WACA/WSDOT Meeting
Minutes for Wednesday, March 7, 2012

Attendees:
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
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<tr>
<td>Mike Polodna, WSDOT</td>
<td>Tom Weist, Oldcastle</td>
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<td>Allan Kramer, Lehigh NW</td>
<td>Mark Gaines, WSDOT</td>
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<td>Tamson Omps, CalPortland</td>
<td>Dave Germer, CalPortland</td>
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<td>Craig Matteson, Oldcastle</td>
<td>David Burg, Ashgrove</td>
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<td>Bruce Chattin, WACA</td>
<td>John Harris, Lafarge</td>
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<td>Jason Brewer, BASF</td>
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<td>Eric Clark, Corliss</td>
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Location: WSDOT HQ Mats Lab, Main Conference Room

Next WACA Meeting Date:
Wednesday, June 13, 2012 at WACA’s Office in Des Moines, 9:30 AM – 12:00 Noon
Note that this meeting has been moved to the 2nd Wednesday of the month.

Future WACA Meetings Dates:
Wednesday, September 5, 2012 at WSDOT HQ Mats Lab, Main Conf Room, 9:30 AM – 12:00 Noon
Wednesday, December 12, 2012 at WACA’s Office in Des Moines, 9:30 AM – 12:00 Noon
Note that this meeting has been moved to the 2nd Wednesday of the month.

Meeting Minutes are available at:
http://www.wsdot.wa.gov/Business/MaterialsLab/WACAMinutes.htm

Issue: Degradation for concrete Aggregate/Base Course – Kurt Williams
A research study is on-going to test the effect of using aggregate with low degradation values in concrete mixes.

3/7/12 – Mike Polodna reported that WSDOT is meeting with WSU to review a draft report.

Action Plan: Continue to give updates at quarterly meetings.

Issue: Water for Concrete – Kevin Wolf (for Bob Raynes)
WSDOT Standard Specification 9-25.1 Water for Concrete requires that in order to use recycled water the lab that tests their water must meet R-18. No one is currently using recycled water because of the R-18 requirement.

3/7/12 – The proposed specification was reviewed. Alan Kramer questioned the requirement that water density shall not exceed 1.03 g/ml. Mike explained that the limit was chosen because the risks of batch variability for strength and set time increase with increasing densities. Also, ASTM C 1602 table 2 limits total solids to 50,000 ppm, and ODOT limits density to 1.03. Alan Kramer will look for research supporting the use of water with densities greater than 1.03.
Mike emphasized the requirement to use qualified testers and equipment and follow the requirements of AASHTO R-18 Sections 5 and 6. Industry questioned whether hydrometer and physical testing needed to meet those requirements. Industry proposed that they conduct the hydrometer tests and physical tests at each batch plant and send samples to qualified labs for the required chemical tests. They questioned how they could provide a Quality System for each batch plant. Mike agreed to conduct further discussions with Kurt Williams and Mark Gaines regarding testing requirements.

**Action Plan:** Continue the discussion at the next meeting.

**Issue: Standard Specification 9-23.8 Waterproofing – Jason Brewer**

Are changes needed to this specification? Should WSDOT be specifying ASTM C 1585 instead of ASTM C 642?

3/7/12 – Jason Brewer led the discussion and asked for WACA/WSDOT comments on the issue. Jason stated that he thinks this would qualify as a Type S admixture under ASTM C 494.

**Action Plan:** Provide WSDOT and WACA comments at the next meeting.

**Issue: Trial Batches for Concrete Overlay Mixes in WSDOT 6-09.3(3)B & C – Craig Matteson**

Discussion on prescriptive mixes in 6-09.3(3)B and C. Both these mixes are prescription designs right down to the coarse & fine aggregate ratios, cement contents and W/C ratios. Are we required to run a trial batch for 5- 28 day compressive results, as there is no compressive strength specified?

3/7/12 – Mark Gaines reported debonding on a slag overlay job completed last year. CTL investigated and said slag-modified mixes should not be used. Mark would like to move to performance mixes for overlays. John Harris reported that Rob Shogren has submitted data from his trial batches of slag-modified batches.

**Action Plan:** Continue the discussion at the next meeting.

**Issue: Qualification of Concrete Suppliers and the NRMCA – Kurt Williams**

Colin Lobo of the NRMCA has contacted WSDOT regarding WSDOT Standard Specification 6-02.3(4)A Qualification of Concrete Suppliers, and the use of the NRMCA Plant Certification checklist by people other than those working through the NRMCA. WSDOT proposes deleting options 2 and 3 of the specification and allowing certification only through the NRMCA.

3/7/12 - No comments on the proposed specification were received. Mike Polodna reported that a WSDOT checklist is in development and will be submitted to WACA for review once complete. Mike asked that any comments on the proposed specification be submitted to him or Kurt via email.
Proposed Specification:

**6-02.3(4)A Qualification of Concrete Suppliers**

Batch Plant Prequalification may be obtained through one of the following methods:

1. Certification by the National Ready Mix Concrete Association (NRMCA). Information concerning NRMCA certification may be obtained from the NRMCA at 900 Spring Street, Silver Springs, MD 20910 or online at www.nrmca.org. The NRMCA certification shall be valid for a 2-year period from the date of inspection. When this method of certification is used the following documentation shall be submitted to the Project Engineer.
   a. A copy of the current NRMCA Certificate of Conformance, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

2. Independent evaluation certified by a Professional Engineer using WSDOT Concrete Batch Plant Inspection Checklist (DOT Form 350-010). The Professional Engineer shall be licensed under title 18 RCW, state of Washington, qualified in civil engineering. The independent certification using the WSDOT Concrete Batch Plant Inspection Checklist shall be valid for a 6 month period from the date of inspection. When this method of certification is used the following documentation shall be submitted to the Engineer.
   a. A copy of the Professional Engineer’s stamped and sealed WSDOT Concrete Batch Plant Inspection Checklist, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

**Action Plan: Review comments at the June 2012 meeting.**

**Issue: Acceptance of Pumped Concrete – Bruce Chattin**

*It is well known that pumping can change the air content of the concrete. WSDOT requires that sampling be conducted from the end of the delivery system, after the concrete is pumped, and leaves it to the contractor to determine how to get it there within the required specification.*

*3-7-12 There was further discussion of the topic. WSDOT stated their intention of continuing to test at the end of the pump. The March, May, June, and July 2003 AGC/WSDOT Structures Team Meeting minutes indicate that the requirement for pumper certification was discussed and it was removed from the WSDOT Standard Specifications at that time. The reasons stated were that it had not been enforced and that it added no value to the quality of the concrete.*

*12-7-11 The discussion continued from the September meeting. Bruce Chattin reviewed the pump operator and equipment maintenance certification program available through the ACPA. John Harris stated that a pre-placement conference with WSDOT participation is needed. He also stated that the World of Concrete has training available for pump operators. Dick Boss stated that a certification program will not make a difference and that industry can solve the problem by only agreeing to provide in-spec concrete at the end of the chute. Kurt Williams stated that if industry wants to proceed with equipment/operator certification that WACA should write a proposal for WSDOT consideration. Kurt would take the proposal to AGC for comments.*

**Action Plan: Bruce Chattin will write a specification that will include requirements for prequalified pumpers and equipment for WSDOT review. WACA will meet with AGC to discuss the topic.**

**Discussion Item: WSDOT Standard Specification 1-06.3 Manufacturer’s Certification of Compliance – Greg McKinnon**
Greg McKinnon of Stoneway Concrete inquired if the “corporate official” part of this specification applies to concrete.

The Manufacturer’s Certificate of Compliance must identify the manufacturer, the type and quantity of material being certified, the applicable Specifications being affirmed, and the signature of a responsible corporate official of the manufacturer and include supporting mill tests or documents. A Manufacturer’s Certificate of Compliance shall be furnished with each lot of material delivered to the Work and the lot so certified shall be clearly identified in the certificate.”

3/7/12 Mike Polodna distributed copies of WSDOT Standard Specification 6-02.3(5)B Certification of Compliance and explained that it is the specification that applies to concrete, not 1-06.3 above. The requirement is for a signature “… by a responsible representative of the concrete producer, affirming the accuracy of the information provided”. Bruce Chattin will forward the handout to Greg McKinnon to determine if this satisfies his concerns on this issue.

Action Plan: Bruce Chattin will forward the handout to Greg McKinnon to determine if this satisfies his concerns on this issue. Continue the discussion at the next meeting.

New Issue: Aggregate Source Approvals for Sources to be Blended with Others – Dick Boss
An Aggregate Source Approval is required for each pit. Since WSDOT is now sampling and testing only processed material instead of pit run or blended material, source owners have issues supplying samples of processed, non-blended aggregates.

3-7-12 Dick was not in attendance and the topic was tabled until his next meeting.

Action Plan: Table the topic until Dick’s next meeting.