

10th Annual Concrete Conference

**Michigan DOT
Concrete Bus Tour
August 13, 2008**

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January 27, 2009



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Two Part Format

- Presentation and discussion of projects (1 ½ hours)
- Bus Tour of project sites (6 ½ hours)



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Demonstration Projects (Performance Update)

- Dowel bar retrofit alignment verification study
- Deicer study effects on PCC
(MichiganTech Transportation Institute)



Presentation and Discussion

Dowel bar retrofit alignment verification study



Device developed in Germany

Non-destructive quick method to check dowel bar alignments

FHWA owns three MIT-Scan II devices can be borrowed through the Concrete Pavement Technology Program (CPTP)



Deicer study of effects on PCC Pavement

- Determine Long Term Exposure to Magnesium Chloride, Calcium Chloride & Sodium Chloride
- Estimate Potential Reduction in Service Life
- Pavement Performance was Significant Better with Ground Blast Furnace slag or Fly Ash in the Mix
- Sealants Improved Performance, Need to be Reapplied Every 3-5 Years

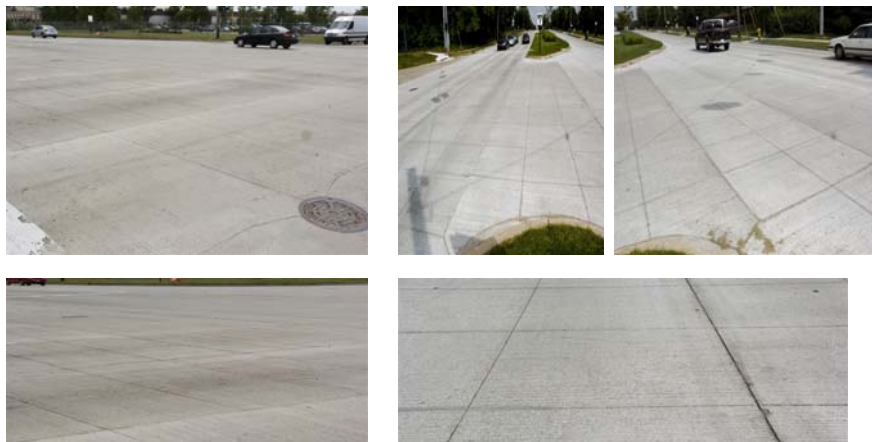


Pavement Tour

- 4"-6" White-topping
 - intersections, collector streets and ramps



Pavement Tour



Observations

White-topping projects

- 4-6" deep, construction very similar to PennDOT.
- Intersection reconstruction is almost entirely white topping and the connecting roadway.
- Rutting issue was eliminated.
- Anticipating 20 year pavement life
- tour projects in-place 4-10 years with no performance issues.



Pavements Tour

- 6.5" Concrete Overlays 4 lanes – high truck traffic



Pavement Tour



Observations

Concrete overlays

- 6.5" depth unbonded, 1 ½" asphalt over existing concrete
- Minimal spall & joint repairs, only areas with base failure
- Transverse joint alignment is not required
- Anticipating 25 year pavement life
- Michigan is experiencing very good performance.



Best Practices

- Warranty for materials and workmanship, all projects
- Alternate bidding – currently very limited bituminous bids
- Pavement committee reviews all design & construction changes



Results

Significant Initiatives

- Alternate Bidding Procedure
- Warranty Specification
- Pavement Preservation
 - Overlays



