VIRGINIA'S PASSENGER RAIL: KEYS TO FURTHER SUCCESS

SOUTHERN ENVIRONMENTAL LAW CENTER

Virginians For High Speed Rail

New River Valley Passenger Rail

GREATER WASHINGTON PARTNERSHIP

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INTRODUCTION

Virginians love passenger rail. Public and bipartisan support for passenger rail has soared as people recognize the many benefits it provides, including providing more transportation choices, increasing energy efficiency, cutting pollution, and generating economic activity.

Planning, policy changes, and investments led to significantly expanded and improved intercity rail (Amtrak) and commuter rail (Virginia Railway Express) service in Virginia, and generated years of ridership growth. The COVID-19 pandemic had a major impact on the use of all transportation systems, but despite this unprecedented challenge Amtrak ridership is surging and set a record in 2023, while VRE ridership is also recovering—though more gradually.

There are exciting projects and plans underway—and important additional opportunities—to accelerate the growth of passenger rail. Of particular importance, the appropriately named Transforming Rail in Virginia (TRV) initiative is a multi-corridor and multi-phase program that will greatly enhance, improve, and expand both intercity and commuter rail service. We must follow through on implementing this program and take other steps to ensure even greater success for Virginia's passenger rail.

THE REBIRTH OF PASSENGER RAIL

After years of neglect, passenger rail in Virginia has been significantly expanded and the Commonwealth is currently served by eight round-trip, intercity regional trains.

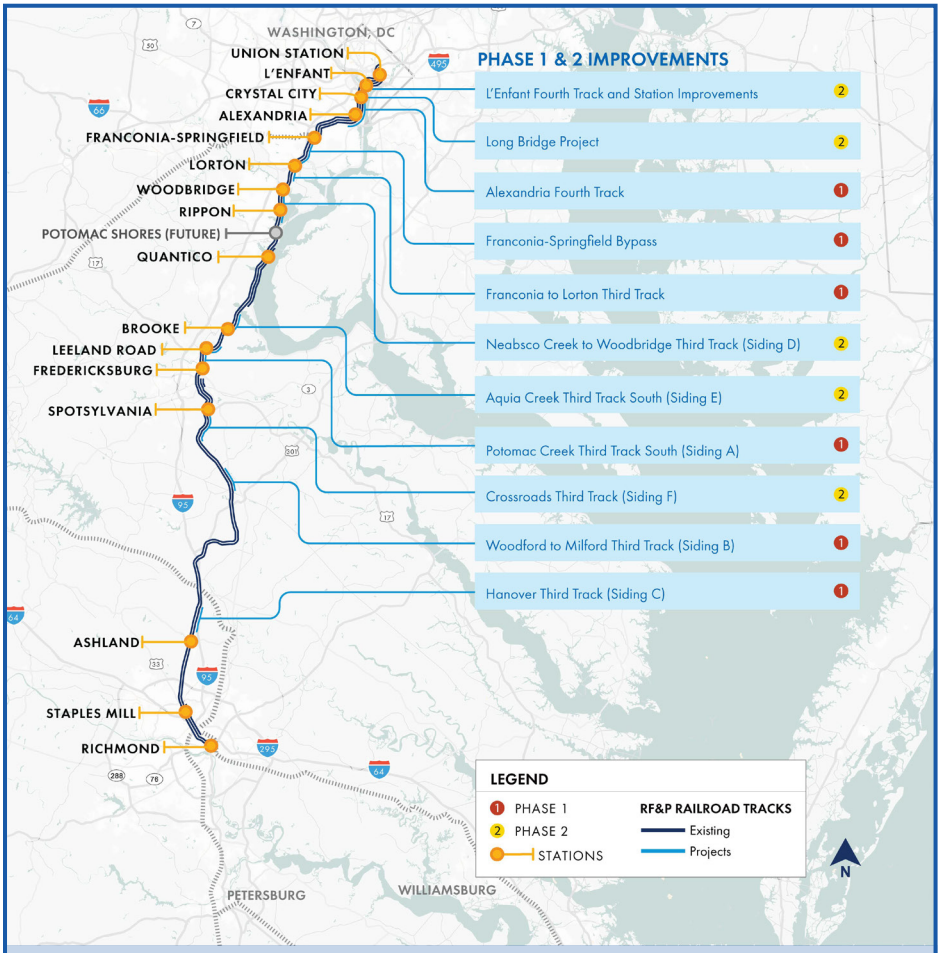
Virginia launched its first expansion of Amtrak intercity service in 2009 with the Piedmont Regional serving Alexandria, Burke Centre, Manassas, Culpeper, Charlottesville, and Lynchburg. This service was expanded in 2017, returning passenger rail to Roanoke for the first time in almost 40 years. And a second daily round-trip train on this route was added in July 2022 as part of the first phase of the TRV initiative.

Virginia began to fund additional service between Richmond and Washington in 2010. This train also serves Alexandria, Woodbridge, Quantico, Fredericksburg, Ashland, and Henrico's Staples Mill Station, and was later extended to serve Petersburg and Norfolk in 2012. A second daily round-trip train was added in 2018, and a third was added in July 2022, also as part of the TRV initiative.

In addition to these state-supported services, Virginia is served by three daily Amtrak trains that connect Washington to Richmond's Main Street Station, with two of these trains extending further east to Williamsburg and Newport News.

The Commonwealth is served by seven of Amtrak's longer distance, national trains as well, providing service to destinations as far away as Chicago, Miami, and New Orleans. These trains also serve communities not served by our regional trains, including Staunton, Clifton Forge, Danville, and Lorton.

Transforming Rail in Virginia Projects: Phases 1 & 2

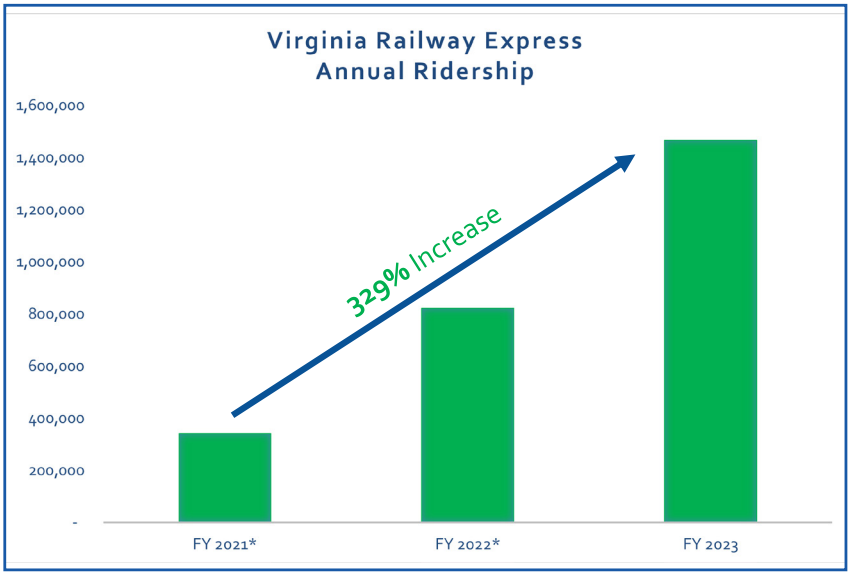


DID YOU KNOW...

As part of TRV, Virginia purchased 350 miles of railroad right-of-way and 225 miles of track from CSX, including half of the D.C. to Richmond corridor, the entire Buckingham Branch Railroad from Doswell to Clifton Forge, and the S-line from Petersburg to the North Carolina border.

Image credit: Virginia Passenger Rail Authority

Image credit: Virginia Railway Express



Source: Virginia Railway Express
**Public Health Emergency*

Virginia's commuter rail service, VRE, was launched in 1992 and is owned by the Northern Virginia Transportation Commission and the Potomac and Rappahannock Transportation Commission. VRE operates on two lines, the Fredericksburg Line that runs north-south and the east-west Manassas Line, both of which terminate at Union Station in Washington, D.C. These lines have been extended over time, and now serve 19 stations in Northern Virginia with a 20th station (Potomac Shores) opening soon.

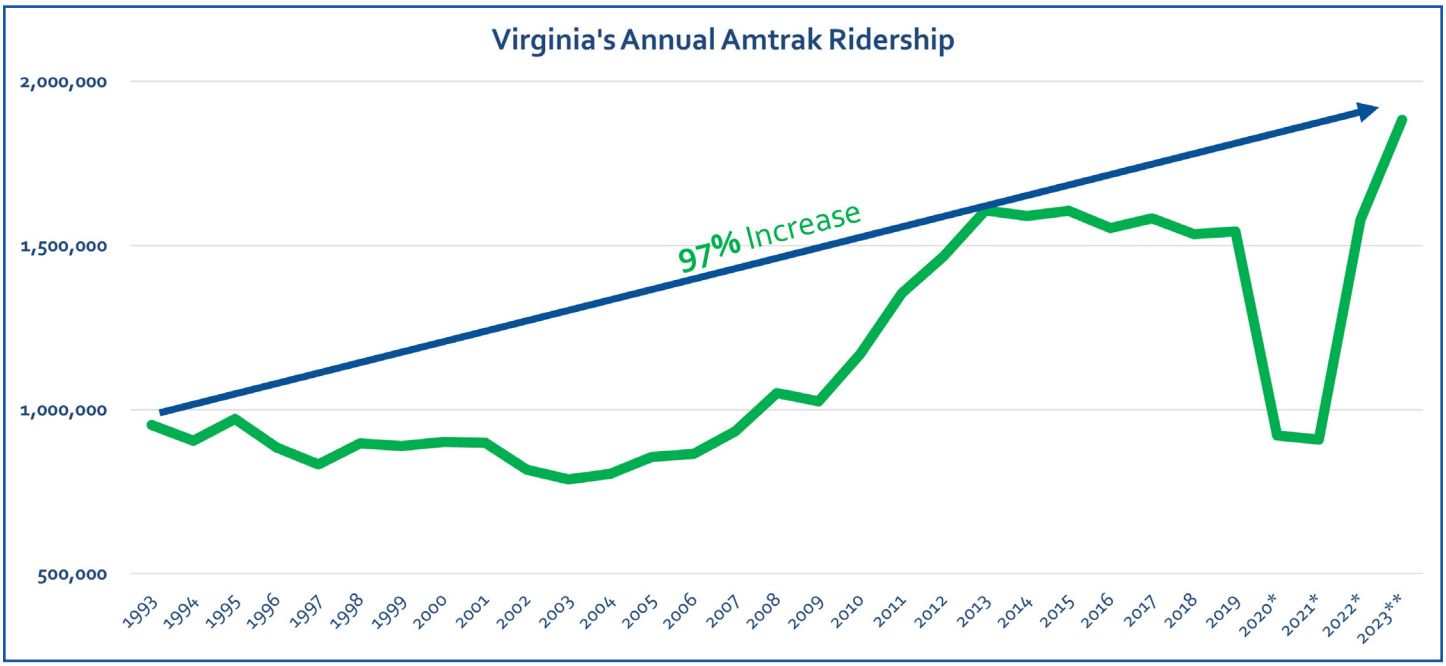
In 2020, the Virginia General Assembly passed the Transportation Omnibus package (HB1414) which, in addition to restructuring the state's transportation funding and formulas, created the Virginia Passenger Rail Authority (VPRA). VPRA is an independent authority tasked with managing the Commonwealth's rail assets (including rail lines and stations), overseeing construction of rail expansion projects, and partnering with Amtrak and VRE on the operation of our passenger trains.

Virginia's Department of Rail and Public Transportation (DRPT) works to prepare future passenger rail corridors and projects for development. DRPT is tasked with articulating the Commonwealth's rail vision, studying future rail corridors and developments, managing the inclusion of rail in Virginia's multi-modal transportation plans, and overseeing the state's freight and short-line rail programs.

Combined, VPRA and DRPT are managing the TRV investments and guiding the continued development of our successful passenger rail program.

GROWING RIDERSHIP

The rebirth of Virginia's passenger rail network resulted in substantial ridership growth, demonstrating the demand for rail service. During the two decades preceding the COVID-19 pandemic, VRE ridership more than tripled, and Virginia's Amtrak ridership grew over 70 percent.[1]



Source: Amtrak (Federal Fiscal Year)
**Public Health Emergency **Estimate*

Ridership continued to grow until the pandemic when a medical state of emergency was declared. Over the two years encompassing the height of the pandemic, Virginia's Amtrak ridership dropped 41 percent[2] and VRE's ridership fell 92 percent.[3]

The good news is that the pandemic ridership decline is proving to be a blip rather than a new normal. Intercity rail ridership has rebounded, and Virginia's state-sponsored Amtrak Regional trains are seeing their highest ridership ever while Amtrak's national trains that serve the Commonwealth are seeing their passenger counts reach pre-pandemic levels. For FY 2023, Virginia's Amtrak trains are on-pace to exceed 1.8 million passengers for the first time. VRE has not seen ridership reach pre-pandemic levels yet. However, even with commutes into Washington, D.C. altered since the pandemic, VRE has seen its annual ridership increase from a low of 341,000 in FY 2021 to 1.47 million in FY 2023, and VRE had the largest year-over-year increase in ridership of any commuter rail service in the country for the first quarter of 2023.[4] VRE is also looking to launch Saturday service within the next year which will help them continue their post-pandemic ridership growth.

MULTIPLE BENEFITS

The expansion and improvement of Virginia's passenger rail network has been a huge success, generating multiple benefits for Virginians.

Since 1993, Amtrak has handled over 33.6 million trips in Virginia while VRE has carried more than 95.7 million passengers. Combined, these 129.3 million trips avoided an estimated 15.1 billion miles people would have traveled on our roads, reducing fuel consumption by 303.2 million gallons, and preventing the release of 5.9 billion pounds of carbon emissions as well as other tailpipe pollutants.[5]

Additionally, each year travel on Virginia's passenger trains have eliminated the equivalent of 76 interstate lane miles of traffic, potentially saving the Commonwealth's taxpayers $2.6 billion in unnecessary roadway construction and maintenance costs.[6]

Passenger rail is also good for our economy. Since 1993, Amtrak and VRE have generated over $16.3 billion in economic benefits for the Commonwealth, with an average of 5,600 jobs created or sustained each year. One of the biggest drivers of Virginia's Amtrak resurgence is tourism and leisure travel, and we estimate that Amtrak leisure travelers generated over $88 million in direct and indirect economic benefits in 2022 for the Commonwealth's economy.[7]

By every standard, investments in Virginia's passenger rail have paid significant dividends.

FACT CHECK

Since 1993, Amtrak and VRE have generated over $16.3 billion in economic benefits for the Commonwealth, with an average of 5,600 jobs created or sustained each year.

Share of U.S. Transportation Sector GHG Emissions by Source, 2021

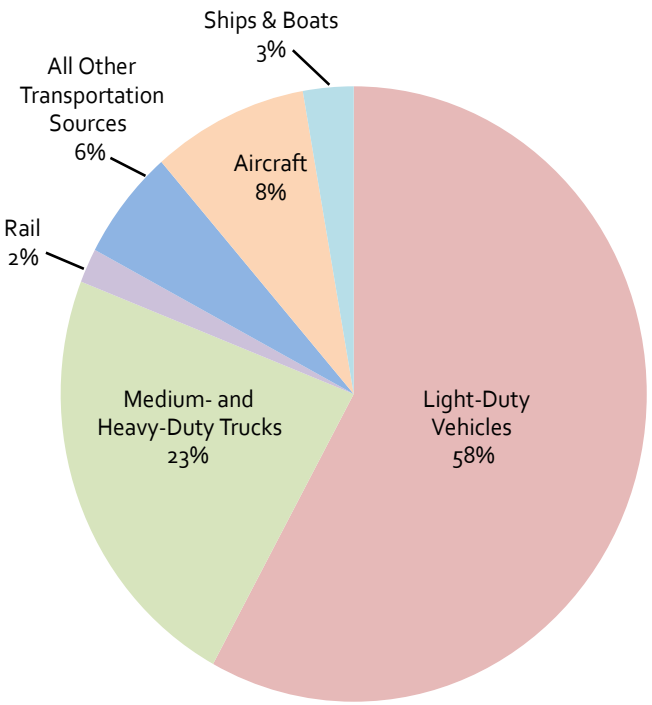


Image credit: U.S. Environmental Protection Agency

CHALLENGES TO WATCH

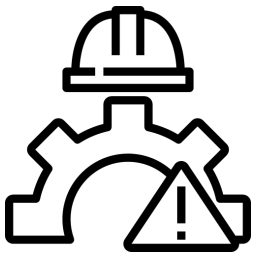
While ridership is rebounding, Virginia's passenger rail faces some additional challenges, which although they seem to be easing, need to be monitored closely.

Reduced Workforce

During the height of the pandemic, Amtrak cut nearly 20 percent of its workforce, losing thousands of talented employees.[8] However, Amtrak hired 3,700 staffers in 2022 and anticipates returning to pre-pandemic workforce levels in 2024.[9]

The freight rail industry is also dealing with pandemic-era workforce challenges including cutting over 30,000 jobs.[10] The reduced workforce has accelerated the trend towards longer trains (with some reaching three miles in length)[11] which utilize significantly more rail capacity due to their inability to fit within normal railroad passing sidings and their overall lower operating speeds. This results in delays for passenger trains, since they often are unable to overtake or get ahead of a longer, slower moving freight train.

Deferred & Delayed Asset Maintenance



This has led to an increase in derailments or breakdowns. These incidents, especially among longer freight trains, can block rail corridors for hours or even days.

One such derailment caused Amtrak's Auto-Train trip to be stuck in rural South Carolina in early January 2023 for nearly 20 hours.[12]

Inflation

The rail industry has seen large increases in overall costs due to higher prices for materials and labor. The price of two core building commodities used in rail lines and bridges has risen rapidly, with concrete materials up 32 percent and iron/steel up 45 percent since 2019.[13] As a result, the cost of critically important rail projects has increased significantly. For example, the estimated cost of the Long Bridge project to double rail capacity across the Potomac River has risen from $1.98 billion to $2.28 billion.[14]

KEY OPPORTUNITIES & NEXT STEPS

There are significant opportunities to increase the amount of passenger rail service we have, reduce trip times, expand service to reach more Virginians, and make rail an even cleaner transportation choice.

1 The Bipartisan Infrastructure Law: Infrastructure Investment & Jobs Act

A primary opportunity for progress is the recent increase in federal funding that can accelerate and expand upon planned rail projects. The bipartisan federal Infrastructure Investment and Jobs Act (IIJA) Congress passed in late 2021 provides a record amount of transportation funding, including historic levels of funding for passenger rail.

Thanks to the hard-work of VPRA, DRPT, and Virginia's congressional delegation, since June of 2022 the Commonwealth has secured $190.6 million in federal funds to construct the Franconia-Springfield bypass, improve safety at four at-grade crossings, advance planning of the S-Line corridor (Petersburg to Raleigh) to 30 percent design, improve the Petersburg and Newport News stations, move the extension of passenger rail service to the New River Valley forward, and advance the Long Bridge project's bicycle-pedestrian crossing component. Virginia has applied for numerous other federal rail, transit, and multi-modal grants to advance specific TRV projects, and should continue to pursue such grants. Strong federal support for expanding and improving Virginia's passenger rail will go a long way towards advancing needed projects.

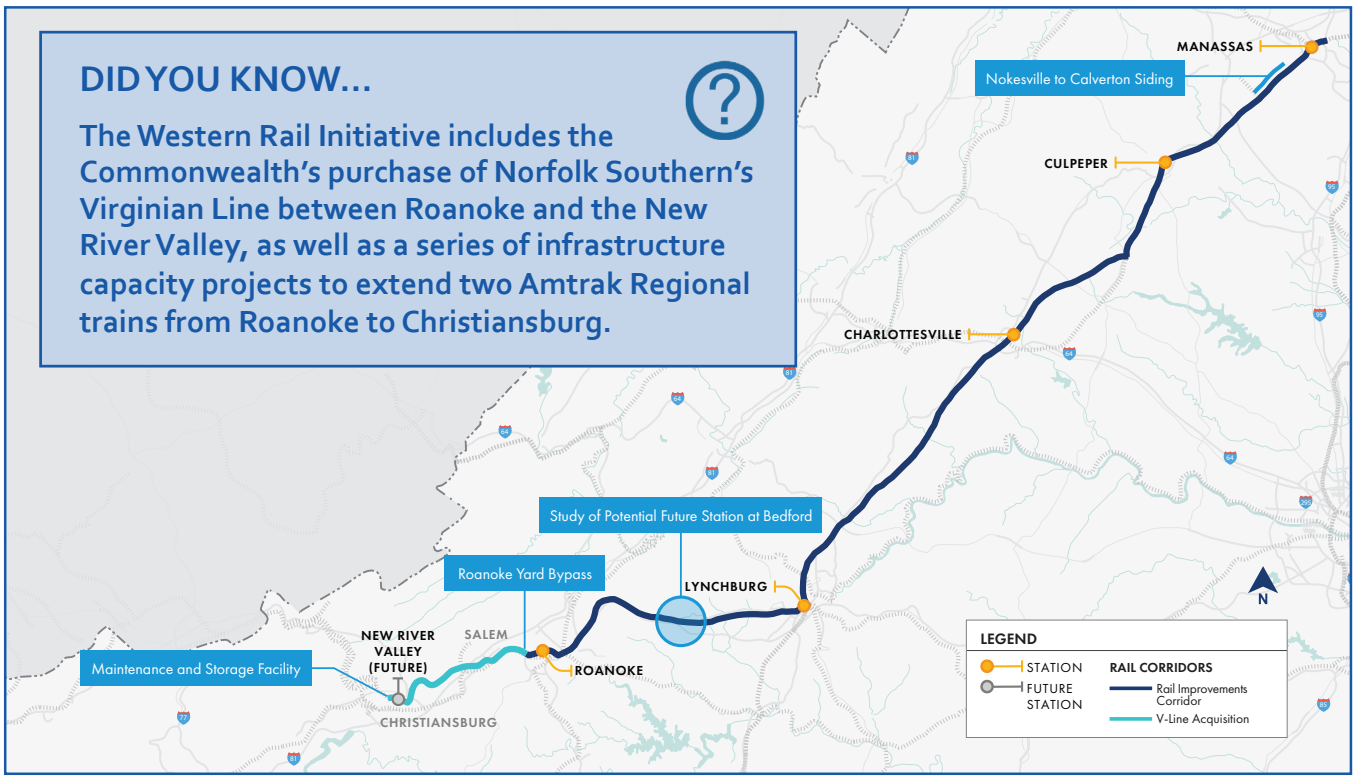


Image credit: Virginia Passenger Rail Authority

2 Transforming Rail in Virginia (TRV)

Image credit: Amtrak

DID YOU KNOW...

The Siemens Airo trainsets are dual-powered—they operate on electricity over the Northeast Corridor and can easily switch from electric to diesel power in DC. This eliminates the need for changing engines and will reduce the travel time between New York and Virginia destinations by nearly 40 minutes.

Implementing the TRV initiative is by far the most significant step to improve Virginia's passenger rail. TRV is a $4 billion program that includes public purchase and ownership of over 412 miles of railroad right-of-way, expansion of capacity on critical rail corridors, modernization of rail stations, and bringing new state-of-the-art Siemens trainsets to Virginia.

The TRV program (including the Western Rail Initiative) consists of multiple phases, with each phase delivering important projects and significant public benefits.

Substantial portions of Phase 1 (2022-2026) have already been completed. These projects include the extension of an Amtrak regional train from DC that previously terminated at Henrico's Staples Mill Station to Downtown Richmond's Main Street Station, the extension of a third Amtrak Regional from Washington to Norfolk, and the extension of a second Amtrak Regional from Washington to Roanoke. DRPT has also studied proposed new service along the Commonwealth Corridor (Hampton Roads-Richmond-Charlottesville-Christiansburg) and the Christiansburg to Bristol Corridor and has submitted both routes to the Federal Railroad Administration for consideration as part of the Corridor Identification and Development Program—a program that will guide federal investment in new passenger rail corridors.

The remaining Phase 1 projects include the construction of nine improvements along the Washington to Richmond corridor with an estimated budget of $1.911 billion (including the initial purchase of the railroad right-of-way). These projects will result in 23 new railroad track miles and completion of the 30 percent design phase for the S-Line corridor that runs from Petersburg to the North Carolina state line (and ultimately to Raleigh). Phase 1 may also include a DRPT capacity study along the corridors linking Richmond and Hampton Roads to identify opportunities for additional service connecting Richmond to Newport News and Norfolk/Virginia Beach.

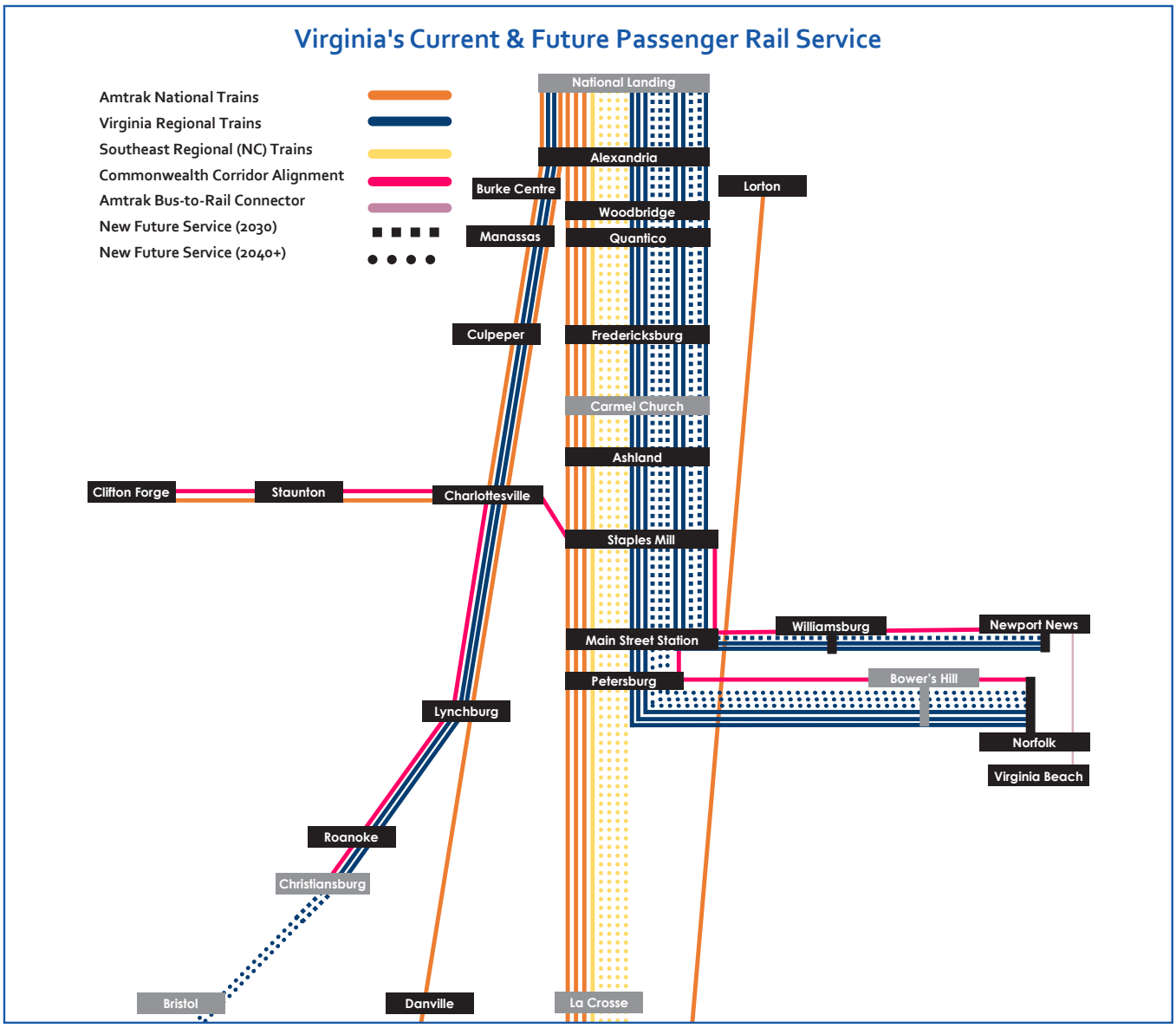
Phase 2 (2026-2031) includes another seven projects along the Washington to Richmond corridor, which are estimated to cost over $2.6 billion. Among these projects is the most important component of TRV—construction of a new Long Bridge across the Potomac River to address the most serious passenger rail bottleneck on the east coast. The new bridge will double the capacity of the crossing and separate freight and passenger traffic. In addition, Phase 2 will expand the line from Washington to Alexandria to four tracks and from Alexandria to Lorton to three tracks. This phase also includes nine projects totaling $442 million to construct the necessary capacity to extend Amtrak Regional service from Roanoke to Christiansburg.

At the end of the first two phases of TRV, Virginia will have added seven Amtrak Regional trains, extended all Richmond Regionals from Staples Mill Station to Main Street Station, extended all Roanoke Regionals to the New River Valley, added 10 new VRE frequencies, and launched the new dual-powered Airo trains. This major capacity expansion will be accompanied by steps to begin separating passenger and freight operations in Northern Virginia, which will enable safer, more reliable, and faster trips along the Washington to Richmond corridor benefiting every train that operates in Virginia.

3 Beyond TRV

As significant as the first two phases of the TRV program are, there are other important opportunities to improve passenger rail.

For one thing, expanding the entire Washington to Richmond corridor to four tracks to separate freight and passenger trains would allow for a seamless travel experience from Richmond to Washington—and on to the northeast corridor to New York. Other important projects that are needed beyond TRV include transfer of dispatching from CSX to Amtrak for the Washington-Richmond corridor, the expansion of rail capacity along the Richmond to Hampton Roads corridors, construction of the Commonwealth Corridor, build-out of the S-Line between Petersburg and Raleigh, extending service from the New River Valley into Tennessee via Bristol, and transition of Amtrak's Cardinal service[15] to run daily. Many of these projects have been included in the Virginia Statewide Rail Plan, previously completed state and federal studies, or submitted for consideration as part of the federal Corridor Identification and Development Program.



Source: Virginia Department of Rail and Public Transportation, Federal Railroad Administration, Amtrak, Virginians for High Speed Rail, and North Carolina Department of Transportation

At a minimum, these projects are estimated to provide at least three additional roundtrip trains between Richmond and Hampton Roads, four additional roundtrips between Washington and North Carolina, two new roundtrips along the Commonwealth Corridor, and additional service along the Washington to New River Valley corridor.[16] These projects would also expand commuter rail service such as allowing more VRE trains including late-night and weekend service, as well as allowing single-seat commutes from Virginia into Maryland on VRE and from Maryland into Virginia on MARC (Maryland's commuter rail service)—eliminating the transfer between VRE and MARC in DC that is currently required.

4 Reducing Pollution

In addition to expanding and improving service, there are tremendous opportunities to further reduce pollution from our trains and to decarbonize our rail network. Transportation is the largest source of carbon pollution in Virginia, and a major source of other harmful emissions.[17] Because passenger and freight rail are far more fuel-efficient than cars and trucks, rail already provides a cleaner transportation alternative—but more can be done. Since 2010, Amtrak has cut its CO_2 emissions by over 450,000 metric tons nationally and it has a goal of transitioning its entire fleet to run on electricity by 2035 and to achieve net-zero greenhouse gas emissions by 2045.[18] One way this is being accomplished is the launch of the state-of-the-art Siemen's Airo Trains which will begin serving Virginia's Regional routes by 2027. According to Amtrak, these trains "are more fuel efficient and produce 90% less particulate emissions in diesel operations" than current diesel trains.[19]

The steps to reduce pollution in Virginia and move the Commonwealth's entire rail network towards a similar net-zero greenhouse emissions goal include:

- Phased electrification of Virginia's rail corridors.
- Expanding "last mile" connections between passenger rail, public transit, and bicycle & pedestrian facilities.
- Installing solar panels & maximizing energy efficiency at rail stations.
- Supporting VRE's transition to zero-emission technology.
- Encouraging freight rail to move away from carbon-based technology.

5 Further Policy Steps

In addition to the steps noted previously to advance fast, frequent, and reliable passenger rail, further policies to implement and supplement these advances include the following:

- Protecting state rail funding and securing additional federal, state, and local resources.
- Funding rail station modernization and providing multimodal connections between stations and activity centers.
- Conducting a state study of opportunities to expedite the transition to zero-emission trains and infrastructure.
- Ensuring that future passenger rail investments promote more compact development patterns.
- Protecting any potentially abandoned rail corridors through public purchase for future service.

Image credit: Virginia Passenger Rail Authority

MOVING FORWARD

Virginia has made tremendous progress in advancing passenger rail with increased funding, expanded and improved service, growing ridership, and calls for more service from the public, businesses, and political leaders.

Moving forward, Virginia should fully implement the TRV initiative and pursue further projects and steps beyond TRV that provide additional and faster service while reducing the environmental footprint of rail.

Great things are happening with Virginia's passenger rail, and we need to build upon our success. All aboard!

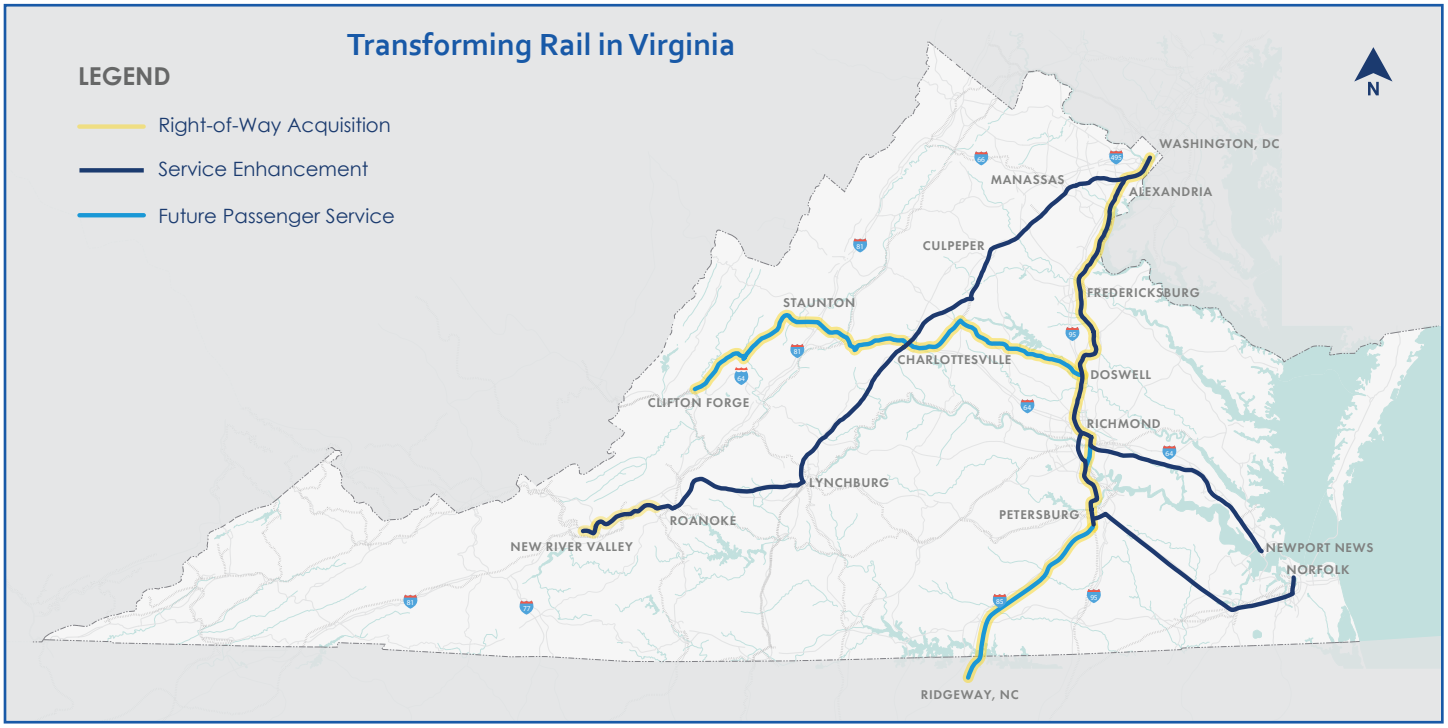


Image credit: Virginia Passenger Rail Authority

ENDNOTES

[1] Ridership data provided by Amtrak and Virginia Railway Express.
[2] Ridership data provided by Amtrak, https://www.amtrak.com/about-amtrak/amtrak-facts/state-fact-sheets.html
[3] Ridership data provided by Virginia Railway Express, https://www.vre.org/about/board/board-agenda-minutes/
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[5] Statistics generated from data provided by Amtrak, Virginia Railway Express, Environmental Protection Agency, and U.S. Department of Energy.
[6] Data generated from Federal Highway Administration and Virginia Department of Transportation statistics.
[7] Tourism Economics, *Economic Impact of Visitors in Virginia 2021*, August 2022, https://www.vatc.org/wp-content/uploads/2022/09/2021-Economic-Impact-of-Visitors-in-Virginia.pdf
[8] Luz Lazo, "Amtrak to Cut up to 20 Percent of Workforce as Coronavirus Takes Toll," *Washington Post*, June 16, 2020, https://www.washingtonpost.com/transportation/2020/05/27/amtrak-cut-up-20-percent-workforce-coronavirus-takes-toll/
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[10] U.S. Bureau of Labor Statistics, "Industries at a Glance: Rail Statistics," https://www.bls.gov/iag/tgs/iag482.htm (accessed Sept. 6, 2023).
[11] The Federal Government Accountability Office concluded that the average length of a freight train has grown 25% since 2008. Henry Grabar, "The Trains are Getting Longer and the Job is Getting Worse," *Slate*, Dec. 1, 2022, https://slate.com/business/2022/12/freight-rail-strike-trains-csx-biden-congress.html#:~:text=Falling%20employee%20headcount%20has%20encouraged,a%20Government%20Accountability%20Office%20study
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[14] Virginia Passenger Rail Authority, *Fiscal Year 2024 Budget*, https://vapassengerrailauthority.org/wp-content/uploads/2023/05/FY24-Adopted-VPRA-Budget-Document-5.25.23.pdf, page 8.
[15] Amtrak's Cardinal train operates between New York and Chicago with six stops in Virginia.
[16] Compiled from various passenger rail studies, including the Tier I Richmond to Hampton Roads Passenger Rail Study, Richmond to Raleigh Final High Speed Rail Study, and Commonwealth Corridor Feasibility Study.
[17] U. S. Environmental Protection Agency, "Fast Facts on Transportation Greenhouse Gas Emissions," https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions (accessed Sept. 6, 2023).
[18] Amtrak, *FY 2022 Sustainability Report*, https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/environmental1/Amtrak-Sustainability-Report-FY22.pdf, page 6.
[19] Deb Kiner, "Amtrak Airo, State-of-The-Art Trains, Will Hit the Tracks in 2026 with Focus on Comfort, Efficiency," *Pennlive*, December 16, 2022, https://www.pennlive.com/life/2022/12/amtrak-airo-state-of-the-art-trains-will-hit-the-tracks-in-2026-with-focus-on-comfort-efficiency.html

Image credit: Devin Jefferson

ABOUT

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Virginians for High Speed Rail is a nonprofit coalition of citizens, businesses, localities, community organizations, and economic development agencies that educate and advocate for the expansion of fast, frequent, and reliable rail service connecting our communities to increase the economic potential of the Commonwealth.

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RVA757 Connects is a nonprofit organization focused on advancing the economic prosperity for everyone in the Richmond region (RVA) and Hampton Roads (757) – a megaregion called the I-64 Innovation Corridor. The organization identifies, supports, and advances major opportunities, initiatives, and projects that meaningfully benefit both the Richmond and Hampton Roads regions.

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The **Greater Washington Partnership** is the first-of-its-kind nonprofit alliance of the region's most influential leading employers across diverse industries in Maryland, Virginia and Washington, DC – all committed to championing the region's economic growth and vibrancy.

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NRV Passenger Rail is broad-based community initiative to bring Amtrak passenger rail service to Virginia's New River Valley. Formed in 2013, NRV Passenger Rail represents a unique partnership between business, municipal, legislative, and university leaders with support from all corners of our region.

nrvpassengerrail.org | @nrvrail2020 | @nrvpassengerrail

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Image credit: Amtrak

Cover image: Courtesy of Amtrak