# CONCRETE CONNECTIONS

*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.buffalo.edu/ibe.html**
**https://trans-ipic.illinois.edu/July-2025-Webinar**
The Professor's Perspective on page 44 covers the topic of educating the next generation of bridge engineers through both research and innovative educational programs. The first link connects to the webpage for the Institute of Bridge Engineering at University at Buffalo, the State University of New York, which offers specialized courses in bridge engineering. A webinar recording about some of the research discussed in the article is available at the second link.

**https://www.volpe.dot.gov/news/detecting-damage-structural-components-with-new-infrared-technologies**
The article at this link describes the development of infrared technology by Fuchs Consulting Inc. (FCI), which was funded by the U.S. Department of Transportation's Small Business Innovation Research program. FCI is the subject of the Focus article on page 6, and infrared ultra–time domain thermography (IR-UTD) is discussed in the Concrete Bridge Technology article on page 35. IR-UTD is a nondestructive evaluation method that can detect early signs of defects in concrete components.

**https://www.youtube.com/watch?v=C6OqgIEZwfI**
This is a link to a time-lapse video of the construction of the Schuylkill Banks Christian to Crescent Bridge in Philadelphia, Pa., which is the subject of the Project article on page 14. The pedestrian bridge features precast concrete U-beams made integral with two cast-in-place towers that anchor the wire-rope cables supporting the superstructure. Innovative solutions were required due to the considerable site constraints, which included an industrial docking facility, high-voltage electric lines, a narrow footprint against railroad along the shoreline, and vertical limitations where the structure passes underneath a rail bridge and the Schuylkill Expressway.

**https://nationalconcretebridge.org/ncbc-epoxy-coated-strand-workshop**
The Concrete Bridge Technology article on page 20 discusses the one-day Construction of Unducted External Post-Tensioning with Epoxy-Coated Strand in the Laurel Fork Bridge workshop presented by the National Concrete Bridge Council, in conjunction with the Concrete Bridge Engineering Institute and the Federal Highway Administration. This is a link to presentations from the workshop, additional resources, and site-visit photos.

**https://nationalconcretebridge.org/2025-ncbc-webinar-series**
The second edition of the "Recommended Practice to Assess and Control Strand/Concrete Bonding Properties of ASTM A416 Prestressing Strand" was published in the January/February 2025 issue of *PCI Journal,* with errata published in the September/October 2025 issue. The recommended practice is the topic of the Concrete Bridge Technology article on page 28. On August 20, 2025, the National Concrete Bridge Council presented a webinar about the updated recommended practice. Recordings for that webinar and the rest of the completed 2025 NCBC webinar series are available at this link.

**https://www.ndt.net/article/ndtce2015/papers/167_washer_glenn.pdf**
The Concrete Bridge Technology article on page 35 presents the development and uses of infrared ultra–time domain thermography (IR-UTD) for the detection of delamination in concrete components. This is a link to a paper presented at the 2015 International Symposium Non-Destructive Testing in Civil Engineering, which includes background information about the technology and bridge deck images that illustrate the evaluation results.

**https://www.fhwa.dot.gov/resourcecenter/teams/structures-geotechnical-hydraulics/Structural_Design_UHPC_Workshop_Manual.pdf**
The Concrete Bridge Technology article on page 32 focuses on the selective uses of ultra-high-performance concrete (UHPC) to enhance durability and extend the service lives of concrete bridges. The August 2024 Federal Highway Administration's *Structural Design with UHPC Workshop Manual* is available at this link.

**https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/research-notes/task4396-rns-05-25-a11y.pdf**
This is a link to a summary of New Performance Approach to Evaluate ASR in Concrete, a Transportation Pooled Fund (TPF) project that is mentioned in the State article on Idaho on page 50. The Idaho Transportation Department is an active participant in several TPF projects that research ways to solve transportation challenges and improve the state's infrastructure.

**https://cbei.engr.utexas.edu**
Regular readers of *ASPIRE*® will know that the training facility and coursework development at the Concrete Bridge Engineering Institute (CBEI) at the University of Texas at Austin has been ongoing. CBEI reached another milestone this summer with the completion of a full-scale bridge for the Bridge Deck Construction Inspection Training Facility, which is discussed in the CBEI article on page 47. The recently improved CBEI website, which can be accessed at this link, includes dates and registration links for upcoming courses.

## OTHER INFORMATION

**https://www.post-tensioning.org/FAQTECHNICALNOTES**
In June 2024, the Post-Tensioning Institute published two technical notes (Tech Note 23 and Tech Note 24) focused on developing industry awareness about variations in the relaxation properties of alternative materials for high-strength steel bars used in prestressing and post-tensioning applications. The alternatives discussed are "Non-ASTM A722" and "ASTM A722 Like" bars. Both technical notes can be downloaded at this link.