

Appendix D3:

Responses to Operator Comments

CSXT	1
Amtrak.....	10

ID	Comment	Response	Reference
CSXT			
1A	<p>First, the Draft Environmental Impact Statement (DEIS) should further clarify its scope. Issuance of the DEIS is a major achievement in the Long Bridge Project. However, there are many additional hurdles before construction can begin. These include matters such as securing agreement regarding operation and maintenance of the new tracks, payment to impacted property owners, and other difficult tasks that could materially impact the Project. These requisite actions, and unknown potential costs, should be further acknowledged in the DEIS.</p>	<p>An additional commitment has been added to Final EIS (FEIS)/Record of Decision (ROD) Section 2.3, Measures to Minimize Harm to continue coordination with CSXT to develop agreements related to operation and maintenance of the new tracks, and to resolve any additional issues that may arise.</p> <p>With regard to impacts to property owners, the Project would comply with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and applicable District, Commonwealth of Virginia, and Arlington County laws in any instances where property acquisition or displacement would be necessary to implement the Project. If full property acquisition is required, fairly compensate property owners for the land acquired and, if necessary, provide relocation assistance.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A16; A22</p>
1B	<p>The DEIS accurately states, consistent with the National Environmental Policy Act (NEPA), that it “identifies the potential effects of the Long Bridge Project on the human and natural environment. The DEIS also identifies measures to avoid, minimize, or mitigate potential adverse impacts.” DEIS at 1-1. While this scope is appropriate, CSXT believes the FEIS should identify aspects of the Project that are not resolved by the analysis. The DEIS does not define or resolve any of the following, and should explicitly state that it is not to be interpreted as bearing on the resolution of any of the following:</p> <ul style="list-style-type: none"> a) ownership, maintenance and governance of the newly constructed tracks; b) the amount of compensation owed to property owners whose rights would be impacted by the Project; 	<p>While it is not necessary to state in the EIS that these items have not been resolved during the NEPA process, for clarity the following statement has been added as a footnote in DEIS Chapter 1, Introduction:</p> <p>“The EIS does not define or resolve, and is not to be interpreted as bearing on the resolution of:</p> <ul style="list-style-type: none"> • Ownership, maintenance, and governance of any newly constructed tracks; • Amount of compensation owed to property owners whose rights would be impacted by the Project; • Permission to construct the Project, which much be granted by CSXT, the owner of the existing Long Bridge Corridor; 	<p>FEIS/ROD Section 1.4, DEIS Errata and Other Changes</p> <p>Errata ID: 01</p>

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	<p>c) permission to construct the Project, which must be granted by CSXT, the owner of the existing Long Bridge Corridor;</p> <p>d) other permits and permissions necessary to lawfully construct the Project; or</p> <p>e) operating rights of the various carriers to use the newly constructed tracks.</p>	<ul style="list-style-type: none"> • Other permits and permissions necessary to lawfully construct the Project; or • Operating rights of the various operators to use any newly constructed tracks. <p>These issues are not relevant to the analysis of environmental impacts. They will be resolved in future phases of project development and implementation.”</p>	
1C	<p>These factors, along with the remaining uncertainties inherent in an engineering Project of this scale, could materially increase the costs and impacts associated with the various alternatives discussed. For example, the entity that is selected to oversee and perform maintenance on the new tracks would incur significant costs associated with these tasks, which costs should be borne by the entities for which the increased capacity is intended to serve (i.e. the passenger rail entities). The FEIS would ideally perform reasonable estimation of these costs and incorporate them into the analysis and, at a minimum, should identify them as significant and unresolved.</p>	<p>The capital cost estimates summarized in DEIS Chapter 3, Table 3-13, are based on conceptual engineering and are intended to provide a comparative cost between alternatives to assist environmental decisions to be made. As explained in DEIS Appendix B7, Conceptual Engineering Cost Estimates Report, the cost estimates include allowances for variables such as environmental mitigation and purchase of real estate. The cost estimates also include large contingencies based on the level of unknowns at this stage of project design. At this stage of project design, it is not appropriate to perform more detailed cost estimates.</p>	<p>DEIS Chapter 3, Table 3-13</p> <p>DEIS Appendix B7, Conceptual Engineering Cost Estimates Report</p>
1D	<p>While there are many factors that would likely increase complexity of the Project beyond what is discussed in the DEIS, one of the most complex areas of the Project is the Maryland Ave to L’Enfant Interlocking area. DDOT and FRA’s selected proposed track configuration in this area does not meet CSXT’s company-wide safety-based clearance requirement that newly constructed track include 15 foot track spacing. DEIS at 3-28. CSXT proposed various changes to DDOT and FRA’s original proposal for this area, aimed at maintaining safety and a reasonable allocation of risk. The CSXT proposal included, among other things, adjusted clearances and added safety features to help mitigate the risks associated with building this area of track with sub-optimal clearances. Many of these proposed</p>	<p>As noted in the comment, FRA and DDOT have incorporated many of CSXT’s proposed features into the conceptual engineering design developed for the DEIS. DRPT will continue to coordinate with CSXT to consider CSXT’s remaining requested items during later design phases. DRPT will address operational impacts of the reduced track spacing and lateral clearance between Maine Avenue SW and LE Interlocking in design refinement.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A22</p>

ID	Comment	Response	Reference
	<p>features have been incorporated into District Department of Transportation (DDOT) and Federal Railroad Administration’s (FRA) design. There are, however, several outstanding requirements CSXT set forth in its letter of September 18, 2018. Satisfaction of the remaining requested items is important to CSXT’s ability to safely and cost-effectively operate in the as-proposed track configuration for this area.</p>		
1E	<p>CSXT understands that not all details of the Project legally need be, nor practically can be, resolved prior to the issuance of a FEIS. And, even in light of the uncertainties discussed in this section, CSXT believes DDOT and FRA have selected well from the action alternatives available. Therefore, CSXT proposes that the FEIS address these unknown factors by acknowledging that they have yet to be resolved and further discuss the potential uncertainty they create.</p>	<p>See response to Comment 1B.</p>	<p>n/a</p>
1F	<p>The DEIS acknowledges that CSXT owns the current Long Bridge. It should further acknowledge that CSXT is also the property owner in the Long Bridge corridor where many of the new proposed interlockings would be built. Chapter 12 of the DEIS discusses impacts to property owners including, for example, loss of parking spaces at the Washington Marina and “small impacts to the properties along the right-of-way.” DEIS at 12-13. But it entirely ignores the very substantial impacts of the Project to CSXT’s property rights within the right-of-way.</p> <p>In order for the Project to be constructed, CSXT would be required to commit a significant portion of its right of way to the new tracks and ancillary structures, need for which is driven by passenger rail demands, not CSXT’s own freight rail demands. Commitment of CSXT’s property to this non-business-driven use would significantly diminish the value</p>	<p>The DEIS acknowledges CSXT’s ownership of the Long Bridge Corridor in Chapter 12, Line 108 where it states “CSX Transportation (CSXT) owns the Long Bridge Corridor, which it acquired in 1999.”</p> <p>The following paragraph has been added following Chapter 12, Line 261:</p> <p>“The existing railroad right-of-way is owned by CSXT. Action Alternative A would require CSXT to commit a significant portion of its right-of-way to new tracks and ancillary structures, which would be used primarily for passenger operations. The specific nature of the impacts would be determined during later phases of project development, based on agreements between CSXT, DDOT, and Virginia Department of Rail and Public Transportation (DRPT).”</p>	<p>DEIS Chapter 12, Line 108</p> <p>FEIS/ROD Section 1.4, DEIS Errata and Other Changes</p> <p>Errata ID: 61</p> <p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A16; A22</p>

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	<p>of the property to CSXT. Just as the DEIS discusses less substantial impacts to other private property interests and mitigation for these impacts, so too must it discuss the impacts to CSXT and appropriate mitigation. For example, the DEIS acknowledges that in order to mitigate private property loss the Project must “appropriately compensate property owners for loss of parking spaces and revenue.” DEIS at 12-31. CSXT’s loss of property and potential revenues associated with the loss of use of a portion of its right of way must also be incorporated into the analysis.</p>	<p>This text has not been added for Action Alternative B because Chapter 12, Line 263 states “Action Alternative B would cause the same property impacts as Action Alternative A.”</p> <p>DRPT would continue to coordinate with CSXT regarding agreements related to operation and maintenance of the new tracks, and to resolve any additional issues that may arise, including appropriate compensation for use of the railroad right-of-way.</p>	
1G	<p>Third, the DEIS states that there would be certain short term outages on the entire corridor during Project construction. CSXT’s position throughout the DEIS process has been, and continues to be, that two tracks must remain in operation throughout the entire construction of the Project. If FRA and DDOT persist in the view that short term outages are truly unavoidable, further discussions are necessary to determine how to mitigate the associated impacts to CSXT’s freight rail operations. CSXT would be pleased to make engineering and operating resources available for purposes of those discussions.</p>	<p>DRPT would continue to coordinate with CSXT to develop construction staging and phasing to minimize impacts to railroad operations. To the extent that impacts are unavoidable, DRPT would work with CSXT to determine appropriate mitigation.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A22</p>
1H	<p>CSXT has previously explained to DDOT and FRA that in order to avoid impacts to its operations, it needs two tracks available for use throughout the entirety of construction with no outages. The DEIS nonetheless states that “it is anticipated that over the duration of the Project, there would be seven night outages, one day outage, and three 55-hour weekend outages that would affect maintaining two-track operations.” DEIS at 9-23. While these impacts may seem minor in comparison to the duration of the Project, they nonetheless would impact CSXT’s operations to an extent not previously anticipated. Mitigation of these impacts should be considered in the FEIS and must be discussed among the stakeholders.</p>	<p>See response to Comment 1G.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A22</p>

ID	Comment	Response	Reference
1I	In addition, CSXT questions whether it is appropriate to identify potential outages to two-track operations with this level of detail at this stage in the project. The need for outages would no doubt evolve over the course of the more detailed design. CSXT would be pleased to make engineering and operating resources available to help minimize the extent of outages required in the final design.	<p>Given the complexity of the construction phasing for the Long Bridge Project, construction staging, and phasing were developed to understand potential impacts. In some cases, a larger area of impact needed to be assumed until further design development could occur. During final design, DRPT would continue to work with CSXT to develop construction staging and phasing to minimize impacts to railroad operations.</p> <p>Added acknowledgement that outages made depend on design and engineering developments to the summary of potential temporary impacts in Table 1-2 of the FEIS/ROD.</p>	<p>FEIS/ROD Section 1.2.2, Comparison of Transportation and Environmental Consequences, Table 1-2</p> <p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A04; A05; A22</p>
1J	Finally, the DEIS should acknowledge that the anticipated night and weekend closures would disproportionately impact CSXT's freight operations, which predominantly occur on nights and weekends to allow passenger train traffic to predominate during prime commuting hours.	<p>The following sentence has been added to the analysis in Chapter 9.5, Temporary Impacts:</p> <p>“While scheduling interruptions to two-track service for nights and weekends would minimize disruptions to commuter and passenger rail service, these interruptions would disproportionately impact CSXT's freight operations, which predominantly occur on nights and weekends to prioritize passenger train traffic during prime commuting hours.”</p>	<p>FEIS/ROD Section 1.4, DEIS Errata and Other Changes</p> <p>Errata ID: 40</p>
1K	Fourth, there are a number of issues that should be corrected with regard to the DEIS evaluation of noise impacts associated with the selected alternative.	See responses below.	n/a
1L	The DEIS concludes that the relatively high existing noise conditions at the Mandarin Oriental Hotel are “due to the presence of wheel squeal generated by trains on the curved track.” DEIS at 13-6. This conclusion is uncited and CSXT is unaware of support for it. It should be supported in the FEIS by detailed data. In addition, the FEIS should acknowledge that wheel squeal is not the only source of	As discussed in the DEIS Appendix D2: Affected Environment Report , noise measurements were conducted on the Maine Avenue pedestrian bridge adjacent to the Mandarin Oriental Hotel near the closest point of the building to the Long Bridge Corridor. Measurements during the midday period included two long CSXT trains, one Virginia Railway Express (VRE) train, and one Amtrak train. During the afternoon peak period, there were a total of five	DEIS Appendix D2: Affected Environment Report

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	noise impacts. This would increase flexibility in considering potential mitigation measures.	Amtrak and VRE trains. There were no train pass-bys during the nighttime period. The tracks are curved along this segment of the corridor and most trains generated significant wheel squeal, which created high frequency tonal conditions. Observations and measurements of train pass by events showed that wheel squeal significantly contributed to the overall noise level from train passbys.	
1M	In light of the importance accorded wheel squeal to the analysis, the FEIS should acknowledge that the selected action alternative may result in an increase in curvature of the track adjacent to the Mandarin Oriental Hotel. The proposed track configuration near the Mandarin Oriental Hotel increases the degree of curvature from 5.45 degrees to approximately 8.15 degrees. DEIS Appendix B5 at Option 2 Plan Figure. The steeper proposed curve would undoubtedly increase the likelihood of wheel squeal, a fact that must be acknowledged, quantified, and mitigated in the analysis. CSXT has previously encouraged DDOT and FRA to reduce the curvature in this area. While the 8.15 degree curve is slightly less steep than prior proposals considered, CSXT nonetheless believes efforts should be made toward further reduction.	With the Action Alternatives, the increase in track curvature near the Mandarin Oriental Hotel does have the potential to increase the likelihood of wheel squeal conditions. The FEIS has been updated (see DEIS Chapter 13.4.1.2 and 13.6.1) to acknowledge this factor and how it would be addressed as the project advances.	FEIS/ROD Section 1.4, DEIS Errata and Other Changes Errata ID: 94, 97
1N	The DEIS discusses that construction noise limits are more restrictive at night, but fails to adequately acknowledge that most construction would be required to occur at night during these more restrictive periods. The analysis states that “If construction occurred at night, noise levels would exceed the District nighttime limit (65 dBA [Lmax]) at all locations within approximately 500 feet from construction activities.” DEIS at 13-13 (emphasis added). Elsewhere in this Chapter, the DEIS acknowledges that there are important receptors within 500 feet of the rights of way where construction would occur, including the Mandarin Oriental Hotel and the Portals V Residences. In order to	The FEIS has updated the discussion regarding nighttime construction to indicate that when construction occurs at night there would likely be exceedances to the District nighttime noise limit. As described in DEIS Chapter 9, Transportation and Navigation , the likelihood of nighttime construction has been presented including that construction staging would be developed to maintain two-track service in the Local Study Area as much as feasible, with disruptions scheduled primarily for nights and weekends.	DEIS Chapter 9, Transportation and Navigation, Lines 544-546 FEIS/ROD Section 1.4, DEIS Errata and Other Changes Errata ID: 40,95

ID	Comment	Response	Reference
	ensure minimal interruptions to track operations, much of the construction would need to occur at night. The FEIS should, therefore, acknowledge the potential for more temporary night noise impacts than are currently discussed.		
10	The DEIS concludes that use of a wayside top-of-rail friction modifier system and gauge-face lubrication would “eliminat[e] the presence of wheel squeal.” DEIS at 13- 15. The use of the word “eliminating” in this discussion is inappropriate as these systems have been shown only to reduce the impacts of wheel squeal.	The FEIS has been updated to address that proposed mitigation measures would likely reduce, but not necessarily completely eliminate, wheel squeal conditions.	FEIS/ROD Section 1.4, DEIS Errata and Other Changes Errata ID: 94, 97
1P	The DEIS concludes that the wheel squeal mitigation measures would result in a 12 dBA reduction at the Mandarin Oriental Hotel and a 10 dBA reduction at the Portals V Residences. These conclusions are uncited and CSXT is unaware of support for them. The FEIS should provide citations and data to support these conclusions. It is likely also appropriate to provide approximate ranges of anticipated reductions, rather than definitive amounts of dBA reduction.	DEIS Appendix D3: Environmental Consequences Report (see page 10-32), presents predictions of the estimated noise reduction that would be provided by a top-of-rail friction modifier system and gauge-face lubrication.	DEIS Appendix D3: Environmental Consequences Report, Page 10-32)
1Q	The FEIS should clarify that under the no action alternative, noise related to individual freight trains would not change and that any increased noise resulting from freight trains is a result of increased market demand for freight services. The DEIS concludes that under the No Action Alternative, noise at the Mandarin Oriental Hotel and Portals V Residences would increase by 3.9 dBA by 2040. DEIS at 13-7. This conclusion is driven, in large part, by the fact that the DEIS projects an increase in the number of CSXT trains travelling through the corridor per day from 18 to 42 by 2040. DEIS at 3-29. The conclusion that CSXT would increase its daily traffic by 24 trains, or 130% over existing levels, was drawn from the Environmental Impact Statement for the DC to Richmond Virginia High Speed Rail	Train volumes for the Long Bridge Project were developed to estimate railroad performance in the Corridor and to inform the evaluation of the alternatives. While the number of freight trains used is the same as used in the DC2RVA project, CSXT representatives agreed that this was a reasonable assumption. To address CSXT’s concern, language has been added to Chapter 3 and Chapter 13 acknowledging the uncertainty of projecting freight rail volumes in 2040.	FEIS/ROD Section 1.4, DEIS Errata and Other Changes Errata ID: 09, 93

ID	Comment	Response	Reference
	<p>(DC2RVA) project. However, as noted in the DC2RVA FEIS, “CSXT actual freight growth may be greater or less than the projected growth rates based on market demands.” DC2RVA FEIS at 2-49. There is significant uncertainty in projecting the actual volume of freight train traffic in the No Action Alternative because it is driven by unknowable future market conditions. Whether or not the associated noise impacts would occur is similarly uncertain. The FEIS should acknowledge this uncertainty.</p>		
1R	<p>The DEIS should clarify that an increase in number of trains, resulting in an increase in noise impacts, is far more certain under the selected action alternative than under the no action alternative. As discussed above, the predicted increase in freight traffic is subject to significant uncertainty. On the other hand, that the number of passenger rail trains would increase under the selected action alternative is a certainty and the primary goal of the Project. That noise impacts would increase under the selected action alternative is far more likely than that noise impacts would increase under the no action alternative. As such, the conclusion that the selected action alternative results in lesser noise impacts than the no action alternative should be reevaluated to take into account the relative likelihood of increased impacts in each scenario. This in no way alters CSXT’s support for the selected alternative. Rather, we raise this simply to inform the discussion regarding appropriate mitigation.</p>	<p>As presented in the DEIS Chapter 13, Noise and Vibration (lines 71-72), noise impact criteria compare the existing noise conditions to future noise conditions for the Action Alternatives. No Action Alternative noise levels have been presented to present potential changes in noise conditions.</p>	<p>DEIS Chapter 13, Noise and Vibration, Lines 71-72</p>
1S	<p>Fifth, there is a discrepancy between the clearances proposed for the Maryland Avenue to L’Enfant interlocking in the body of the DEIS and the plans described in Appendix B5. Appendix B5 appears to be a prior version of the Report in which Option 2, the selected Option, includes 13-foot track centers with 8.5 foot lateral clearances. As described in Chapter 3 of the DEIS, “Amtrak, VRE, and DRPT have</p>	<p>The inconsistencies noted are due to the different purposes of the DEIS and Appendix B5, Maryland Avenue SW to L’Enfant Interlocking Clearance Assessment. The appendix was missing a cover sheet, which has since been inserted, explaining the purpose of the report and subsequent decisions.</p>	<p>FEIS/ROD Section 1.4, DEIS Errata and Other Changes Errata ID: 190</p>

ID	Comment	Response	Reference
	<p>agreed to 14-foot track centers with 7.5 feet of minimum lateral clearance” in this area. DEIS at 3-28. Appendix B5 should be replaced with a version that reflects the current approach.</p>	<p>Specifically, the purpose of the report, finalized in September 2018, was to provide an assessment of the existing and proposed horizontal alignment within this segment of the project to determine the feasibility of various four-track alignment options between the north end of Maine Avenue and L’Enfant Interlocking. Of the options assessed, the report recommended proceeding with Option 2, which would have 13-foot track spacing and a minimum of 8.5-foot horizontal clearances. After reviewing the report, CSXT stated that they would be more likely to accept an option with 14-foot track centers and 7.5-foot minimum lateral clearance. Therefore, FRA and DDOT developed conceptual engineering plans for the Action Alternatives with the requested spacing, and these plans were used for the analysis of impacts in the DEIS. The appendix contains the original analysis, and therefore discusses 13-foot track centers with 8.5-foot minimum lateral clearance, rather than the 14-foot track centers and 7.5-foot minimum lateral clearance shown in the conceptual engineering plans and used for analysis in the DEIS.</p>	
<p>1T</p>	<p>As noted in the DEIS, “Amtrak, VRE, and DRPT have agreed to 14-foot track centers with 7.5 feet of minimum lateral clearance” for the challenging tunnel area below Maryland Avenue in the District. DEIS at 3-28. DDOT and FRA have also endorsed this approach, including in the Appendix B6 Conceptual Engineering Plans. Appendix B5, however, reflects an old DDOT and FRA proposal for Option 2, the selected Option, that relies on 13-foot track centers and 8.5 foot minimum lateral clearances. DEIS Appendix B5 at p. 5. The Appendix should be corrected to reflect DDOT and FRA’s current proposal for the area, a proposal that has garnered more stakeholder report than that set forth in the current version of Appendix B5.</p>	<p>See response to Comment 1S.</p>	<p>FEIS/ROD Section 1.4, DEIS Errata and Other Changes</p> <p>Errata ID: 190</p>

ID	Comment	Response	Reference
Amtrak			
<p>See Appendix F, Agency, Operator, and Organization Letters Received for the full text of the letter from Amtrak. Substantive comments are responded to below. In the letter, Amtrak states that they strongly support the goal of expanding rail capacity across the Potomac River, and stated that “the project design team has adeptly engaged the stakeholders to create an optimal alignment through the very physically-constrained corridor.” Amtrak also states that the Preferred Alternative “is consistent with Amtrak’s preference for infrastructure and service plans providing adequate infrastructure that can reliably support each carrier’s projected service growth” and that “the engineered design of the Preferred Alternative should support optimal passenger train operations.”</p> <p>Amtrak also expresses concern that some of the design assumptions made for the Long Bridge Project and other independent projects in the corridor “may inhibit or limit passenger train performance.” For the Long Bridge Project, Amtrak expresses specific concerns related to the reverse “S” curves proposed at each end of the new bridge, which would require limiting train speeds to 40 miles per hour (mph). Amtrak states that they have simulated high-performing train operations with the 40-mph curves and the curves result in the lose of up to one and a half minutes in travel time.</p>			
2A	<p>Amtrak believes these sub-optimal passenger train speed restrictions can be eliminated with minor environmental impact through additional adjustments to the conceptual design. Eliminating these remaining design-imposed speed restrictions (up to a 70 mph design speed goal) will shorten travel times for all passengers using the new bridge and enhance the values of rail passenger services otherwise facilitated by the project. Eliminating unnecessary speed restrictions also lowers the long-term risk of functional obsolescence risk as rail passenger transport technology emerges with higher-performing equipment, an objective that Amtrak is currently pursuing.</p> <p>Speed optimizations will require minor modifications to structural designs developed during conceptual engineering. From the drawings reviewed, it appears the S curve can be eliminated entirely on the District side of the new bridge by extending the tangent alignment off the bridge to the I-395 undergrade bridge area, then designing a curve with a much higher radius (lower angle degree) to transition into the alignment along 14th Street SW. This would change the location and alignment of proposed</p>	<p>FRA appreciates the depth of review and supporting information provided by Amtrak on the DEIS and acknowledges Amtrak’s support for the project goals and a desire to enable higher train speeds in the corridor. The design of the Action Alternatives in the DEIS attempted to balance the competing considerations including efficiency of future train operations, the desire to minimize impacts to park property (including significant NPS-administered properties), cost, construction impacts to railroad operations, constructability, operations, and maintenance. FRA believes that the current design meets the needs of railroad operations while also minimizing impacts to the extent practicable. FRA and DRPT will continue to coordinate with Amtrak and CSXT during future design phases to optimize the design from the operators’ perspective within the constraints of the corridor.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A06</p>

ID	Comment	Response	Reference
	bridges over WMATA and I-395, while containing the revised alignment, with only minor adjustment, within the existing conceptual engineering footprint. In addition, dependent on the engineering confirmation, part of the optimized alignment might shift closer to 14th Street SW, resulting in the need to shift the proposed retaining wall, but not to the point of encroaching into 14th Street SW.		
2B	The Northern Virginia approach is more challenged in effectuating an increased design speed commensurate with optimized passenger train operations as an S curve configuration will still be required to join the future bridge alignment to the existing railroad right-of-way. Reducing this curvature may entail modifications to the preliminary bridge design over the river and George Washington Memorial Parkway (GWMP) as well as potentially additional right-of-way width in the extreme corner of the Long Bridge Park, (where the preliminary design right-of-way already encroaches into the park). Specifically, refinement of design to reduce the curve sharpness might include a slight curve over the water on the new bridge’s southern approach spans. As with the bridge modifications on the District side, the bridge over the GWMP would shift in location and angle, but the new design would substantially be in a similar location to that propose in the preliminary engineering design. In preliminary design, a constraint on the latitude of the S curve design was imposed to accommodate the existing RO Interlocking configuration; however, modification of the RO design and required functionality could be resolved in final design phases with plausible solutions beyond the bridge project’s limits.	See response to Comment 2A .	FEIS/ROD Section 2.3, Measures to Minimize Harm Commitment/Mitigation ID: A06
2C	Another advantage of large radius (low degree) curves is that the optimal required superelevation for passenger train operation can be lower, and closer to low-speed	See response to Comment 2A .	FEIS/ROD Section 2.3, Measures to Minimize Harm

ID	Comment	Response	Reference
	<p>freight train superelevation. One objective of the Long Bridge Project is interoperability of freight and passenger trains. Target speed for freight train operations in the design is 40 mph, but in reality, operations can be much slower due to nearby curves, signals, and turnouts. For freight, particularly in congested areas subject to stopping and starting such as Long Bridge, curve superelevation values are often kept at low to moderate levels to improve train handling. On the other hand, passenger trains that can be running at much higher speeds will require higher superelevation if the curves are relatively sharp (low radius/high degree) for optimum passenger comfort. Curves designed with as large a radius (low degree) as practical minimize these potential design conflicts.</p>		<p>Commitment/Mitigation ID: A06</p>
<p>2D</p>	<p>Amtrak's request is that the EIS and subsequent Record of Decision (ROD) accommodates the abovementioned changes to the current conceptual engineering plans in the final design of the Preferred Alternative. This can permit a transitional refinement from preliminary to final design to thoroughly evaluate these modification suggestions without impacting project construction timeline by reopening the ROD and subject the project to additional delay. These proposed modifications can be accomplished independent of final decisions regarding facility ownership, development of detailed operating plans, and other stakeholder requirements. Amtrak has been a consistent and valuable stakeholder from the start of this project and continues to have a strong and long-term interest in this project. We would like to continue our involvement as an important stakeholder moving into final design and construction for this project.</p>	<p>See response to Comment 2A.</p>	<p>FEIS/ROD Section 2.3, Measures to Minimize Harm</p> <p>Commitment/Mitigation ID: A06</p>