Development of a Precast Bent Cap System for Seismic Regions

October 21, 2010

Session Duration: 120 minutes

Precast bent cap systems are of increasing utility in highway construction. Precasting moves concrete forming, pouring, and curing operations out of the work zone, making bridge construction safer and more environmentally friendly, and it removes bent cap construction from the critical path. Early uses of precast bent caps were limited to applications where minimal moment and shear transfer were required at connections. In seismic regions, provisions normally must be made to transfer greater forces through connections.

The webinar will explore the results of research conducted under the Transportation Research Board’s National Cooperative Highway Research Program to develop and validate various precast concrete bent cap systems for use throughout the nation’s seismic regions. Panelists will discuss conducting large-scale experimental testing and structural analyses to assess the potential implementation of precast bent caps throughout the country. Attendees will learn more about constructability, speed of construction, and durability of precast materials. Panelists will discuss information related to emulative, nonintegral bent cap systems; hybrid, nonintegral bent cap systems; and an integral, emulative system using precast girders spliced with post-tensioning.

Session Presenters:
Claude Napier, Federal Highway Administration Resource Center
Matthew Tobolski, Tobolski-Watkins Engineering, Inc.
Eric Matsumoto, California State University, Sacramento

Moderated by: Waseem Dekelbab, TRB