AGENCY/CONTRACTOR TRAINING PROGRAM

AASHTO Subcommittee on Construction Meeting
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The Ultimate Goal

- The primary goal is to construct durable, long lasting, low maintenance, smooth, safe and quiet roadways
- Innovations in equipment, materials and processes are key elements in achieving this goal
- Without adequate training, improvements cannot be realized
Achieving the Goal

- A comprehensive agency/contractor training program serves 2 purposes
  - Raise the bar for construction quality
  - Compensate for loss of experienced personnel
Presentation Outline

- Historical perspective
- Assessing training needs
- Member survey
- Development of comprehensive training program
NHI was tasked with development of “Construction of Portland Cement Concrete Pavements” over a decade ago.

The course originated with this Subcommittee and represented a joint AASHTO/FHWA/ACPA effort.

This course represented the only NHI offering dealing with concrete pavement construction.

It is no longer available through NHI (2007?).
Presentation Outline

- Historical perspective
- **Assessing training needs**
- Member survey
- Development of comprehensive training program
Historical Perspective (cont.)

- ACPA has offered “how to” seminars for many years through C/S workshops.
- This approach has significant limitations due to time and audience.
- An agency/contractor targeted training program was clearly needed.
Historical Perspective (cont.)

- ACPA has “higher” level courses already available
  - Concrete Pavements 101, “Design, Construction and Rehabilitation of Concrete Pavements”
  - Concrete Pavements 210, “Mechanistic-Empirical Pavement Design Guide for Concrete Pavements”
Assessing Training Needs

- The lack of an NHI course for an extended period has been very problematic.
- A number of states have requested general (or project specific) training prior to larger paving projects.
- Development of a series of “customer based” training courses was approved by the ACPA Board of Directors.
The First Step

- A meeting was held at the World of Concrete in January 2006 to discuss course development issues
  - Content
  - Format
  - Staged development
  - Delivery methods
  - Timeline and pricing structure
Additional Resources

- Technical inquiries database
- Agency polling
- Survey of existing courses/presentation materials
Presentation Outline

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- Development of comprehensive training program
The contractor training program currently under development by ACPA will be comprised of 3 "core" training modules and a series of topics that will be selected by the sponsor to meet specific needs. The target audience for these customized courses includes contractor and agency personnel, consultants, field technicians and anyone requiring a basic knowledge of the varied aspects of concrete paving and materials. The information presented will have application to highways, airfields, and streets and local roads although some modules may require slight revision depending on the client.
Program Requirements (cont.)

Core Modules:

- Concrete Fundamentals (mix constituents, mix design basics, batching operations, hydration basics, etc.)
- Paving Operations (equipment, basic processes, sequence of operations, etc.)
- Fundamentals of Quality Control/Quality Assurance (who, what, when, where and how)
Member Survey

- A survey of ACPA members was conducted in March 2006
- Contractors, materials suppliers, equipment manufacturers, consultants and ACPA Chapter representatives responded
- Respondents were asked to select the 10 most important training needs from a list of 26 topics developed in a prior meeting
Potential Training Modules

Jointing/Load Transfer
Curing
Finishing
Texturing
Stockpile Management
Safety
Forming
Mix Design Evaluation
Equipment Set-up
Testing
Troubleshooting
Maturity
Design/Plan Verification

Profile Measurement
Environmental Issues
Soil Stabilization
Base Selection and Construction
Subsurface Drainage Systems
Basic Statistics
Optimized Mixes
Communications
Life Cycle Cost Analyses
Specifications
Constructability Issues
Value Engineering
Design Basics
“Top 10” Contractor Topics

1. Mix Design Evaluation
2. Testing Procedures
3. Design Basics
4. Jointing/Load Transfer
5. Constructability
6. Optimized Mixes
7. Curing
8. Texturing
9. Soil Stabilization
10. Life Cycle Cost Analysis
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ACPA Task Force on Training

- 5 DOT representatives
- 5 ACPA contractors
- 1 FHWA representative
- 1 ACPA Chapter Executive

The primary responsibility of the group is to review training materials and recommend additional program needs.
Typical Module Content

- Objectives
- Basic Theory
- Main content (slides, embedded video, text)
- Troubleshooting
- Examination
Delivery Methods

- The initial training modules will be delivered in a classroom format
- Interactive CD format is being considered for certain modules
- Web-based courses will also be offered
**Timeline**

- “Top 10” modules are currently under development
- The pilot training courses will be in late fall 2006
- Additional module development will be completed in 2007
- Dynamic process in which new materials will be added on an as-needed basis
Thank You!

For Additional Information:

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