



Illinois Department of Transportation

Division of Public and Intermodal Transportation

100 West Randolph Street / Suite 6-600 / Chicago, Illinois / 60601

September 26, 2012

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

Re: The Illinois Department of Transportation's Request for a Waiver from FRA's Buy America Requirements

Dear Administrator Szabo:

The Illinois Department of Transportation (IDOT) hereby requests a waiver from the Federal Railroad Administration's (FRA) Buy America requirements contained in 49 U.S.C. 24405(a). This request pertains to three component parts of the end products which comprise the incremental Trail Control System (ITCS). ITCS will be used on locomotives as part of the Illinois' High Speed Rail Improvement Program (Program). The specific component parts of the end products that are not manufactured in the US are: 1) an Ethernet cable (cable); 2) an omni directional antenna (antenna); and 3) a router and server combination (router). A detailed justification for IDOT's waiver request is set forth below.

1. The Illinois High Speed Rail Improvement Program

In December 2010, IDOT and FRA entered into cooperative agreements to allow IDOT to complete the activities necessary to implement high speed passenger rail service along Union Pacific Railroad's (UPRR) Chicago to St. Louis rail corridor¹ (Corridor). Currently, passenger trains along this Corridor operate at a maximum speed of 79 miles per hour (mph). Once the Program is complete, passenger trains will operate at speeds of up to 110 mph. The reduced travel time resulting from these improvements will enhance the marketability of intercity passenger rail and will support a more regionally and modally balanced transportation system.

The Program consists of six tasks encompassing infrastructure improvements, station improvements, acquiring rolling stock, communications, and program management. The work is being performed entirely in Illinois on UPRR's Joliet and Springfield subdivisions between Joliet and the East St. Louis area. The subject of this letter pertains to rail signaling. This includes the design and installation of improvements.

¹ Grant numbers: FR-HSR-0015-11-01-00, FR-HSR-0015-11-01-01, FR-HSR-0015-11-01-02, FR-HSR-0113-12-01-00, collectively, the Grants.

2. The Incremental Train Control System

The ITCS will be used on Amtrak locomotives until the positive train control system (PTC) is implemented. ITCS was developed by General Electric Transportation System (GETS). In the IDOT Program, it is a communication-based control system used to activate crossings for operation at high speed. It receives continuous information from the crossing devices to ensure safe passage of trains. ITCS on this Corridor incorporates host processors on board locomotives, wayside equipment located at each grade crossing, and a Global Positioning System (GPS)-based train tracking system. It will activate crossing gates using wireless communication in addition to conventional track circuitry.

3. Description of End Products

The ITCS is composed of three end products, as defined by FRA: 1) on board equipment; 2) wayside equipment; and 3) Amtrak departure test equipment.

The onboard equipment is a safety-critical computer which communicates to wayside equipment, tracks the train via GPS, and applies a penalty brake if an unsafe condition occurs. The wayside equipment is located at crossing locations to activate the crossings based on train commands. It also collects health information to ensure that it is operating correctly. The Amtrak departure test equipment installed at departure points is used to facilitate the uploading of database files to each train, and the offloading of FRA-required recordkeeping log files from the trains.

A total of twenty Amtrak locomotives will be equipped with ITCS equipment. To date, two locomotives have been equipped using previously available equipment from Amtrak. The equipment on these two locomotives is currently being field tested in the corridor as part of pre-revenue service testing. The duration of this testing is approximately two months. Eight additional locomotives will be completed in October with the ten remaining locomotives completed by the end of 2012.

The departure equipment will be located at Union Station, Chicago Illinois. A single router/server combination is required for the Corridor and has already been installed. This equipment is currently undergoing pre-revenue testing.

IDOT seeks a Buy America waiver for two components of the on board equipment and one component of the Amtrak departure test equipment.

4. Non-US Components

The end products are manufactured at various locations in the US including Grain Valley and Warrensburg Missouri, Melbourne Florida and Chicago Illinois.

Ninety-eight percent of the on board equipment will be comprised of domestic components. Approximately 2% will be of foreign origin. The cable and antenna are components of the onboard equipment and are not domestically manufactured. The antenna is used to communicate to the departure test server and upload train logs to the wayside servers in Chicago and St. Louis. The cable is used to communicate from the INET-II radio to the Ethernet switch which assists in offloading logs and records of train operation.

Five percent of the system necessary to operate the departure test equipment is of foreign origin. The router is a component of Amtrak's departure test equipment and is not domestically manufactured. The router uses custom software created to facilitate the delivery of track databases and to enable the FRA-required recordkeeping and operational investigations of train operations.

The following table lists the foreign-origin components. GETS has made these components as the standard parts of the end products for the ITCS. The total dollar value of the foreign-origin components is approximately \$20,000 out of the approximately \$2.5 million total cost of the ITCS end products.

Component	Part Number	Origin	Quantity Needed	Manufacturer
Ethernet Cable from INET-II Radio to Ethernet Switch.	203664-0000	Mexico	20 (one per locomotive)	Turck Manufacturing
900 MHz Omni-Directional Antenna	018261-0000	Switzerland	20 (one per locomotive)	Huber and Suhner
RuggedComm RX-1000 Router & Server Combination	RX 1000	Canada	One	RuggedComm

5. Efforts Made to Secure the Manufactured Goods

GETS has contacted its network of approved suppliers in order to secure domestically produced replacement cables, validated antennas and a router. Unfortunately, no domestic sources have been located that meet the ITCS's specific design and technical needs within the time frame for startup of the Program.

6. Request for a Waiver

ITCS is vital to the implementation of high speed rail on the Chicago to St. Louis corridor. Our partners and suppliers have been able to locate domestic sources for the vast majority of the necessary equipment. Together, two of the components, the antenna and the cable, comprise only 2% of the on board equipment. For the Amtrak departure test equipment, the third component subject to this waiver request, about 5% is of foreign origin.

Pursuant to Section 24405(a), the FRA Administrator may waive application of the Buy America requirement if he finds that one or more of the following apply: 1) applying the statute would be inconsistent with the public interest; 2) the steel, iron and goods produced in the US are not produced 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 US within a reasonable time; or 4) including domestic material will increase the cost of the overall project by more than 25 percent.

Applying the Buy America statute would be inconsistent with the public interest. The initial segment of high speed rail on the Corridor is scheduled to begin in October 2012, with additional milestones to follow through 2017. To delay the Program for the time it would take to design and manufacture the cable, antenna, and router could take a year, or longer. This would delay the Program and affect the marketability of intercity passenger rail. Per GETS, redesign and testing of these components could cost approximately \$1.48 million; this is not a cost-effective use of Program funds. Therefore, a waiver pursuant to exception 1, above, is requested for all three foreign-produced components.

There are no domestically produced cables, antennas and routers currently available that are of satisfactory quality to meet the specific design and technical needs of the ITCS that would allow the ITCS to be 100 percent US-origin. In addition, while the ITCS could be redesigned and retested to include custom fabricated items that would also have to be redesigned and fabricated, the cost in both time and money to accomplish this makes the items not reasonably available. As noted above, the startup date of the Program is October 2012 and the time to custom fabricate these items is six months to one year, at minimum (per GETS). As such, a waiver is also requested for all three components based on number 2, above.

Cable – The cable is unique due to the special connectors not typically used in Ethernet cables that may be found in retail stores. After much effort, GETS has been unable to locate an acceptable domestic manufacturer of the cable; therefore, the design and manufacture of a domestic replacement would be required. Some level of testing would also be required before and after installation. GETS estimates that this process could take up to four months at a cost of approximately \$50,000.

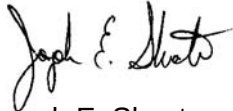
Antenna – The antenna is very specialized and of a unique nature. The antenna is manufactured with materials made to resist corrosion encountered on the locomotive's roof as a result of it being subjected to the exhaust gases and heat produced by the locomotive. After much effort, GETS has been unable to locate an acceptable domestic antenna in the US. To manufacture it domestically would require significant re-design and the development of specialized tooling. After development it would require the manufacturer's installation on the 20 units needed for the Program. At this point, costs are difficult to estimate but GETS expects them to be well over \$700,000. The estimated time frame to develop and manufacture a new antenna could be a year or more. Re-testing of the wayside equipment will also be required if modifications are made to the antenna.

Router – The custom router software is only currently operational on the RuggedComm RX-1000. GETS has been unable to locate a domestically produced router. To replace this component with a domestic product would take a minimum of twelve months to create, validate, test, deploy and field test. Further, only one router/ server is needed. Although the cost of a newly designed product itself may not be significantly different than the current product, there would be installation and testing costs of up to \$725,000, per GETS. Due to the time constraints of this Program, this option has not yet been pursued.

7. Conclusion

IDOT understands the importance of domestically produced goods and is committed to procuring Buy America compliant end products for the High Speed Rail Program. However, due to the unique circumstances surrounding the components of the end products of the ITCS, a waiver is needed. Thank you for considering our request. If you need additional information, please contact me at 312-793-2116.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph E. Shacter". The signature is fluid and cursive, with the first name "Joseph" being the most prominent.

Joseph E. Shacter
Director
Division of Public and Intermodal Transportation