Accelerated Construction Using Precast Concrete Pavement Systems

FHWA Webinar
May 30, 2013
The Illinois Tollway
More Sustainable Concrete Pavement
Rehabilitation / New Construction

Get In
&
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&
Stay Out!
Why Precast Patching Has Value, Especially in the Middle Lanes
First Precast Application in 2002 – Uretek Method
Proprietary Fort Miller System Introduced in 2007
Competition Needed in More Ways than One

- More than 1 precast concrete pavement system was proven to be needed in 2008

- To some extent, precast concrete has to compete with high performance cast-in-place concrete
Tollway’s Generic System
Developed in 2009
Tollway System Provides Options for Dowel Bar Retrofitting

Standard wide mouth retrofitting method

New pre-drill / narrow mouth procedure
Tollway’s Generic System Successfully Placed Last 3 Years Using Both Methods

With wide mouth retrofits

With narrow mouth retrofits
Isolated Joint / Slab Repair Applications
New Construction Applications
Large Area Consecutive Slab Repair Applications
Ramp Reconstruction Applications
Overnight Intersection Reconstruction Applications
Applications for 2013

- I-55 EB to I-294 NB super elevated ramp – warped continuous
- I-294 to I-80 ramp – warped isolated
- End of ramps at intersections – warped continuous
  - I-88 at Highland Ave.
  - I-88 at Spring Road
- I-355 patching / overlay – isolated flat
- I-88 patching / diamond grind – isolated flat
Future Tollway Needs for Precast

- Bridge approach slab replacements overnight
- New integral abutment bridge approach slabs
- Ramp Plaza Replacements
Thank you