

AGENDA
ACI Committee 345
Bridge Construction, Maintenance, and Repair
Fall 2012 Convention
Toronto, Ontario
Huron
Sunday, October 21, 2012, 1:30 pm to 3:30 pm

1. Introduction
2. Approval of Spring 2012 (Dallas) minutes
3. Membership (Appendix A)
4. Technical Sessions/Symposium Publications:
Spring 2013 – Minneapolis, MN – three sessions

“Advanced Materials and Sensors towards Smart Concrete Bridges: Concept, Performance, Evaluation, and Repair” moderated by Jimmy Kim

“SCC in Repair Applications” moderated by Michael Brown and Devin Harris
5. Liaison reports from other committees (TAC, 342, 343, others)
6. Status of Documents
 - a. 345.1R – Maintenance of Concrete Bridge Elements, published July 2006. Present Document Status – Due for revision/re-approval in 2014.
Ad-hoc committee (Kim, Silfwerbrand, Williams, and St John) reviewed the document and proposed revisions
 - b. 345.XR – Guide for Concrete Bridge Deck Repair and Rehabilitation

Chapter 1 – Brown to draft after other chapters
Chapter 2 – Brown to draft after other chapters
Chapter 3 – send to 342 as the basis for their new document on Bridge Superstructure Condition Assessment. Overview (brief synopsis) from Jeff Smith/Larry Olson – by April 15, 2012: to check progress
Chapter 4 – Weyers to draft – Brown to check status by Oct 31, 2011: sent a doc of ACI-546 to Weyers
Chapter 5 – to be balloted in October (Brown to post by Oct 31, 2011): need to check
Chapter 6 – Needs additional sections drafted (St. John/Kim/Williams) by Feb 28, 2012: to check progress (Williams and Kim completed)
Chapter 7 – Sprinkel and Silfwerbrand: new contents proposed (See Appendix A)
Chapter 8 – Brown to draft – by Feb 28, 2012: to check progress

Chapter 9 – to check progress

9.1– Sidewalks – Andy Foden – by May 31, 2012: to check progress

9.2 –Parapets – Andy Foden – by Feb 28, 2012: to check progress

9.3 – Joints – Chris Carroll – by Feb 28, 2012: completed

9.4 – Approach slabs – Mark Williams/Devin Harris – by Feb 28, 2012: to check progress

- b. 345.2R – Guide for Widening of Highway Bridges, updated and approved in 1998, reapproved in 2005. Present Document Status – Conditional approval by TAC; final ballot prior to publication; need updated pictures- Rita is working.

7. Other Business

Appendix A

Membership as of Oct. 2012: **47 members**

Officers: 2

Kim, Yail Jimmy (Chair) Oglesby, Rita K (Secretary)

TAC Contact

Sprinkel, Michael M

Voting members: 13

Beaver, Jesse Brown, Michael C Carroll, Chris Foden, Andrew J Gepraegs, Oliver K Matejowsky, Alan B Sandberg, Harold R Silfwerbrand, Johan L Sprinkel, Michael M St John, Paul J Vaughn, Ronald E Weyers, Richard E Williams, Mark Erik

Consulting members: 6

Anderson, James C Danley, Byron Fouad, Fouad H Harwood, Allan Virmani, Yash Wouters, Jeffrey

Associate members: 26

Akbari, Reza Anderson, Gerald H Bartlett, F Michael Bazzo, Jeff Branson, Tobias J W Carrato, John L Carter, Paul D Castrodale, Reid W Cumming, Neil A Deo, Omkar M Guth, Dena L Haque, Mohammed E Harris, Devin K Huza, Richard Klein, Gary J Morcous, George Nash, William R Pulido, Claudia P Simpson, John M Smith, Jeffrey L Soubra, Khaled S Suh, Kwangsuk Takhtovich, Eugene Waldron, Christopher J Watts, Ralph D Zhu, Zhenyu

Appendix B

New proposal (additions in green):

Chapter 7 – Overlays (*Sprinkel & Silfwerbrand*)

7.1 Scope

7.2 Need for Overlays

7.2.1 Restored or Strengthened Load-Carrying Capacity

7.2.2 Waterproof Barrier

7.2.3 Skid Resistance

7.2.4 Wearing Course

7.2.5 Reduction of Wheel Load Effect

7.3 Required Properties of Overlays

7.3.1 Properties required of all overlays

7.3.1.1 Adhesion to concrete

7.3.1.2 Cohesion

7.3.1.3 Skid Resistance

7.3.1.4 Durability

7.3.2 Properties required of waterproof barriers

7.3.2.1 Impermeability

7.3.2.2 Crack Resistance

7.3.2.3 Temperature Compatibility

7.4 Types of Overlays

7.4.1 Plain Concrete Overlays

7.4.2 Reinforced Concrete Overlays

7.4.3 Fibre Concrete Overlays

7.4.4 Latex Modified Concrete Overlays

7.4.5 Hydraulic Cement Concrete Overlays

7.4.6 Polymer Overlays

7.4.7 Membrane and AC Overlays

7.5 Design Considerations

7.6 Construction Considerations

7.6.1 Scarification and Removal of Unsound Concrete

7.6.2 Cleaning

7.6.3 Substrate Preparation

7.6.4 Placement and Consolidation

7.6.5 Curing

7.6.6 Skid Resistance

7.6.7 Traffic Vibrations

7.7 Other Considerations

7.7.1 Material Performance Specifications

7.7.1.1 Cement Type

7.7.1.2 w/cm

7.7.1.3 Aggregate Size

7.7.1.4 Air Content

7.7.1.5 Slump

7.7.1.6 Compressive Strength

7.7.1.7 Shrinkage

7.7.1.8 Ductility

7.7.2 Environmental Considerations

7.7.2.1 Climate

7.7.2.2 Traffic

Previous version:

Chapter 7 – Overlays (*Sprinkel & Silfwerbrand*)

7.1 Scope

7.2 Need for Overlays

- 7.2.1 Waterproof Barrier
- 7.2.2 Skid Resistance
- 7.2.3 Wearing Course
- 7.2.4 Reduction of Wheel Load Effect

7.3 Required Properties of Overlays

- 7.3.1 Properties required of all overlays
 - 7.3.1.1 Adhesion to concrete
 - 7.3.1.2 Cohesion
 - 7.3.1.3 Skid Resistance
 - 7.3.1.4 Durability
- 7.3.2 Properties required of waterproof barriers
 - 7.3.2.1 Impermeability
 - 7.3.2.2 Crack Resistance
 - 7.3.2.3 Temperature Compatibility

7.4 Types of Overlays

- 7.4.1 Latex Modified Concrete Overlays
- 7.4.2 Hydraulic Cement Concrete Overlays
- 7.4.3 Polymer Overlays
- 7.4.4 Membrane and AC Overlays

7.5 Design Considerations

7.6 Construction Considerations

- 7.6.1 Constructing the Overlay
 - 7.6.1.1 Scarification and Removal of Unsound Concrete
 - 7.6.1.2 Substrate Preparation
 - 7.6.1.3 Placement and Consolidation
 - 7.6.1.4 Curing
 - 7.6.1.5 Skid Resistance

7.7 Other Considerations

- 7.7.1 Material Performance Specifications
 - 7.7.1.1 Cement Type
 - 7.7.1.2 Maximum w/cm
 - 7.7.1.3 Maximum Aggregate Size
 - 7.7.1.4 Maximum Air Content
 - 7.7.1.5 Slump
 - 7.7.1.6 Minimum Compressive Strength