



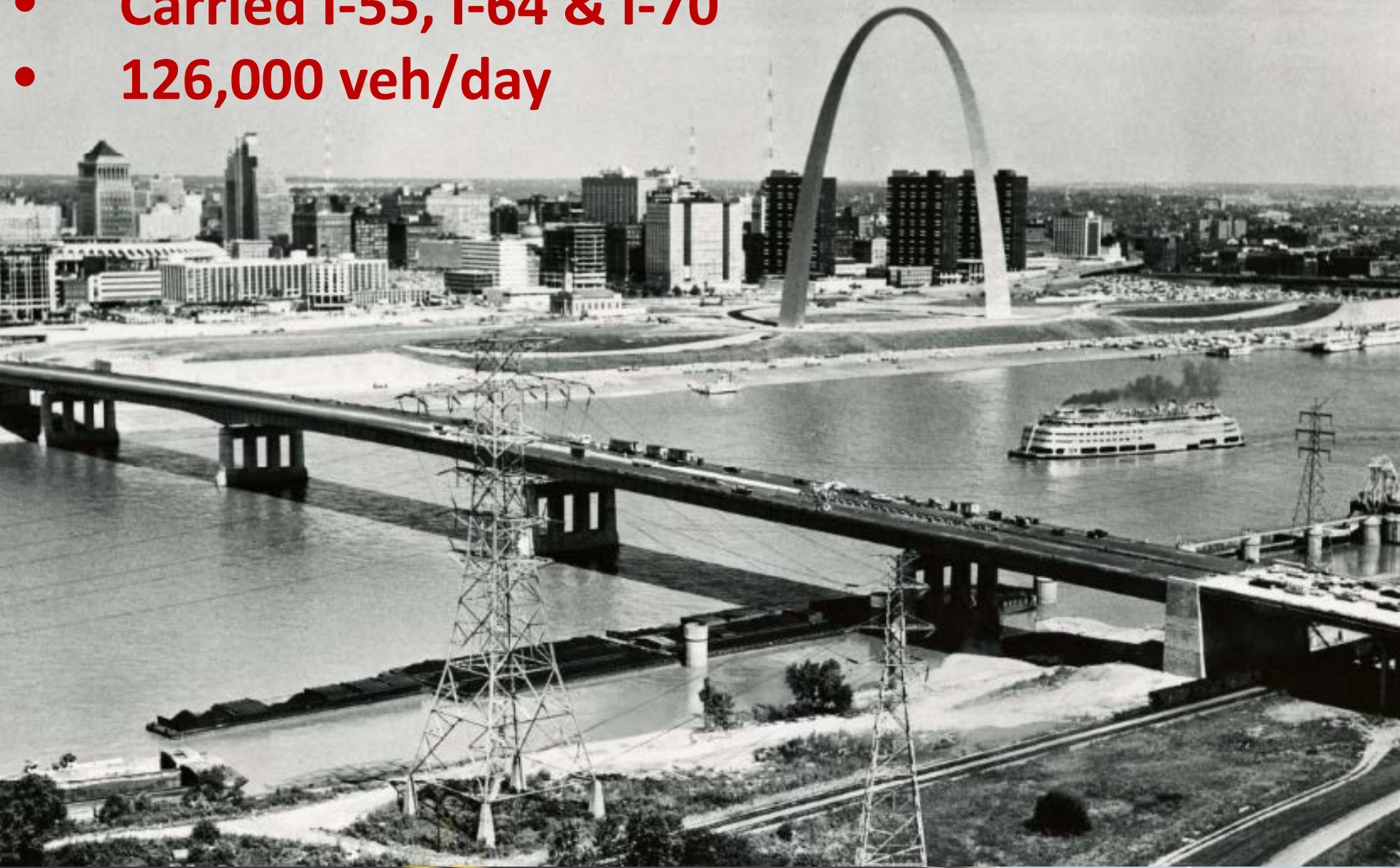
# Poplar Street Bridge Project

Michelle Forneris, P.E.

Area Engineer



- **Nov. 9, 1967**
- **Carried I-55, I-64 & I-70**
- **126,000 veh/day**





# Poplar Street Bridge



# Improvements





# Overlay



# Overlay Options

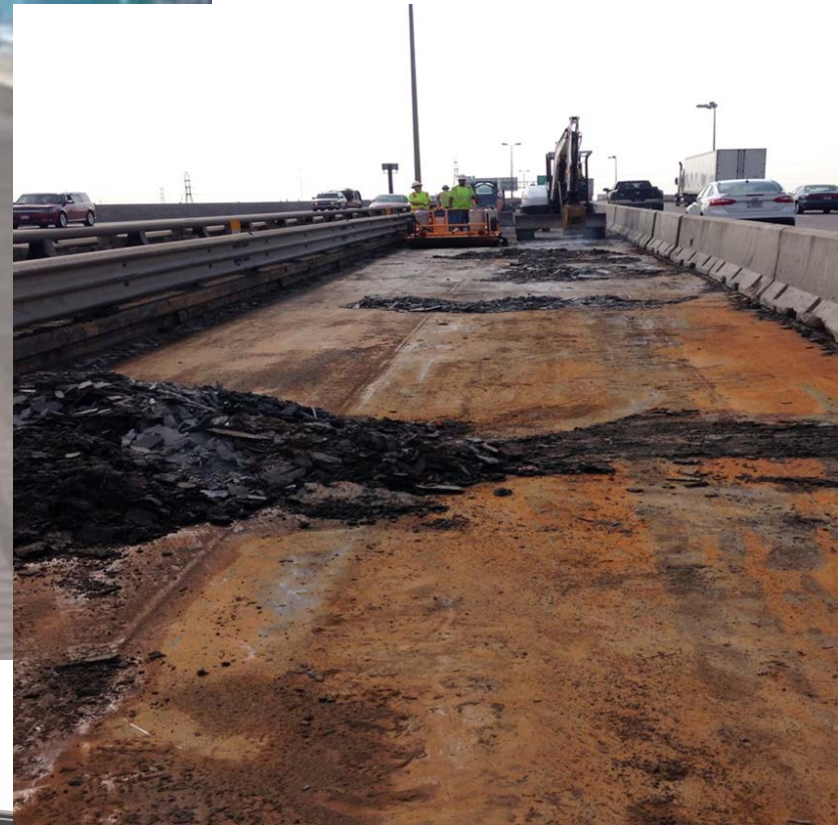


- 2.5" Epoxy Asphalt Concrete (EAC)
- 2.5" Polyester Concrete (PC)
- 2.5" Steel Fiber Reinforced Concrete (SFRC)
- 4" Lightweight SFRC with reinforcing layer & welded stud connection

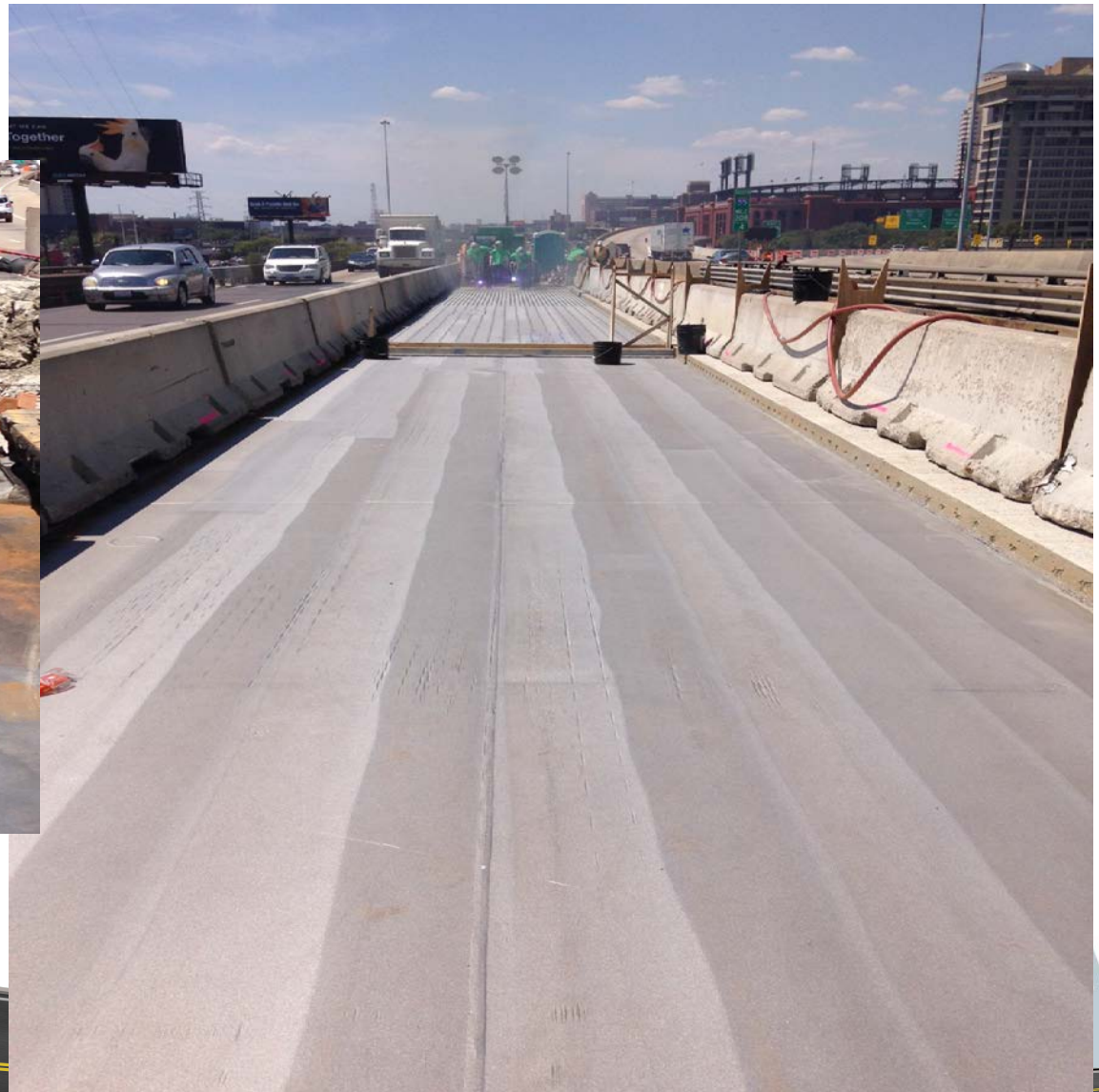




# Surface Preparation



# Surface Preparation





# Corrosion Protection



- Thermal coating 99.9% Zinc



# Shear Studs



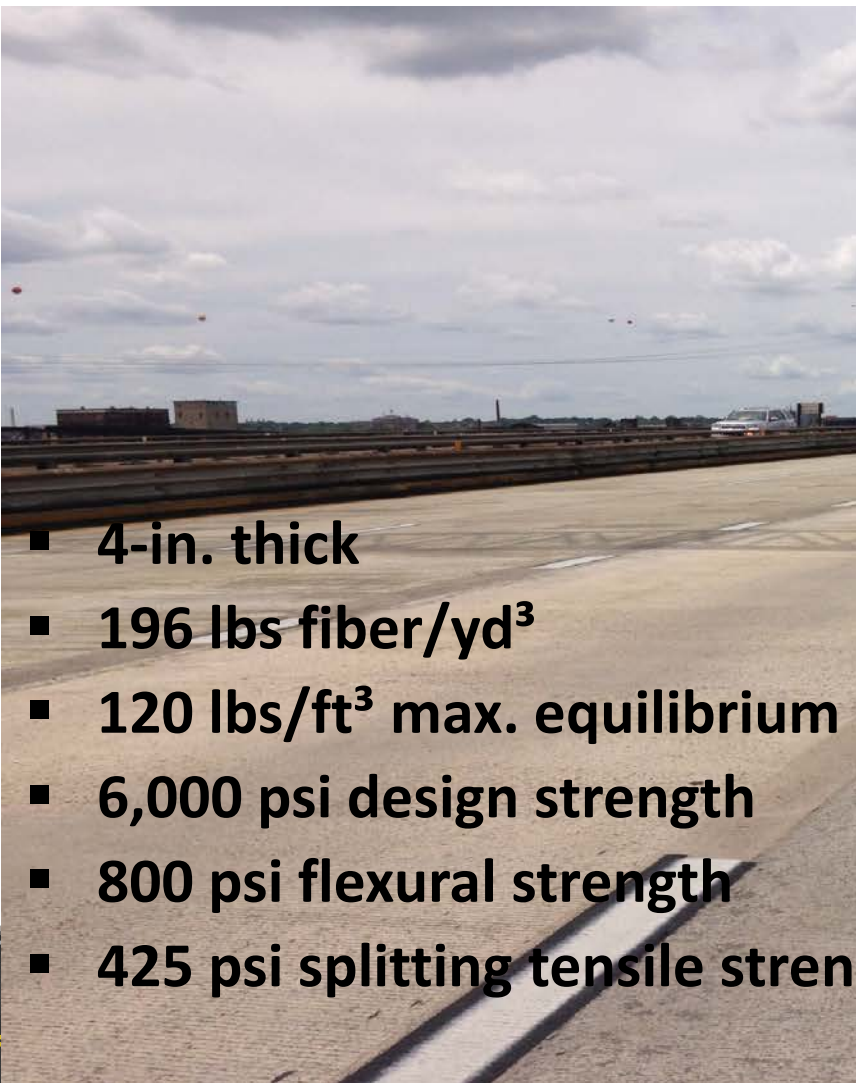
- 550,000+ studs on deck

- 10,500+ wall studs





# Steel Fiber Reinforced Lightweight Concrete



- 4-in. thick
- 196 lbs fiber/yd<sup>3</sup>
- 120 lbs/ft<sup>3</sup> max. equilibrium c
- 6,000 psi design strength
- 800 psi flexural strength
- 425 psi splitting tensile streng

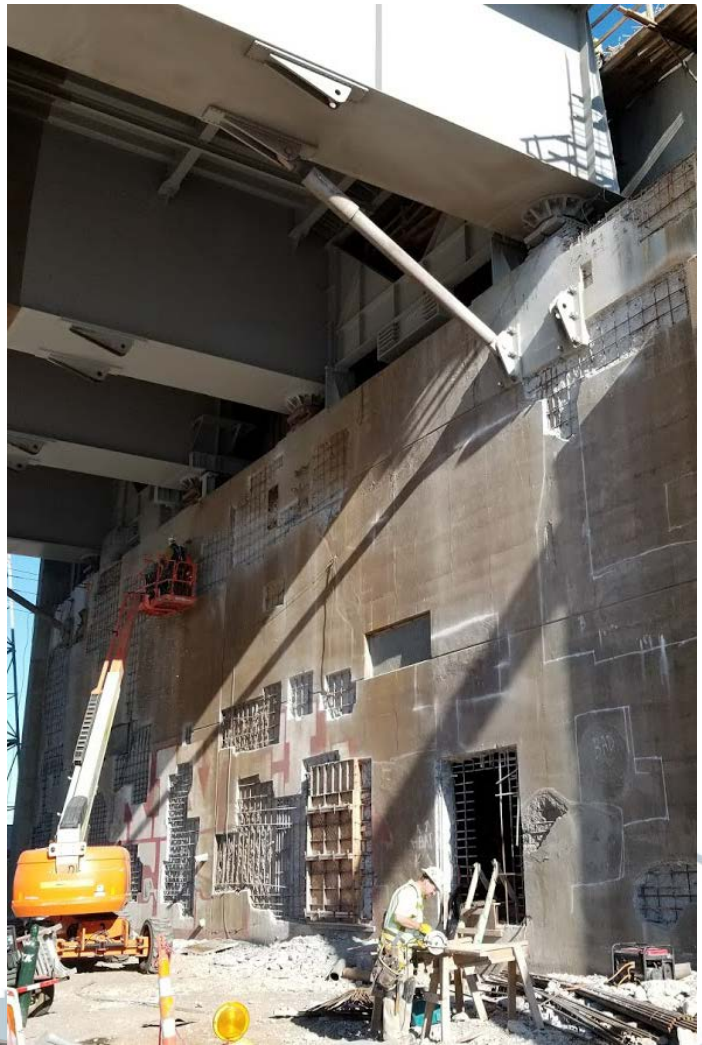


# Total Bent Replacements





# Substructure Repairs



# Bearing Replacement



- Existing Roller Bearings

- New Seismic Isolation Bearings







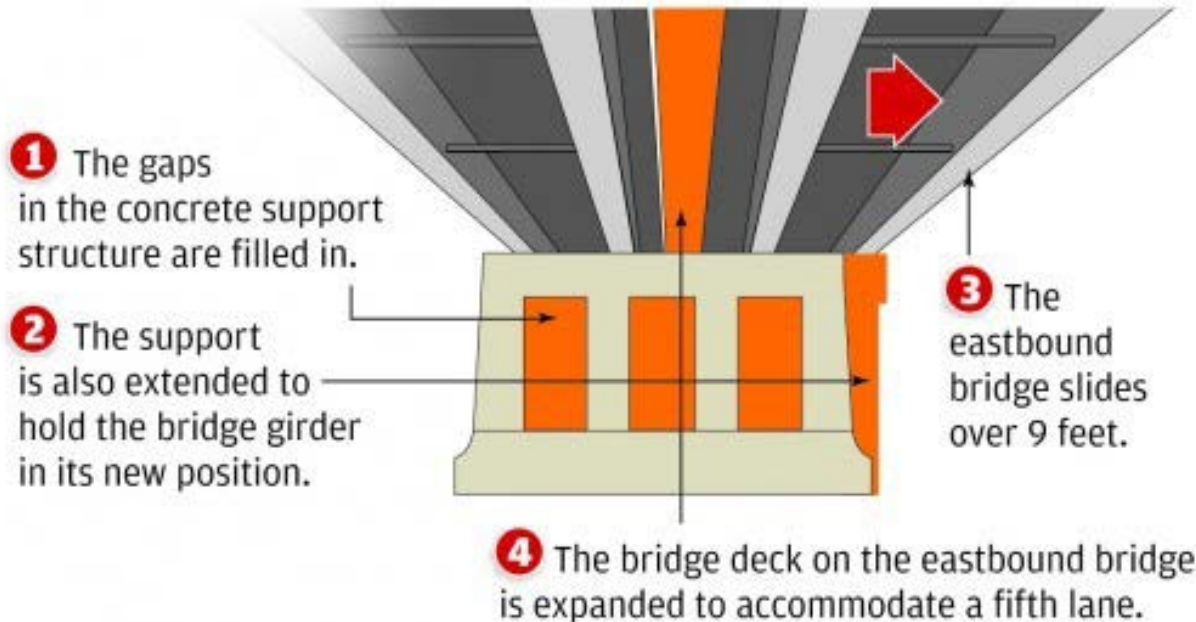
# Bridge Widening ...the Slide

## WIDENING THE POPLAR STREET BRIDGE

Missouri and Illinois are looking at adding a fifth eastbound lane to the Poplar Street Bridge. The \$21 million project would ease commuter traffic.



View toward Illinois from Missouri







#ATM#





# Pier 5 Extension



# Median Removal





# Slide Details



- 6 piers – simultaneously
- 2,165' long
- 54'2" wide
- 20.4 million pounds



# Jacking Equipment





# Track System



10





# The PSB Slide



# Joint Replacement





# Infill Steel







# Opening Day





# Questions?

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