Two Lift Paving
Contractor’s Perspective

National Open House
Two Lift Concrete Paving
Abilene, Kansas
October 16, 2008

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Overview

• Concept
• Planning
• Scheduling
  – Delays
• Test Section
  – Lessons Learned
• I-70 Paving
Concept

- European Scan Tour
  - KDOR representative

- Market Need
  - Air void problems
  - Aggregate quality of local market
  - Extended pavement life

- Appropriate Project / Location

- Exposed Aggregate Surface
Concept – Market Need
Concept - Project

• I-70 in Saline County, Kansas
  – 2 year pavement reconstruction project
    • WBL in 2007
    • EBL in 2008
  – Rest area on each side
    • Ideal for test sections
  – Revised typical section required 24’ paving
    • Uniform Shoulders on Variable Granular Base
Planning

• Preliminary Discussion
  – April 2007 – Manhattan, KS
    • KDOT, FHWA, CP Tech Center, KSU, Koss
    • Highways for Life

• Workshop
  – June 2007 – Abilene, KS
    • Dr. Hermann Sommer (Austrian Engineer)
    • CP Tech Center
    • Dr. Rob Rasmussen
Planning

• Mix Designs
  – Stiffness of Bottom Lift
  – Durability of Top Lift

• Equipment and Logistics
  – Delivery and placement of bottom lift
    • Stiffness
    • Haul Road v. Front of Paver
  – Delivery and placement of top lift
    • Minimize deformation of bottom lift
  – Production and Delivery of Two Mixes
Planning

• Test Section
  – Expectations
  – Location
  – Complexity
Scheduling

• Test Section
  – Late Summer / Fall 2007
    • 2007 Season – Extremely Wet
      – Paving Crew Unavailable
  – Spring 2008
    • More economical to re-schedule to location where a paving crew was already working
      – US-69 Side Road
        » Minimal risk
        » District IV
    • 2008 Season – Extremely Wet
      – Paving completed in June 2008
Test Section
Test Section
Test Section
Test Section
I-70

• Plant
  – Dual Drum
  – Two Silos
    • Split
  – Aggregate Bins
    • Four
• Delivery
  – Product from either drum
  – Truck could delivery either
  – Color Coded Cards
I-70

- Delivery
I-70

- Placement
  - Haul Road
  - Spreaders
I-70

- Placement
  - Top Lift
  - Distance
Jointing
Jointing
Jointing
Conclusion

- Practical Application
- Limited Production Impact
- Economical
  - Economize bottom lift
  - Extended pavement life
- No Problem
- Team Effort