

I-70 Section of Independent Utility 4 Re-evaluation

Public Involvement Meeting (PIM) Meeting #1

July 21, 2022

4PM – 6PM

Columbia ARC



NEPA Basics



What is NEPA?

- National Environmental Policy Act – NEPA
- Signed into law in 1970
- Requires that agencies prepare a “detailed statement” of the environmental impacts of any “major federal action significantly affecting the quality of the human environment”
- Intended to help “maintain conditions under which man and nature can exist in productive harmony”
- Labeled by the courts as an “environmental full disclosure law”
- Directs federal agencies to use a systematic, interdisciplinary approach during the planning process whenever federal actions have a potential impact on the environment
- Involves “widespread coordination, review, and public disclosure”
- Requires that federal agencies (FHWA, FAA, FTA, among others) administer their programs (i.e., major decisions) in accordance with NEPA



Key Elements of a NEPA Document

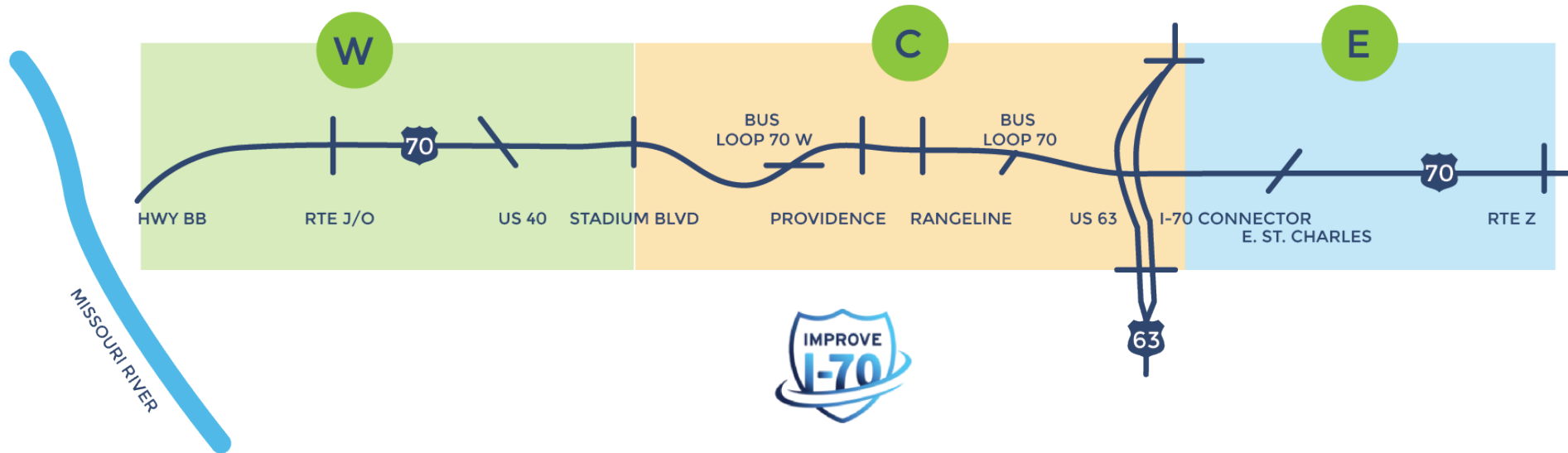
- Purpose and Need – Why the project is being done
- Alternatives – Possible solutions that address the Purpose and Need
 - Conceptual Alternatives
 - Reasonable Alternatives
 - Preferred Alternative
 - Selected Alternative
- Environmental Impacts
- Public Involvement



Study Corridor



I-70 Section of Independent Utility (SIU) 4 Study Corridor



17 miles long with 10 interchanges



Previous I-70 Studies



Second Tier EIS for I-70 Through Columbia

- Established SIU 4 as I-70 from just east of Route BB to Route Z
 - 17 miles long with 10 interchanges
- Completed in 2006 with a Record of Decision
- Selected Alternative
 - One additional lane in each direction on I-70, including through the City of Columbia
 - Replacement of all existing interchanges and overpasses
 - Access management where appropriate
 - Provision of continuous outer roads as deemed necessary
- A Supplemental EIS investing truck-only lanes was completed in 2009



What is a Re-evaluation?

- Required when an EIS is more than three years old and/or it has been more than three years since the last major federal action
 - Authority to undertake final design, authority to acquire a significant portion of right-of-way, or approval of the design plans
- If the study area conditions have changed
 - Development, additional congestion, new historic properties, etc.
- If the project scope has changed since the document was approved
- If the project impacts have changed since the document was approved



Purpose and Need for this Re-evaluation

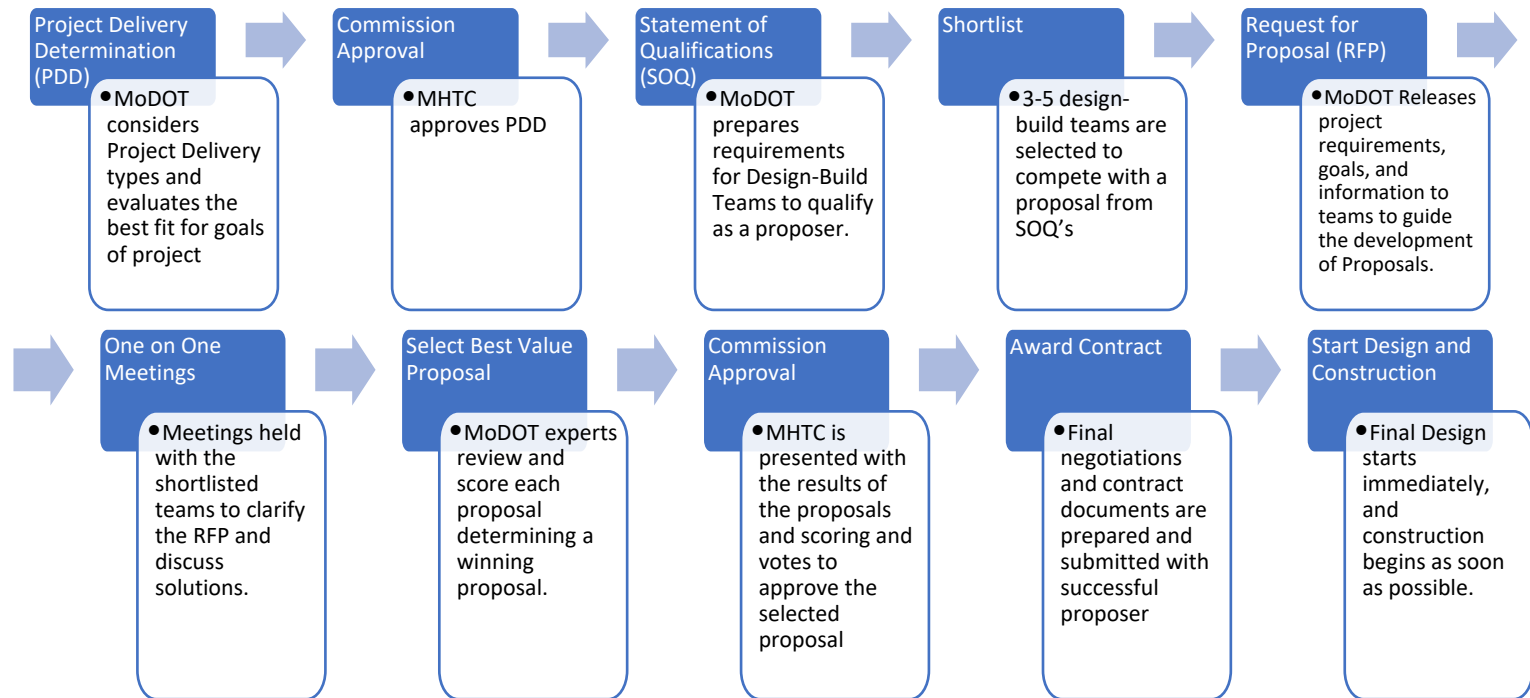
- From the 2006 Second Tier EIS
 - Accommodate existing and future traffic volumes on I-70;
 - Improve outdated I-70 design elements;
 - Accommodate all users of I-70; and
 - Improve user safety.
- All remain valid today



Design-Build Project Delivery



MoDOT Design-Build Process



The Design-Build Process

- Design-Build leverages private sector innovation to build on existing conceptual designs through a competitive process.
- Advantages of a Design-Build Project
 - Faster construction and reduced costs
 - Promotes innovation
 - Improves quality
- Typical Timeline

- Design-Bid-Build



- Design-Build



Reasonable Alternatives

The following boards present the Reasonable Alternatives along the I-70 SIU 4 corridor.

Please note that only pavement improvements between Stadium and the Connector and the Connector interchange are identified in the Statewide Transportation Improvement Program (STIP).

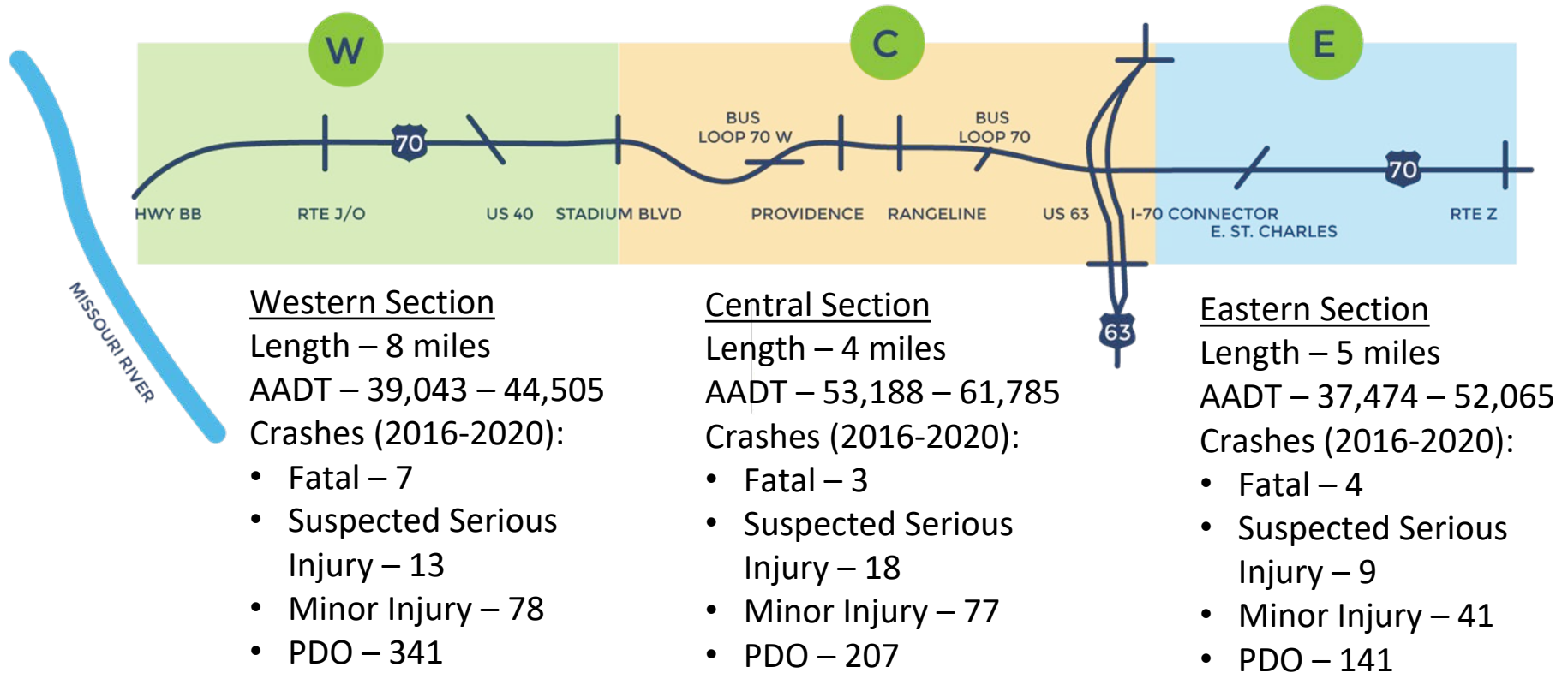
Pedestrian and bicycle accommodations are being investigated for all alternatives and will be presented at future meetings. Please provide your feedback on needs or issues on the comment form.



I-70 SIU 4 Mainline Facts & Issues

17 miles long with 10 interchanges

One additional lane in each direction of I-70 (three lanes in each direction)



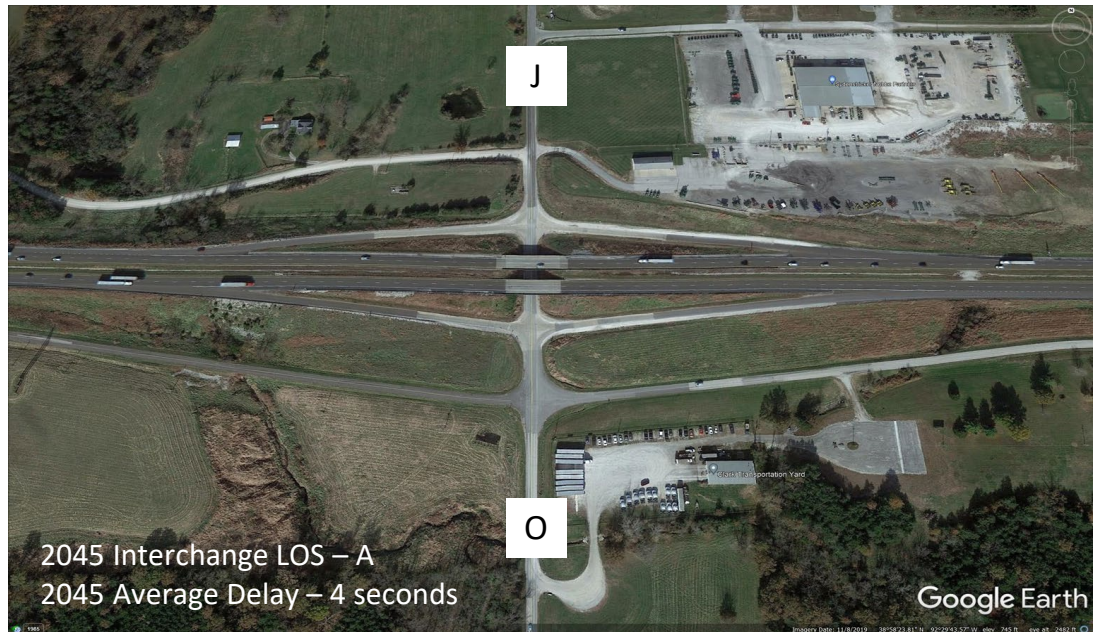
Routes J/O

Issues identified by study team

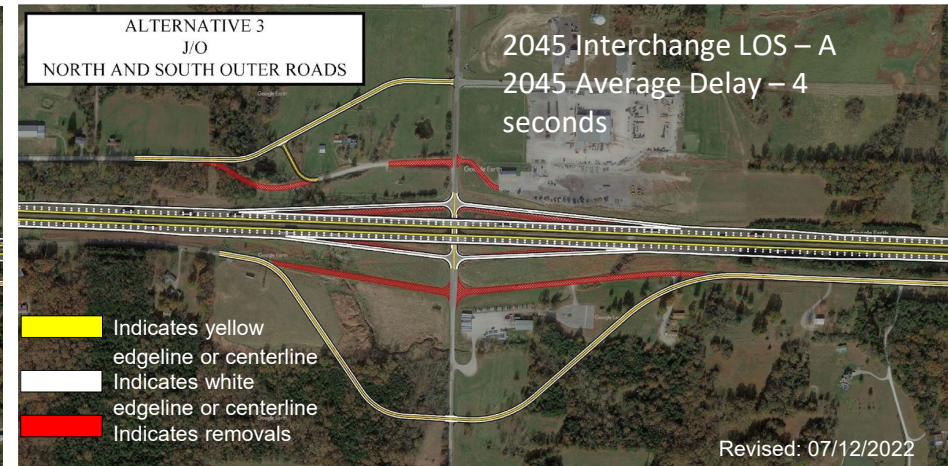
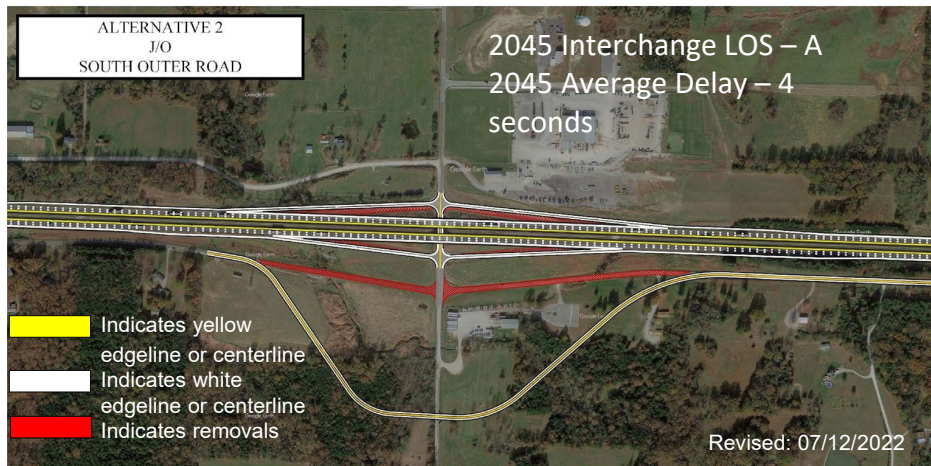
- Outer road spacing
- Ramps do not meet current design standards

Issues identified by Community Advisory Group (CAG)

- Sight distances related to off ramps



Routes J/O Reasonable Alternatives

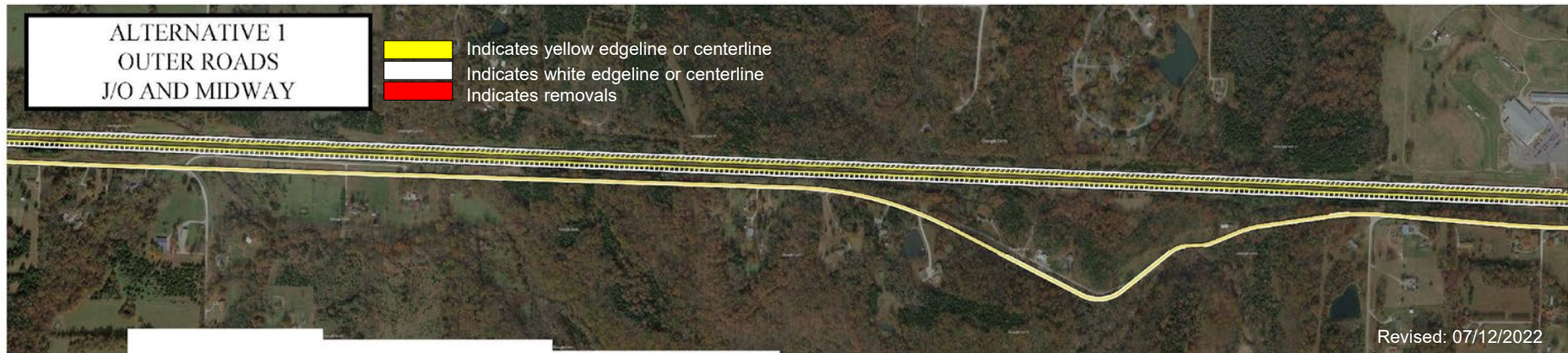


Notes:

- Both alternatives reconstruct the diamond interchange with longer ramps. Alternative 2 includes improvements to the South Outer Road. Alternative 3 includes improvements to the North and 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



Continuous Outer Road South of I-70



Notes:

- Improvements shown are not on the Statewide Transportation Improvement Plan (STIP)
- 3.46 miles of outer road improvements
- Will require 1 new bridge



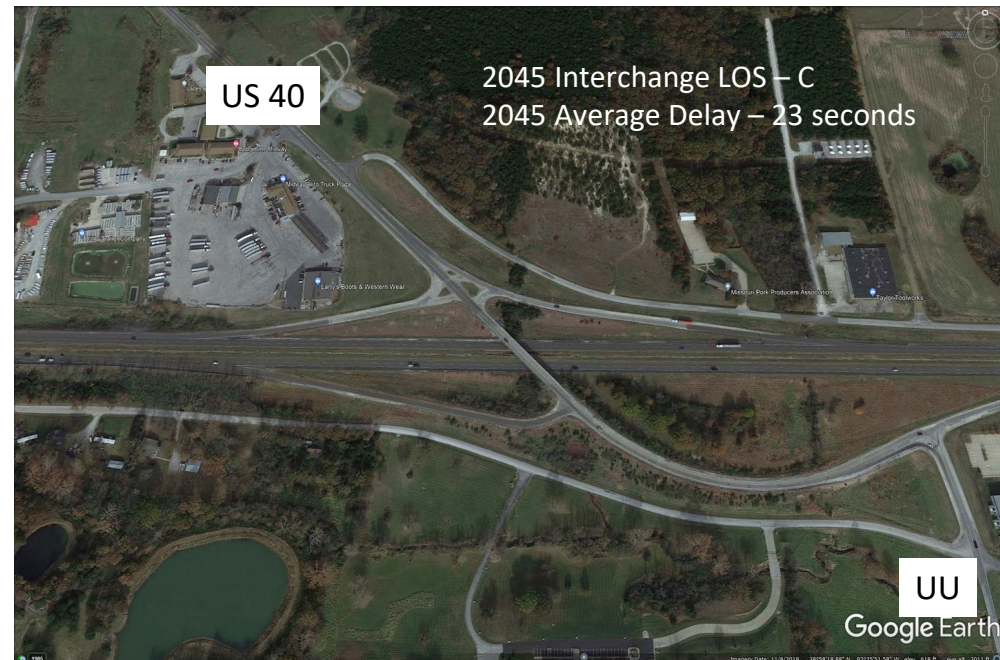
US 40/Midway

Issues identified by study team

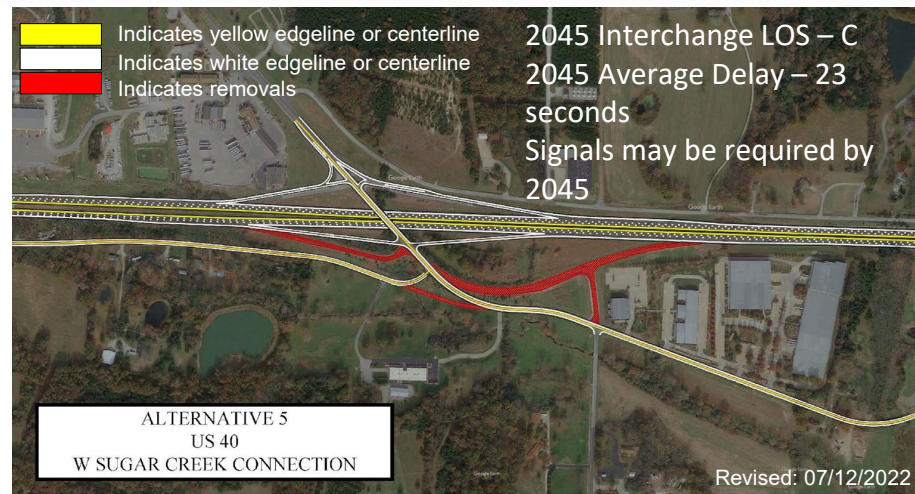
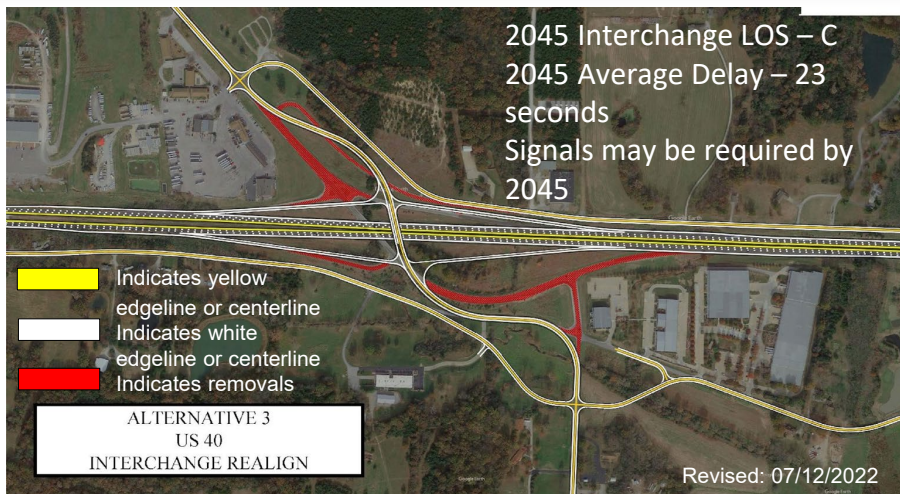
- Non-traditional configuration (SB to EB on ramp)
- Safety issues at Route UU intersection
- Safety issues due to skewed interchange

Issues identified by CAG

- New school traffic
- Need for continuous outer road to Stadium Blvd.
- Coordinate with Boone County Scott Blvd. interchange plans
- Improvements needed to Route UU to allow better access to south Columbia



US 40/Midway Reasonable Alternatives



Notes:

- Alternative 3 realigns US 40 to remove the skew. US 40 ties into Route UU to the south
- Alternative 5 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



Continuous Outer Road on North Side of I-70

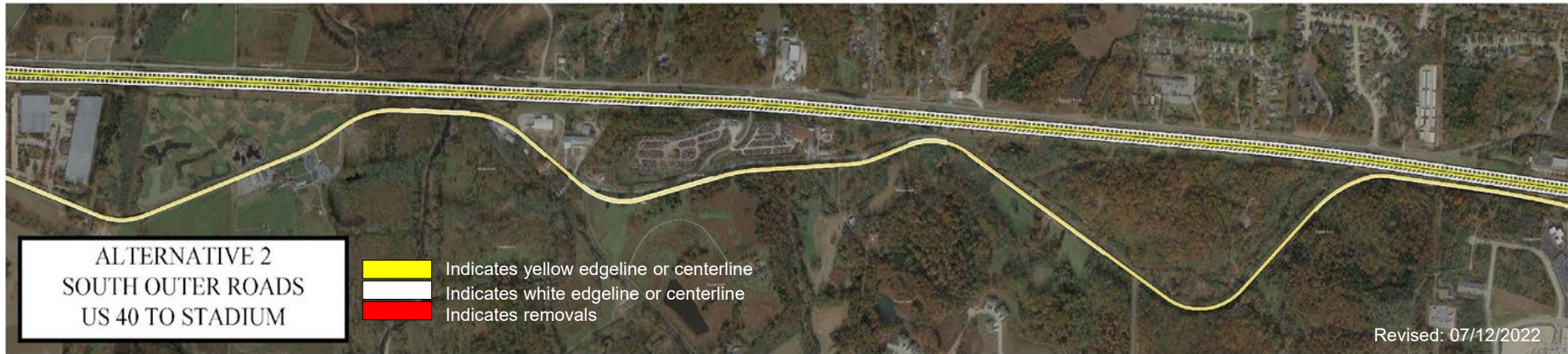


Notes:

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



Continuous Outer Road on South Side of I-70



Notes:

- 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 bridges



Stadium Boulevard

Issues identified by study team

- Interchange improvements in 2014
- Traffic congestion on Stadium Blvd.
- WB off ramp backups
- Closely spaced intersections to interchange

Issues identified by CAG

- NB backups due to lane reconfiguration
- Lack of pedestrian access to the park on NE side at Stadium Blvd.



Stadium Blvd. Reasonable Alternative

(Outer Road at Existing Location)

Notes:

- 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

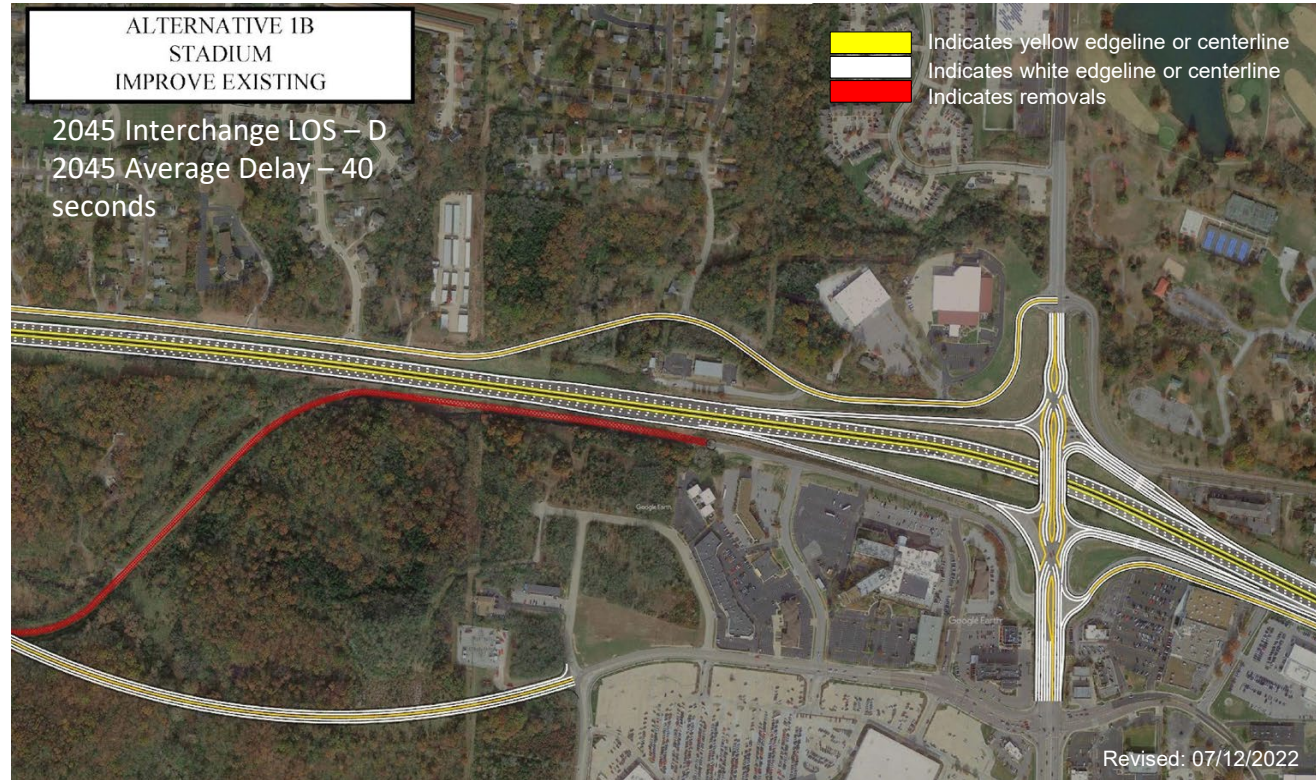


Stadium Blvd. Reasonable Alternative

(Outer Road at Bernadette)

Notes:

- 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



Business Loop 70 West

Issues identified by study team

- Interchange improvements in 2017
- Operational issues at EB off and on ramps
- Operational issues at WB BL 70 and eastern roundabout
- Five-legged EB roundabout with tight turning radii

Issues identified by CAG

- Disability community has difficulty getting to Aldi
- Pedestrians are system users also



Business Loop 70 West Reasonable Alternative



Notes:

- Provides a dedicated right turn lane 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



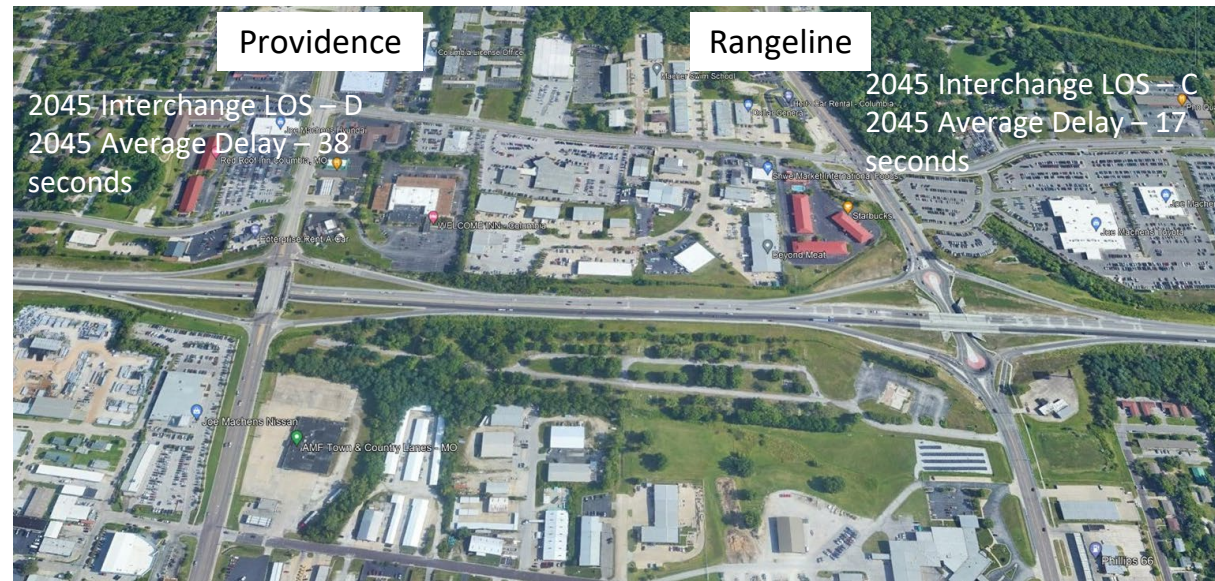
Providence/Rangeline

Issues identified by study team

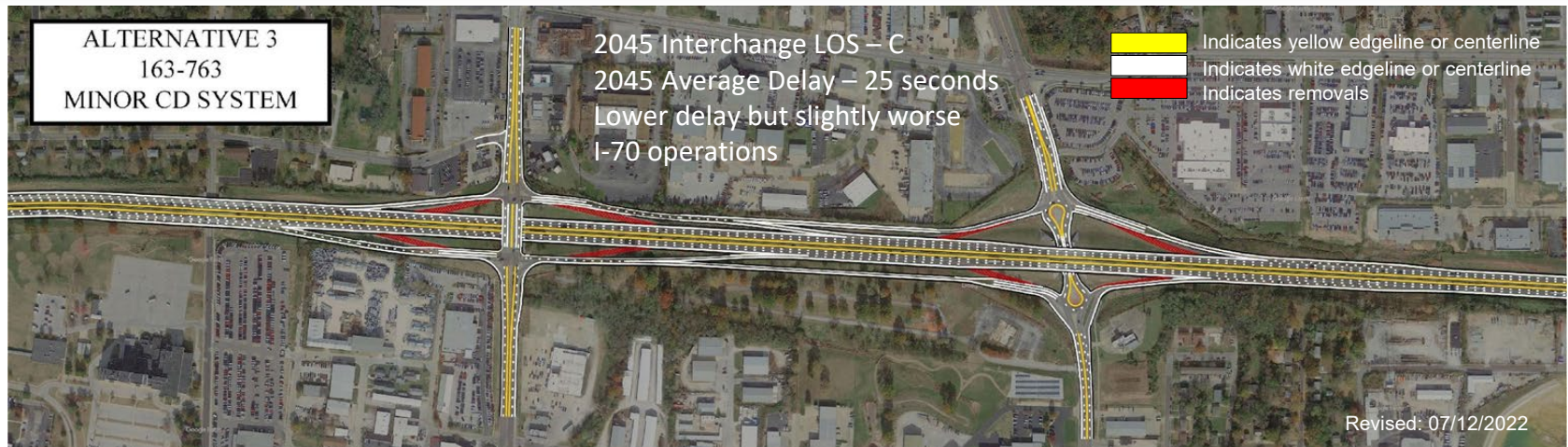
- Rangeline improvements in 2017
- Closely spaced interchanges create weaving issues

Issues identified by CAG

- Sidewalks could be widened
- First responders noted that shoulders and added lanes along I-70 would help alleviate traffic and safety concerns



Providence/Rangeline Reasonable Alternative

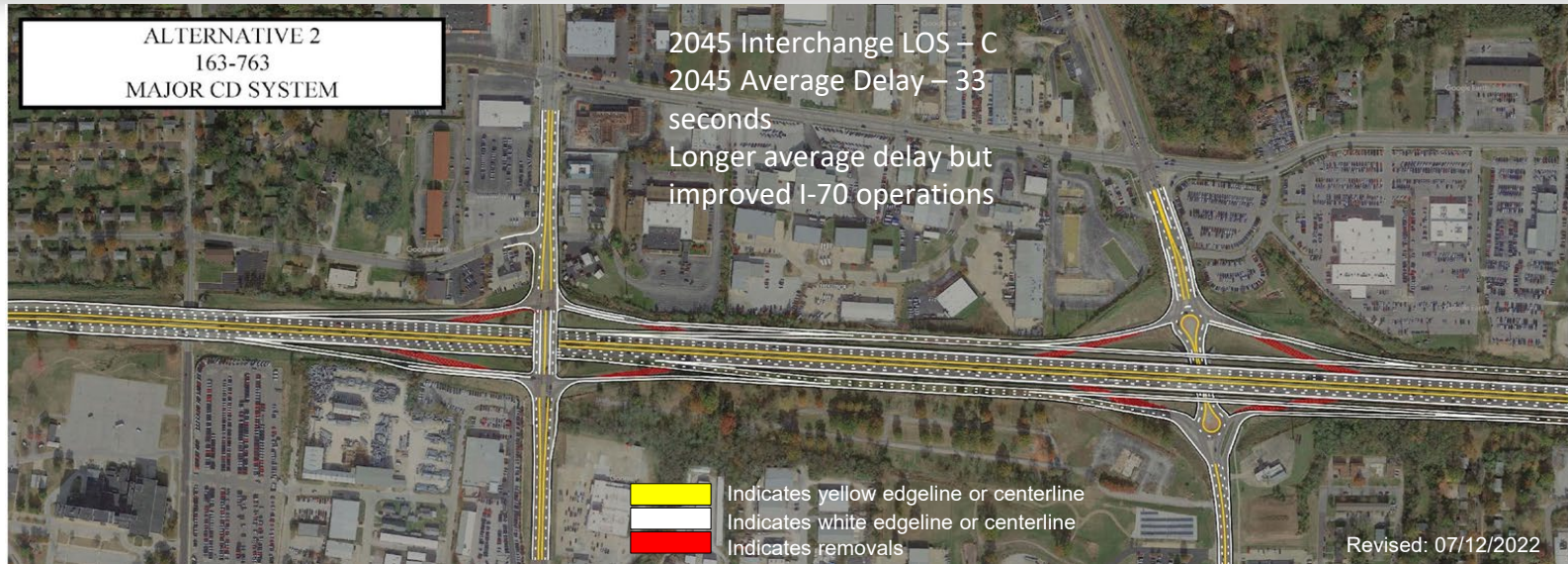


Notes:

- Provides 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



Providence/Rangeline/Parker Reasonable Alternative (Part 1)

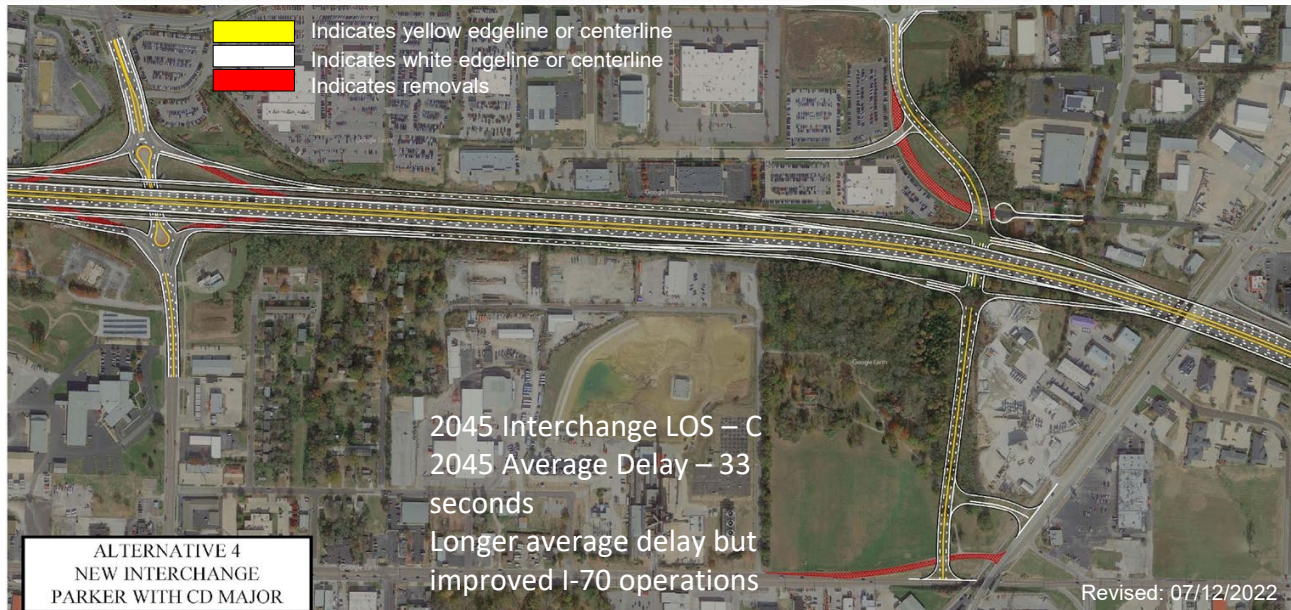


Notes:

- Provides C-D roads between Providence, Rangeline and a new interchange at Parker. Grade separations are provided so that any combined 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



Providence/Rangeline/Parker Reasonable Alternative (Part 2)



Notes:

- ADT – Providence: 22,600 (2021) | 27,940 (2045)
- ADT – 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



I-70/US 63 Connector

Issues identified by study team

- Traffic congestion on 63 Connector through the interchange area
- Heavy traffic between Clark and Conley in addition to I-70 traffic
- Heaviest movements are to/from south and west
- Intersections too close to interchange

Issues identified by CAG

- Often there are backups on the EB exit ramp
- A flyover should be considered at this location
- Large number of pedestrians in the area with very few facilities
- This is a hot spot for pedestrian deaths
- There are merge issues onto Broadway
- Columbia is building multi-use paths and MoDOT should coordinate improvements with the City

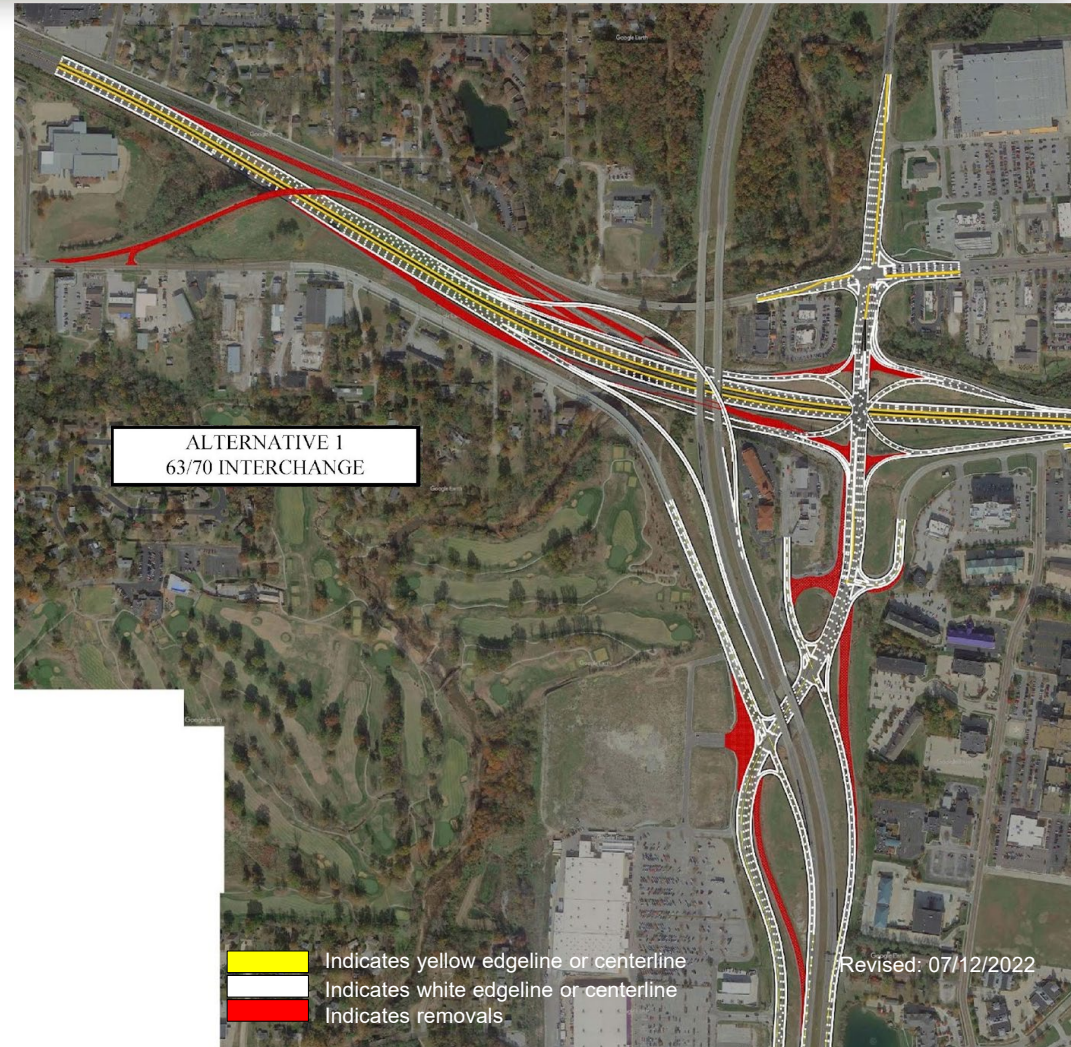


I-70/US 63 Connector

Reasonable Alternative 1

Notes:

- 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 I70 & EB I70 to SB US 63 flyover ramps
 - Single Point Urban Interchange (SPUI)
 - Additional intersection at Conley & US63
 - Improvements at Clark Lane & US63
 - Improvements at Bus. Loop & Conley
- Approximately 6,440 ADT will use the NB US63 to WB I70 flyover ramp; Approximately 5,440 ADT will use the EB I70 to SB US 63 flyover ramp
- NB US 63 to WB I70 & EB I70 to SB US 63 flyover ramps would result in a 17% reduction of all traffic through the connector interchange in No-Build Conditions
- 2016-2020 Crash History –
 - 3 Suspected Serious Injury
 - 66 Minor Injury
 - 118 Property Damage Only

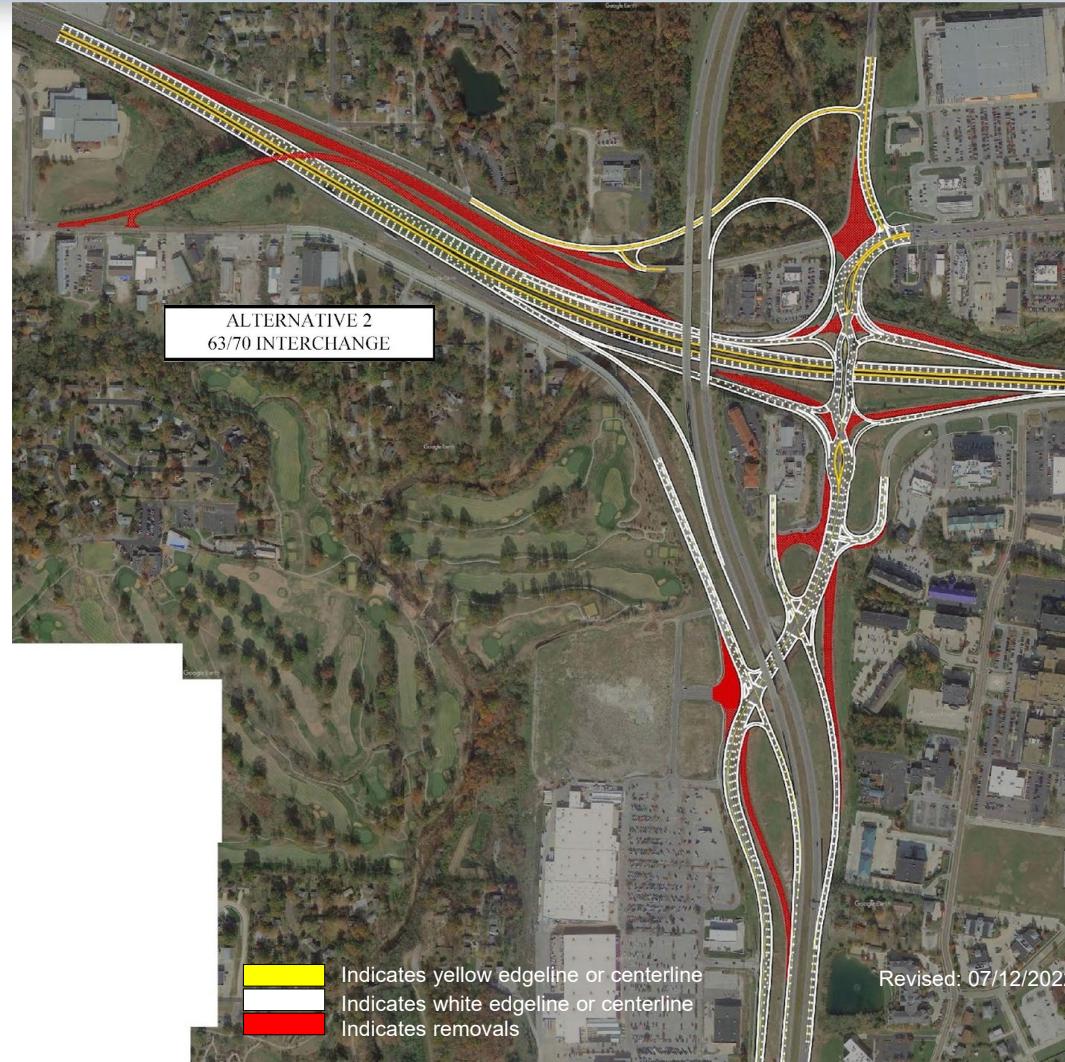


I-70/US 63 Connector

Reasonable Alternative 2

Notes:

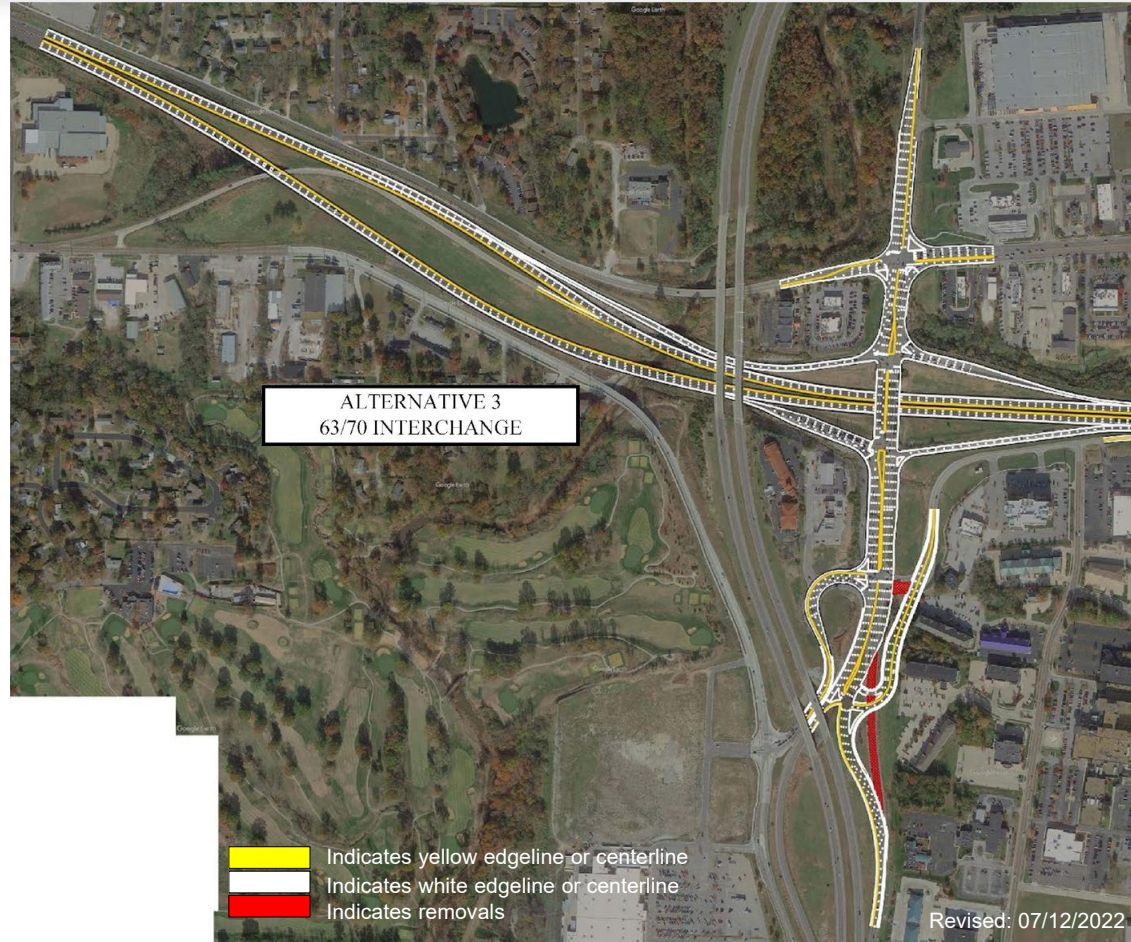
- Improvements at the Connector and I-70 pavement improvements east of Stadium to the Connector are included on the STIP
- Provides:
 - Diverging Diamond Interchange
 - NB US63 to WB I70 loop ramp
 - EB I70 to SB US 63 flyover ramp
 - Additional intersection at Conley & US63
 - Improvements at Clark Lane & US63, makes Clark Lane primary movement
 - Improvements at Bus. Loop & Conley
- Approximately 6,440 ADT will use the NB US63 to WB I70 loop ramp; Approximately 5,440 ADT will use the EB I70 to SB US 63 flyover ramp
- NB US 63 to WB I70 & EB I70 to SB US 63 ramps would result in a 17% reduction of all traffic through the connector interchange in No-Build Conditions



I-70/US 63 Connector Reasonable Alternative 3

Notes:

- Improvements at the Connector and I-70 pavement improvements east of Stadium to the Connector are included on the STIP
- Provides:
 - Existing lefthand exit to Business Loop 70 remains in place (bridge will need to be replaced)
 - Additional through and turn lanes at the I-70 interchange with the Connector
 - Additional through and turn lanes at the Clark Lane intersection
 - Conley Road intersection is split into two separate T-intersections which allows for simpler signal phasing and additional capacity along the Connector



St. Charles/Lake of the Woods

Issues identified by study team

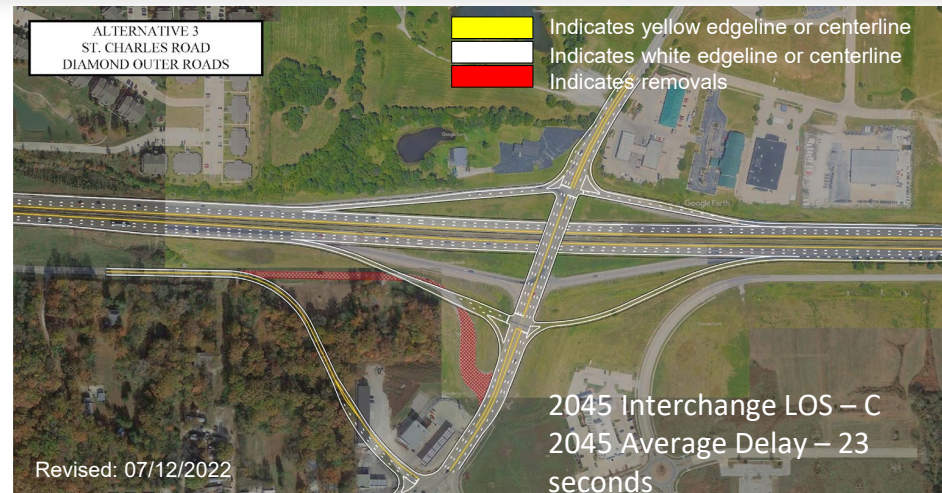
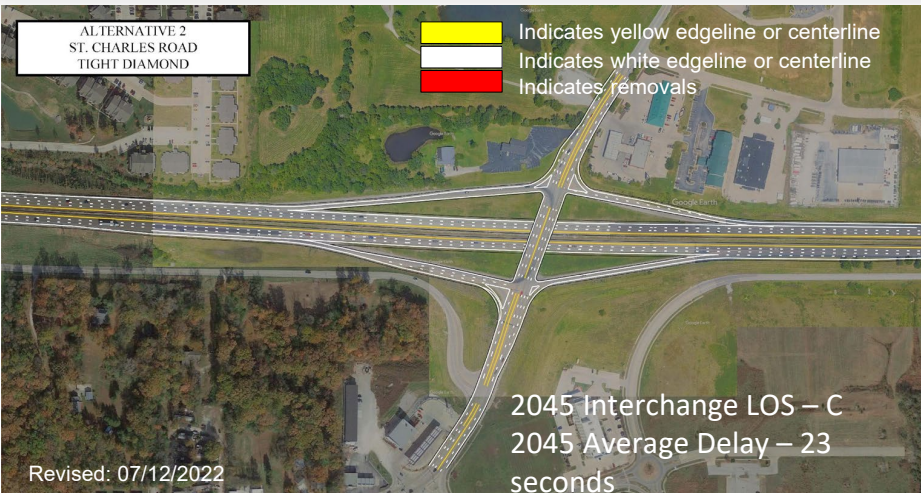
- Heavy traffic flows to/from the west
- High growth area expected
- Future operation issues at interchange without improvements
- Closely spaced outer road in southwest side

Issues identified by CAG

- Outer road has turns that are too tight for truck traffic
- Traffic volumes will continue to increase around this intersection
- A back-age road to the north could help concerns on the frontage road
- Concern if 3 lanes on I-70 will fit under this overpass as it was recently constructed



St. Charles/Lake of the Woods Reasonable Alternatives



Notes:

- Alternative 2 widens the bridge over I-70 to 6 lanes, the outer roads remain in their existing location
- Alternative 3 widens the bridge over I-70 to 6 lanes, the south outer road is realigned further to the south which allows the EB ramps to be shifted south providing better spacing for the signals at the ramp terminal intersections
- 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



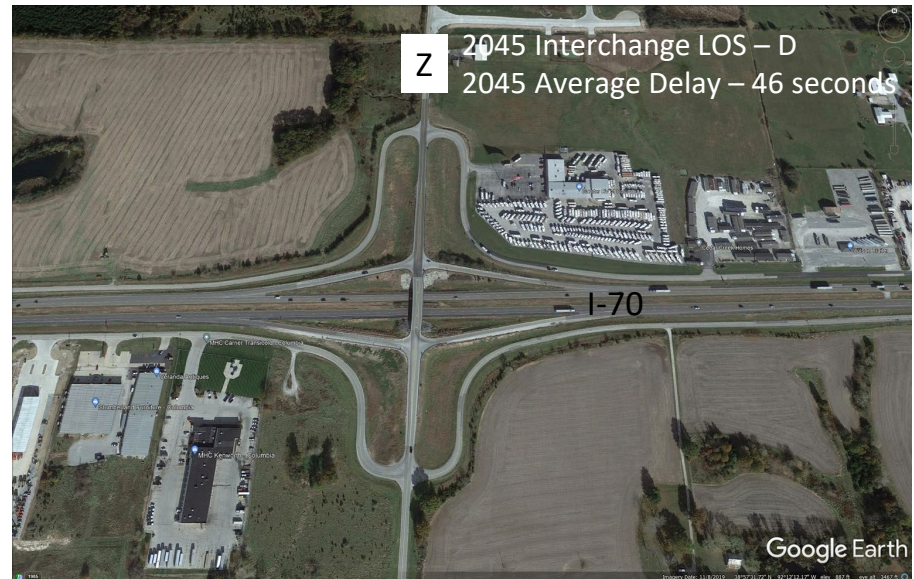
Route Z

Issues identified by study team

- Outer road separation is adequate
- Bridge over I-70 built in 2013

Issues identified by CAG

- Outer road curves are too tight for truck traffic
- Traffic volumes will continue to increase around this intersection
- A back-age road to the north could help concerns on the frontage road
- Concern if 3 lanes on I-70 will fit under this overpass as it was recently constructed



Route Z Reasonable Alternatives

Notes:

- The existing diamond interchange remains in place with minor improvements to the ramps to lengthen the merge/diverge distances and tie into the widened mainline
- 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



Next Steps



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
- August/September 2022 – CAG #3 & PIM #2 – Preferred Alternative
- Fall 2022 – Prepare Re-evaluation Document
- Late 2022 – Anticipated Re-evaluation Document Approval
- 2023 – Begin Design-Build Procurement

