

Tennessee River Bridge Feasibility Study

City of Decatur
04.08.24

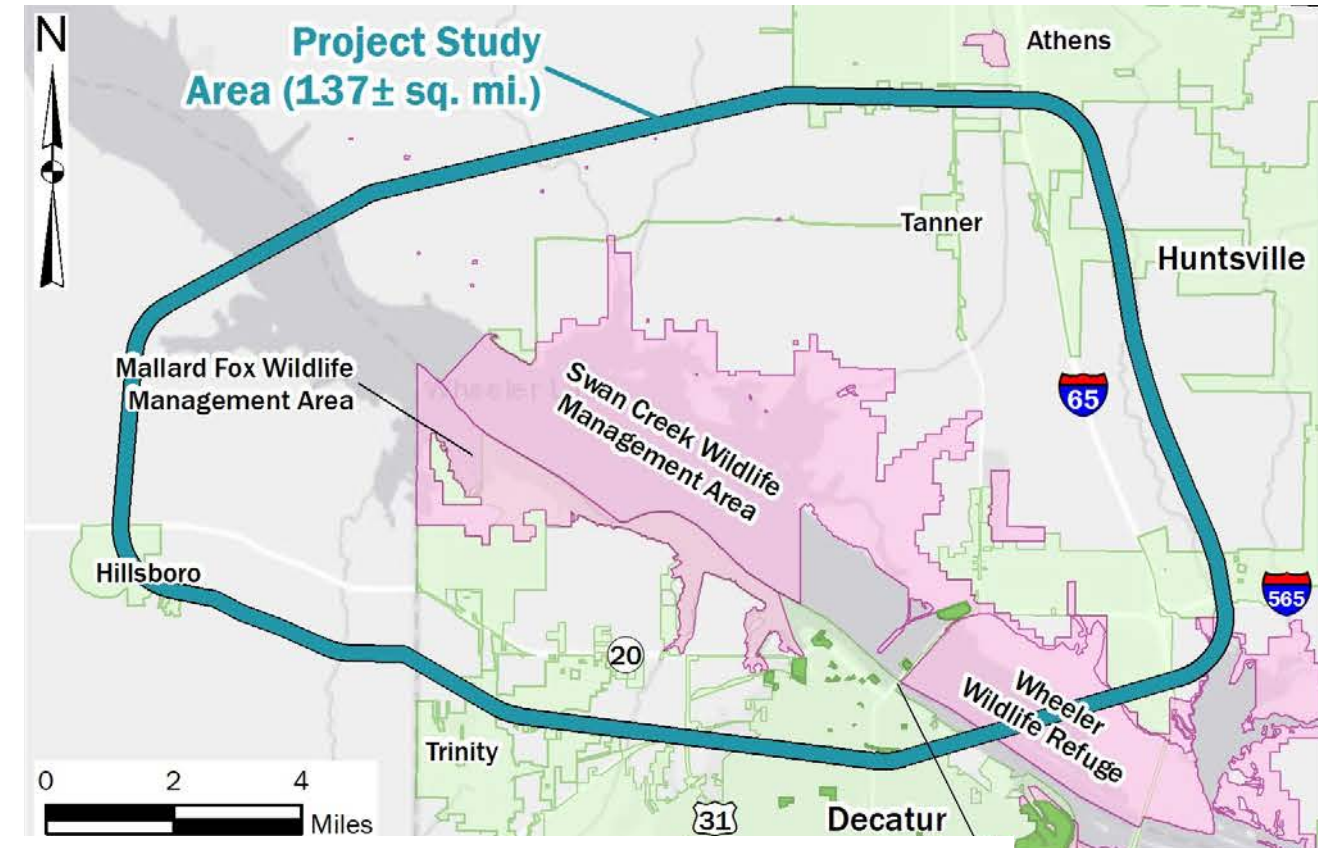




History and Timeline

The City of Decatur:

- recognized the need to provide infrastructure improvements that enhance connectivity
- received a \$1 million grant from the Appalachian Regional Commission (ARC)
- contracted TTL to conduct the Tennessee River Bridge Feasibility Study



*Typical timeline for a federally funded project

Feasibility Study



What is a Feasibility Study?

- Conducts a preliminary analysis, involving feedback about a project from the appropriate stakeholders
- Analyzes the data obtained in the early phase of the study
- Conducts a survey to identify the public demand for the project
- Identifies obstacles and any potential impacts, as well as how to mitigate for them
- Makes an initial "go" or "no-go" decision about moving ahead with the project

Why are we doing a Feasibility Study?

- to determine the practicability, constructability, and level of impact of a proposed project

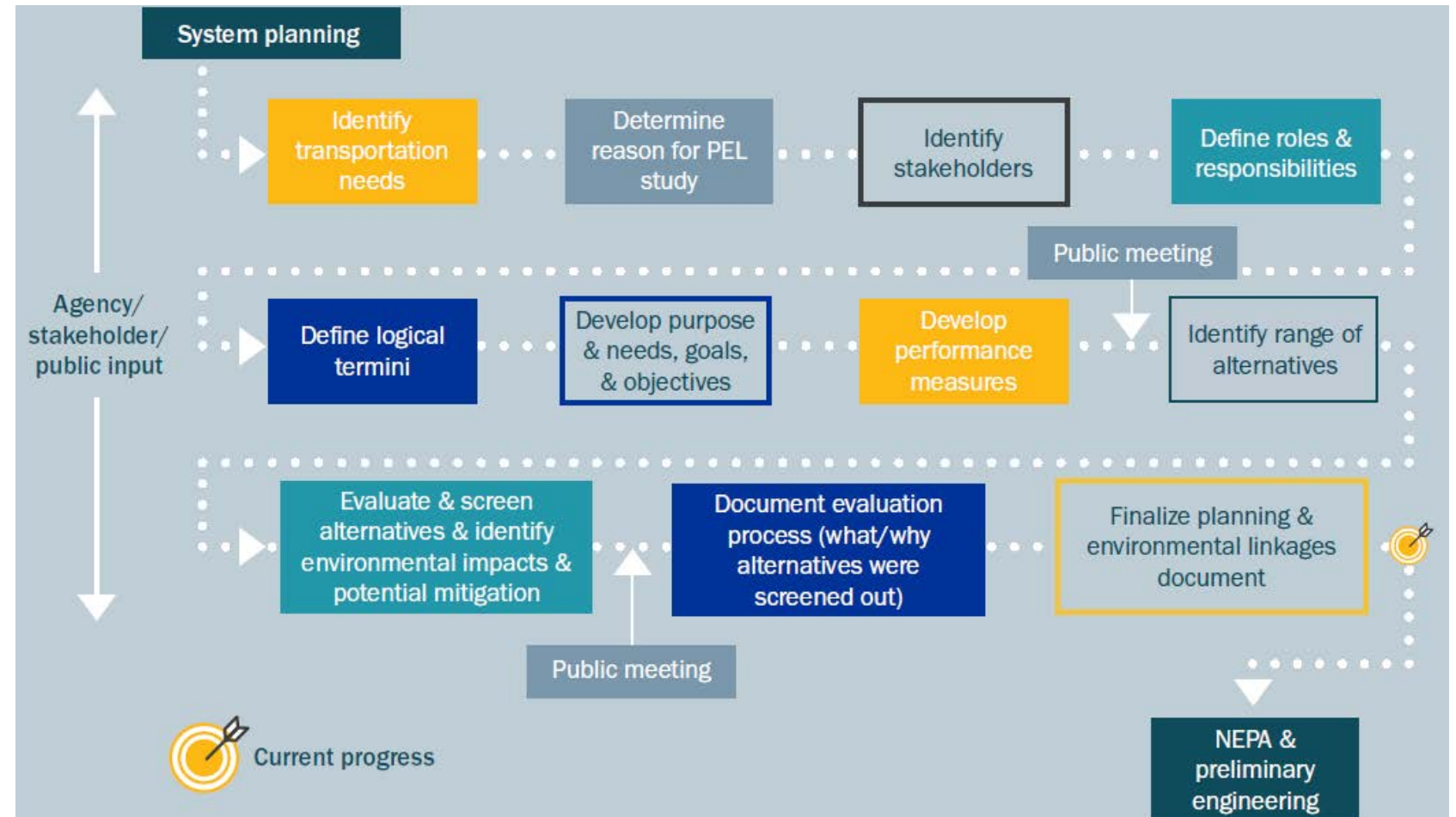
Federal Highway Administration *PEL Process*



The PEL Process Includes:

- Data Collection
- Purpose and Need Development
- Agency Coordination/Involvement
- Stakeholder Involvement
- Public Involvement
- Documentation
- Lead Agency Review and Involvement

A goal of using the PEL process is to improve efficiency by minimizing duplication between the planning and National Environmental Policy Act (NEPA) processes.





What is Included in the Feasibility Study Document

- Definition of Project Study Area
- Planning Context
- Existing Conditions
- Study Vision and Purpose and Need
- Stakeholder Engagement and Public Involvement
- Methodology, Development, and Evaluation
- Alternatives and Recommendations
- Potential Impacts/Anticipated Permitting/Mitigation and NEPA Process
- Future Actions

Desktop Screening Analysis of Environmental Resources



Hazardous Materials

Reviewed existing federal and state resources:

- NPL List
- SEMS List
- US Brownfield List
- CORRACTS List
- UST List
- LUST List
- PFAS Facilities List
- State Landfill List



Wildlife Protected/Sensitive Species

Reviewed the USFWS ECOS Information for Planning and Consulting (IPaC) to determine federally protected species within the Project Study Area.



Wetlands and Waters/FEMA

Reviewed existing data sources:

- USGS National Hydrography
- USDA Web Soil Survey
- USFWS National Wetlands Inventory
- Google Earth
- FEMA FIRM Maps



Land Use/Farmland/Noise

Utilized the National Land Use/Cover data to gather information on land use patterns.

Reviewed the NRCS Web Soil Survey to determine areas of prime farmland.

Integrated FHWA noise activity categories with the county zoning and the national land use/cover data.



Historic and Recreational

Conducted a Desktop Screening for Archaeological Resources.

Identified Section 4(f) and 6(f) properties by using Decatur's "parks" layer, WMA boundaries, and wildlife refuge boundary.



Air & Water Quality

Utilized the EPA's Motor Vehicle Emission Simulator to estimate impacts to Air Quality.

Utilized the Alabama Surface Water Classifications Map to estimate impacts to Water Quality.



EJ / Climate Change

Utilized EPS's EJ Screen to determine areas of concern.

Reviewed climate change data and existing weather models to estimate average temperatures and rainfall in the area.



Traffic Analysis



Previous Work Performed/Related Transportation Studies

TTL reviewed previous work performed and the related transportation studies and projects in order to better serve the City of Decatur during the Study process.



Origin and Destination

An analysis of 2020 weekday traffic from StreetLight depicted the preferred routes for both northbound and southbound trips.



Traffic Data Analysis

Studied existing traffic counts and travel patterns to determine the level of services for each segment of the roadway along the existing corridor.

Roadway Analysis



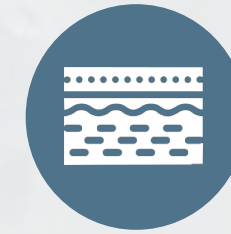
Existing Structures/Navigation

Reviewed existing data resources from the USCG, AASHTO, and ALDOT to examine the existing structures and determine navigational concerns associated with a new or replacement structure spanning the Tennessee River.



Safety

The corridor was reviewed to evaluate the existing conditions with respect to any safety concerns from a roadway and vehicle perspective.



Geological and Geotechnical Conditions

Studied existing geologic maps previous boring logs to determine the underlying subsurface formations.





Public Engagement Summary



Federal Agency Coordination

- FHWA (6)
- TVA (4)
- USACE (4)
- USCG (4)
- USFWS (3)



State Agency Coordination

- ALDOT (5)
- AHC (1)
- ADCNR (1)



2 Rounds of Large Group Stakeholder Coordination

- 43 Industrial Facilities
- 20 Special Interest Groups
- 13 Utility Companies
- 4 Counties
- 8 Cities
- 6 AL House Districts
- 3 AL Senate Districts
- 1 AL Congressman District



Individual Stakeholder Meetings

Coordinated and held 14 individual stakeholder meetings (property owners, business owners, advocacy groups, etc.).



2 Public Involvement Meetings

- 275 attendees between both meetings
- 185 comments and two form letters



2 Additional Stakeholder Meeting

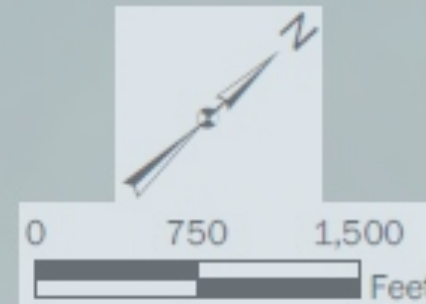
- Ducks Unlimited, the Delta Waterfowl Foundation, and ADCNR
- ALDOT

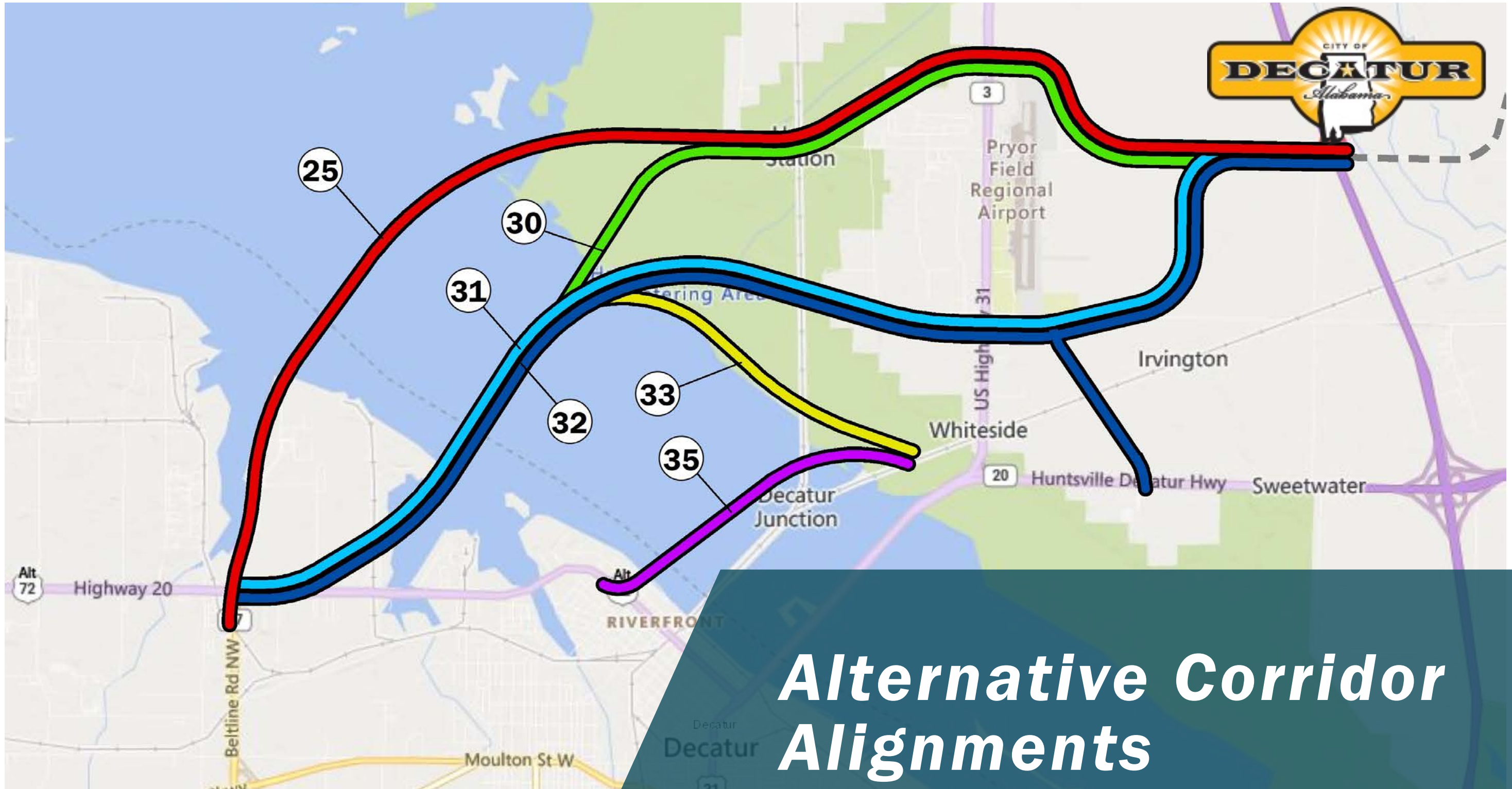
Existing Corridor Alignments

B - Additional Southbound Causeway Lane & Y-Interchange Improvements

C - On/Off-Ramp at Wilson Street, Bridge & Y-Interchange Improvements

D - Bridge Widening & Y-Interchange Improvements





Alternative Corridor Alignments



What's Next...

- Expand the Study Area to evaluate regional impacts of this Project with regards to existing and future transportation projects planned for by federal, state, and local jurisdictions in the region.
- An analysis of the feasible alternatives with more detail regarding cost effectiveness, reduction of risks, and performance.
- An Alternative Alignments Enhanced Design for the bridge concept (15% level design) and the roadway concept (15% level design) to support decision-making and document the impacts of the Project.
- Pre-NEPA Scoping Study for Environmental Resources and preparation of the Notice of Intent.
- A comprehensive traffic analysis utilizing Transcad software (or ALDOT's current model software) and StreetLight AADTs/ data to inform traffic forecasting, create up to three build alternatives, and develop an existing conditions model.
- A safety analysis built on available crash data provided by the City of Decatur and ALDOT.
- Public Outreach

