

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

IN THIS ISSUE

<https://iowadot.gov/bridge/Monarch-Highway-Bridges>

The Iowa portion of Monarch Highway, a section of Interstate 35 from Texas to Minnesota, is discussed in the Perspective article on the Iowa Department of Transportation's (Iowa DOT's) focus on bridge aesthetics (page 6). This is a link to the Iowa DOT webpage featuring the bridges along the Monarch Highway corridor from Ankeny to Ames, Iowa.

<https://i395-miami.com>

The Interstate 395 project in Miami, Fla., includes the Signature Bridge featuring segments composed of precast concrete arches. This is a link to the project website, which includes links to project information as well as construction photos, videos, and renderings of the project's structures. The Perspective article on page 15 notes the role that specialty engineers play in the planning and construction of conventional and complex projects.

<https://hrbtexpansion.org>

The Hampton Roads Bridge-Tunnel expansion project's marine trestles are the subject of the Project article on page 18. The bridge designers used the *Guide Specification for Bridges Vulnerable to Coastal Storms* as a basis for the updated, resilient design. This is a link to the project website, where project newsletters and magazines, as well as videos covering all aspects of the construction, can be accessed.

<https://www.bimforbridgesus.com>

Building information modeling (BIM) for bridges is the subject of the Concrete Bridge Technology article on page 30. The website at this link provides access to an infographic "roadmap" for the TPF-5(372) BIM for Bridges and Structures pooled-fund project as well as resources for bridge engineers and software developers.

<https://oasis.pci.org/Public/Catalog/Home.aspx?CourseSearch=1&Criteria=177&Option=734>

The Concrete Bridge Technology article on page 26 covers basic concepts of strain compatibility in concrete components. The PCI eLearning Course T130: Flexural Design of Precast, Prestressed Concrete—Strength Limit States can be accessed via this link. This free course covers the simplified method and strain-compatibility method for flexural design of precast, prestressed concrete beams.

<https://connect.ncdot.gov/projects/research/RNAProjDocs/RP2018-16%20Final%20Report.pdf>

<https://connect.ncdot.gov/projects/Value-Management/CLEAR-Program/Video/Rapid%20FRP%20Repair%20of%20Concrete%20Bridges.pdf>

The Safety and Serviceability article on page 36 presents a rapid-repair system for prestressed concrete C-channel beams that was developed by North Carolina State University in research sponsored by the North Carolina Department of Transportation. These are links to the final research report and a presentation, respectively, on the mechanically fastened fiber-reinforced-polymer rapid-repair system.

<https://abc-utc.fiu.edu/wp-content/uploads/2024/07/SR-79-Gila-River-AECOM-ABC-Presentation-Slides.pdf>

Arizona is the featured state in the article on page 40. Among Arizona's innovative concrete bridge projects is the State Route 79 over the Gila River Bridge replacement. This is a link to a presentation on the project. The project used accelerated bridge construction methods, and crews worked around the clock over two weekends to slide four three-span sections of the new structure into place.

<https://i10broadwaycurve.com>

The Broadway Curve project is Arizona's largest urban freeway reconstruction project to date. The project, which is currently under construction through a public-private-partnership agreement, is featured in the State article on page 40. The project website at this link includes the project background, photos, and videos.

<https://international.fhwa.dot.gov/programs/mrp/docs/FHWA-PL-23-009.pdf>

This is a link to the Outcomes Report from the 2022 Federal Highway Administration (FHWA) technology exchange that is featured in the FHWA article on page 51. One of the technologies from the report, optical fiber sensors for monitoring post-tensioning strands, is also featured in the Concrete Bridge Technology article on page 32.

NCBC
National Concrete Bridge Council

Announcement

RESOURCES FOR CONCRETE BRIDGE DESIGN AND CONSTRUCTION
Catalog of Resources from AASHTO, FHWA, Members of the National Concrete Bridge Council, and Specialized Service

The highly anticipated Resources for Concrete Bridge Design and Construction is available for free download!

We've collaborated to create a comprehensive resource hub for all your concrete bridge needs. Developed from the AASHTO/NCBC Collaboration Agreement, this document compiles essential resources from AASHTO, FHWA, and NCBC members. This vital catalog will aid concrete bridge practitioners in their design and construction endeavors.

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