Concrete Pavement Preservation in Oklahoma

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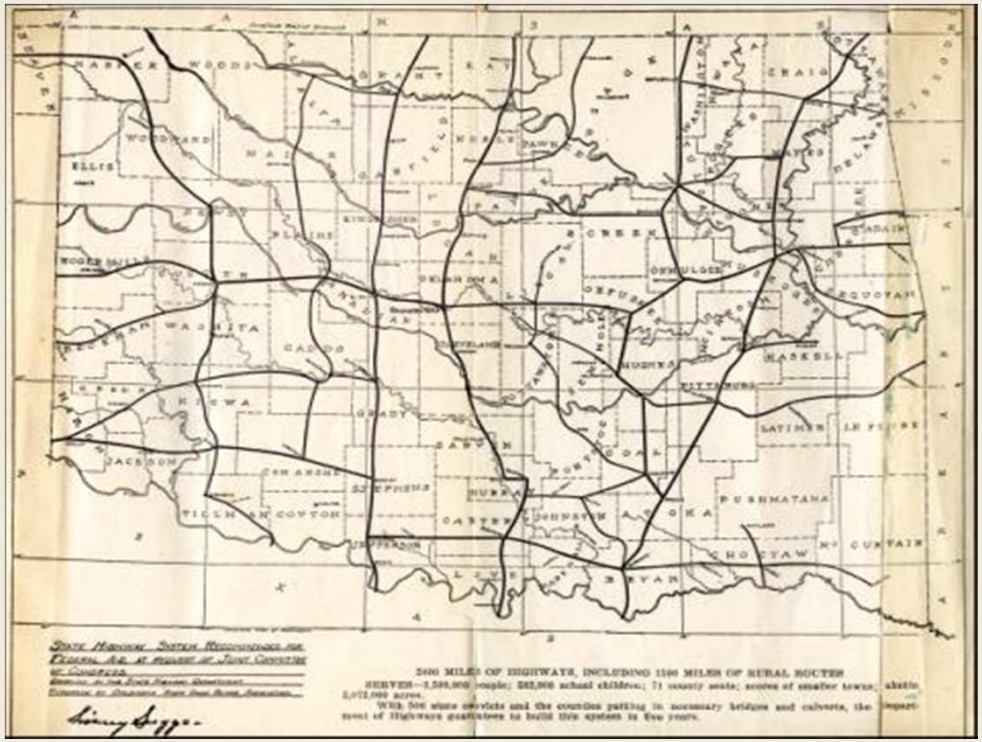
OK/AR Chapter, ACPA

SE Pavement Preservation Workshop May 3, 2011

ODOT 100
1911-2011



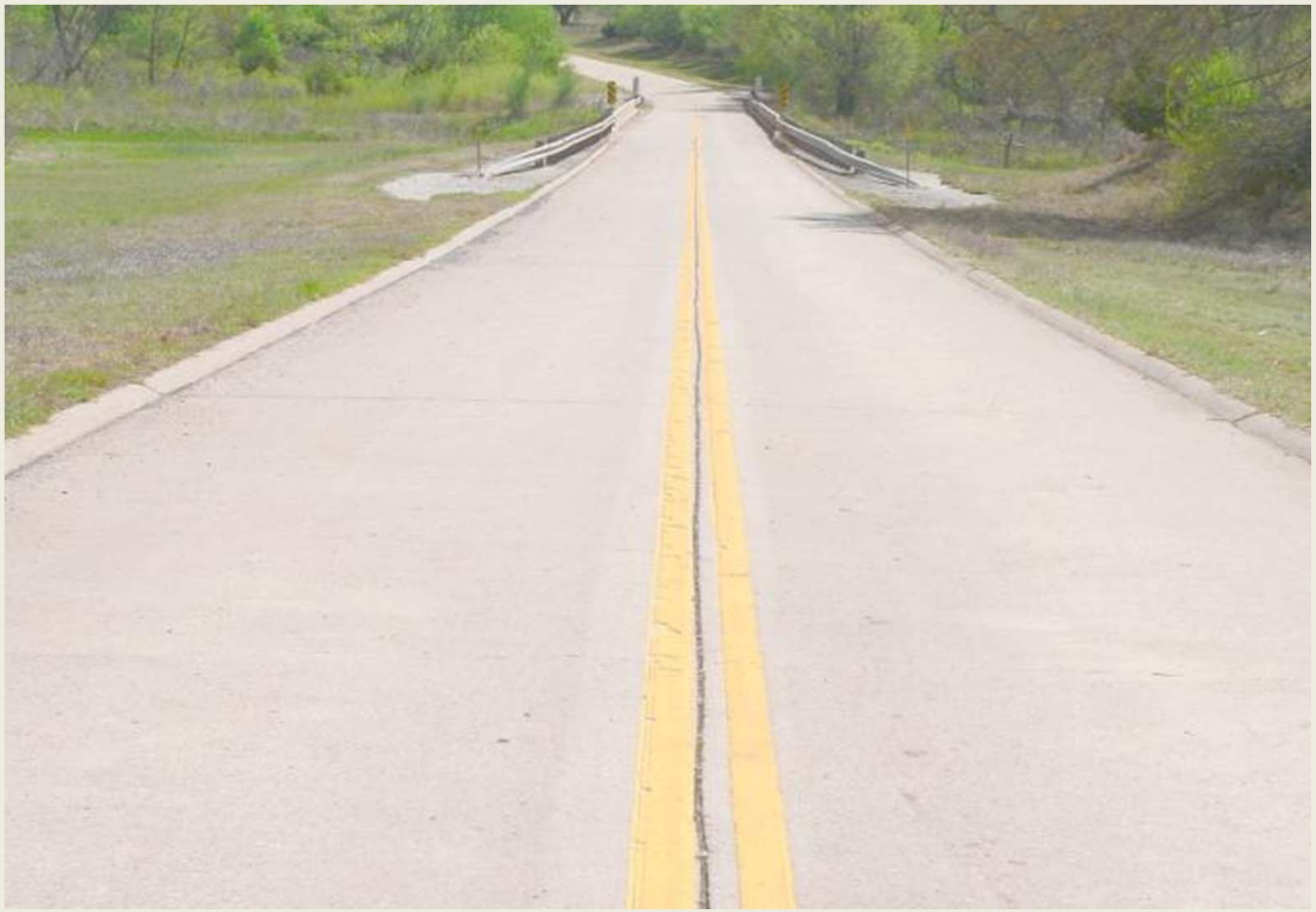
Oklahoma Highways

- Oklahoma Department of Transportation
  - 12,261 miles
  - 673 miles
- Oklahoma Turnpike Authority
  - 601 miles

Oklahoma Concrete Pavement Design Through the Years

- Route 66
  - Built in early 1930's
  - Reinforced Design - DJRCP
  - 50' joint spacing
- Interstates
  - Bulk built in 1960's - DJRCP (61.5' Spacing)
  - Switched to PCCP in 1970's (15' spacing)
  - Added Dowels back 1980's – DJCP
  - Also began using CRCP in 1980's

Route 66



FHWA Demonstration Project 69

- Tri-Regional Pavement Rehabilitation Conference in OKC May 1984
- Portland Cement Concrete Pavement Restoration Project
  - Full Depth Repair
  - Spall Repair
  - Slab Stabilization
  - Retrofit of Load Transfer Devices
  - Diamond Grinding
  - Resealing of Pavement Joints

FHWA Demonstration Project 69

- Original Pavement Built 1969
- 9” PCCP, 4” FABB, 6” Lime Mod Subgrade
- 15’ Joint Spacing
- Preliminary Report 1987
- No Follow up found – missed opportunity?

Preservation Methods Used Today

- Full Depth Patching
- Partial Depth Patching
- Slab Stabilization
- Dowel Bar Retrofit
- Diamond Grinding
- Joint Sealing

Full Depth Patching

Loss of Load Transfer

DBR & Diamond Grinding

- Since 2002
  - Dowel Bar Retrofit
    - 867,000 bars
  - Diamond Grinding
    - 3.5 million square yards

First DBR Installation in Oklahoma at 25 years

Early DBR Project

Early DBR Project

CPR Project Interstate 44 in OKC

CPR for County Roads

Next Generation Concrete Surface