

Durability Based Specifications

Outline

- Dan DeGraaf
 - Background
- John Staton
 - AASHTO reception
- Tyson Rupnow
 - Update on synthesis
 - Outline next steps
 - Task force members
- Bret Trautman
 - Presentation of a resolution

Background

- Oklahoma City
 - Noted that a fundamental need existed to change the way PCC is specified, placed, tested, and accepted
- Need
 - Durability based specification
 - Begin implementation of currently available technology
 - Identify gaps in technology
 - New test methods
 - Implement monitoring programs to correlate laboratory data with field performance

6 Program Elements

- Develop synthesis on durability characteristics
- Identify new tests that are ready for implementation
- Support states and aid them in gaining experience with new tests
- Develop durability based specification that builds upon the synthesis
- Work within the research community to develop any additional test methods needed
- Work with AASHTO to formally adopt the new specifications

AASHTO Reception

- Presented the scoping document
 - 2 technical session meetings and roundtable at AASHTO SOM
 - Overwhelming support was received
 - Asked each state to return and provide \$3000 to TTCC for support of the synthesis
 - Asked for support for the pooled fund project to follow (2013)

Envisioned Process

- NCC provide technical oversight
- Coordinated efforts under CP Road Map through the CP Tech Center
- Include as many stakeholders as possible
- Synthesis will assist in development of a strategic plan
 - Recommend changes to current specifications
 - Prioritize research needs and identify funding sources
 - Implement findings
 - Develop QA processes and educate users

Proposed NCC Approach

- Two projects
 - Synthesis to be completed 2012 – 2013
 - Pooled fund study to be completed 2013 to 2018

Synthesis Support

- State supporting include
 - Michigan
 - Minnesota
 - Oklahoma
 - Pennsylvania
 - Louisiana
 - Iowa (planning to support)

Timeline – Short-term

- Synthesis completed by end of 2013
- Framework for pooled fund study completed by end of 2013
- Implementation of current knowledge
- Field demonstrations of existing technology
- Training programs
- Revise QA testing protocol
- Identification of knowledge gaps

Timeline – Long-term

- Resistance to environmental conditions including de-icing chemicals
- Internal distress mechanisms (AAR and D-cracking)
- Test methods to detect potential problems
- Monitoring to model projected lifetimes
- Mix design and proportioning
- Limitations and benefits of innovative products
- Continuous demonstration, implementation, and education on new test methods and processes as they are developed

Keep it Interesting



NCC Task Force

- Seeking nominations for members to serve on this task force
 - Can volunteer



NCC Resolution