



Citizens Advisory Group Meeting #3



IL 100-106 River Crossing Project Florence Bridge - Phase I Study

March 8, 2018

Agenda



River Crossing Project

- ▶ Project Timeline
- ▶ Study Area and Preliminary Alternatives
- ▶ Review of Environmental Resources
- ▶ Review Range of Alternatives Considered
- ▶ Identify Alternatives Proposed to be Carried Forward
- ▶ Refined Alternatives to be Carried Forward
 - ▶ Features, Costs and Impacts
- ▶ Public Meeting #2 Comment Review
- ▶ Next Steps

Project Timeline



River Crossing Project

2017

2018

2019

- Public Meeting #1**
September 15, 2016
- Need of Improvement
 - Feasibility Study
 - Assemble CAG

- Public Meeting #2**
December 7, 2017
- Present Alternatives
 - Comparison of Benefits and Impacts

- Public Hearing**
Summer 2019
- Present Preferred Alternative for review and comment

Bridge Condition Report

Environmental Assessment/CE

Design Report, Bridge Type Study

PHASE I (Planning)

CONTEXT SENSITIVE SOLUTIONS - PUBLIC INVOLVEMENT

PHASE II
(Design)

PHASE III
(Const.)

We Are Here

- CAG #1**
November 2, 2016
- Purpose of CAG
 - Ground rules
 - Initial coordination
 - Feasibility Study
 - Purpose & Need/Brainstorm alternatives

- CAG #2**
April 25, 2017
- Present geometric alternatives, impacts and access

NEPA Concurrence P&N
February 23, 2017

- CAG #3**
March 8, 2018
- Review 2nd PM feedback
 - Review recommended alternatives to be carried forward

NEPA Concurrence Alts. Carried Forward
June 14, 2018

- CAG #4**
Fall 2018
- Identify Preferred Alternative for Public Hearing

NEPA Concurrence Preferred Alt.
February 2019

- CAG #5 and #6**
(if necessary)
- Bridge Type Study Group
 - Meeting #5 - identify options
 - Meeting #6 - finalize type

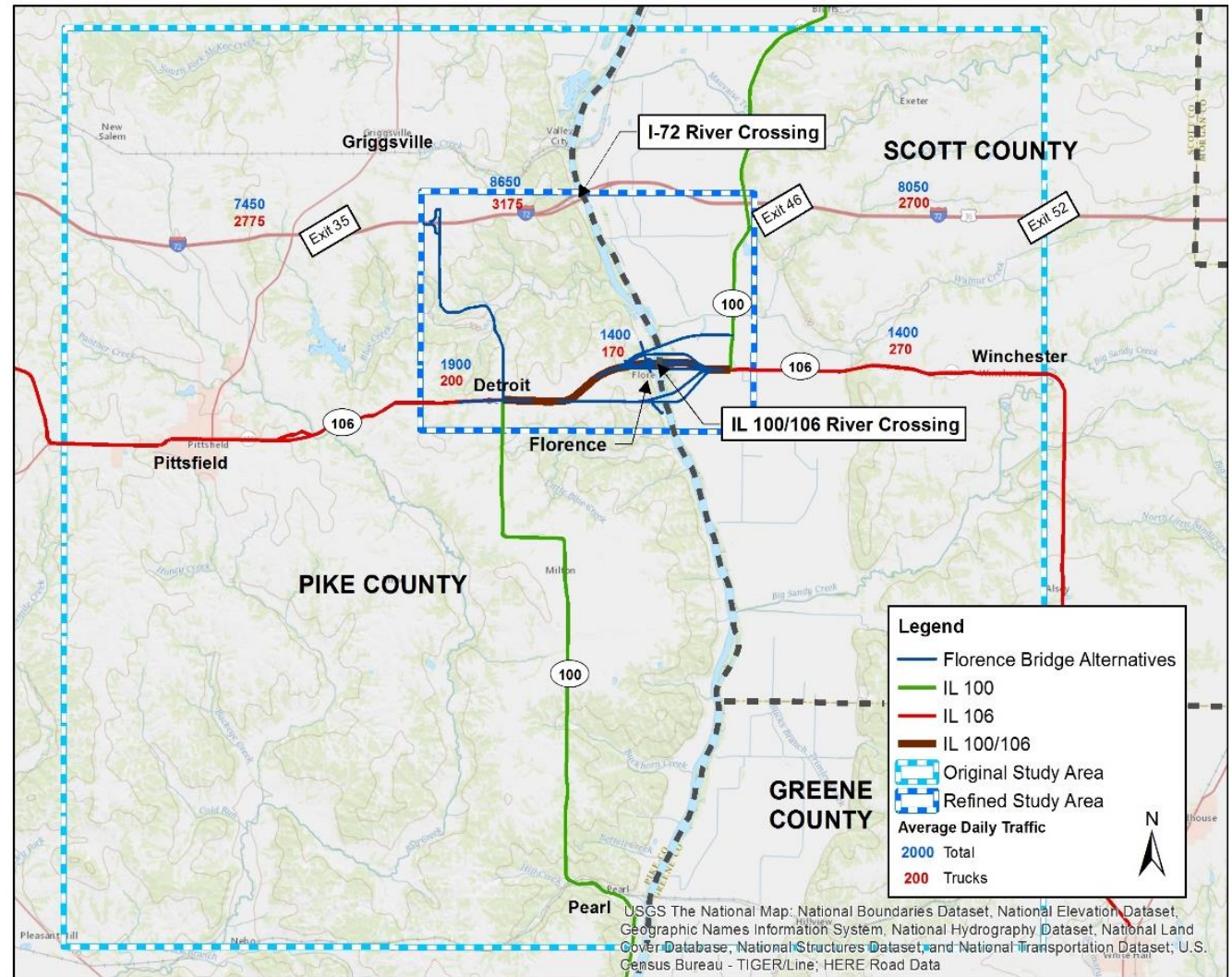
- Phase I is funded
- Phase II and Phase III are unfunded
- \$14 M bridge rehab FY 19-23
 - Rehab design to start in 2018 (\$650K)

Study Area

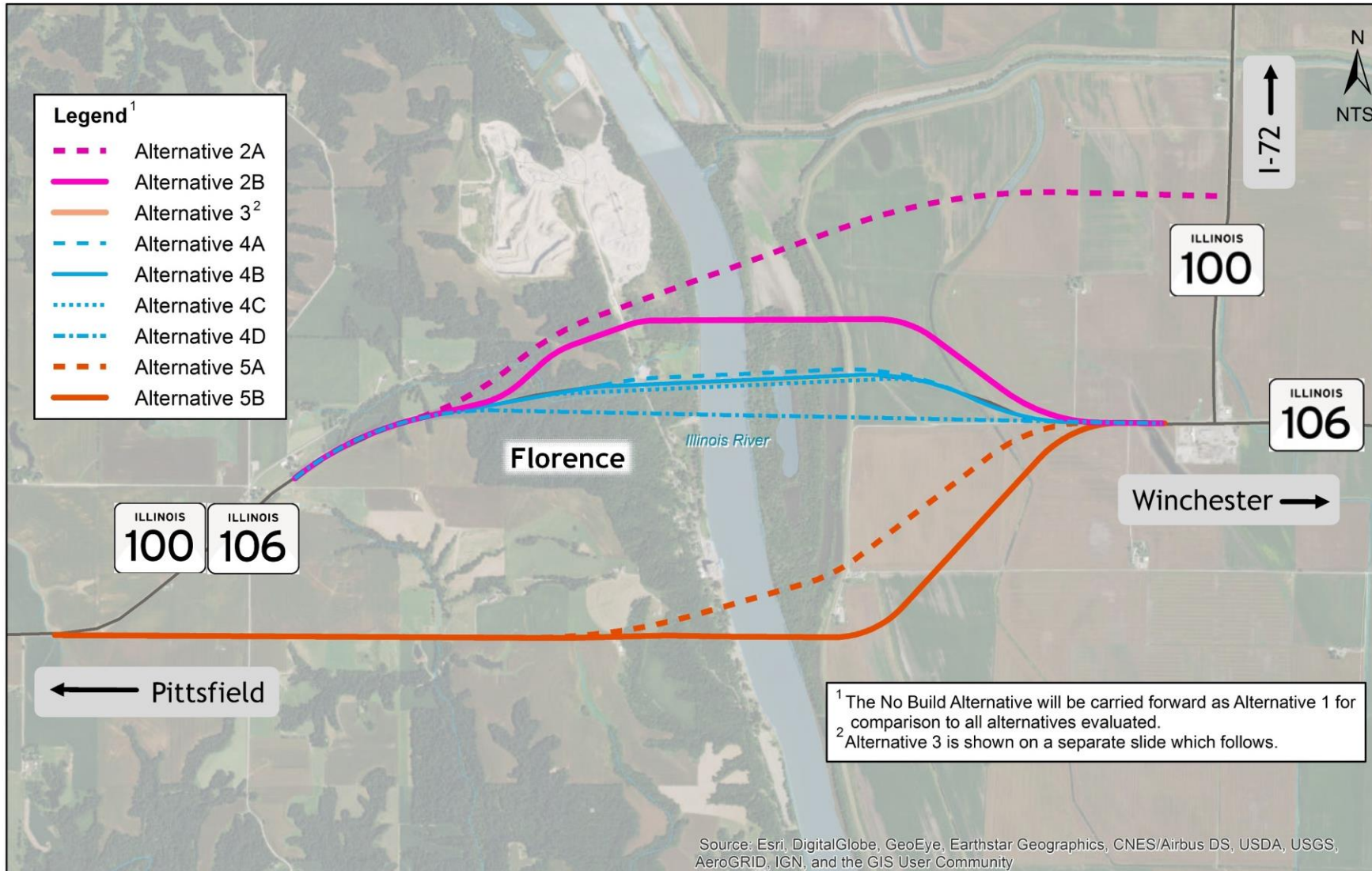
- ▶ Originally included parts of Pike, Scott and Greene Counties
- ▶ Was narrowed down to approximately 50 square miles
 - ▶ A crossing option at Pearl was also proposed, but was not brought forward
- ▶ All draft alternatives are in the Florence area, or in eastern Pike County and western Scott County



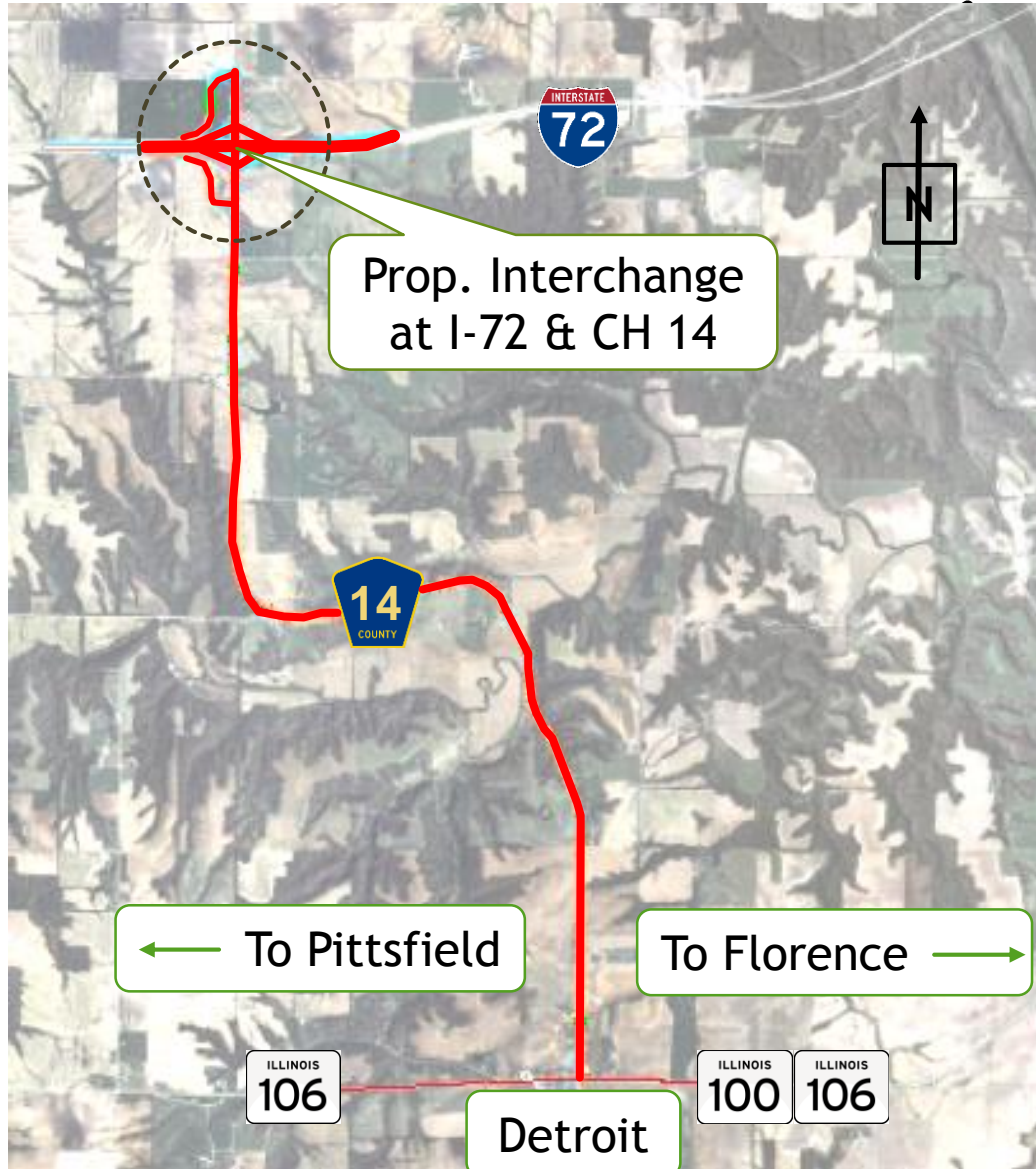
River Crossing Project



Alternatives Location Map



Alternatives Location Map



Alternative 3

- ▶ Located to the west of the other Alternatives
- ▶ Improves existing County Highway 14 between Detroit and I-72
- ▶ Constructs an interchange to connect CH 14 with I-72
- ▶ The existing bridge at Florence would be removed

Environmental Resources



River Crossing Project

ENVIRONMENTAL ASSESSMENT KEY COMPONENTS

Alternatives Analysis

Is an evaluation of the preliminary alternatives using established evaluation criteria. Alternatives that are not reasonable, feasible, or do not meet the purpose and need are dismissed.

Purpose and Need

Identifies the problems that the project is intended to address.

Preferred Alternative

Identifies an alternative that best balances the environmental impacts and costs with the ability to fulfill the project's purpose and need.

Environmental Consequences

Includes a detailed evaluation of the social and environmental impacts of the alternatives that are retained.

Affected Environment

Provides a description of the project area environs potentially affected by the alternatives.

Scoping

Is an open coordination process with agencies and public to identify scope of issues to be addressed.

Project follows the **National Environmental Protection Act (NEPA)** :

- Preparing an inventory of Environmental Resources in the project study area.
- Avoidance of sensitive resources if reasonably possible.
- Minimizing impacts to resources when unavoidable.
- Mitigation of resources as required.

The NEPA process ensures that environmental factors are weighted equally when compared to other factors in the decision making process.

Engineering Performance & Environmental Screening (April 2017)



River Crossing Project

IL 100/106 Alternatives Comparison Matrix (April 2017)^A

Alternatives Proposed to be Carried Forward are highlighted in BLACK

| Category | Measure | 1 | 2A | 2B | 3 ^B | 4A | 4B | 4C | 4C/D | 4D | 5A | 5B | 3 & 4B |
|---|------------------------------------|------|----------|----------|----------------|---------|---------------------|---------|------------------|---------|----------|----------|---------------------|
| New Right-of-Way | Acres | 0 | 85 | 70 | 60 | 30 | 10 | 20 | 50 | 65 | 95 | 95 | 70 |
| Estimate of Probable Construction Cost | Current (Millions of Dollars) \$ M | \$ - | \$100.5M | \$110.0M | \$23.5M | \$73.5M | \$64.0M | \$70.5M | N/A ^C | \$97.0M | \$129.5M | \$103.5M | \$87.5M |
| Main Bridge Length | Feet | 0 | 2,260 | 2,630 | 0 | 2,810 | 2,800 | 2,830 | N/A | 2,800 | 2,340 | 1,640 | 2,800 |
| New Roadway Length | Miles | 0 | 2.6 | 2.0 | 5.6 | 0.9 | 0.4 | 0.8 | N/A | 1.8 | 3.4 | 3.3 | 6.0 |
| Adverse Travel (Florence) | User Delay Cost (\$/yr.) | 0 | \$74.1K | \$37.9K | \$720.1K | \$ - | During Construction | \$ - | N/A | \$29.0K | \$132.7K | \$136.8K | During Construction |
| Adverse Travel (Through Travel) | User Delay Cost (\$/yr.) | 0 | \$129.3K | \$14.4K | \$1,537K | \$ - | During Construction | \$ - | N/A | \$ - | \$ - | \$ - | During Construction |
| Constructability ^D | Subjective (described) | - | 2 | 2 | 4 | 1 | 1 | 1 | 1 | 3 | 4 | 4 | 1 |
| Forest Land | Acres | | 66.9 | 97.7 | 0.6 | 18.1 | 21.9 | 17.0 | 38.4 | 84.4 | 24.87 | 30.3 | 22.5 |
| Wetlands | Acres | | 16.9 | 20.7 | 11.4 | 16.8 | 16.2 | 15.2 | 16.0 | 14.0 | 10.0 | 7.3 | 27.6 |
| Permanent River/Stream Crossings | Each | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Floodplain | Acres | | 57.0 | 50.0 | 0.0 | 28.0 | 30.7 | 27.4 | 25.5 | 41.5 | 33.2 | 38.3 | 30.7 |
| Prime Farmland | Acres | | 47.6 | 35.4 | 40.4 | 13.5 | 4.4 | 10.6 | 22.4 | 22.1 | 55.2 | 61.8 | 44.8 |
| Inventoried Natural Areas and Park Space ^E | Acres | | 0.0 | 0.0 | 0.0 | 1.3 | 1.4 | 1.5 | 1.0 | 1.5 | 0.0 | 0.0 | 1.4 |
| T&E Species Areas of Occurrences ^F | Present - # | | 1 | 2 | 0 | 4 | 4 | 3 | 3 | 4 | 1 | 1 | 4 |
| Bald Eagle Sightings ^G | Present - # | | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Community (Section 4(f)) | Listed Properties - Each | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Cultural (Section 106) | Listed Properties - Each | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Displacements (Residential) | Each | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 6 | 0 |
| Displacements (Commercial) | Each | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Displacements (Industrial) | Each | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Divided Parcels | Each | | 6 | 6 | 4 | 4 | 0 | 0 | 6 | 5 | 7 | 9 | 5 |
| Hazardous Waste Sites | Each | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Engineering and Performance Considerations

Environmental Impacts

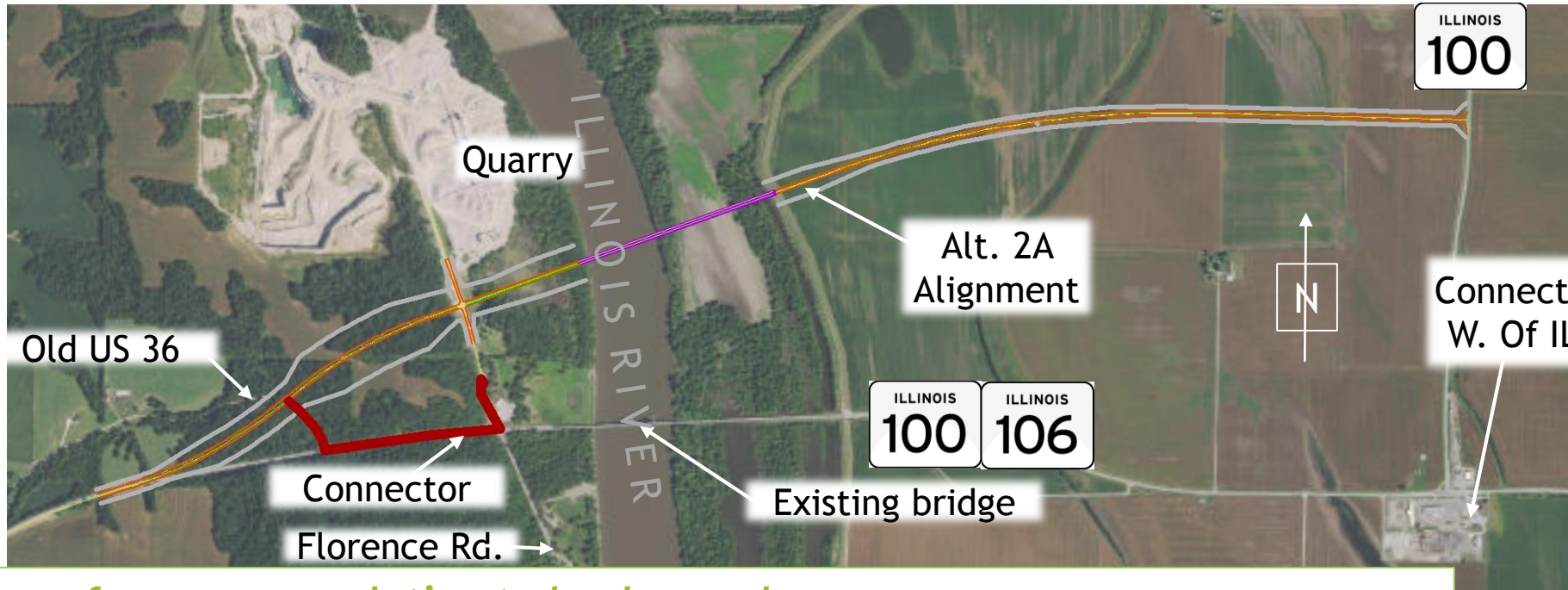
- A. Impacts Assessment included the mainline alternative only and were based on designs from March 2017. The preliminary screening was done using a database of information available in April 2017. This table does not include an assessment of any connector roadways.
- B. Alternative 3 was evaluated and will not move forward because it does not meet the Purpose and Need.
- C. Not Applicable. Alternative 4C/D was not one of the original proposed designs and was not evaluated by the same criteria as the other alternatives. Alternative 4C/D is a compromise between two designs and was evaluated for environmental impacts. Alternatives that were not chosen to be carried forward after the Citizen Advisory Group (CAG) meetings were not re-evaluated for cost.
- D. "Constructability" refers to impacts during construction, subjectively rated, with 1 being the most impacts and 4 being the least impacts.
- E. Acres coincident with the Florence Bridge Bed (Illinois Natural Area Inventory Site #1658), identified as Category VI, for an unusual concentration of flora or fauna and high quality streams.
- F. Zones around a point of occurrence.
- G. Bald Eagle sightings are a record in the Illinois Natural History Survey (INHS) database, but are not indicative of geospatially located nests. They are included in the alternatives matrix with respect to the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Color-Code Key

| |
|--|
| Relatively high benefit or low impact |
| Relatively moderate benefit or moderate impact |
| Relatively low benefit or high impact |

Alternatives Proposed To Be Dropped

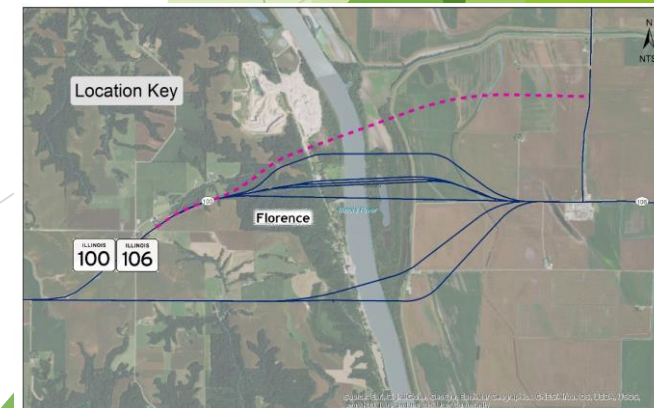
Alternative 2A (2,000 feet north)



River Crossing Project

Reasons for recommendation to be dropped

- ▶ Extensive impacts to farmland east of river
- ▶ Negatively impacts future quarry expansion
- ▶ Substantial work within the floodplain, forested lands, and wetlands
- ▶ Potential for impacts to the Illinois Chorus Frog and Bald Eagle
- ▶ High construction cost and greater amount of land acquisition
- ▶ Introduces a new stop condition for motorists on IL 100/106

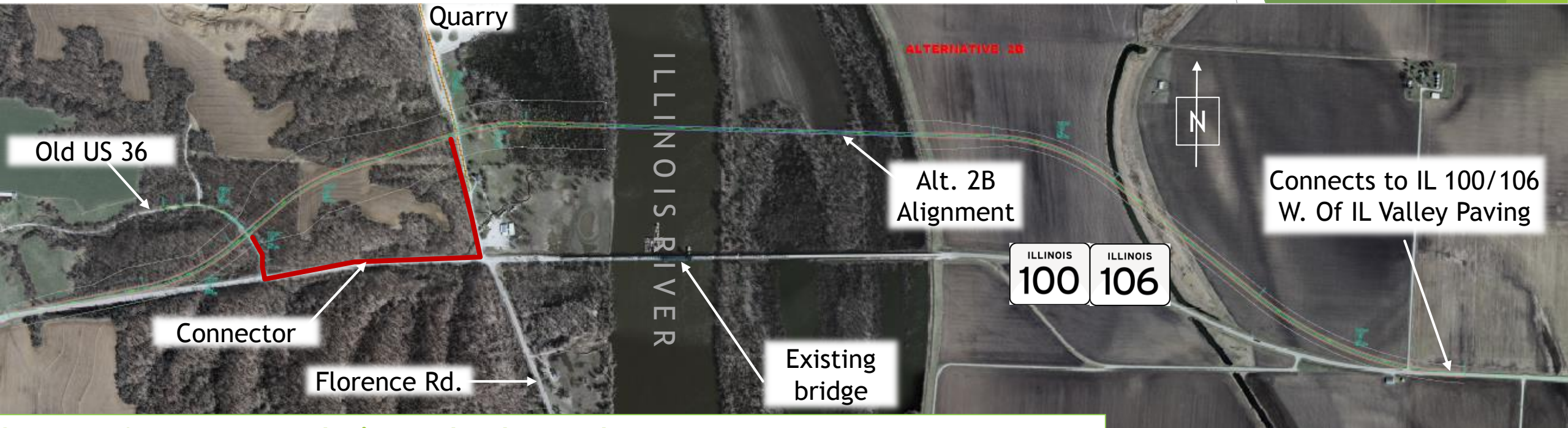


Alternatives Proposed To Be Dropped

Alternative 2B (1,100 feet north)

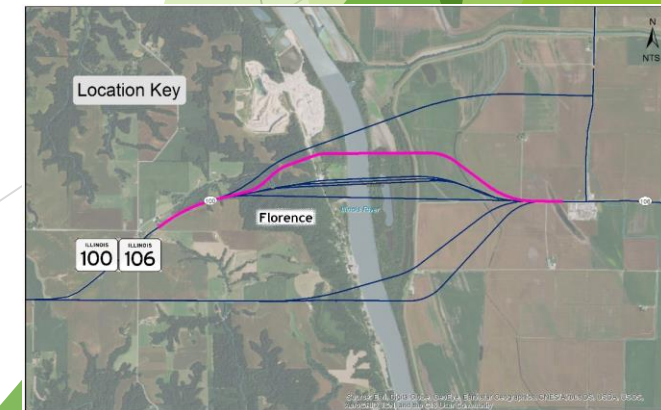


River Crossing Project

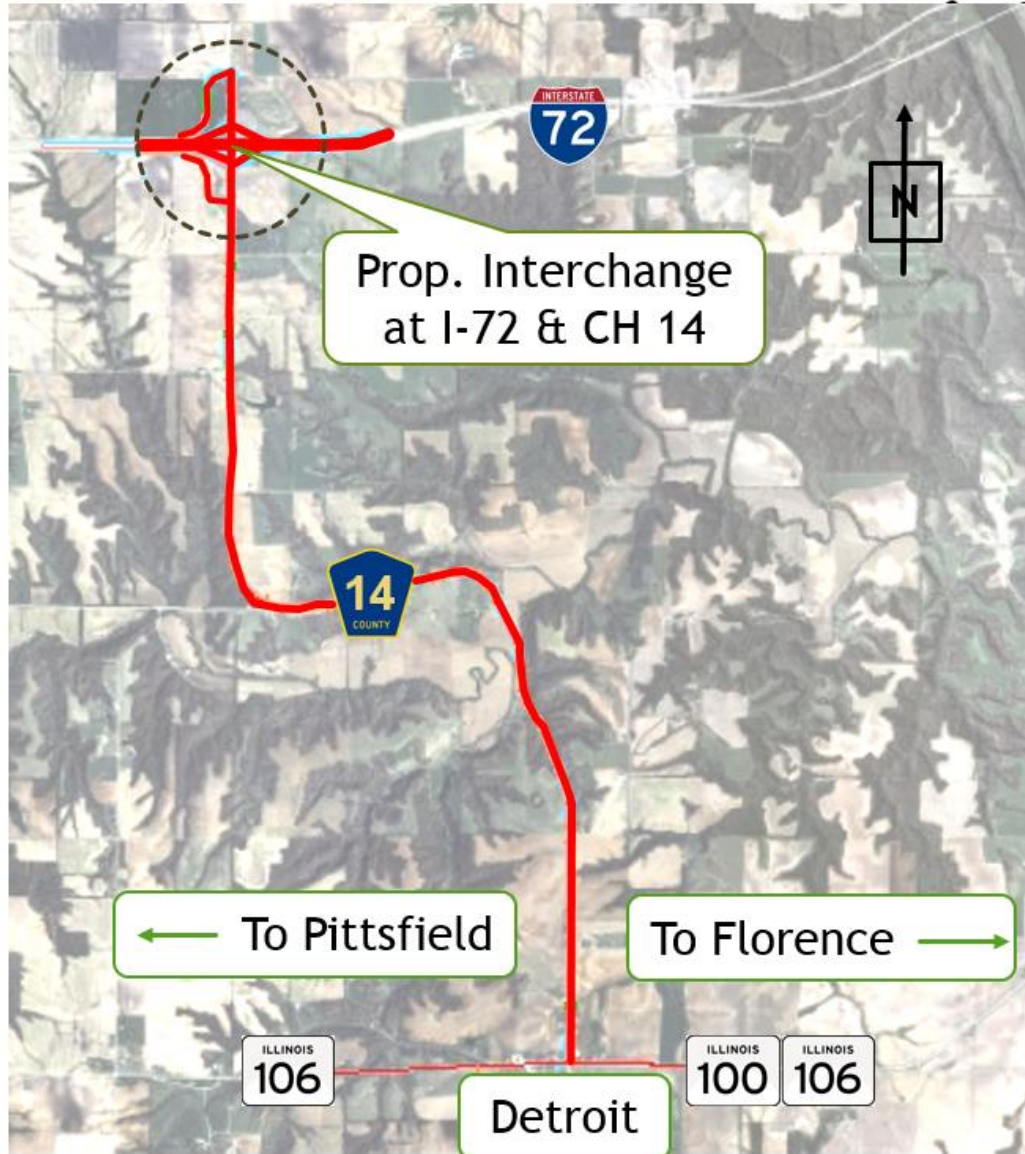


Reasons for recommendation to be dropped

- ▶ Extensive farmland impacts east of river
- ▶ Negatively impacts future quarry expansion
- ▶ Substantial work within the floodplain, forested lands, and wetlands
- ▶ Potential for impacts to the Illinois Chorus Frog, Decurrent False Aster, and Bald Eagle
- ▶ High construction cost and greater amount of land acquisition



Alternative 3 (Upgrade existing CH 14)



Reasons for recommendation to be dropped

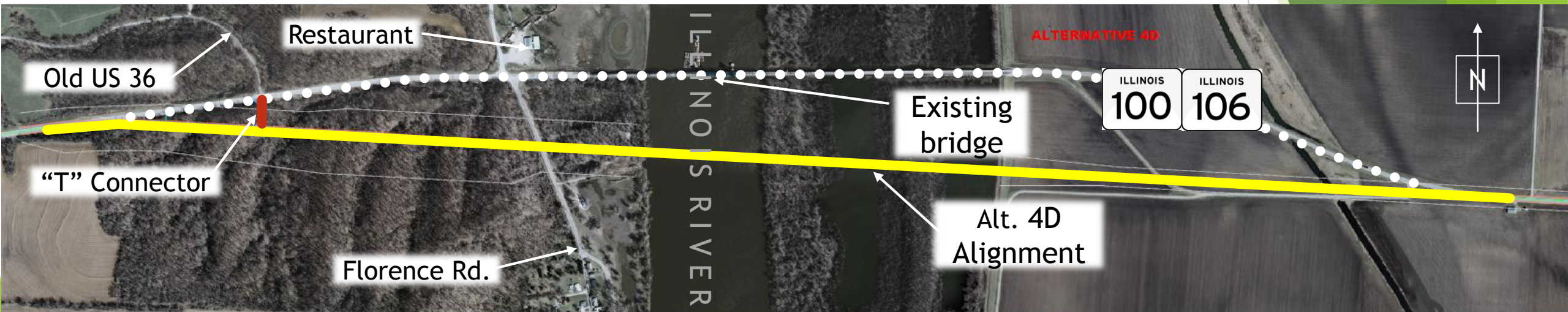
- ▶ Fails to meet the requirements of the Purpose and Need Statement
 - ▶ Doesn't accommodate all modes of traffic (Farm Implements, Pedestrians, Bicycles)
- ▶ Combination of Alternatives 3 and 4B considered, but high impacts and costs as compared to other alternatives

Alternatives Proposed To Be Dropped

Alternative 4D (600 feet south)

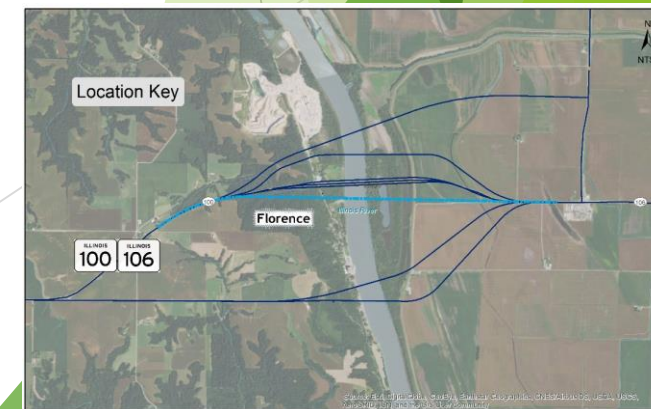


River Crossing Project



Reasons for recommendation to be dropped

- ▶ Increased property and farmland impacts as compared to 4A, B and C
- ▶ Potential impact to Pike County boat launch
- ▶ Increased rock excavation through bluff
- ▶ Extensive impacts to floodplains and forested land
- ▶ Potential impacts to the Illinois Chorus Frog, Decurrent False Aster, and River Invertebrates
- ▶ Impacts to residential parcels

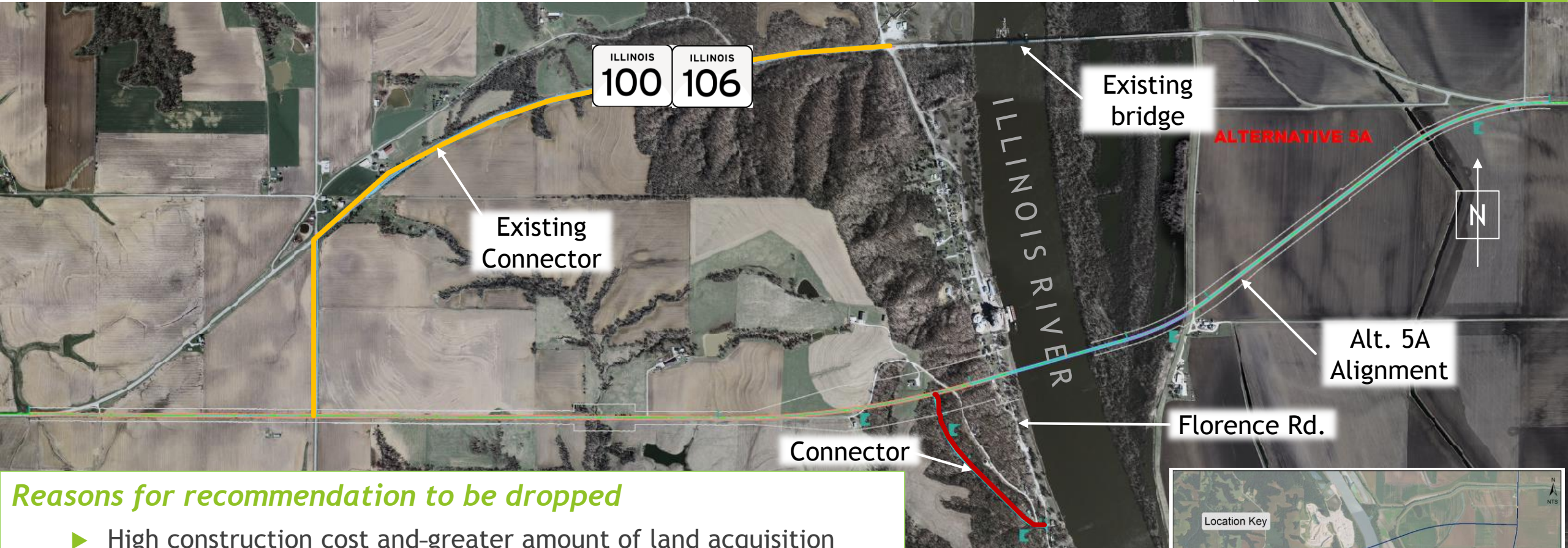


Alternatives Proposed To Be Dropped

Alternative 5A (4,000 feet south)

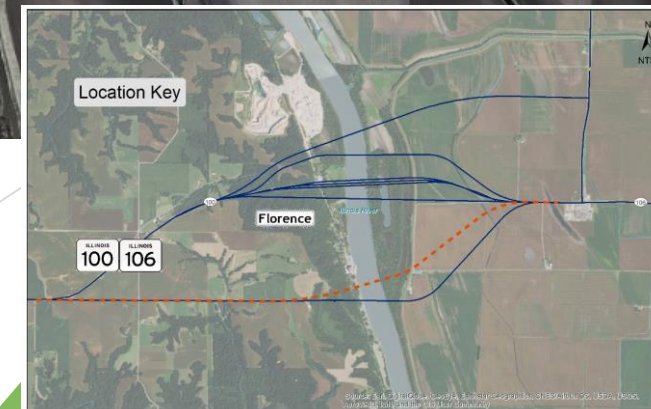


River Crossing Project



Reasons for recommendation to be dropped

- ▶ High construction cost and-greater amount of land acquisition
- ▶ Extensive farmland impacts east of river
- ▶ Potential impacts to the Illinois Chorus Frog
- ▶ Impacts to residential parcels; high adverse travel for Florence
- ▶ Longer bridge and new roadway length than 5B



Refined Alternatives

- ▶ Geometry refined to accommodate Florence Rd. connection and US Coast Guard requirements
- ▶ Wetland impact survey results included for more accurate accounting of impacts
- ▶ Presence of Decurrent False Aster (T&E species)
- ▶ Presence of mussels (no T&E found)
- ▶ Revised cost estimates
- ▶ Revised right-of-way limits
 - ▶ Approximate limits, could change for Preferred Alternative and in detailed design



River Crossing Project

Alternative 1 (No Action)

- ▶ Leave existing bridge in place
 - ▶ Required to be carried forward under federal NEPA process
 - ▶ Provides a baseline for comparison with other alternatives
- ▶ Bridge maintenance
 - ▶ Bridge may become unserviceable in the future when repairs are no longer possible
 - ▶ *Rehabilitation, painting, deck overlay, joint repair, miscellaneous*
 - ▶ *Phase II & III Engineering and Construction programmed for FY 19-23 (\$14.65 M)*

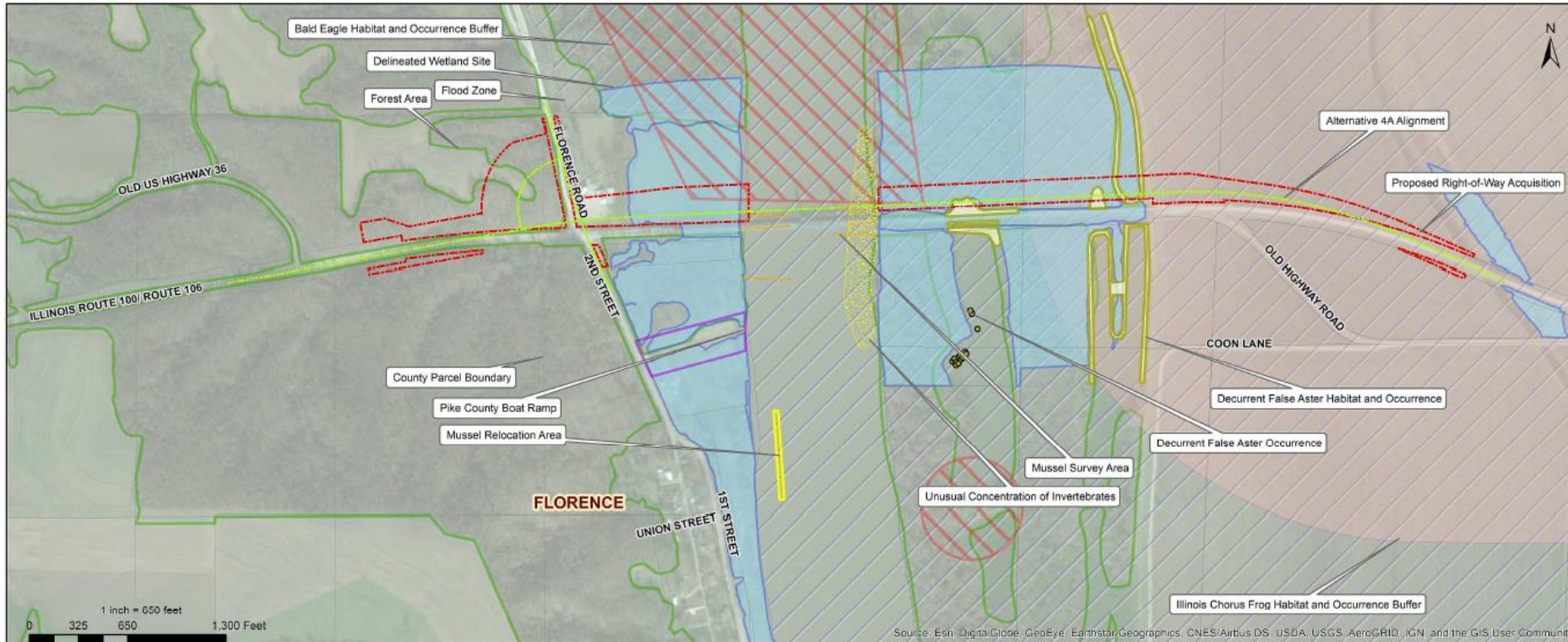


Alternatives Proposed To Be Carried Forward

Alternative 4A (100 feet north)



River Crossing Project



Reasons for recommendation to be carried forward

- ▶ Lowest construction cost of recommended alternatives
- ▶ Relatively low impacts to farmland and forested land

*Potential impacts to the Illinois Chorus Frog, Decurrent False Aster, River Invertebrates, and Bald Eagle

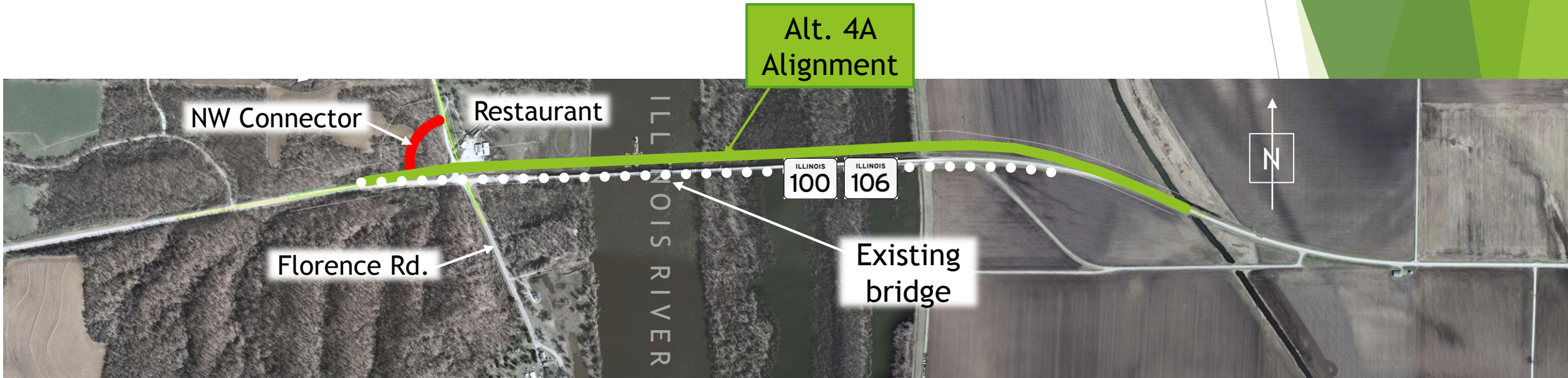
*Potential to displace business

Alternatives Proposed To Be Carried Forward

Alternative 4A (100 feet north)

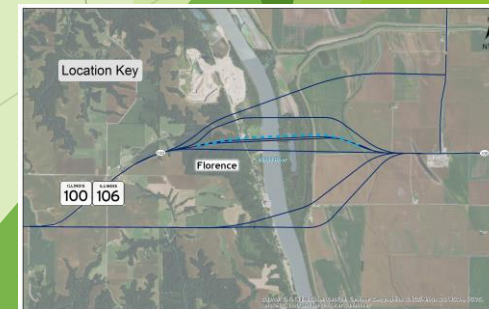


River Crossing Project



Revised Engineering Screening Data

- ▶ Land Acquisition: 27.3 acres
- ▶ Updated cost: \$70.6 M
- ▶ Illinois River bridge length: 3,165 feet
- ▶ New roadway length: 4,232 feet
- ▶ Connection to Florence Road in northwest quadrant
- ▶ Requires a short bridge of IL 100-106 over Florence Road

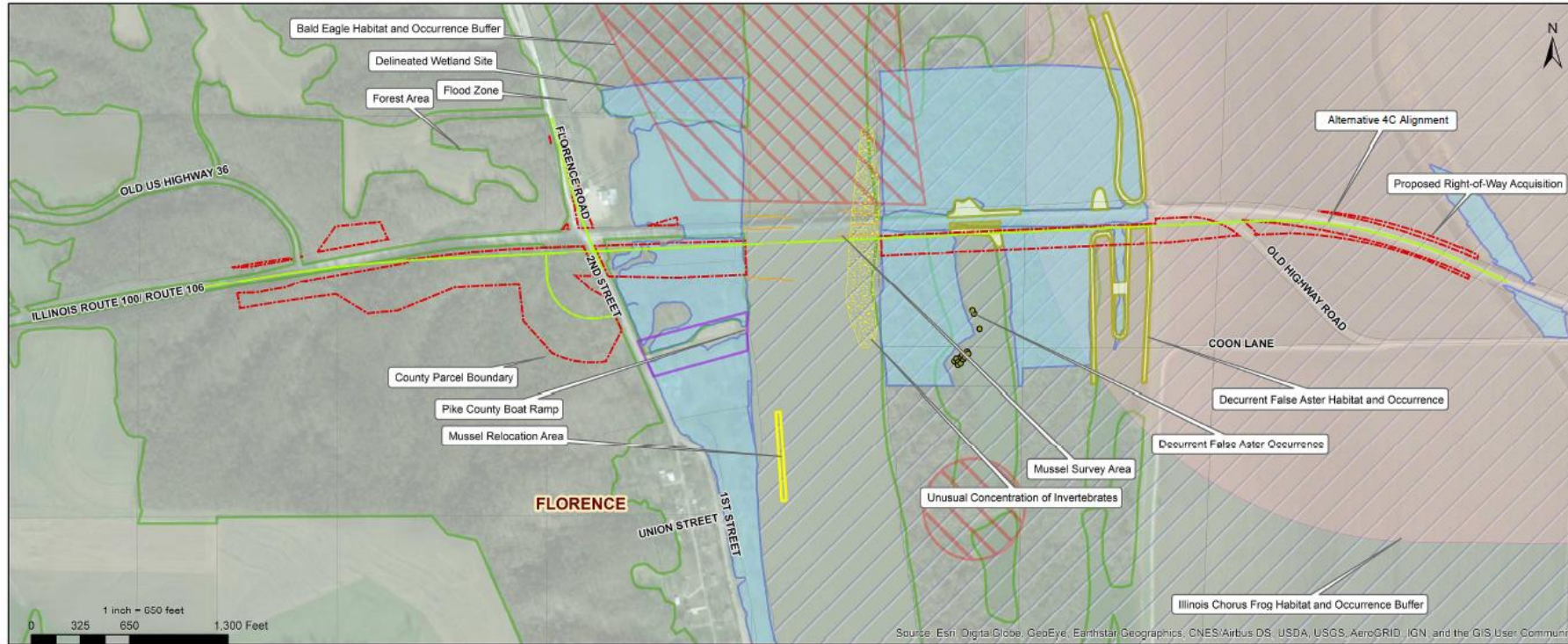


Alternatives Proposed To Be Carried Forward

Alternative 4C (100 feet south)



River Crossing Project



Reasons for recommendation to be carried forward

- ▶ Lowest property impacts of recommended alternatives
- ▶ Reduces the amount of rock excavation as compared to 4D
- ▶ Least impact to the floodplain
- ▶ Relatively low impacts to farmland and forested land
- ▶ Relatively low construction costs and impacts

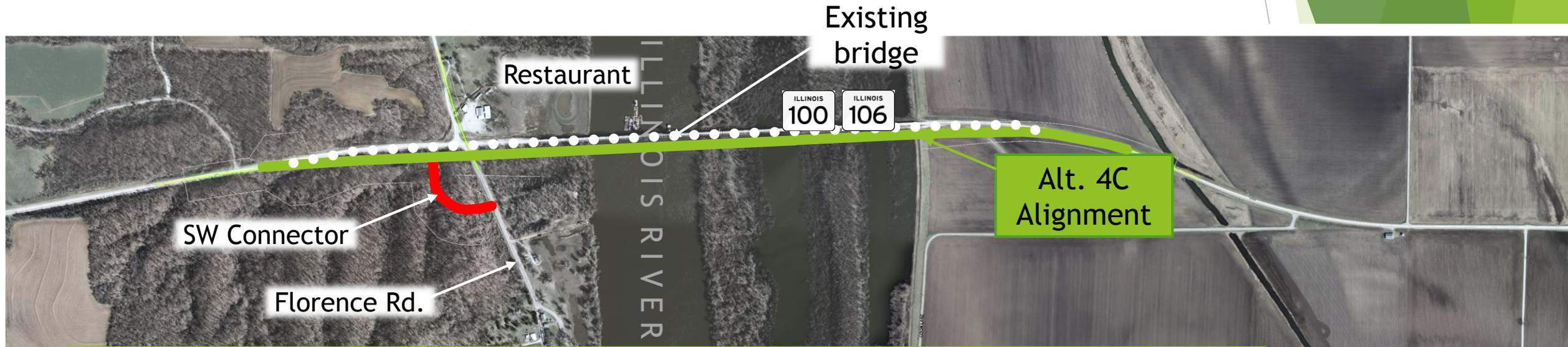
*Potential impacts to the Illinois Chorus Frog, Decurrent False Aster, and Invertebrates

Alternatives Proposed To Be Carried Forward

Alternative 4C (100 feet south)

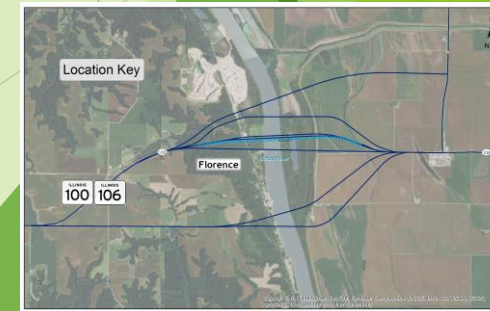


River Crossing Project



Revised Engineering Screening Data

- ▶ Land Acquisition: 32.9 acres
- ▶ Updated cost: \$77.6 M
- ▶ Illinois River bridge length: 3,167 feet
- ▶ New roadway length: 5,078 feet
- ▶ Connection to Florence Road in southwest quadrant
- ▶ Requires a short bridge of IL 100-106 over Florence Road

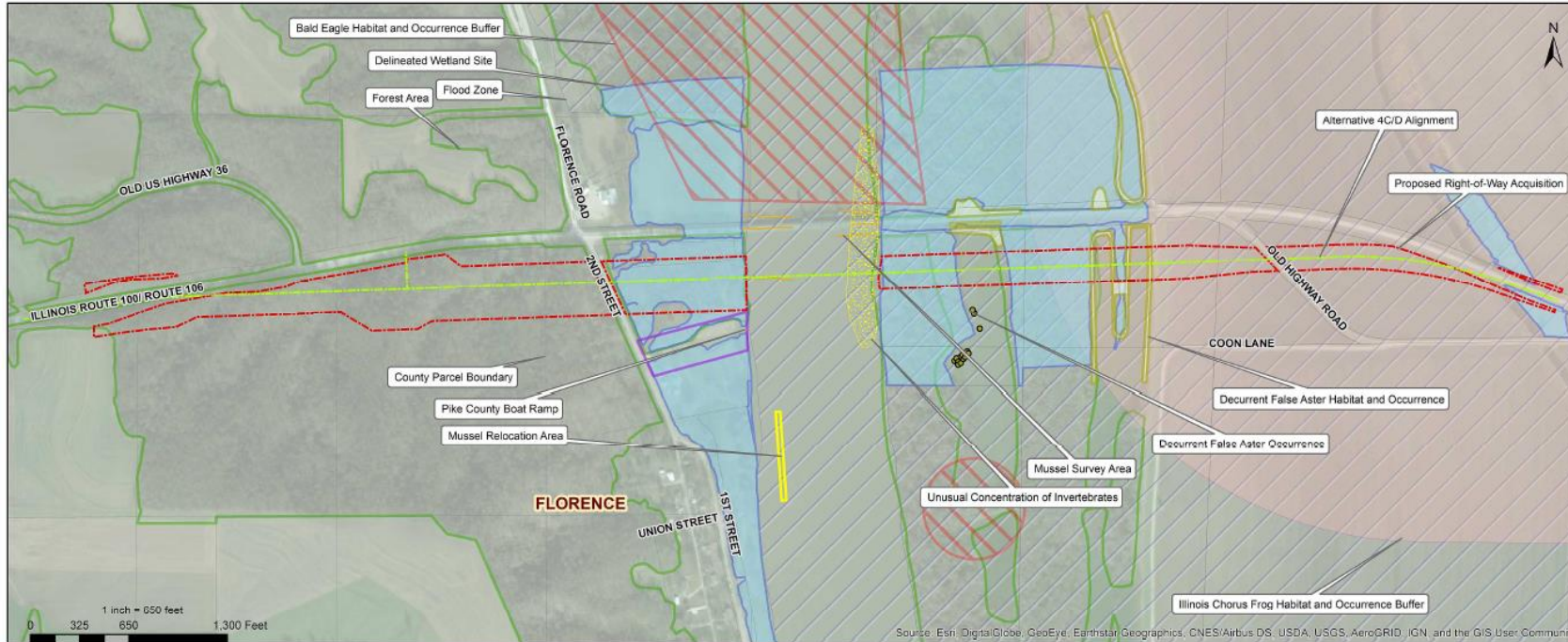


Alternatives Proposed To Be Carried Forward

Alternative 4C/D (300 feet south)



River Crossing Project



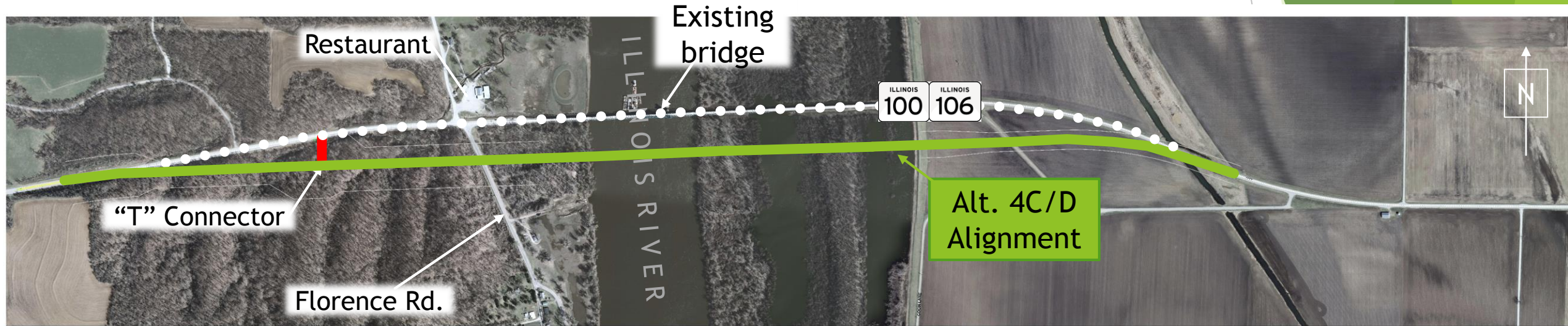
Reasons for recommendation to be carried forward

- ▶ Variation of Alternative 4D
- ▶ Creates a “T” intersection connector road west of the bridge
- ▶ Can be constructed with minimal impacts to existing traffic
- ▶ Similar construction costs as 4C
- ▶ Reduces the amount of rock excavation as compared to 4D
- ▶ Reduced property impacts as compared to 4D

*Would increase farmland and forested land impacts as compared to 4C

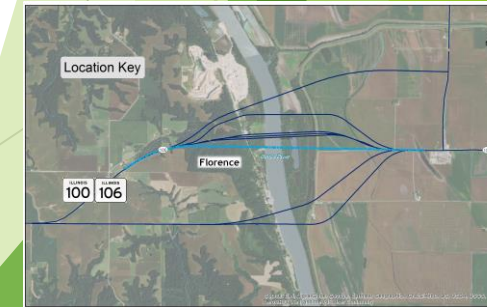
*Potential impacts to the Illinois Chorus Frog, Decurrent False Aster, River Invertebrates, and Bald Eagle

Alternative 4C/D (300 feet south)



Revised Engineering Screening Data

- ▶ Land Acquisition: 45.8 acres
- ▶ Updated cost: \$77.3 M
- ▶ Illinois River bridge length: 3,167 feet
- ▶ New roadway length: 6,586 feet
- ▶ Connection to Florence Road via a “T” connection to existing IL 100-106, east of Old US 36
- ▶ Requires a short bridge of IL 100-106 over Florence Road

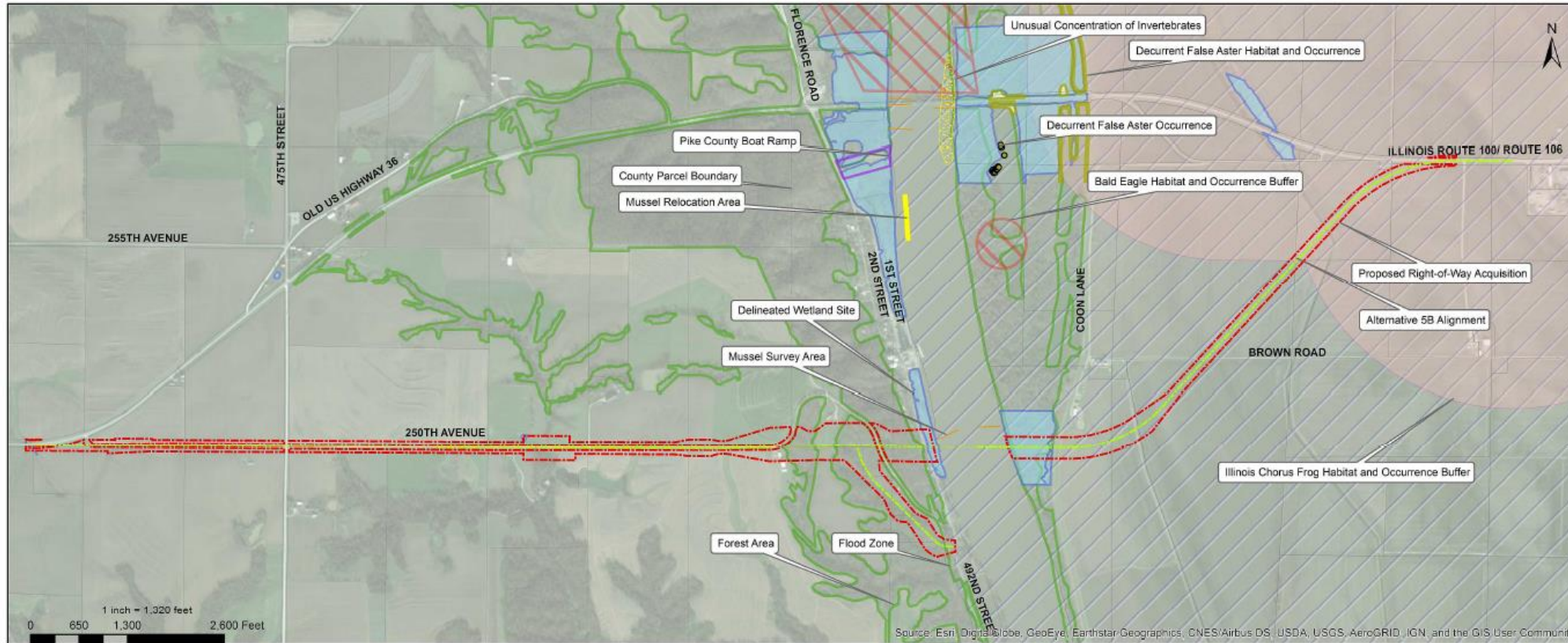


Alternatives Proposed To Be Carried Forward

Alternative 5B (4,500 feet south)



River Crossing Project



Reasons for recommendation to be carried forward

- ▶ Shortest and least costly bridge crossing
- ▶ Least impact to surveyed wetlands
- ▶ Can be constructed with minimal impacts to existing traffic
- ▶ Furthest alternative from river bend (improves navigation)

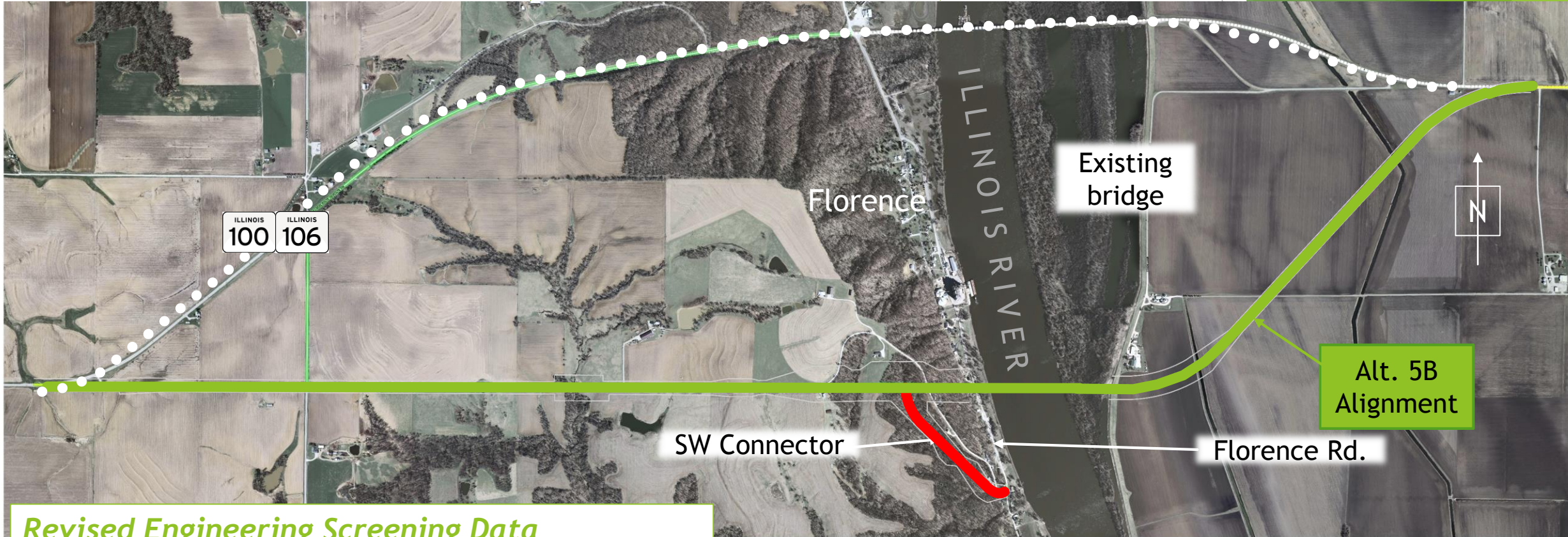
- *Highest roadway cost of the recommended alternatives
- *Potential impacts to the Illinois Chorus Frog
- *Highest farmland impacts of the recommended alternatives
- *Potential to displace residences

Alternatives Proposed To Be Carried Forward

Alternative 5B (4,500 feet south)

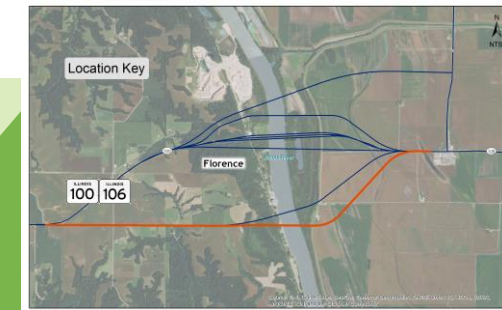


River Crossing Project



Revised Engineering Screening Data

- ▶ Land Acquisition: 90.1 acres
 - ▶ Updated cost: \$72.1 M
 - ▶ Illinois River bridge length: 1,816 feet
 - ▶ New roadway length: 4,232 feet
- ▶ Connection to Florence Road in southwest quadrant
 - ▶ New river bridge will extend over Florence Road



Revised Impacts (March 2018)



| Category | Measure | 4A | 4C | 4C/D | 5B |
|--|------------------------------------|---------|---------|---------|----------|
| New Right-of-Way | Acres | 27.3 | 32.9 | 45.8 | 90.1 |
| Estimate of Probable Construction Cost | Current (Millions of Dollars) \$ M | \$70.6M | \$77.6M | \$77.3M | \$72.1M |
| Main Bridge Length | Feet | 3,165 | 3,167 | 3,167 | 1,816 |
| New Roadway Length | Miles | 0.8 | 1.0 | 1.2 | 3.6 |
| Adverse Travel (Florence) | User Delay Cost (\$/yr.) | \$11.5K | \$17.2K | \$20.1K | \$136.8K |
| Adverse Travel (Through Travel) | User Delay Cost (\$/yr.) | \$ - | \$ - | \$ - | \$ - |
| Constructability ^B | Subjective (described) | 1 | 1 | 1 | 4 |
| Forest Land ^C | Acres | 16.9 | 30.4 | 38.4 | 26.9 |
| Wetlands ^D | Acres | 14.8 | 13.4 | 12.4 | 5.2 |
| Wet Floodplain Forest | Acres | 6.3 | 8.2 | 12.0 | 5.0 |
| Wet Forbland | Acres | 3.2 | 3.9 | 0.0 | 0.0 |
| Wet Meadow | Acres | 4.7 | 1.4 | 0.4 | 0.2 |
| Wetland Pond | Acres | 0.6 | 0.0 | 0.0 | 0.0 |
| Floodplain ^E | Acres | 26.2 | 25.4 | 25.5 | 41.1 |
| Prime Farmland ^F | Acres | 13.0 | 7.3 | 14.9 | 59.0 |
| Inventoried Natural Areas ^G | Acres | 3.0 | 3.3 | 2.9 | 0.0 |
| Potential Mussels Disturbance ^H | Present - # | 215 | 270 | 86 | 197 |
| Decurrent False Aster ^I | Present - # | 4,210 | 3,170 | 230 | 0 |
| Displacements (Residential) ^J | Each | 0 | 0 | 0 | 6 |
| Displacements (Commercial) | Each | 1 | 0 | 0 | 0 |
| Parcels with Right-of-Way Impacts | Each | 7 | 9 | 9 | 31 |
| Divided Parcels | Each | 2 | 1 | 1 | 9 |

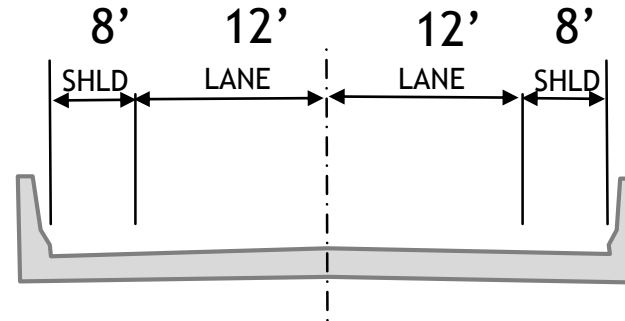
River Crossing (all build alternatives)



River Crossing Project



Plate Girder bridge type



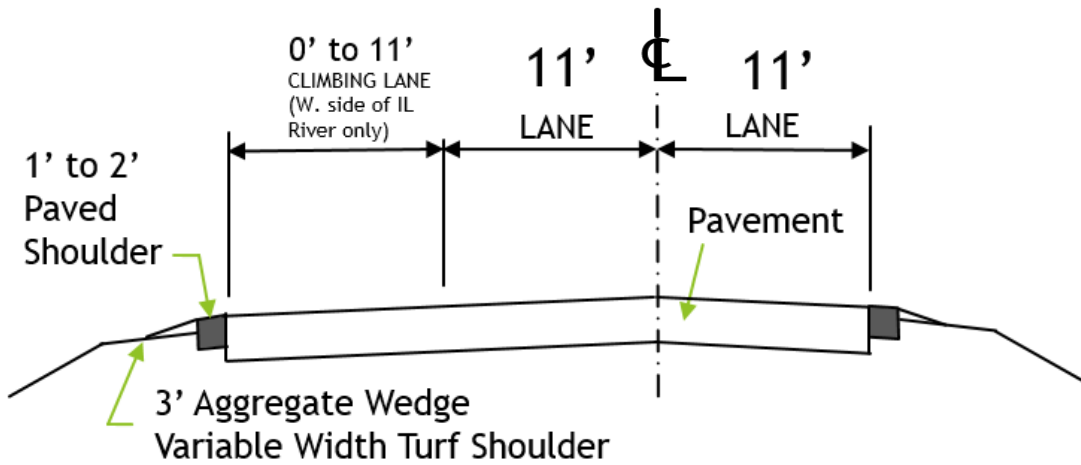
Conceptual Typical Section

- ▶ ***Twice the width of the existing bridge opening***
 - ▶ 400' horizontal bridge navigation clearance (preliminary recommendation of Coast Guard)
 - ▶ ***Existing horizontal navigation opening 202'***
- ▶ Preliminary width - two 12' lanes and two 8' shoulders (40' clear width) - accommodates farm implements, bicycle use, staging for future rehabilitation
- ▶ Plate girder bridge may be considered for spans \approx 500' or less

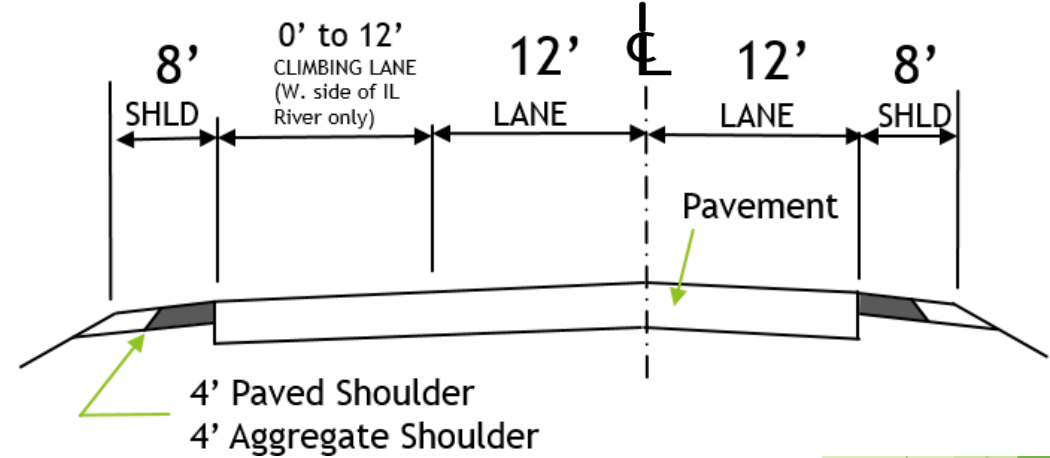
Alternatives Proposed To Be Carried Forward

Roadway (all build alternatives)

EXISTING



PROPOSED



Conceptual Typical Section

Public Meeting #2 Comment Review



River Crossing Project

| Alternative | 4A | 4C | 4C/D | 5B |
|----------------------------|----|----|------|----|
| 1 st Preference | 7 | 17 | 3 | 0 |
| 2 nd Preference | 6 | 4 | 5 | 0 |
| 3 rd Preference | 3 | 0 | 9 | 0 |
| Last Preference | 0 | 0 | 0 | 10 |
| Not marked | 8 | 3 | 7 | 14 |

- ▶ 24 total comments received
- ▶ No public support for Alternative 5B; adverse impacts to farmland and farm operations cited
- ▶ Support for Alternative 4C, as well as alternatives other than 5B
- ▶ Other concerns about pavement maintenance, flooding, property-specific concerns, drainage/levee district, archaeological impacts

Next Steps

- ▶ Merger Team Meeting (June 14, 2018)
 - ▶ Concurrence with Alternatives Carried Forward (detailed study)
- ▶ CAG #4 (Fall 2018)
 - ▶ Present initial recommendation of Preferred Alternative
- ▶ Merger Team Meeting (February 2019)
 - ▶ Concurrence with Preferred Alternative
- ▶ Public Hearing (Summer 2019)
 - ▶ Present Preferred Alternative for public comment

CAG #3 Comments



River Crossing Project

- ▶ Your Written Comments are Welcome!
- ▶ Comment form included in handout
- ▶ Please send your comments by Thursday, March 22, 2018 to:

Mr. Jeffrey M. South, P.E.

Region 4 Engineer

Illinois Department of Transportation

126 East Ash Street

Springfield, Illinois 62704-4792

Attention: Jay M. Wavering, P.E.

Or email to contact@florencebridgestudy.com