

AGENDA
ACI Committee 130 – Sustainability of Concrete

ACI Fall 2011 Convention, Tampa, Florida
Part 1: Monday, October 17, 2-5pm, C-232
Part 2: Tuesday, October 18, 11am-1pm, C-200

Monday Agenda

- 1) Welcome and Introductions
- 2) Approval of Spring 2011 minutes
- 3) Sustainability Sessions
 - a) Sessions at this conference (Rowland)
 - i) ACI & the Concrete Industry's Approach to Green Building
Wednesday, 9am-12pm, M-Meeting Room 4 (moderator: Larry Rowland)
 - ii) Performance-Based Requirements for Concrete and Sustainability, Part 1
Monday, 2-5pm, M-Meeting Room 1 (moderator: Ken Rear)
 - iii) Performance-Based Requirements for Concrete and Sustainability, Part 1
Tuesday, 9am-12pm, M-Meeting Room 1 (moderator: Mark Chrzanowski)
 - iv) Contractor's Day Lunch, Engineering the World's Tallest Structure
Tuesday, 12-2pm, M-Salon 6 (speaker: Larry Novak)
 - b) Upcoming Sessions (Rowland)
 - c) Topics for future conventions
 - i) Spring 2012, Dallas, Texas (The Art of Concrete)
 - ii) Fall 2012, Toronto, Ontario (Forming our Future)
 - iii)
- 4) Sustainability Forum (Julie Buffenbarger, Koji Sakai)
- 5) JCI Conference on Concrete Sustainability 2013 (Koji Sakai)
- 6) Other conference/session/workshop announcements
- 7) JCI International Conference on Concrete Sustainability, 2013 (Sakai)
- 8) First ACI Concrete Sustainability Award (update on nominations)
- 9) Update on committee document, "Guide to Sustainable Concrete" (details during Tuesday meeting, see Exhibit A)
 - a) Update on Chapters 4 & 5 (Kevin MacDonald & Matt Offenbergl)
 - b) Resolution of negatives on Chapter 13 (David Darwin & Kelsey Edwardsen)
 - c) Resolution of negatives on Section 2.7 (Doug Hooton & Tom VanDam)
- 10) Adjournment of Monday meeting

Tuesday Agenda

- 1) Welcome and Introductions
- 2) Brief review of Monday meeting (Schokker)
- 3) Subcommittee Updates (focused on “Guide to Sustainable Concrete” progress and needs)
 - a) 130A: Materials (Chairs: Doug Hooton & Tom VanDam)
 - b) 130B: Production/Transportation/Construction (Chairs: Kevin MacDonald & Matt Offenberg)
 - c) 130C: Structures in Service (Chair: Tracy Marcotte)
 - d) 130D: Rating Systems/Sustainability Tools (Chairs: Jeff Volz, & Arezki Tagnit-Hamou)
 - e) 130E: Design/Specifications/Codes/Regulations (Chairs: Mark Chrzanowski & Larry Church)
 - f) 130F: Social Issues (Chair: David Darwin, Vice Chair: Kelsey Edwardsen)
 - g) 130G: Education/Certification (Chairs: Larry Rowland & Khaled Awad)
- 4) Completion of any remaining business from the Monday meeting
- 5) New Business
- 6) Adjournment

GUIDE TO CONCRETE SUSTAINABILITY

Reported by ACI Committee 130

This report gives general information about concrete sustainability.....

Keywords: sustainability; green; environmental; ...

CONTENTS

Chapter 1—Introduction

- 1.1—General
- 1.2—Background
- 1.2—Scope
- 1.4—Limitations
- 1.5—Background on sustainability
- 1.6—Sustainable attributes for concrete

Chapter 2—Materials

- 2.1—Cementitious materials
- 2.2—Non-portland cement binders
- 2.3—Aggregates and fillers
- 2.4—Admixtures and additives
- 2.5—Water
- 2.6—Reinforcement

Chapter 3—Proportioning

- 3.1—Mixture proportion considerations
- 3.2—Overdesign implications

Chapter 4—Production and Transport

- 4.1—Environmental best practices for production
- 4.2—Transportation
- 4.3—On site
- 4.4—Innovative green products
- 4.5—Industry resources and programs

Chapter 5—Construction

- 5.1—Formwork
- 5.2—Placement and post-placement

5.3—Health and Safety

Chapter 6—Structures in Service

6.1—Durability

6.2—Asset management

6.3—Historic preservation and cultural significance

6.4—Environmental impacts

Chapter 7—Rating Systems

7.1—Overview

7.2—Recommended criteria for evaluating sustainability of concrete

7.3—LEED (Leadership in Energy and Environmental Design)

7.4—Green Globes

7.5—BREEAM (Building Research Environmental Assessment Method)

7.6—CASBEE (Comprehensive Assessment System for Built Environmental Efficiency)

7.7—Green Roads

7.8—GreenLITES (Leadership in Transportation and Environmental Sustainability)

7.9—U.S. Cities and LEED

7.10—CHPs (Collaborative for High Performance Schools)

Chapter 8—Sustainability Tools

8.1—Overview

8.2—Recommended sustainability tools for evaluating concrete

8.3—Athena

8.4—BEES

8.5—Concrete center thermal mass calculator

8.6—EcoConcrete

8.7—EcoQuantum

8.8—Envest

8.9—WRI

8.10—Black boxes

8.11—Comparisons

8.12—Applications

Chapter 9—Design

9.1—What is sustainable design?

9.2—Sustainable design starts at the conceptual level

9.3—PCA high performance concrete

9.4—Durability

9.5—Service life

9.6—Improvements needed for adoption

Chapter 10—Specifications

10.1—Elements of a sustainable specification

10.2—Sample sustainable specifications

10.3—Specifics for ACI 301

Chapter 11—Codes

11.1—Sustainable practices by understanding code requirements

11.2—Green building codes

11.3—Durability codes

11.4—Specifics for ACI 318

Chapter 12—Regulations

12.1—Global

12.2—Federal

Chapter 13—Social impacts

13.1—Needs

13.2—Stakeholders

13.3—Health and safety

13.4—Aesthetics

13.5—Societal connectivity

13.6—Residential

Chapter 14—Environmental impacts

14.1—Local and global climate

14.2—Water

14.3—Durability and longevity

14.4—Energy

Chapter 15—Economic impacts

15.1—Overall metrics

15.2—Cost of maintenance

15.3—Economic assessment

15.4—Balance of trade

Chapter 16—Summary and Conclusions

Chapter 17—References