Accelerated Bridge Construction
University Transportation Center
(ABC-UTC)

Florida International University (FIU) (Lead)

Partner Universities:
Iowa State University (ISU)
University of Nevada-Reno (UNR)

www.abc-utc.fiu.edu
ABC-UTC

Award Announcement: September 2013

Consortium of Universities:

- Florida International University (FIU)
  - Atorod Azizinamini (lead)
- Iowa State University (ISU)
  - Brent Phares & Terry Wipf
- University of Nevada, Reno (UNR)
  - Saiid Saiidi
ABC-UTC Collaboration

- AASHTO Technical Committee for Construction (T-4)
- AASHTO Technical Committee for Seismic Design (T-3)
- TRB ABC Subcommittee
- ABC-UTC Steering Committee
ABC-UTC Collaboration

ABC-UTC Steering Committee

• ABC Center Executive Board
• State DOTs
• National Assoc. of County Engineers
• Delaware River & Bay Authority
• Federal Highway Administration
• Industry
• Academia
Collaborative Process to Date

- Submitted proposed activities to AASHTO T-4; T-4 reviewed and commented during its November 2013 mid-year meeting
- Shared T-4 review comments with Steering Committee in advance of its December 2013 meeting; Steering Committee commented
- Asked AASHTO T-3 to comment on proposed seismic research
- Developed action plan in consideration of T-4, T-3 & Steering Committee comments
ABC-UTC

Focus Areas:
• Research
• Workforce Development
• Technology Transfer
1st-Round Research Projects

- Florida International University (FIU)
  - Compilation of All ABC Research-Ongoing & Completed
  - Compilation of Available Short to Medium Span ABC Systems
  - Extending Application of Simple for Dead & Continuous for Live Load Steel Bridge System to ABC Applications in Seismic Regions - Phase I, Numerical Study
  - Estimating Total Cost of Bridge Construction using ABC and Conventional Methods of Construction
  - Development of Manual for Enhanced Service Life of ABC Projects
1st-Round Research Projects

• Iowa State University (ISU)
  • Development of Prefabricated Bridge Railings
  • Strength, Durability, and Application of Grouted Couplers for Integral Abutments in ABC Projects
  • Synthesis: Rapid Bridge Rehabilitation
1st-Round Research Projects

• University of Nevada at Reno (UNR)
  • Behavior and Design of Precast Bridge Cap Beams with Pocket Connections
  • Evaluation of Seismic Performance of Bridge Columns w/ Couplers and Development of Design Guidelines
  • Development and Seismic Evaluation of Pier Systems w/ Pocket Connections and Hollow PT/UHPC Columns

Note: An ad-hoc committee is being formed for each research project to monitor progress
Process to be Used for Selection of Research Topics for 2nd Round

- ABC-UTC would like to collaborate to solve technical challenges, leading to expanded use of ABC
  - State DOTs
  - Industry

- ABC-UTC would like input from AASHTO T-4, AASHTO T-3 and TRB ABC Committee
Example Workforce Development Activities

- Increase ABC research assistantships for graduate students
- Mentor undergraduate & graduate students in ABC
- Develop undergrad ABC research intern program
- Add ABC course content at university level
- Develop online ABC courses
- Develop K-12 educational modules on ABC
Example Technology Transfer Activities

- Monthly webinars - continuing
- In-depth webinars (3-4 hr., nominal fee)
- Dedicated website: www.abc-utc.fiu.edu
- Expanded information on website, to include searchable ABC projects database
- Presentations at SCOBS & other national meetings
Example Technology Transfer Activities

- Periodic e-newsletters
- Printed annual newsletter
- Social media – Facebook, Twitter, LinkedIn
- ABC Strategic Implementation Plan, in collaboration with AASHTO T-4
- National ABC Conference
2014 National Accelerated Bridge Construction Conference

December 4-5, 2014
December 3 – workshops

Hyatt Regency, Miami, Florida

www.2014abc.fiu.edu
Next Webinar

Tuesday, July 29, 2014 (1:00 - 2:00 p.m. Eastern)

Featured Presentation

Performance of ABC Bridges in Utah

by

Carmen Swanwick, P.E., Chief Structural Engineer, Utah Department of Transportation

To register, visit: www.abc-utc.fiu.edu