Technology Transfer, Deployment & Delivery Goals for the CPTP

- Reduce User Delays
- Improve Safety
- Reduce Costs
- Improve Performance
- Foster Innovation

Safer, Smoother, Quieter, Longer-Lasting
Focus Areas for Tailored Technology Transfer

- Advanced Designs
- Optimized Concrete Materials
- Improved Construction Processes
- Rapid Repair & Rehabilitation
- User Satisfaction

Safer, Smoother, Quieter, Longer-Lasting
## CPTP Product Matrix — See Handout

<table>
<thead>
<tr>
<th>Products and Tech Briefs</th>
<th>Advanced Designs</th>
<th>Optimized Concrete Materials</th>
<th>Improved Construction Processes</th>
<th>Rapid Repair and Rehabilitation</th>
<th>User Satisfaction</th>
</tr>
</thead>
</table>

## Concrete Pavement Technology Program Products

<table>
<thead>
<tr>
<th>Products</th>
<th>Advanced Designs</th>
<th>Optimized Concrete Materials</th>
<th>Improved Construction Processes</th>
<th>Rapid Repair and Rehabilitation</th>
<th>User Satisfaction</th>
</tr>
</thead>
</table>
Concrete Pavement Technology Program

CPTP Products for Long-Life Pavements

CPTP Stakeholders
AASHTO
Academia
FHWA
Industry
States
TRB

Mobile Concrete Laboratory

Dowel Bar Location

Precast Prestressed Concrete Pavement

Program Goals
- Reduce User Delays
- Improve Safety
- Reduce Costs
- Improve Performance
- Foster Innovation

Concrete Pavement Technology Program

Continuously Reinforced Concrete Pavement

Coefficient of Thermal Expansion

Air Void Analyzer

Concrete Maturity Testing

...and Publications
Advanced Designs

- Design Procedures for Whitetopping
- Cost & Performance Benefits of Various Pavement Design Features
- Optimized Dowel Bar Design
- Sealed & Unsealed Joints
- Coefficient of Thermal Expansion
Optimized Concrete Materials

- Tests to confirm compatibility of concrete ingredients
- Improved guidelines for developing job-specific concrete mixtures
Improved Construction Processes

- Maturity concepts for concrete strength and opening to traffic
- Magnetic tomography device to measure dowel bar alignment in concrete
- Guidelines for improved curing of slipformed concrete pavements
Rapid Repair & Rehabilitation

- Repair & rehabilitation strategies
- Precast panels for full-depth repair of transverse joints
- Precast prestressed panels for pavement rehabilitation
User Satisfaction

- Guidelines for construction traffic management for high-volume roadways
- Studies to better understand and define smoothness and surface texture requirements
Interim and Final Reports – Various CPTP Projects

- Maturity Testing / Conc. Pavement Applications
- Curing Practice / Slipformed Conc. Pavements
- Use of Magnetic Tomography Technology to Evaluate Dowel Bar Placement
- Concrete Pavement Rehabilitation and Preservation Treatments
- Incremental Costs and Performance Benefits of Concrete Pavement Design Features
- Achieving a High Level of Smoothness in Concrete Pavements Without Sacrificing Long-Term Performance
- The Concrete Pavement Road Map

TechBriefs: http://www.fhwa.dot.gov/pavement/pub_listing.cfm?TitleStart=T
INTERNATIONAL CONFERENCE ON LONG-LIFE CONCRETE PAVEMENTS

October 25 and 26, 2006 – Chicago, Illinois

Organized as a part of CPTP Implementation Activity

Information available on FHWA Web site –
CPTP Workshops, Presentations
Equipment Demonstration & Loan

- Executive Meetings 2004-2006 with State DOTs
- Precast Prestressed Pavement Demonstrations
Precast Prestressed Concrete Pavement Demonstration Projects

- Pilot project 2002 in Texas
- Missouri DOT Project December 2005
Texas DOT – Completed Pilot Project
Missouri DOT
Precast Panels –
Fabrication in
Memphis, TN
Precast Prestressed Concrete Pavement Projects – Completed and-or Planned

- Texas – Frontage Road
- California – Night-Time Lane Addition
- Missouri – Pavement Rehabilitation
- Iowa – Bridge Approach Slab
- Indiana – Vertical Clearance @ Underpass
- Texas – Weigh-in-Motion Scale
- Future State DOT Demos – Additional Applications of this Proven Technology
CPTP Implementation Activities

- DOT Executive Meetings
- Best Practices Workshops
- Selected Presentation Topics
- Conferences on Whitetopping & Long-Life Pavements
- TechBriefs & Project Reports
- Exhibits at Meetings & Conferences
- Precast Prestressed Demonstrations
- Demonstration & Loan Program for New Testing Equipment