



Florida Department of Transportation

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DME MEMORANDUM NUMBER 20-06

DATE: October 30, 2020

TO: DISTRICT MAINTENANCE ENGINEERS AND DISTRICT STRUCTURES
MAINTENANCE ENGINEERS

FROM: Rudy Powell, Jr. P.E., Director, Office of Maintenance

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SUBJECT: **Inspection of bolts on Hopkins Frame movable bridges**

This memorandum implements testing requirements of bolts for movable bridges with Hopkins frames during bridge inspections. Procedure 850-010-030 Bridge and Other Structures Inspection and Reporting is in the process of being updated to include these requirements. This DME Memorandum will be superseded by the procedure when the procedure is adopted.

The requirements of this Memorandum are listed on the next page.

Movable Bridges with Hopkins Frames

Description

Inspection requirements for bolts on the Hopkins Frame movable bridges using nondestructive test (NDT) methods.

Background

Failure of bolts on a Hopkins Frame of a movable bridge resulted in the temporary closure and emergency repair of the bridge. An investigation of other Hopkins Frame bridges was performed on the bolts of the Frames using Ultrasonic (UT) NDT methods. UT identified anomalies within the bolts of the Hopkins Frame bridges that were consistent with ongoing material failure. This resulted in the need to replace the bolts on several other Hopkins Frame bridges.

Procedure

The replaced bolts shall be inspected using NDT methods as part of the 1st inspection occurring 12 months after the new bolts were installed. If no new issues are found the NDT inspection shall be repeated every 48 months for all Hopkins Frame bolts as part of a regularly scheduled inspection. Any time one of the Hopkins Frame Bolts are replaced, an NDT inspection shall be performed on that bolt as part of the 1st inspection occurring 12 months after the installation of the new bolt.

Implementation

This procedure is effective immediately on all Hopkins Frame movable bridges.

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