

CONCRETE CONNECTIONS

Concrete Connections is an annotated list of websites where information is available about concrete bridges. Links and other information are also provided at www.aspirebridge.org.

IN THIS ISSUE

<https://www.hdrinc.com/portfolio/i-91-rockingham-bridges>

The Interstate 91 (I-91) Rockingham Bridge, Vermont's longest precast concrete spliced-girder bridge, received a PCI Design Award and is the subject of the Project article on page 28. This website has remarkable construction photos of the bridge.

<https://outside.vermont.gov/agency/VTRANS/external/Projects/Structures/Forms/AllItems.aspx?RootFolder=%2fagency%2fvtrans%2fexternal%2fProjects%2fStructures%2f12a130&FolderCTID=0x01200074B2F1F49FDD30448D18FC55BFA5E40000AFA5164EB50FC64DBB5A49CE09B9CFEB>

Documents such as a project fact sheet and the "2014 Rehabilitation Study Report" for the I-91 Rockingham Bridge project (page 28) can be downloaded from the Vermont Agency of Transportation website via this link.

<https://www.jpcarrara.com/projects/rockingham-i-91-bridge>

The long, haunched precast concrete girder segments for the I-91 Rockingham Bridge (page 28) were challenging to produce, transport, and erect. The largest girder was 96 ft long, weighed 187,000 lb, and required a truck with steerable trailer to transport. This is a link to a photo gallery of the production and erection of the girders on the precaster's website.

https://www.pci.org/PCI_Docs/Publications/PCI%20Journal/2021/January-February/Project_Spotlight_JF21.pdf

This is a link to a Project Spotlight article on the I-91 Rockingham Bridge (page 28) in the January–February 2021 issue of *PCI Journal*.

<https://asbi-assoc.org/index.cfm/events/MonthlyWebinars>

This is a link to the American Segmental Bridge Institute (ASBI) webinar page, which provides access to recordings of previous webinars, including the "JFK Causeway" webinar offered on April 28, 2021. The condition evaluation of the JFK Causeway Bridge, the first precast concrete post-tensioned segmental bridge built in the United States, is featured in the Project article on page 20.

<http://www.trb.org/Publications/Blurbs/181972.aspx>

The Project article on page 20 presents some of the findings of the recent condition evaluation of the JFK Causeway bridge. The recently published *National Cooperative Highway Research Program Synthesis 562: Repair and Maintenance of Post-Tensioned Concrete Bridges* includes a literature review, the results of a survey distributed to 50 state departments of transportation, current practices used by bridge owners to repair and maintain post-tensioned bridges, and lessons learned. The report can be downloaded from this link.

<https://www.fhwa.dot.gov/bridge/preservation/docs/hif20062.pdf>

The Federal Highway Administration (FHWA) article on page 46 discusses replacing expansion joints with link slabs. The article presents examples from the FHWA publication *A Case Study: Eliminating Bridge Joints with Link Slabs—An Overview of State Practices* (FHWA-HIF-20-062), which can be downloaded from this link.

<https://abc-utc.fiu.edu/mc-events/lake-pontchartrain-causeway-bridge-safety-bay-construction-past-present>

This is a link to an archived webinar produced by the Accelerated Bridge Construction Center at Florida International University on the Lake Pontchartrain Causeway Bridge safety bays project that is discussed in the Focus article on page 6 featuring the contractor Boh Bros.

<https://www.soundtransit.org/blog/platform/crossing-lake-washington>

The Professor's Perspective on page 40 uses the original construction and recent renovation of the floating bridge across Lake Washington as an example of an innovative solution. This is a link to a website that has a video with renderings of the technology to allow translation in six directions and clips of the full-scale testing for the new extension of the light rail transit system in the Seattle, Wash., region.

<https://vtrans.vermont.gov/projects/middlebury>

This is a link to the official website for the Middlebury, Vt., bridge and rail project that is the subject of the Project article on page 24. Stakeholder involvement was key to success of the project, in which closure of downtown Middlebury and the railroad was limited to a 10-week period. The website presents photos, frequently asked questions, project updates, documents, and a video of tunnel opening-day activities.

<https://www.asbi-assoc.org/index.cfm/resources/videos>

Segmental bridges are the topic of both the Concrete Bridge Technology article on page 38 and the Project article on page 20. This page of the ASBI website has links to informative videos on various aspects of segmental bridge construction.

https://ctr.utexas.edu/wp-content/uploads/pubs/0_5253_1.pdf

The LRFD article on page 49 discusses crack-control reinforcement and its implications. The article is based on a published research study, "Strength and Serviceability Design of Reinforced Concrete Deep Beams," which can be downloaded from this link.

OTHER INFORMATION

<https://www.asbi-assoc.org/index.cfm/publications/segments>

The Spring 2021 issue of the ASBI newsletter *Segments* is now available via this link.