

# I-70 Section of Independent Utility 4 Re-evaluation

Public Information Meeting #2

November 2, 2022

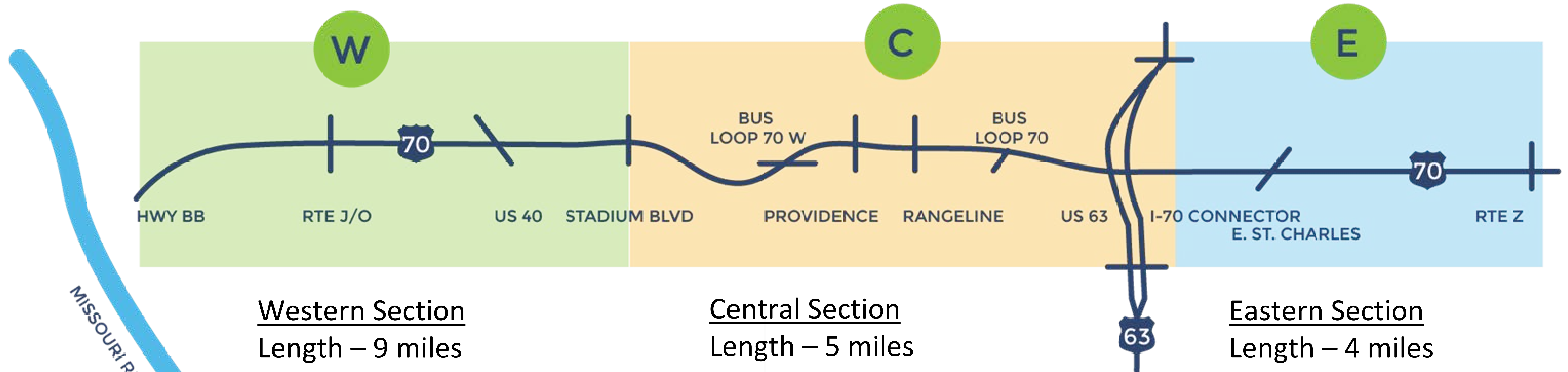
4PM – 6PM

Columbia ARC



# I-70 SIU 4 Mainline Facts & Issues

Approximately 18 miles long with 10 interchanges



## Western Section

Length – 9 miles

AADT – 39,043 – 44,505

Crashes (2016-2020):

- Fatal – 7
- Suspected Serious Injury – 13
- Minor Injury – 78
- PDO – 341

## Central Section

Length – 5 miles

AADT – 53,188 – 61,785

Crashes (2016-2020):

- Fatal – 3
- Suspected Serious Injury – 18
- Minor Injury – 77
- PDO – 207

## Eastern Section

Length – 4 miles

AADT – 37,474 – 52,065

Crashes (2016-2020):

- Fatal – 4
- Suspected Serious Injury – 9
- Minor Injury – 41
- PDO – 141



# I-70 Funded Projects on MoDOT's STIP

- Only two sections of the I-70 corridor are funded for Design-Build procurement
  - Pavement improvements from Stadium Boulevard to US 63
  - Interchange configuration improvements at US 63/I-70 in Columbia
  - Approximately \$194 million available for engineering, utility relocations, right of way, environmental mitigation, and construction contract costs
- The remainder of the improvements shown at this meeting are not currently funded
- Estimates shown throughout are high-level preliminary estimates and are not considered final construction estimates



# Reasonable Alternatives & Preferred Alternative

*Note: Other than the improvements at the Connector and pavement improvements between Stadium and the Connector, the improvements shown on the following slides are not currently funded in MoDOT's STIP*



# How Preferred Alternative is Selected

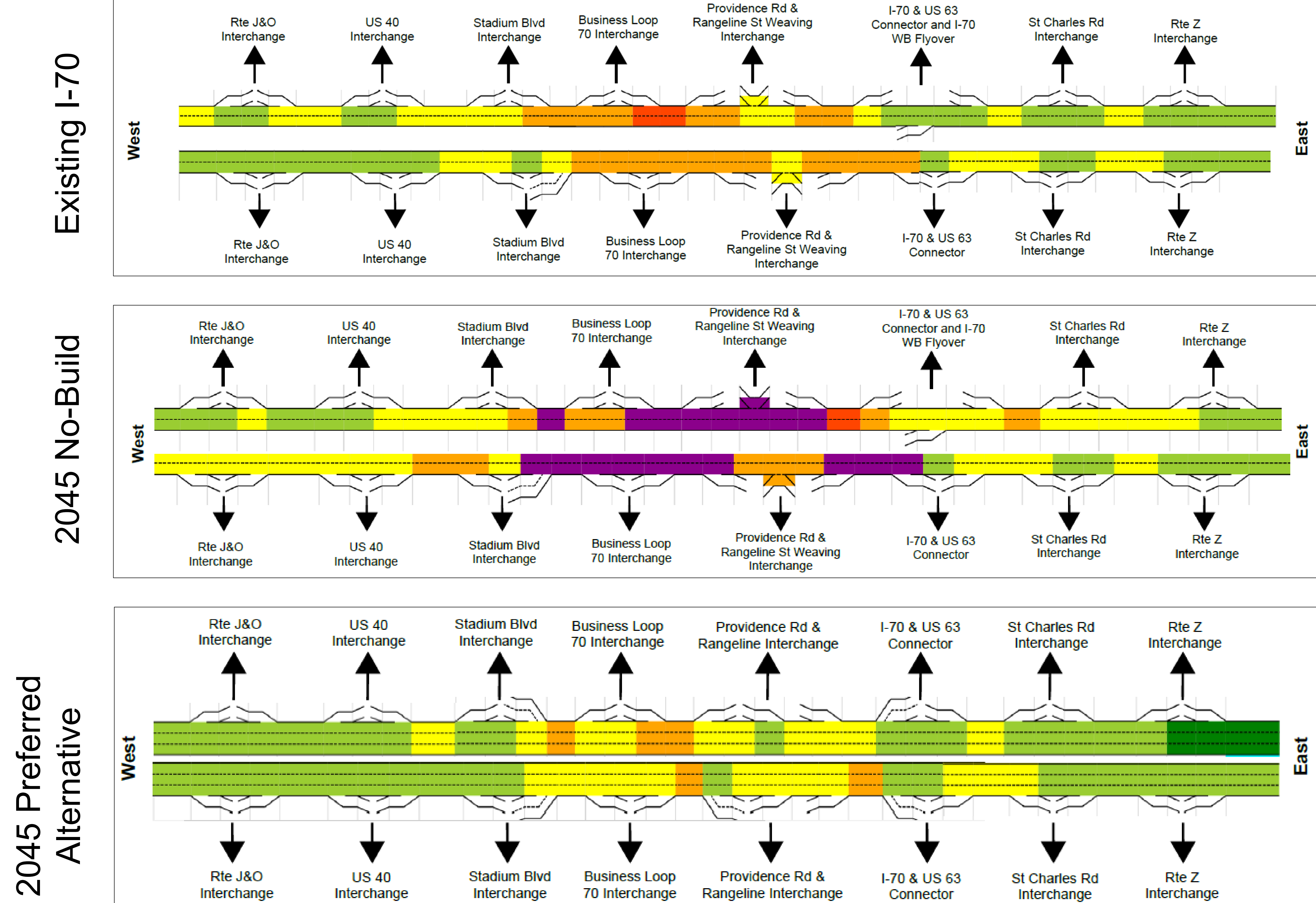
- Assessment of impacts in the following broad categories
  - Right of Way acquisition
    - Including residential, commercial, agricultural
  - Environmental resources
    - Including wetlands, floodplains, streams, threatened & endangered species
  - Community resources
    - Including National Register of Historic Places, Environmental Justice Populations
  - Displacements
    - Including residential and commercial
  - Engineering
    - Including access management, construction staging, traffic operations & safety, costs



# Mainline I-70 Preferred Alternative – Add a 3<sup>rd</sup> Lane to I-70 in Both Directions

## Preferred Alternative: Add a 3<sup>rd</sup> Lane to I-70 in each direction through entire Corridor

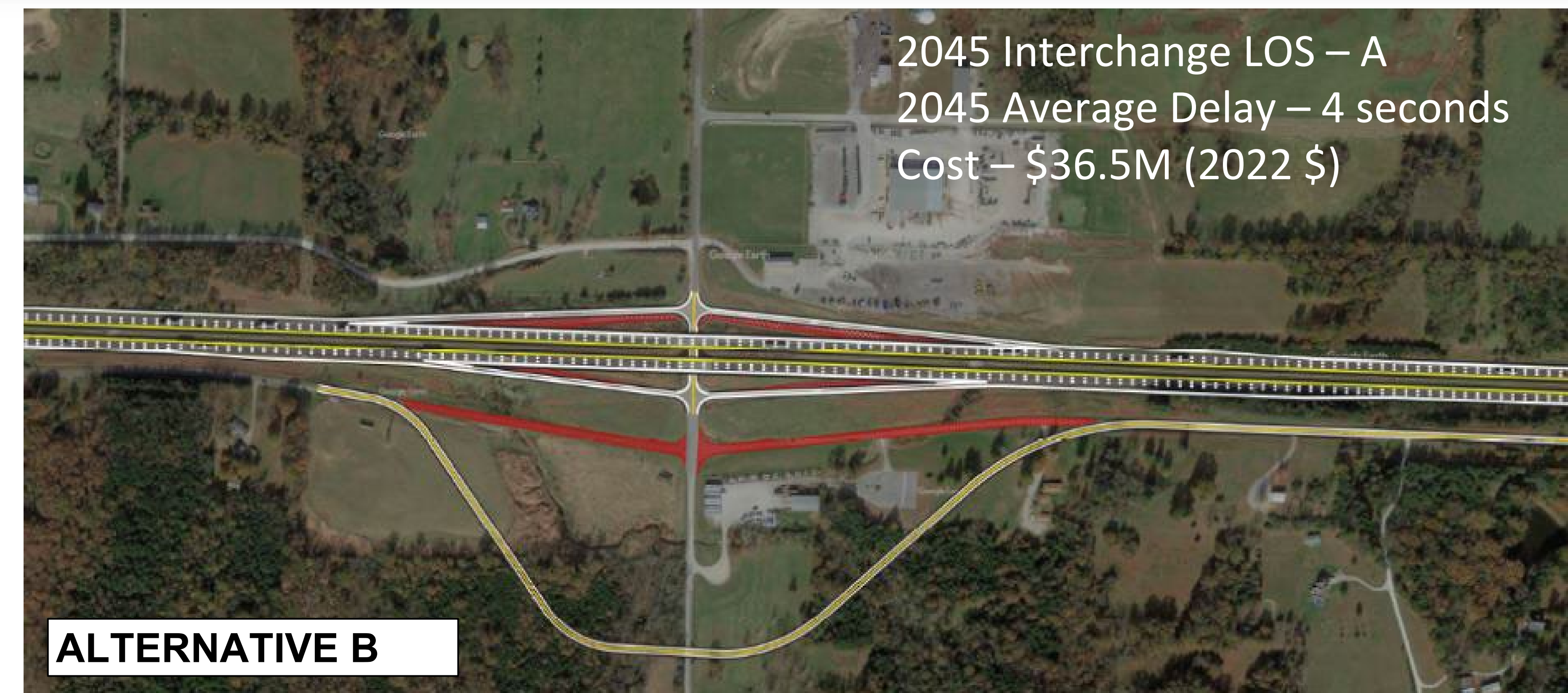
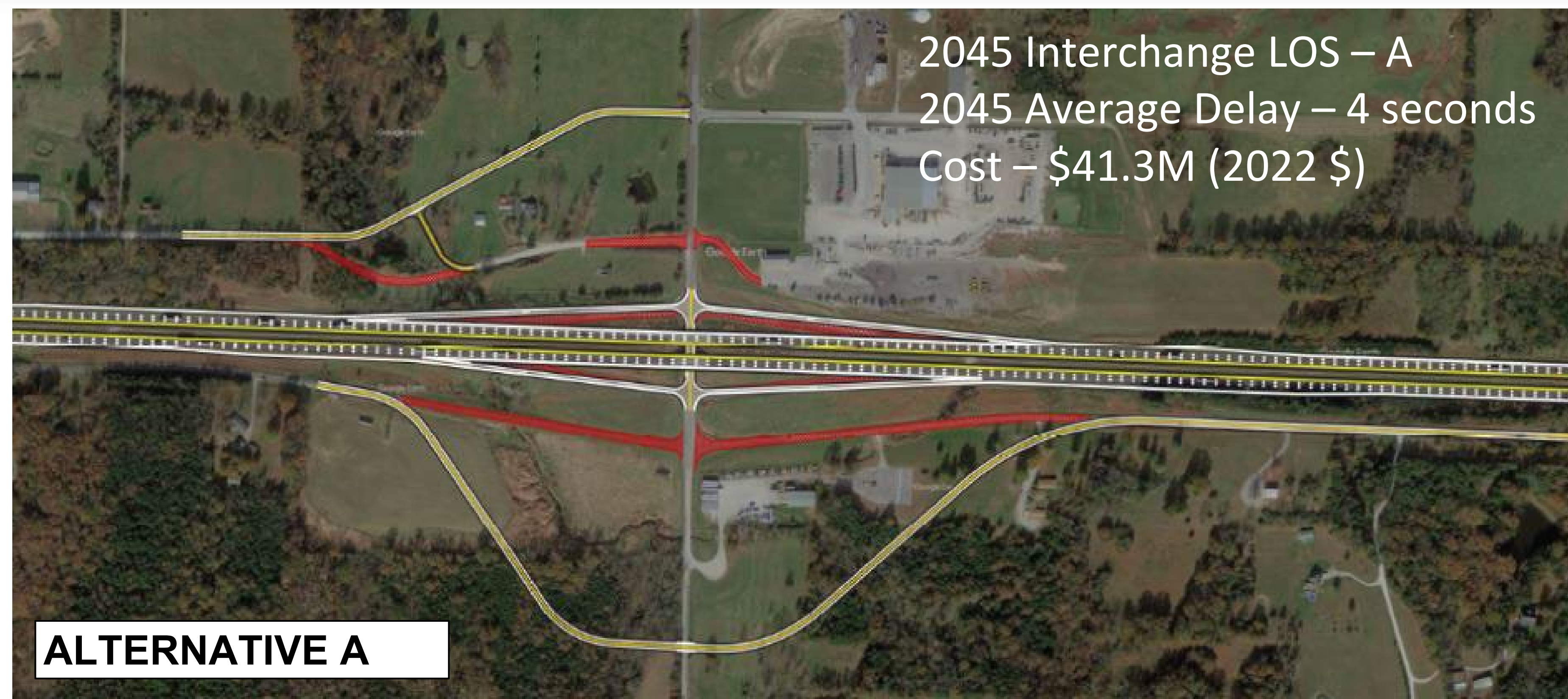
- Consistent with SIU 4 EIS recommendation
- Improves Level of Service to acceptable performance (LOS D)
- Reduces Fatal and Injury Crashes on Mainline by 24%, predicting 9 fewer fatal and serious injury crashes
- Reduces Property Damage Only Crashes on Mainline by 26%, predicting 46 fewer property damage only crashes



**THIS PORTION IS NOT FUNDED**



# Routes J/O Reasonable Alternatives



- Both alternatives reconstruct the diamond interchange with longer ramps.
- Alternative A includes improvements to the North and South Outer Road. Alternative B includes only improvements to the South Outer Roads.
- Improvements shown are not on the Statewide Transportation Improvement Plan (STIP)
- Average Daily Traffic (ADT) on Routes J/O – 1,330 (2021) | 1,500 (2045)
- 2016-2020 Crash History at Interchange Intersections – 2 Property Damage Only

*Notes:*

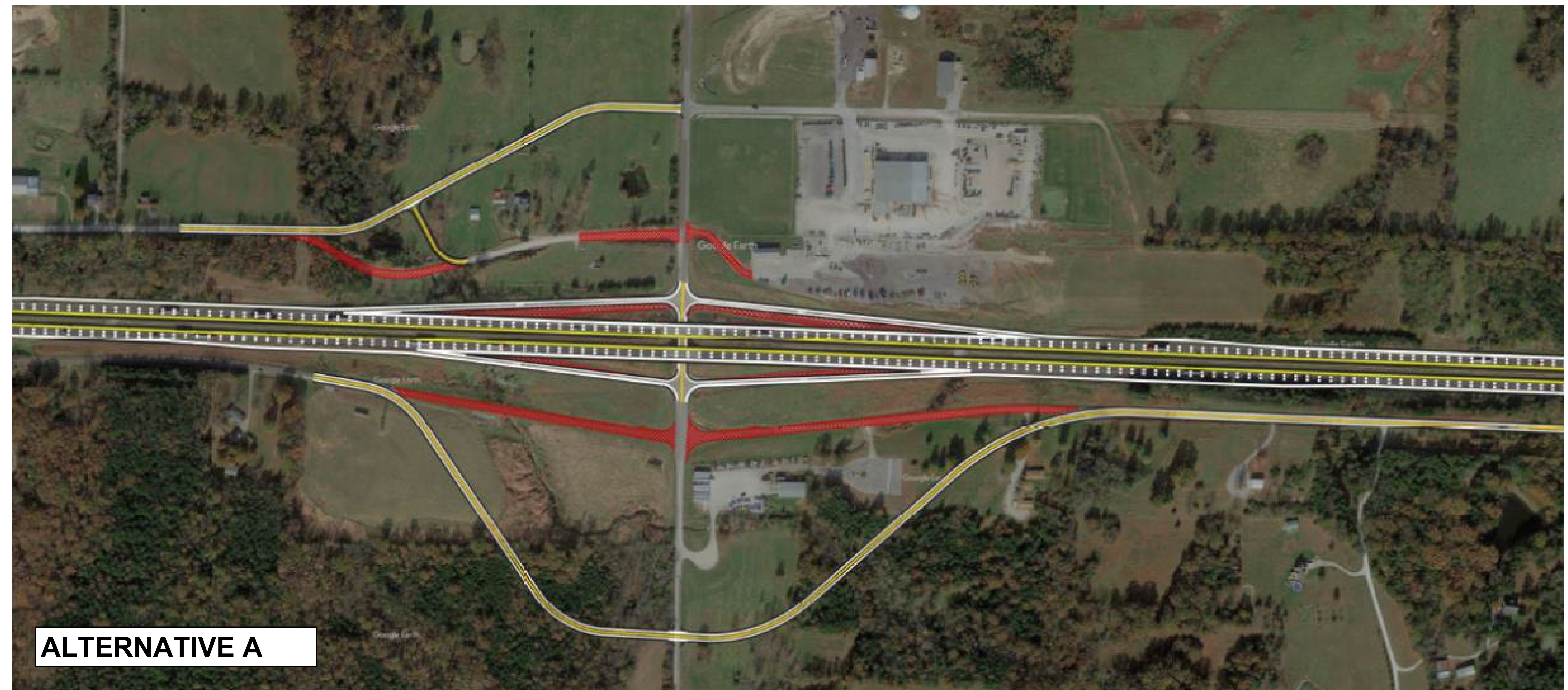
- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# Routes J/O Preferred Alternative

## Preferred Alternative: Alternative A, North and South Outer Roads

- While the cost is slightly less than \$5M more than Alternative B, Alternative A:
  - Achieves full access management guidelines for the entire interchange
  - Improves safety over Alternative B
  - Provides better operations for vehicles using this interchange for travel to/from both directions in the future





# Outer Road between Routes J/O and US 40 Reasonable/Preferred Alternative



## Preferred Alternative: Alternative A, Outer Road on South Only

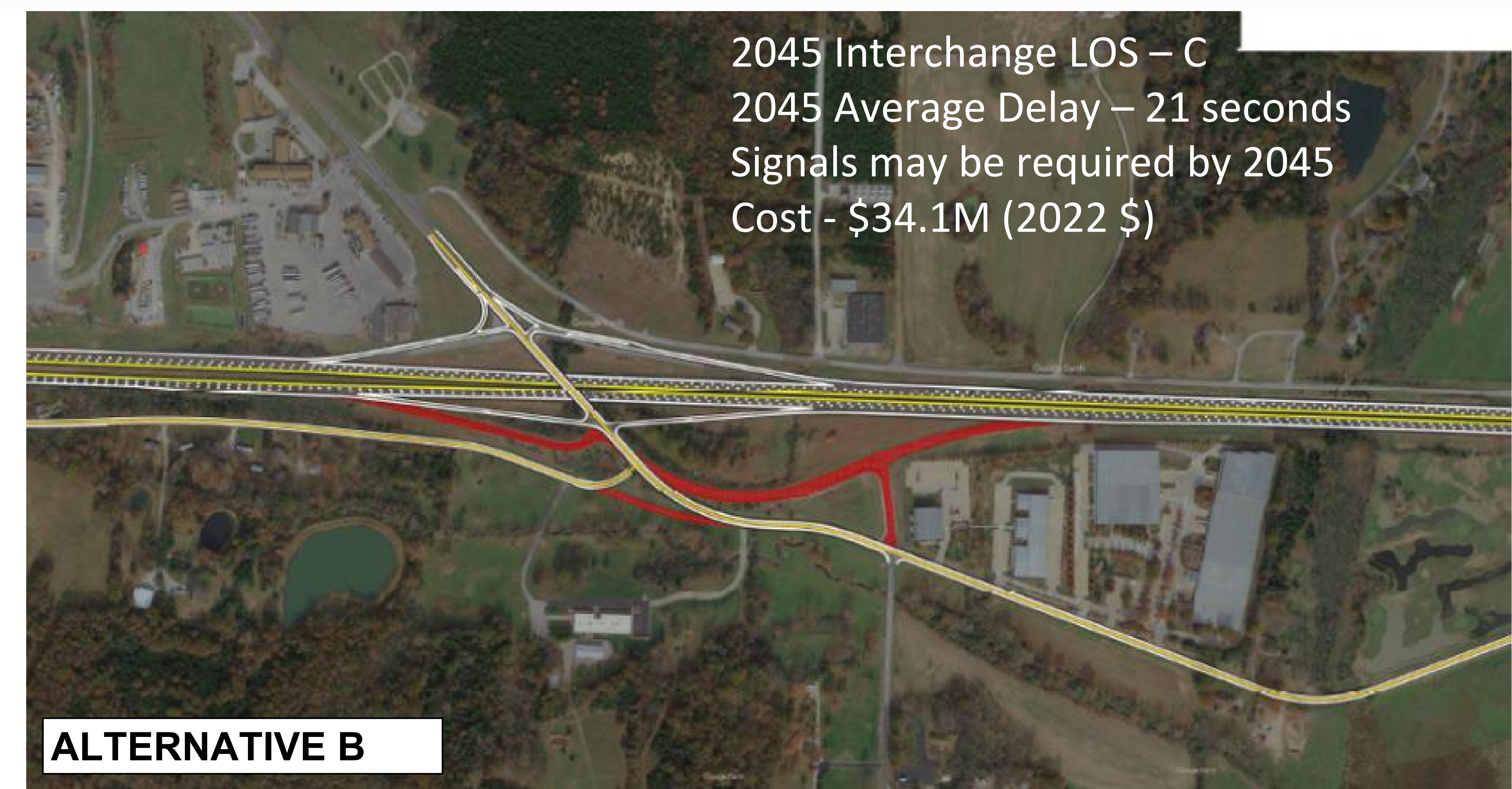
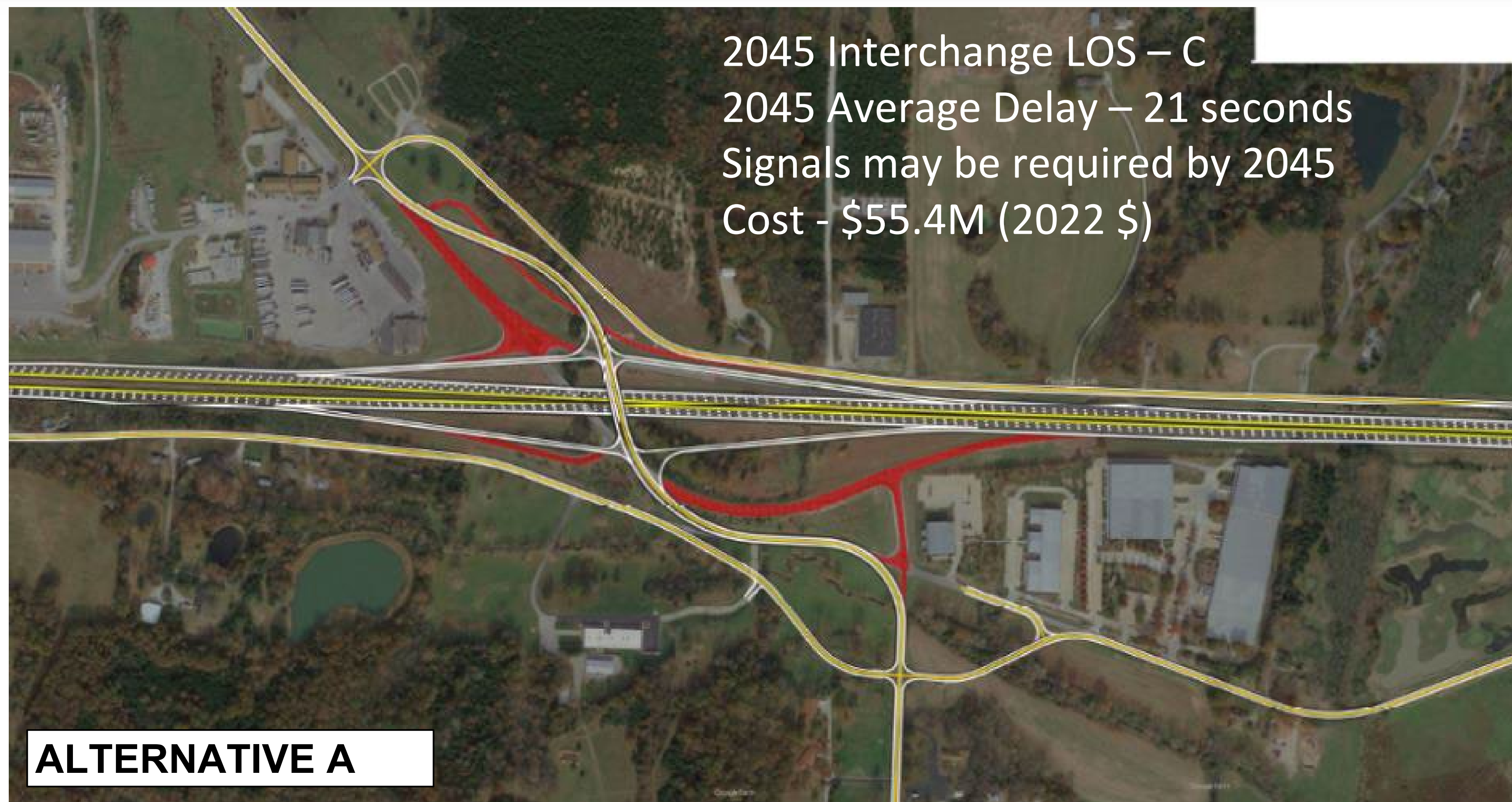
- 3.5 miles of outer road improvements
- Will require 1 new bridge
- Consistent with the SIU 4 EIS Preferred Alternative
- Meets the Purpose and Need of the project
- Addresses stakeholder desire for continuous outer road

### Notes:

- The improvements shown are not currently funded in MoDOT's STIP
- Costs shown include mainline I-70 widening



# US 40/Midway Reasonable Alternatives



- Alternative A realigns US 40 to remove the skew. US 40 ties into Route UU to the south.
- Alternative B keeps the exiting skew and US 40 ties into Sugar Creek Road to the south.
- Improvements shown are not on the STIP
- ADT – 11,400 (2021) | 12,850 (2045)
- 2016-2020 Crash History at Interchange Intersections – 10 Minor Injury, 17 Property Damage Only
- Alternative A reduces crashes by 22%

*Notes:*

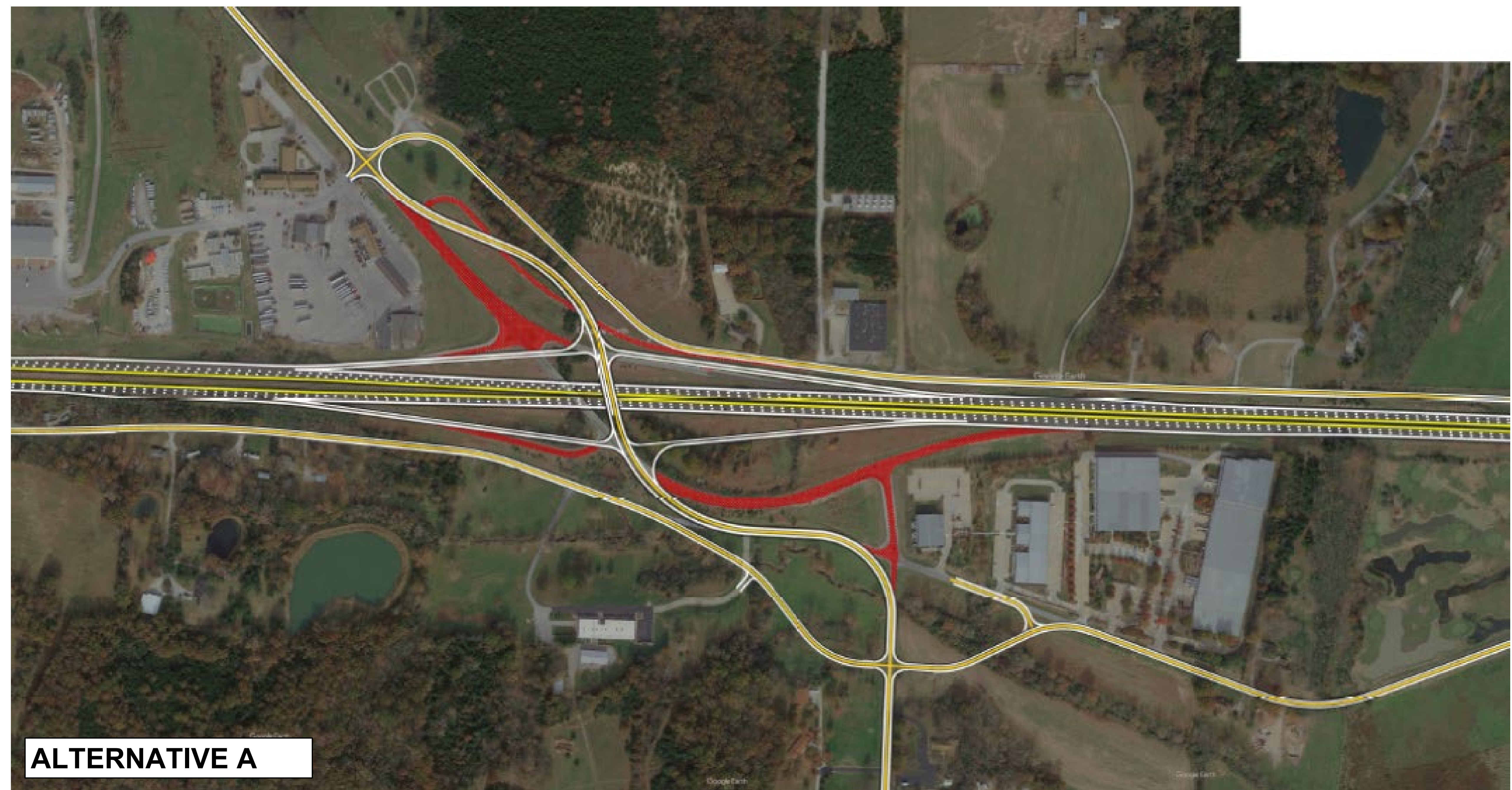
- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# US 40/Midway Preferred Alternative

## Preferred Alternative: Alternative A, Interchange Realign

- While Alternative A is almost \$21M more expensive and, in general, has greater impacts than Alternative B, Alternative A:
  - Addresses the single most stakeholder cited issue at this intersection – addressing the skew angle of the interchange. Stakeholders identified great difficulties in turning from the eastbound I-70 off-ramp to northbound US 40
  - Meets access management guidelines for the entire interchange
  - Provides greater operations and safety over Alternative B



*Note: The improvements shown are not currently funded in MoDOT's STIP*



# Outer Road between US 40 and Stadium – Reasonable Alternative A, Continuous Outer Road on North Side of I-70

Cost - \$79.5M (2022 \$)

ALTERNATIVE A

- Provides an outer road connection across Perche Creek and improves existing outer road north of I-70
- Improvements shown are not on the STIP
- 3.0 miles of outer road improvements
- Will require 1 new bridge

*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# Outer Road between US 40 and Stadium – Reasonable Alternative B, Continuous Outer Road on South Side of I-70



- Provides outer road connection across Perche Creek and improves existing outer road south of I-70
- Improvements shown are not on the STIP
- 3.24 miles of outer road improvements
- Will require 2 new bridges

*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# Outer Road between US 40 and Stadium Preferred Alternative



*Note: The improvements shown are not currently funded in MoDOT's STIP*

## Preferred Alternative: Alternative A, North Outer Road

- Completes outer road system between US 40 and Stadium and provides standard lane widths, and a higher design speed
- Less impacts as it stays primarily on existing MoDOT R/W
- More direct outer road connection than the south outer road alternative
- Alternative A is over \$9M less expensive than Alternative B
- On the south side of I-70, the existing roadway west of Perche Creek is privately owned, whereas on the north side of I-70, the existing roadway on both sides of Perche Creek is within MoDOT R/W resulting in significantly less new R/W will need to be acquired



# Stadium Boulevard – Reasonable Alternative A, Improved Outer Road at Bernadette

- Provides capacity improvements to the WB off ramp (triple left, dual right), and lengthens merging distances on the EB on ramp
- South outer road realigned to the south to connect to Bernadette Dr
- ADT – 41,400 (2021) | 51,180 (2045)
- 2016-2020 Crash History at Interchange Intersections – 11 Minor Injury, 21 Property Damage Only



*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# Stadium Boulevard – Reasonable Alternative B, Improved Outer Road at Existing Location

- Provides capacity improvements to the WB off ramp (triple left, dual right), and lengthens merging distances on the EB on ramp
- South outer road remains at existing location
- ADT – 41,400 (2021) | 51,180 (2045)
- 2016-2020 Crash History at Interchange Intersections – 11 Minor Injury, 21 Property Damage Only



*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*





# Stadium Boulevard Preferred Alternative



## Preferred Alternative: Alternative A, Bernadette Connection

- While Alternative A is \$3.3M more expensive and has greater impacts in some impact categories than Alternative B, Alternative A:
  - Has fewer residential and commercial acres impacted
  - Has fewer acres of floodplain impacts
  - Has fewer linear feet of stream crossings
  - Removes south outer road traffic from existing outer road intersection near the interchange to Bernadette, improving interchange operations and safety



# Business Loop 70 West Reasonable/Preferred Alternative

- Takes advantage of the 2017 interchange improvements
- Improves traffic operations
- Improves safety
- Provides a slip ramp for WB Business Loop to the EB I-70 on ramp
- ADT – 11,900 (2021) | 14,700 (2045)
- 2016-2020 Crash History at Interchange Intersections -  
2 Suspected Serious Injury  
7 Minor Injury  
15 Property Damage Only

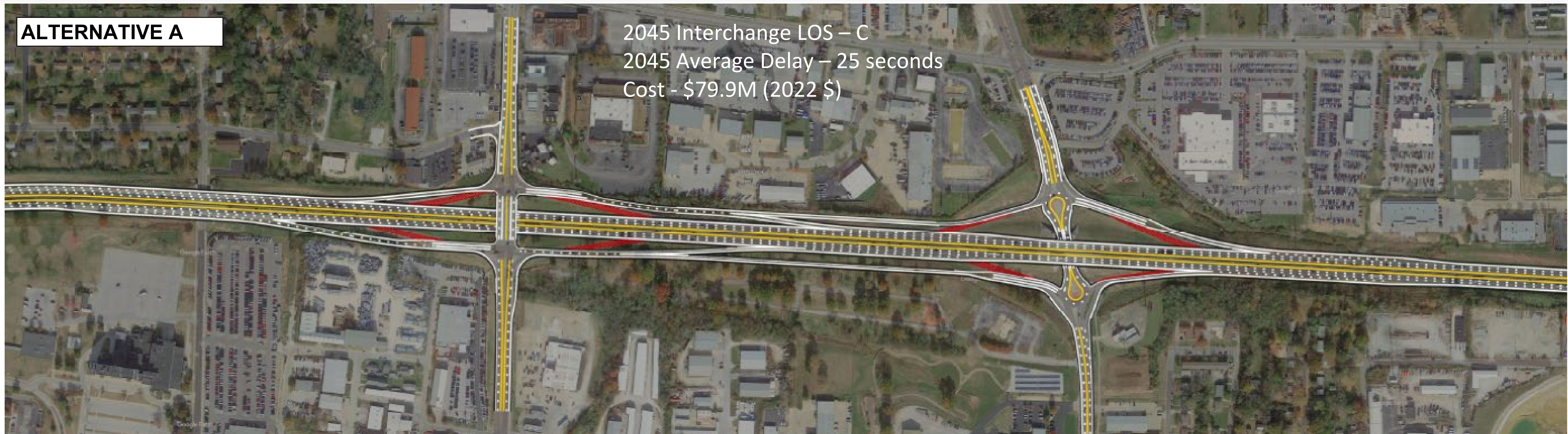


*Notes:*

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# Providence/Rangeline Reasonable Alternative A, Minor Collector-Distributor System



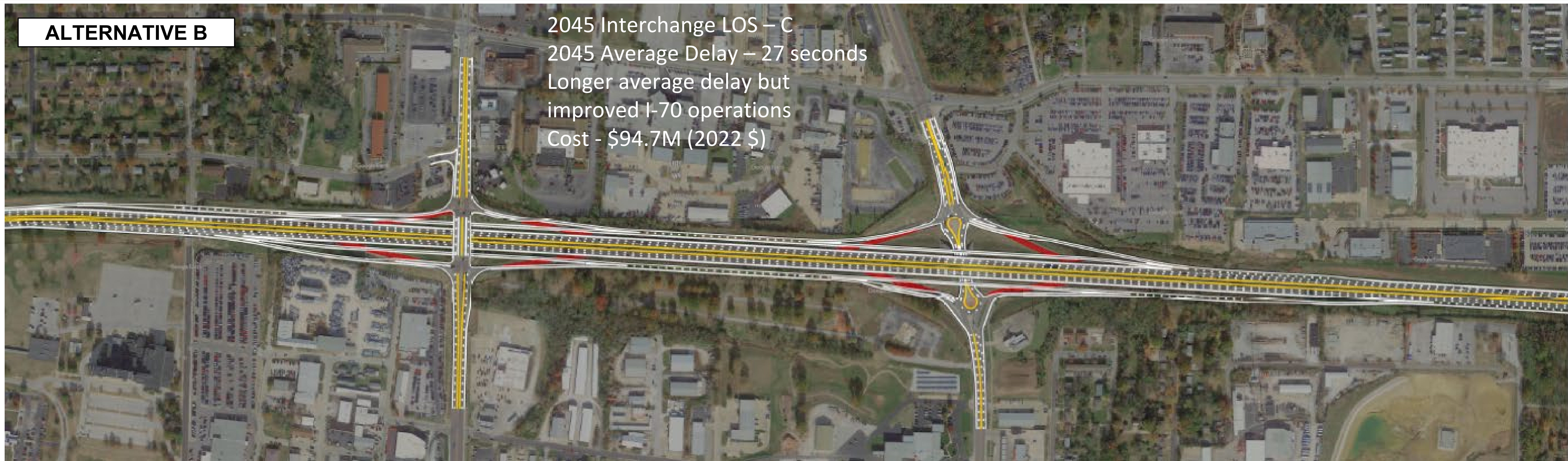
- Provides minor Collector-Distributor (C-D) roads between Providence and Rangeline. The WB off ramps and EB on ramps are combined, therefore Rangeline traffic to/from the west must go through the signals at Providence.
- ADT – Providence: 22,600 (2021) | 27,940 (2045)      Rangeline: 14,700 (2021) | 16,570 (2045)
- 2016-2020 Crash History at Providence Interchange Intersections – 1 Fatal, 16 Minor Injury, 45 Property Damage Only (PDO)
- 2016-2020 Crash History at Rangeline Interchange Intersections – 1 Suspected Serious Injury, 11 Minor Injury, 21 PDO
- Reduces mainline crashes by 20%

*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# Providence/Rangeline Reasonable Alternative B, Major Collector-Distributor System



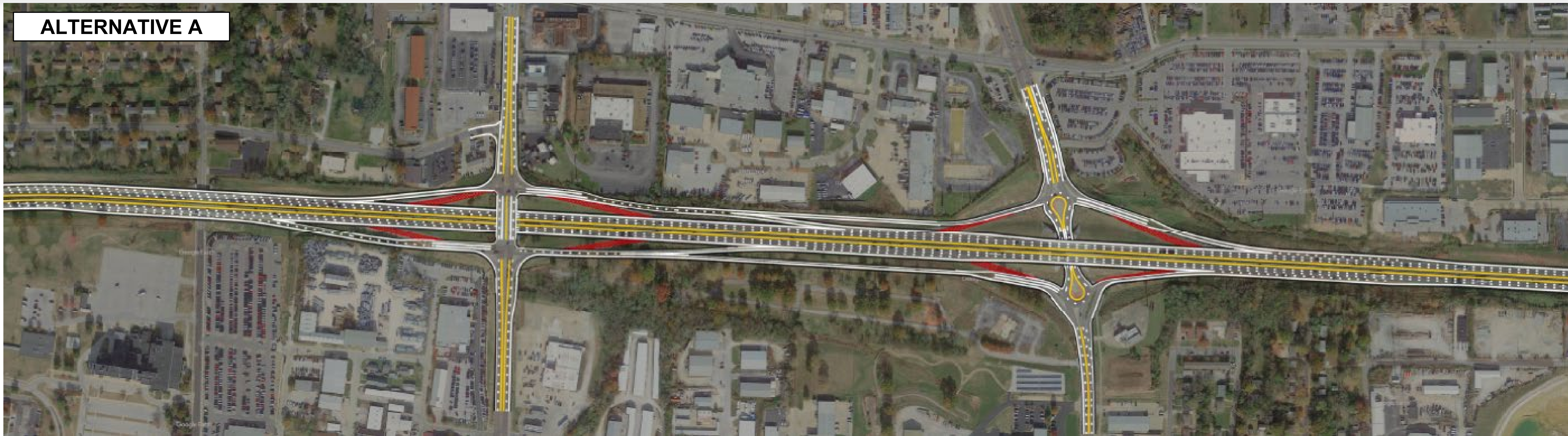
- Provides C-D roads between Providence, Rangeline. All ramps are not required to go through additional signals.
- ADT – Providence: 22,600 (2021) | 27,940 (2045) Rangeline: 14,700 (2021) | 16,570 (2045)
- 2016-2020 Crash History at Providence Interchange Intersections – 1 Fatal, 16 Minor Injury, 45 Property Damage Only (PDO)
- 2016-2020 Crash History at Rangeline Interchange Intersections – 1 Suspected Serious Injury, 11 Minor Injury, 21 PDO
- Reduces mainline crashes by 31%

*Notes:*

- The improvements shown are not currently funded in MoDOT's STIP
- Costs shown include mainline I-70 widening



# Providence/Rangeline Preferred Alternative



## Preferred Alternative: Alternative A, Minor C-D System

- While Alternative A and B have similar impacts, Alternative A, Minor C-D System, was selected as the preferred alternative for the following reasons:
  - The grade separations required for Alternative B create profile challenges that may impact the weaving distance and design speed.
  - Alternative A allows for simpler widening of the existing I-70 bridge over Garth Ave. because the widening required will fit within the existing bridge footprint
  - Alternative B requires two new structures at Rangeline for the C-D roadways
  - Alternative A is almost \$15M less expensive than Alternative B

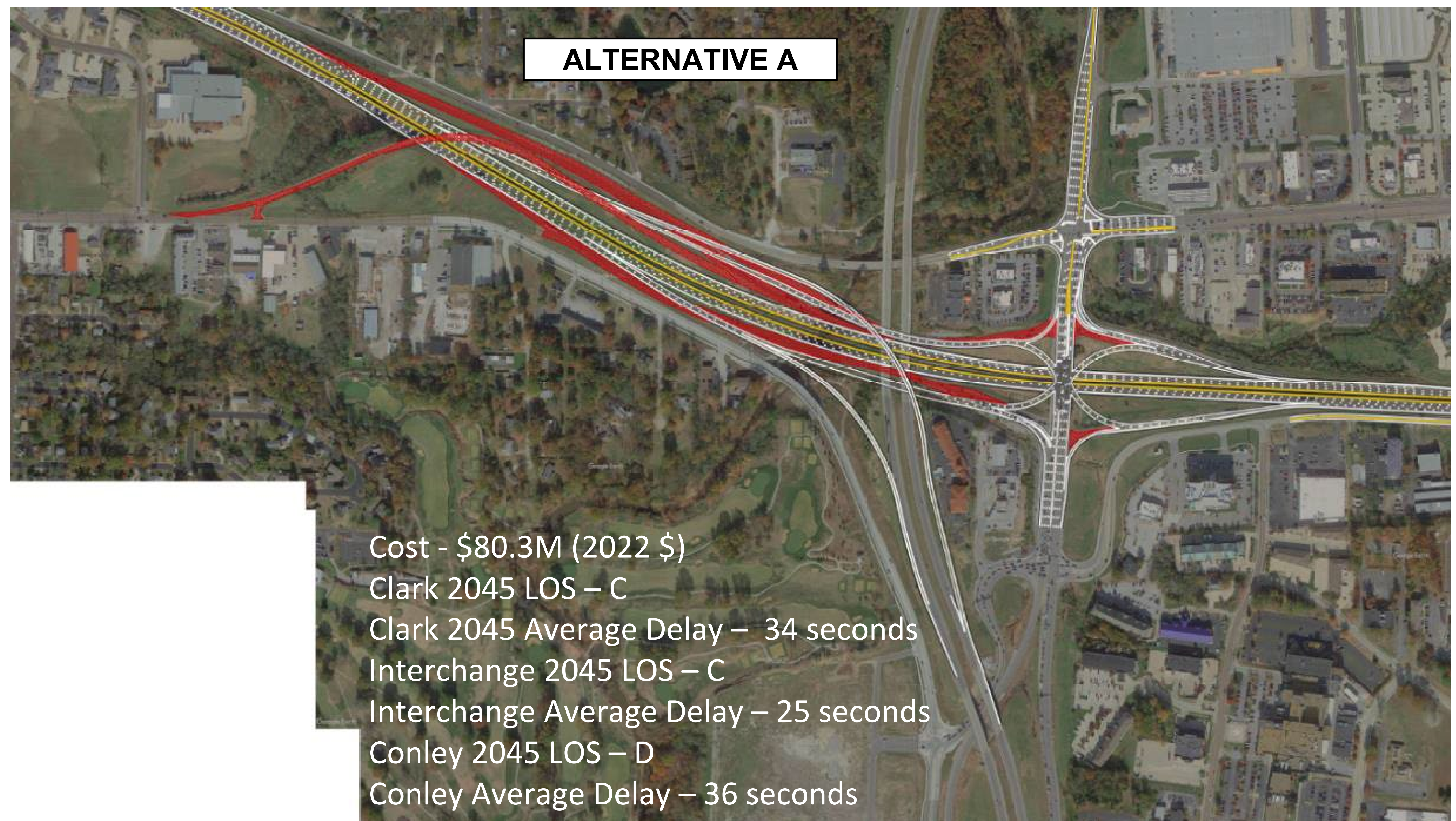
### Notes:

- The improvements shown are not currently funded in MoDOT's STIP
- Costs shown include mainline I-70 widening



# I-70/US 63 Connector – Reasonable Alternative A, Fly over Ramps and Single Point Interchange (SPUI)

- Improvements at the Connector and I-70 pavement improvements east of Stadium to the Connector are included on the STIP
- Provides:
  - NB US63 to WB I-70 & EB I-70 to SB US 63 flyover ramps
  - Single Point Urban Interchange (SPUI)
  - Improvements at Clark Lane & US 63
- SPUI interchange reduces crashes by 6%



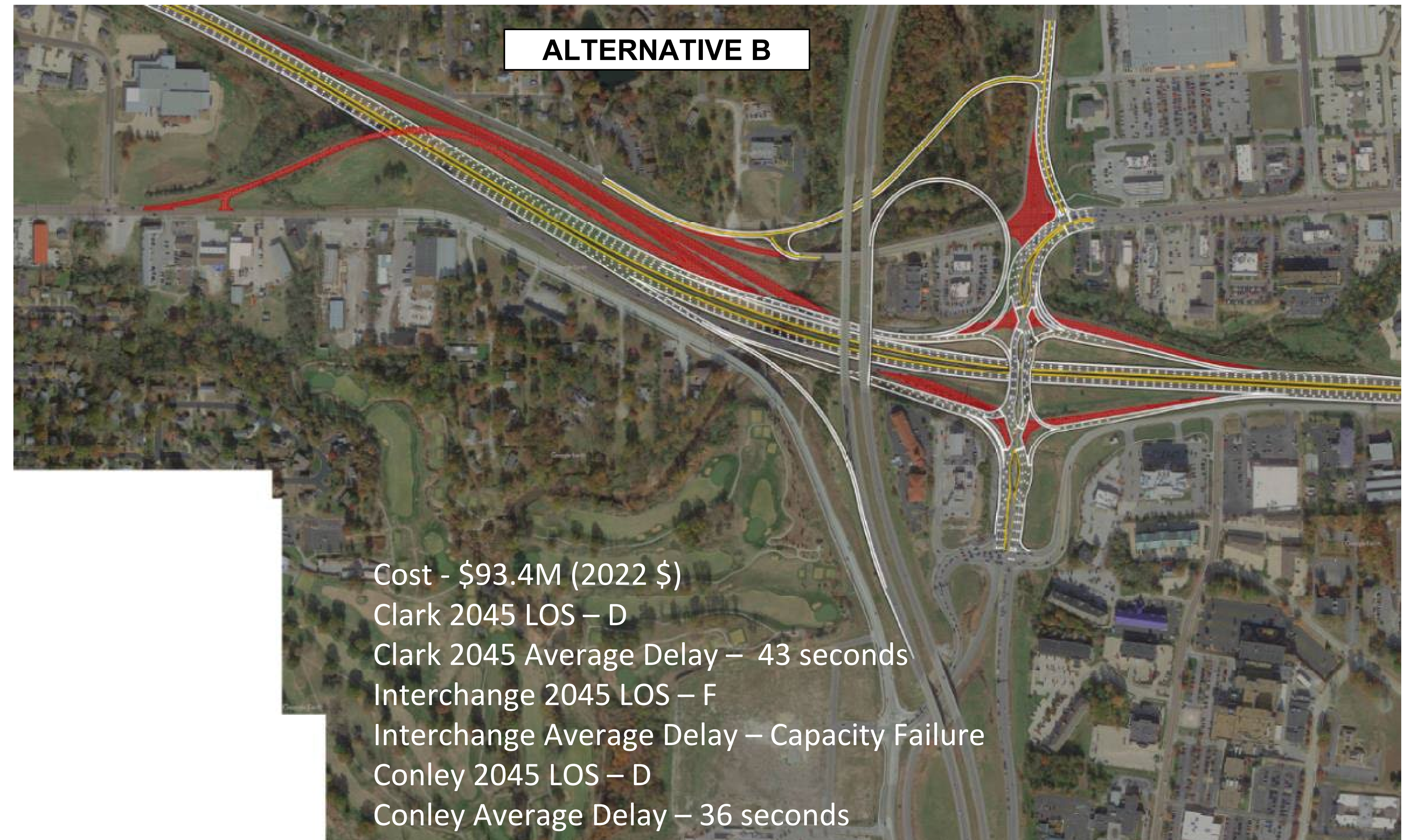
*Note:*

- *Costs shown include mainline I-70 widening*



# I-70/US 63 Connector – Reasonable Alternative B, Fly over/Loop Ramps and Diverging Diamond Interchange

- Improvements at the Connector and I-70 pavement improvements east of Stadium to the Connector are included on the STIP
- Provides:
  - Diverging Diamond Interchange
  - NB US63 to WB I70 loop ramp
  - EB I70 to SB US 63 flyover ramp
  - Improvements at Clark Lane & US63, makes Clark Lane the primary movement



*Note:*

- *Costs shown include mainline I-70 widening*



# I-70/US 63 Connector – Reasonable Alternative C, Existing Interchange Improvements

- Improvements at the Connector and I-70 pavement improvements east of Stadium to the Connector are included on the STIP
- Provides:
  - Lane reconfiguration through Connector
  - Additional intersection at Conley & US 63
  - Improvements at Clark Lane & US 63



*Note:*

- *Costs shown include mainline I-70 widening*





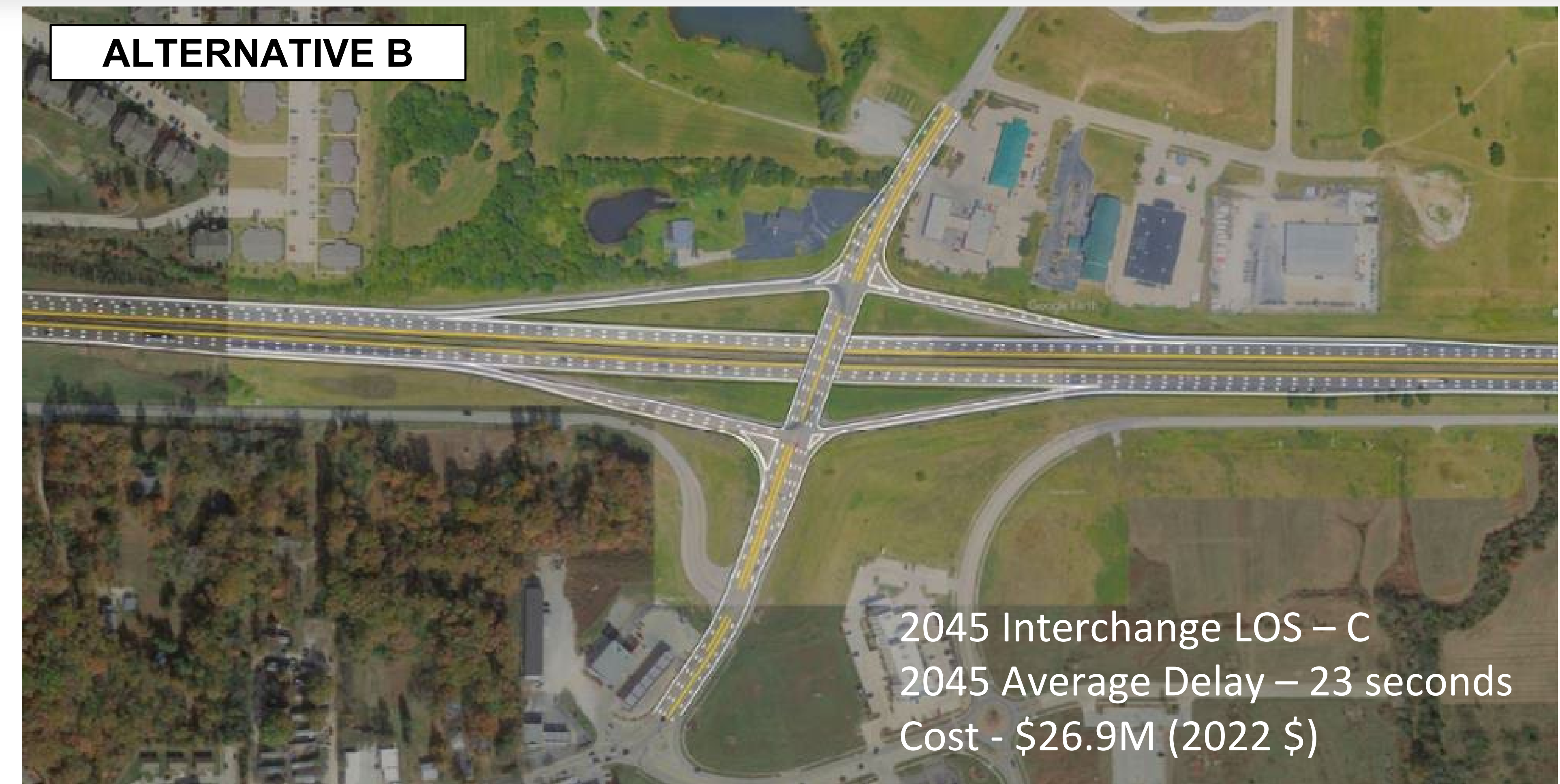
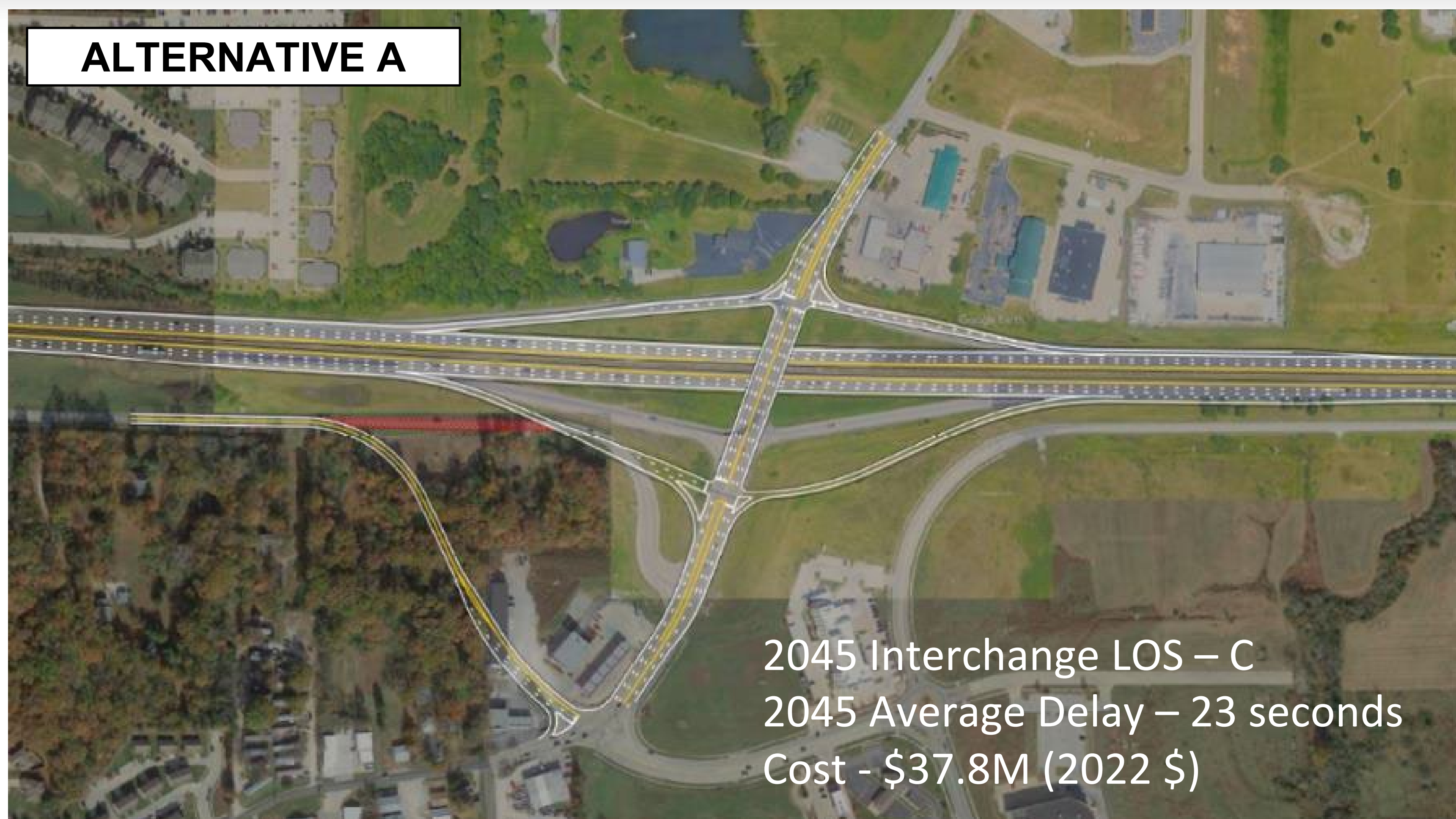
# I-70/US 63 Connector Preferred Alternative

## Preferred Alternative Selected: Alternative A (SPUI)

- Alternative A at this location provides the following benefits:
  - Fewer acres impacted, fewest environmental impacts, fewest community impacts, equal business impacts than Alternative B
  - Provides significant capacity improvements and resilience over Alternative C
  - \$13M less expensive than Alternative B and \$5M less expensive than Alternative C
  - Addresses the heaviest movements interchange movements (northbound US 63 to westbound I-70 and eastbound I-70 to southbound US 63)
  - Address the City's comments on ensuring improvements at the interchange do not affect their future Hinkson Trail extension



# St. Charles/Lake of the Woods Reasonable Alternatives



- Alternative A replaces and widens overpass for additional lanes
- Alternative B replaces and widens overpass for additional lanes and relocates EB ramps and south outer road.
- Improvements shown are not on the STIP
- ADT – 14,000 (2021) | 22,000 (2045)
- 2016-2020 Crash History at St. Charles Interchange Intersections – 7 Minor Injury, 14 Property Damage Only

*Notes:*

- *The improvements shown are not currently funded in MoDOT's STIP*
- *Costs shown include mainline I-70 widening*



# St. Charles/Lake of the Woods Preferred Alternative

## Preferred Alternative Selected: Alternative B, Improve Existing

- While Alternative B does not meet full access management guidelines on the south side of the interchange, Alternative B at this location provides the following benefits over Alternative A:
  - Fewer R/W, environmental, community, and displacement impacts
  - \$10.9M less expensive than Alternative A



*Note:*

- *The improvements shown are not currently funded in MoDOT's STIP*



# Route Z Preferred/Reasonable Alternative A, Existing Interchange Ramp Improvements

- Improvements shown are not on the STIP
- ADT – 1,700 (2021) | 2,330 (2045)
- 2016-2020 Crash History at Route Z Interchange Intersections –  
4 Minor Injury  
13 Property Damage Only
- Access management guidelines are met with the existing interchange configuration



#### Notes:

- The improvements shown are not currently funded in MoDOT's STIP
- Costs shown include mainline I-70 widening



# Schedule

- October 2021 – Re-evaluation begins
- May 24, 2022 – CAG #1 – Confirm Purpose and Need
- July 11, 2022 – CAG #2 – Reasonable Alternatives
- July 21, 2022 – PIM #1 – Reasonable Alternatives
- October/November 2022 – CAG #3 & PIM #2 – Preferred Alternative
- Late 2022 – Prepare Re-evaluation Document
- Spring 2023 – Anticipated Re-evaluation Document Approval
- Spring 2023 – Begin Design-Build Procurement



# Comments

Please provide your comments on the materials presented at tonight's meeting

Thank You!

