



**US 51 BRIDGE  
REPLACEMENT**

# US 51 Bridge Replacement over the Ohio River Wickliffe, Kentucky to Cairo, Illinois

*KYTC Item No. 01-1140.00*



Prepared For:



## CAG/EJ Meeting #3 Summary

October 15, 2020

Prepared By:

HDR



**Michael Baker**

**INTERNATIONAL**

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## Table of Contents

Meeting Summary .....	1
Meeting Purpose: CAG/EJ Meeting #3.....	2
Roll Call.....	2
Introduction.....	2
Bridge Information Page.....	3
How We Got Here Page.....	3
Where We Are Page.....	3
Recommended Decision Page.....	3
Intersection Type .....	3
Bridge Width.....	3
Bridge Type .....	4
What’s Next?.....	4
Online Survey .....	4
Additional Discussion .....	4
Next Steps.....	5

## Appendices

Appendix A: Online Meeting Presentation and Story Map.....	6
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## MEETING SUMMARY

Project: US 51 Cairo Bridge Project

Subject: CAG/EJ Meeting #3

Date: Thursday, October 15, 2020

Location: Webex Virtual Meeting

Invitees:

First Name	Last Name	Title	Organization
Shelby	Adkinson	Director	Shawnee College Cairo Extension Center
Hannah	Chretien	Director	Ballad County Chamber of Commerce and Ballard County Economic and Industrial Development
Todd	Cooper	Judge Executive	Ballard County, Kentucky
Stacey	Courtney	Associate Director- Planning And Community Development Division	Purchase Area Development District
Brian	Derousse	Owner	Kentucky Hillbilly Bbq
Jimmy	Ellis	Reverend	First Missionary Baptist Church
Tiffany	George	Executive Director	Southern Five Regional Planning District
Carla	Hildebrand	Park Manager	Wickliffe Mounds
Rodney	Hill	Pastor	Fairview Baptist Church
Janet	Hunt	Property Owner	Property Near Proposed Bridge Location
Jim	Lefevre	Purchase District Board Of Health Member- Ballard County	Ballard County Health Center
Hannah	Miller	Manager- Pulaski-alexander County	Illinois Farm Bureau
David	Phillips	Mayor	Mayor City Of Wickliffe
Dr. Patrick	Rice	Superintendent	Alexander County, Il Schools
Thomas	Simpson	Mayor	Mayor City Of Cairo
Monica	Smith	Director	Cairo Public Library
Vernon	Stubblefield		Concern For Aging Community Population
Allen	Tappan	Manager	Waterfront Services Co.
Steve	Tarver	Cairo Community Leader	



## **MEETING PURPOSE: CAG/EJ MEETING #3**

The following summary represents our understanding of the decisions and action items covered during CAG/EJ Meeting #3 on October 15, 2020. This summary is based on notes taken during discussion. If this differs from your understanding, please notify [US51Bridge@mbakerintl.com](mailto:US51Bridge@mbakerintl.com).

Project: US 51 Cairo Bridge Project

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Subject: CAG/EJ Meeting #3

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Date: Thursday, October 15, 2020

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Location: Webex Virtual Meeting

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Attendees: Jill Asher, FHWA-KY  
Shelby Byrne, The Waterways Journal  
Stacey Courtney, Purchase Area Development District  
Patty Dunaway, Michael Baker  
Tiffany George, Southern Five Regional Planning District  
Brad Gregory, HMB  
Phil Halter, City Council-Charleston, MO  
Janet Hunt, Property Owner Near Bridge Location  
Anna Klenke, Michael Baker  
Chris Kuntz, KYTC  
Jim LeFevre, Ballard County Health Center  
John Mettillie, Michael Baker  
Cara Mills, Black River Technical College  
Karen Mohammadi, Michael Baker  
Ameerah Palacios, HDR  
David Phillips, Mayor of Wickliffe  
Kyle Poat, KYTC  
Shannon Provance, HDR  
Jeff Schaefer, HDR  
Charles Stein, IDOT  
Aaron Stover, Michael Baker  
Keith Todd, KYTC  
Brad Whybark, KYTC  
WPSD-TV

## **ROLL CALL**

Chris Kuntz made opening remarks on behalf of KYTC to welcome participants to the meeting.

## **INTRODUCTION**

Aaron Stover gave an overview of the code of conduct for the meeting and informed attendees that the virtual meeting could be accessed through the project website, [US51Bridge.com](http://US51Bridge.com).



For the complete online meeting presentation and story map, please see **Appendix A**. The high level discussion included information on the 2013 planning study that was conducted, as well as meetings held with local officials, and the CAG/EJ group.

## **BRIDGE INFORMATION PAGE**

Aaron Stover said the webpage has a lot of information that gives historical information about the bridge and interactive elements for readers to learn about the background of the project.

## **HOW WE GOT HERE PAGE**

Aaron Stover gave a brief overview of the page, which included a summary of the previous planning study, along with summaries of meetings held with this group.

## **WHERE WE ARE PAGE**

Aaron Stover gave a brief summary of the CAG/EJ Meeting #2 in July 2020, which included the impacts associated with the project that were previously disclosed and the updates that were given about various alternative alignments, typical sections and intersection alternatives.

## **RECOMMENDED DECISION PAGE**

Aaron Stover gave an overview of the preferred alternative, explaining the various benefits, that KYTC and the project team weighed the input from the various public meetings, as well as the pros and cons of each option and determined that there was an overwhelming favorite in Alternative 2 by the Citizen's Advisory Group, the navigation industry, and the project team. Alternative 2 includes impacts to local mooring and fleeting operations, which will need to be mitigated. Alternative 2 is the least expensive option. This Alternative has minimal impact to the human and natural environment. As it is constructed away from the existing facilities, it has minimal impact to maintenance of traffic using the existing bridge. Alternative 2 was the best option, satisfying all of the project goals and requirements.

### **Intersection Type**

Aaron Stover explained that the project team's recommendation is for the Roundabout. He explained that the roundabout is a very efficient way of handling the traffic through the intersection, allows for additional capacity, and would allow for a focal point for the community's future growth and development.

### **Bridge Width**

Aaron Stover explained that the project team is recommending a two-lane, 40' wide bridge, which would recognize a cost savings and accommodate anticipated future capacity and growth, bicycles, safe passage for emergency vehicles and agricultural traffic. While the project team understands the desire of some for a four lane facility, the two lane facility is supported by the lack of four lane highway connectivity in the area, the fact that a two lane facility can handle the current and future traffic volumes of the area, and that a two lane bridge is approximately 27 percent less in cost.

## **Bridge Type**

Aaron Stover explained that the bridge type will be further discussed and worked through in the next phase of the design process, with further input, site exploration, and geotechnical work.

## **WHAT'S NEXT?**

Aaron Stover explained that the project is being finalized and the categorical exclusion level three document is targeted to be completed soon.

Aaron Stover gave an overview of the phase two process of final design, and when construction is anticipated to begin.

## **ONLINE SURVEY**

Aaron Stover encouraged participants to complete the online survey to comment on the project and share their thoughts.

## **ADDITIONAL DISCUSSION**

### **Comment from Jim LeFevre**

Jim LeFevre asked for more detailed information that explains the justification for the roundabout to be chosen over a signalized intersection.

#### *Response from Brad Gregory*

Brad Gregory explained that the roundabout is more expensive but handles traffic growth better, provides a safety improvement, and has less conflict points. He also explained that a signalized intersection would later have to be amended with growing traffic versus a roundabout would align with the design forecasts.

### **Comment from Tiffany George**

Tiffany George asked if the roundabout will be wide enough to be semi-truck friendly.

#### *Response from Patty Dunaway*

Patty Dunaway responded to Tiffany George that truck traffic will be considered in final design.

#### *Response from Brad Gregory*

Brad Gregory responded to Tiffany George that the design would be able to handle the largest semi-truck on the market to date.



## **Comment from Phil Halter**

Phil Halter asked if the elimination of the Mississippi River bridge was still planned in the next few years.

### *Response from Aaron Stover*

Aaron Stover responded to Phil Halter that the bridge is currently undergoing maintenance and there is work being done to extend its useful life.

### *Response from Charles Stein*

Charles Stein responded to Phil Halter that the state is spending \$5 million to improve the joints on the bridge and there are no plans to close it.

### *Follow-Up Comment from Phil Halter*

Phil Halter responded to Charles Stein that from the Missouri side, residents are hearing the bridge will close, which would force the traffic to go through Cairo to get to Kentucky.

### *Response from Aaron Stover*

Aaron Stover responded to Phil Halter, thanking him for his question and concern.

## **NEXT STEPS**

Chris Kuntz closed the meeting and thanked everyone for their participation and attendance. Participants were encouraged to keep up with the project by visiting the website at [US51Bridge.com](http://US51Bridge.com).



# Appendix A: Online Meeting Presentation and Story Map



# US BRIDGE ONLINE PUBLIC MEETING





- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey

# Welcome!

Thank you for visiting the  
US 51 Bridge Online Public Meeting

Typically, this meeting would be held in person, however, due to the COVID-19 pandemic and to insure the safety of everyone involved, we've opted to bring you the information in this online format.

[Click here for a welcome video](#) from the Kentucky Transportation Cabinet's Chris Kuntz, District 1 Transportation Engineering Branch Manager for Project Development that will help guide you through the information.

Most Maps are interactive and can be zoomed into and out of like Google Maps. If something is underlined like the [welcome video](#) above, it is a link that can be clicked. *We welcome you to click, zoom, and investigate any page or map on this presentation.*

The last tab includes a brief [Participant Information Survey](#) to gather your input about the project. Please take a moment to fill it out. surveys should be completed and submitted by 5 p.m. CDT October 30th.



# CAIRO BRIDGE INFORMATION






## US 51 - Cairo Bridge

The US 51 Bridge spans the Ohio River between Cairo, IL and Wickliffe KY. It carries US 51, US 60, and US 62 traffic between Kentucky, Illinois, and Missouri




 US 51 - Cairo Bridge

US 51 - Cairo Bridge

Constructed between 1936 and 1938, the Cantilevered Warren Through Truss structure is the longest bridge in Kentucky with a total length of 5,865 feet.




 US 51 - Cairo Bridge

The bridge deck was replaced in 1980 and rehabilitated in 1999.

There is a current maintenance project on the approaches and the bridge to repair the deck and drainage.



US 51 - Cairo Bridge

 US 51 - Cairo Bridge

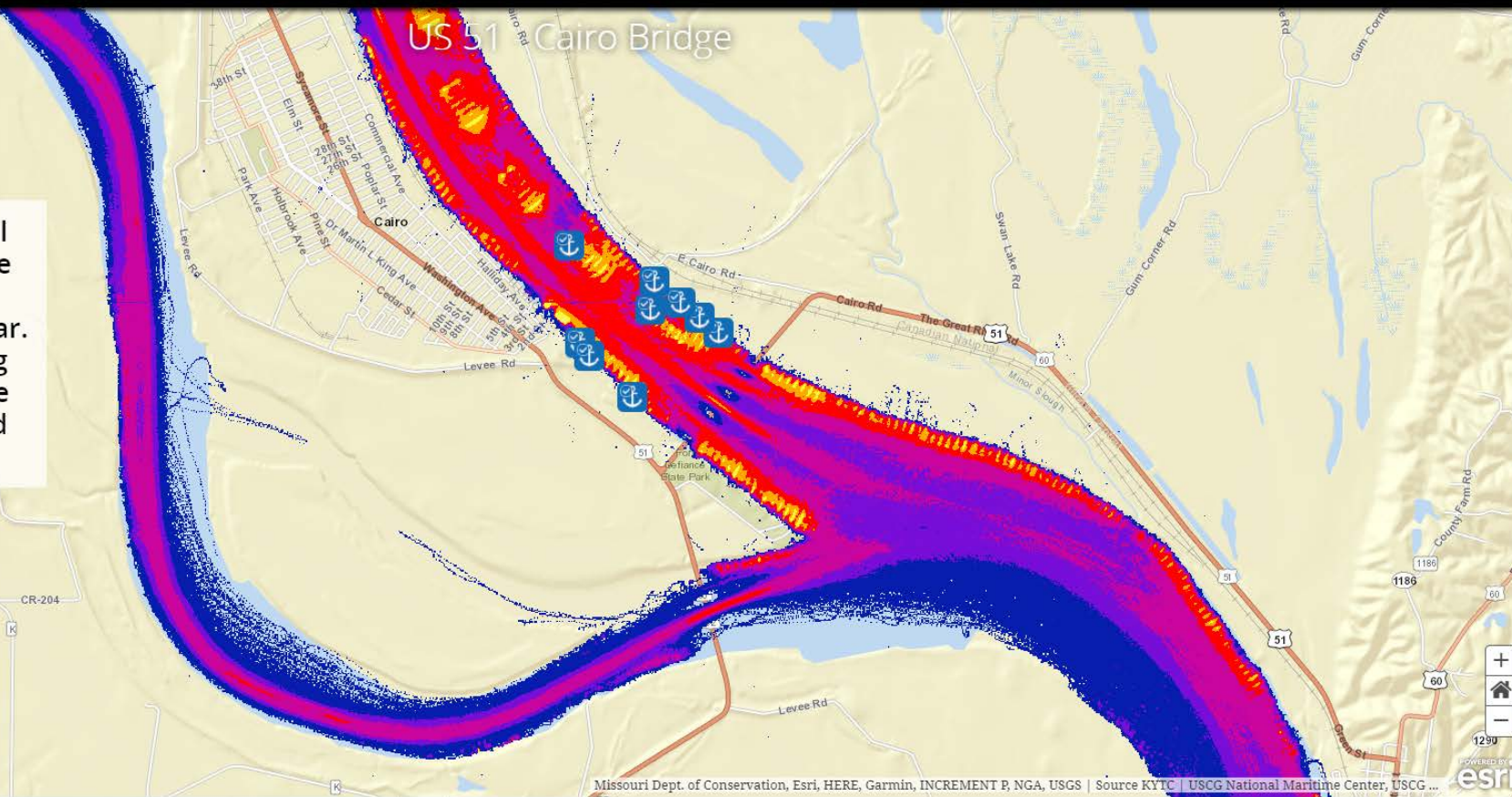
# US 51 - Cairo Bridge

The US 51 Bridge is one of two structures at the Alexander-Cairo Port situated at the confluence of the Mississippi River and the Ohio River.



US 51 - Cairo Bridge

Approximately 80% of all inland barge traffic in the United States passes through this port each year. There are barge mooring locations near the bridge - along the Kentucky and Illinois Shores





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## US 51 - Cairo Bridge

### US 51 - Cairo Bridge

The existing bridge deck is only 22.5' wide with narrow 10' driving lanes and 1.25' shoulders. The roadway has inadequate vehicle headlight sight distance and a tight horizontal curve on the Kentucky approach which does not meet national or state design standards.



HOW WE GOT HERE



# US 51 Bridge Online Public Meeting

- Welcome
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- How We Got Here
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- Survey
- How We Got Here
- Planning Study**
- Local Officials and Public Meetings
- CA/EJ Group Meeting #1
- Seamen's Church Institute Simulator
- CA/EJ Group Meeting #2

In 2013, KYTC conducted a study to find the best corridor in which to construct a new Ohio River Bridge Crossing. **The display on the right shows the 8 options that were considered.**

In January, 2014, the findings of the US 51 Bridge Project Planning Study were published. This planning-level review included a location study, an environmental overview, and recommendations for a preferred corridor alternative to be considered further in the next phase of work. It was recommended that the all four alternatives just north of the existing bridge (Alt 1, Alt 2, Alt 2A, Alt 2B) should advance for additional development. This corridor was called **Combined Alternative 2**.

[Click here to access the complete Planning Study Report.](#)



Figure 3  
US 51  
Ohio River Bridge  
Range of Alternatives



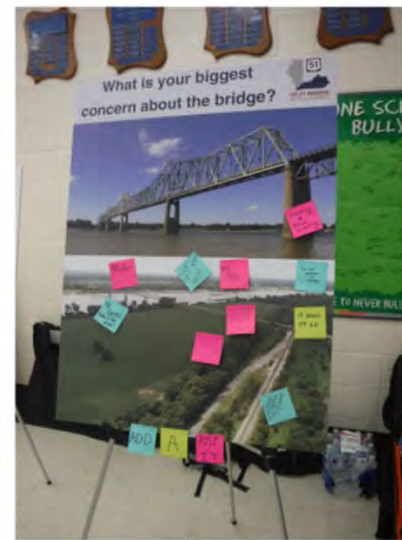
### Local Officials and Public Meetings

September 9 and 10, 2019

A Local Officials Meeting and Two Public Open House Meetings were held in Wickliffe, KY and Cairo, IL.

The Public Meetings were an open house format with stations manned by project team members who were available to answer any questions or issues raised by the public. The stations included:

- **Welcome Station:** attendees were asked to sign in and were given an informational brochure about the project and questionnaire forms.
- **Environmental Station:** provided information about the NEPA and Section 106 processes, the 2014 Planning Study, the evaluation criteria used in the 2014 planning study, and the purpose and need statement for the project.
- **Preferred Corridor Station:** presented the preferred combined Alternative 2 corridor from the 2014 planning study.
- **Roadway Station:** attendees were shown the preliminary alignments board and the future traffic projections for the





## Local Officials and Public Meetings

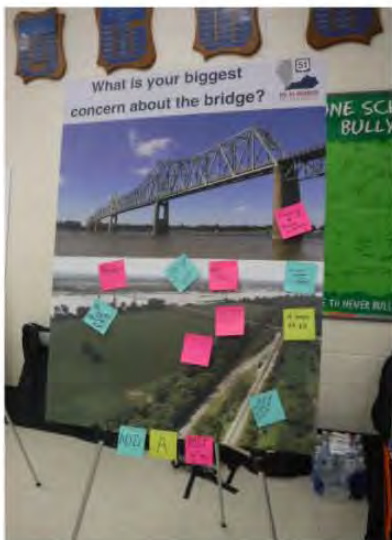
- roadway.
- **Structures Station:** included information about the existing bridge conditions and a brief introduction to the parts of a bridge structure.
- **Project Development Process Station:** included a description of the typical project development process, a project specific schedule and an objective board.
- **Post-it Note Board Station:** attendees could leave notes voicing their opinions and concerns and a board directing them where they can get more involved with the process and receive additional information.

[Click here to see the Meetings' Informational Brochure.](#)

## Meetings Summary

Attendees at each meeting were also encouraged to respond to a questionnaire regarding the project. A total of 73 surveys were returned - 19 from the Wickliffe meeting, 50 from the Cairo meeting, and 4 from the Local Officials meeting. To the right is summary of their response.

Top concerns from the meeting attendees were:



    **Local Officials and Public Meetings**

They can get more involved with the process and receive additional information.

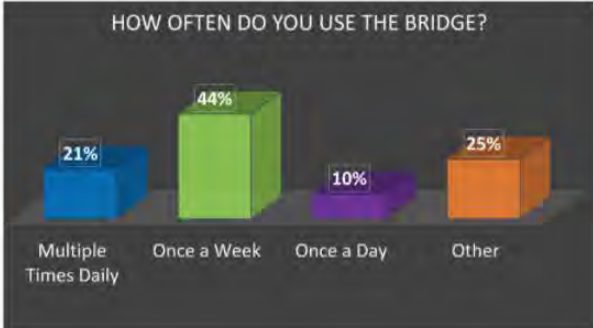
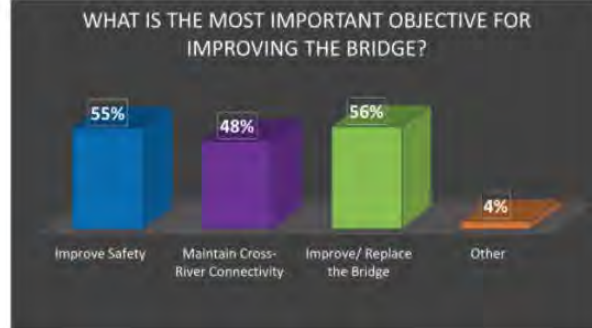
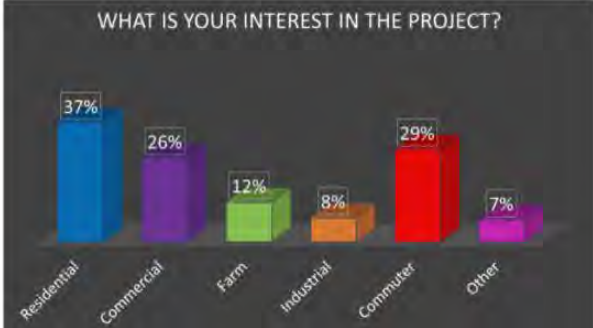
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Top concerns from the meeting attendees were:

- **Bridge closures and local economic impacts** - they do not want to close the existing bridge during construction for fear of adverse effects on local economies and tourism.
- **Safety**
- **Flooding** - a solution to flooding, especially on the Kentucky side, was a point of focus.
- Some expressed interest in a **four-lane bridge** as an avenue for economic growth.





- Welcome
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### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

November 14, 2019

The purpose of the Citizens Advisory and Environmental Justice Group is to provide a direct line of communication between local community members and project development parties for the discussion of potential impacts to local businesses, low income and minority communities, and valued natural, environmental, cultural, agricultural, and river transportation resources in the area.

Much of the meeting focused on what has changed since 2014 and understanding the local community and the community concerns. Three alternative alignments and two typical sections were also presented for review.

Scroll down for more information.

Community Discussion



### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

#### Community Discussion

The project team and CA/EJ group discussed various topics, issues, concerns, and opportunities at the outset of the meeting. A few of the questions and answers:

#### What are the locations of important community areas and focal points?

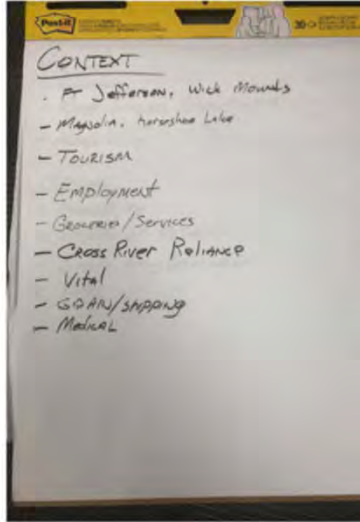
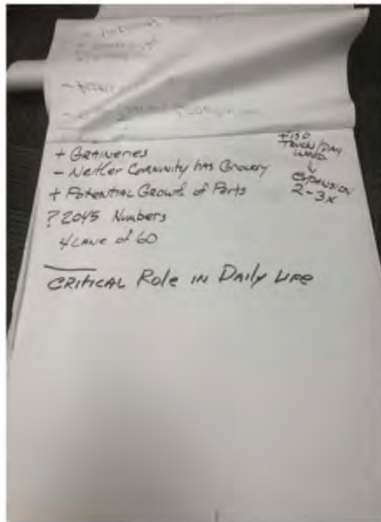
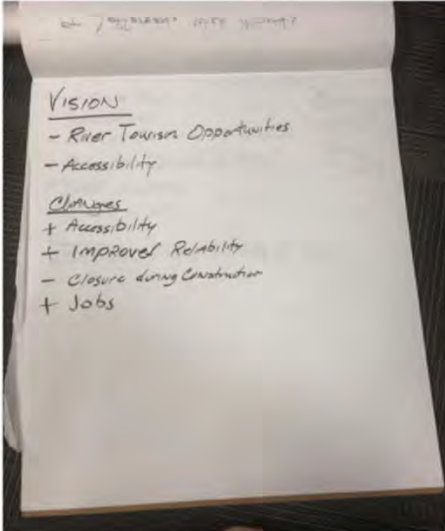
- **Kentucky:** Jefferson Park, Wickliffe Mounds, Courthouse, Fort Jefferson, churches
- **Illinois:** Magnolia Manor, Horseshoe Lake, Fort Defiance Park, Cairo High School, Thebes Courthouse, St. Mary's Park, Public Library, Custom House, GEM theatre, Riverlore, and churches

#### How might changes to the bridge negatively or positively impact you, your family and the community?

- ...traffic impacts during constructions as a negative...
- ... added jobs from construction as a positive.
- ... positive impact by improving access and increasing safety to users.

#### What has changed since 2014?

- Papermill has reopened
- New river fisheries
- Many individuals are employed on the opposite side of the river
- Four-State pact for riverport authority is in the works.



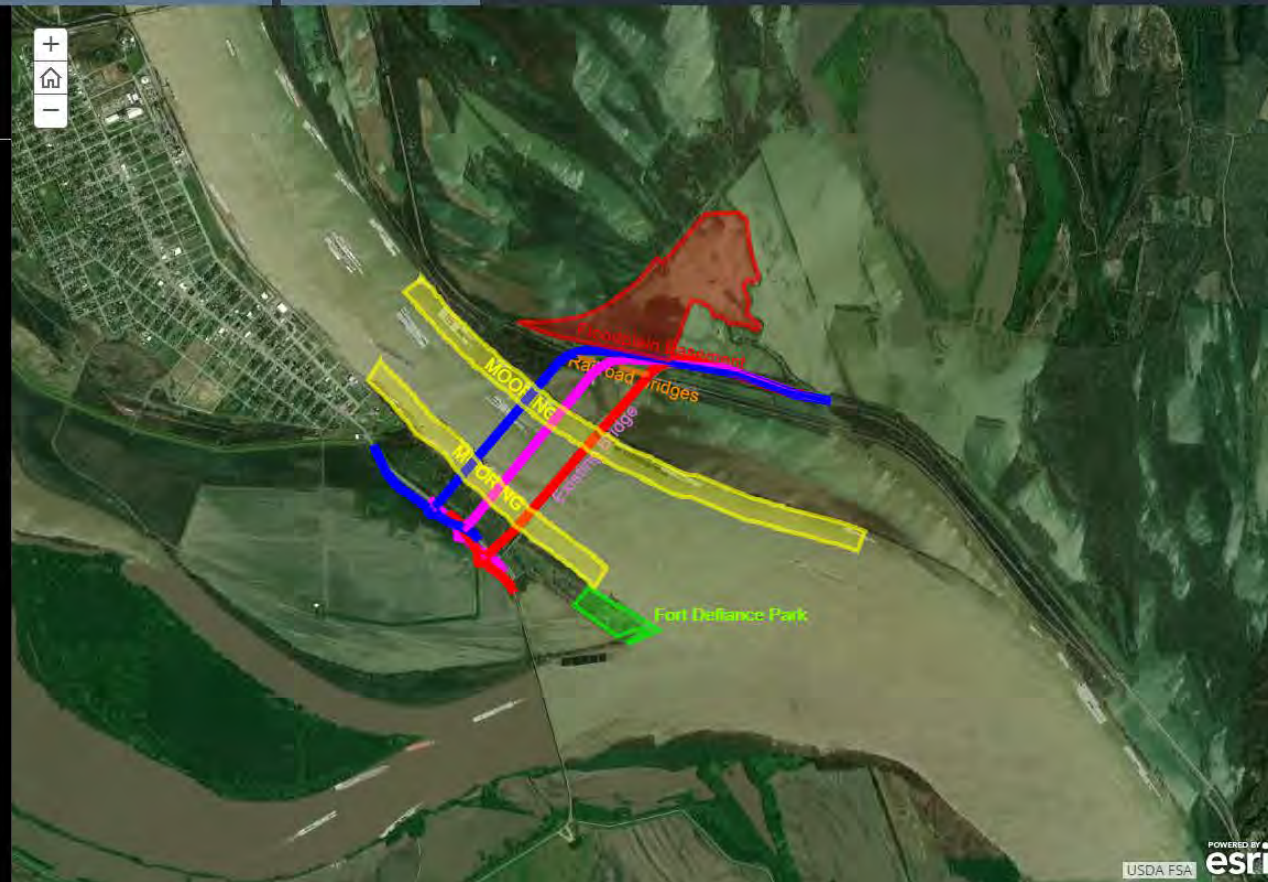


Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

Alignment Alternative Constraints

Constraints in the project area affecting the locations of the proposed alignment alternatives include:

- **The Existing Bridge** - Because of the importance to the existing bridge to surrounding communities, new alternatives must allow the bridge to remain in place during construction.
- **Barge Moorings** - Fleeting and barge traffic are prevalent in the area. There are many barge anchors located on both sides of the river. Affecting these anchors could be costly and harmful to the industry in the area.
- **Railroad Bridges** - There are 2 railroad bridges to allow flood water to flow through the opening instead of over the railroad. According to railroad regulations, no overhead structure can be within 100 feet of a railroad bridge in order to allow for future maintenance. Impacting these bridges would result in costly damages and long delays.
- **Floodplain Easement** - The Natural Resources Conservation Service has an Emergency Watershed Protection Program Floodplain Warranty Easement on this parcel. This easement is to maintain and enhance the functional values of floodplains, protect the natural wildlife and their habitat, and to safeguard lives and property from floods, droughts, and the products of erosion. Impacting this parcel, other than a temporarily during construction, could possibly render the project unbuildable due



     
**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1**

within 100 feet of a railroad bridge in order to allow for future maintenance. Impacting these bridges would result in costly damages and long delays.

- **Floodplain Easement** - The Natural Resources Conservation Service has an Emergency Watershed Protection Program Floodplain Warranty Easement on this parcel. This easement is to maintain and enhance the functional values of floodplains, protect the natural wildlife and their habitat, and to safeguard lives and property from floods, droughts, and the products of erosion. Impacting this parcel, other than a temporarily during construction, could possibly render the project unbuildable due to Federal Regulations.
- **Fort Defiance Park** - A former American Civil War military fortification. Due to Federal Regulations, impacts to a historic park would require justification that it would be the only option.

**Recommendation:** Alternative 1 - Blue

Meeting attendees identified the following "Pros" for Alternative 1 - Blue:

- + Closer in proximity to Cairo, IL
- + Potential to be less disruptive to property owners.

"Cons" identified by attendees included:  
- Longer structure than the other two



- Welcome
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- How We Got Here
- Where We Are
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### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

#### Alignment Alternative 1 - Blue

Meeting attendees identified the following "Pros" for Alternative 1 - Blue:

- + Closer in proximity to Cairo, IL.
- + Potential to be less disruptive to property owners.

"Cons" identified by attendees included:





- Longer structure than the other two
- Closer to waterfront services facilities/could disturb river fleeting operations
- Impacts to the Conservation Easement on the Kentucky side.
- Close proximity to the railroad and dry docks.

#### Alignment Alternative 2 - Purple

Meeting attendees identified the following "Pros" for Alternative 2 - Purple:

- + A curve that is not as sharp with additional room to negotiate the turn on the Kentucky side
- + Reduced congestion on the Kentucky side
- + Limited impacts to moorings
- + Provides a nice connection on the Illinois side



     
**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1**

**Alignment Alternative 2 - Purple**

Meeting attendees identified the following "Pros" for Alternative 2 - Purple:

- + A curve that is not as sharp with additional room to negotiate the turn on the Kentucky side
- + Reduced congestion on the Kentucky side
- + Limited impacts to moorings
- + Provides a nice connection on the Illinois side

"Cons" identified by attendees included:

- Potential impacts to river fleeting operations
- Impacts to the Conservation Easement on the Kentucky side
- Close proximity to railroad

**Alignment Alternative 3 - Red**

Meeting attendees identified the following "Pros" for Alternative 3 - Red:

- + Least impact to river fleeting operations
- + Familiar location
- + Less expensive

The "Con" identified by attendees was:



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
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- Planning Study
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### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

#### Alignment Alternative 3 - Red

Meeting attendees identified the following "Pros" for Alternative 3-Red:

- + Least impact to river fleeting operations
- + Familiar location
- + Less expensive

The "Con" identified by attendees was:  
- Details of the potential impacts to the Illinois side intersection with US 60/US 62.

**THIS ALTERNATIVE WAS THE PREFERRED ALIGNMENT OF THE ATTENDEES.**

#### Typical Sections

Typical sections are detailed cross section depictions of the highway's principal elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown throughout a set of highway design plans.

Attendees were presented with two typical sections: one with two



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- How We Got Here
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### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

#### Typical Sections

Typical sections are detailed cross section depictions of the highway's principal elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown throughout a set of highway design plans.

Attendees were presented with two typical sections: one with two lanes and another wider typical section to initially carry two lanes (one lane in each direction) with the ability to accommodate four lanes if US 51 is widened in the future.

The attendees identified the following Pros and Cons for the typical section:

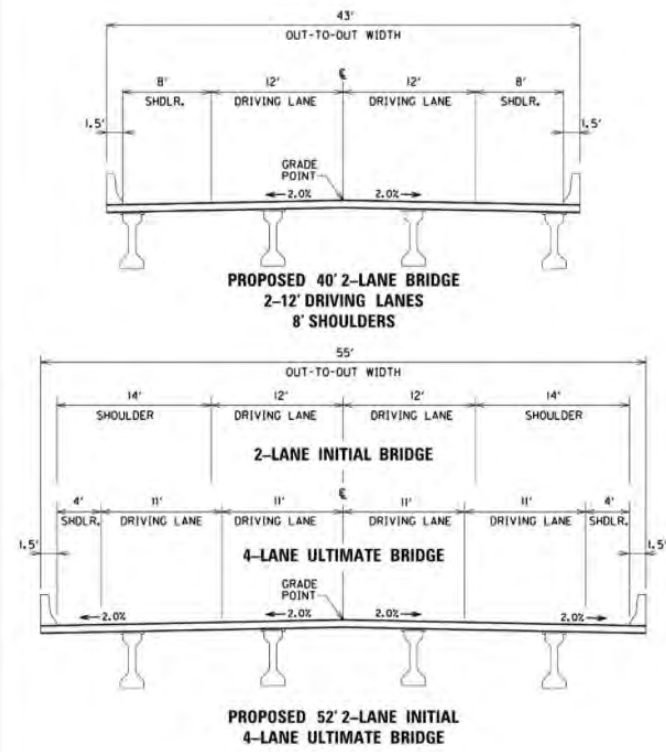
#### Two-lane typical section

"Pros":

- + Less expensive.
- + Expanded shoulders (in comparison to existing).
- + Provides adequate capacity.

"Con":

- Does not provide the opportunity for future expansion and growth of the community.



### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #1

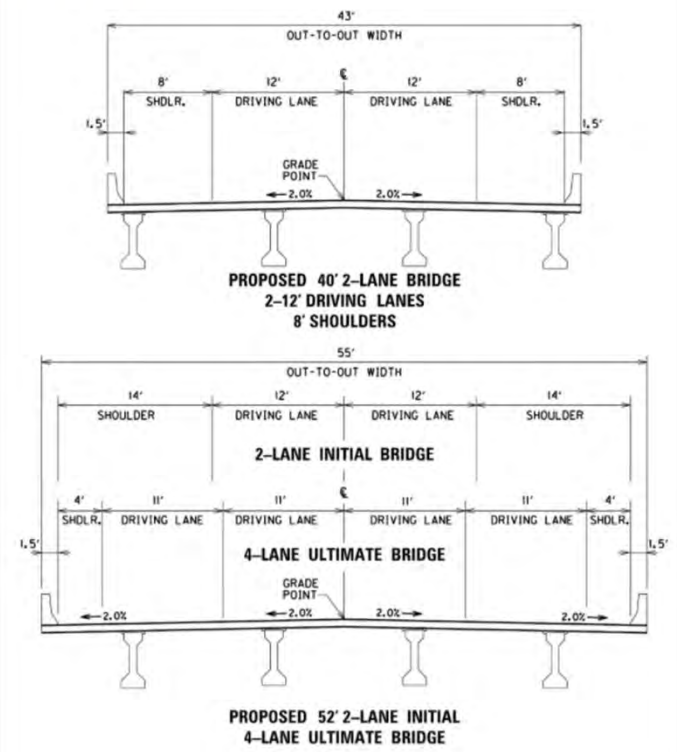
The attendees identified the following Pros and Cons for the typical section:

#### Two-lane typical section

- "Pros":
- + Less expensive.
  - + Expanded shoulders (in comparison to existing).
  - + Provides adequate capacity.
- "Con":
- Does not provide the opportunity for future expansion and growth of the community.

#### Two-lane initial/four-lane ultimate typical section

- "Pros"
- + Allows for future growth.
  - + Provides a connection to the 4-lane US 60.
  - + Accommodates future riverport traffic.
- "Cons":
- More expensive.
  - Having to transition to a two-lane road at the ends of the bridge.
  - 4 lane template would not allow pedestrians or bicycles.





### Seamen's Church Institute Simulation

June 1st - 5th 2020

Seamen's Church Institute (SCI), located in Paducah, KY, is a Maritime Education Center that provides training to commercial and private entities and utilizes simulated geo-specific visual data to create real-time simulations.

The project team created a simulation for each alignment, multiple bridge span arrangements, and multiple river conditions - over 200 simulations total. Licensed towboat captains and barge captains completed simulations and were asked to answer a survey.

[Click to see video of the the simulations in action](#)

Below is a recap of the Captains' survey:

- Preferred **Alignment 2 and 3** over **1**
- No significant challenges navigating 800' or 900' clear span bridge
- No significant challenges navigating the new bridge during construction
- Concerns about fleet mooring for alignments 1 and 2





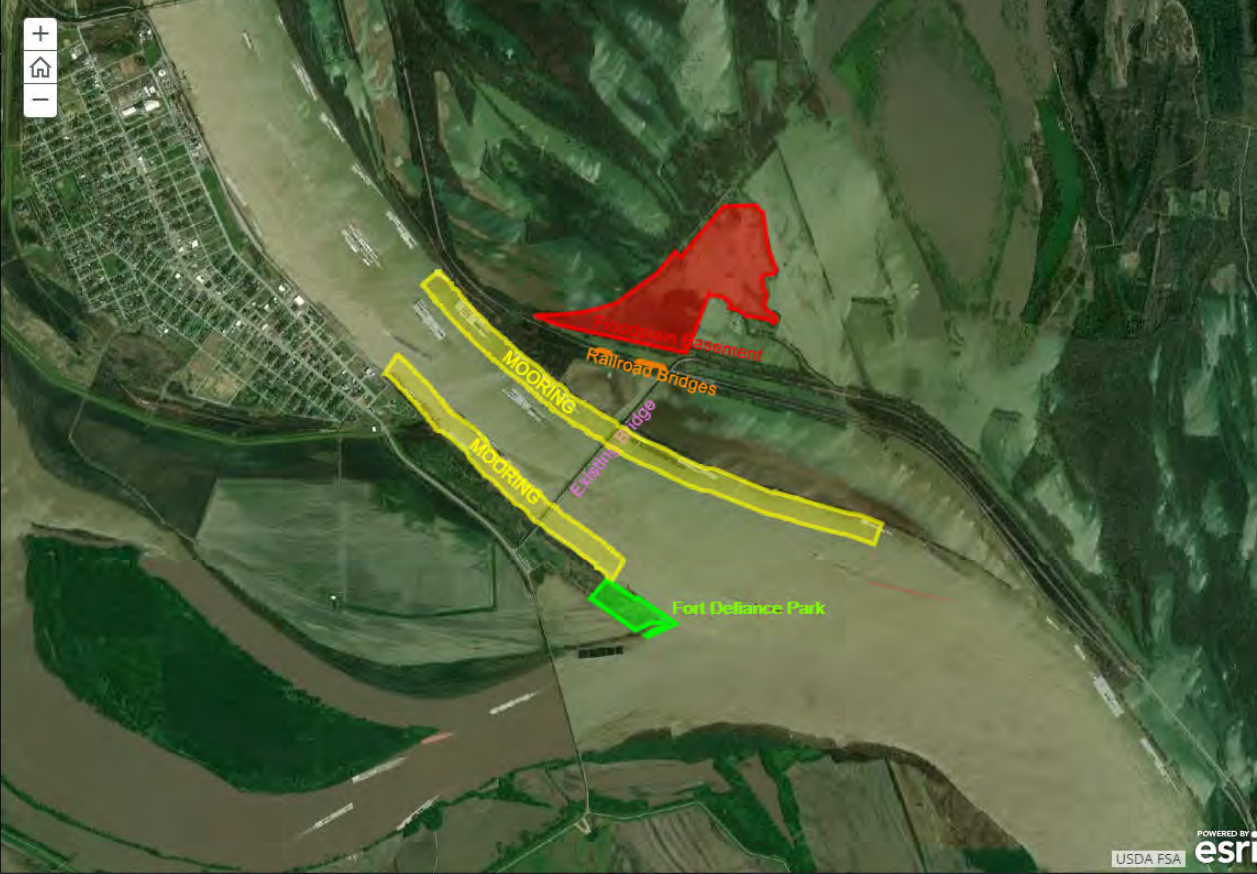
### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

The second CA/EJ Group Meeting was held on July 9, 2020. Due to the COVID-19 pandemic, the meeting was held virtually.

The meeting focused on the refinements of the Alignment Alternatives shown in the first CA/EJ Group Meeting and advancements of the environmental impacts to the area.

Constraints in the project area affecting the locations of the proposed alignment alternatives include:

- **The Existing Bridge** - Because of the importance of the existing bridge to surrounding communities, new alternatives must allow the bridge to remain in place during construction.
- **Barge Moorings** - The mooring anchors were located using GPS to determine exact locations. Affecting these anchors could be costly and harmful to the industry in the area.
- **Railroad Bridges** - There are 2 railroad bridges to allow flood water to flow through the opening instead of over the railroad. According to railroad regulations, no overhead structure can be within 100 feet of a railroad bridge in order to allow for future maintenance. Impacting these bridges would result in costly




### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

- **Railroad Bridges** - There are 2 railroad bridges to allow flood water to flow through the opening instead of over the railroad. According to railroad regulations, no overhead structure can be within 100 feet of a railroad bridge in order to allow for future maintenance. Impacting these bridges would result in costly damages and long delays.
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Alternative 1 - Blue

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- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- How We Got Here
- Planning Study
- Local Officials and Public Meetings
- CA/EJ Group Meeting #1
- Seamen's Church Institute Simulator
- CA/EJ Group Meeting #2

### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

#### Alternative 1 - Blue

The alignment for Alt 1 was very similar to the previous meeting. It was shown with a T - intersection.

- 1800' upstream of existing bridge
- 2.03 miles long
- Roadway pulls off US 51 just west of Minor Slough Bridge
- Roadway/Bridge threads between existing bridge and USDA parcel
- Crosses railroad 200' north of second railroad bridge
- Possible single lane closures during tie-in to existing bridge

#### Alternative 2 - Purple

The alignment for Alt 2 was very similar to the previous meeting. It was shown with a Roundabout intersection.

- 900' upstream of existing bridge
- 1.94 miles long
- Roadway/Bridge threads between existing bridge and USDA parcel
- Crosses railroad 300' north and south of railroad bridges
- Possible single lane closures during tie-in to existing bridge





### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

#### Alternative 2 - Purple

The alignment for Alt 2 was very similar to the previous meeting. It was shown with a Roundabout intersection.

- 900' upstream of existing bridge
- 1.94 miles long
- Roadway/Bridge threads between existing bridge and USDA parcel
- Crosses railroad 300' north and south of railroad bridges
- Possible single lane closures during tie-in to existing bridge

#### Alternative 3 - Red

Because of required railroad clearance, Alt 3's curve on the Kentucky side was flattened to pull away from the railroad bridge and crosses the existing roadway bridge. A temporary bridge will be necessary to maintain traffic during construction. It was shown with a "Continuous Right" intersection.

- 85' upstream of existing bridge
- 1.88 miles long
- A temporary bridge will be necessary to maintain traffic during construction
- It will require closing the existing bridge for a week or longer to tie into the temporary bridge





- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- How We Got Here
- Planning Study
- Local Officials and Public Meetings
- CA/EJ Group Meeting #1
- Seamen's Church Institute Simulator
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### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

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#### Intersection Types

- The three intersection types:
- T-Intersection
  - Roundabout
  - Continuous Right

All three intersections are interchangeable and can be used with any alternative.





- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- How We Got Here
- Planning Study
- Local Officials and Public Meetings
- CA/EJ Group Meeting #1
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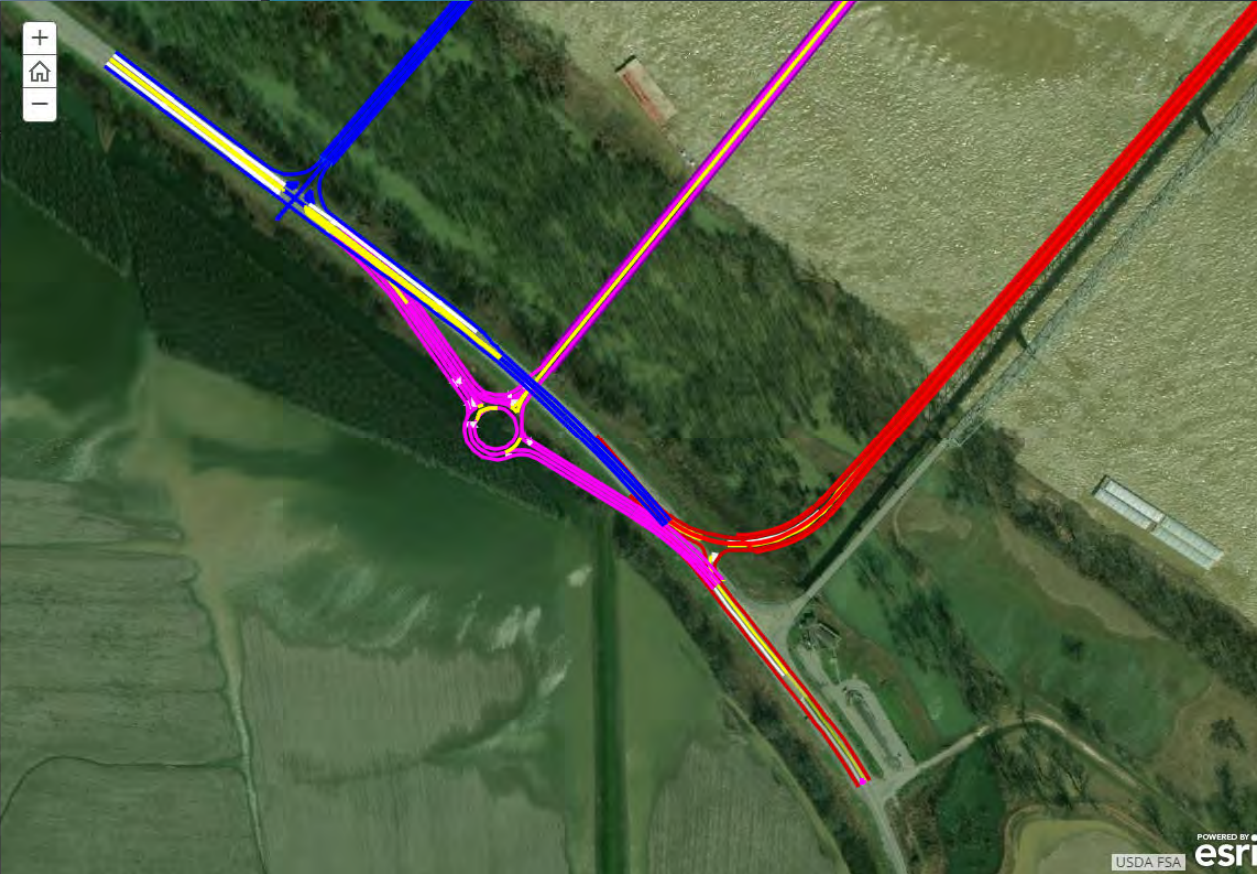
#### Alternatives Comparison

Attendees were polled regarding the three alternatives with the option to select as many alternatives as they wanted for each question.

Of the 8 alternative-specific questions, Alternative 2 was selected as the most favorable 8 times.

[Click here for Complete Survey Results](#)

#### Bridge Types



**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2**

**Alternatives Comparison**

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Of the 8 alternative-specific questions, Alternative 2 was selected as the most favorable 8 times.

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**Bridge Types**





Three different Bridge Types were presented at the meeting. These included:

- A Tied Arch Bridge
- A Truss Bridge
- A Cable Stay Bridge

**Typical Sections**

Attendees were presented with the same two typical sections as the



     
**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2**

**Bridge Types**

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- A Tied Arch Bridge
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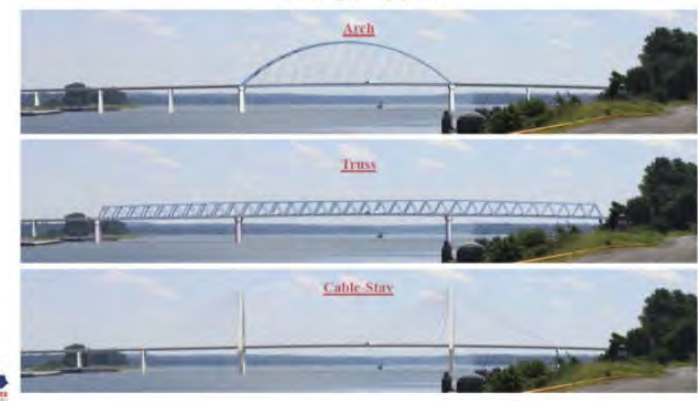
**Typical Sections**

Attendees were presented with the same two typical sections as the previous meeting: one with two lanes and another wider typical section to initially carry two lanes (one lane in each direction) with the ability to accommodate four lanes if US 51 is widened in the future.

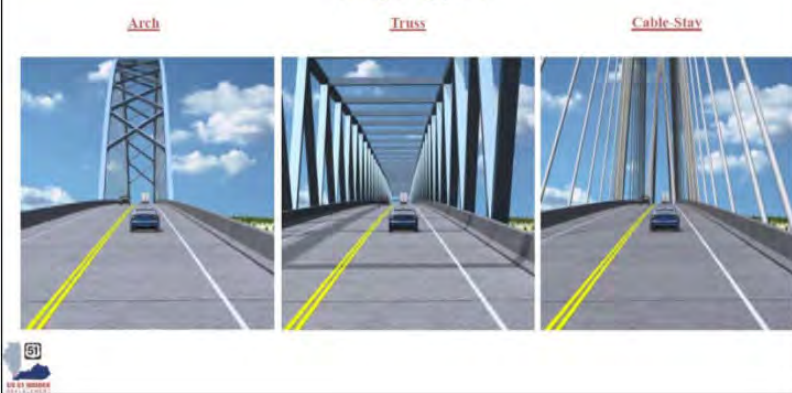
A **conceptual** was presented to the attendees.

Many members still voiced the desire to have a 4-lane bridge in order to facilitate future growth.

**Bridge Types**



**Bridge Types**





### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

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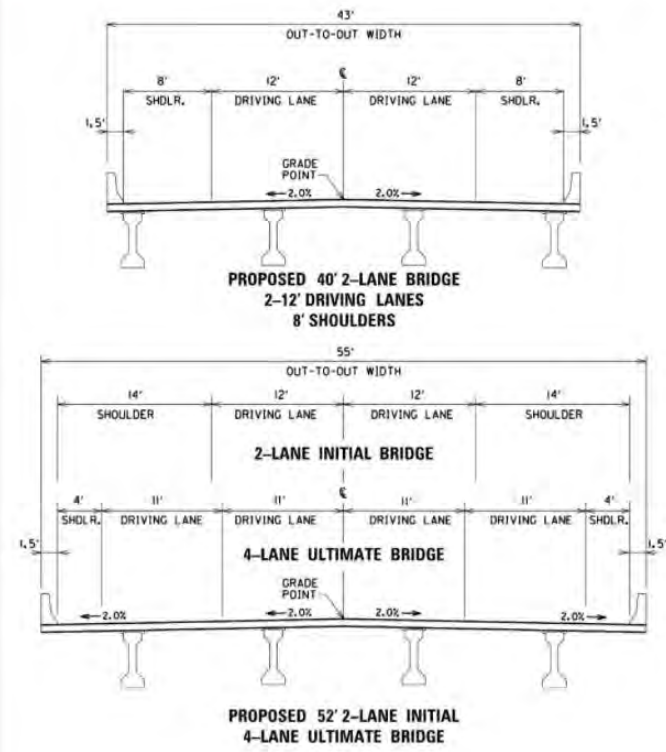
A **decision matrix** was presented to the attendees.

Many members still voiced the desire to have a 4-lane bridge in order to facilitate future growth.

#### Environmental Impacts - Historic

Many different Environmental and Human Environmental Impacts were measures and considered.

- Historic properties in the area are:
- Cairo Historic District - IL
  - St. Patrick Catholic Church - IL
  - US 51 Bridge - KY/IL



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- How We Got Here
- Planning Study
- Local Officials and Public Meetings
- CA/EJ Group Meeting #1
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   [Edit](#)

### Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2

No issues detected

- Included:
- A Tied Arch Bridge
  - A Truss Bridge
  - A Cable Stay Bridge

#### Typical Sections

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Environmental Impacts - Historic

[← BACK](#)

Bridge Cross Section	Bridge Cost	IL Design Exception Needed	KY Design Exception Needed	Bicycle Accomodations	Emergency Refuge	Agricultural Traffic
52' (2 Lane/4 Lane)	\$341M	NO	NO	●	●	●
44' (10' Shld)	\$288M	NO	NO	●	●	●
40' (8' Shld)	\$270M	NO	NO	●	☹	☹
36' (6' Shld)	\$246M	YES	YES	X	X	X

Note: The 52' ultimate 4-Lane typical section will require a design exception for both states and will not accommodate bicycles, agricultural traffic, or emergency refuge.

     
**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2**

**Environmental Impacts - Historic**

Many different Environmental and Human Environmental Impacts were measured and considered.

Historic properties in the area are:

- Cairo Historic District - IL
- St. Patrick Catholic Church - IL
- US 51 Bridge - KY/IL
- US 60/US 62 Bridge - IL/MO

\*Further analysis is ongoing

No previously recorded archeology sites within the alternatives present in Kentucky or Illinois. Natural processes have significantly impacted the area, lowering the potential for Native American and other archaeological sites.

**Environmental Impacts - Human**

No relocations, no community facilities impacted, no park impacts, nor adverse affect to Environmental Justice communities were measured for each alternative. Pedestrian and bicycle facilities should have a positive impact with the project.



     
**Citizens Advisory/Environmental Justice (CA/EJ) Group Meeting #2**

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**Environmental Impacts**

Stream impacts, terrestrial impacts, and endangered species impacts were measured for each alternates.

After measuring impacts to historic, natural, and human environmental, **it was determined there was no significant difference in each of the alternatives.**



     
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WHERE WE ARE NOW



# US 51 Bridge Online Public Meeting

- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are**
- Recommended Decision
- What's Next?
- Survey

- Where We Are Now**
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections



## Where We Are Now

Since the last CA/EJ meeting, the design team has further developed the alignments, analyzed the intersection types, and weighed typical section options.

In order to proceed from Preliminary Design to Final Design, a preferred alignment needs to be selected. The preferred alignment selection narrows down the affected area for geotechnical and archaeological studies and allows for the completion of the environmental document.

Click on the [Blue Tabs](#) above for more information about specific topics.





### Alignment Alternatives

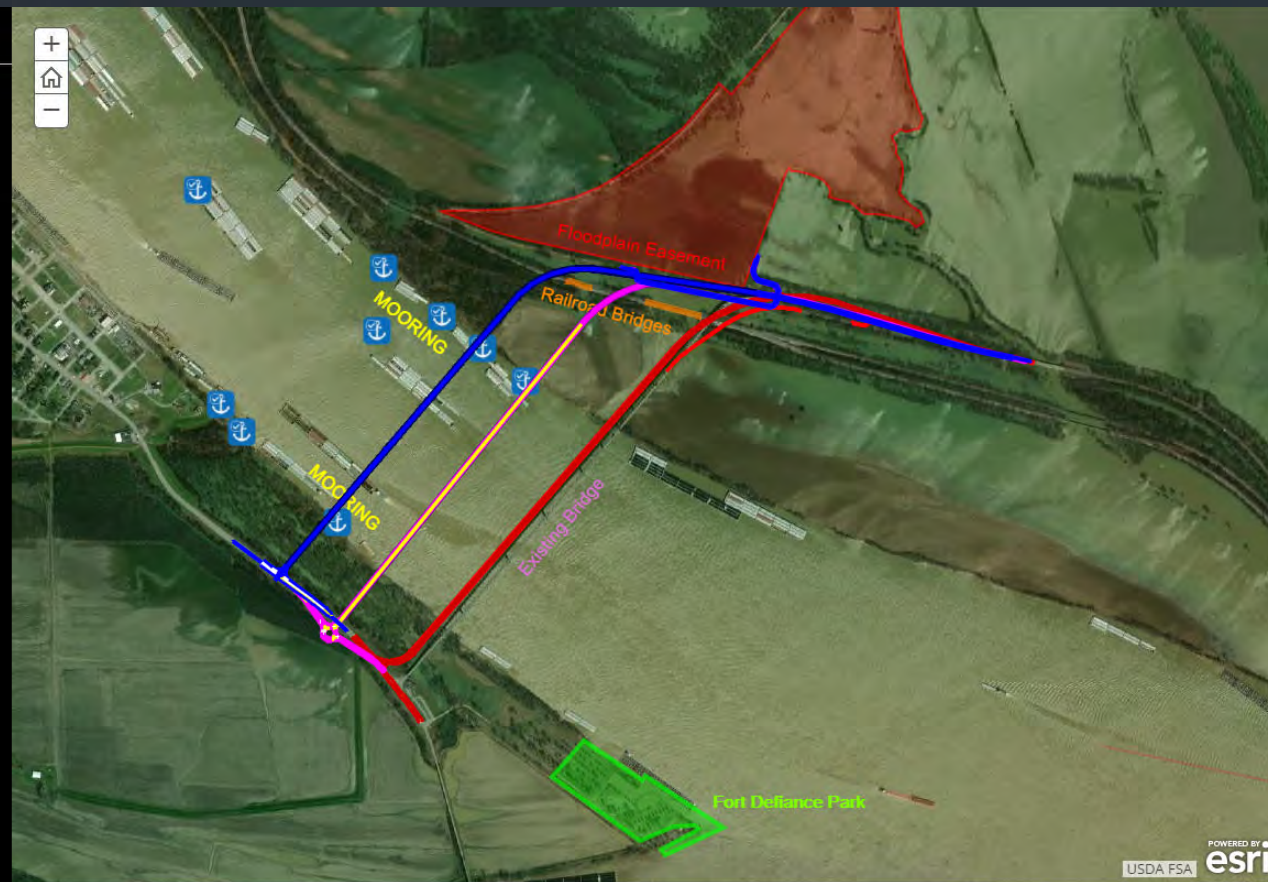
Each Alternative was further designed, tweaked according to previous comments, and detailed at a higher level than previous meetings. The higher level design and detail allowed us to weigh the positives and negatives of each option.

Scroll down for information on each alternative.

#### Alternative 1 - Blue

- Most expensive alignment alternative
- Most mooring impacts
- Least preferred by the Seamen's Church Institute simulation participants
- Impacts USDA Natural Resource Conservation Service parcel (temporarily - only during construction)
- + Least amount of parcels affected
- Largest footprint

Environment impacts are near equal on all three alternatives.





    
**Alignment Alternatives**

**Alternative 1 - Blue**

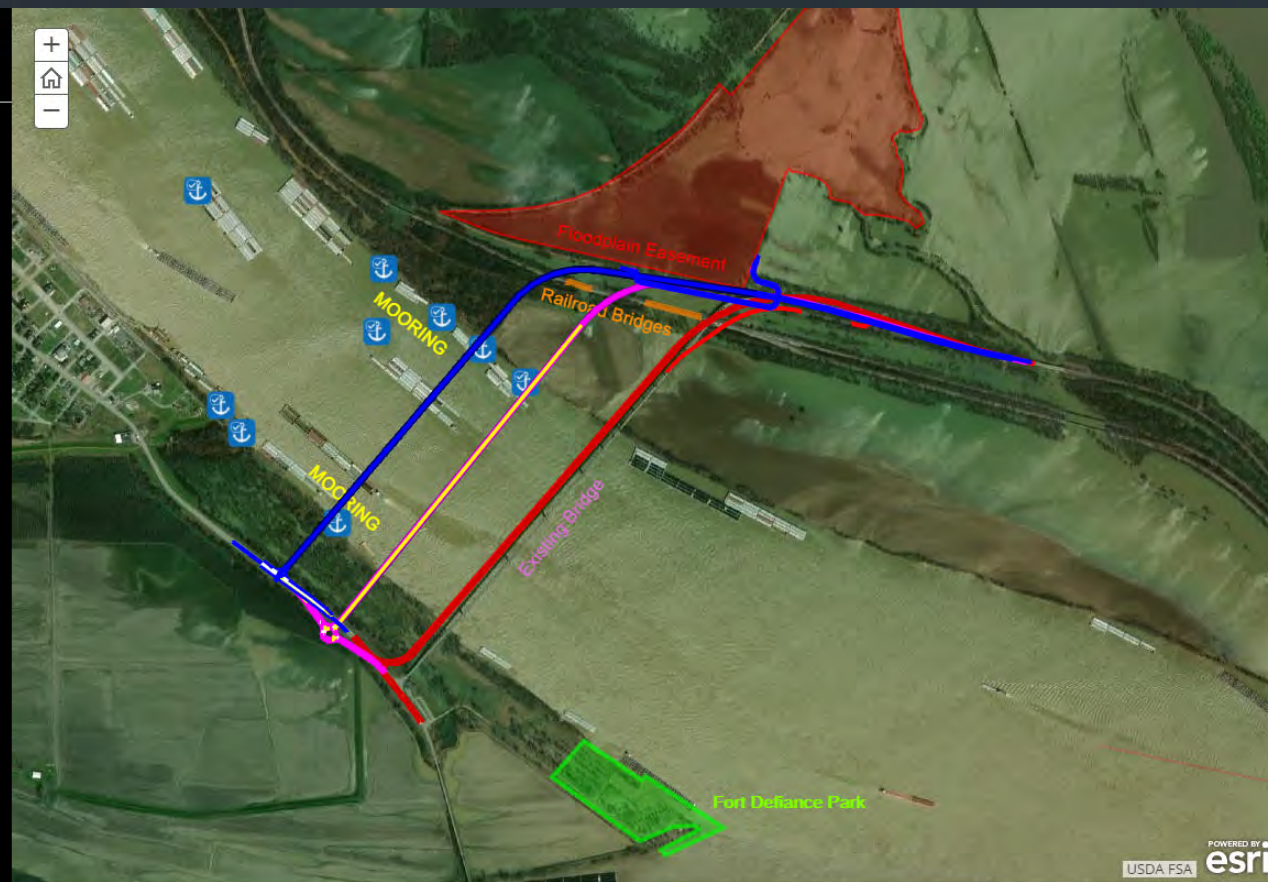
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Environment impacts are near equal on all three alternatives.

**Alternative 2 - Purple**

- + Similar cost to Alternative 3
- Some mooring impacts
- + **No impact from barge captains at Seamen's Church Institute (SCI) simulations**
- + **Most preferred by the fleeters at SCI simulations**
- Impacts USDA Natural Resource Conservation Service parcel (temporarily - only during construction)
- + **Able to construct with minimal impact to existing bridge**

Environment impacts are near equal on all three alternatives.



    
**Alignment Alternatives**

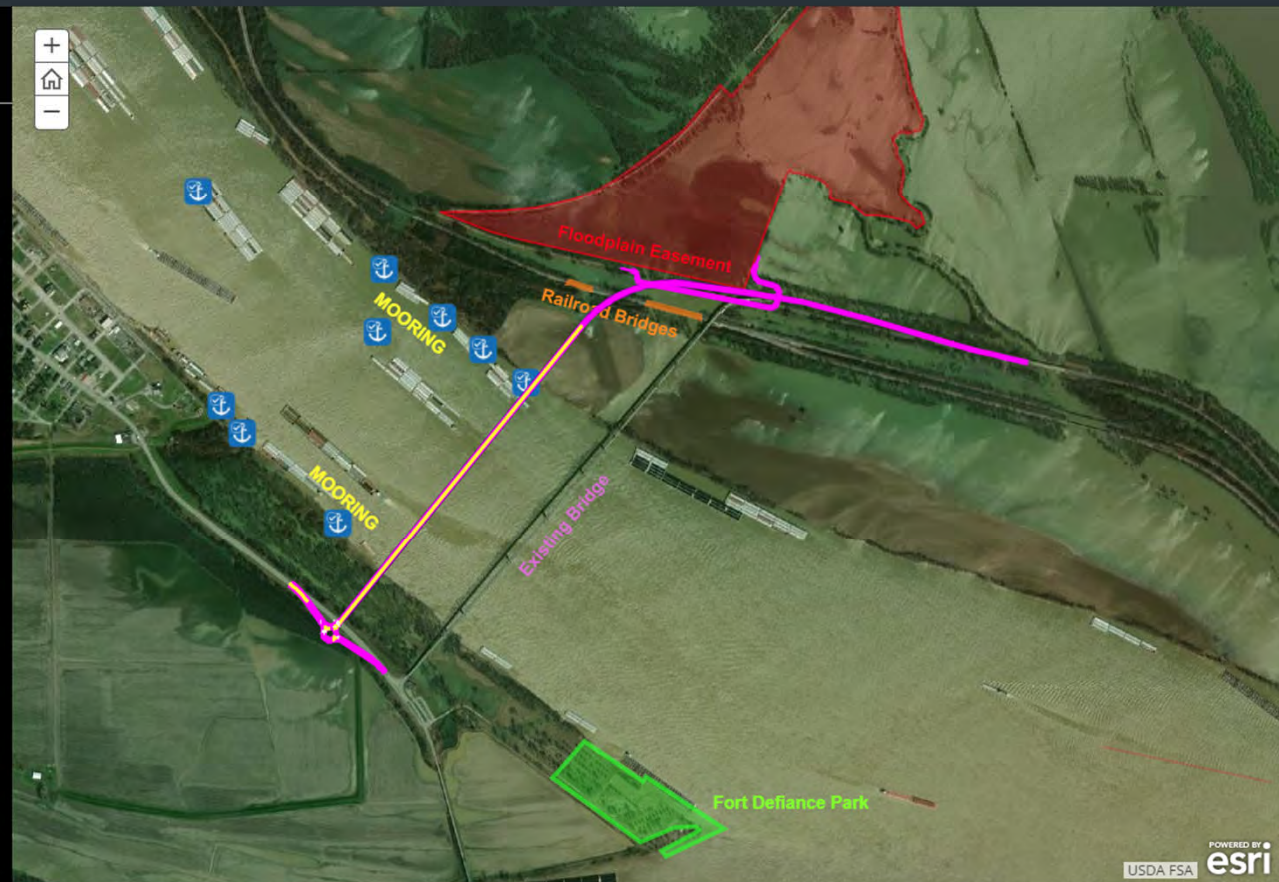
**Alternative 2 - Purple**

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**Alternative 3 - Red**

- + Least amount of mooring impacts
- + Most preferred by fleeters at Seamen's Church Institute simulations
- Greatest amount of parcels affected
- + No Impacts to USDA NRCS parcel
- Would require a temporary bridge and bridge closure for construction
- Would require additional railroad coordination





- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey

- Where We Are Now
- Alignment Alternatives
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- Welcome
  - Cairo Bridge Information
  - How We Got Here
  - Where We Are
  - Recommended Decision
  - What's Next?
  - Survey
- Where We Are Now
  - Alignment Alternatives
  - Intersection Alternatives
  - Typical Sections



### US 60/US 62 Intersection Alternatives

The project team has analyzed the three intersection types - a T-Intersection, a Roundabout, and a Continuous Right Intersection.

**\*\*Any of these three intersections can be constructed with any of the three alignment alternatives\*\***

Each intersection movement was analyzed to determine how long it takes to traverse through the intersection (delay) and given a letter grade Level of Service (LOS). LOS is based on the amount of time each vehicle has to wait to go through the intersection during a particular hour. Through movements do not have opposing traffic movements and, therefore, have a LOS A.

Click the image below to enlarge and learn more about LOS and the traffic associated with each letter grade.

Roadway	
LOS A	Free Flowing Uninterrupted vehicle
LOS B	Stable flow Other vehicles are more noticeable
LOS C	Stable flow Vehicle operations affected by other vehicles



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- Where We Are Now
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections



### US 60/US 62 Intersection Alternatives

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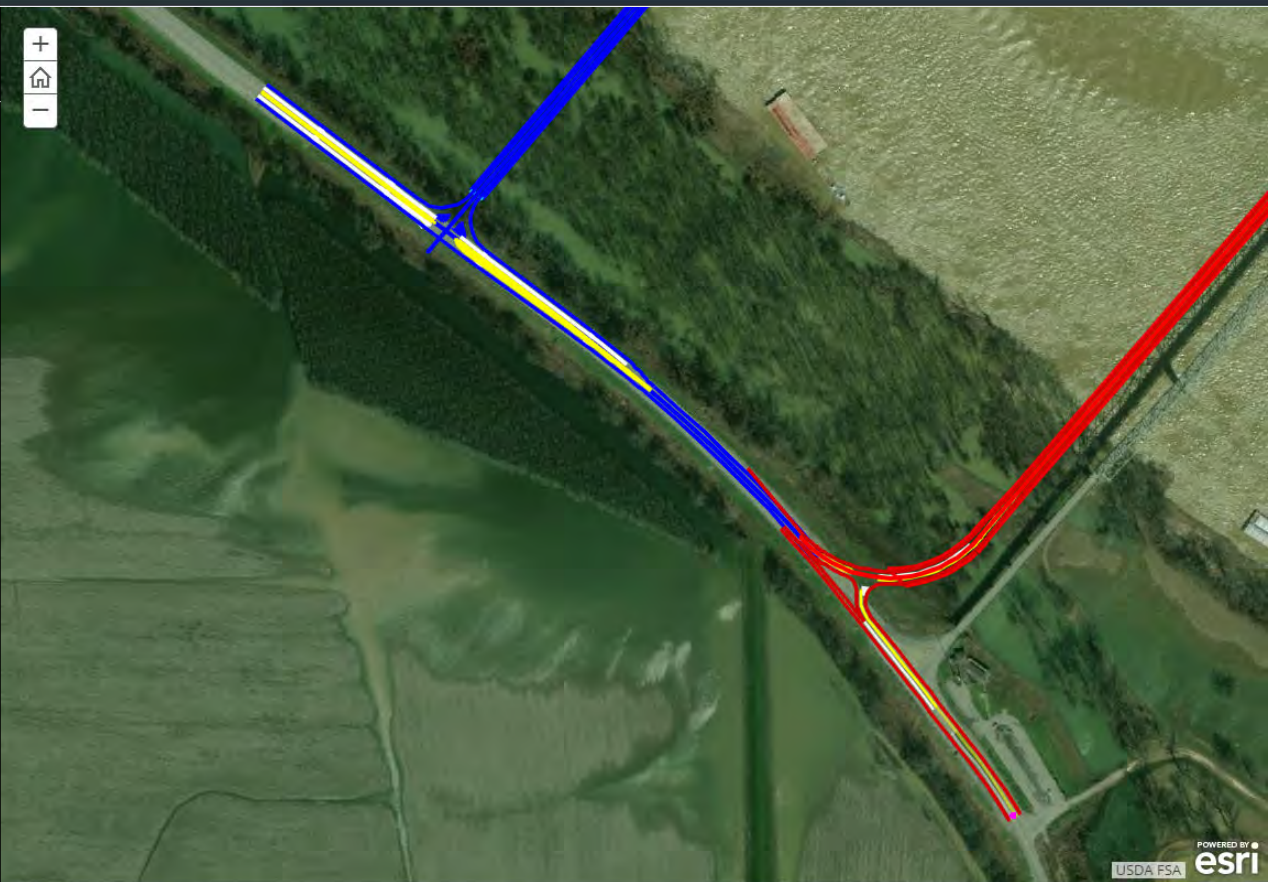
Click the image below to enlarge and learn more about LOS and the traffic associated with each letter grade.

Roadway	
LOS A	Free flowing Uninterrupted vehicle
LOS B	Stable flow Other vehicles are more noticeable
LOS C	Stable flow Vehicle operations affected by other vehicles
LOS D	High density free flow Operation of vehicle is affected by other vehicles
LOS E	High density traffic flow, nearing capacity Operating conditions are extremely poor
LOS F	Forced or breakdown flow Amount of traffic exceeds capacity

Scroll down for more information about each alternative.

### No-Build Alternative

The "No-Build" option is always included when evaluating






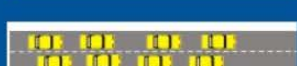


- Welcome
  - Cairo Bridge Information
  - How We Got Here
  - Where We Are
  - Recommended Decision
  - What's Next?
  - Survey
- Where We Are Now
  - Alignment Alternatives
  - Intersection Alternatives
  - Typical Sections

US 51/US 62 Intersection Alternatives

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Click the image below to enlarge and learn more about LOS traffic associated with each letter grade.

**Roadway**

<b>LOS A</b>		<ul style="list-style-type: none"> <li>Free flowing</li> <li>Uninterrupted vehicle</li> </ul>
<b>LOS B</b>		<ul style="list-style-type: none"> <li>Stable flow</li> <li>Other vehicles are more noticeable</li> </ul>
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LOS	Characteristics	Vehicle Operations
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No-Build Alternative

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  **US 60/US 62 Intersection Alternatives**

**No-Build Alternative**

The "No-Build" option is always included when evaluating alternatives. While it may be a reasonable alternative, especially where the impacts are high and the need is relatively minor, more often, the no-build alternative serves as a benchmark against which the impacts of the other alternatives can be compared.

Click the image below to enlarge to see how the No-Build alternative will function in the design year - 2045.

Alternative	Minimize	Minimize LOS	Minimize Delay (min)	Minimize Delay (hr)	Total Annual Delay (EC)
No-Build	NB	3	408	10.20	10,400
	SB	3	412	10.30	10,400
	TOT	6	820	20.50	20,800
1a T-Intersection (Signalized)	NB	3	294	7.35	7,450
	SB	3	292	7.30	7,350
	TOT	6	586	14.65	14,800
1b T-Intersection (Signalized)	NB	3	283	7.08	7,175
	SB	3	277	6.93	7,075
	TOT	6	560	14.01	14,250
	SB	3	277	6.93	7,075
2 (Continued Right)	NB	3	385	9.63	9,750
	SB	3	387	9.68	9,800
	TOT	6	772	19.31	19,550
3 (Roundabout)	NB	3	311	7.78	7,875
	SB	3	311	7.78	7,875
	TOT	6	622	15.56	15,750

T-Intersection Alternative

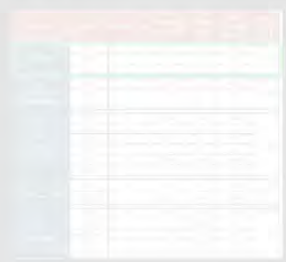


- Welcome
  - Cairo Bridge Information
  - How We Got Here
  - Where We Are
  - Recommended Decision
  - What's Next?
  - Survey
- Where We Are Now
  - Alignment Alternatives
  - Intersection Alternatives
  - Typical Sections

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Click the image below to enlarge to see how the No-Build will function in the design year - 2045.



Alternative	Movement	Movement LOS	Movement Delay (s/veh)	Volume veh/hr	Total Movement Delay (sec)	Total Delay (sec)
No Build	WBL	F	380.5	205	78,003	84,803
	WBR	B	11.6	250	2,900	
	SBL	A	10.0	390	3,900	
1a T - Intersection (Unsignalized)	WBL	F	224.0	205	45,920	51,952
	WBR	B	10.4	250	2,600	
	SBL	A	8.8	390	3,432	
1b T - Intersection (Signalized)*	WBL	C	24.5	205	5,023	16,946
	WBR	A	6.7	250	1,675	
	NBT	A	6.4	45	288	
	NBR	A	2.4	185	444	
	SBL	C	23.4	390	9,126	
2 Continuous Right	WBL	A	9.8	205	2,009	9,829
	NB LT & RT	D	34.0	230	7,820	
3 Roundabout	WBL	A	6.1	205	1,250.5	9,347
	WBR	-	-	250	-	
	NBR & THRU	B	13.3	230	3,059.0	
	SBL	B	12.1	390	4,719.0	
	SB THRU	A	5.3	60	318.0	



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey

- Where We Are Now
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections

   **US 60/US 62 Intersection Alternatives**

**T-Intersection Alternative**

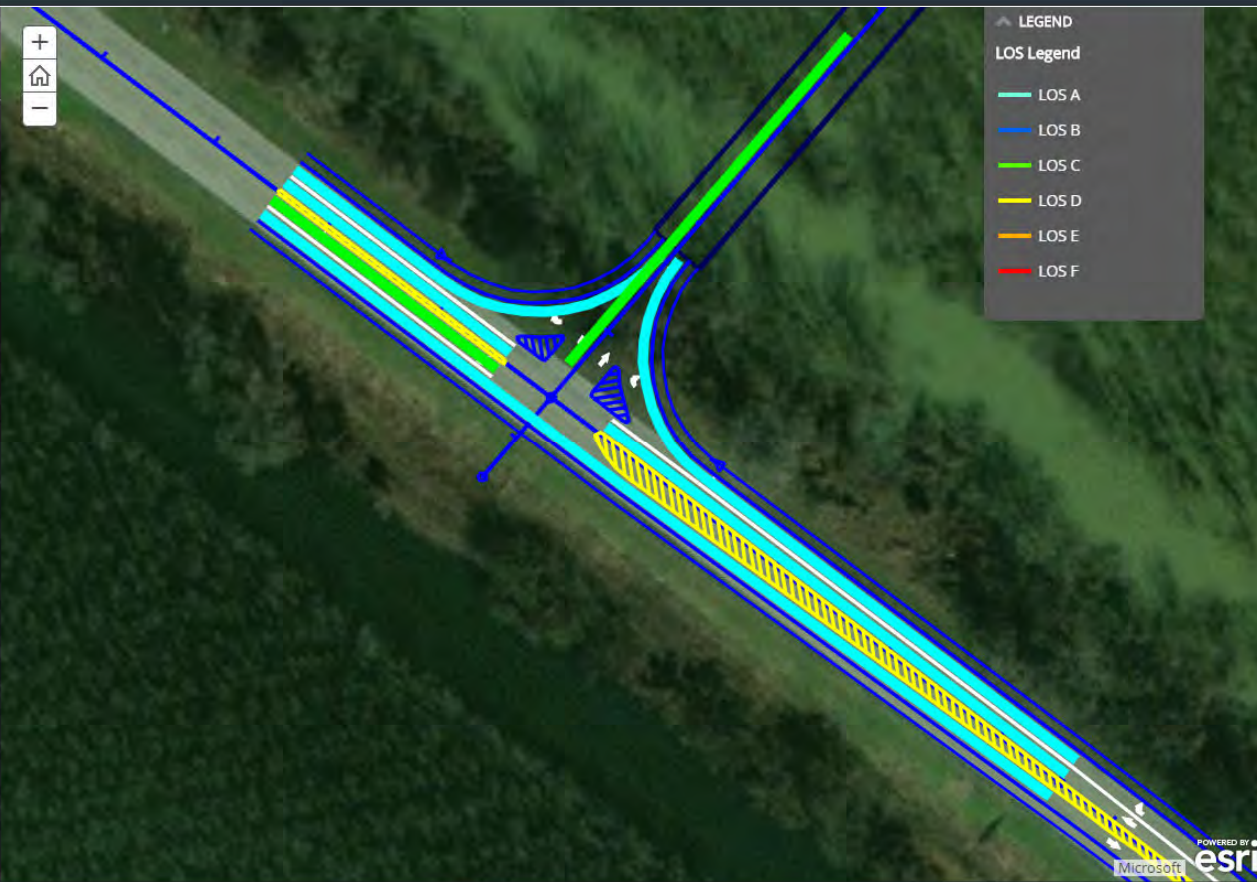
A T-Intersection, as its name implies, is the junction of two roads that form a T. This type of intersection can be constructed with or without a traffic signal.

The total vehicle delay at the intersection will be significantly less if it the intersection is signaled.

Click the image below to enlarge to see how the T-Intersection alternative will function in the design year - 2045.

Alternative	Scenario	Design Year	Vehicle Delay (sec)	Vehicle Miles Traveled (VMT)	Level of Service (LOS)
T-Intersection	2045	2045	1,200	1,200	LOS B
	2045	2045	1,200	1,200	LOS B
	2045	2045	1,200	1,200	LOS B
Continuous Right	2045	2045	1,200	1,200	LOS B
	2045	2045	1,200	1,200	LOS B
	2045	2045	1,200	1,200	LOS B

**Continuous Right Intersection Alternative**



- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- Where We Are Now
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections

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The total vehicle delay at the intersection will be significantly lower if the intersection is signalized.

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Alternative	Movement	Movement LOS	Movement Delay (s/veh)	Volume veh/hr	Total Movement Delay (sec)	Total Delay (sec)
No Build	WBL	F	380.5	205	78,003	84,803
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- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey

- Where We Are Now
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections



US 60/US 62 Intersection Alternatives

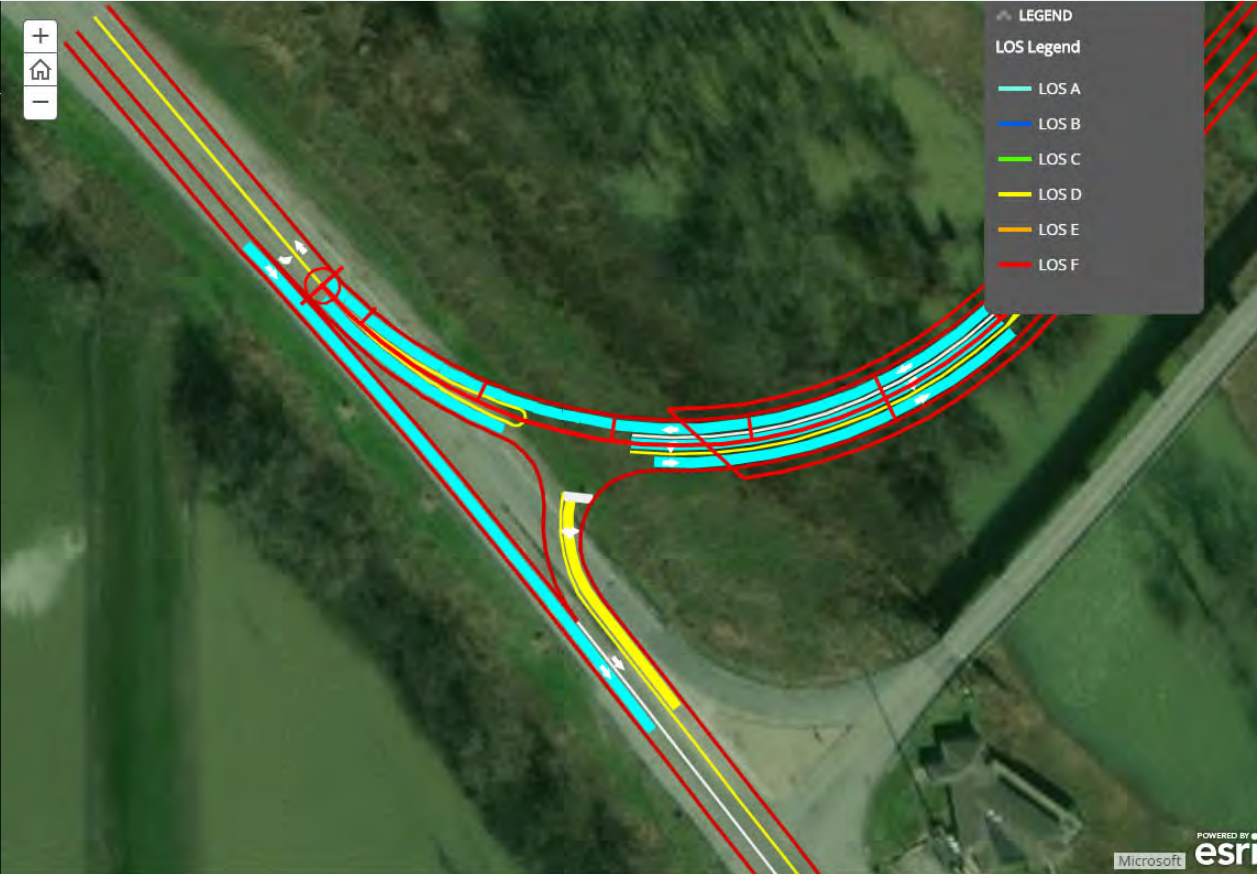
Continuous Right Intersection Alternative

A continuous right intersection exchanges one leg of the mainline approaches with the side street approach effectively creating a new mainline. It is particularly useful at intersections with a side street volume that is comparable to or heavier than one of the mainline approach volumes.

In this instance, the bridge approach has been made part of the mainline and the northbound US 60/US 62 approach is relegated as the side street with a stop condition.

Click the image below to enlarge to see how the Continuous Right alternative will function in the design year - 2045.

Alternative	Volume	Volume/CS	Volume/CS/CS	Volume/CS/CS/CS	Volume/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	Volume/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS/CS	
1	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
2	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
4	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
5	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
6	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
7	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
8	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
9	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
10	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000



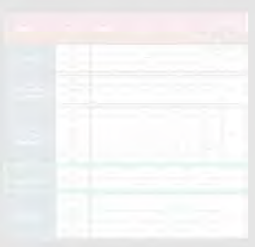
# US 51 Bridge Online Public Meeting

- Welcome
- Cairo Bridge Information
- How We Got Here
- Where We Are
- Recommended Decision
- What's Next?
- Survey
- Where We Are Now
- Alignment Alternatives
- Intersection Alternatives
- Typical Sections

A continuous right intersection exchanges one leg of the approaches with the side street approach effectively crossing the mainline. It is particularly useful at intersections with approach volumes that is comparable to or heavier than one of the approach volumes.

In this instance, the bridge approach has been made parallel to the mainline and the northbound US 60/US 62 approach is the side street with a stop condition.

Click the image below to enlarge to see how the Continuous Right alternative will function in the design year - 2045.



Alternative	Movement	Movement LOS	Movement Delay (s/veh)	Volume veh/hr	Total Movement Delay (sec)	Total Delay (sec)
No Build	WBL	F	380.5	205	78,003	84,803
	WBR	B	11.6	250	2,900	
	SBL	A	10.0	390	3,900	
1a T - Intersection (Unsignalized)	WBL	F	224.0	205	45,920	51,952
	WBR	B	10.4	250	2,600	
	SBL	A	8.8	390	3,432	
1b T - Intersection (Signalized)*	WBL	C	24.5	205	5,023	16,946
	WBR	A	6.7	250	1,675	
	NBT	A	6.4	45	288	
	NBR	A	2.4	185	444	
	SBL	C	23.4	390	9,126	
2 Continuous Right	WBL	A	9.8	205	2,009	9,829
	NB LT & RT	D	34.0	230	7,820	
3 Roundabout	WBL	A	6.1	205	1,250.5	9,347
	WBR	-	-	250	-	
	NBR & THRU	B	13.3	230	3,059.0	
	SBL	B	12.1	390	4,719.0	
	SB THRU	A	5.3	60	318.0	



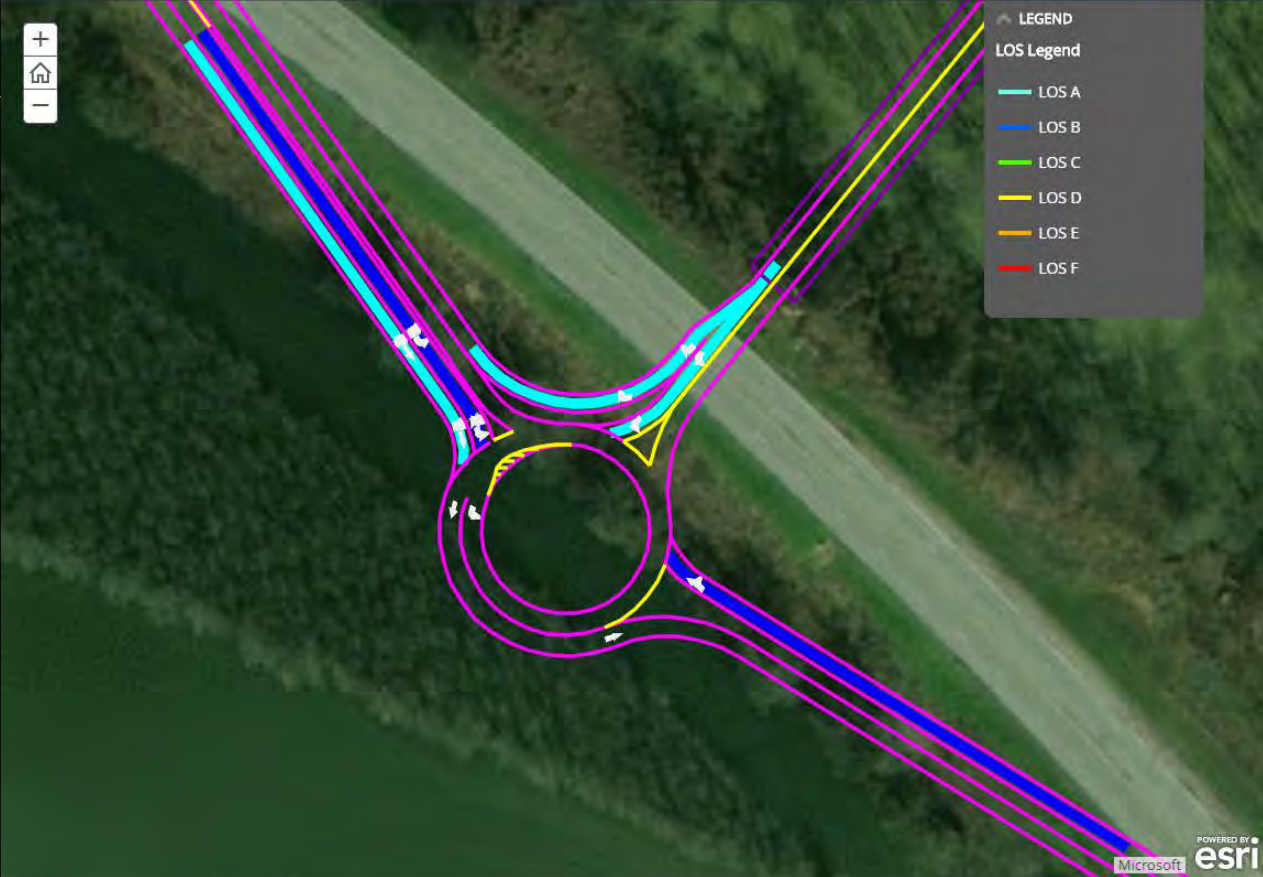
US 60/US 62 Intersection Alternatives

Roundabout Alternative

A roundabout is a type of circular intersection that is often safer, more efficient, and more aesthetically appealing than conventional intersection designs. Most significantly, roundabouts reduce the types of crashes where people are seriously hurt or killed by 78-82% when compared to conventional stop-controlled and signalized intersections.

Click the image below to enlarge to see how the Roundabout alternative will function in the design year - 2045.

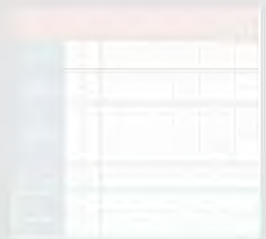
Alternative	2045	2045	2045	2045	2045	2045
1	100%	100%	100%	100%	100%	100%
2	100%	100%	100%	100%	100%	100%
3	100%	100%	100%	100%	100%	100%
4	100%	100%	100%	100%	100%	100%
5	100%	100%	100%	100%	100%	100%
6	100%	100%	100%	100%	100%	100%
7	100%	100%	100%	100%	100%	100%
8	100%	100%	100%	100%	100%	100%
9	100%	100%	100%	100%	100%	100%
10	100%	100%	100%	100%	100%	100%
11	100%	100%	100%	100%	100%	100%
12	100%	100%	100%	100%	100%	100%
13	100%	100%	100%	100%	100%	100%
14	100%	100%	100%	100%	100%	100%
15	100%	100%	100%	100%	100%	100%
16	100%	100%	100%	100%	100%	100%
17	100%	100%	100%	100%	100%	100%
18	100%	100%	100%	100%	100%	100%
19	100%	100%	100%	100%	100%	100%
20	100%	100%	100%	100%	100%	100%
21	100%	100%	100%	100%	100%	100%
22	100%	100%	100%	100%	100%	100%
23	100%	100%	100%	100%	100%	100%
24	100%	100%	100%	100%	100%	100%
25	100%	100%	100%	100%	100%	100%
26	100%	100%	100%	100%	100%	100%
27	100%	100%	100%	100%	100%	100%
28	100%	100%	100%	100%	100%	100%
29	100%	100%	100%	100%	100%	100%
30	100%	100%	100%	100%	100%	100%
31	100%	100%	100%	100%	100%	100%
32	100%	100%	100%	100%	100%	100%
33	100%	100%	100%	100%	100%	100%
34	100%	100%	100%	100%	100%	100%
35	100%	100%	100%	100%	100%	100%
36	100%	100%	100%	100%	100%	100%
37	100%	100%	100%	100%	100%	100%
38	100%	100%	100%	100%	100%	100%
39	100%	100%	100%	100%	100%	100%
40	100%	100%	100%	100%	100%	100%
41	100%	100%	100%	100%	100%	100%
42	100%	100%	100%	100%	100%	100%
43	100%	100%	100%	100%	100%	100%
44	100%	100%	100%	100%	100%	100%
45	100%	100%	100%	100%	100%	100%
46	100%	100%	100%	100%	100%	100%
47	100%	100%	100%	100%	100%	100%
48	100%	100%	100%	100%	100%	100%
49	100%	100%	100%	100%	100%	100%
50	100%	100%	100%	100%	100%	100%



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Typical Sections

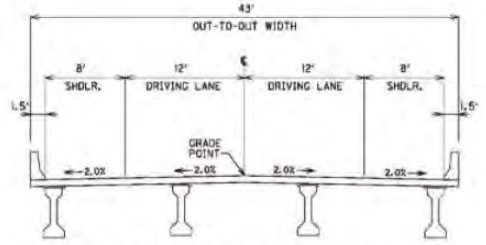
Typical sections are detailed cross section depictions of the highway's principal elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown throughout a set of highway design plans.

There were comments from each meeting that a 4-lane bridge was necessary for future growth in the area. The project team investigated the positives and negatives of a 2-lane bridge vs. a 4-lane bridge. The 4-lane bridge option is constructed with extra width and striped as 2-lane with the potential to be re-striped in the future to accommodate four lanes of traffic.

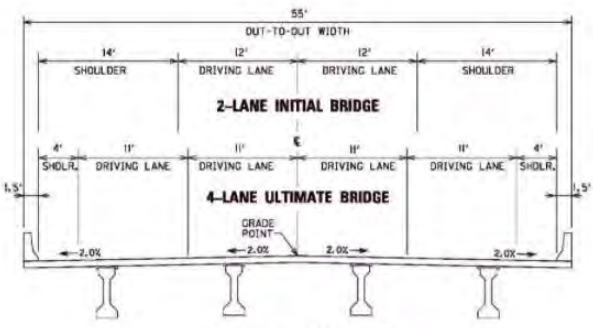
Scroll down for additional information.

Traffic Counts

Roadways are constructed with shoulders on the flanks. Traffic is expected to be 20-40 vehicles per hour per lane.



PROPOSED 40' 2-LANE BRIDGE



PROPOSED 52' 2-LANE INITIAL 4-LANE ULTIMATE BRIDGE



### Typical Sections

### Traffic Counts

Roadways are constructed with an eye on the future. Traffic is projected out 25 - 30 yrs (the design year) to ensure that the roadway is built for longevity.

The current Annual Average Daily Traffic (AADT) is 5,500 vehicles per day. After analyzing the historical traffic data and growth near Cairo and Wickliffe, a traffic growth rate of 0.5% was assumed. The 2045 design year AADT estimate is 6,200 vehicles per day. The CA/EJ group felt this growth rate was low, so a special count was conducted to insure the numbers were accurate. The count showed 6,050 vpd - much higher than the forecast. The count indicated a growth rate of 1.8% projecting out to 9,450 vehicles per day in the design year - 2045. This growth rate appears to be much higher than historical used in the area, however since news of a new port and comments of potential group from the CA/EJ group, the design team felt the growth rate was justified.

A standard two-lane roadway such as what is proposed with the two-lane typical section can serve approximately 18,000 to 19,000 vehicles per day.

### Connectivity

A four-lane bridge would require four-lane roadways to connect to

## TRAFFIC PROJECTIONS

### Traffic Projections for the US 51 Ohio River Bridge:

HISTORIC TRAFFIC		AADT
2013 Traffic Count (KYTC)		5,350 vpd
2020 Current Year (KYTC)		6,050 vpd
TRAFFIC FORECAST		AADT
2025		6,600 vpd
2045		9,450 vpd

Notes: Future years forecast using 1.8% annual growth rate  
AADT = Annual Average daily traffic  
vpd = Vehicles per day

- Approximately 35% of traffic using bridge is truck traffic
- Two Lane Bridge is Adequate



- Welcome
- Cairo Bridge Information
- How We Got Here
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- What's Next?
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### Typical Sections

### Connectivity

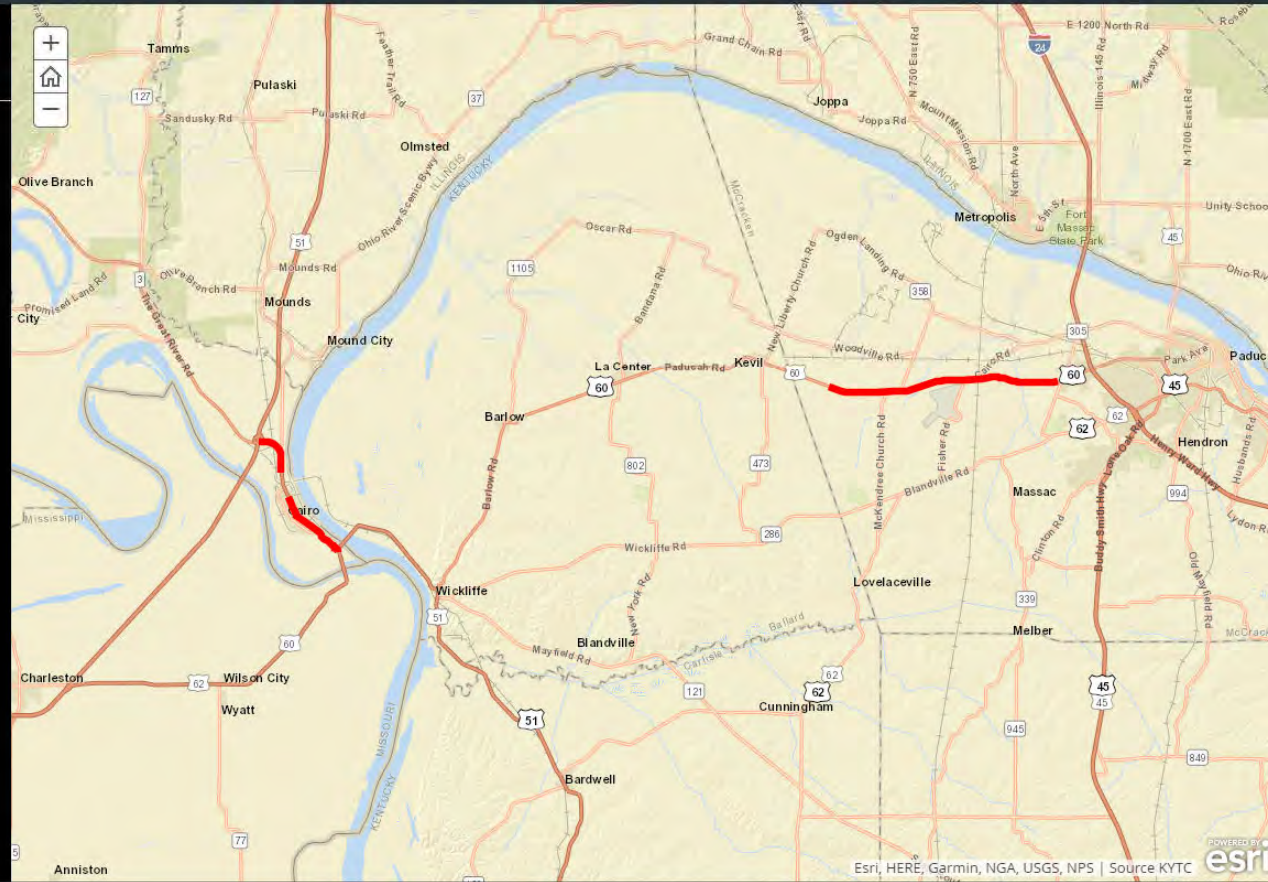
A four-lane bridge would require four lane roadways to connect to. While US 60/US 62 in Illinois has 4 lanes, the Kentucky side has no 4 lane sections nearby. Upon further investigation, the nearest 4 lane facility is west of Kevil, KY 20 miles away, through downtown Wickliffe. The current KYTC six-year plan does not include any four-lane improvements west of Kevil and no planning studies are pending for that area.

### Construction Cost / Usability

Early in the process, the design team narrowed down the typical options to:

- 40' Bridge (2-12' lanes w/8' shoulders)
- 52' Bridge (2 lanes/4 lanes ult)

A 52' Bridge that was striped as a 2 lane roadway would not require a design exception and would initially allow for bicycles, emergency stopping, and agricultural traffic. It would be able to handle more vehicles. However, to switch to a 4 lane bridge in the future, a design exception might be needed. The smaller shoulders would also not accommodate bicycles, stopped vehicles, or agricultural traffic. A 52' bridge would have an estimated increased cost of approximately 27%.



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Bridge Cross Section	Bridge Cost	IL Design Exception Needed	KY Design Exception Needed	Bicycle Accomodations	Emergency Refuge	Agricultural Traffic
52' (2 Lane/4 Lane)	\$341M	NO	NO	●	●	●
44' (10' Shld)	\$288M	NO	NO	●	●	●
40' (8' Shld)	\$273M	NO	NO	●	●	●
36' (6' Shld)	\$246M	YES	YES	X	X	X

Note: The 52' ultimate 4-Lane typical section will require a design exception for both states and will not accommodate bicycles, agricultural traffic, or emergency refuge.

## RECOMMENDED DECISION





### Preferred Alternatives

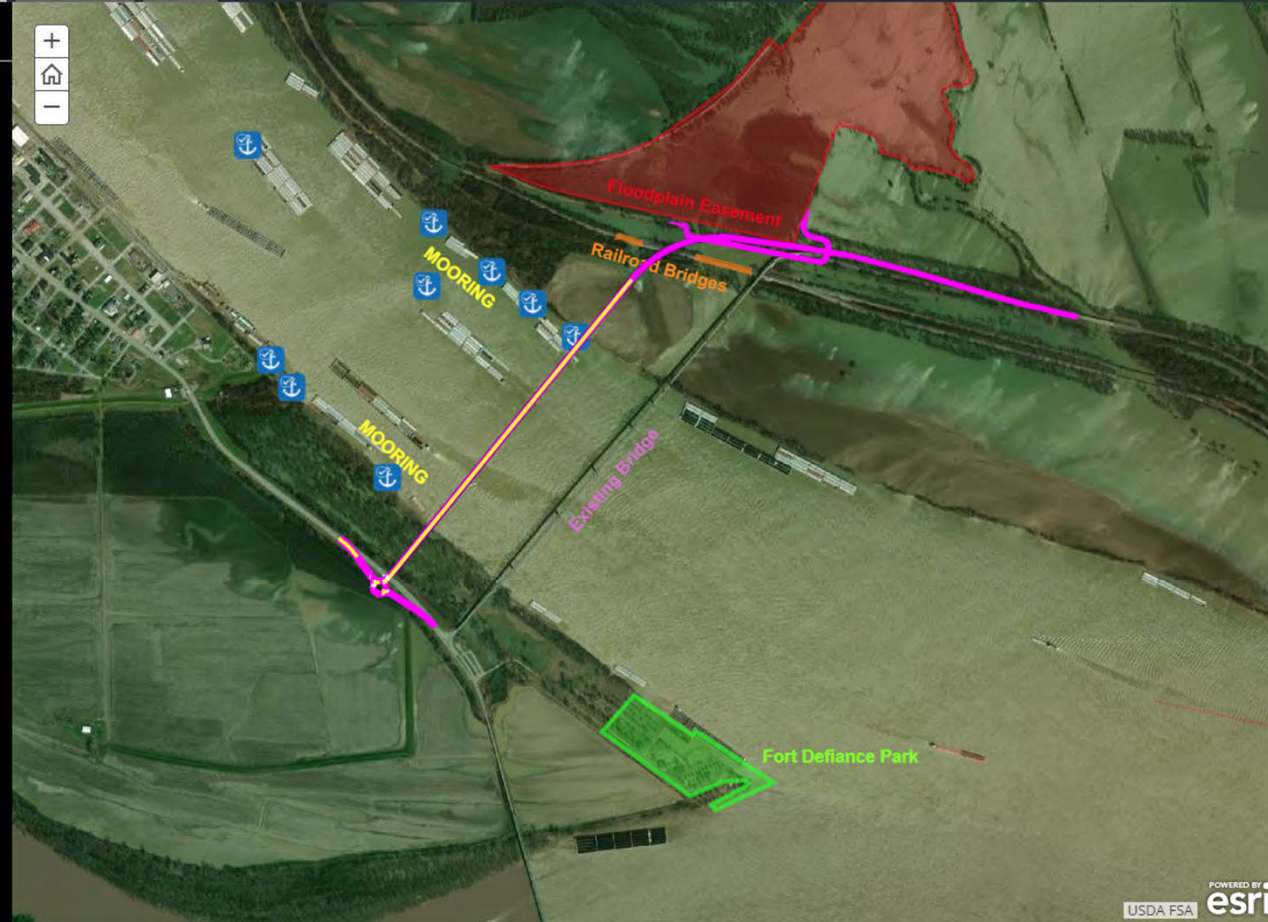
KYTC and the project team weighed the input from the various public meetings, as well as the pros and cons of each option and determined that there was an overwhelming favorite in Alternative 2 by the Citizen's Advisory Group, the fleeting industry, and the project team thus, Alternative 2 was selected as the preferred alignment alternative.

### Intersection Type

Of the three intersection types, the Roundabout was selected as the preferred intersection alternative. The roundabout provides the least delay and allows for a focal point as traffic enters/exits Cairo. It also provides the best ability for future growth in Kentucky, Illinois, or Missouri by not favoring one direction.

### Bridge Width

While the project team understood the concerns of the CA/EJ meetings, with consideration of the Design Year (2045) AADT, lack of 4-lane connectivity in the region, inability to ultimately accommodate bicycles, stroller, vehicles, and agricultural traffic, and



# US 51 Bridge Online Public Meeting

- Welcome
- Cairo Bridge Information
- How We Got Here
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## Preferred Alternatives

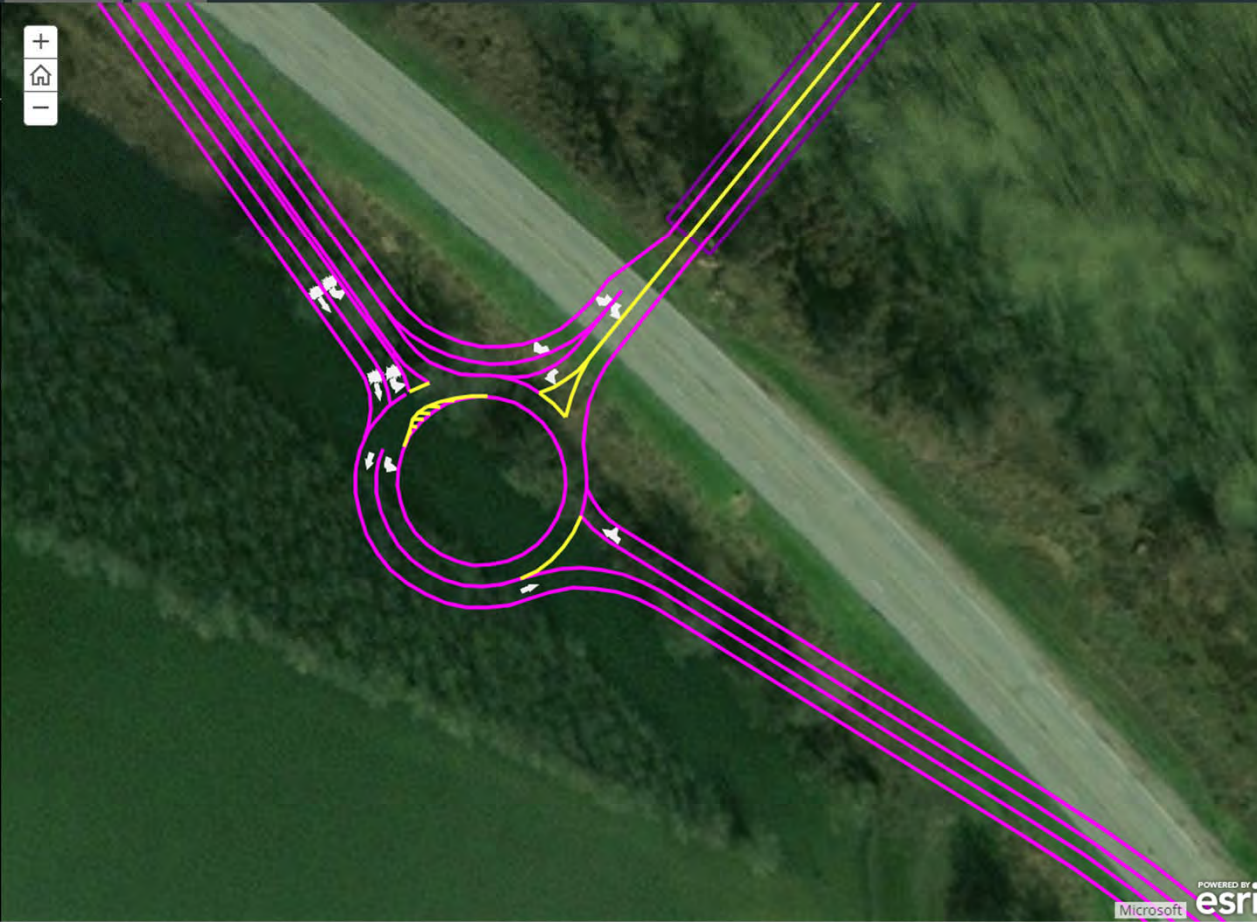
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## Bridge Width

While the project team understood the concerns of the CA/EJ meetings, with consideration of the Design Year (2045) AADT, lack of 4-lane connectivity in the region, inability to ultimately accommodate bicycles, stopped vehicles, and agricultural traffic, and the increased construction cost, it is the project team's recommendation to proceed with a 2-lane, 40' wide bridge.





### Preferred Alternatives

#### Intersection Type

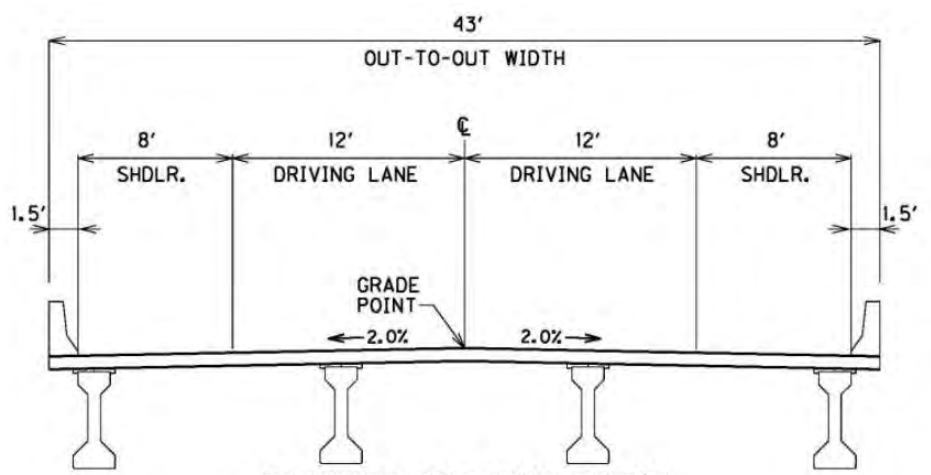
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#### Bridge Type

All three bridge types and span arrangements will be carried forward to the next phase where more input will be gathered.



**PROPOSED 40' 2-LANE BRIDGE**  
**2-12' DRIVING LANES**  
**8' SHOULDERS**



Preferred Alternatives

Intersection Type

Of the three intersection types, the Roundabout was selected as the preferred intersection alternative. The roundabout provides the least delay and allows for a focal point as traffic enters/exits Cairo. It also provides the best ability for future growth in Kentucky, Illinois, or Missouri by not favoring one direction.

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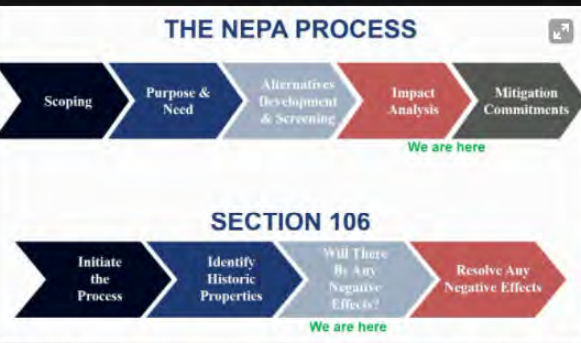
WHAT'S NEXT?





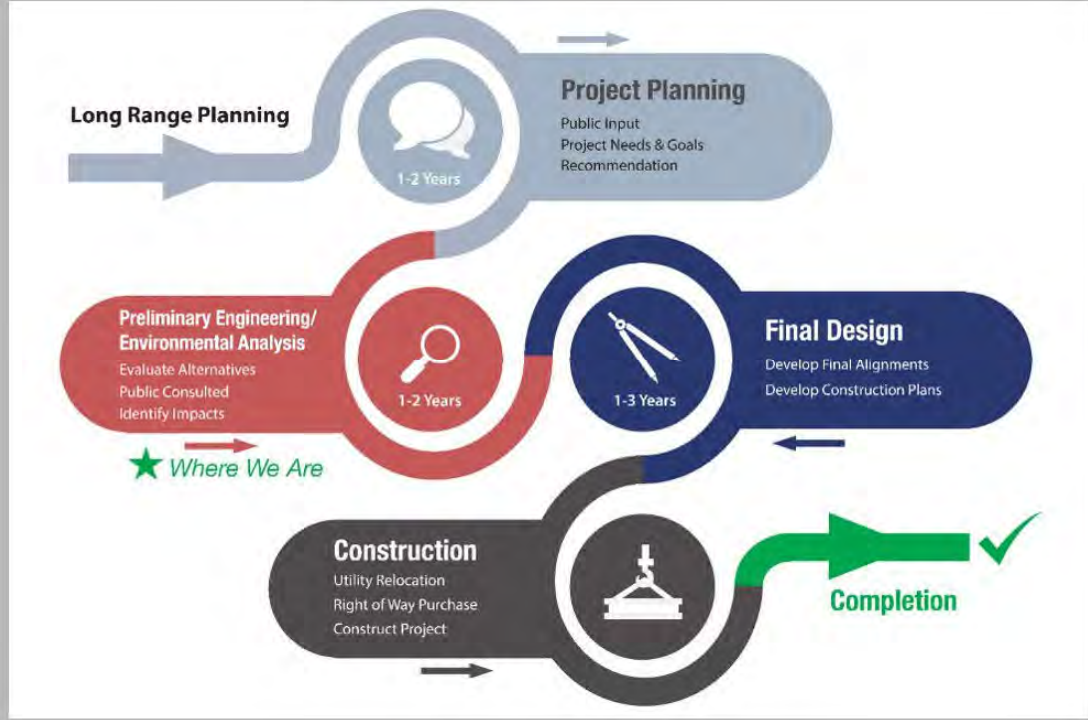
The Process

We are currently at the end of the Preliminary Engineering and Environmental Analysis portion of the project. Public input has been gathered, a preferred alternative has been selected, and environmental impacts are being finalized.



Once the environmental impacts are finalized, the environmental document will be submitted to the Federal Government to insure that there is no significant effect on the human or natural environment. This signifies the end of Preliminary Engineering.

The Design team will immediately move into Phase II - Final Design. Below is a rough timeline of the events to come:

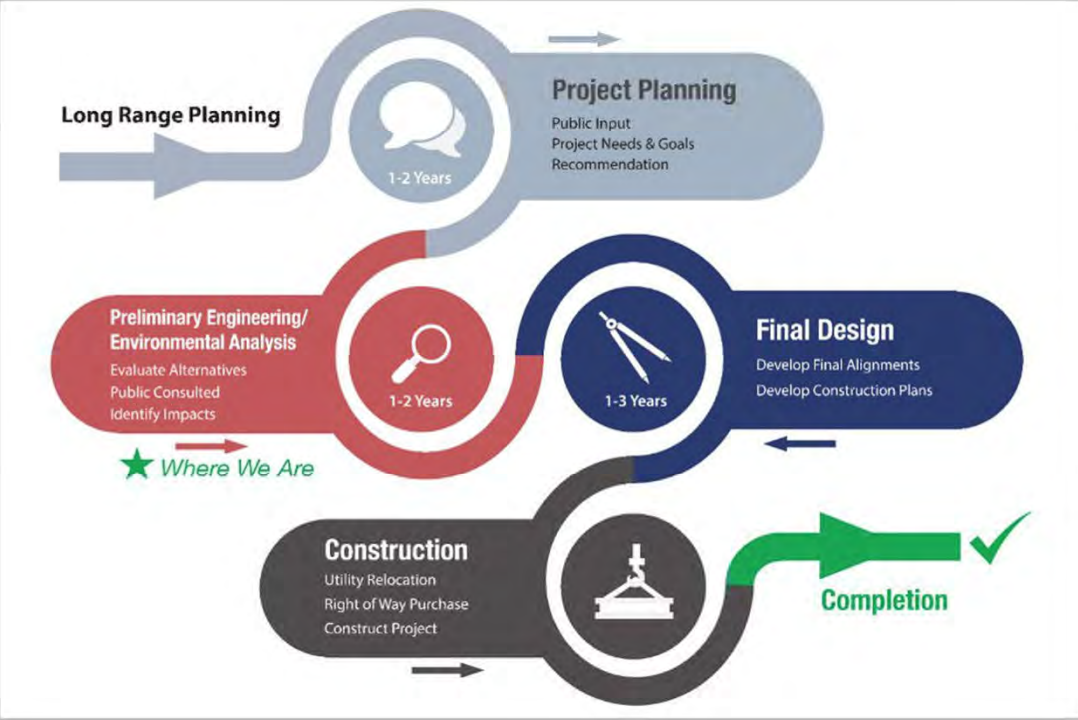


E.Issues?  
We are here

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- Early 2021**
  - Begin a more detailed roadway design
  - Continue bridge design
  - Investigate seismic activity/impacts and geotechnical impacts
- Late 2021**
  - Select a bridge type
- 2022**
  - Begin Purchasing Right of Way
- 2026 - 2027**
  - Begin Construction (subject to funding)



# SURVEY





David

# Thank you!

for visiting the  
**Cairo Bridge Online Public Meeting**

Hopefully, you found the information presented to be helpful, clear, and informative. This narrative will remain online from October 16 to October 30. Feel free to look back through any piece you'd like and share this with anyone that might find it helpful.

Please fill out the survey to the right with your thoughts and/or questions.

For additional information, visit the Project website:  
<https://us51bridge.com/>  
Or you can visit  
[District 1's Facebook page](#)

Questions and comments can be directed to:  
Chris Kuntz  
Email: [Chris.Kuntz@ky.gov](mailto:Chris.Kuntz@ky.gov)  
Phone Number: (270) 898-2431

## Cairo Bridge Public Meeting Survey

### Thank you for participating in this survey!

Your feedback is important. The following questions give you an opportunity to provide input to help the project team as the project moves forward. Thanks again for providing your input!

*If you need assistance completing this survey, please call Chris Kuntz at (270) 898-2431 for ADA assistance.*

Full Name:\*

Phone:\*

Email:\*

ZIP Code

Home\*



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Email: [Chris.Kuntz@ky.gov](mailto:Chris.Kuntz@ky.gov)  
Address: 5501 Kentucky Dam Road, Paducah, KY 42003

### Work

Optional

### School

Optional

### Which category represents your main interest in this project?

<input type="radio"/> Residential (Property Owner)	<input type="radio"/> Commercial	<input type="radio"/> Agricultural
---	----------------------------------	------------------------------------

<input type="radio"/> Industrial	<input type="radio"/> Commuter
----------------------------------	--------------------------------

 Other (Please Specify)

### How often do you use the Cairo bridge?

<input type="radio"/> Daily	<input type="radio"/> Weekly	<input type="radio"/> Monthly
-----------------------------	------------------------------	-------------------------------



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Annually  Not at all

The online meeting details the connectivity and costs for bridge replacement options. How important to you are the benefits of a wider, two-lane bridge option that would serve community traffic needs?

1 - Not at all important 2 - Low importance 3 - Slightly important 4 - Neutral 5 - Moderately important 6 - Very important 7 - Extremely important

How much of an impact would the Alternative 2 option with a roundabout affect your future use of:

	1 - No effect	2 - Minor effect	3 - Neutral	4 - Moderate effect	5 - Major effect
The Illinois intersection of US-60 and US-62?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Cairo bridge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much do you agree that Alternative 2 is the right choice for your community?

1 - Strongly disagree 2 - Disagree 3 - Somewhat disagree 4 - Neutral 5 - Somewhat agree 6 - Agree 7 - Strongly agree

How much do you agree that a roundabout is the right choice for your



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The Cairo Bridge:

How much do you agree that Alternative 2 is the right choice for your community?

1 - Strongly disagree   2 - Disagree   3 - Somewhat disagree   4 - Neutral   5 - Somewhat agree   6 - Agree   7 - Strongly agree

How much do you agree that a roundabout is the right choice for your community?

1 - Strongly disagree   2 - Disagree   3 - Somewhat disagree   4 - Neutral   5 - Somewhat agree   6 - Agree   7 - Strongly agree

Please tell us any other thoughts you have to share about the Cairo bridge replacement project:

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**Submit**