



February 27, 2014

Mr. Joseph C. Szabo
Administrator
Federal Railroad Administration
U.S. Department of Transportation
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Re: Request of the National Railroad Passenger Corporation for a Buy America Waiver for Two Prototype Next Generation Trainsets

Dear Administrator Szabo:

On January 24, 2014, the National Railroad Passenger Corporation ("Amtrak") and the California High-Speed Rail Authority (the "Authority") issued a joint Request for Proposal for the Provision of Tier III Next Generation Trainsets and Other Related Goods and Services (RFP No. X-034-14024 TIER III NEXT GEN TRAINSETS) (the "RFP" or "Solicitation"). Under the terms of the Solicitation, among other things, Amtrak intends to purchase two prototype high speed rail ("HSR") Trainsets ("Trainsets"). Pursuant to Federal Railroad Administration ("FRA") guidance, the RFP requires compliance with the Buy America requirements contained in 49 U.S.C. 24405(a) ("FRA Buy America Statute"). In accordance with the FRA Buy America Statute, Amtrak hereby requests a waiver to permit the final assembly of Amtrak's two prototype Trainsets which will be purchased under the Solicitation, at facilities outside the United States. It is Amtrak's understanding that the Authority will submit a separate FRA Buy America waiver request for the final assembly of their two prototype HSR Trainsets. Accordingly, the Authority's HSR prototype Trainsets are not addressed in this letter.

Amtrak believes that the waiver for its two prototypes is necessary to safely and quickly advance HSR on the Northeast Corridor ("NEC"). Verification and validation of the Trainset design at the prototype stage is best performed at an established HSR equipment manufacturer's facility where experts in HSR Trainset design, manufacture, assembly, and testing are resident. A Buy America waiver that allows the prototypes to be assembled at an established HSR equipment manufacturer's facility outside of the U.S. will facilitate delivery of the Trainsets within a reasonable time and will be shown to be consistent with public interest. This waiver will mitigate risks to the safe and timely delivery of the program, which includes the possibility of delayed Trainset delivery, delayed testing, incomplete training of manufacturing and oversight personnel, and incomplete integration of systems. A detailed justification for Amtrak's waiver request is set forth below.



1. Amtrak's High Speed Rail Program Overview

Amtrak introduced its premium *Acela* high speed service on the NEC in 2000. Since its inception, the ridership numbers have grown in every year except 2009. In 2013, *Acela* service accounted for 11 percent of Amtrak's passengers, 18 percent of Amtrak's total revenue and 72 percent of the NEC's fully allocated operating contribution, the Corporation's only operating surplus. The service is provided by twenty 1990s first generation HSR Trainsets each with approximately 300 seats that are past what is increasingly being viewed as the assumed mid-life for high speed equipment in premium service. The *Acela* service is becoming increasingly capacity constrained, with a majority of trains on peak travel days having passenger loadings in excess of 90 percent.

Amtrak's NEC services play an important role in providing the mobility required for a significant portion of the U.S. economy based in the NEC. Population growth is expected to grow by 32 percent in the next 25 years, so the importance of receiving Trainsets quickly is not only vital to Amtrak, but to ensuring the prosperity of the region.

In 2012, Amtrak updated its previously-produced Vision for the NEC. The new Vision contained plans for a new 220 mph alignment from Boston to Washington, which is being considered with other alternatives in FRA's NEC Future environmental impact statement process. These plans show that at full build the number of Next Generation Trainsets in operation will be 64. The Vision document recognized that the alternatives for travel on this corridor are limited, with air space and road capacity also at maximum utilization. Amtrak continues to pursue these plans. It is hoped that this joint procurement with the Authority will result in the procurement of a high speed Trainset to operate initially at 160 mph on Amtrak's existing infrastructure and ultimately at 220 mph on an improved NEC.

In September 2013, Amtrak presented a Business Plan to the Amtrak Board of Directors. The Business Plan showed considerable growth on the NEC and the additional ridership and revenue it will bring. The addition of more high speed capacity is crucial and it is important to receive these trainsets in a timely manner.

2. Amtrak/Authority Joint Trainset Procurement Overview

On January 17, 2013, Amtrak announced that it was joining forces with the Authority in the search for HSR Trainsets based upon equipment that is currently being manufactured and in commercial service, that are capable of operating safely at speeds up to 220 mph on both Amtrak's NEC and on California's developing HSR corridor. The partnership advances each of the respective HSR programs, and creates potential efficiencies by ordering trains of similar specifications – thereby developing a U.S. standard for HSR rolling stock that can eventually be manufactured and supplied domestically. In addition, it is anticipated that combining orders could increase the attractiveness for international manufacturers to establish HSR facilities in the U.S., and strengthen the business case for a new domestic HSR trainset industry to be developed, bringing new high quality jobs and stimulating the domestic supply chain.



On January 24, 2014, Amtrak and the Authority jointly issued a competitive Solicitation for the new HSR Trainsets. The intended result of the Solicitation is the procurement of "Common Platform" Trainsets for Amtrak and the Authority. A "Common Platform" is defined as a Trainset or Trainsets from a "platform" family (e.g., either distributed or concentrated power, similar body construction/cross section, either conventional or articulated bogie architecture) that meets or exceeds Amtrak's current schedule performance on the NEC infrastructure as it exists today while meeting the Authority's and Amtrak's future needs when substantially new high speed infrastructure is completed. Although the technical differences between the Amtrak and Authority Trainsets require two distinct sets of prototypes to be developed (e.g., differences in traction power, car bodies, bogie suspension characteristics, and differences in initial operating speeds), developing the prototypes in concert allows both organizations to share costs, share design perspectives, and leverage the benefits of a joint procurement.

The Amtrak plan envisions an acquisition of trainsets to supplement, and eventually replace, the current Acela service. Amtrak is seeking a trainset capable of operating at 160 mph on Amtrak's existing infrastructure and that is capable of or can be subsequently modified to operate at up to 186 mph and/or 220 mph as the tracks and other infrastructure elements are improved to support the higher speeds. The Authority is seeking a trainset capable of operating up to 220 mph initially, and which would be similar in performance requirements to that required under Amtrak's Vision for High-Speed Rail in the NEC.

The Amtrak/Authority Trainset joint procurement contemplates that a total of four prototypes will be designed, assembled and tested under the Amtrak and Authority contracts. Two of these prototypes will be designed and assembled to meet Amtrak's requirements. **It is the two prototype HSR Trainsets meeting Amtrak's requirements that are the subject of this Buy America waiver request.**

Due to the compelling need for the HSR Trainsets by Amtrak and the Authority, an aggressive schedule has been set. Key dates for the Solicitation are identified in the following table.

Event	Date
RFP Issued	January 24, 2014
Proposals Due-Close Date	May 16, 2014
Oral Presentations	Week of September 8, 2014
<i>Anticipated Notice of Award</i>	<i>December 2014</i>

Once the Amtrak contract is executed, a notice to proceed will be issued, and the Trainset design process will begin, leading initially to the manufacture and assembly of the Amtrak prototype Trainsets to be completed by December 2016. Amtrak anticipates that revenue service using the new Trainsets will be initiated in 2018.



The timely delivery of the two Amtrak prototype Trainsets is critical as these units are necessary to support the integration testing of the trainsets with the core systems, final commissioning of the prototypes, and training of Amtrak’s operating and maintenance (O&M) personnel. These are all critical first steps for the timely and safe introduction of these Trainsets into revenue service on the NEC. Key dates for the Amtrak prototype Trainsets and associated testing and training activities are identified in the following table.

Event	Date
<i>Notice of Award</i>	<i>December 2014</i>
Completion of 2 Prototype Trainsets (Amtrak)	December 2016
U.S. Test Track (Prototypes Delivered)	March 2017
Training of O&M Personnel	July 2017
Commissioning Core Systems	July 2017
Commissioning of Prototype Trainsets	September 2017
Begin Revenue Service	2018

3. An Overview of Amtrak’s Planned Trainset

Amtrak intends to procure a service-proven trainset platform, capable of meeting the requirements of the Performance Specification issued with the RFP. The Trainset will be capable of operating bi-directionally at speeds up to 220 mph, and having a minimum seating capacity of 425 passengers.

Amtrak’s Trainsets will have an initial operating speed of 160 mph and will be tested at 165 mph. As a result of these high operating and testing speeds, there are several attributes of Trainset design that need to be respected in order to provide a safe and reliable service. The Trainset carbody needs to be rigid and lightweight, necessary to reduce the static axle loads, and to improve the quality of vehicle/track interaction (e.g., HSR Trainset carbodies are typically of an aluminum extrusion design). The Trainset carbody needs to be carefully integrated with the crash energy management components. The Trainsets need to be built to close tolerances to achieve an excellent level of pressure sealing; this is necessary to reduce the pressure pulses experienced by the occupants as Trainsets pass one another at speed, and as the Trainset travels in and out of tunnels. The propulsion and braking systems need to be highly reliable and capable of delivering the performance needed to support the operating plan, while providing the level of braking effort required to achieve the maximum safe braking distances. Lastly, as HSR is a system and not comprised of just the Trainset, the equipment needs to be correctly integrated with the infrastructure and core systems (e.g., track, signaling, communications, traction power, etc.).

Though Amtrak’s Trainsets are to be as “off-the-shelf” as possible, they will be compliant with the new FRA Tier III rulemaking, and FRA Buy America and ADA requirements. These attributes will necessitate current service-proven designs to be modified. It is imperative that these modifications are correctly



integrated into the overall Trainset design. ***The Trainsets will embody highly technological component/system designs, and unique manufacturing processes and procedures that mandate a level of care and due diligence commensurate to that found at established HSR equipment manufacturers so as to mitigate the risk of incorrect integration, delays to the program, and potential unsafe conditions.***

4. Request for Waiver

Amtrak's Trainset procurement is subject to FRA's "Buy America" statute at 49 U.S.C. § 24405(a) and applicable FRA guidance.¹ Pursuant to 49 U.S.C. § 24405(a), the U.S. Secretary of Transportation may obligate funds for "a project only if the steel, iron, and manufactured goods used in the project are produced in the United States." FRA has stated that what constitutes FRA Buy America compliant rolling stock is rolling stock that has undergone final assembly in the U.S. from components that are manufactured in the U.S. Tier III HSR Trainsets are included in the FRA definition of rolling stock.

FRA may grant a waiver from the Buy America requirements if the FRA determines that one or more of the following are true:

- (1) Applying the requirement would be inconsistent with the public interest;
- (2) The required component(s) are not produced in the U.S. in a sufficient and reasonably available amount or are not of a satisfactory quality;
- (3) Rolling stock or power train equipment cannot be bought and delivered in the U.S. within a reasonable time; and/or
- (4) Including the domestic component(s) will increase the cost of the overall project by more than 25 percent.

A cornerstone of Amtrak's program is the procurement of service-proven HSR Trainsets. The correct assembly and timely testing of the prototype Trainsets in an established HSR equipment manufacturing facility furthers this objective. A Buy America waiver for Amtrak's two prototype HSR Trainsets is critical to allowing Amtrak to maintain the HSR program schedule, validate the critical safety elements of the Trainset design, ensure that proper training is completed, and facilitate the development of critical manufacturing and assembly resources – thereby facilitating timely delivery of equipment and consistency with the public interest. **Accordingly, it is Amtrak's position that two of the above four waiver exceptions apply to the final assembly of Amtrak's two prototype HSR Trainsets, as detailed more fully below.**

4.A Applicability of Waiver Category No. 1 - Applying the requirement would be inconsistent with the public interest

¹ See FRA Buy America Frequently Asked Questions at: <http://www.fra.dot.gov/Page/P0391>.



The correct integration of Trainset design, and the implementation of proven manufacturing and assembly processes mitigates risk and maximizes the potential for a properly functioning, safe Trainset to be delivered. The timely delivery of properly functioning Trainsets supports a robust testing process which facilitates the early identification of latent defects. Identification of latent defects prior to the start of production will mitigate risks that could contribute to unsafe operation.

HSR has proven to be the safest mode of transport when compared to air and highway travel. The implementation of carefully controlled and proven manufacturing and assembly processes contributes to the historically safe record of HSR. Performing the final assembly and the associated verification and validation of the Trainset design at an established HSR equipment manufacturer's facility facilitates the correct integration of the Trainsets, and will provide the public with a safe, service-proven mode of transportation. Risks associated with incorrect assembly and incomplete training of a domestic workforce are mitigated for the prototypes through the use of trained and seasoned professionals at the manufacturer's facilities.

During the assembly of the prototypes, U.S. manufacturing and assembly resources can be deployed to the country of origin to be trained in the specific manufacturing and assembly processes and procedures. U.S. labor resources can witness and participate in the proper assembly and testing of the prototypes in advance of domestic final assembly occurring; this eliminates the steep learning curve that will be needed for domestic assembly of the prototype Trainsets. Amtrak resources responsible for performing oversight of the assembly and test processes can be trained, and resources responsible for O&M can be dispatched to interface with appropriate specialists. In addition, as the prototypes are being assembled, domestic production planning specialists will have the opportunity to develop and refine production plans/procedures that will be utilized in the eventual domestic facility.

A benefit of contracting for two prototypes is to allow them to be used as demonstration units in the U.S. These demonstration units would represent a fully validated Trainset, and can support the training of domestic manufacturing/assembly resources, as well as training of O&M resources at the U.S. facility.

4.B Applicability of Waiver Category No. 3 - Rolling stock or power train equipment cannot be bought and delivered in the U.S. within a reasonable time

Program Schedule

As discussed earlier, Amtrak's premium *Acela* service on the NEC generates 72 percent of the NEC operating surplus, the Corporation's only operating surplus. This surplus serves to offset to some significant extent the amount of investment the public sector would be required to make to preserve Amtrak's national system of intercity passenger rail service. *Acela* currently operates at or near capacity while demand for this service is projected to grow. Thus, the capacity limits reflect a foregone opportunity to further increase the net revenue from NEC operations and thus the ability for Amtrak to make capital investments in intercity passenger rail service beyond that funded by the Federal Government. This is one of the motivating factors for the aggressive schedule of this acquisition.



The Trainsets being procured represent a significant increase in technological complexity when compared to current U.S. commuter and intercity passenger rail equipment. Changes to existing service-proven HSR Trainsets will be required to comply with the FRA Tier III rulemaking, and FRA Buy America and ADA requirements. In essence, these prototypes will represent a pilot program for “validating” the FRA’s proposed notice of proposed rulemaking (“NPRM”) language for Tier III operations and for introducing 220 mph service in the U.S. The final assembly of the prototypes at an established HSR equipment manufacturer’s facility is critical in increasing confidence that the Trainsets will be correctly integrated, and the program schedule leading to revenue service will be maintained.

Interviews with HSR Trainset manufacturers have identified a one and a half to two year time period to establish the required facilities to support a domestic high speed Trainset assembly capability. This time period is largely comprised of the time needed to upgrade current/future new facilities to accommodate assembly of high speed equipment, and the time needed to train the domestic workforce. Both of these elements of potential delay can be mitigated while final assembly of the prototypes is occurring overseas.

Design Integration and Testing

Amtrak and the Authority require two sets of two prototypes to be designed, assembled and tested under the Amtrak Trainset procurement contract. Performing the final assembly of the prototypes at an established HSR equipment manufacturer’s facility allows for verification and validation of Trainset system design and the identification of faults. During assembly, the first prototype (one each for Amtrak and the Authority) will be used to verify proper design and integration. This approach reduces the risk of production proceeding with latent defects present in the Trainset design. The second prototype will then be used to validate the manufacturing/serial production process and procedures that will ultimately be transferred to the U.S. facility.

After delivery, the first prototype will be used to support Trainset testing, core system commissioning, Trainset commissioning and O&M training. Currently, there is no domestic high speed Trainset (>160 mph) testing facility. Testing the prototype Trainsets overseas will facilitate proving the design and its modifications for use on the NEC, and will reduce the time required for commissioning in the U.S. The second prototype Trainset provides guaranteed availability of equipment to continue testing should the other prototype have a need to be removed from testing. Minimizing risk of significant delay during the prototype testing stage will, in turn, help ensure timely completion of the testing of the systems and Trainsets, the expeditious training of the O&M resources, driver and train crew, and emergency response preparation.

This approach increases the likelihood that there will be an efficient manufacturing, assembly, and commissioning process for production (rather than prototype) Trainsets, thereby supporting the scheduled revenue service start date.



5. Conclusion

Amtrak supports the FRA's goal of cultivating a domestic high speed rail industry. We understand the importance of high speed rail in the United States and believe that it is in the public interest for the FRA to grant a Buy America waiver for the limited purpose of assembling Amtrak's prototype HSR Trainsets in the country of origin of the car builder that is ultimately selected for award of a contract under the RFP. Such a prototype waiver will further FRA's Buy America program goals by facilitating the transition to a U.S.-based assembly and testing operation. Waiver of the requirements for these prototypes will also support the aggressive timelines that Amtrak has in place for the RFP and provide the winning car builder the time to develop new and/or upgraded existing domestic facilities for correct technology transfer and transition to domestic final assembly. For these reasons and as set forth in greater detail above, Amtrak respectfully ask the FRA to grant Amtrak a waiver to allow assemble of two prototype Trainsets outside of the United States.

Thank you for your careful consideration of Amtrak's request and support of Amtrak's high speed rail program. If you have any questions or comments, please contact Andrew Wood at (215) 349-1882 or me.

Very Respectfully,

A handwritten signature in black ink, appearing to read "Paul Vilter".

Paul Vilter
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