



Illinois Department of Transportation

Division of Public and Intermodal Transportation
100 West Randolph Street / Suite 6-600 / Chicago, Illinois / 60601

June 30, 2015

Ms. Sarah Feinberg
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 Request for Modification of Time-Limited Buy America Waiver for Adjustable Self-Closing Hinges

Dear Administrator Feinberg:

The Illinois Department of Transportation (IDOT) seeks to expand the 24 month, limited time waiver of the Buy America requirements previously approved by FRA on February 4, 2015. This request pertains to the swing gate hinges used on construction of the Illinois high speed rail project between Chicago and the St. Louis area (HSR Corridor). After extensive test installations and continued operational problems with the American-made hinges, we seek to extend the Buy-America waiver to include an additional 250 Sure Close gate hinges. This is necessary to provide safe, reliable grade crossing protection for pedestrians and to meet the FRA-approved schedule to complete the bulk of the project by June 2017. This is important so that the program meets the ARRA deadline. We note that this request does not include an additional time extension. The current 24 months indicated in the February 4, 2015 waiver are sufficient for installation of the proposed additional quantity of hinges. IDOT's support for its request is set forth below.

Background

At issue is a hinge which is part of the pedestrian swing gate that integrates right-of-way fencing and railroad grade crossings to provide improved pedestrian safety along the Chicago – St. Louis HSR Corridor. The first hinge proposed by the HSR program was manufactured in the U.S. It was tested and found not compliant by the Illinois Commerce Commission (ICC) because its closure force was too strong and it could not be adjusted sufficiently to eliminate the possibility of pedestrian injury. Non-approval by the ICC caused exit gate installations at pedestrian crossings to be put on hold, even though construction of adjacent project elements continued.

Thereafter, IDOT and the ICC located an acceptable hinge. The Sure Close hinge is manufactured outside the U.S. by D&D Technology. The Sure Close hinge met the ICC's safety and performance requirements. It has been tested by the ICC for over two years at a busy pedestrian crossing on a freight railroad in the Chicago area. The hinge is the only component of the swing gate that was not manufactured in the U.S.

On December 12, 2013, IDOT sought a Buy America waiver from FRA for the Sure Close hinge based on exception one of the Buy America requirements as set forth in 49 U.S.C. 24405(a).

On March 3, 2014 FRA responded to the waiver request. FRA provided IDOT with extensive research through NISTMEP on potential American hinge suppliers. FRA identified three of the listed companies with potential to produce the hinge. FRA suggested that IDOT reach out to the manufactures on the list.

IDOT immediately investigated the partial match firms provided by FRA. Not all of the firms on FRA's list were contacted since some of them did not manufacture hinges. Of the three firms identified as able to manufacture hinges only one, [REDACTED] ([REDACTED]), stated that it was able to produce the type of adjustable hinge needed for the gate. IDOT worked with [REDACTED] to develop a workable hinge.

The process to manufacture this U.S. made hinge has not been timely for the HSR program. There have been repeated delivery delays and test failures (a detailed summary of the field testing is attached.) [REDACTED] agreed to provide two prototypes for testing on March 20, 2014. Delivery was promised in May, 2014. The first hinges, however, did not arrive until July, 2014. Once delivered, the prototype hinges provided failed to perform; the gate was stuck in the open position and failed to close. The prototype hinges and the entire gate unit were then shipped to [REDACTED] to assess the issues. [REDACTED] made further modifications to the hinges which were reinstalled on October 10, 2014.

We had hoped that modifications to the prototype would be successful. However the hinges were found inoperative on November 17, 2014 after a period of cold temperatures (about 12 degrees F). The hinges again were sent back to [REDACTED] for evaluation. [REDACTED] modified the design with new parts and adjustments; the hinges were finally returned and reinstalled in February 2015 but failed to open correctly. The modified hinges were sent back to [REDACTED] in March 2015 to analyze the cause of the failure to open. The hinges were reinstalled for the fourth time in April 2015; the speed adjusting screws were not working and the closure rate was found to be too fast and the gate bounced back on closure. IDOT has worked with [REDACTED] for more than 15 months without a workable hinge having been produced.

The program cannot meet the HSR Corridor construction schedule as proposed to FRA without the requested additional hinges.

Expanded Limited Time Waiver Request

IDOT requests an amendment to the 24 month limited time waiver previously approved by FRA on February 4, 2015 to increase the number of hinges from 350 to 600. The continued prototype issues have not been resolved. Construction contracts currently in progress will require use of all 350 gate hinges previously approved by FRA for the pedestrian gates. The remaining contracts to be awarded in 2015 and 2016 will require another 250 hinges. Testing of the [REDACTED] prototypes was not successful; in spite of repeated modifications and testing the [REDACTED] hinges do not perform reliably.

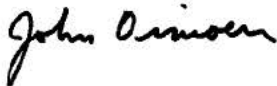
The hinges on the pedestrian swing gates represent a small cost (approximately \$190,000 for 600 Hinges or 0.01% of the total \$1.6 billion program cost) for the overall Illinois HSR Corridor. The hinge is a critical component to the pedestrian warning systems to provide improved safety for pedestrians in the corridor. With all of the safety measures being implemented on the HSR Corridor it is imperative that all components, including hinges, provide reliable and safe operation. The hinges are critical to assure that the gates can be pushed open by children to leave the track area and will not close with such force to cause injuries. Without the pedestrian safety gates in place, higher speed operations would not be approved by the ICC.

Conclusion

IDOT acknowledges the importance of domestically produced goods and has used best efforts to procure a Buy America compliant hinge for the HSR project. We have worked without success with [REDACTED], the U.S. firm, to develop, test and produce hinges. A reliable hinge has not been produced in spite of 15 months of testing and repeated modifications.

Thank you for considering our request to modify the Buy America waiver to include an added 250 Sure Close hinges. If you need additional information, please contact me at 312-793-4222.

Sincerely,



John Oimoen
Interim Director
Division of Public and Intermodal Transportation

Attachment



High Speed Rail – Chicago to St. Louis

Attachment to Buy America Waiver Request for Adjustable Hinges
June 30, 2015

Summary of Field Testing of [REDACTED] hinges

Below is a summary of the field testing for the American-made [REDACTED] prototype hinges that occurred from July 2014 to Date. The prototype hinges were installed by Industrial Fence, Inc. (IFI) under contract with the Union Pacific Railroad (UPRR) at the pedestrian crossing on the west side of the train station in Dwight, Illinois on July 21, 2014.

August 2014

- August 1st – The test hinges (1st design) and the gate were sent back to [REDACTED] because they failed to open.

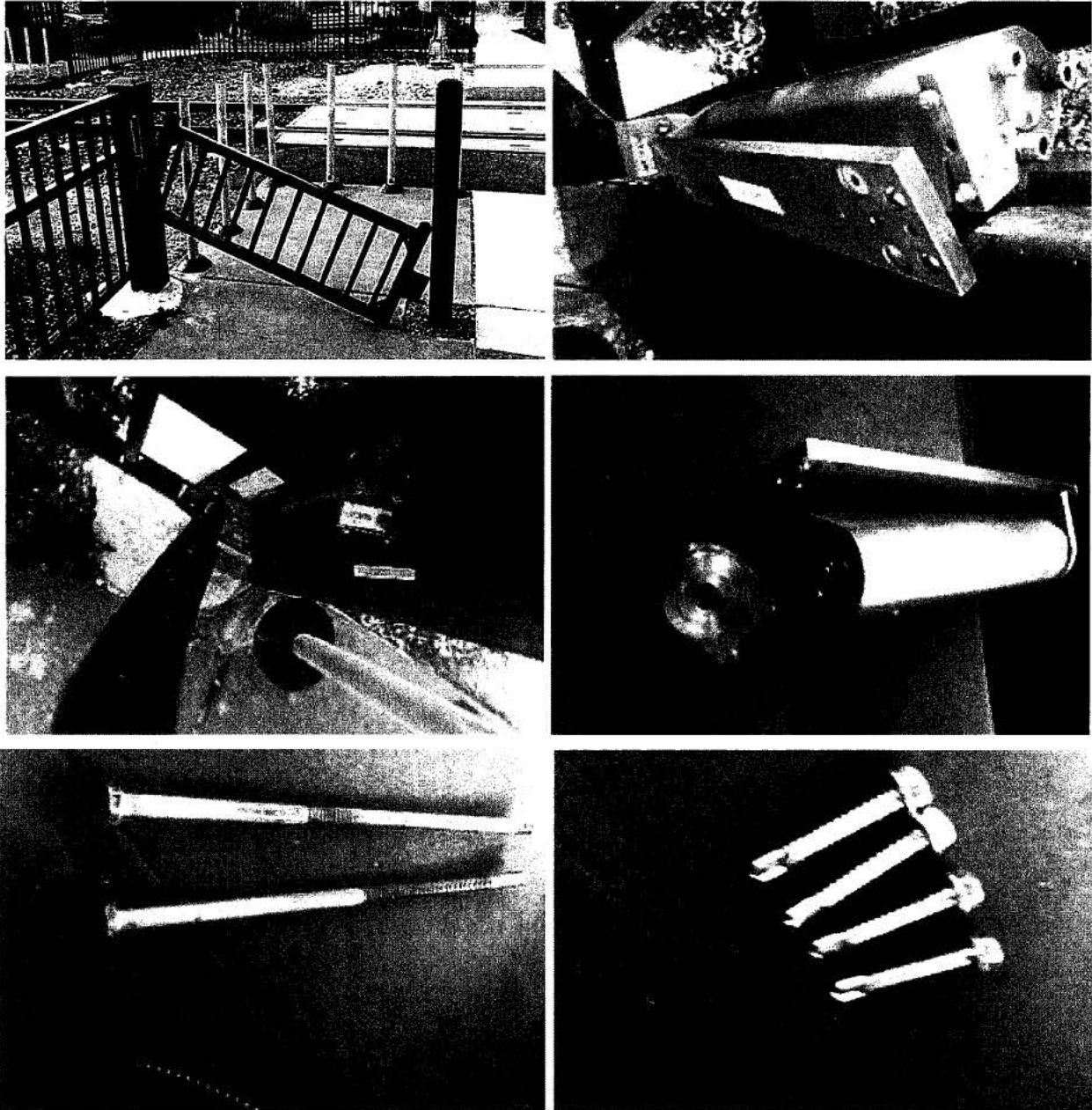
October 2014

- October 1st – 2nd redesigned hinges were modified by [REDACTED] and returned to UPRR's fence contractor (IFI).
- October 10th – 2nd redesigned hinges were installed. Facts surrounding this installation are set forth below.
 - Install time was approximately one hour. The holes were predrilled and utilized from previous install attempt. Additional install time was required. Installer suggested a template be used in future installations.
 - Smooth closing action after being recalibrated from factory.
 - Easy to adjust closing speed.
 - Stainless steel construction.
 - No hardware, installation instructions or adjusting tools were provided by [REDACTED].
 - Long through bolt hardware (as installed) made set-up and installation more time consuming.
 - The heavy weight of the revised hinges was noted.
 - With limited adjustment capability allowed, exact gate opening size will need to be pre-determined.

November 2014

- November 17th – IFI field team along with TranSystems (UPRR construction manager) conclude the following after determining that the 2nd redesigned hinge broke.
 - [REDACTED] did not provide any recommended mounting instructions.
 - No mounting hardware was included with the shipment of hinges.
 - The hinge failed on the hinge to gate connection not the post connection. Four self-tapping screws per hinge were used to make the connections of the gate.

- The cold weather may have played a role in failure of the hydraulic mechanism. IFI said the hinge seemed to be locked tight in cold weather, and was probably forced opened, thus the top piece of the hinge's internal connection sheared off.
- The local weather during the period in question ranged between 12 °F to 27 °F.



- November 19th – The IDOT program manager contacted [REDACTED] to request the broken hinge be returned and analyzed by [REDACTED]. The program manager also requested that detailed mounting instructions be provided by [REDACTED] to remove failure variables. Hinges sent back.

December 2015

- December 9th – [REDACTED] designs hinges for the third time. [REDACTED] held up the redesign (which includes stronger face plates) until 2nd purchase order was executed.

January 2015

- January 30th – [REDACTED] sent an invoice.

February 2015

- February 4th – [REDACTED] noted manufacturing delays due to the strong winter storm in Connecticut.
- February 12th – 3rd redesigned hinges are received by IFI from [REDACTED]. No mounting hardware is included.
- February 24th – 3rd redesigned [REDACTED] hinges are installed. Installation notes below.
 - The local weather was below freezing, about 14 °F.
 - The new stronger face plate and revised bolt pattern were used.
 - The closure speed was very slow and closure time excessive.

March 2015

- March 3rd – 3rd redesigned hinges are returned to [REDACTED] so it could analyze what caused the failure to open. One grease chamber was modified by [REDACTED].
- March 24th – IFI received the 4th redesigned [REDACTED] hinges. The hinges arrived without mounting hardware.

April 2014

- April 24th – 4th redesigned hinges are installed. Speed adjusting screws were found to be not working.

May 2015

- May 1st – The IDOT program manager asks [REDACTED] for delivery timeline of revised [REDACTED] hinges. Detailed gate layout plan sheets shown below were included in the request.

June 2015

- June 16th 17th - The American-made [REDACTED] hinges currently installed and being tested at Dwight have been found to be non-adjustable. The closure rate is also quite fast (2.5 to 2.8 seconds) and there is significant bounce-back when they close. [REDACTED] has requested that the hinges be returned for further modification.

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