

**COMMENTS FROM THE EXECUTIVE COMMITTEE
OF THE VIRGINIA RAIL POLICY INSTITUTE
ON THE
WASHINGTON TO RICHMOND HIGH SPEED RAIL STUDY**

September 11, 2015

The Washington to Richmond (DC2RVA) corridor is critical to the future of both freight and passenger rail in Virginia. It already is the most heavily traveled corridor in the Commonwealth. And with current congestion on I-95 and the projected heavy additional population growth in the Northern Virginia, Richmond, and Hampton Roads regions, the DC2RVA surface transportation corridor clearly will require additional capacity in the years ahead. Passenger and freight rail should be considered for a significant share of such planning and development given the many potential advantages of greater use of the rail mode for transport and mobility. Moreover, the DC2RVA rail corridor provides the crucial link between passenger service in the heavily traveled and successful Northeast Corridor (NEC) and the rest of the Southeast High Speed Rail (SEHSR) corridor that is largely a work in progress, as well as a crucial link to both the north and south side of Hampton Roads.

The Virginia Rail Policy Institute (VRPI) strongly endorses the goal of improving the DC2RVA corridor, and we are pleased to see that the Virginia Department of Rail and Public Transportation (DRPT) and the Federal Rail Administration (FRA) are preparing the Tier II Environmental Impact Statement to advance infrastructure improvements and service upgrades to bring high(er) speed rail and expanded capacity to this corridor. We would like to comment on a number of aspects of this study and to identify some of the issues that should be considered as it moves forward.

We also note that there are many other significant issues and steps needed to develop and advance a more robust long-term vision for the future of the DC2RVA corridor. Among other things, there is a need to get beyond the overly-restrictive 90 mph limit on passenger trains in the corridor, examine electrification, and explore new routing and alternative station locations in order to develop a first-rate rail option for this corridor. Since these comments pertain to the Tier II study, which is constrained by the Tier I study, they are more narrowly focused on certain aspects of the current study. This narrowed focus, however, should in no way be read as an endorsement of a more limited vision for the long-term future of the corridor.

I. Alignment and Station Location Criteria

DRPT has stated that a primary purpose of the recent public meetings on this project was to generate input on the criteria for developing, evaluating, and selecting alignments and station locations. Although there are numerous potential factors to consider in selecting and applying such criteria, VRPI recommends that the following criteria be emphasized:

- Improvements should advance fast, frequent, and reliable passenger rail service. This includes improving:
 - travel time (speed) to achieve 90 mph speed where possible
 - service frequency
 - on-time performance
- Stations and stops should be located in population centers and central business districts and provide downtown-to-downtown service. Priority should also be given to station locations where surrounding land use provisions encourage transit-oriented development.
- A priority should be placed upon station locations that have strong transit, bicycle, and pedestrian connections and connectivity should be enhanced and maximized. This should include the implementation of new or reformulated transit options to connect rail to surrounding potential riders, such as—for at least the short term—shuttle buses between Staples Mill and Main Street Station in Richmond.
- The adverse impacts of improvements on communities and natural and historic resources (e.g., noise and vibration, wetlands and water quality, parks and open space) should be avoided or minimized as much as practicable, and any remaining impacts should be mitigated. In addition, beneficial environmental impacts (e.g., reduction of air pollution) should be maximized.
- Alignments should not preclude future speed increases or electrification of the corridor.
- The financial cost of improvements must be proportionate to the benefits to the public (e.g., number of trains and passengers served, quality and reliability of service, amount of pollution reduction). Cost effectiveness is a central element of constructability that is often given insufficient attention and needs to be considered throughout the development of alternatives in this study.

II. Alignment and Station Location Challenges and Opportunities

From the south bank of the Potomac River to Greendale in Henrico County, the location of Amtrak's Richmond Staples Mill Station, the existing DC2RVA rail corridor (also known as CSX's RF&P Subdivision) will be expensive to enhance, but infrastructure solutions are, for the most part, relatively straightforward. The general plan that has existed and been incrementally advanced, largely with public funding, for more than two decades, is to convert this 105-mile, historically double-track, bi-directional, railroad to a three-track rail corridor with capability to accommodate trains of any type on any track in either direction, facilitated by a series of

universal crossovers. Continuing to proceed with this general plan is a reasonable approach. Once such enhancements are in place, it should be possible to substantially increase train throughput (with or without higher train speeds) and to minimize—although not entirely eliminate—train movement conflicts and delays.

However, three urban areas along the DC2RVA corridor—Fredericksburg, Ashland, and Richmond—present particular challenges. Improvements or alterations of alignments or station locations in these areas are likely to have significant potential impacts, including impacts on historic and natural resources, existing communities and businesses, and vehicle and rail traffic. They are also likely to carry a much higher price tag.

A. Fredericksburg Alignment and Station

Congestion in Fredericksburg is a challenge, particularly if intercity passenger rail service is expanded as is planned and as VRPI strongly supports. The alternatives of expanding the existing alignment through the city or pursuing potential new alignments around Fredericksburg appear likely to impact sensitive historic and natural resources. It may well be the case that further analysis will show that more modest improvements to the existing alignment are the best practical alternative and the most likely to be permitted and approved. Regardless of the approach taken, the current station should remain as a gateway for commuter and regional passenger rail, given its downtown location in the heart of the region.

Re-routing freight traffic around downtown Fredericksburg does deserve further study, however, since it could improve capacity for both future HSR traffic and existing VRE and Amtrak trains. In addition, other rail corridors located outside of the DC2RVA corridor can have an important impact on this corridor. The existing rail route from Orange (Norfolk Southern) to Gordonsville (CSX/Buckingham) and then east on the Piedmont Subdivision to Doswell, should be maintained and upgrades should be examined that could safely and expeditiously accommodate north-south detour trains that would otherwise be stranded on the RF&P Subdivision in case of accident or incident. To illustrate, it seems likely that Fredericksburg area VRE commuters would much rather take an extra hour and a half getting home via the detour than wait far longer for the primary route to be cleared. CSX intermodal freight is similarly likely to use such a detour if the primary route is not available.

B. Ashland Alignment and Station

The major existing alignments in the corridor split into independent segments at the wye located at RR milepost SRN-001 near the I-64/95 junction in downtown Richmond. *Project Maps*, at Segment 63. The alignment selected will determine whether HSR would implicate impacts in Ashland (and at Staple Mills Road). Proposed Alternative 1 is the existing Amtrak alignment, passing through the existing Richmond-Staples Mill Road Amtrak station, through

Ashland, and on to downtown Fredericksburg. Proposed Alternative 2 would bypass Staples Mill Road and Ashland to the east via the Buckingham Branch Railroad ROW, rejoining the CSX mainline at the wye at RR mile marker CFP-22, just south of the Hanover/Caroline County line. *Project Maps*, at Segment 32.

It appears that Alternative 1 is likely to be the preferable alternative since it lies largely within existing ROW and is currently used by Amtrak, making coordination with existing service and schedules easier. In addition, the Buckingham Branch provides a number of technical and engineering challenges, including straightening existing curves. However, Alignment 2 does cross fewer and lower-traffic roads, and is a substantially rural alignment likely to have fewer noise impacts. Even if the Buckingham Branch line is not the primary alternative chosen, upgrades to this line may nonetheless be desirable, as discussed further below, to provide a “reliever” route in case of accidents or incidents on the primary line.

If Alternative 1 is selected, the presentation boards at DRPT’s recent public meetings and conversations VRPI board members have had with DRPT staff suggest that the alternatives under consideration in the study include a bypass of Ashland, elevated tracks, or a tunnel under Ashland. A bypass of Ashland for freight traffic, and perhaps some passenger service as well, should improve the speed and reliability of passenger rail in the corridor; however, it also may have significant impacts on natural and historic resources. The likely adverse visual and community impacts of the elevated track option also appear likely to rule that out that option. In fact, the adverse impacts and cost of the bypass, elevated, and tunnel options all may significantly outweigh the time savings or additional capacity benefits they offer. We look forward to seeing the data on these issues developed in the study. It should be noted, however, that many more trains ran through Ashland decades ago than do today. Rather than bypassing or going over or under Ashland, it may be that the best overall strategy is to achieve higher speeds by focusing on improvements elsewhere in the corridor and by having fewer trains stop in Ashland.

C. Richmond Alignment and Stations

The greatest challenges to improving the DC2RVA corridor are in the Richmond area, where there are a number of interrelated issues regarding both station location and the need to address significant bottlenecks and system limitations.

The study is considering having HSR service in the DC2RVA corridor use the existing Main Street Station, the existing Staples Road Station, and/or a new station either on Broad Street or on the Boulevard, and materials have suggested that two of these locations may be chosen. Although VRPI does not have sufficient information to endorse particular station locations at this time, it appears that a brief summary of the options would be as follows:

- The existing Main Street Station has been supported by the City of Richmond, as it currently serves downtown Richmond, and it is near population and job centers and served by transit; however, significant capacity improvements and track upgrades are necessary to allow greater frequency of service and reduce bottlenecks.
- The existing Staples Mill Road Station has been supported by Henrico County, currently serves the vast majority of passenger rail traffic in Richmond and is relatively convenient for many suburban residents; it has sufficient capacity but suffers from its less-central suburban location.
- The proposed Broad Street or Boulevard locations would be on a major arterial roadway within the Richmond city limits, near significant population and commercial areas, and be transit-accessible. If we were starting from scratch, this would be an ideal location for a station; however, acquiring land for the station, track, and parking may present insurmountable cost, environmental, and logistical impacts.

All three stations have opportunities for spurring significant mixed use, transit-oriented development with appropriate local support.

Capacity constraints and operational issues in the Richmond region complicate and must inform alignment, station location, and investment decisions. The “Richmond Terminal”—as CSX labels its rail lines, yards and support facilities extending from Greendale (Amtrak Staples Mill, “RVR”) to Richmond Airport (Fort Lee) on the east—includes Main Street Station (Amtrak “RVM”), Fulton Yard, southward through Main Street Station to Bellwood and Centralia, as well as westward along the James River to the general vicinity of the CSX (former ACL-RF&P) James River bridge. These facilities are in need of major reconfiguration and improvement in order to support highway-competitive freight operations and service, even if passenger train service were not a factor. Improvements to these facilities are also critical to HSR. Although existing conditions are sub-optimal as a result of a number of factors, a primary cause of current problems is the incompatibility of present-day CSX system freight traffic flows and supporting operations superimposed upon the residue of predecessor railroad physical infrastructure that was significantly altered by track and connection changes dating back for decades. The Richmond Terminal, as it currently exists, is a patchwork system that regularly witnesses delays to freight and passenger train movements, some of which utilize entirely too much track capacity, and require excessive locomotive and crew resources in order to make circuitous and convoluted moves.

The problems plaguing Richmond Terminal have a particularly significant impact on Main Street Station. It is unlikely that Main Street Station, a civic icon, can ever serve all passenger trains arriving, departing and passing through Richmond. However, the operating

capacity of this station should be increased significantly, and it can, and should, be utilized to the maximum extent operationally feasible—primarily for trains passing through Richmond to and from Newport News since there is no other feasible route for such trains. It also is possible to use Main Street Station as the originating and terminating point for at least some trains operating northward from Richmond to Washington and beyond. And it is possible to upgrade the so-called Bellwood Subdivision between Main Street Station and Centralia to accommodate Norfolk and North Carolina trains; however, the cost and the schedule penalty associated with routing those trains through Richmond may well offset the benefits and would likely be a detriment to faster overall schedules on those trains. We look forward to seeing data on these and other potential upgrades—including the cost of upgrades and comparisons between overall travel time using Main Street Station and other routing alternatives. We also recommend the development of various scenarios that include an option routing all Richmond traffic via Main Street Station in order to develop the strongest possible passenger rail market in the downtown center. Moreover, despite the hurdles noted earlier in this paragraph, in order to better connect the downtown centers of Richmond and Norfolk, and Norfolk to DC and the rest of the NEC, there should be at least some daily trains from Norfolk to Main Street Station.

There are improvements that can be made in the near term, with relatively modest capital outlays, that could improve existing operations and service, such as a crossover here and there. In addition, closer coordination among and between CSX dispatching centers in Baltimore, Huntington and Florence, all of which can have a hand in the movement of various Amtrak trains to and through Richmond Terminal, would offer benefits to both freight and passenger rail.

For the most part, however, improvements to Richmond Terminal will be far more costly. But that does not mean that they should not be made. Significant improvements in Richmond are critical to significantly improving the DC2RVA corridor. VRPI recommends that the improvements considered include:

- An additional James River bridge crossing to link Fulton Yard (Peninsula Subdivision) with South Yard (Bellwood Subdivision) to permit north-south and east-west movements on either end. This is perhaps the most important potential new infrastructure item in the DC2RVA corridor. It has the potential to “fix” many of Richmond Terminal’s problems by eliminating the need for run-around moves at Fulton, as well as push/pull and pusher moves, all of which presently consume an inordinate amount of track time and space. In addition to expediting CSX freight and saving CSX money by reducing locomotive and crew hours, it would substantially reduce freight train moves through Main Street Station and between AM Junction and AY on the north end of the Bellwood Subdivision. Passenger train moves via Main Street Station would obviously benefit. Moreover, such a track and routing configuration would enable southbound

Amtrak trains terminating at Main Street Station to “turn” for subsequent northward movement. Of course, cost, environmental and community impacts, and other factors need to be explored in evaluating this potential improvement.

- Upgrade the east end of the Piedmont Subdivision (CSX, leased to Buckingham Branch), Bone Dry Junction to Doswell, adding a west-to-north connection, as well as a west-to-south connection at Doswell. It is conceivable that several passenger and freight trains, daily, might better use that route between Richmond and Doswell, or the reverse direction, rather than being routed through Acca Yard. In addition, this would afford a “reliever” route in case of accident or other adverse conditions on the much heavier traveled RF&P Subdivision.
- Construct a high-capacity, modern rail terminal facility on the site of the existing Staples Mill Station. Although it may be possible to locate the second Richmond station elsewhere (including in the vicinity of the Science Museum on Broad Street), the existing location has proven popular with Amtrak travelers and serves more passengers than any other station in Virginia. While the capacity of a downtown station should be maximized and Staples Mill perhaps could be replaced in the long term, Staples Mill is likely to be retained at least as an interim suburban station and it has the land for rail development. If Staples Mill is retained, Henrico County should take the lead in developing this facility—as Norfolk, Newport News, and Roanoke have done for their stations—but State assistance will also be required, and should be provided. Shorter term improvements, such as the parking lot expansion at Staples Mill that has been at a standstill, need to be made as well, and a transit connection (such as shuttle buses) between Staples Mill and Main Street Station should be evaluated.

III. The Critical Role of CSX

As the discussion of rail alignments and station locations clearly indicates, CSX is a key potential partner and/or obstacle to enhanced rail services—both freight and passenger—in the DC2RVA corridor, particularly in the Richmond region. The most direct of several existing rail corridors is exclusively owned and controlled by CSX, a non-public entity, and this fact has significant implications that must not be ignored. If the rail corridor (or corridors – since there is a more circuitous alternative to the primary one) were owned by a single public entity, the task of designing, constructing and arranging for the operation of enhanced freight, intercity rail, and commuter rail service would almost certainly be easier to implement. Given the private ownership, the paramount question overshadowing the program of work and stated objectives of the DC2RVA study is whether the potential public/private conflicts of rights, interests, and objectives can be reconciled to the satisfaction of all parties. Although the goal and objective should, in theory, be a “win-win” for all concerned, this may not be achievable.

If the challenges in the corridor can be reconciled and resolved to the mutual interest and benefit of all parties, including the current owner of the rail corridor (or corridors), the following issues are among those critical to a successful outcome:

- CSX rail freight operations, as presently conducted, are fundamentally incompatible with quality intercity passenger and commuter rail services, regardless of whether the latter are operated at current relatively slow speeds or projected higher speeds. We touched on some of the issues above and would be glad to provide more detail on this complicated but critical issue.
- It is possible to design and construct infrastructure to mitigate, but not entirely eliminate, operational conflicts. The extent, cost and potential benefits to be derived from such enhanced infrastructure can be projected, but not absolutely determined, thus any such investment will, if made, represent a leap of faith.
- The reason anticipated and desired benefits of new rail infrastructure investment cannot be precisely determined in advance—and the reason such benefits will vary from day to day and week to week—is that CSX freight operations (as well as those of other Class I rail freight operators) are subject to unanticipated freight train schedule deviations for a wide variety of reasons, including equipment failure, systems failure, freight traffic terminal congestion, weather, and many other internal and external influences. Not infrequently, freight train delays, which are commonplace, adversely impact passenger trains, just as passenger train delays (for many of the same reasons) adversely impact freight. In summary, most U.S. rail operations today tend to be irregular in nature in terms of volume throughput (trains) and schedule adherence. Thus, it is imperative to carefully identify and weigh potential benefits, costs, and impediments in considering possible improvements.

The success of potential improvements also depends upon the competency of CSX train dispatching, and CSX management philosophy and governance vis a vs passenger trains (which can change from one management regime to another). This is not to suggest that CSX is uniquely hostile to passenger trains; sometimes CSX goes to extraordinary lengths to assist Amtrak and Virginia Railway Express, but that appears to depend upon the CSX management emphasis of the moment.

In short, much of the potential progress in the DC2RVA rail corridor hinges upon negotiating, implementing, and managing a mutually satisfactory relationship between the owner of the corridor and the public sector that it appears will have to supply most of the capital for improvements. There are many arrangements within the freight railroad industry that could be adopted and used to satisfy the public desire for equitable treatment. VRPI has yet to observe

any such relationship devised and implemented by DRPT to date. Simply “buying” defined-term “train slots” falls short of what is adequate. Although much of this issue is beyond the scope of the DC2RVA study, the study will be of much more limited value if this is not addressed.

IV. Infrastructure and Operations Beyond the Study Area

A further challenge that is central to the ability to achieve the DC2RVA objectives will be infrastructure and operational solutions devised and implemented within Washington, D.C. and on the rail lines north of DC as well as on lines south and east of Richmond. For example, Long Bridge, Washington Union Station, Virginia Avenue, Landover, New Carrollton, BWI, the Baltimore tunnels (both Amtrak and CSX), and CSX main line approaches from Baltimore and Brunswick, together with the operations thereon, can have a significant positive or negative impact on train performance on the so-called RF&P Subdivision.

VRPI understands that improvements and operations north of the Potomac River and south and east of Richmond are not part of the scope of work for the DC2RVA study team. However, prudent public investment decisions relative to the DC2RVA corridor cannot be made without consideration of these factors.

V. Conclusion

The final plan for the DC2RVA corridor must be cost-effective, operationally sustainable, and demonstrably effective in relieving highway and aviation system stress in order to justify a massive investment in rail in the corridor. VRPI is optimistic that the case can be made and such investment secured, enabling the Commonwealth to move beyond the existing level of limited and sub-standard freight and passenger service in the corridor.

To help achieve this, these comments have identified a number of issues that should be considered as the DC2RVA study moves forward. We appreciate your consideration of these comments, and look forward to continuing to provide input as this project progresses.