

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://www.bimforbridgesus.com>

This is a link to the BIM for Bridges and Structures website, which was developed as part of the Transportation Pooled Fund (TPF) project TPF-5(372). The pooled fund's goal was to develop an open, national standard for exchanging building information modeling (BIM) information necessary for bridge design, construction, and maintenance, and this website offers many resources related to BIM for bridges. The Perspective article on page 7 discusses how Kiewit is using BIM for bridge projects.

<https://harborbridgeproject.com/about-the-bridge/project-overview>

The Harbor Bridge project in Corpus Christi, Tex., is the subject of the Project article on page 10. Using the design-build-operate-maintain delivery model, the Texas Department of Transportation teamed with Flatiron-Dragados LLC to replace the aged Harbor Bridge with a signature precast concrete segmental cable-stayed bridge. This is a link to the project website, which provides a project overview, maps, and photos of the bridge development and construction, and much more.

<https://www.codot.gov/projects/i70westvail/auxiliarylanes>

The Interstate 70 West Vail Pass auxiliary lanes project website can be found at this link. As part of that project to enhance safety and reduce congestion through the steep mountain pass, the Colorado Department of Transportation replaced the bridge structures over Polk Creek in Summit County, Colo., near the town of Vail. The bridge replacements are the focus of the Project article on page 20.

<https://www.aspirebridge.com/magazine/2015Summer/ASPIRESupplementSummer2015.pdf>

The Polk Creek bridges discussed in the West Vail Pass Project article on page 20 feature an innovative design that incorporates curved precast, post-tensioned concrete U-girders. A supplement to the Summer 2015 issue of *ASPIRE*®, found at this link, tracks the development of the U-girder.

<https://my.mech.utah.edu/~brannon/pubs/7-2009BrannonLeelavanichkulSurveyConcrete.pdf>

The Concrete Bridge Stewardship article on page 32 discusses a study to develop assessment techniques and repair guidance for prestressed concrete girder bridges subjected to overheight vehicle strikes. As part of the study, finite element modeling was used to evaluate the damage response of prestressed concrete girders. This is a link to a report comparing theory and implementation of some of the concrete constitutive models used in the study.

https://www.researchgate.net/publication/390421082_RELAXATION_TESTING_OF_ASTM_A722_AND_A722-LIKE_BAR_A_LIMITED_BLUESTONE_DAM_CASE_STUDY

The Concrete Bridge Technology article on page 26 discusses the differences in structural behavior between ASTM A722, ASTM A722-like, and non-ASTM A722 prestressing bars. The article also references the Post-Tensioning Institute's Technical Notes 23 and 24 regarding the important differences among these types of bars. This is a link to a case study and material testing involving ASTM A722 and ASTM A722-like bars.

<https://www.concrete.org/education/freewebsessions.aspx>

The National Concrete Bridge Council (NCBC) member spotlight on page 36 focuses on the American Concrete Institute (ACI) and its mission to advance knowledge of concrete and its use. This link takes you to a webpage where you can browse through a catalog of hundreds of free ACI educational presentations from 2018 to the present.

<https://asbi-assoc.org/wp-content/uploads/2023/07/2021-July-Webinar-Corven.pdf>

The LRFD article on page 43 discusses the upcoming changes to the American Association of State Highway and Transportation Officials' *Manual for Bridge Evaluation* regarding the load rating of segmental concrete bridges. This is a link to slides from a 2020 American Segmental Bridge Institute convention and webinar presentation that gives the history and background for load- and resistance-factor rating.

<https://www.ncdot.gov/helene-recovery/Pages/default.aspx>

In September 2024, Hurricane Helene produced record rainfall across western North Carolina and severely affected critical transportation corridors. The State article about North Carolina on page 40 discusses recovery efforts and how the North Carolina Department of Transportation (NCDOT) is using lessons learned from the hurricane to inform emergency response and long-term resiliency planning. This is a link to the NCDOT Hurricane Helene recovery page, where you can find project information, videos, and links to other resources.