

December 22, 2015

Rafiq Darji, PE
Construction & Materials Engineer
SHRP2 – Program Manager
FHWA – Florida Division
3500 Financial Plaza, Suite 400
Tallahassee, FL 32312

Re: Buy America Waiver Request
Southern Boulevard (SR 80) Bascule Bridge Replacement Project
FPID No.: 419013-1-52-01

Dear Mr. Darji:

The Florida Department of Transportation respectfully requests a waiver of the Buy America requirements of 23 CFR 635.410 for the motor brakes and machinery brakes for the Southern Boulevard (SR 80) Bascule Bridge Replacement Project currently moving toward the bidding process. Below are details related to the requested waiver.

Justification of the need for the particular type of brake:

In accordance with the contract documents, brakes are to be provided and designed to AASHTO Movable Highway Bridge Design Specifications (MHBDS) 5.5, 5.6, 6.7.13 and the FDOT Structures Design Guidelines (SDG) Section 8.6.7. The intent of AASHTO is to provide two sets of brakes – motor brakes and machinery brakes. This requirement provides stopping and holding as well as a failsafe within the gear train of the operating machinery.

According to the contract documents, all brakes shall be spring-set, thruster released shoe brakes with built in externally adjustable mechanical time delays for brake setting. Span drive brakes shall be sized according MHBDS with the exception that ice accretion loads may be ignored. Brakes shall be mill duty brakes meeting AISE –NEMA Standards. The brake setting shall be no more than 90% and no less than 40% of the continuous rated capacity. The delay setting for each set of brakes shall be staggered to prevent all brakes from setting simultaneously and shock loading the machinery. Recommended time delay settings are 2 seconds for the motor brakes and 4 seconds for the machinery brakes.

Explain the impact of not having the approval:

There are no options other than the correct type of machinery brakes for fail safe and timed gradual setting. The brake application must be gradual as per the specified thruster in order to prevent damage to the bridge, loss of power or E-stop.

Brakes are an integral part of the movable bridge design. Brakes provide stopping and parking of the bascule leaves and are MHBDS required devices for the safety of the traveling public, both vehicular and navigation.

Document that brakes meeting the Project requirements are not domestically available:

Throughout the brake manufacturing industry, it is well documented that there are no brakes made in the United States that satisfy both the project needs and the Buy America requirements.

Recent experience on similar projects has shown that Contractors have been unable to locate qualified bridge brakes of either the shoe or disc type that have all components made in the United States. An extensive effort has been made to locate qualified domestically made brake products. The search for a qualified product included contacting known bridge brake manufacturers including the following:

<u>Manufacturer</u>	<u>Contact</u>	<u>Phone No.</u>
Johnson Industries	Mike Kalaf	416-213-9991
Mondel (made by Magnetek)	Mike Astemborski	262-252-2902
Gemco (made by Ametek)	Frank Ernst	800-325-8074
Link Controls	Bill Bowden	631-471-3950
Bubenzer	Larry Chizmar	908-237-9400
Hindon	Brad Hunt	800-754-1287

All of the above manufacturers confirmed that they do not produce a product that meets both the Buy America provisions and the requirements of Articles 5.5, 5.6 and 6.7.13. An internet search revealed several other brake manufacturers, but none make a qualified brake in the United States. The Engineer of Record has contacted several contractors that supply machinery and brakes for movable bridges but had no success in locating a qualified brake made entirely in the United States. The Engineer of Record has also discussed this issue with other design engineers experienced in movable bridge machinery design and confirmed that they too have not been able to locate qualified brake products which are made in the United States. Brakes that could be used on the project have been identified that are made, or are partially made, in Canada or Europe.

As the brakes are a required operational component of the new Southern Boulevard bascule bridge and are not available through a United States manufactured product, the FDOT requests FHWA approval to waive the Buy America provisions for the motor brakes and machinery brakes on the referenced project.

If you have any questions, please contact me at 850-414-4269.

Respectfully Submitted,



Thomas A. Andres, PE
Assistant State Structures Design Engineer