

# Fort Smith Noon Lions Club

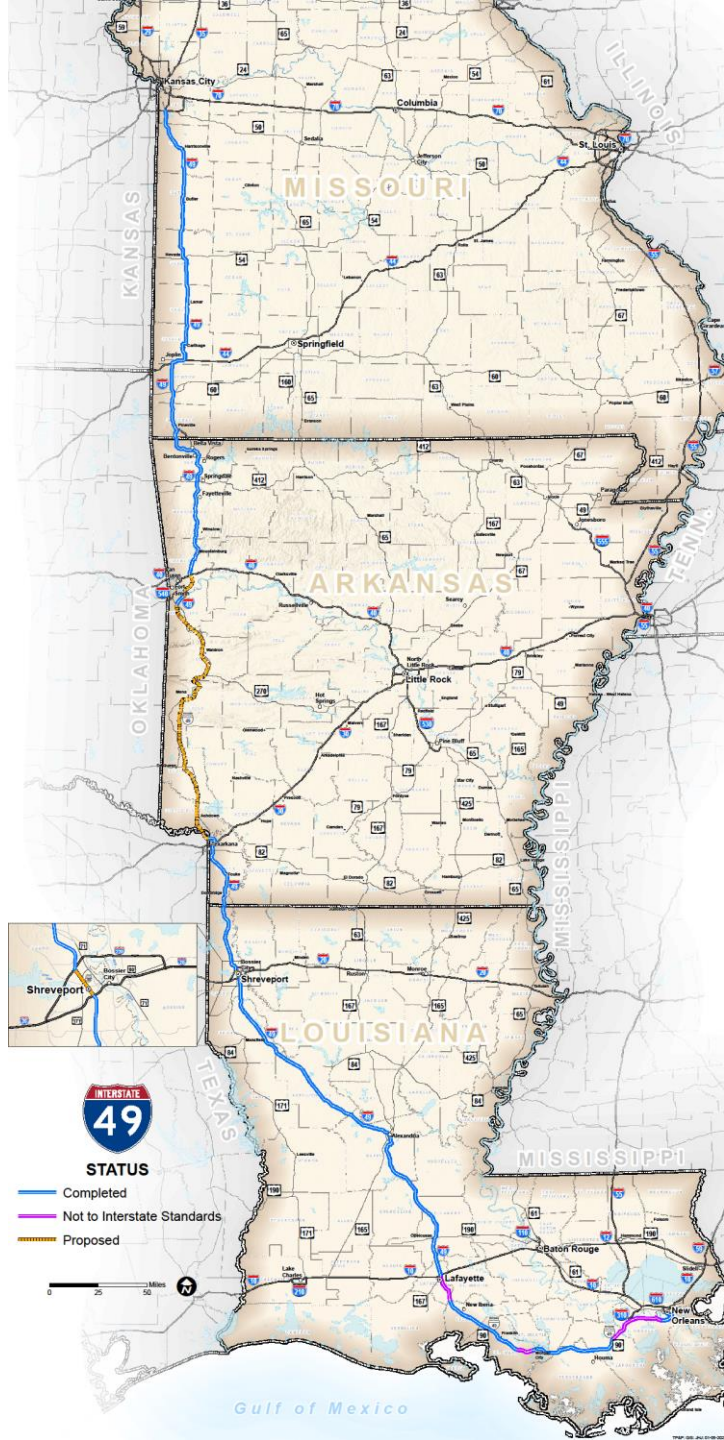
Jason Hughey, P.E. | District 4 Engineer  
April 23, 2024



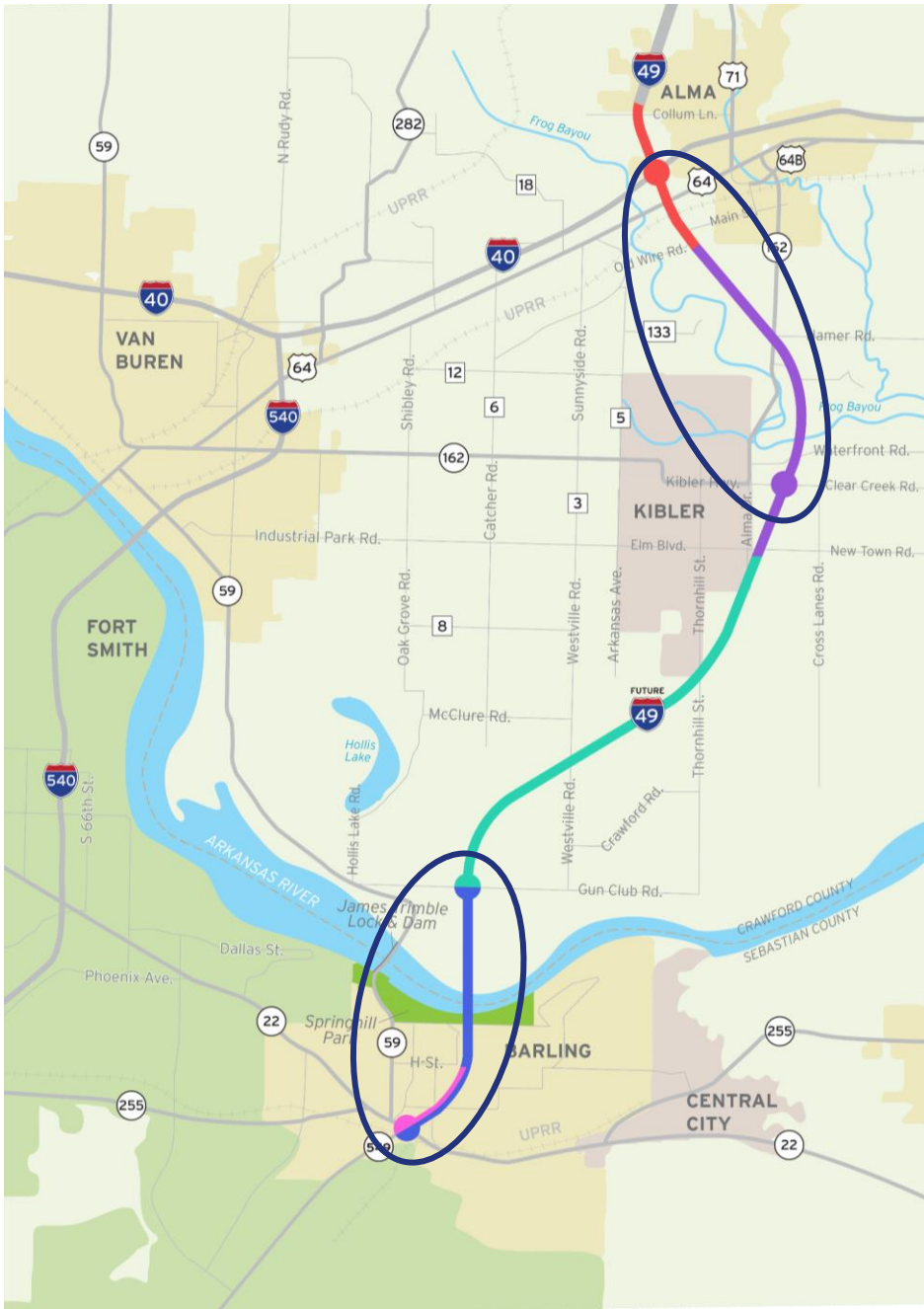









# Interstate 49 ALMA TO TEXARKANA







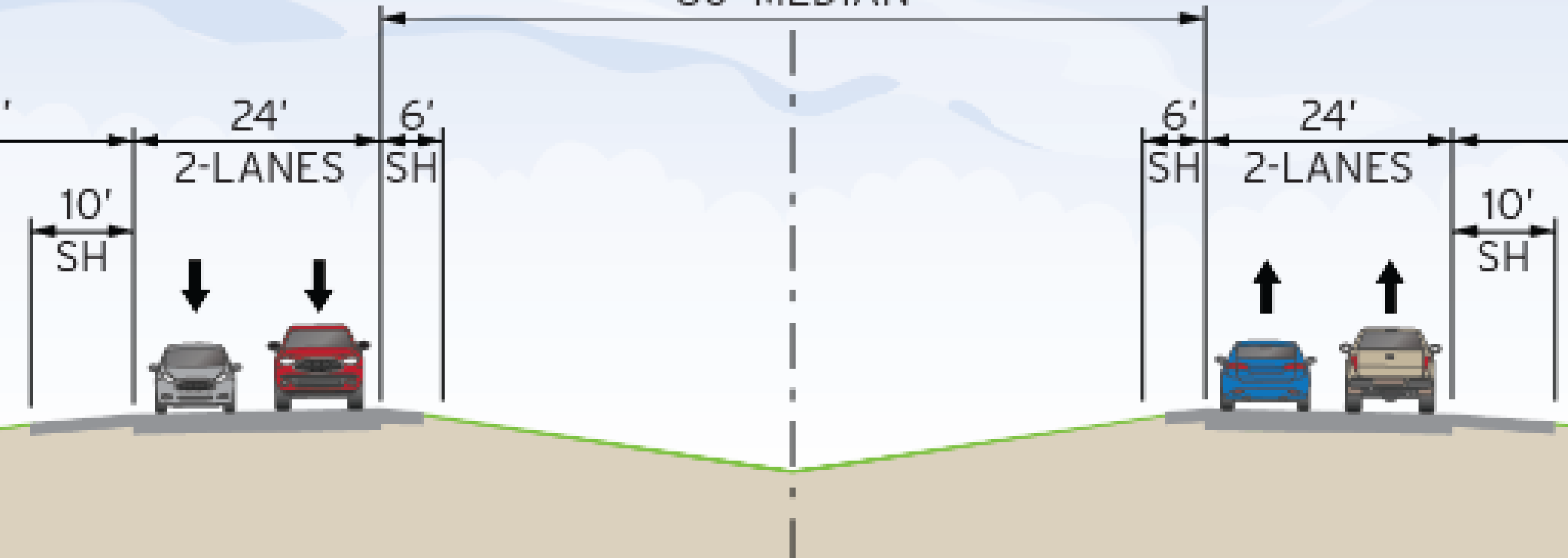
# Preliminary Construction Phases

Segment	Major Work Scope Items
	<b>Clearing and Grubbing</b> (Highway 22 to East H Street)
	<b>River Bridge and Approach Grading/Paving</b> (Highway 22 to Gun Club Road)
Phase 1 	<b>Grading and Six Structures and Approaches</b> (Clear Creek Road to I-40)
	<b>Grading, Paving, Grade Separations and Cross Drainage Structures</b> (Gun Club Road to Clear Creek Road)
Phase 2 	<b>Base, Surfacing, and Six Structures and Approaches</b> (Clear Creek Road to I-40)

# PROPOSED I-49

C.L.

80' MEDIAN





# ECONOMIC POTENTIAL

Enable Forecasted Traffic Volumes of 20k Vehicles/Day Through the Heart of the Chaffee Crossing Redevelopment Area

Provide Direct Access to the Western Arkansas Intermodal Authority (WAIA) Economic Development Area

Provide Freight Access to the WAIA Future Intermodal Port Facility

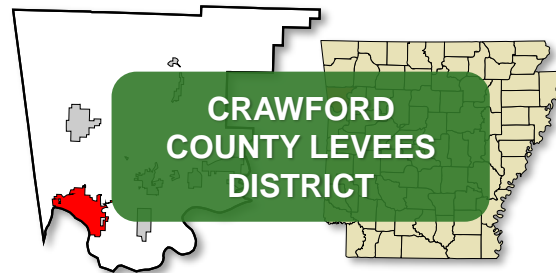
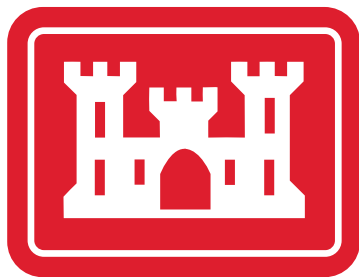
Improve Access to the Designated Opportunity Zone

Extend the Primary Highway Freight System by Approximately 20 miles from I-40 to US 71





# COLLABORATION, INNOVATION & SAVINGS





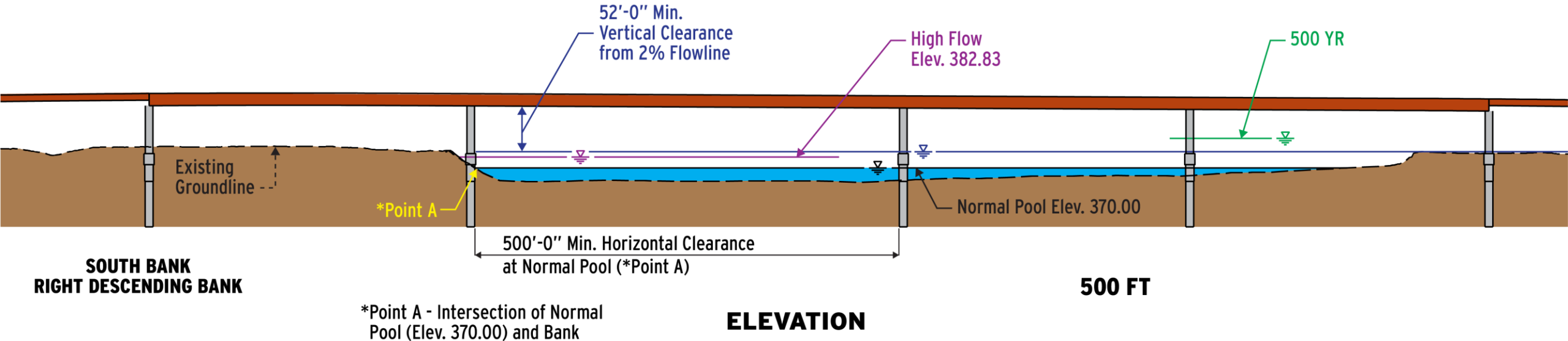


# RIVER BRIDGE LOCATION



**James W. Trimble  
Lock and Dam  
1.2 Miles Upstream**

# USCG REQUIREMENTS



# USCG REQUIREMENTS



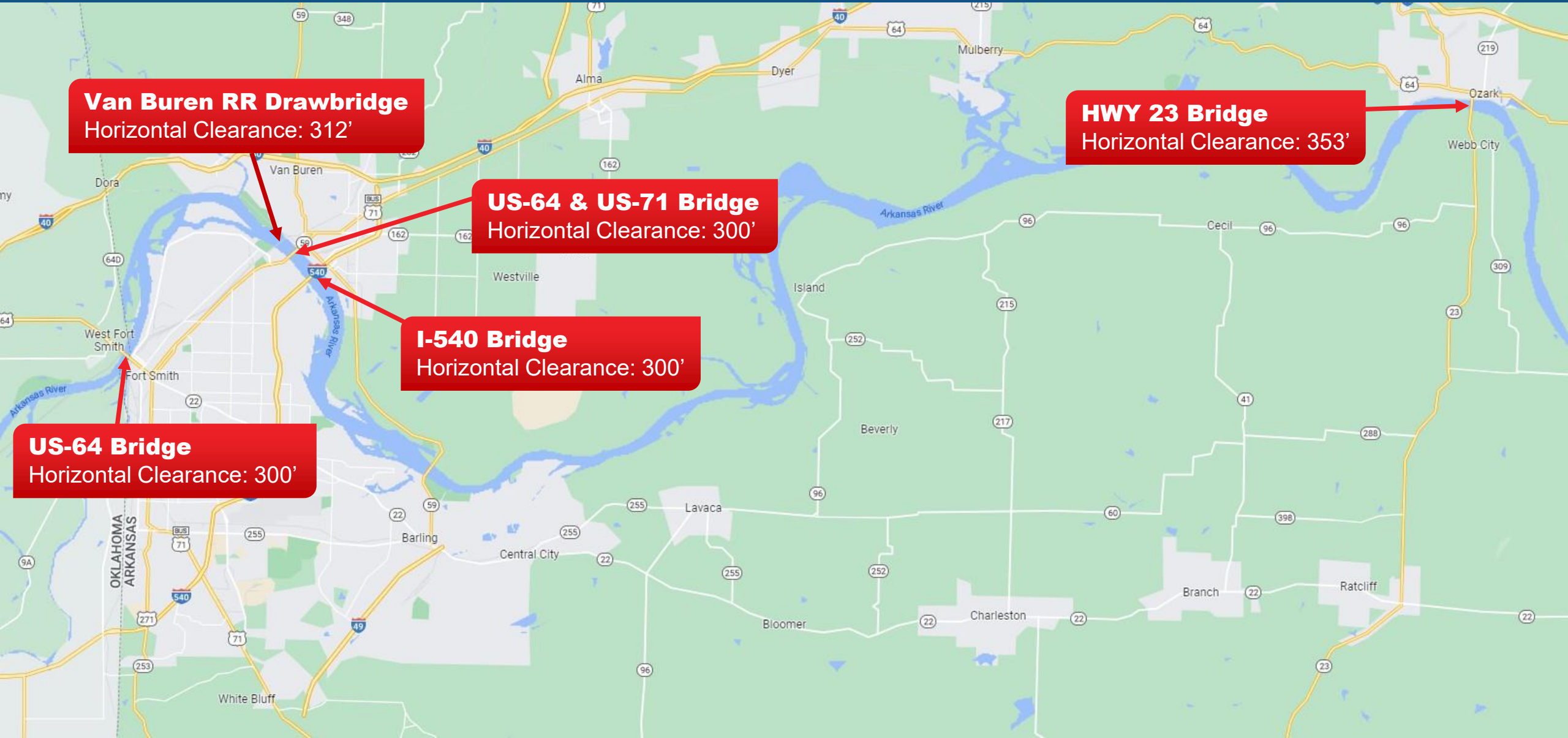
**> 500 ft span**



**< 500 ft span**

# MKARNS RIVER BRIDGE

## NAVIGATION CLEARANCE



**Van Buren RR Drawbridge**  
Horizontal Clearance: 312'

**US-64 & US-71 Bridge**  
Horizontal Clearance: 300'

**I-540 Bridge**  
Horizontal Clearance: 300'

**US-64 Bridge**  
Horizontal Clearance: 300'

**HWY 23 Bridge**  
Horizontal Clearance: 353'

# WHAT'S DRIVING THE NAVIGATION CLEARANCE?

- Input from Tow Boat Operators
- Rapidly Rising Water Levels
- Bend in the River



Back to the Drawing Board

# DESIGN TEAM RECOMMENDATION



- Engage the Seamen's Church Institute (SCI) to Conduct a River Navigation Study
- Test Different Span Lengths
- Provide for the Reasonable Needs of River Navigation



# SCI STUDY

## ASSEMBLING THE TEAM



Governing Agency



Study Administrator



Pilot



Pilot



Pilot



Pilot



Pilot

# SCI STUDY SIMULATOR





# SCI STUDY

## THE RUN MATRIX

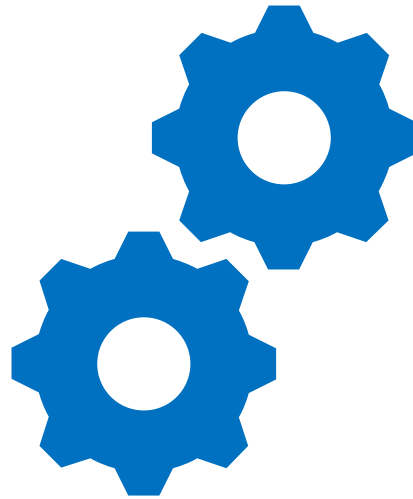


- Span Length
- River Flow
- Upstream/Downstream
- Wind Direction and Speed
- Daytime or Nighttime
- Loaded or Empty Barges
- Documented Each Run and Took Survey

# SCI STUDY RESULTS



Safety



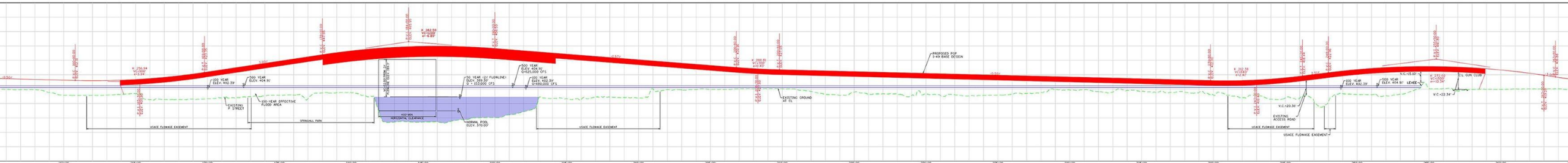
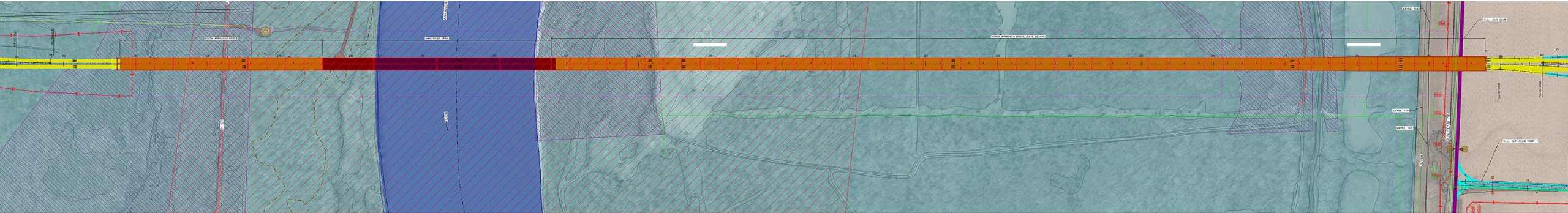
Function

**\$30M**

Est. Cost Reduction

# HYDRAULIC DESIGN CONCEPTUAL

## Long Bridge (Original Concept)



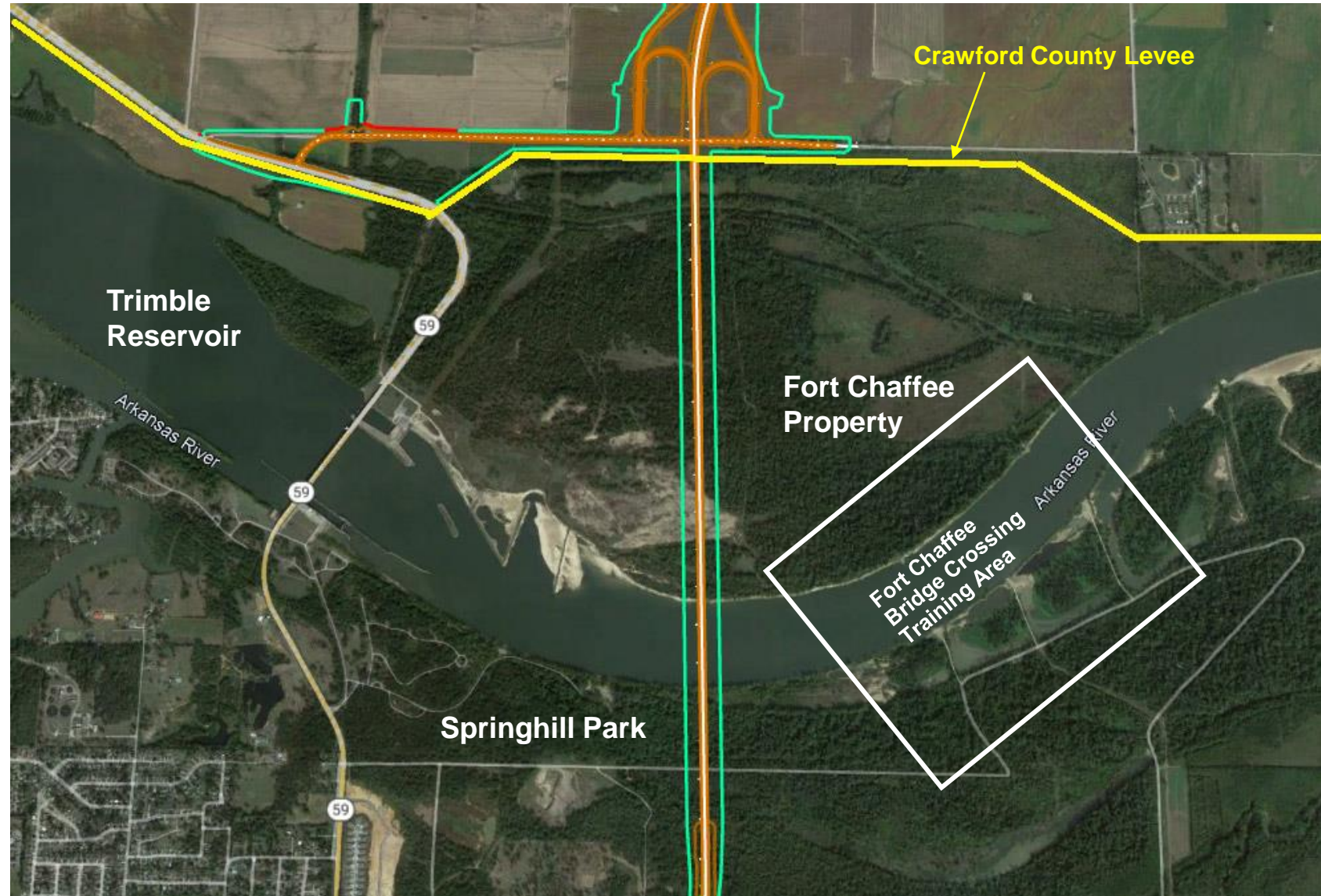
← 9,500 ft →

# OPPORTUNITIES & CHALLENGES

**Opportunity:** Reduce the Length of the Bridge

**Challenge:** Impart no Negative Affect on the:

- Trimble Reservoir
- Crawford County Levee
- Springhill Park
- Fort Chaffee Property



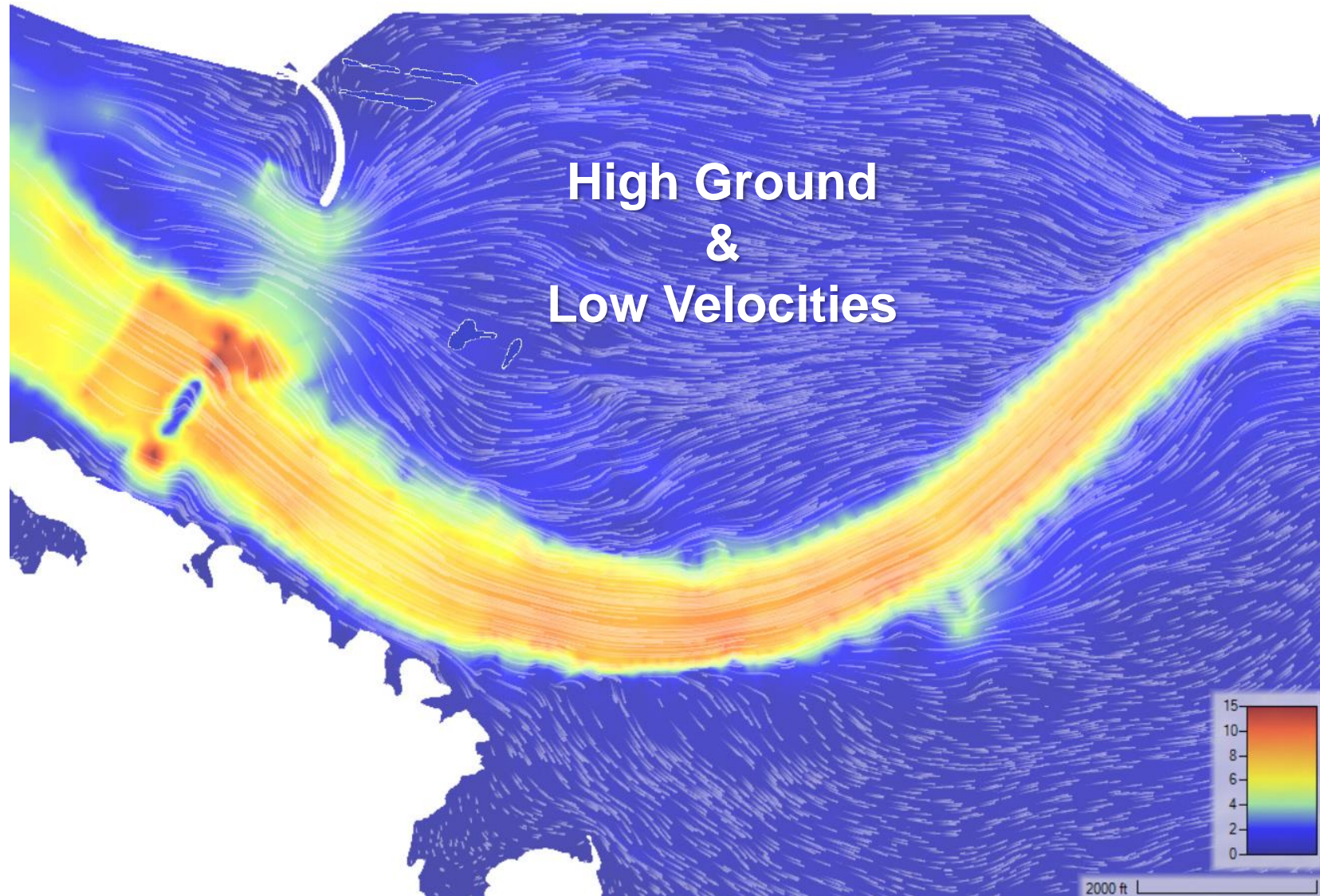
# HYDRAULICS

## EXISTING CONDITIONS

**Existing  
Conditions**

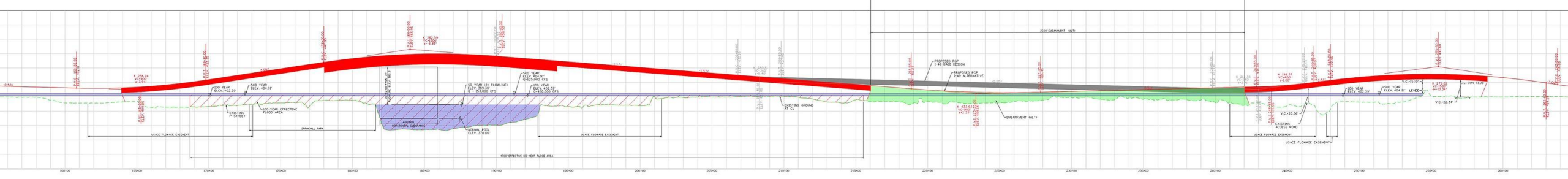
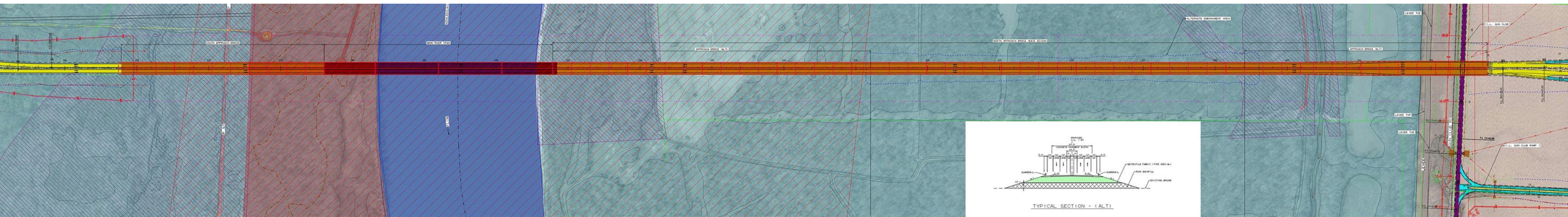
2D Hydraulic Model

Showing Velocity  
Vectors



# REVISED CONCEPT

## Short Bridges (Alternative)



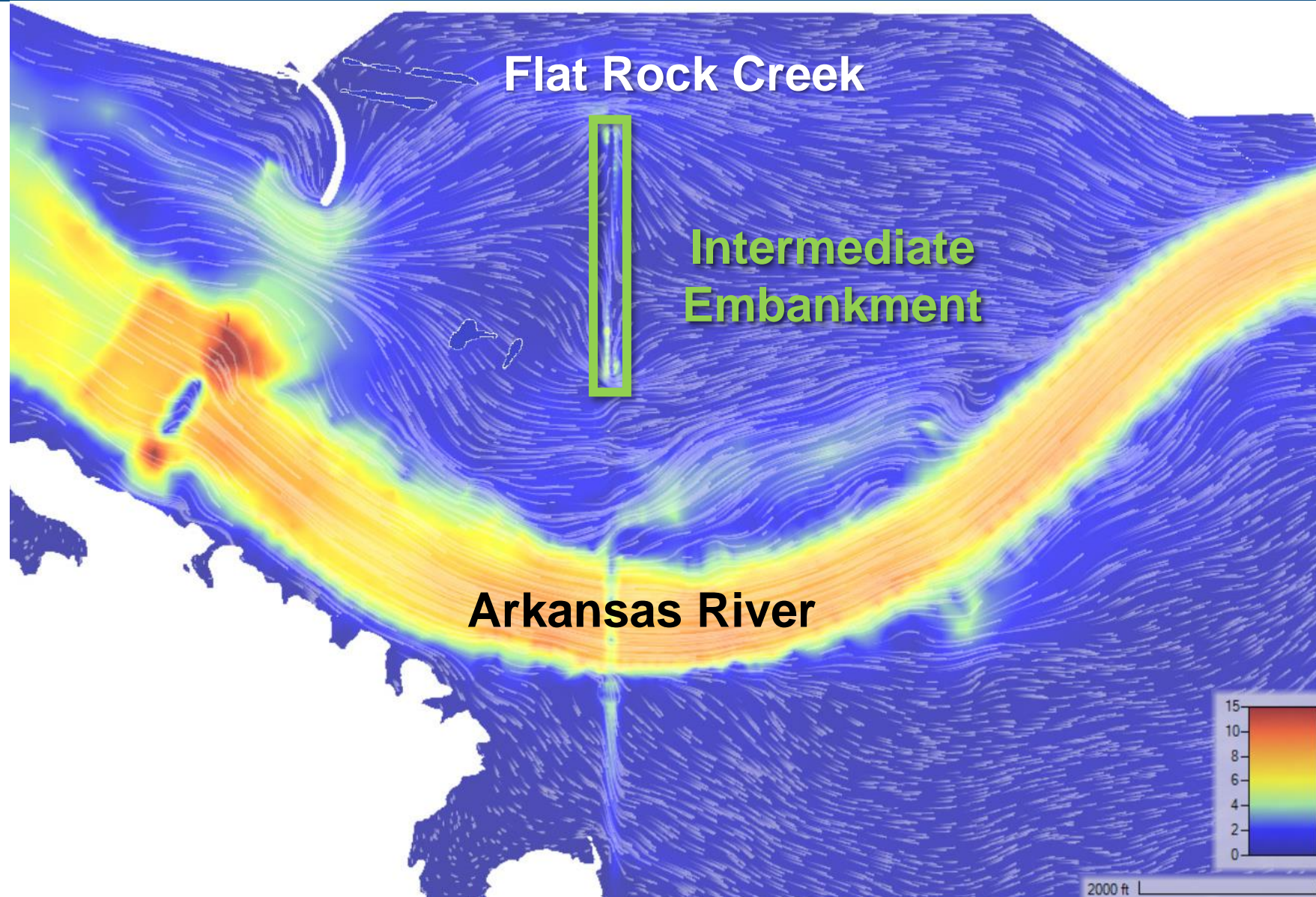
# HYDRAULICS

## PROPOSED CONDITIONS

### Proposed Conditions

2D Hydraulic Model

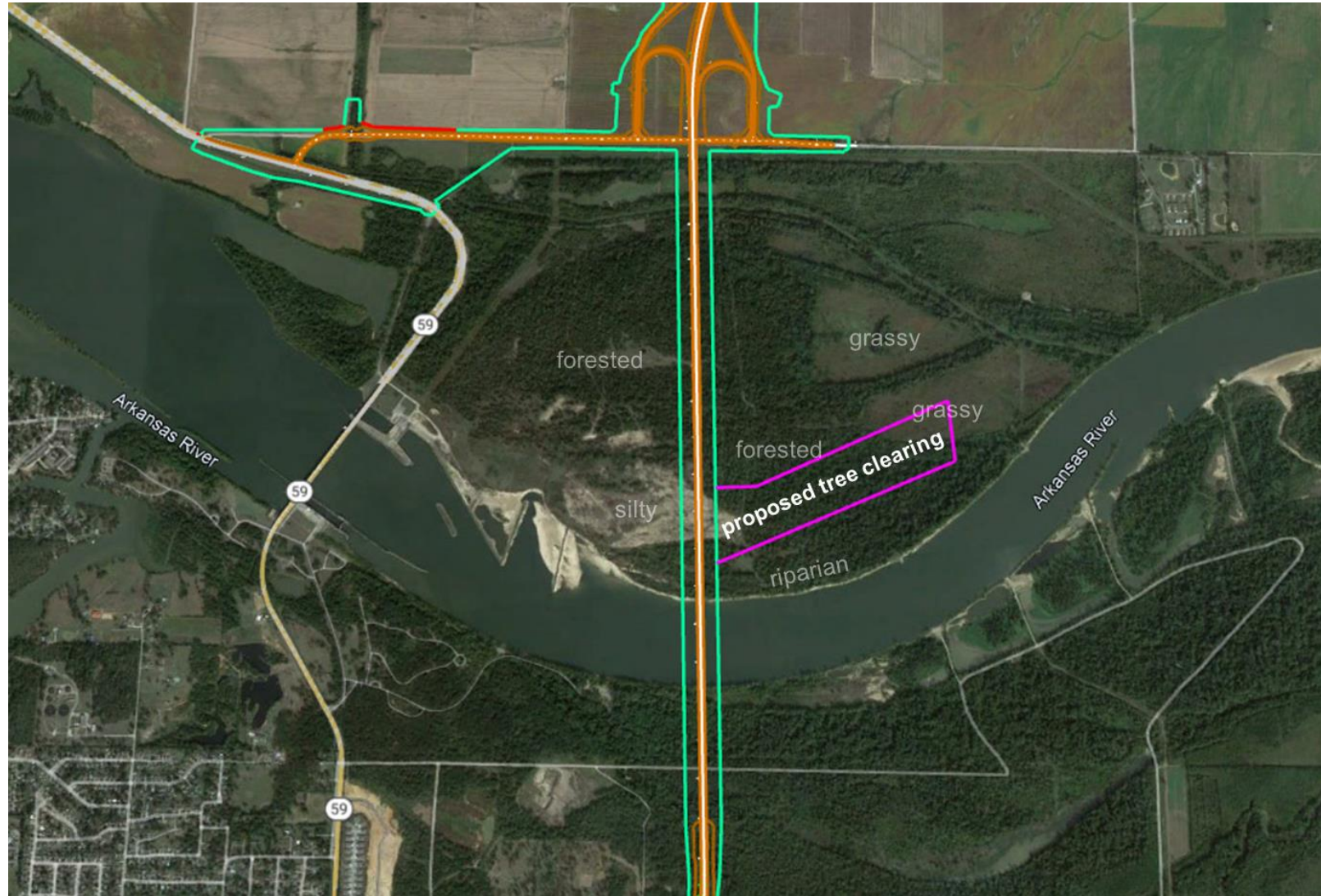
With Intermediate  
Embankment Instead  
of Continuous Bridge



# HYDRAULIC MITIGATION CONCEPT

## Proposed Tree Clearing Area

- Conceptual Extents
- 60 to 90 Acres
- Ft. Chaffee Concurrence

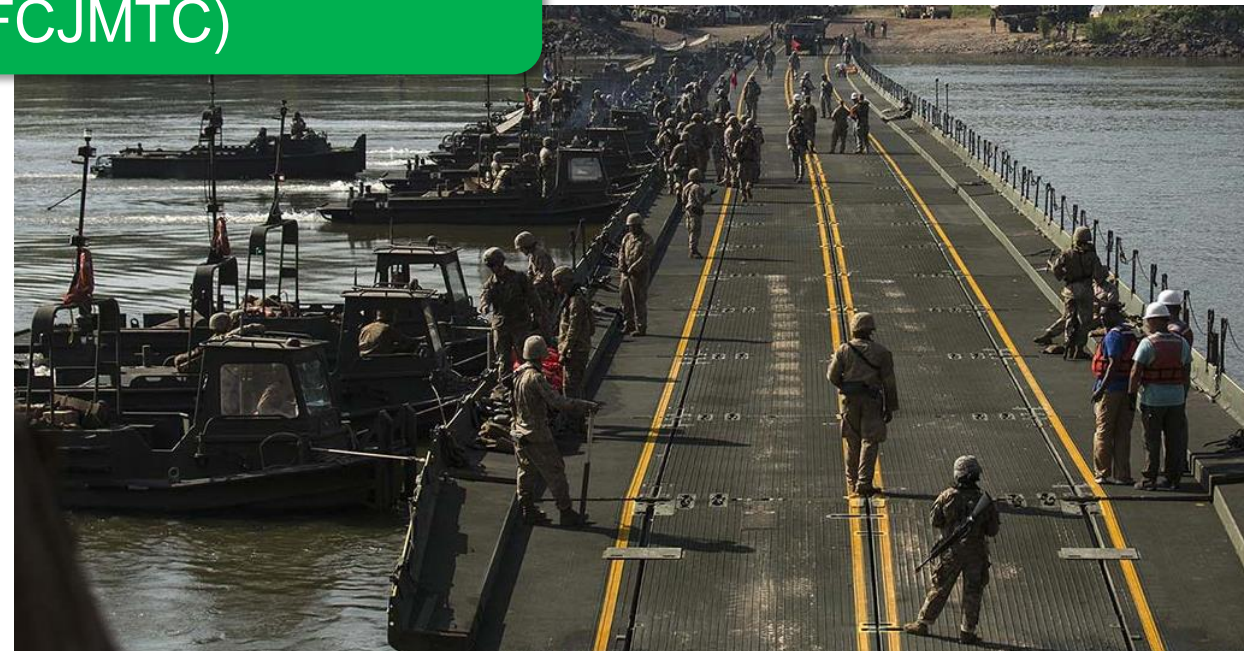




# FORT CHAFFEE ACTIVITIES



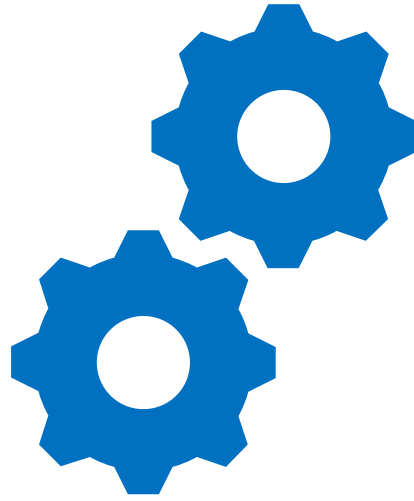
Fort Chaffee Joint Maneuver Training Center (FCJMTC)



# HYDRAULIC STUDY RESULTS



Safety



Function

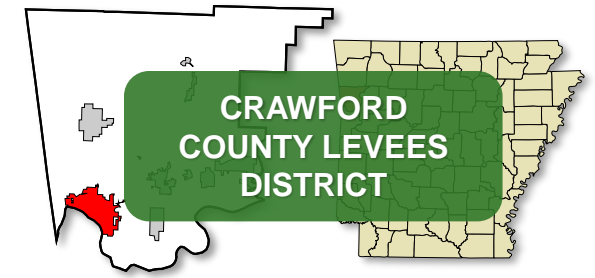
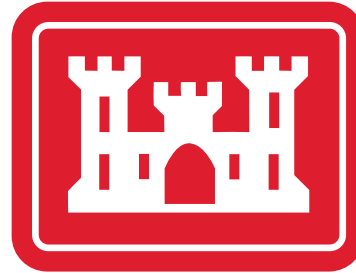
**\$35M**

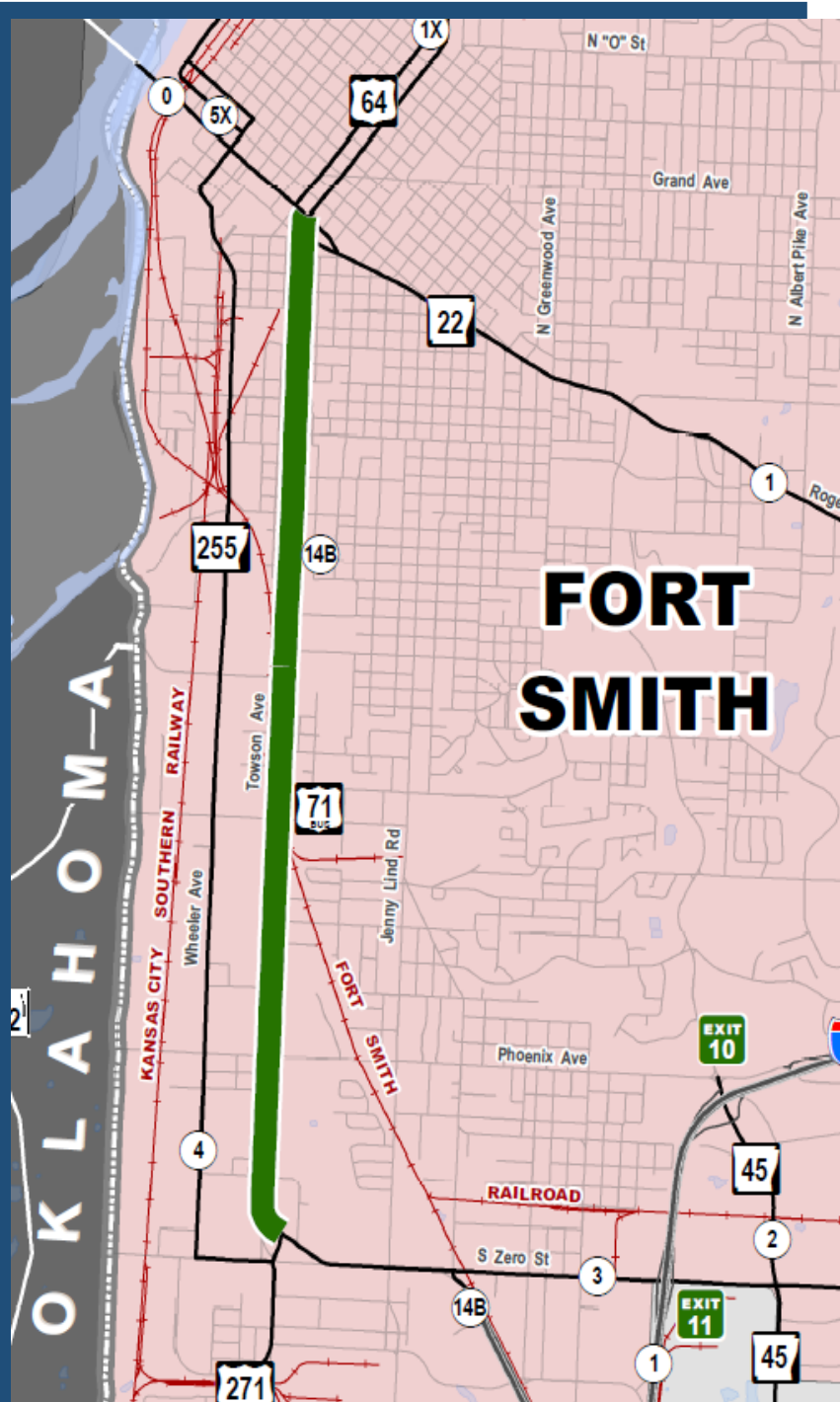
Est. Cost Reduction



# COLLABORATION, INNOVATION & SAVINGS

**\$65  
Million  
Estimated  
Cost  
Savings**





# HWY. 71B – TOWSON AVE.

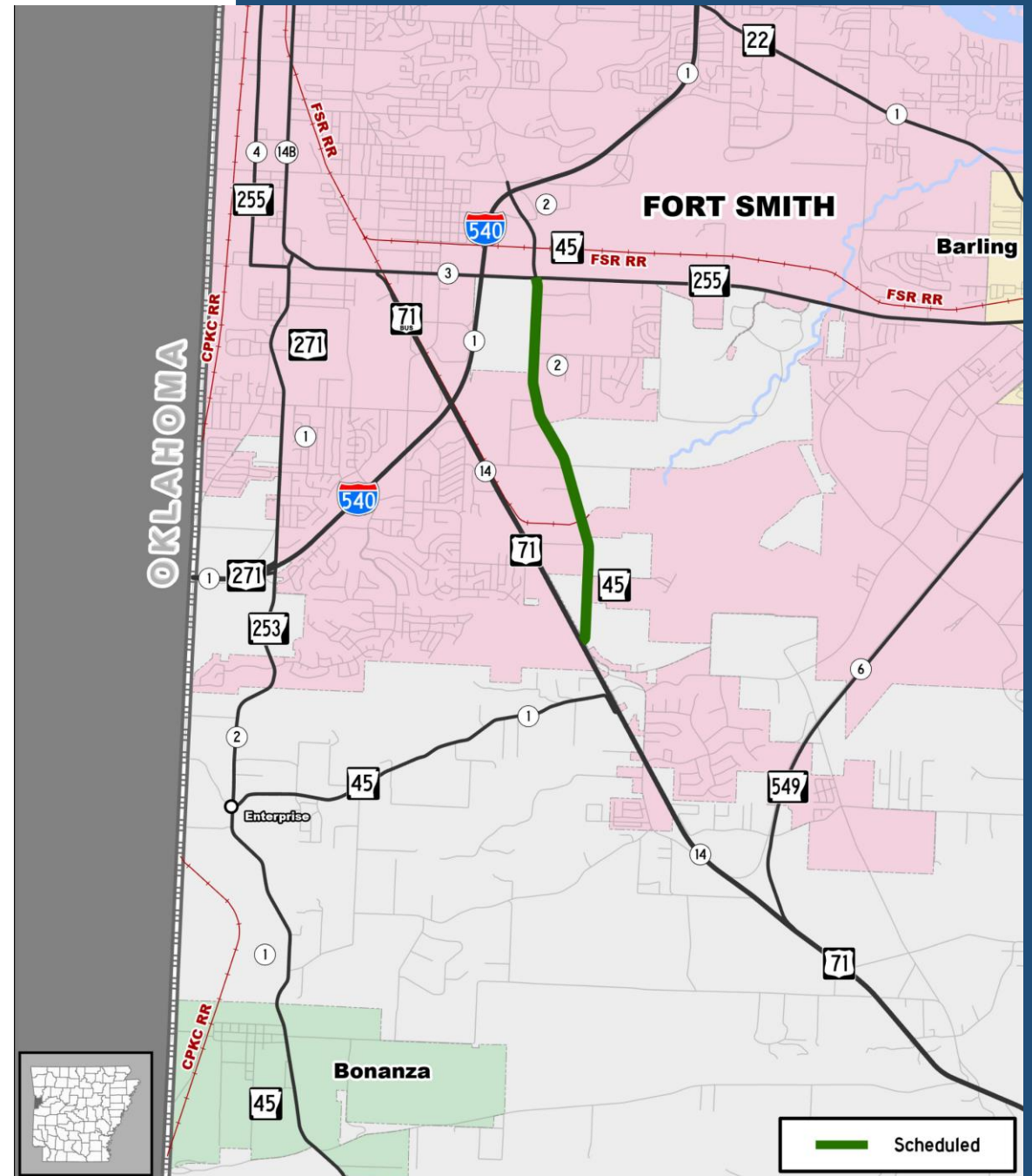
---

- Pavement Preservation, Drainage and Sidewalk Improvements
- Schedule – TBD
- Est. Cost: \$10-15 million
- Partnering with Fort Smith

# HIGHWAY 45

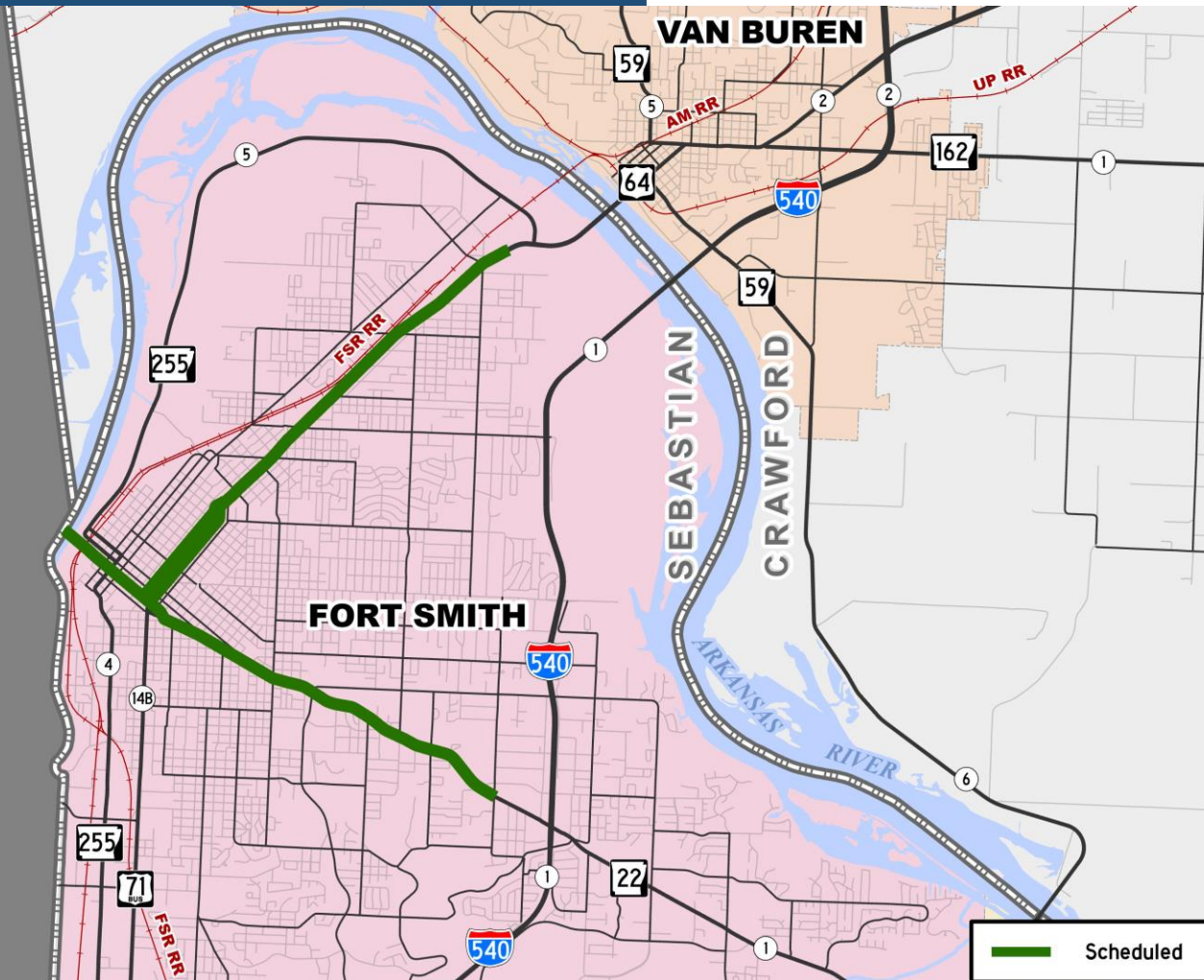
---

- Widening
- 3 Miles
- Est. Cost: \$20-30 Million
- Schedule - TBD



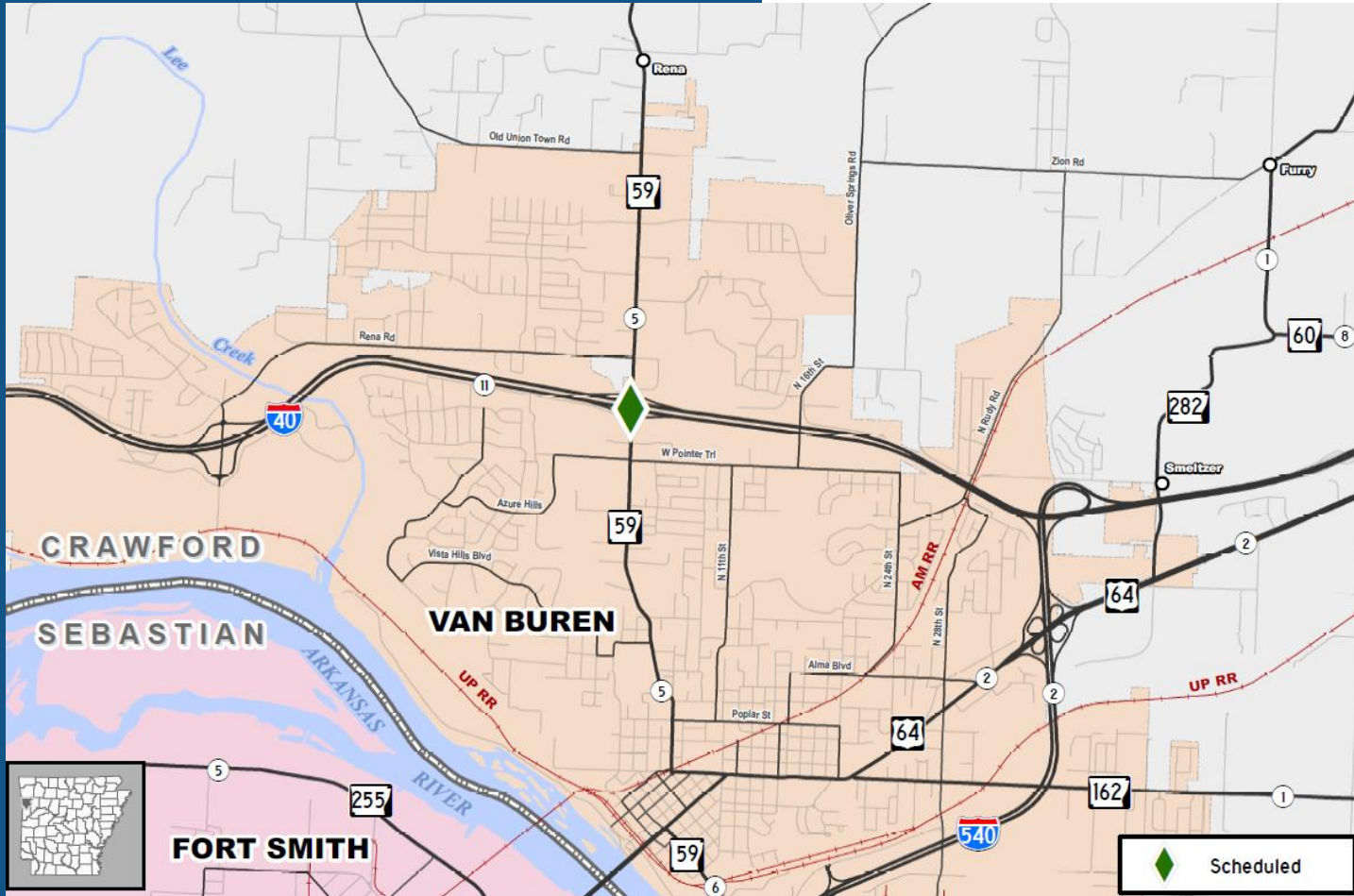
# HIGHWAYS 22 & 64

(Midland and Garrison/Rogers)



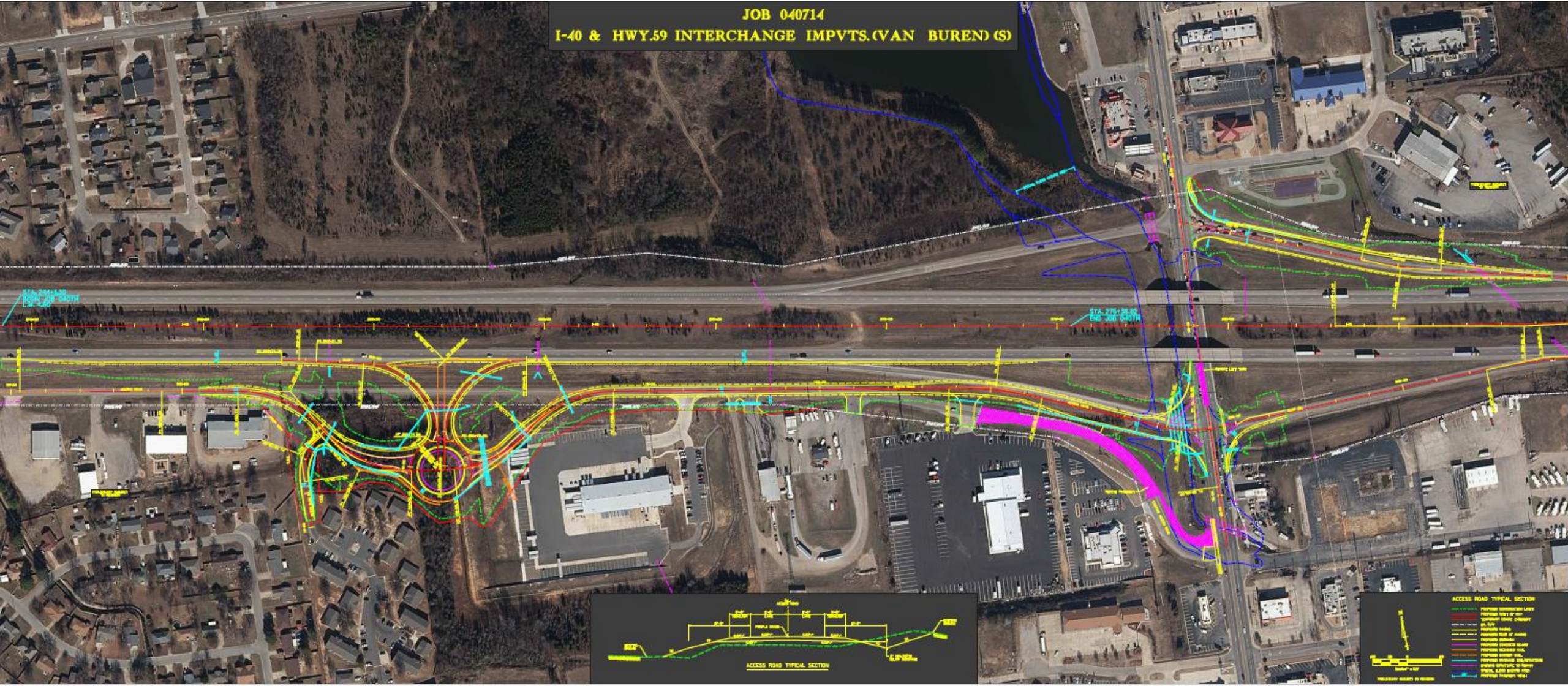
- Pavement Preservation
- 9 Miles
- Est. Cost: \$3-5 Million
- Scheduled 2025

# INTERSTATE 40/HIGHWAY 59



- Interchange Improvements
- 0.5 Mile
- Est. \$10-20 Million
- Scheduled for Mid 2024

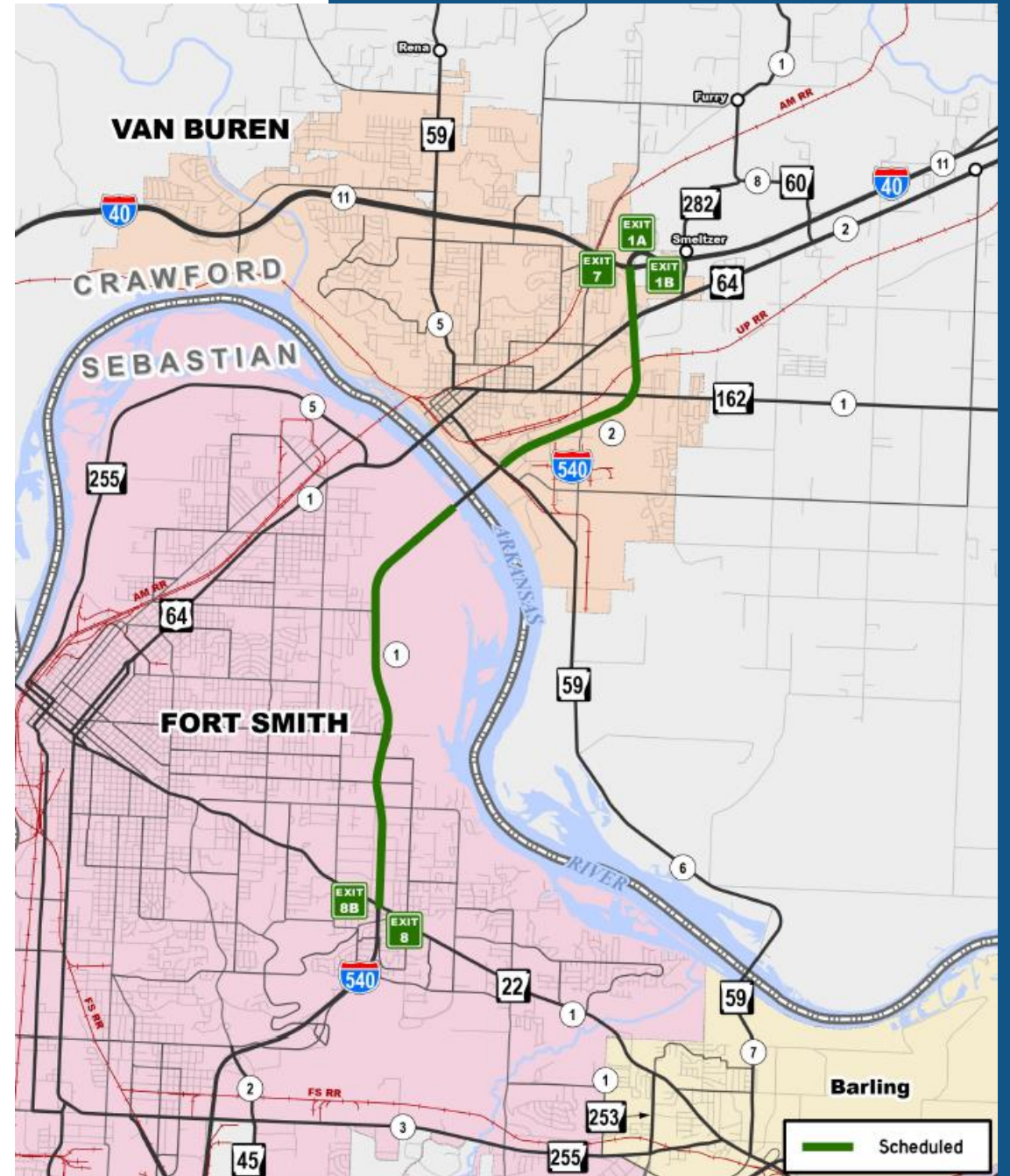
# INTERSTATE 40/HIGHWAY 59



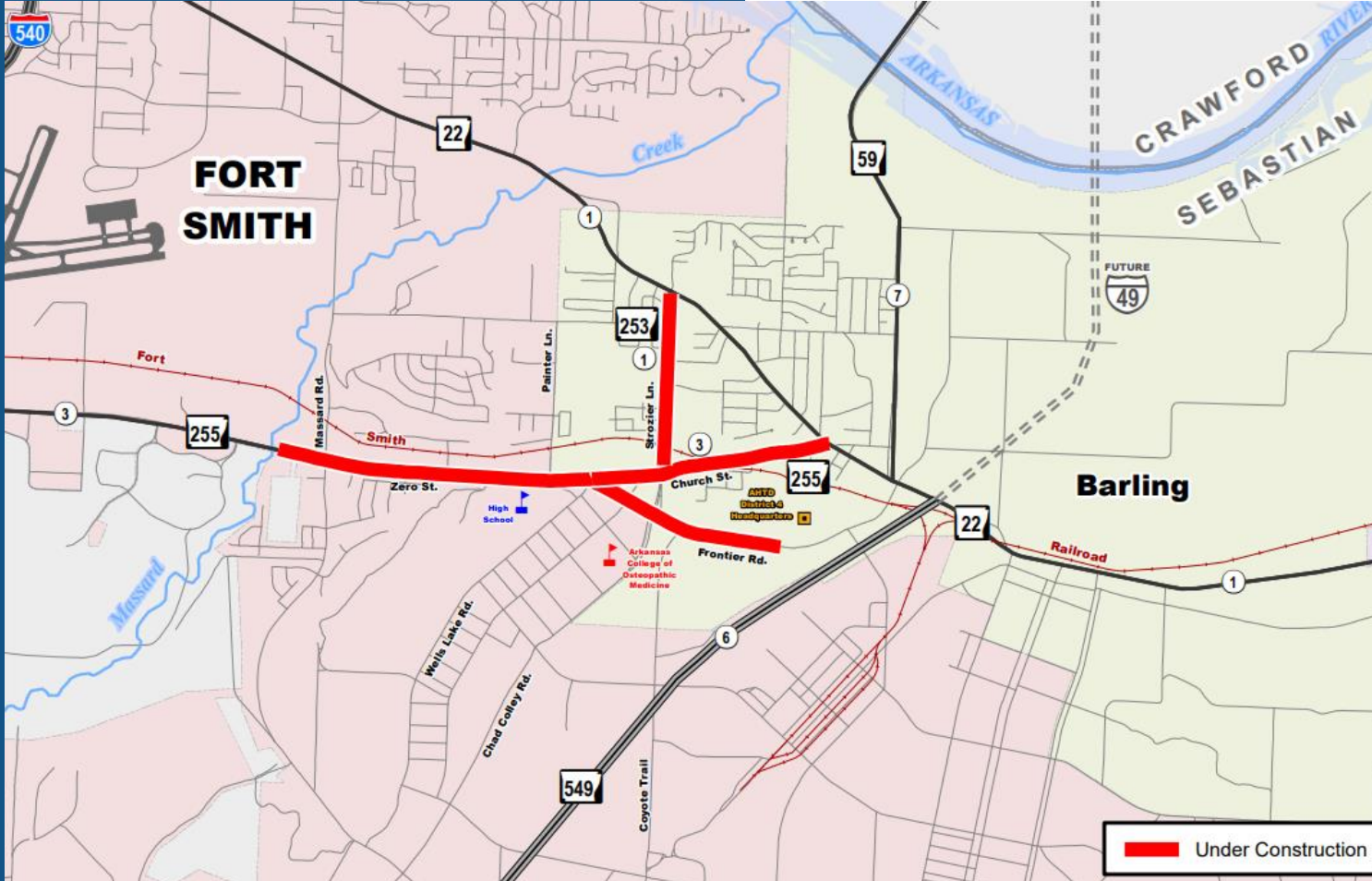


# INTERSTATE 540

- Resurfacing & Joint Repair
- 7 Miles
- \$22 Million contract awarded to Emory Sapp & Sons
- Est. Completion Mid 2025



# HIGHWAYS 255 & 253

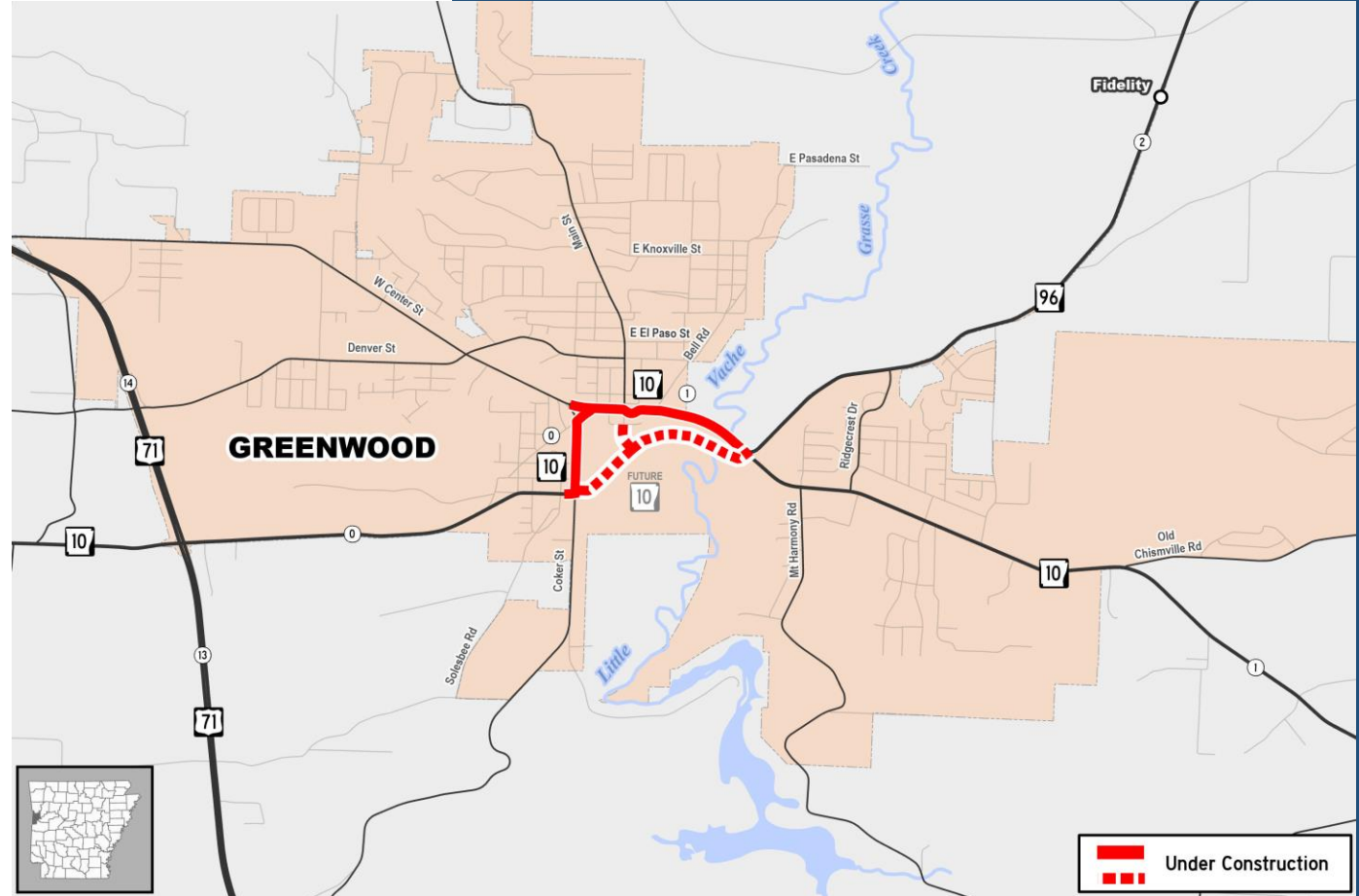


- Widening & Relocation
- 4 Miles
- Awarded to Forsgren, Inc. for \$19.3 million
- Construction scheduled to be complete late 2025

# HIGHWAY 10

## Greenwood Bypass

- New Location & Reconstruction
- Awarded in Nov. 2023 for \$58 Million
- Contractors: Forsgren, Mobley Construction, and Manhattan Road & Bridge, Joint Venture
- Est. Completion: Late 2026



# HIGHWAY 10

## Greenwood Bypass

- Major Widening (2 to 5 Lanes)
- 2 Miles
- Project Development Phase





**ASK**



***DOT***

Scan the QR Code to visit our  
customer service portal!



# Fort Smith Noon Lions Club

Jason Hughey, P.E. | District 4 Engineer  
April 23, 2024

