

AGENDA
North Central Pavement Research Partnership (Frozen Four)
MDOT Meeting Facilities
Lansing, MI
October 17 – 18th

October 17, 2007: 8:30 – 5:00PM. Resilient Modulus Workshop

Theme: Putting Resilient Modulus Research into Practice

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|----------------------|--|
| 8:30 – 8:45 | Welcome and Introductions – WHRP |
| 8:45 – 9:15 | MDOT’s Application of Resilient Modulus Research – Regional Subgrade Characterization – <i>Gilbert Baladi Michigan State University</i> |
| 9:15 – 10:15 | Topic 1: Laboratory Measurement of Resilient Modulus – <i>Ralph Hodek and Torsten Mayrberger Michigan Tech</i> |
| 10:15 – 10:30 | Break |
| 10:30-11:45 | Topic 2: Prediction of Resilient Modulus from other Laboratory Measured Properties <i>Hani Titi – UW Milwaukee</i> |
| 11:45 – 1:00 | Lunch (Catered In) |
| 1:00 – 2:15 | Topic 3: Prediction of Resilient Modulus from Field and Aggregate Properties – <i>Debakanta (Deb) Mishra – University of Illinois – Champaign</i> |
| 2:15 – 2:30 | Break |
| 2:30 – 3:45 | Topic 4: Application of Existing Databases to Aide Predictions and ME Design Guide Sensitivity Analysis – <i>Joseph Labuz University of Minnesota</i> |
| 3:45-4:15 | Minnesota’s Participation in NCHRP Synthesis 20-05: Estimating Stiffness of Subgrade and Unbound Materials for Pavement Design – <i>John Siekmeier, MNDOT</i> |
| 4:15– 5:00 | Ongoing/Future Research Activities and Opportunities for Collaboration – <i>Discussion Facilitated by WHRP</i> |

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October 17 – 18th

October 18, 2007. 8:30 – 12:00 PM. Frozen Four Business Meeting

- | | |
|----------------------|--|
| 8:30-8:45 | Introductions – <i>WHRP</i> |
| 8:45-9:45 | Overview of MDOT’s Research Program and Plans for the Future -
<i>MDOT</i> |
| 9:45-10:30 | Updates on new Research Projects and Opportunities for
Collaboration – <i>All State partners</i> |
| 10:30-11:00 | Feedback on Resilient Modulus Workshop and Ideas for Future
Workshops/Meetings - <i>WHRP</i> |
| 11:00-11:30 | Extension of the Pooled Fund <ul style="list-style-type: none">• Do we want to do it?• Discuss areas of emphasis, frequency of meetings, etc.• If/when the group wants to initiate a research proposal of its own? |
| 11:30 – 12:00 | Financial Update/Outstanding Issues |

Wisconsin – Summary of New (FY 2008) Research Projects

WHRP's FFY 2008 Projects

	Activity	Project IDs	Title	Principal Investigator	Institution	Duration	Research Budget
<i>Flexible TOC</i>	Research	0092-08-06	Wisconsin Mixture Characterization Using the SPT on Historical Aggregate Structures	Ramon Bonaquist	Advanced Asphalt Technologists	12 months	\$74,992
	Research	0092-08-09	Pre-Overlay Repair of Existing Concrete and Asphalt Pavements: Phase I	Haifang Wen	UW Madison	20 months	\$69,896
	Research	0092-08-07	Intelligent Compaction: Joint Project with Geotech	Harold Von Quintos	ARA	24 months	\$50,000
<i>Rigid TOC</i>	Pooled Fund		FHWA TPF Solicitation 1153: Concrete Technology Transfer Consortium			Year 1 of 5	\$5,000
	Research	0092-08-08	Reduction of Minimum Required Weight of Cementitious Materials in Concrete Mixes	Larry Sutter	Michigan Tech	24 months	\$114,938
	Research	0092-08-10	Performance Assessment of Wisconsin's Whitetopping and Ultra-Thin Whitetopping Projects	Haifang Wen	UW Madison	12 months	\$74,867
<i>Geotech TOC</i>	Pooled Fund		Accelerated Implementation of Intelligent Compaction Technology for Embankment, Subgrade Soils, Aggregate Base, and Asphaltic Pavement Material			12 months	\$25,000
	Research	0092-08-11	Effective Depth of Soil Compaction in Relation to Applied Compactive Energy	Peter Bosscher	UW Madison	18 months	\$54,914
	Research	0092-08-12	Determination of Resilient Modulus Values for Typical Plastic Soils in Wisconsin	Hani Titi	UW Milwaukee	18 months	\$50,689
	Research	0092-08-07	Intelligent Compaction: Joint Project with Flex	Harold Von Quintos	ARA	24 months	\$50,000
	Research - Contract Amendment	0092-04-10	Extension of Fly Ash Project (0092-04-10)	Tuncer Edil	UW Madison	12 months	\$30,000
	Technology Transfer	0092-07-15	Data Integration Peer Exchange	Hussain Bahia	UW Madison	6 months	\$9,775
<i>Data Integration TOC</i>	Research		Data Integration and Partnership for Statewide Transportation Planning	Jessica Guo	UW Madison	18 months	\$79,989
	Research		Evaluation and Recommendation for Further Development of the WisDOT Pavement Information Files (PIF) Database	Jagannath Mallela	Applied Research Associates, Inc.	18 months	\$90,000
	Research		Development of a Database Framework and Implementation Plan for Integrating WisDOT Materials and Construction Databases	Kelly Smith	Applied Research Associates, Inc.	15 months	\$79,994
	Total						

Full summary of completed and in-progress WHRP Research Projects is available at www.whrp.org

FFY 2009 Summary of Research Ideas

WHRP Flexible Pavements TOC - Summary of Research Ideas	
Number	Research Idea
1	Consideration of Thermal Properties of Aggregates and Effects on Compaction
2	Warm Mix Asphalt Pavements
	Effects of Reduced Aging on pavement performance.
	Impacts of moisture/absorption of aggregates.
3	Definition of applications for WisDOT including social/economic benefits.
	Definition of parameters that significantly effect Flow Number and correlation with pavement performance.
4	Evaluation of 3D Characteristics of WI Aggregates and Relationship to Simple Performance Test Results
	Change in properties during production
	Design vs. Construction Properties
	Aggregate Durability
5	Variation of Properties as different areas of the quarry are being processed.
	When is an As-Built Mix Design different from the original submittal?
	Development of test method for evaluation
6	Defintion of significant aggregate/binder/mix properties
	Relationship to performance.
	Mix Designs for Applications
7	Do we have too many different ESAL Levels for mixes?
	Define mix design parameters pertinent to applications (ie new construction vs. overlay).
8	Cataloging Low Temperature Properties of Common HMA Mixtures for Application to the ME Design Guide.
9	Recommended Guidelines and Specifications for Application of Tack Coat
10	Deep Strength Asphalt Pavements
10	HMA Mix Design with High Percentage of Recycled Asphalt Pavement.

Research Needs Generation Meetings – Scheduled for other TOCs.

Rigid Pavements: 11/13

Structures: 11/2

Geotech: TBD

Tenative Timeline for FY 2009 Projects:

Final RFPs: 12/11/2007

Advertise: 1/15/2008 - 3/1/2008

Proposal Review and Project Selection: 3/1/2008 – 4/20/2008

Define potential partner state interest/involvement.

Frozen Four Budget Update

Summary of Expenditures	
Annual Budget	\$25,000.00
Contract Amendmnet	\$15,000.00
Total Budget	\$40,000.00
Expense	Amount
Other Expenditures	\$ (4,563.84)
Subconsultant Expenditures	(\$5,250.00)
Total Expenditures	(\$9,813.84)
Remaining Budget	\$30,186.16
Percent Budget Used	25%

Summary of Other Expenditures	
Domestic Travel	\$ 3,300.00
Indirect Cost	\$ 1,263.84
Total Expenditures	\$ 4,563.84

Summary Subconsultant Invoices			
Invoice Number	Jrnl ID	Jrnl Date	Amount
Purchase Order	PO00000080	10/18/2005	\$5,250.00
FF 2006-01	MW10731015	8/11/2006	(\$1,450.00)
FF 2006-02	MW12702006	12/5/2006	(\$2,125.00)
FF 2006-03	MW12702006	12/5/2006	(\$950.00)
FF 2006-04	JRT0000432	10/11/2007	(\$725.00)
Purchase Order		8/1/2007	\$5,025.00
		Subcontract Budget	\$10,275.00
		Total Expenditures	(\$5,250.00)
		Remaining Budget	\$5,025.00
		Percent Budget Used	51%