

Best Practices Regarding Performance of ABC Connections in Bridges Subject to Multihazard and Extreme Events NCHRP 20-68A, Scan 11-02

Description

Meta Fields

Category : Completed Projects

Group : Synthesis

Subject : Connections

Abstract :

One of the innovative practices a number of states use is accelerated bridge construction (ABC), which is intended to reduce the time and overall costs of bridge construction and its impact on the traveling public and improve work-zone safety, quality, and durability, among other factors. Working more efficiently is consistent with the Federal Highway Administration's (FHWA's) Every Day Counts initiative. ABC practices often involve using prefabricated components that must be connected effectively to form a well-integrated bridge system that resists design loads. Connections of prefabricated elements are particularly critical under extreme event loading, such as high waves, tidal or storm surges, earthquakes, high winds, blasts, and other largely lateral forces acting on bridges. This scan focused on connections that are resistant to this type of loading. This report presents a summary of the initial findings, recommendations, and planned implementation actions of a domestic scan conducted from March 25 to 31 and April 22 to 28, 2012, to identify successful and emerging ABC connections that are able to resist multi-hazard (MH) loading and extreme events.

Key Words :

Best practices; Blast loads; Bridge construction; Bridge members; Design load; Earthquakes; Elastic waves; Prefabricated bridges; Storm surges; Structural connection; Tidal waves; Water waves; Wind

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