

**North Central Pavement Research Partnership (Frozen Four)  
Business Meeting Minutes  
MDOT Meeting Facilities  
Lansing, MI  
October 18th**

**List of Attendees**

Calvin Roberts	MDOT	Laura Fenley	WisDOT
Andre Clover	MDOT	Peg Lafky	WisDOT
Mike Eacker	MDOT	Deb Mishra	University of Illinois - Champaign
Dave Phillips	MDOT	Ralph Hodek	Michigan Tech University
Shongtao Dai	MnDOT	Torsten Mayrberger	Michigan Tech University
John Siekmeier	MnDOT	Hussain Bahia	WHRP
Irene Battaglia	WisDOT	Pat Casey	CTC & Assoc. (WI)
Andrew Hanz	WHRP		

**I. Overview of MDOT’s Research Program and Plans for the Future – Andre Clover  
MDOT**

- a. Overview: Research Administration and Logistics is being revamped.
  - Office of Research created in 2005 (used to be housed in Construction and Technology)
  - Now merges technology advancements and business practices. Current focus is on streamlining administrative procedures.
  - One Research Analyst on staff.
- b. Process
  - Research Needs: Defined by regular meetings between state universities and MDOT.
  - Focus on follow up for all research ideas submitted.
  - January – February: MDOT scopes research projects.
  - Research Projects presented at an annual meeting that involves MDOT technical staff and industry to develop RFPs.
  - Research is kept in state. Universities compete for a percentage of funding in broad areas – not specific projects.

- Examples of Past, Current, and Future MDOT Research Projects related to Frozen Four focus areas were provided by Andre at the meeting.
- c. Research Administration
  - MDOT Project person is responsible for technical and administrative oversight of projects.
  - Research Administration manual is under development to aid universities and MDOT in project management.
  - Target August of every year to present a two fiscal year program.
  - Review Meeting
    1. Approval of projects based on strategic plan.
    2. Encumber 20% matching funds from the state.
    3. Only funding for current fiscal year is approved.
  - MDOT is moving towards the philosophy of bringing all research areas to the table to develop proposals and compete for funding.
- d. MDOT Research Programs that may be of interest to Frozen Four
  - MTRB: University and MDOT: Informal meeting, report on activities is pending.
  - TRIM: Proposed research oversight organization, similar to WHRP. MDOT and universities would provide funding for director and administrator.

## II. Minnesota Research Update – Shongtao Dai – MnDOT

- a. **Local Road Research Board Projects (LRRB):**
  - Porous Pavements (PCC and HMA) both have test sections on MnROAD.
  - Evaluation of the effects of using a PG52-34 binder on pavement performance.
  - Evaluation of Ground Penetrating Radar – This ties in to the next potential Frozen Four Workshop Topic.
  - Pavement Rehabilitation Selection – Cold In Place Recycling.
  - Full project summary available at <http://www.lrrb.org/>
- b. **MnRoad Pooled Fund Activities:** Dr. Dai provided a hand out of MnROAD's current research and construction project. Information available at <http://www.mnroad.dot.state.mn.us/research/mnresearch.asp>

## III. Wisconsin Research Update – Andrew Hanz – WHRP

- a. **FY 2008 Research projects:** A summary of the projects for FY 2008 was provided in the meeting materials. All of these projects have an assumed start date of October 1, 2007.
- b. **FY 2009 Research ideas:** The WHRP Flexible Pavements TOC met prior to the workshop and developed research ideas that were provided to the Frozen Four group in the meeting packet.

## IV. Illinois Research Update – Deb Mishra – UIC

- a. Deb did not have specific details regarding current IDOT research efforts however the following websites provide information regarding current research efforts and past research reports:
  - Past Research Reports: <http://www.dot.il.gov/materials/research/reports.html#QuarterlyReports>
  - Current Research Projects: <http://ict.uiuc.edu/default.asp>

**Action Items:**

- The following attendees were identified as points of contact for any information regarding in progress research projects or research ideas:
  - Minnesota: Shongtao Dai
  - Michigan: Mike Eacker
  - Wisconsin: Andrew Hanz
  - Illinois: Imad Al Qadi
- WHRP will work with UIC to get an IDOT research update.

**V. Discussion of Potential Opportunities for Collaboration**

- a. Identify project from common research areas of interest and combine funding and technical expertise to develop and oversee a larger research project.
  - Challenges: Differences in research administrative cycles make this option very difficult to accomplish.
- b. Add funding to existing Frozen Four pooled fund to incorporate a research element into our activities. Incorporation of research would provide a technical aspect to the deliverables of the pooled fund to supplement the research administration and coordination tasks the group continues to pursue.
- c. Develop a small pilot projects to help more clearly define collaboration mechanisms and processes.

**VI. Feedback on Resilient Modulus Workshop**

- a. Overall feeling of the group was that the workshop went extremely well and would like to pursue future workshop activities.
- b. Comments from Ralph Hodek – Michigan Tech University
  - The Frozen Four states should work move specification and design procedures away from classifying soils and base materials using dry density ( $\rho_D$ ).
  - Use information from presentation and related research projects to develop a report justifying the Frozen Four's claim that  $\rho_D$  is insufficient to accurately characterize soils in design or construction activities. The report will also propose alternative methods for characterizing soils. The report will be distributed to the Departments of Transportation of the Frozen Four Partner States and could serve as a tangible deliverable and call for action from the Frozen Four group.
  - There is a great need to improve the understanding and inputs for level 2 and 3 Mechanistic Pavement Design.
  - It is imperative that the group define a common nomenclature for soil descriptions to allow researchers and practitioners to facilitate

understanding of the soils being evaluated and the conclusion drawn from the research projects.

#### **Action Items**

- WHRP will develop a report on the Resilient Modulus Workshop to include the following
  - Presentations by all the invited researchers.
  - Summary and comparison of lab procedures used by partner states.
  - Summary of past, in-progress, and planned Resilient Modulus Research.
  - Summary of State QC/QA practices to evaluate stiffness of bases and subbases. (Pending extension of pooled fund).
  - Transportation Synthesis Report on Field Practices for acceptance of base and subbase materials (Pending extension of the pooled fund).
- The report will be made available on the Frozen Four website: [www.frozenfour.us](http://www.frozenfour.us)

#### **VII. Potential Ideas for Future Workshops**

- a. Methods of Field Measurement for Subgrade and Base Stiffness
- b. Workshop on how best to leverage funding and take advantage of collaboration opportunities: Research Administration.

#### **VIII. Extension of the Pooled Fund**

- a. The current Frozen Four pooled fund ends on February 21<sup>st</sup> 2008 the possibility of extending the pooled fund was brought forth to the group, specifically the following topics were discussed:
  - The main objectives and direction the group wants to pursue moving forward.
  - Frequency and potential topics for future workshops.
  - Potential for pursuing pilot projects and investigating other possible deliverables for state agencies.
  - Level of funding needed to accomplish desired workplan tasks.
- b. Based on discussion it was decided that WHRP would draft a workplan to include the following.
  - Two workshops
  - 4 Business Meetings
  - Pilot Projects
  - Funding: \$20,000 - \$25,000/yr/state

#### **Action Items:**

- WisDOT will send a formal request to extend the pooled fund, including required level of funding.
- WHRP will draft a workplan detailing the terms discussed above and distribute to partner states as a request for renewal.

#### **IX. Financial Update:**

- a. Andrew gave a financial update; currently the group has spent about 25% of the overall budget. It is expected that due to all the travel funding, the expenditures will greatly increase in the next quarter.
- X. Next Meeting: TBD** based on pooled fund renewal.