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BY OVERNIGHT DELIVERY

February 19, 2014

Ms. Sarah Feinberg Acting FRA Administrator Federal Railroad Administration U.S. Department of Transportation 1200 New Jersey Avenue, S.E. Washington, D.C. 20590

Re: <u>Request for a Waiver from FRA's Buy America Requirements in connection</u> with Positive Train Control

Dear Acting Administrator Feinberg:

The New York Metropolitan Transportation Authority ("MTA") hereby requests a waiver from the Federal Railroad Administration's ("FRA") RRIF Loan Buy America requirements, set forth in 75 Fed. Reg. 60165, as such requirements relate to MTA's procurement of a Positive Train Control ("PTC") system for MTA's commuter railroad subsidiaries – Metro-North Commuter Railroad Company ("Metro-North") and The Long Island Rail Road Company ("LIRR"). The specific component parts of the end products for which waivers are sought are (a) transponders and (b) the Temporary Speed Restriction ("TSR") Safety Server.

As explained in detail below, the MTA's existing PTC System Integrator contract, awarded in November 2013, included the applicable Federal Transit Administration's ("FTA") Buy America requirements (specifically, the Rolling Stock requirements under 49 CFR 661.11), and the vendor performing such work is contractually committed to complying with such requirements.

The possible introduction of FRA funding to support MTA's procurement of the PTC system through receipt of a RRIF loan is a circumstance which arose only after the PTC System Integrator contracts had been solicited and awarded. When RRIF financing to assist PTC implementation became contemplated, MTA, working with the PTC vendor, reviewed the contractual work that had already been progressed, and identified three non-domestic components in the system (use of which was consistent with FTA requirements, but not FRA requirements). A domestic replacement has been found for one of these three components, which can be utilized in the project without causing delay to the MTA's PTC installation. However, extensive scouting efforts conducted with the assistance of the U.S. Department of Commerce National Institute of Standards ("NIST") failed to identify any existing domestic manufacturers of the remaining two components, which together account for approximately one percent of the cost of the PTC Systems Integrator Contracts. Moreover, the search process conducted by NIST did not identify potential sources for obtaining domestically manufactured versions of these two components which could be utilized without causing substantial delays to this federally mandated, safety-critical project.

Therefore, in connection with the amendment of the RRIF Loan application to fund the PTC project, MTA is submitting this current request for a waiver from FRA's RRIF Buy America requirements, based upon the non-availability of the two identified non-domestic components.

Additionally, as the RRIF Loan application, and this waiver, are integrally related to MTA's efforts to improve rail safety and meet the important federal PTC mandate at the earliest possible time, MTA respectfully submits that the factual circumstances as set forth herein also support the grant of a waiver based upon the public interest.

1. MTA's PTC Procurement

Congress passed the Rail Safety Improvement Act of 2008 ("RSIA") on October 16, 2008. The RSIA requires, among other things, that certain railroads implement a PTC system on all nonexempt commuter main-line tracks. FRA has promulgated applicable regulations by amendments to 49 CFR Part 236 of the Code of Federal Regulations. PTC is a processorbased/communication-based train control system designed to prevent train accidents. PTC systems must reliably and functionally prevent train-to-train collisions; overspeed derailments; incursion into an established work zone; and movement through a main line switch in the improper position.

The MTA's two subsidiary commuter railroads – LIRR and Metro-North – are generally subject to the PTC requirements (except to the extent that certain limited Mainline Track Exclusion Addenda ("MTEA") have been approved by the FRA). LIRR and Metro-North have worked diligently to implement PTC as required by the RSIA and FRA's implementing regulations.

As LIRR and Metro-North are the two busiest commuter railroads in North America, collectively providing over 160 million rides per year, and operate in some of the busiest and most congested rail corridors in the world, the sheer size and intricacy of these rail systems have presented numerous challenges with respect to the design, procurement and implementation of PTC. This is not an "off-the-shelf" implementation; rather, numerous functional changes are required to the baseline "ASCES" PTC system in order to meet the Railroads' unique operational needs, all of which must be designed, tested and implemented in a manner which promotes the public safety. The PTC system must be interoperable with various ASCES and non-ASCES systems being implemented by other passenger and freight operators. Other challenges include the difficulty of obtaining radio frequency spectrum within the service areas of the railroads.

After considerable efforts were put forward to obtain a conceptual engineering design for both railroads, LIRR and Metro-North collectively issued a Request for Proposal to obtain a "System Integrator" to design and furnish complete PTC systems for each railroad, in April 2012 (an earlier Request for Expressions of Interest was issued in 2010). An extensive procurement

process ensued, as the requirements of such systems were reviewed in detail with the two responding proposers, and complex commercial terms were negotiated. In November, 2013, the MTA Board approved the award of two separate (but functionally equivalent) contracts, one for LIRR and one for Metro-North, to the consortium of Bombardier Transportation (Holdings) USA Inc. and Siemens Rail Automation Corporation ("Bombardier/Siemens") (collectively, the "PTC Contracts"). The combined value of the awards, including options thereto, was approximately \$428M.

While all New York State portions of the PTC Contracts were awarded based on the availability of local, New York funding sources, the contracts in their entirety were solicited and awarded with the inclusion of FTA-required terms and conditions. This was done in recognition of the fact that the portions of the work to be performed on Metro-North's Connecticut right-of-way (which is owned by the State of Connecticut) might be funded at least in part with FTA grant monies. Additionally, the MTA did not wish to foreclose the possibility of future federal funding for all or part of the work (including options thereto); and based on prior experience it was anticipated that any such funding would likely be obtained from the FTA.

Thus, among the federal FTA provisions included in the contract were FTA's Rolling Stock Buy America requirements.¹ Bombardier/Siemens provided a certificate indicating compliance with such requirements, and the contractor remains committed to meeting those requirements. In certain important respects the FTA Buy America Rolling Stock requirements are different from the Buy America provisions that FRA applies to RRIF loan-funded work, in that the latter follow PRIIA/HSIPR's Buy America process and guidance. To summarize, the applicable FTA provisions require that no less than 60% of system components be manufactured domestically, and that final assembly of any such system take place in the United States. In contrast, the FRA-RRIF provisions require 100% of such components to be manufactured domestically (absent the grant of any waivers from such requirements).

MTA Railroads have in good faith progressed the PTC Contracts since award in furtherance of meeting the Congressionally-mandated implementation timeline, and promptly engaged FRA on the Buy America issues relevant to the RRIF application, when MTA determined to amend its RRIF application to address the financing of PTC implementation.

2. MTA's RRIF Loan Application

On or about April 21, 2011, MTA submitted an application for a RRIF Loan seeking \$2,208.86 million for direct loan financing of six components of work to be completed by the East Side Access project. In addition, \$801.8 million was requested for refinancing of debt incurred to acquire, improve or rehabilitate existing facilities for three components of the East Side Access project.

¹ Pursuant to 49 CFR 661.11, a signal system such as PTC falls under the Rolling Stock provisions, as opposed to the steel and iron and manufactured products provisions of 49 CFR 661.5.

On or about January 27, 2014 (subsequent to the award of the PTC Contracts), MTA submitted an updated and amended application for RRIF funding, to include the overall PTC project in the amount of \$967.1 million².

3. Description of End Products

The PTC system to be provided pursuant to the PTC Contracts is comprised of three end products: 1) Wayside Equipment; 2) On-Board Equipment, and 3) Office Equipment.

The Wayside Equipment is to be affixed at numerous points along the Railroads' extensive rights-of-way, which collectively comprise more than 1,400 miles of track. The Wayside Equipment interfaces with the underlying signaling systems and the Office and On-Board Equipment. The On-Board Equipment is located in locomotives and in passenger train cab cars and consists of safety-critical computers, sensors, displays, communications and radio equipment. Approximately 1,300 units of rolling stock will be equipped during the project. The Office Equipment is the centralized processing system, which communicates instruction to the On-Board Equipment through the Wayside Equipment.

Each of these end products is in turn comprised of numerous components. MTA seeks a Buy America waiver for one component each of the Wayside Equipment and Office Equipment. On-Board equipment will be fully Buy America compliant.

4. Non-US Components

The end products are manufactured in various locations in the United States including Pittsburgh, Pennsylvania and Louisville, Kentucky.

With respect to the Wayside Equipment, the single non-domestic component is the transponders. Transponders are devices that are energized as a train passes over them, at which time track and signal-related data is communicated from the transponder to the train. The transponder product identified for use in the System Integrator PTC contract that the MTA Railroads entered into in 2013 with a Bombardier/Siemens joint venture is manufactured in Sweden. It is a pre-existing product allowing for configuration with the overall vendor designed and provided system, using already existing programming tools.

With respect to the Office Equipment, the non-domestic component is the TSR Safety Server. This is a 'vital' safety server that handles and processes temporary speed restrictions in a fail safe

² The PTC Contracts are a component of the larger PTC project, which includes Railroad force account installation costs and other integrally related signal projects. This waiver request only relates to the PTC portion of the RRIF application, and the PTC Contracts as a portion thereof.

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manner which are communicated to trains. This item is also manufactured in Sweden. This a product pre-designed to work within the overall proposed system.³

In total, the two referenced non-domestic components represent approximately 1% of the total value of the PTC System Integrator contracts (the TSR Safety Servers are valued at less than \$1 million, and the transponders are valued at approximately \$4 million, out of total contract costs of approximately \$428 million). As is discussed in greater detail below, domestic alternatives to these products have not been identified despite an extensive scouting effort. Even if any domestic products were to be identified at this time, use of different products than the ones described above would require significant re-design of the PTC system and cause significant delay to the implementation of PTC.

5. Market Research and Nonavailability

Since initiating the RRIF loan application for the PTC project, MTA has worked closely with FRA staff to identify the Buy America issues and resolve them. Initially, a third non-domestic component was identified: the Communications Manager, which resides in wayside cases, locomotives, and passenger cab cars. It is comprised of hardware and embedded firmware. The Communications Manager provides real-time communication configuration information between Wayside and On-Board equipment; specifically, this product ensures that the proper radio frequency and other parameters are used to communicate safety information. The product initially identified for use was manufactured in Malaysia.

Based on discussions with the System Integrator, it was determined that an alternate domestic product was available, and that this domestic product could be integrated into the system without any material delay to overall system implementation. Thus, in or about July, 2014, the PTC System Integrator engaged the firm of Wabtec to provide the Communications Manager. This product will be domestically manufactured in Germantown, Pennsylvania. This component is valued at over \$12 million, and thus MTA was able to eliminate the costliest potential non-domestic component.

With respect to the remaining two non-domestic products, in consultation with FRA staff, it was determined to undertake a scouting effort of domestic manufacturers to determine whether any domestic products were available, and if so, whether such products could be integrated into the PTC Contracts without substantial delay. Accordingly, MTA and FRA contacted NIST and NIST was engaged to conduct market research to identify actual or potential domestic manufacturers of domestic alternatives to the transponder and TSR Safety Server components.

³ The PTC Contracts also include a requirement to provide an "RWPS" feature. RWPS stands for Roadway Worker Protection System, and as the name implies, it is a function which enhances the safety of track workers. Included in the RWPS is an option (not yet exercised) for a handheld device, which would put a measure of control directly in the hands of roadway workers. This device has not yet been sourced; however preliminary investigation indicates that it may be difficult to obtain a compliant domestic product. MTA will provide additional information in this regard when such information becomes available.

After detailed scouting templates were jointly developed by MTA and NIST, on or about December 1, 2014 the templates for both transponders and the TSR safety servers were released to a nationwide network of Manufacturing Extension Partnership ("MEP") centers in all 50 U.S.

states and Puerto Rico, to attempt to identify domestic manufacturers who could produce the items needed for the PTC systems. On or about January 13, 2015, NIST provided to the MTA (and FRA) reports summarizing of the results of these scouting efforts.

a. The TSR Safety Servers

With respect to the TSR Safety Servers, the NIST report identified what purported to be one Exact Match and six Partial Matches among domestic manufacturers who responded to the scouting request. Exact Matches are intended to "indicate U.S. manufacturers that have been identified who make the exact item being sought." A Partial Match is "intended to indicate U.S. manufacturers that have been identified who do not make the exact items being sought, but possess some combination of the following:

- The manufacturer produces a similar item to the TSR server being sought.
- The manufacturer has produced the TSR server being sought in the past.
- The manufacturer currently possesses the capabilities to produce the TSR server being sought."

The purported Exact Match for TSR Safety Servers was the firm of L.B. Foster Company ("Foster"). While well known to the MTA Railroads as a supplier of rail-related products, the MTA Railroads had no prior indication that Foster had developed PTC-related products. Following receipt of the TSR Safety Server report from NIST, the MTA attempted to contact Foster on three separate occasions (by e-mails of January 28, 2015, January 30, 2015, and February 3, 2015); in response to the last of these e-mails a Foster representative stated that Foster was not able to currently pursue provision of the identified product, but expressed interest in selling a completely different product (its Wheel Impact and Load Detection System).⁴

Accordingly, it was determined that the single purported Exact Match set forth in the TSR Safety Server NIST Report was unable and/or unwilling to provide a developed and compliant TSR Safety Server.

⁴ The Foster e-mail in its entirety provided:

[&]quot;Unfortunately, this type of project is not currently something we would be able to participate in. We have had discussions with LIRR in the past on our Wheel Impact and Load Detector (WILD) system. If there is an opportunity to discuss that type of system, we would certainly be interested in scheduling a call or meeting."

Moreover, even if an Exact Match were somehow to be identified, it is clear that any such product could not be introduced into the MTA's PTC project without causing substantial material delay to the implementation of this safety-critical project. Extensive development and design has been undertaken by the PTC System Integrator in the approximately fourteen months since the contract award, all of which is specific to the complex and challenging rail environment in which the MTA Railroads operate – the largest, densest and most complex commuter operations in North America. The hardware itself is scheduled to be shipped in the second quarter of 2015 – a few short months away – and this hardware will be pre-loaded with the "vital" software specifically designed and developed for the MTA's operations. This schedule supports operational pilot testing on both Railroads before the end of 2015.

The substitution of a competing mature domestic product (had any such product been identified) would thus cause significant delay to the planned PTC implementation. The firms identified as Partial Matches⁵ would have to undertake substantial research and development, and testing and certification efforts to even be in position to propose on a TSR Safety Server for the MTA Railroads — much less be in a position to actually produce a compliant product within a timeframe as required by the existing project schedule.

Accordingly, it is respectfully submitted that a non-availability waiver be granted with respect to the TSR Safety Server.

b. The Transponders

The NIST report purported to identify three Exact Matches, and seven Partial Matches for the PTC transponders. One of the purported Exact Matches was Foster, whose inability to pursue the opportunity is documented above. MTA proceeded to conduct telephone interviews with the two remaining firms identified as Exact Matches. It was confirmed during those calls that neither of these firms (KeyTronics and Appalachian Regional Manufacturers) actually produces a transponder used by railroads, much less one specifically developed and programmed for PTC uses. KeyTronics stated that it had been hired previously to produce a subcomponent to be used in a transponder, but did not currently manufacture, nor had it ever previously manufactured, transponders. Appalachian Regional Manufacturers and its MEP representative acknowledged that the firm had never participated in any part of the process of manufacturing transponders, and, as was confirmed in an e-mail dated February 5, 2015 (attached), indicated it was not in fact an Exact Match, as stated in the NIST report, and should have been more properly categorized as Partial Match.

⁵ One of the Partial Matches identified for both the Safety Server and the transponders is Siemens Rail Automation Corporation, which is already a consortium partner to whom the MTA contract has been awarded. However, Siemens does not have readily available compliant, developed products that could be substituted into the contract at this time.

Moreover, similar to the TSR Safety Server, even if an Exact Match were somehow to be identified, an alternate transponder product could not substituted at this time without causing substantial delays to the PTC implementation on the MTA Railroads. Such a transponder would have to meet the specification requirements of the PTC System Integrator contract. These requirements include environmental testing specific to the MTA Railroads' operating environment. For example, any such transponders would have to be tested and found to be able to operate in the challenging EMI (electromagnetic interference) environment of the Railroads. Shock and vibration testing to two-times AREMA standards would have to be demonstrated. Documentation would have to be developed to include such transponders in the PTC System FRA safety certification that the Railroads are developing, in conjunction with the PTC SI contractor. The transponder's configuration management system would have to be reconfigured for another manufacturer's product, and the current designed provisioning tools could not be utilized with a different product. Such additional testing, design and configuration tasks as would be required to use of another manufacturer's product would all cause substantial delay to the PTC project.

The fact is that in order to meet extremely tight schedule constraints necessary to achieve PTC implementation, the Railroads have already begun to accept deliveries of transponders from the System Integrator, and will be in receipt of approximately 3,200 transponders by March 2015, with deliveries continuing on an aggressive schedule thereafter.⁶ Thus, the substitution of any new product that one of the Partial Matches might be able to eventually develop (or substitution of a mature alternate existing product, if one could be identified at this time), would result in substantial delays to PTC implementation.

Accordingly, it is respectfully submitted that a non-availability waiver be granted with respect to the transponders.

c. Shifting Production of the Non-Domestic Components to the U.S. is not feasible at this time

As noted above, the finalization and delivery of the two components in question are being expedited in order to start pilot testing of the PTC systems at the earliest possible date, leading up to implementation of the full systems on Metro-North and LIRR. There is no opportunity to shift production of these components to the United States without incurring serious delay to the project. The TSR Safety Server is on the verge of shipping. Thousands of transponders have shipped or will ship within the next several months, with progressive delivery of transponders thereafter required to

⁶ In fact, in April, 2014, the Board of the MTA approved a change order to the System Integrator Contract, in the approximate value of \$11 million, which included provision for the acceleration of project elements, including transponders, specifically so that the Railroads could achieve substantial implementation of PTC in a more expedited manner than was required under the original contract.

adhere to the expedited contract schedule. Location of new manufacturing facilities, training of a new workforce, implementation of quality control/quality assurance procedures to ensure proper manufacture of these safety-critical components and other activities necessary are shift manufacture to the U.S. is simply not achievable without substantial delay to the project.

MTA (working with its contractors) significantly reduced the value of non-domestic components by re-sourcing the Communications Manager component. This was done in advance of finalization of the RRIF loan, and is being implemented regardless of whether the RRIF loan is ultimately granted. Every effort has been made to reduce the value of non-domestic components, which now stands at approximately 1% of total contract value. It is respectfully submitted that this already low percentage cannot be further reduced without incurring harm to the PTC project schedule and objectives.

- 6. Additional Reasons in Support of the Waiver
 - a. The Important Public Safety Implications of PTC

As the FRA fully appreciates, PTC is an important, Congressionally-mandated rail safety system. PTC's ability to prevent train-to-train collisions, overspeed derailments and other events can prevent accidents which can have catastrophic consequences for passengers, rail workers and the public in general. This waiver request, which is submitted in conjunction with the proposed PTC RRIF loan, is in furtherance of the implementation of PTC throughout the two largest commuter rail systems in the United States. It is therefore respectfully urged that the grant of this wavier will be in furtherance of rail safety and therefore in the interest of the public.

b. Previous Compliance with USDOT (i.e., FTA) Buy America

MTA proactively required the application of FTA's Buy America provisions to the PTC Contracts, even such portions of the Contracts which are entirely locally funded. Thus even without this waiver, the important federal objective of promoting domestic sourcing of manufactured products has been significantly advanced. It is respectfully maintained that the MTA had no reason to anticipate application of the FRA Buy America process and guidance at the time of the solicitation of the PTC Contracts. Even so, as described above, MTA was able to work with the PTC Contractor to replace the most costly of the non-domestic components (the Communications Manager) with a domestic product. Thus, the grant of a waiver necessitated by the differences in the FTA and FRA requirements is a reasonable result which upholds the underlying purpose of domestic buying preferences, while advancing important safety objectives.

c. The Avoidance of Extensive Re-designs and Other Delays to the MTA's PTC Project

Approximately fourteen months of intensive PTC design work has been completed at considerable expense. The design is all but final, and key decisions have been made which effectively define the overall configuration and capabilities of these huge and complex technological systems. Overall system architecture, from a design perspective, has been frozen. There has been significant progress made toward completion of the FRA-required PTC Safety Plan, which is based upon the identification of specific component products, including those products for which a waiver is requested in this letter.

As referenced above, substitution of different component products would substantially disrupt the design process. This would have a significant financial impact on the Railroads, and most importantly in this context, also cause substantial delay to the project – delaying the finalization of design, the start of pilot testing on the Railroads' right-of-way and ultimately the final implementation of this project. The grant of this waiver would prevent the incurrence of such serious financial and potential safety-related consequences.

7. Conclusion

MTA understands and agrees with the importance of procurement of domestically produced goods, as was reflected in the adoption of, and adherence to, FTA Buy America requirements in the PTC System Integrator Contracts as awarded in November 2013. MTA is also committed to complying with FRA Buy America requirements in connection with the potential receipt of an FRA RRIF Loan. At the same time, MTA is committed to implementing PTC as soon as possible given the Congressional mandate therefor, and the underlying and hugely important safety enhancements that will be provided by PTC. Due to the unique circumstances as set forth herein, a waiver is needed in order to achieve full FRA Buy America compliance, based upon the non-availability of domestic components. It is respectfully submitted that such waiver additional information with respect to information relevant to the Buy America waiver request, please contact the undersigned at 718-558-8264, or James Henly, VP & General Counsel of Metro-North, at 212-340-4933. Any questions with respect to the RRIF Loan Application may be directed to Patrick McCoy, MTA Director of Finance, at 212-878-7183.

Very truly yours,

Richard L. Gans ∨ VP – General Counsel & Secretary, LIRR On behalf of MTA, Metro-North and LIRR

Ms. Sarah Feinberg, Acting FRA Administrator Federal Railroad Administration February 19, 2015

 cc: Thomas Prendergast, Chairman & CEO, MTA Robert Foran, Chief Financial Officer, MTA Patrick McCoy, Director of Finance, MTA Jerome Page, Esq., General Counsel, MTA Patrick Nowakowski, President, LIRR Joseph Giuletti, President, Metro-North James Henly, Esq., Vice President & General Counsel, Metro-North

Gans, Richard

From: Sent: To: Cc: Subject:

Tuesday, February 03, 2015 11:24 AM Gans, Richard

Thank You

February 3, 2015

Mr. Richard Gans Vice President and General Counsel MTA Long Island Rail Road

Reference: MEP Supplier Scouting Opportunity Synopsis LIRR-2014-1 Rail Mounted Serial Transponder for Train Control

Mr. Gans,

Thank you for your time in yesterday's teleconference. It is unfortunate that Appalachian Regional Manufacturing Inc. (ARM) was presented as an exact match to become a potential business partner for the referenced subject matter. While this is not the case today, I am certain that given the appropriate timeline, ARM could be a viable supplier of products that would meet the certification requirements outlined in FRA-TA-2010-001.

ARM's engineer has extensive experience with certification standards for NIST, NSTA, NFPA, GSA, ASTM, ASME, ANSI and UL/CSA, as applied to various products during the design and test phases of product development. As stated during the teleconference, we also have considerable rf talent in the area at our disposal. Some of the global experts in rf communications are at Morehead State University, where they have significant satellite design and communications expertise. In addition, specific severe testing expertise for shock and vibration is available to ARM through a local engineering service that routinely performs such tests for Sikorsky and Lockheed Martin.

ARM consistently delivers a high quality of work, as attested to by earning an 'unconditional approval rating' during a recent ISO audit by the Federal government, and we have the skilled workforce, quality, and competitive cost structure in place to deliver products that meet or exceed our customers' expectations. Please contact me for your future project needs. I am confident that ARM will deliver value to you and your customers, and provide a mutually beneficial business venture.

Sincerely, Gerald "Randy" Perry President Appalachian Regional Manufacturing