

عنوان مقاله:

WSDOT Strategic Plan and Research Projects for Accelerated Bridge Construction

محل انتشار:

سومین کنفرانس بین المللی مقاوم سازی لرزه ای (سال: 1389)

تعداد صفحات اصل مقاله: 11

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خلاصه مقاله:

Bridge construction with prefabrication of modular components offers an attractive alternative to conventional bridges. Prefabricated bridge components are in increasing demand for accelerated bridge construction. Prefabricating eliminates the need for forming, casting, and curing of concrete in the work zones, making bridge construction safer while improving quality and durability. Prefabricated bridges consisting of pretensioned girders post-tensioned spliced girders, trapezoidal open box girders, and other types of superstructure members are often used for accelerated bridge construction; however, bridge engineers are concerned with the durability and performance of bridges made of prefabricated members in areas of high or moderate seismicity. This paper presents the latest ABC research in Washington and its implementation to a bridge construction project. The discussion expands to the ongoing Highways For Life (HFL) project benefitting the latest research data available for ABC implementation. This paper describes precast concrete bridge bent connections that are suitable for high seismic zones. Lateral load tests on the top connection system have shown that it has strength and ductility similar to those of a comparable cast-in-place connection. Tests on the bottom connection system are ongoing, and a demonstration project will be built later this .year

کلمات کلیدی:

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