the tax base and the effect of COVID-19.

*See markers for **F1 - F5** on Financial Risk Heatmaps.*

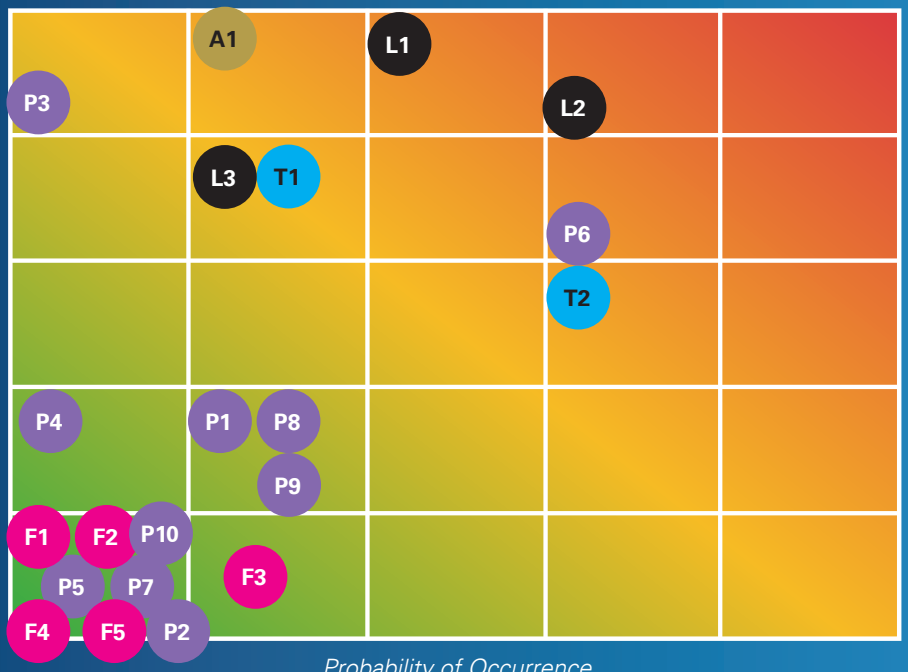
The "Financial Risk Heatmaps" illustrated on the following page provide a graphical depiction of the financial risk assessment results prior to adjustment, and post-adjustment. The potential impact and probability are represented on the y and x axes of the heatmaps, respectively.

Financial Risk Heatmaps

I-95 Rail Corridor Improvements affordability is driven by a combination of funding sources over time. Each source has its own degree of materiality, level of commitment, and timing considerations.

All funding sources have been assessed for risks according to (i) the severity of non-occurrence and (ii) the probability of such non-occurrence. Severity and probability are represented on the x and y axes of the diagrams below, similar to the approach to technical risk assessment earlier on in this section.

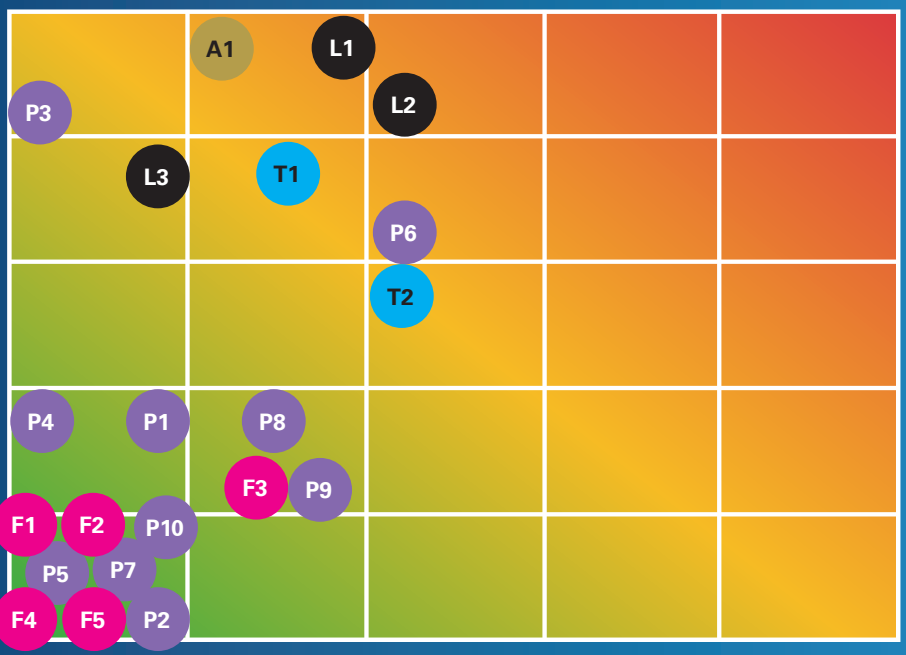
Funding source risk assessment before sensitization



Potential Impact

Probability of Occurrence

Funding source risk assessment after sensitization



Potential Impact

Probability of Occurrence

CATEGORIES OF RISK

PayGo Funding

P1: PTF ($485M)
P2: Historical Funds ($457M)
P3: VPRA FUND ($1458M)
P4: CROC ($60M)
P5: NVTA Contribution ($23M)
P6: Amtrak Ticket Revenue ($471M)
P7: Amtrak NEC Credit ($356M)
P8: State/Local Contributions ($61M)
P9: I-81 ($100M)
P10: Budget Bill ($84M)

Proceeds of Financing

L1: Amtrak Ticket Proceeds ($210M)
L2: I-66 Proceeds ($652M)
L3: CROC Proceeds ($139M)

Amtrak

A1: Amtrak Capital ($944M)

Tolls and Concessions

T1: FredEx ($255M)
T2: I-66 ($129M)

Federal Grants and Commonwealth Matches

F1: FASTLANE ($45M)
F2: CMAQ ($189M)
F3: Match Funding and other Capital and Operating Grants ($20M)
F4: SMART SCALE ($193M)
F5: Pandemic Relief Credits ($15M)

Note: The current Financial Plan reflects the results of the adjusted risks (i.e. revenue sources have already been sensitized)

Technical Risk Assessment

Integral to financial planning is assessment of technical risks for Capital Projects. This exercise informs assumptions on the capital costs and contingency included in the project cost estimates, which in turn drives assessments on feasibility and affordability. The process that has been established for identifying, monitoring, and managing technical risks to the Capital Projects follows guidance from Federal Transit Administration (FTA) Oversight Procedure (OP) 40 and Federal Railroad Administration (FRA) Monitoring Procedure (MP).4 The risk management process considers risks at both the individual Capital Project and programmatic (i.e., all Financial Plan Capital Projects) levels, both of which are documented and monitored in risk registers. At this time, project risk registers, as illustrated in the figures below, have been completed for all I-95 Corridor projects in partnership with VRPA planning, environmental, engineering, and communications staff.

During these workshops, technical risks to the I-95 Corridor Capital Projects were identified by the team, scored based on the probability of occurrence and impact of the risk, and mitigation strategies were identified for each risk item. Examples of risk mitigation strategies identified for the Capital Projects include coordination with partner or stakeholder agencies early and proactively, using contract language to transfer or reduce risk and inclusion of contingency as a percentage of the estimated construction. The project-level and programmatic risk registers also include the identification of the organization or project staff responsible for and capable of managing the risk. VPRA is currently refining the programmatic risk register using the results from project workshops and feedback from VPRA staff on other risks that exist outside of individual projects.

Examples of project-level risks identified during the risk workshops for the I-95 Corridor Capital Projects include delays in obtaining stakeholder approvals, delays in adjacent projects on the corridor and utility relocation delays. In addition to cost and schedule, programmatic risks are evaluated on additional risk impact categories such as safety and security, environmental, public relations, reputation and legal.

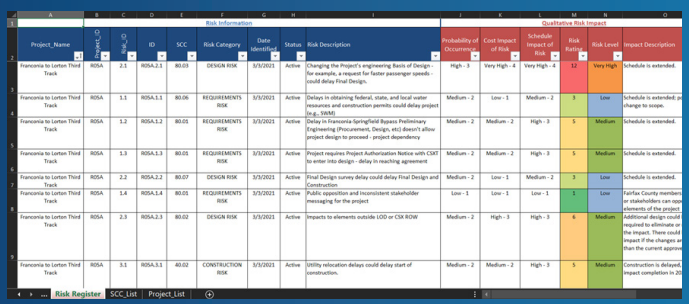
Select programmatic risks include:

- *Requirements Risk*: The difficulty of succinctly and fully developing project requirements
- *Design Risk:* The performance and variability of design activities occurring after alternatives analysis
- *Construction Risk:* Includes both risks that are due to variability of the project's environment (weather, subsurface conditions, etc.) and construction contractor failure
- *Market Risk:* Difficulty procuring project management, administrative, right-of-way, design, or construction services, materials, and equipment
- *Post-construction Risk*: Risks associated with operations and maintenance of project assets

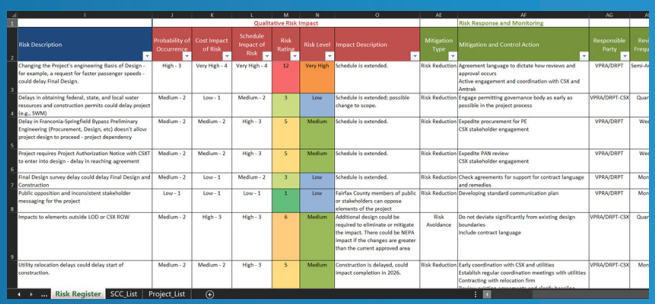
Draft Project Risk Registers for Phase 1 of the I-95 Improvements
Enables mitigation strategy development

The images below represent outputs of ongoing risk management efforts to date.

VPRA has initiated and will continue to maintain a risk register with stakeholder responsibilities and accountability identification and enforcement.



Risk Identification and impact assessment



Impact mitigation and management

[4] (https://www.transit.dot.gov/regulations-and-guidance/project-management-oversight-procedures)

Other Risk Considerations

VPRA Organizational Establishment

The delivery and administration of the Capital Projects, Capital and Operating Grants, and ongoing Operations costs that are highlighted in VPRA's Financial Plan will be overseen by VPRA. The Authority was established in 2020 to assume all administrative and fiduciary responsibilities for Virginia's state-supported passenger rail services, including the administration of all related capital expansion projects, infrastructure, and land acquisitions. As a relatively new Authority, there is a risk that delivery of the plan may be impacted by VPRA's own ability to establish itself as an organization capable of managing a program of this scale.

To mitigate any real or perceived risk associated with the VPRA's administration of this program, VPRA welcomed a highly qualified Board of Directors and recruited experienced executive leadership team to anchor the organization. The VPRA team represents decades of industry expertise and experience with delivery of large-scale capital projects and ongoing organizational planning efforts are underway across all facets of the enterprise. In addition to having qualified external consultants on board to support its strategic priorities, identifying supporting talent for the growing organization, developing requisite policies and procedures, and building up the back-office capabilities will be a focus for the Authority in the short, medium, and long-term.

VPRA has additionally taken important steps to develop leading practice policies and procedures to support and inform the development of major enterprise-anchor documents including the Budget, the Financial Plan, a Program Management Plan, and a Risk and Contingency Management Plan, among others.

Passenger Rail Ridership

The capital and strategic initiatives highlighted in the VPRA Financial Plan are expected to increase demand for passenger rail travel over the next 9 years and beyond. Following the CSX right-of-way acquisition, VPRA is forecast in the near term to make minor increases to roundtrip-trains for VRE Fredericksburg and Amtrak-supported trains, and significant increases (approximately double the service, relative to current levels) to these same trains by FY30 with the completion of the majority of Capital Projects.

Prior to the COVID-19 pandemic, the projected levels of service under the program would drive increases in passenger demand. During 2020 however, across the nation, transit ridership decreased by 79 percent when compared to pre-pandemic levels, raising uncertainty for VPRA — like all rail and transit agencies — about the recovery profile for this critical mode of public transportation. VPRA has, however, seen ridership return to approximately 70 percent[1] of pre-pandemic levels.

There are several short- and long-term considerations to take into account when forecasting future ridership including continuation of telecommuting and virtual meetings, the level of population increase in the suburbs vs. urban areas, the level of congestion on Virginia's roads, the recovery rate of air travel (with passengers choosing rail over flying), and pent-up desires to travel. As the Commonwealth recovers from the effects of the pandemic, VPRA, in close coordination with its stakeholders, is observing a recovery in ridership. Internal analysis suggests that Amtrak ridership is expected to return to a slightly lower level of business travel with a slightly higher level of leisure travel that, when combined, looks set to return to 95 percent of pre-pandemic levels by FY25.

A study by UBS[2] on the future trend of passengers reducing their reliance on flying in favor of rail travel found that the majority of business travelers surveyed were willing to accept travel times of two to three hours on trains (the approximate time of the Amtrak journey from Richmond to DC) and upwards of six hours for leisure travelers (Richmond to NYC is six hours).

As demonstrated in this document, funding sources for the Financial Plan have been sensitized for the impact

1 https://www.vapassengerrailauthority.org/media/budget/VPRA%20Executive%20Director's%20Report_February%202022.pdf
2 https://www.ubs.com/global/en/investment-bank/in-focus/2021/ready-to-travel.html

of COVID-19. Based on the assumption that ridership will return to 95 percent of pre-pandemic levels, a permanent five percent reduction to revenues has been reflected in the Financial Plan assumptions. As a result, the Commonwealth has taken early, prudent steps to mitigate the risk of funding the projects and will continue to proactively manage demand risk and monitor recovery of revenue, traffic, and ridership in the corridor with its stakeholder partners as ridership recovers in the near to medium term. As the acute impacts of COVID-19 continue to abate, VPRA has initiated an updated ridership study and, should it be required, the Agency can mitigate the risk of delayed ridership recovery using two key tactics – (i) delaying capital expenditure, and (ii) aligning operational frequencies to ridership demand.

Delivery Risk

Specific to Capital Projects, delivery risk refers to the risk that the VPRA will not meet its core delivery objectives, such as on-time and on-budget completion. Responsibility for Capital Project delivery and expenditure will be shared among VPRA, CSX and VRE, each of whom will have to manage various delivery risks. Delivery risks include many items such as delivery requirements, design, construction, market, interface and post- construction risks.

VPRA is developing a program management framework, which outlines the principles for the management and delivery of the Capital Projects highlighted in the Financial Plan. Several program management framework guidance documents have been developed to date:

- *Project Management Plan (PMP):* Establishes the overall management strategies and action plan for implementing the program, including managing the program scope, cost, schedule, quality, and associated risks.

- *Project Work Plans (PWPs):* Cover project-specific details and work as a complement to the PMP. Information from the PWPs will roll up at a programmatic level to the PMP's master schedule and master budget to ensure coordination, inform human capital and financial resource needs across the program, and assess construction impacts to passenger and freight rail services.

- *Risk and Contingency Management Plan (RCMP):* Defines processes to promote and support proactive identification, analysis and management of risks. Risks outside the direct control of VPRA will be managed through collaboration with internal and external stakeholders to minimize the impacts of these events on project delivery.

These guidance documents are "living" documents and will be amended and revised by VPRA in coordination with its partners as it advances in the delivery of its institutional mandates.


AMTRAK
15

Next Steps

Next Steps

Over the next nine years and beyond, VPRA will continue to advance financial planning efforts along with key commercial and organizational initiatives. This section highlights opportunities that VPRA is undertaking and/or evaluating in order to meet this goal.

Ongoing Financial Planning

As discussed previously, VPRA is continuously refining the Financial Plan with the latest cost, revenue and timing estimates, as well as actual figures as they become available to track its own accountability and capital program affordability. This Financial Plan document is intended to be a "living document" which will be updated at key milestones over time in order to provide understandable, transparent and up-to-date information to project stakeholders – in particular if and when major assumptions change. In parallel to this work, VPRA will continue to produce annual Budget documents which provide estimates of Capital Project, O&M and Capital & Operating Grant costs, as well as VPRA revenues. Importantly, these documents also track the changes in the budget when compared to the previous year's report. The tracking of budgeted and actual spending will be improved with the introduction of a modern Enterprise Resource Planning System, which VPRA is currently procuring for roll-out at the end of 2022. The system will support key financial processes including producing reports and analyzing data with increased accuracy.

Enterprise Risk Management

Effective risk management is underpinned by a strong, intentional governance structure. As the steward for more than $6B in public funds with the dedicated program delivery mission outlined in Commonwealth statute, the Board has ultimate accountability for the delivery of the Financial Plan and the oversight of key risks to that mission.

For this reason, VPRA and the Board will explore the range of models for a programmatic risk governance structure that may be most appropriate to the Authority. Aspects that VPRA may consider could include (but would not be limited to) the establishment of a VPRA risk management office, a risk management committee that reports to the Board, and/or the development of a comprehensive Enterprise Risk Management (ERM) plan to manage the risks associated with the program and the Authority's target operating model in line with VPRA's organizational and business objectives.

As global disruptions have increased, so has the complexity of the risk landscape, leading to more questions than ever before – which traditional approaches to risk cannot adequately answer. A more formalized ERM model could help VPRA to manage risks over the long-term, consistent with leading practices for capital programs of comparable size. As the Authority continues to stand-up its organizational resources, VPRA has a unique opportunity to establish upfront a culture and supporting organizational capabilities to manage risk.

Analysis of Capital Project Delivery Models

As the Financial Plan progresses, VPRA will continue to analyze potential delivery options for Capital Projects within the Financial Plan with the goal of deriving the best value and quality for the people of Virginia. Capital Projects will progress through project development, design, and construction over the next nine years. It is expected that VPRA, CSX, and VRE will lead the design and construction of individual projects with technical support from Amtrak. Analysis of project delivery models will require continued and iterative financial and risk analysis around specific projects or construction packages, careful assessment of market conditions, and meaningful market and stakeholder engagement. Over the length of the Financial Plan, VPRA, CSX, VRE, and Amtrak will participate in regular program management team meetings to coordinate and manage the Capital Projects, as well as any relevant Capital and Operating Grant or Operations activities, to minimize disruption to existing passenger and freight rail services due to construction.

Stakeholder Engagement

VPRA is committed to collaborative engagement with key funding partners and stakeholders within the region. Specifically, VPRA is working closely with strategic federal, state, and local partners to ensure affordability for the Financial Plan to deliver on its organizational objectives. Strong partnerships are integral to VPRA, and VPRA is committed to continued collaboration and ongoing communications with its partners.

Partners involved in key capital and strategic initiatives include:

- CSX Transportation
- Norfolk Southern
- Amtrak
- Virginia Railway Express
- US Department of Transportation
- Virginia Department of Transportation
- Department of Rail and Public Transportation

Market Engagement

VPRA's Financial Plan envisions significant capital investment over time to effectuate transformative improvements in rail capacity and service across the Commonwealth. The production of this Financial Plan document is one element of VPRA's effort to nurture market confidence in it as an effective and transparent steward of financial resources. As capital elements of the Financial Plan are anticipated to advance to procurement in the near future, VPRA will continue to advance its outreach and collaboration with the local construction community and their stakeholders to highlight delivery opportunities and VPRA's position as a credible counterparty.

Additional Next Steps

In furtherance of its objectives, VPRA will continue to explore federal funding opportunities, advance capital program development, develop its organization, and continue to assess both risk and delivery model options. With that foundation, the Authority will be well positioned to coordinate on federal grant application requirements as well as various federal loan and debt issuance processes. The table below illustrates the next steps (additional to those outlined previously in this section) that VPRA will consider in the short-, medium- and long-term from a financial, and organizational perspective. These next steps are indicative and reflect the latest information as of the date of this document.

Category	Short Term	Medium Term	Long Term
Financial Next Steps	• Issue the Financial Plan • Complete Western Rail transaction • Complete CROC debt issuance process with VRE • Continue to monitor effects of COVID-19 on ridership • Explore federal funding opportunities, such as IIJA	• Conclude the I-66 and Amtrak ticket revenue debt issuance processes • Conclude updated revenue and ridership analysis • Explore increamental federal funding opportunities • Coordinate on federal grant and loan application requirements	• Continue ongoing financial planning and analysis • Continue ongoing risk assessment and management
Organizational Next Steps	• Ongoing management of Capital and Operating Grants • Continue expansion of VPRA functional area leadership	• Ongoing management of Capital and Operating Grants • Guide refinement of additional passenger rail improvement efforts	• Ongoing management of Capital and Operating Grants • Refine operational roles as service levels increase

Glossary

ADA
Americans with Disabilities Act

APTA
American Public Transportation Association

B
Billions

Capex
Capital Expenditures

CARES Act
Coronavirus Aid, Relief, and Economic Security Act

CTB
Commonwealth Transportation Board

CMAQ
Congestion Mitigation and Air Quality Improvement Program

CROC
Commuter Rail Operating and Capital Fund

CSX
CSX Transportation

DRPT
Department of Rail and Public Transportation

FASTLANE
"Fostering Advancements In Shipping AndTransportation ForThe Long-Term Achievement Of National Efficiencies"

FRA
Federal Railroad Administration

FredEx
Fredericksburg Extension

FTA
Federal Transit Administration

FY
Fiscal Year

I-64
Interstate 64

I-66
Interstate 66

I-66 (ITB)
Interstate-66 Inside the Beltway

I-81
Interstate 81

I-95
Interstate 95

INFRA
Infrastructure for Rebuilding America

NEC
Northeast Corridor

NVTA
Northern Virginia Transportation Authority

O&M
Operations and maintenance

MARC
Maryland Area Rail Commuter

MP
Monitoring Procedure

M
Millions

NPS
National Park Service

OP
Oversight Procedure

PayGo
Pay-as-you-Go

PMP
Project Management Plan

PPE
Personal Protective Equipment

PTF
Priority Transportation Fund

PWP
Project Work Plan

RCMP
Risk Management and Compliance Program

ROW
Right-of-way

RRIF
Railroad Rehabilitation and Improvement Financing

RF&P
Richmond, Fredericksburg and Potomac

TIFIA
Transportation Infrastructure Finance and Innovation Act

TTF
VirginiaTransportationTrust Fund

USDOT
US Department of Transportation

VDOT
Virginia Department of Transportation

V-Line
Virginian Line

VPRA
Virginia Passenger Rail Authority

VRE
Virginia Railway Express

VMT
Vehicle Miles Traveled

YoE
Year of Expenditure

Board of Directors
Virginia Passenger Rail Authority (VPRA)

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Jennifer DeBruhl
Acting Director, DRPT

The Honorable Sharon Bulova
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Fairfax County

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Norfolk

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