Aspects of Sustainability in the Documents and Activities of the American Concrete Institute

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April 24, 2013
About the American Concrete Institute

• Founded in 1904
• 20,000 Members from 129 Countries
• Chapters in 42 Countries
• Structural Building Code used by 20 Countries
• Over 130 Technical & Educational Committees
ACI’s Mission
Provide knowledge and information for the best use of concrete
ACI Strategic Plan

...Facilitate efforts that communicate the sustainability of concrete and its applications...
ACI Sustainability Position Statement

• Support the consideration of economic, social, and environmental balance for sustainability criteria in concrete design, materials, and construction;

• Work to identify and, as appropriate, remove barriers to the adoption of more sustainable concrete practices, technologies, standards, specifications, etc.; and

• Raise the level of awareness and seek support for increased sustainability practices and designs within the concrete industry and beyond.
ACI Sustainability Objectives

• Expand the understanding of sustainability;
• Integrate sustainability content into relevant ACI documents and products;
• Coordinate an industry consensus and response on sustainability; and
• Explore methods to quantify, rate, and certify sustainability of concrete structures.
Sustainability Milestones at ACI

- 2000 Board Task Group on Sustainable Development
- 2004 Board Advisory Committee on Sustainable Development
- 2007 Concrete Summit on Sustainable Development
- 2008 First Annual Concrete Sustainability Forum
- 2008 Sustainability First Included in ACI Strategic Plan
- 2009 Concrete Joint Sustainability Initiative
- 2010 ACI Publishes two Sustainability Books
- 2010 Technical Committee on Sustainability of Concrete
- 2012 Fifth Annual Concrete Sustainability Forum
Sustainability Resources
(Free to Universities)
ACI Sustainability Committees

• Board Task Group on Sustainable Development
• Board Advisory Committee on Sustainable Development
• Technical Committee on Sustainability of Concrete
Concrete Sustainability Forums at ACI Conventions

Annual forum to focus on balancing need for safety, durability, and resilience with environmental stewardship. Also to aid in development of ISO/TC71/SC8 standard.
Existing ACI Technical Resources

- Energy Efficiency/Thermal Mass *(Committee 122)*
- Concrete Durability *(Committee 201)*
- Supplemental Cementitious Materials *(Committees 232, 233, 234)*
- Self-Consolidating Concrete *(Committee 237)*
- Environmental Structures *(Committee 350)*
- Pervious Concrete *(Committee 522)*
- Concrete Repair *(Committee 546, 562, 563)*
- Recycled Concrete *(Committee 555)*
ACI Technical Committee 130

Technical report on sustainability

• Materials
• Production
• Construction Practices
• Service Life
• Rating Systems
• Social Impacts
• Environmental Impacts
• Economic Impacts
ACI Education Opportunities

• Industry presentations
  – At events and conventions
  – To ACI chapters and industry groups
  – Online, on-demand
ACI Professional Development

• Self-paced eLearning courses
  – Concrete Sustainability: Basics
  – Concrete Sustainability: Incorporating Environmental, Social, and Economic Aspects
Sustainability Awards/Recognition

• ACI’s Concrete Sustainability Award  
  – Inaugural recipients Fall 2012
• Strategic Development Council’s Jean Claude Romain Innovation in Concrete Award
• Currently developing project-based award(s)
Creation of Concrete Joint Sustainability Initiative in 2009

A coalition of industry institutes and associations representing companies that make or maintain concrete structures and infrastructure.
History of CJSI

April 2009 – Initial Memorandum of Understanding among Portland Cement Association, National Ready Mixed Concrete Association, and American Concrete Institute

- Common interest and vision on CONCRETE STRUCTURES (both horizontal and vertical)
- Common identity and message
- Coordinated efforts
Members of Concrete JSI

- American Coal Ash Association
- American Concrete Institute
- American Concrete Pipe Association
- American Concrete Pressure Pipe Association
- American Concrete Pumping Association
- American Shotcrete Association
- American Society of Concrete Contractors
- Architectural Precast Association
- American Segmental Bridge Institute
- Cast Stone Institute Concrete
- Concrete Reinforcing Steel Institute
- Concrete Sawing and Drilling Association
- Concrete Foundations Association
- Expanded Shale, Clay and Slate Institute
- Interlocking Concrete Pavement Institute
- International Concrete Repair Institute
- National Concrete Masonry Association
- National Precast Concrete Association
- National Ready Mix Concrete Association
- Portland Cement Association
- Post-Tensioning Institute
- Precast/Prestressed Concrete Institute
- RMC Research and Education Foundation
- Silica Fume Association
- Slag Cement Association
- Tile Roofing Institute
- Tilt-Up Concrete Association
- Wire Reinforcement Institute
Refocus the Issue

• From CO$_2$ footprint of cement...

...To lifecycle eco-footprint of concrete structures
CJSI Outreach Toolkit

- Sustainability presentations (PowerPoint)
- Sustainability information sheets
- “Sustain” bi-monthly e-newsletter signup
Future Sustainability Direction for ACI

ACI will continue to champion development of scientifically-backed consensus technical resources, facilitate activities of the Concrete Joint Sustainability Initiative, advocate for integration of resilience into sustainability activities, and partner with leading authorities.
Thank you for your attention

For the most up-to-date information please visit the American Concrete Institute at: www.concrete.org.