2012 NCHRP Materials and Tests Research Update

2012 AASHTO SOM Annual Meeting
Biloxi, Mississippi
August 5-10, 2012
OUTLINE

- NCHRP Features
- NCHRP Program Cycle
- FY2013 NCHRP Program Funding
- NCHRP Materials and Tests Projects
  - Funded (FY2013)
  - Awarded (FY2012)
  - Status of Related Projects
- NCHRP Products Developed for AASHTO SOM
- FY 2013 and 2014 Schedule
NCHRP: An AASHTO Program

- Started in 1962 – 50th Anniversary was on June 19, 2012
- Sponsored by state DOTs and DC
- Voluntary contributions from SP&R funds
- About $35 million/year
- Applied research - addresses all aspects of highways (including all topics covered by SOM’s 21 technical sections)
- Research topics are proposed by state DOTs, AASHTO committees, and FHWA
- Panels composed of state DOTs professionals, industry, academia, and consultants monitor the research
- Research products are intended for implementation by state DOTs and industry/provided to AASHTO for adoption/dissemination or published/distributed by the NCHRP
**Research Projects**
Selected by SCOR once/year (March)

**Research for AASHTO Standing Committee on Highways (20-07 projects/tasks)**
Selected by NCHRP Project Panel SP20-07 twice/year (May and October)

**Synthesis of Information Related to Highway Problems (20-05 synthesis topics)**
Selected by NCHRP Project Panel SP20-05 once/year (in May)
NCHRP Program Cycle -1

1. Submittal
2. Evaluation
3. Program Formulation
4. Program Approval
5. Panel Formulation
6. Proposal Process
7. Agency Selection
8. Project Surveillance
9. Results and Implementations
NCHRP Program Cycle - 2

Submittal & Evaluation

- NCHRP solicits problem statements from authorized sources: DOTs, AASHTO Committees/Subcommittees, and FHWA (July-September)
- FHWA and NCHRP evaluate problem statements
- AASHTO Committees/Subcommittees rank and comment on problems statements in their respective areas
- SCOR and RAC rate the candidates in a mail ballot to set priorities for the SCOR meeting in March
NCHRP Program Cycle - 3

• NCHRP sends a summary report to the SCOR
• SCOR meets to formulate the NCHRP Program (late March)
• FHWA approves of conformance with Federal-aid requirements
• SCOR sends a report to the AASHTO Board of Directors requesting approval of the projects
• AASHTO refers program to the NAS for administration
• NAS reviews for acceptance
NCHRP Program Cycle - 4

• NCHRP solicits panel nominations (May-June)
• NCHRP/NAS appoints panel members
• Panel prepares RFP (July-September)
• NCHRP solicits proposals
• Panel reviews the proposals and makes recommendation for award of contract
• NCHRP/NAS negotiates and executes a contract
• NCHRP administers the project
FY2013 NCHRP PROGRAM FUNDING
FY2013 NCHRP Program Funding

$26,465,000

Continuation: 17 Projects, $9,475,000

New: 42 Projects, $16,990,000
FY2013 NCHRP Program Continuation Projects

- **17 Projects**: Continuations
  - **11 Special projects**:
    - $8,550,000 (90%)
  - **6 Continuation projects**:
    - $925,000 (10%)

- **$9,475,000**

- **11 Special projects**:
  - Research for AASHTO SCO: Planning, Highways, Public Transportation, and Environment
  - Synthesis, Legal Studies, IDEA, Domestic and International Scan, and NCHRP Program Implementation
  - Surface Transportation Security Research
  - Research for Administration of HW&T Agencies (CEOs)
FY2013 NCHRP New Projects

New
42 projects
$16,990,000

Other areas
37
$14,140,000
(83%)

Materials & Tests
5 (12%)
$2,850,000
(17%)
<table>
<thead>
<tr>
<th></th>
<th>Submitted</th>
<th>Programmed</th>
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<tbody>
<tr>
<td>Member Dept.</td>
<td>53</td>
<td>13</td>
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<tr>
<td>AASHTO COM.</td>
<td>62</td>
<td>27</td>
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<tr>
<td>FHWA</td>
<td>4</td>
<td>2</td>
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<tr>
<td>TOTAL</td>
<td>119</td>
<td>42</td>
</tr>
<tr>
<td>SOM</td>
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FY2013 NCHRP MATERIALS AND TESTS FUNDED PROJECTS
<table>
<thead>
<tr>
<th>Project</th>
<th>Title</th>
<th>Funds</th>
</tr>
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<tbody>
<tr>
<td>04-39</td>
<td>Field Performance of Corrugated Pipe Manufactured with Recycled Polyethylene Content</td>
<td>$600,000</td>
</tr>
<tr>
<td>09-54</td>
<td>Improve Long-Term Aging for Asphalt Mixture Performance Tests and Cracking Models</td>
<td>$800,000</td>
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<tr>
<td>09-55</td>
<td>Recycled Asphalt Shingles in Warm Mix Asphalt Mixtures</td>
<td>$600,000</td>
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<tr>
<td>10-92</td>
<td>Risk Assessment of Materials Inspection, Testing and Acceptance Practices</td>
<td>$400,000</td>
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<tr>
<td>10-93</td>
<td>Methods for Characterizing Roughness of Urban Pavements</td>
<td>$450,000</td>
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<tr>
<td>Project</td>
<td>Title</td>
<td>Fund</td>
</tr>
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<tr>
<td>20-07/Task 331</td>
<td>Report on the Methods and Standards to Measure the Permeability of Concrete</td>
<td>$50,000</td>
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FY2012 NCHRP BRIDGE AND STRUCTURE AWARDED PROJECTS
<table>
<thead>
<tr>
<th>Project</th>
<th>Title</th>
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<tbody>
<tr>
<td>09-51</td>
<td>Material Properties of Cold-In-Place Recycled and Full-Depth Reclamation Asphalt Concrete for Pavement Design</td>
<td>In progress</td>
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<tr>
<td>09-52</td>
<td>Short-Term Laboratory Conditioning of Asphalt Mixtures</td>
<td>In progress</td>
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<tr>
<td>09-53</td>
<td>Properties of Foamed Asphalt for Warm Mix Asphalt Applications</td>
<td>In progress</td>
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<tr>
<td>10-88</td>
<td>Developing Precision and Bias Statements for AASHTO Standard Methods of Test TP 98 and TP 99</td>
<td>Pending</td>
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<tr>
<td>Project</td>
<td>Title</td>
<td>Status</td>
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<td>20-07/Task 280</td>
<td>AASHTO Materials “C” Specifications</td>
<td>In progress</td>
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<tr>
<td>20-07/Task 284</td>
<td>Establish Test methods for 100 Year Service Life for HDPE Thermoplastic Pipe in the AASHTO LRFD Bridge Design Specifications</td>
<td>Pending</td>
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<tr>
<td>20-07/Task 311</td>
<td>Development of War mix Asphalt Technology Evaluation Program</td>
<td>In progress</td>
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<tr>
<td>20-07/Task 319</td>
<td>Evaluating Applicability of the Dual Ring Test Procedure for Assessing The Cracking Tendency of Repair Materials</td>
<td>Pending</td>
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</table>
NCHRP MATERIALS & TESTS PROJECTS (1997-2012)
75 Completed; published in the NCHRP report series/adopted by AASHTO

25 In progress

5 Contract pending

5 In development (new)
NCHRP Products Developed for AASHTO SOM
NCHRP Products Developed for SOM

- Test Methods
- Precision and Bias Statements
- Specifications
- Others (research plans, strategic planning, etc.)
FY 2013 Program Cycle

- March 20-21, 2012: FY 2013 projects selected
- April 2012: Program announcement
- April 29, 2012: Solicit panel nominees
- AASHTO Board of Directors approval of funding allocation and recommended research program
- National Academies acceptance
- Panel formation
- July-December 2012: 1st and 2nd panel meetings (develop RFPs and select agencies)
- February 1, 2013: FY 2013 authorization
- February-March 2013: Contracting
FY 2014 Program Cycle

- July 2, 2012: Solicitation of problem statements
- Sept. 17, 2012: End date for problem statements
- Nov. 17, 2012: Respond to submitters
- December 3, 2012: End date for submitter comment
- January 4, 2013: Mail candidates to SCOR/RAC
- February 20, 2013: SCOR/RAC ballots due
- March 6, 2013: Ballot summary report to SCOR
- March 26-27, 2013: SCOR meeting/project selection
ACKNOWLEDGEMENTS

- State DOTs/AASHTO
- Members of AASHTO SOM and its Technical Sections
- FHWA
- NCHRP Panel Members
- Research Teams
A handout (list of current and recently completed projects related to selected materials topics) is available:

- It identifies status of projects (completed, in progress, or anticipated).
- It identifies available publications (reports, digests, web documents, etc.).

Specific information or questions, contact Amir N. Hanna (ahanna@nas.edu/202/334-1432)
NCHRP
Advancing transportation and meeting states’ needs for half a century

WWW Homepage
http://www.trb.org/NCHRP

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