

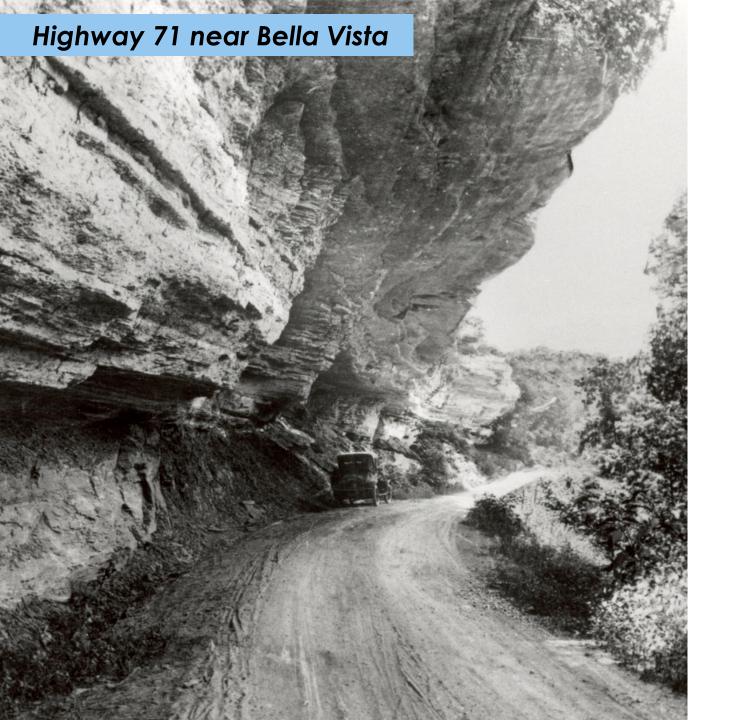
# Van Buren Area and Interstate 49 Updates

Jared Wiley, P.E. Chief Engineer – Preconstruction

November 8, 2023

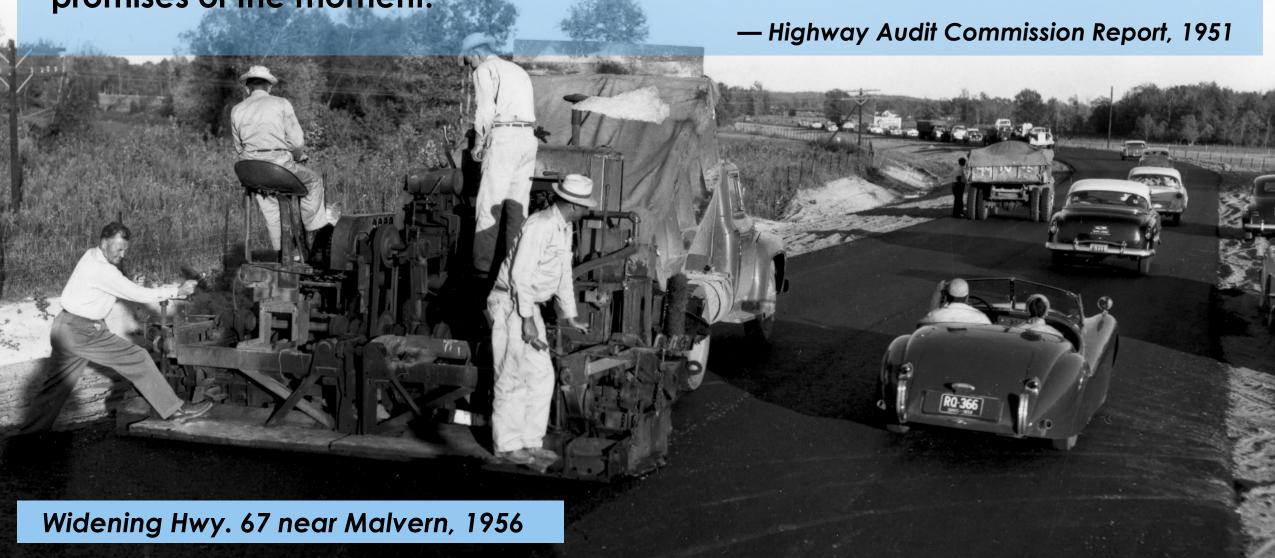






- First Commission created
  - No Highway Department
  - No Highway System
- 3,600 Vehicles
- 36,000 miles of public roads
- \$72,000 total budget

The advice, counsel and expert know-how which is available from the Department's own technical and administrative staffs bear scant weight indeed when they are in conflict with the political pressures and political promises of the moment.



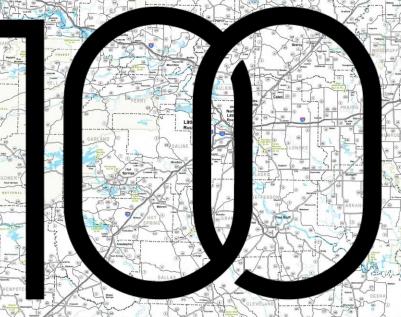


# Major Milestones

1975	1 <sup>st</sup> State to Complete its Interstate System
1985	Rural Road Program – Out of the Mud
1991	Highway Improvement Program
1999	Interstate Rehabilitation Program
2011	2 <sup>nd</sup> Interstate Rehabilitation Program
2012	Connecting Arkansas Program
2020	Renew Arkansas Highways Program

# S S MARION S CARCY SEARCY SEARCY SEARCY

CELEBRATING



YEARS OF PROGRESS



#### **ARDOT Quick Facts**

- 3<sup>rd</sup> Largest State Agency
- Approximately 3,700 Employees
- 16,450 Highway Miles
- More Than 7,000 Bridges
- Central Offices in Little Rock
- 10 Districts Statewide

### ARDOT ANNUAL FUNDING

01

½-cent Sales Tax Funds

\$285 Million

02

Regular State Funds

\$650 Million

03

Federal Funds

\$800 Million



### Ten Year Plan

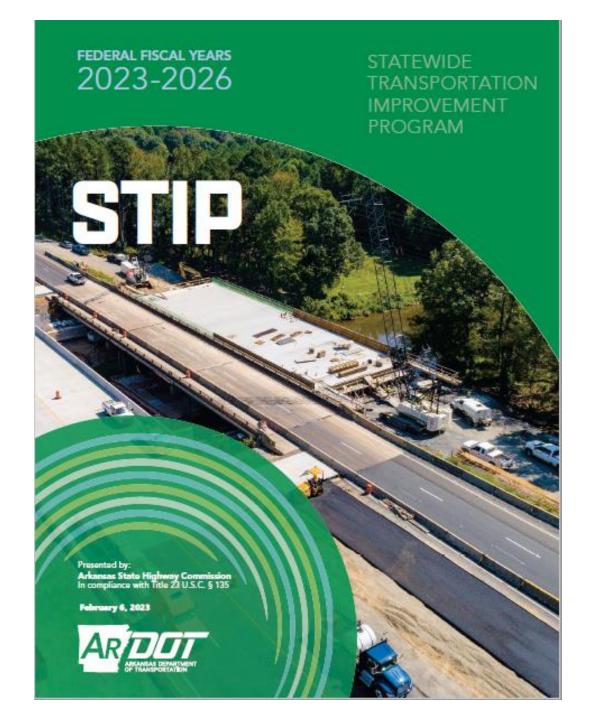
#### **System Preservation**

- 7,000 Miles
- 1,100 Bridges

#### Capital and Capacity

\$1.2 Billion Annually





### 2023-2026 **STIP**



**814 Projects** 



4,100 Miles



271 Bridges



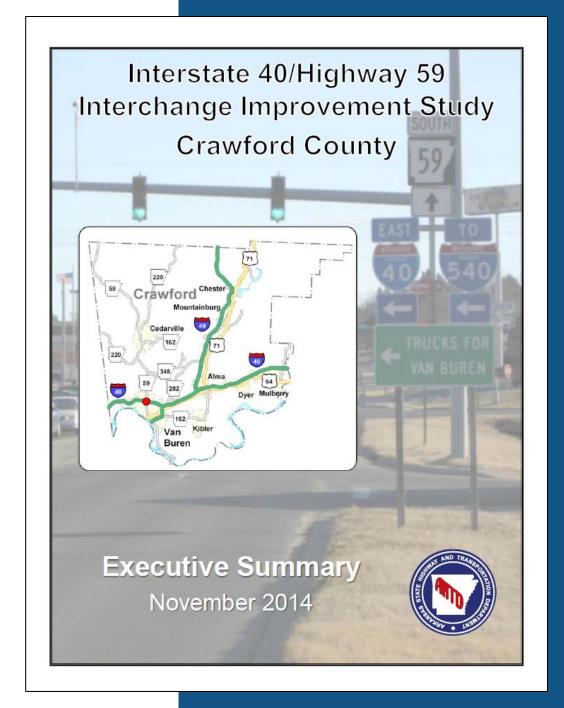
\$4.4 Billion



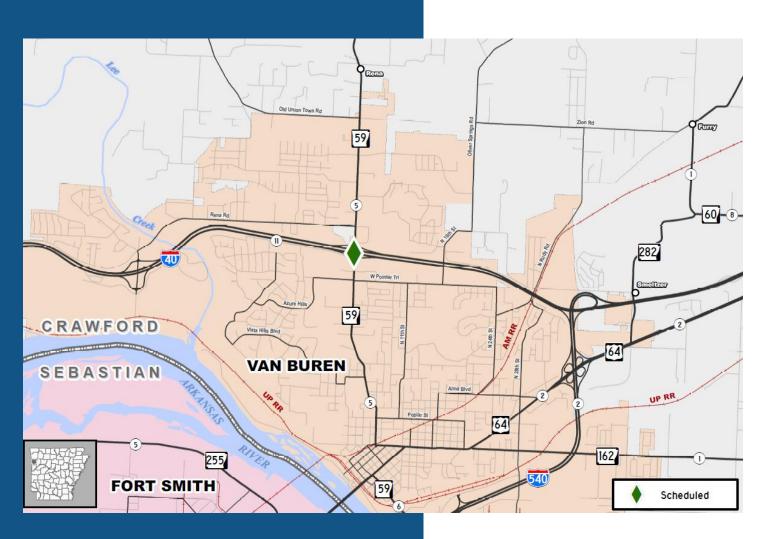
# Local Project Updates

# INTERSTATE 40/ HIGHWAY 59 STUDY CRAWFORD COUNTY

- Study Authorized by Minute Order 2008-096
- Needs & Feasibility Study
   Completed in November 2014
- Identified Potential Alternatives to Alleviate Traffic Congestion

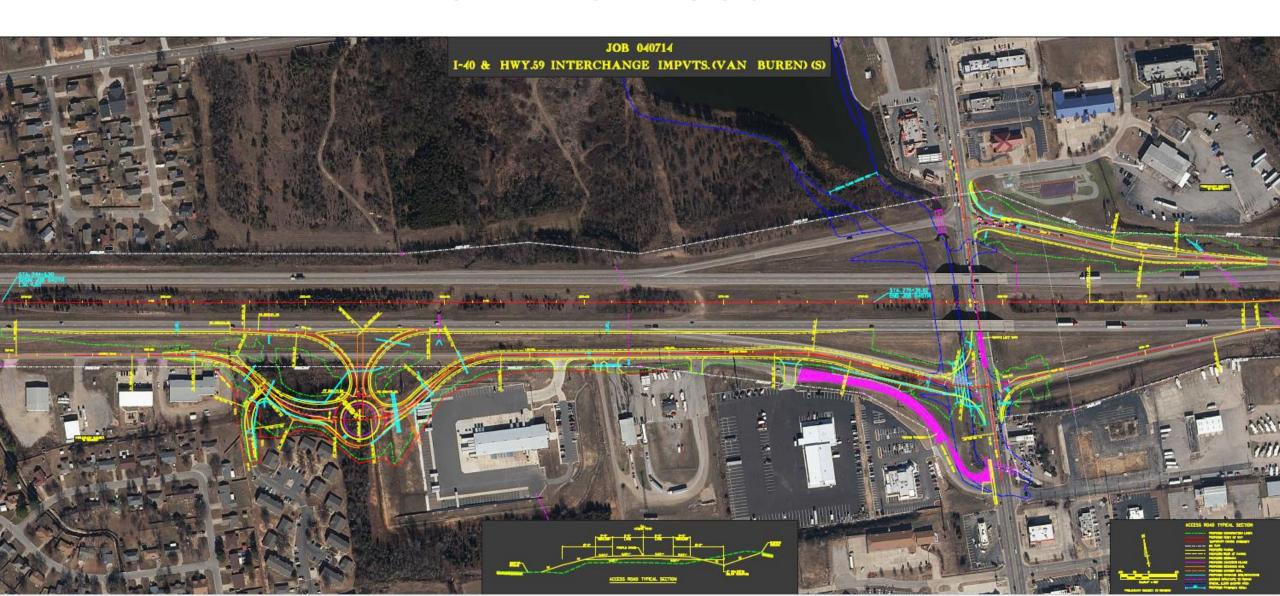


# INTERSTATE 40/HIGHWAY 59 CRAWFORD COUNTY



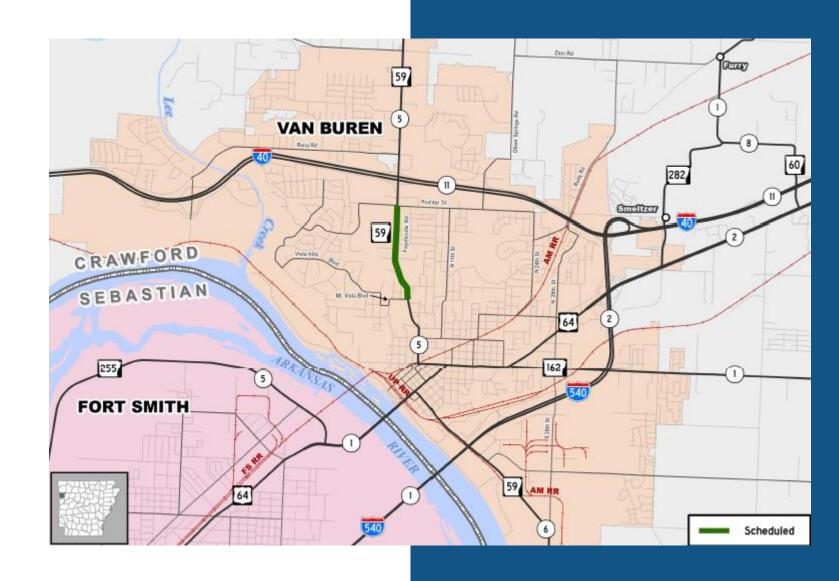
- Interchange Improvements
- 0.5 Mile
- Est. \$10-20 Million
- Scheduled for Mid 2024

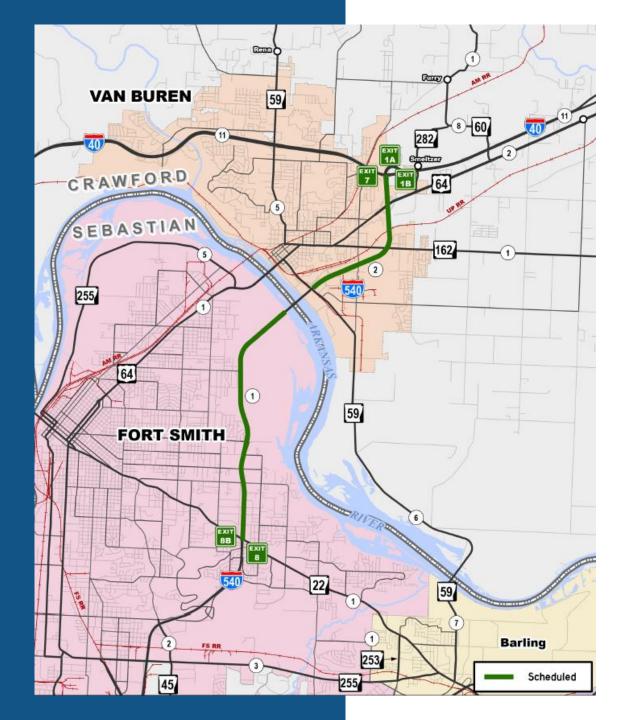
# INTERSTATE 40/HIGHWAY 59 CRAWFORD COUNTY



### HIGHWAY 59 CRAWFORD COUNTY

- Major Widening
- 1 Mile
- Est. \$5-10 Million
- Scheduled for Mid 2026





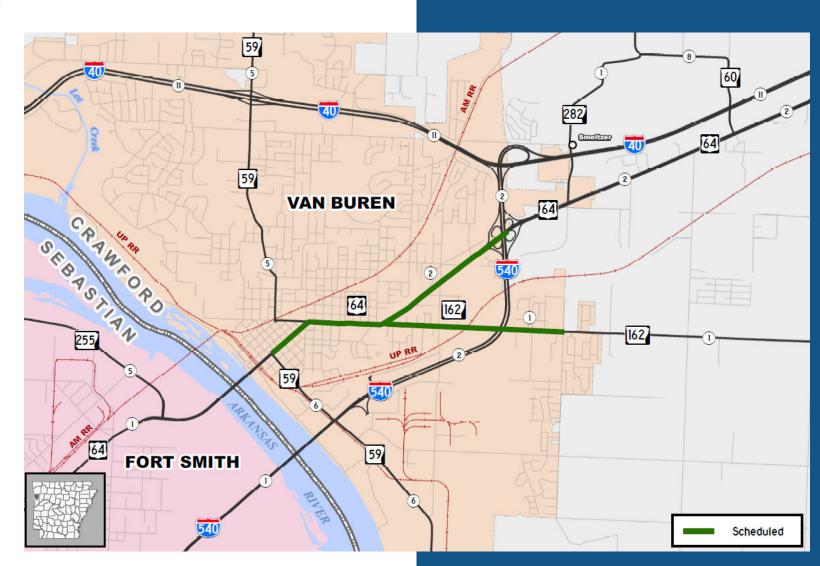
# Interstate 540 CRAWFORD & SEBASTIAN COUNTIES

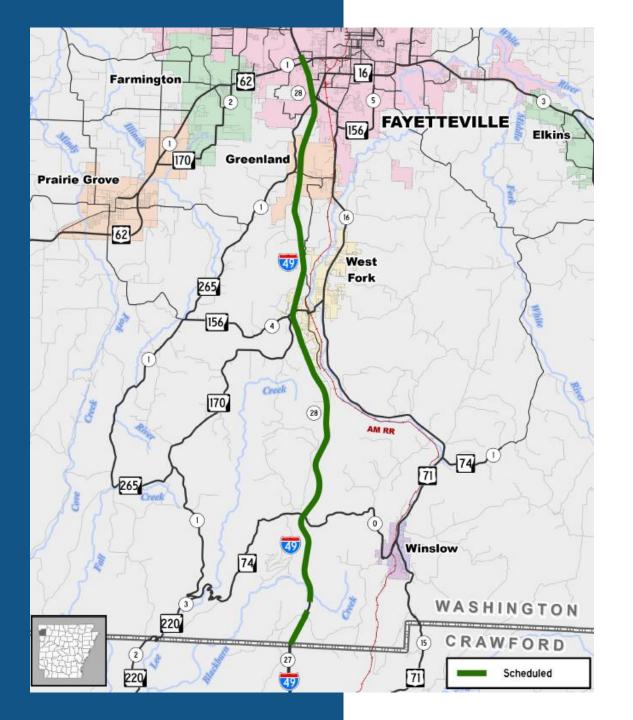
- Resurfacing & Joint Repair
- 7 Miles
- Est. \$10-20 Million
- Scheduled for Early 2024

### HIGHWAYS 64 & 162

**CRAWFORD COUNTY** 

- Resurfacing
- 4 Miles
- Est. \$2-3 Million
- Scheduled for 2025





# Crawford Co. Line – Hwy. 62 WASHINGTON COUNTY

- Resurfacing
- 20 Miles
- Awarded to Emery Sapp & Sons for \$37.3 Million in November 1st Letting



# Interstate 49 Updates

0

#### Calgary Vancouver CANADA Regina Winnipeg Seattle WASHINGTON Thunder Bay MAINE 95 VERMONT MONTANA Sudbury NORTH DAKOTA MINNESOTA 5 **1**5 OREGON IDAHO NEW wisconsin St. Paul HAMPSHIRE Toronto W YORK Boise **Green Bay** MASSACHUSETTS SOUTH DAKOTA MICHIGAN Buffalo 90 RHODE WYOMING Detroit PENNSYLVANIA - 80 W **New York** 10W/ Philadelphia CALIFORNIA w NEBRASKA NEW Salt Lake City Lincoln INDIANA Columbus Sacramento Washington D.C. DELAWARE Denver UTAH ILLINOIS NEVADA VIRGINIA 80 MARYLAND. W Kansas City Columbia COLORADO U U MISSOURI KANSAS 64/ Las Vegas KENTUCKY W Raleigh ARIZONA TENNESSEE (10) NORTH 75 OKLAHOMA ARKANSAS Nashville Los Angeles Columbia Oklahoma City Albuquerque San Diego Phoenix SOUTH Atlantic Little Rock Birmingham NEW MEXICO Ocean GEORGIA 20 Dallas 30 ALABAMA LOUISIANA TEXAS Jacksonville 49 10 W Hermosillo San **New Orleans** Antonio Chihuahua Tampa Pacific FLORIDA Ocean I-49 Status Saltillo = Completed = Not To Interstate Standards Durango - Proposed

# INTERSTATE 49 ALMA TO TEXARKANA



# THE NEXT PHASE HIGHWAY 22 - INTERSTATE 40

- Environmental Impact Statement Record of Decision
   December 1997
- Alternative Delivery and Toll Feasibility Study Completed November 2018
- Environmental Re-Evaluation and Preliminary Design Began Fall 2020
- Issue #1 Approved by Voters November 2020





- \$10 Million Project Development
- \$800 Million Plus ROW and Construction
- Funding Sources:
  - ✓ Amendment 101
  - ✓ Federal Funds / State Funds
  - ✓ IIJA Grants
  - ✓ Community Project Funding

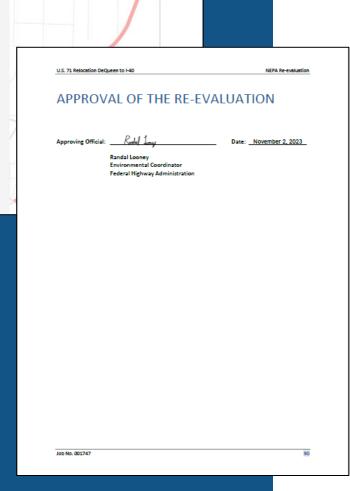




#### NEPA Re-evaluation

U.S. 71 Relocation DeQueen to I-40 Crawford and Sebastian Counties, Arkansas

November 2023 Job 001747





#### Regulatory Permitting

- Springhill Park (Section 4(f))
- McClellan-Kerr Arkansas River Navigation System
- Crawford County Levee District (Section 408)
- Flowage Easements (Section 408)
- Waters of the US, including Wetlands (Section 404)

#### Archeological Survey

- 3+ months of field survey
- Approximately 600 acres assessed in field

#### Agency Coordination

- US Army Corps of Engineers
- US Coast Guard
- US Fish and Wildlife Service
- Federal Highway Administration
- Federal Emergency Management Administration
- Arkansas Army National Guard





- 600 Acres Right-of-Way
- 100 Parcel Acquisitions



### COLLABORATION, INNOVATION & SAVINGS













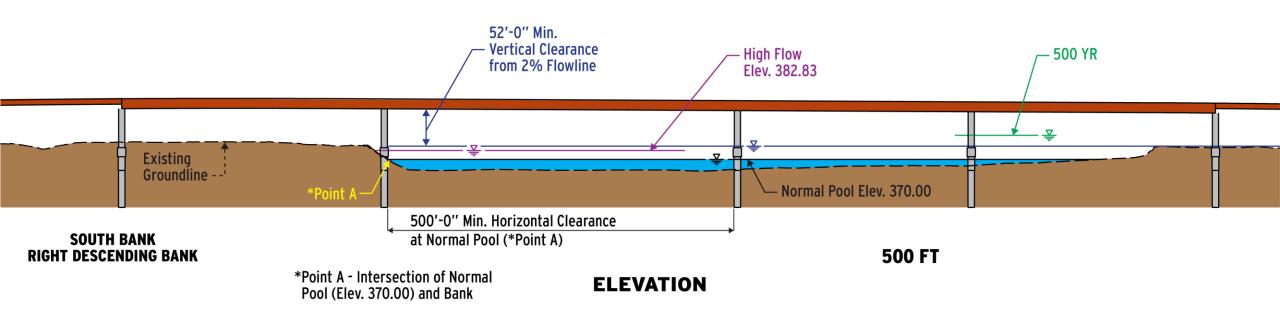


# 49 RIVER BRIDGE LOCATION



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

### USCG REQUIREMENTS



# USCG REQUIREMENTS



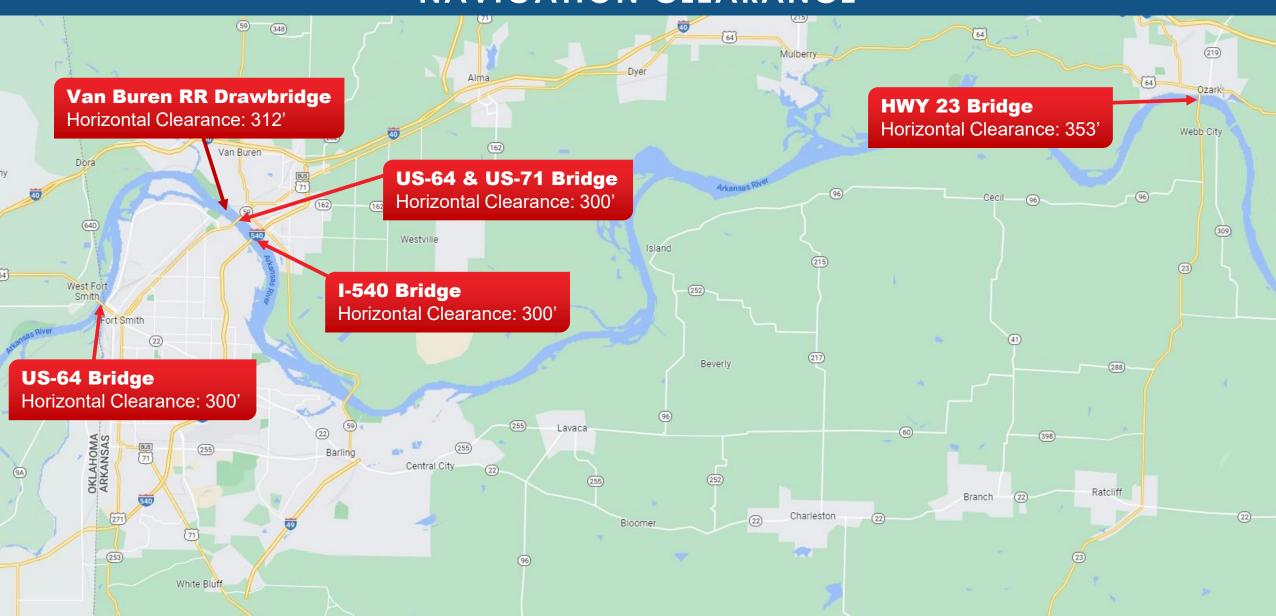


> 500 ft span

< 500 ft span

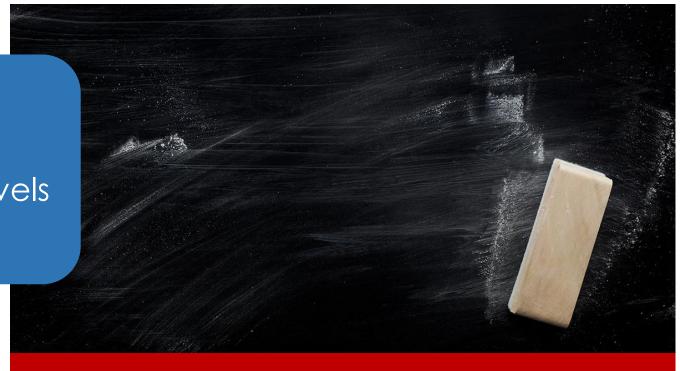
## MKARNS RIVER BRIDGE

#### NAVIGATION CLEARANCE



# 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







Study Administrator





Pilot



Pilot





# SCI STUDY SIMULATOR

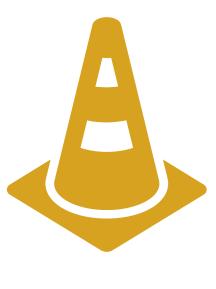


# SCI STUDY THE RUN MATRIX

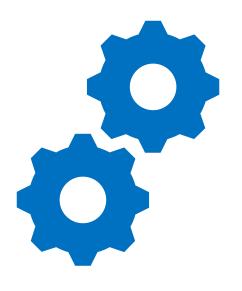


- Span Length
- River Flow
- Upstream/Downstream
- Wind Direction and Speed
- Daytime or Nighttime
- Loaded or Empty Barges
- Documented Each Run and Took Survey

#### SCI STUDY RESULTS



Safety



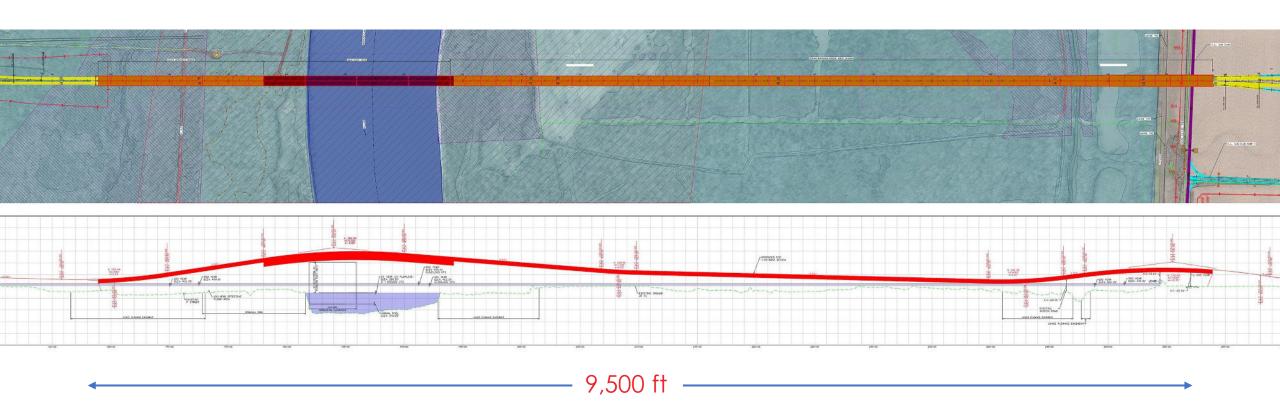
**Function** 



Est. Cost Reduction

## HYDRAULIC DESIGN CONCEPTUAL

**Long Bridge (Original Concept)** 



#### 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



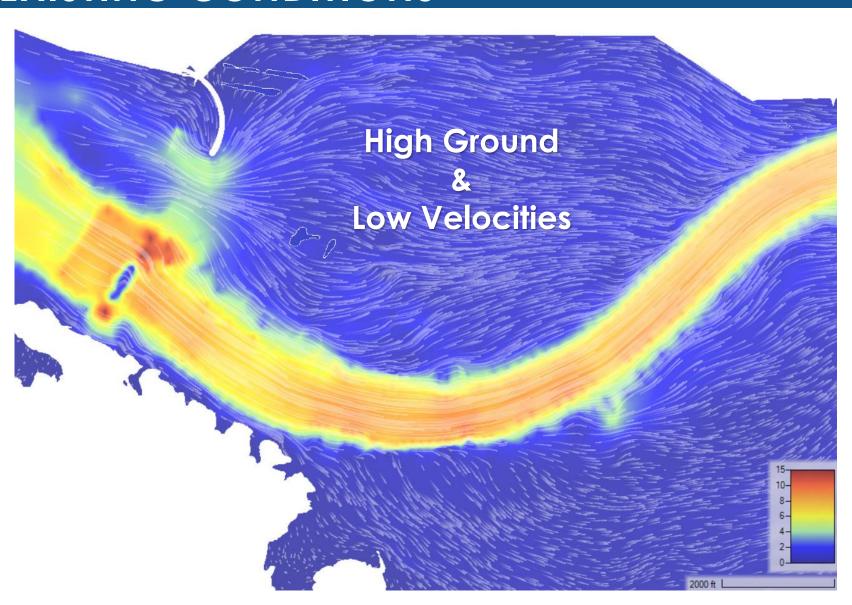
## HYDRAULICS EXISTING CONDITIONS

Existing Conditions

2D Hydraulic

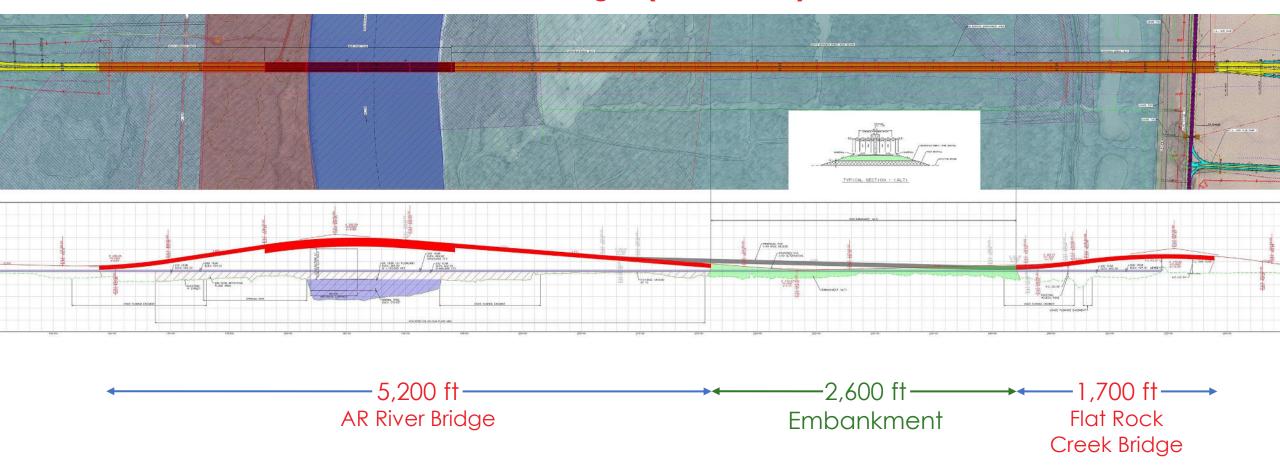
Model

Showing Velocity Vectors



#### REVISED CONCEPT

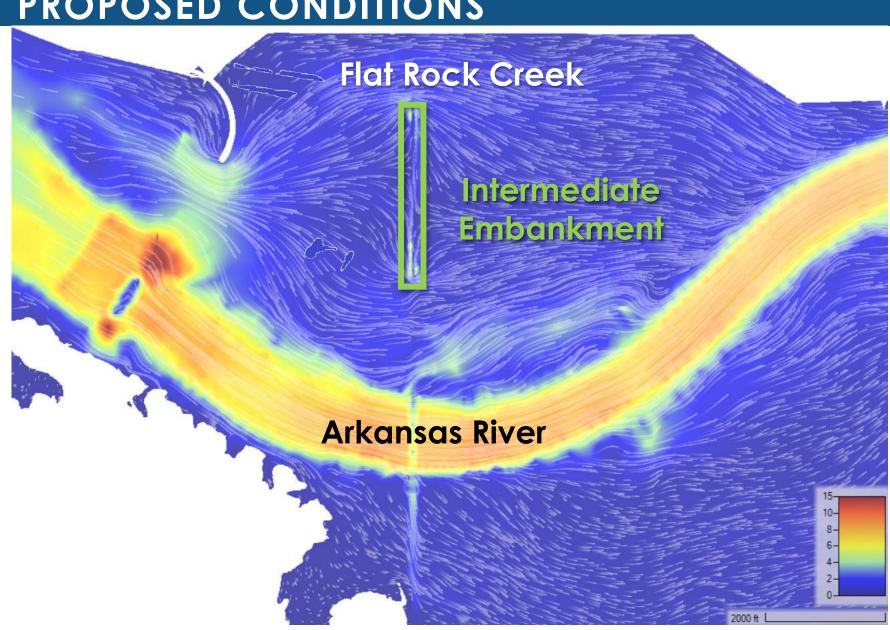
#### **Short Bridges (Alternative)**



## HYDRAULICS PROPOSED CONDITIONS

Proposed Conditions 2D Hydraulic Model

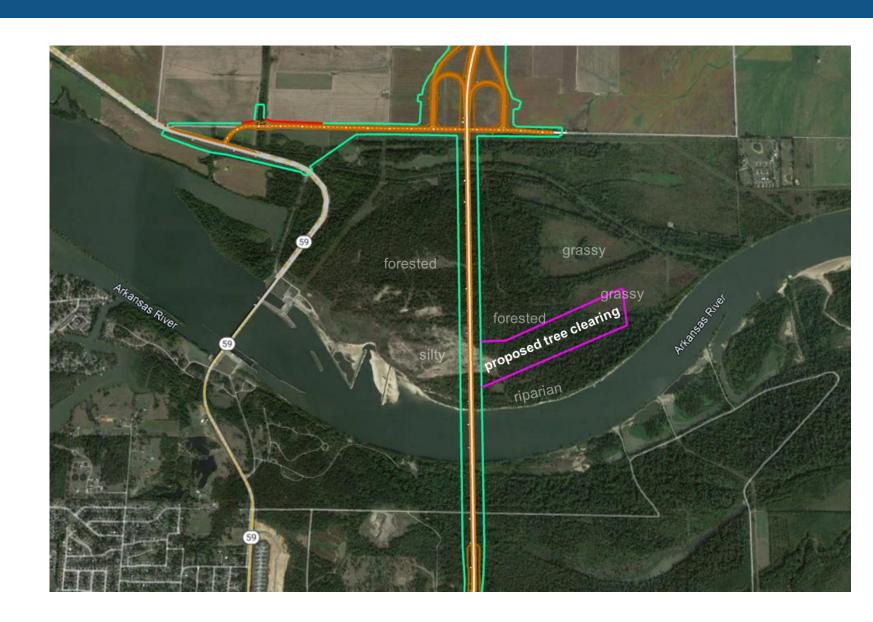
With Intermediate
Embankment
Instead of
Continuous Bridge



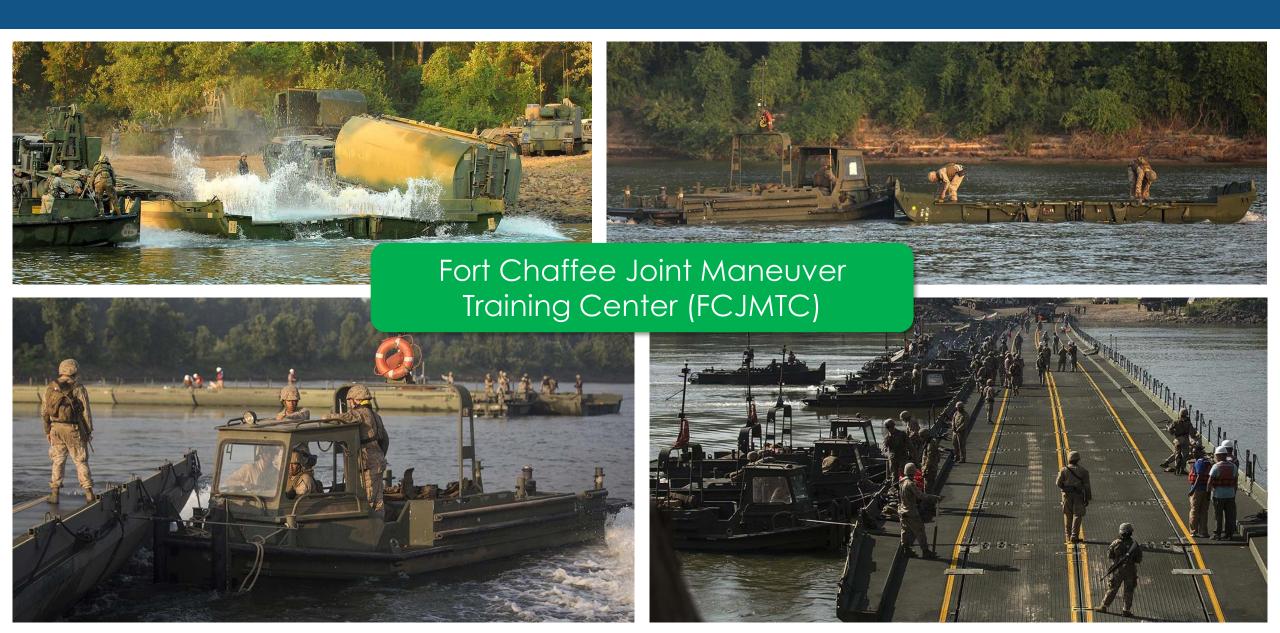
#### HYDRAULIC MITIGATION CONCEPT

#### Proposed Tree Clearing Area

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



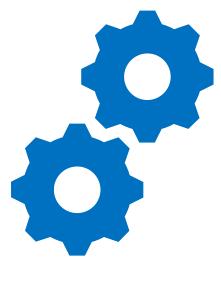
#### FORT CHAFFEE ACTIVITIES



#### HYDRAULIC STUDY RESULTS



Safety







Est. Cost Reduction (Subject to USACE Section 408 Approval)



### COLLABORATION, INNOVATION & SAVINGS

\$65 Million Estimated Cost Savings

















#### ECONOMIC POTENTIAL

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

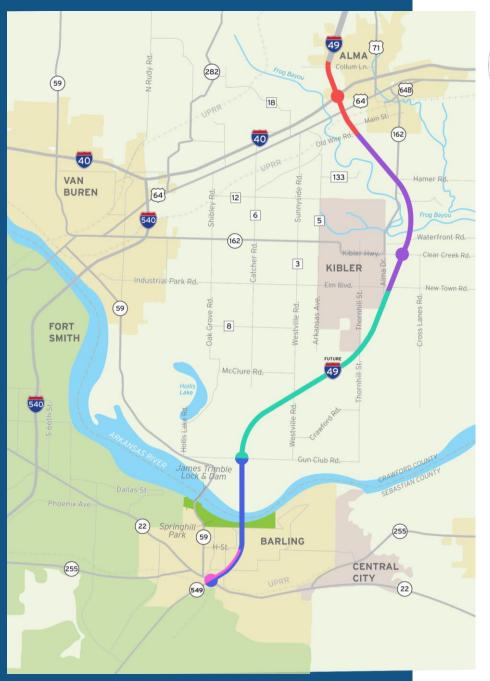
Provide Direct Access to the Western Arkansas Intermodal Authority (WAIA) Economic Development Area

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





## PRELIMINARY CONSTRUCTION PHASES

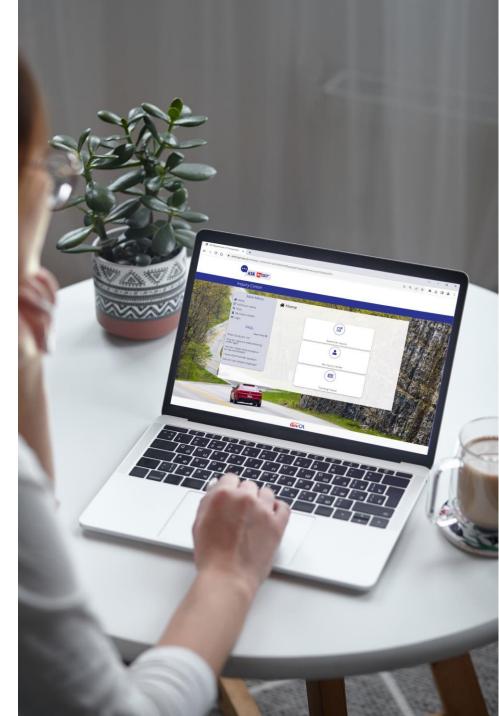
Segment	Major Work Scope Items
	Clearing and Grubbing (Highway 22 to East H Street)
	River Bridge and Approach Grading/Paving (Highway 22 to Gun Club Road)
	I-40/I-49 Interchange Bridges and Approach Grading/Paving
	Grading, Paving, Grade Separations and Cross Drainage Structures (Gun Club Road to Clear Creek Road)
	Grading, Paving, Grade Separations and Cross Drainage (Clear Creek Road to I-40/I-49 Interchange)



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# Van Buren Area and Interstate 49 Updates

Jared Wiley, P.E.
Chief Engineer – Preconstruction

November 8, 2023

