

MOISTURE SENSITIVITY

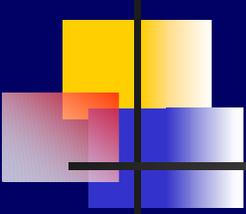
National February 4 - 6, 2003 Seminar

Road Map for the Future & Discussion



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and
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Road Map

- **Introduction**
- **Objective and goals**
- **Organization of seminar**
- **Findings of breakout sessions**
- **Identify and prioritize needs**
- **Timeline**
- **Recommendations**



Road Map

- **Introduction**

- Point out the problem(s)- major issues
- **Reference to AASHTO survey (Tim's)**
- Why we need a Roadmap



Road Map

- **Objective and goals**
 - What are we trying to accomplish
 - How do we hope to get there

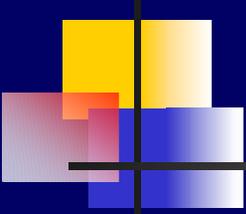


Road Map

- **Seminar-Scope and Objectives**

- Why a seminar?
- **Steering committee makeup and planning meetings**
- Program organization
- **Facilitators and note keepers**
- Protocols
- Participants
- **Break out sessions**
- Summary

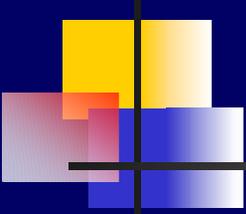




Road Map

- Findings of breakout sessions
- Best Practices
- Gaps in Knowledge
- Research Needs
- Strategic Plan or Road Map

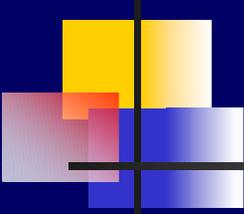




Road Map

- **We have identified Best Practices**
- **Now What do we do?**
 - **Outreach/Education**
 - Training programs
 - **Manuals & Guidelines**
 - AASHTO SOM presentation
 - **NHI course**
 - National Seminar
 - **TRB Workshop 2004**



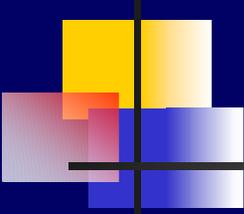


Road Map

- We have identified Best Practices
- Now What do we do?



Glaring Oversights?



Road Map

- We have identified Gaps in “N”
- Steering committee will prioritize
 - Short term action items
 - Long term action items



Road Map

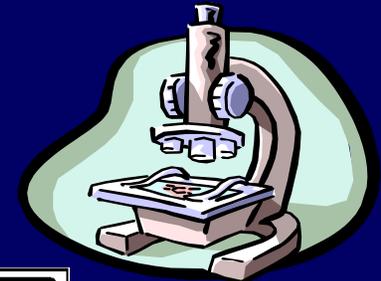
- We have identified Gaps in “N”
 - Short term
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Glaring Oversights?

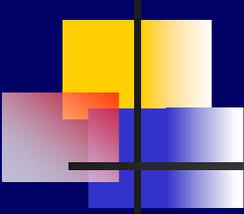
Road Map

- We have identified Research Needs
- Where do we go from here?
 - Research needs identified
 - State sponsor identified
 - Submitted through AASHTO
 - TRB for NCHRP consideration 3/1/03
 - Identify funding sources



Research Needs





Fundamentals

Hamburg – Optimize/Standardize

New /Existing Test Methods for Research

Methylene Blue – Optimize/Standardize

Testing Protocol for Aggregate

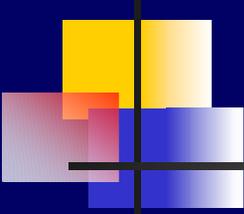
Emulsifiability of Asphalt

Funnel – Bitumatic

Salts – NAPT, ICP

Pessimism Voids – Emulsification





Fundamentals

Adhesive Failure

Surface Energy – Measurement Method

Cohesive Failure

Bitumen or Mastic

Heithaus

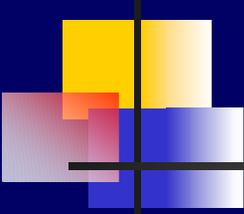
Pull Off

Water Absorption and Diffusion Test

Aggregate

ECS – ICP - Solubility

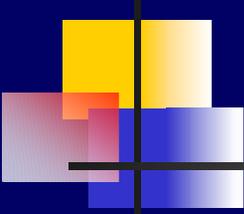




Testing & Treatments

- Fundamental property tests
- Long-term aging
- Rapid QC test
- Completion of ECS research
 - Dynamic modulus / fundamental properties (AASHTO 200X)
 - Traffic impacts on pore pressures
 - pH of water

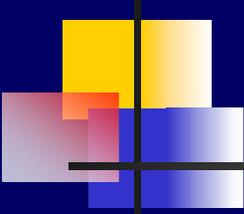




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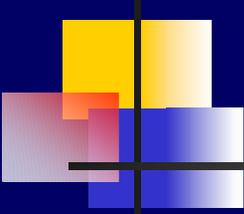




Design Specs

- **Diagnostic Tools for moisture damage**
 - Standardization of terms, evaluation techniques, testing data format, forensic procedures.
- **Long term effect of treatments – aging, moisture and pavement performance**
- **Synthesis on test procedures, what mechanisms are measured per test, variations used by test, pros and cons per test.**

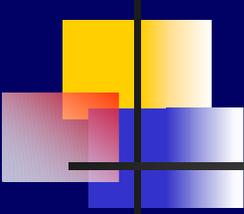




Construction

- **Continuous Density / Stiffness Measurements**
- **Real Time Automated Plant Control**
- **Automated Paver Control / Feedback**
- **Effect Of Temperature On Adhesion**
- **Relationship Of Permeability To Performance**





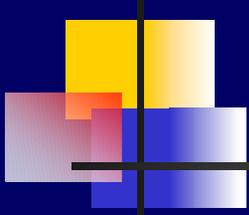
Road Map

- We have identified Research Needs
- Where do we go from here?
 - Prepare research problem statements
 - Obtain funding



What else?





Road Map

Other Comments?

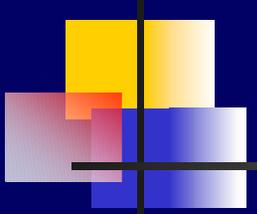
Observations?

Questions?



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National February 4 - 6, 2003 Seminar



Thank You

