



FINDINGS OF CONCERN
Sector New Orleans

March 3, 2023
New Orleans, LA

Findings of Concern 006-23

**DON'T FORGET TO NOTIFY THE COAST GUARD WHEN A
BRIDGE IS NOT FULLY OPERATIONAL!**

Purpose. The U.S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. An inspected towing vessel was underway as the lead boat stern-towing a deck barge and a 51-foot-wide crane barge southbound in a single string with another inspected towing vessel serving as the tail boat on a waterway. The following were the environmental conditions at the time: wave height of 1 foot, ebb current of 1.4 knots, winds light and variable, and clear night skies. While traveling southbound in the waterway, the lead boat attempted to pass through the 77-foot-wide navigation channel of the opened swing bridge. The master could not see the eastern fender system in the darkness, so the master steered the tow toward the west side of the channel in close proximity to the center swing span. Prevailing currents set the tow toward the center swing span. The corner of the crane barge allided with the bridge's over-rotated swing span, causing significant damage to the bridge and rendering it inoperable for 6 days.

Contributing Factors and Analysis. The USCG investigation identified that the navigation lights on the bridge's east fender system had been removed for repair in the days prior to the allision. Their removal was not reported to the U.S. Coast Guard to allow for mariner notification and was a contributing factor to the allision. For swing bridges over navigable waterways, red navigation lights are prescribed on each end and in the middle of fender systems (Figure 1). In darkness, the lights are the primary means to visually identify the navigable channel through an open swing span. The investigation also identified a recurring issue of the bridge's rotational limit switch inaccuracy and the failure to report the issue to the U.S. Coast Guard and bridge tenders in order to notify mariners. Many swing bridges, including the incident bridge, use limit

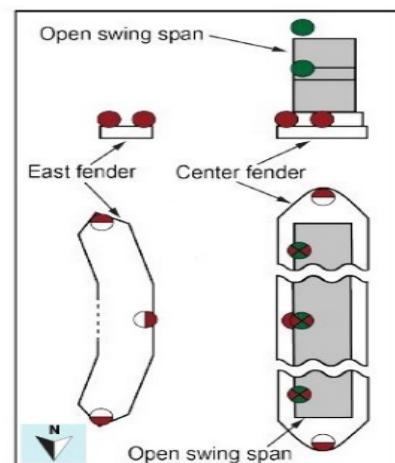


Figure 1: Prescribed navigation lights for a swing bridge with a single navigation channel.



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switches to send an electric signal to interlocked components when the bridge is in the proper open or closed position. Wear and fatigue of, damage to, or malfunction of these switches can lead to over/under-rotation of the bridge's swing span. The over-rotation allowed the bridge to impede the navigation channel beyond the fender thus increasing the risk of bridge allision (Figure 2).

Findings of Concern. Coast Guard investigators have identified the following measures, that if implemented by the owner/operator of similar bridges, may mitigate the risks associated with the above identified contributing factors:

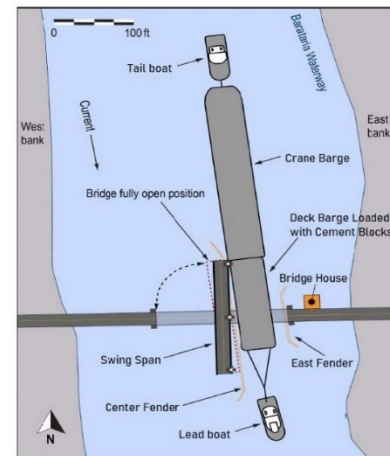


Figure 2: Diagram of over-rotated bridge swing span contributing to allision.

- Notify the U.S. Coast Guard District Commander when bridge navigational lighting will be inoperable during required times of operation and expeditiously commence/complete repairs. If impossible to effect repairs such that bridge lighting will be inoperable during required times of operation and during which navigation conditions will be affected, owners/operators are required by 33 CFR 115.40 to request a temporary deviation from bridge permit conditions and install appropriate temporary lighting to ensure safe navigation.
- Notify the U.S. Coast Guard as required by 33 CFR 117.36 when bridges fail to open or close as designed or when they impede safe navigation and expeditiously commence/complete repairs. When impracticable to expedite repairs, owners/operators must report intentions to temporarily halt bridge operation to the U.S. Coast Guard District Commander so that mariners can be notified.
- Inoperable navigation lights on bridges and bridges that are not fully operational or that otherwise impede safe navigation due to a mechanical issue can pose a hazard to navigation. When a hazard to navigation exists as defined in 33 CFR 160.204, immediate notification to the Coast Guard is required per 33 CFR 160.215. Failure to report hazards to navigation as well as failure to repair bridges can subject a bridge owner/operator to civil or criminal penalties.

Closing. These findings of concern are provided for informational purposes only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments, please contact the USCG Sector New Orleans Investigations Division by email at SECNOLAIO@uscg.mil or phone at (504) 365-2311.