

# CONCRETE CONNECTIONS

Concrete Connections is an annotated list of websites where information is available about concrete bridges. Fast links to the websites are provided at [www.aspirebridge.org](http://www.aspirebridge.org).

## IN THIS ISSUE

### [www.stainless-rebar.org/public.htm](http://www.stainless-rebar.org/public.htm)

This website contains an English language summary of the paper by Hunkeler referenced on page 15.

### [www.fhwa.dot.gov/economicrecovery/index.htm](http://www.fhwa.dot.gov/economicrecovery/index.htm)

Visit this FHWA website for more information on the American Recovery and Reinvesting Act, including funding distributions and requirements, answers to frequently asked questions, presentations and guidance materials, and training mentioned on page 43.

## Environmental

### <http://environment.transportation.org/>

The Center for Environmental Excellence by AASHTO's Technical Assistance Program offers a team of experts to assist transportation and environmental agency officials in improving environmental performance and program delivery. *The Practitioner's Handbooks* provide practical advice on a range of environmental issues that arise during the planning, development, and operation of transportation projects.

### [http://www.environment.transportation.org/teri\\_database](http://www.environment.transportation.org/teri_database)

This website contains the Transportation and Environmental Research Ideas (TERI) database. TERI is the AASHTO Standing Committee on Environment's central storehouse for tracking and sharing new transportation and environmental research ideas. Suggestions for new ideas are welcome from practitioners across the transportation and environmental community.

## Bridge Technology

### [www.aspirebridge.org](http://www.aspirebridge.org)

Previous issues of *ASPIRE*<sup>TM</sup> are available as pdf files and may be downloaded as a full issue or individual articles. Information is available about subscriptions, advertising, and sponsors. You may also complete a reader survey to provide us with your impressions about *ASPIRE*. It takes less than 5 minutes to complete.

### [www.nationalconcretebridge.org](http://www.nationalconcretebridge.org)

The National Concrete Bridge Council (NCBC) website provides information to promote quality in concrete bridge construction as well as links to the publications of its members.

### [www.hpcbridgeviews.org](http://www.hpcbridgeviews.org)

This website contains 56 issues of *HPC Bridge Views*, an electronic newsletter published jointly by the FHWA and the National Concrete Bridge Council (NCBC) to provide relevant, reliable information on all aspects of high-performance concrete in bridges. Sign up at this website for a free subscription.

### [www.fhwa.dot.gov/pavement/concrete/asr.cfm](http://www.fhwa.dot.gov/pavement/concrete/asr.cfm)

This new online Alkali-Silica Reactivity Reference Center provides users with one-stop access to ASR-related information. The site features an overview of ASR, as well as research reports, specifications, guidance documents, case studies, and links to other useful websites. The FHWA report titled *Report on Determining Reactivity of Concrete Aggregate and Selecting Appropriate Measures for Preventing Deleterious Expansion in New Concrete Construction* may be accessed and downloaded from this website.

### [www.fhwa.dot.gov/bridge/prefab/if09010](http://www.fhwa.dot.gov/bridge/prefab/if09010)

Visit this website to download a copy of *Connection Details for Prefabricated Bridge Elements and Systems*. This document represents the State-of-the-Practice with respect to connections between prefabricated elements in accelerated bridge construction projects. Connection details for superstructure, substructure, and foundation elements are included.

### [www.nhi.fhwa.dot.gov/about/realsolutions.aspx](http://www.nhi.fhwa.dot.gov/about/realsolutions.aspx)

Presentations from a monthly seminar series offered online by the Federal Highway Administration National Highway Institute are available to listen to or download from this website. Guest speakers discuss challenges they have faced in the field and innovative solutions used to address those challenges. Seminars relevant to bridges include I-70 Overpass Beam Failure, New Technologies in Driven Piles, and Use of Self-Propelled Modular Transporters.

### [www.specs.fhwa.dot.gov](http://www.specs.fhwa.dot.gov)

This site serves as a clearinghouse and electronic library where users can search, review, cross-reference, and download the most current specifications, construction manuals, and drawings. Materials on the site have been submitted by state departments of transportation and other agencies and include access to specifications, construction manuals, and standard drawings.

## Bridge Research

### [www.trb.org/CRP/NCHRP/NCHRPprojects.asp](http://www.trb.org/CRP/NCHRP/NCHRPprojects.asp)

This website provides a list of all National Cooperative Highway Research Program (NCHRP) projects since 1989 and their current status. Research Field 12—Bridges generally lists projects related to bridges although projects related to concrete materials performance may be listed in Research Field 18—Concrete Materials.

### [http://www.trb.org/news/blurb\\_detail.asp?id=8718](http://www.trb.org/news/blurb_detail.asp?id=8718)

NCHRP Report 609, *Recommended Construction Specifications and Process Control Manual for Repair and Retrofit of Concrete Structures Using Bonded FRP Composites* explores recommended construction specifications to facilitate highway agencies' use of bonded fiber-reinforced polymer (FRP) composites for the repair and retrofit of concrete structures. The specifications cover the construction of FRP systems used as externally bonded or near surface-mounted reinforcement to enhance axial, shear, or flexural strength of a concrete member.

### [http://www.trb.org/news/blurb\\_detail.asp?id=10217](http://www.trb.org/news/blurb_detail.asp?id=10217)

NCHRP Synthesis 393, *Adjacent Precast Concrete Box Beam Bridges: Connection Details* explores current design and construction practices that are reported to reduce the likelihood of longitudinal cracking in box beam bridges.

### [http://www.trb.org/news/blurb\\_detail.asp?id=9627](http://www.trb.org/news/blurb_detail.asp?id=9627)

NCHRP Report 628, *Self-Consolidating Concrete for Precast, Prestressed Concrete Bridge Elements* explores recommended guidelines for the use of self-consolidating concrete (SCC) in precast, prestressed concrete bridge elements. The report examines the selection of constituent materials, proportioning of concrete mixtures, testing methods, fresh and hardened concrete properties, production, quality control issues, and other aspects of SCC.

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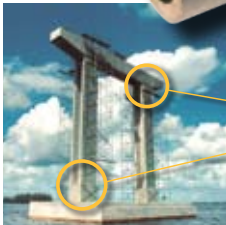
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**PCI** Precast/Prestressed Concrete Institute  
209 West Jackson Boulevard | Suite 500 | Chicago, IL 60606  
Phone: 312-786-0300 | Fax: 312-786-0353 | [www.pci.org](http://www.pci.org)

## How to do it in Precast...



*... a moment-resisting bridge pier or abutment.*



**Q** *How is the moment connection made?*



**All you need is an emulative detail, reconnect the concrete and rebar.**



**Q** *How do you connect the rebar?*



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