

# WELCOME TO PUBLIC INPUT MEETING #2



## Visit the Project Website

[www.dot.nd.gov/midway-grantmarsh](http://www.dot.nd.gov/midway-grantmarsh)

Stay **up-to-date** on meetings, next steps, and opportunities to comment. Materials from this public input meeting will be available to view on the project website following the meeting.



## Leave a Comment

Share **feedback** via written comments on the forms provided at the meeting or via email. Comments will be collected until **December 22**.



## Attend a Future Meeting

Plan to join us at a future public input meeting. We will advertise online and throughout the community for the next public input meeting tentatively planned for **Late 2024**.



## Contact Us

We'd love to stay in touch with you and hear your feedback throughout the project.

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# I-94 MIDWAY GRANT MARSH BRIDGE ENGINEERING AND FEASIBILITY STUDY

## Thursday, December 7

## 5:30PM - 7:30PM

## Presentation at 6:00PM



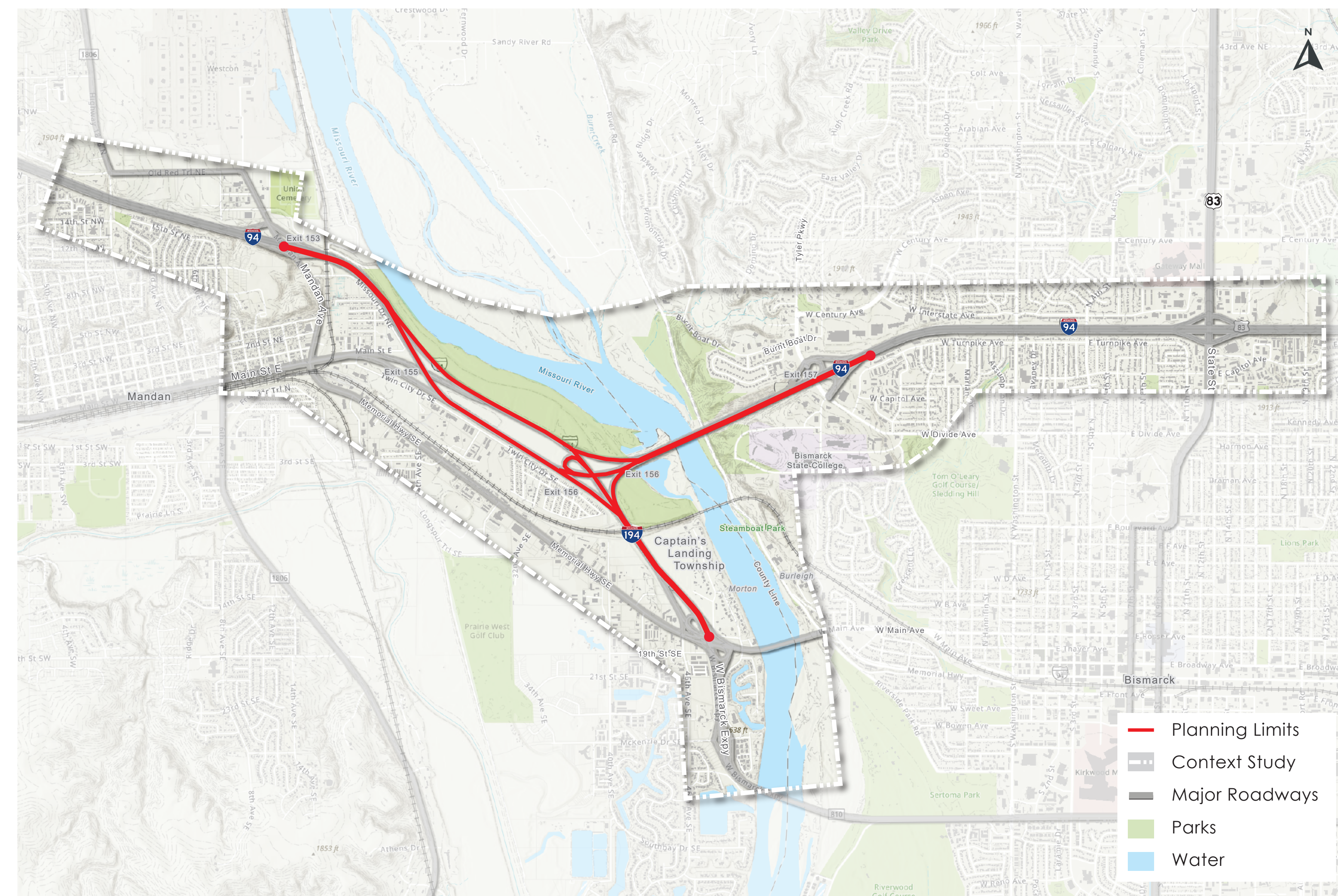
# PROJECT BACKGROUND

## About the Project

The Midway Interchange area and Grant Marsh Bridge connect I-94, I-194, and Bismarck and Mandan. The existing bridge and interchanges were constructed with the surrounding Interstate system, which has not experienced major improvements since it was originally built in 1965.

The bridge is reaching the end of its useful life and will need replacement in the future. This provides an opportunity to consider operational improvements for the I-94 and I-194 roadways and ramps. These Interstate improvements would work jointly with replacement alternatives for the Grant Marsh Bridge.

This Study will provide project-level analyses and early decisions that follow Federal Highway Administration (FHWA) guidance under the Planning and Environment Linkages (PEL) initiative. More information on PEL studies can be found on the 'What is a PEL Study?' board.



## Study Purpose

The purpose of this study is to determine alternatives that improve traffic operations, increase capacity, reduce driver confusion, and maintain a uniform freeway system.

By following the PEL Study process, transportation planning is connected with environmental community concerns. The next step of the feasibility study is to incorporate the project into the federal environmental review process.



## Project Location

The project is located along I-94 from Exit 153 in Mandan to Exit 157 in Bismarck and I-194 to Memorial Highway. This area encompasses the Midway interchange system and Grant Marsh Bridge. It is the main area being analyzed for traffic operations. This study will develop alternatives for this area.

## Study Area

The study area encompasses the project location and various ramps and segments of the surrounding roadways. The purpose of studying this larger area is to understand how different alternatives within the project location will impact the greater roadway network.



# WHAT WE HAVE HEARD

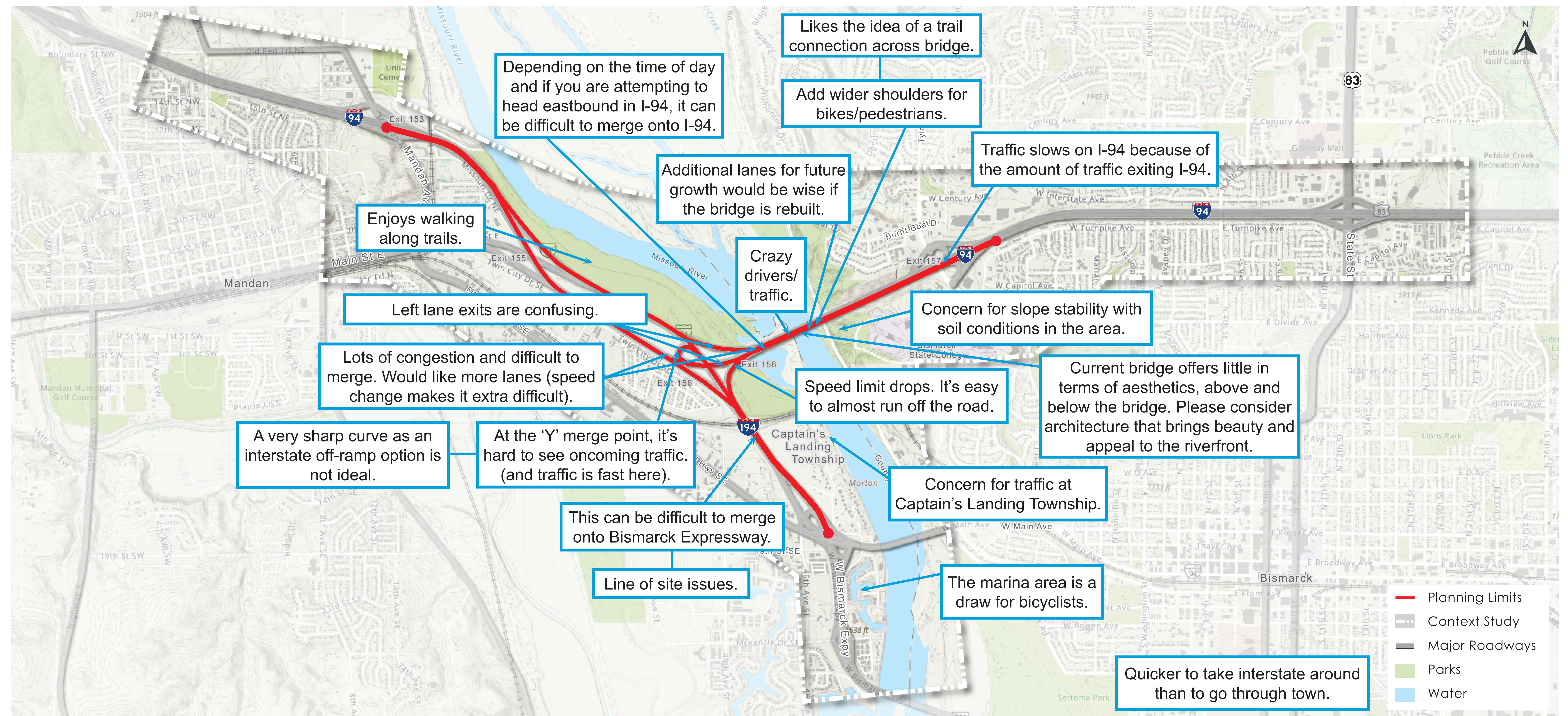
## Who Are We Hearing From?

To understand the interests, goals, issues, future visions, and desired outcomes surrounding this project, NDDOT and Stantec have met with the public, regulatory agencies, and local agencies including cities, counties, the Metropolitan Planning Organization (MPO), parks and recreation agencies, transit agencies, and township.

## Recent Input Opportunities

- Public Input Meeting held at Huckleberry House on June 5, 2023
- Interactive virtual map on the project website from June 5 to June 20, 2023
- Pop-up event held at Bismarck Aquatic Center on June 6, 2023
- Pop-up event held at Mandan 4th of July parade on July 4, 2023

## Frequent Comments Heard





# PROJECT PURPOSE & NEED

## What is a “Purpose and Need”?

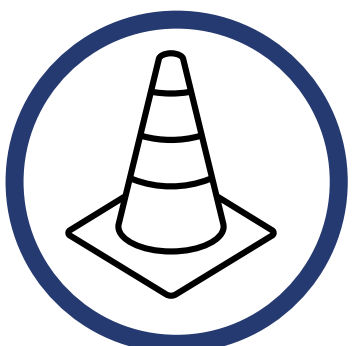
- 1 Provides project **justification** for expending public funds.
- 2 Acts as a basis for **decision-making**.
- 3 Key factor in determining the **Range of Alternatives** and **subsequent alternative development and eliminations**.

## Project Purpose

The primary purpose “drives” the project by providing fundamental goals as to why the project is justified. The purpose for this project is to:

- ✓ Provide a long-term interstate highway across the Missouri River which meets current design standards.
- ✓ Reduce potential for crashes by providing conforming designs that better meet driver expectations.
- ✓ Maintain interstate mobility and reliability, while extending the congestion free operating lifespan.

## Other Desired Outcomes

 **Minimize Construction Disruption**

Seek to minimize construction duration and disruption to the local community.

 **Multimodal Accommodations**

There are no local bicycle/ pedestrian connections between Mandan and Bismarck in the immediate vicinity.

## Project Needs

 **Structural Deficiencies**

Need to consider a bridge replacement alternative before unsafe deterioration occurs.

 **Future Traffic Capacity Issues**

Interchanges and segments of I-94 and I-194 are projected to fail in design year 2050.

 **Geometric Deficiencies**

Update the highway design and layouts to better-meet modern driver expectations.

 **Safety**

Reduce the number and severity of crashes in the project area.





# WHAT IS A PEL STUDY?

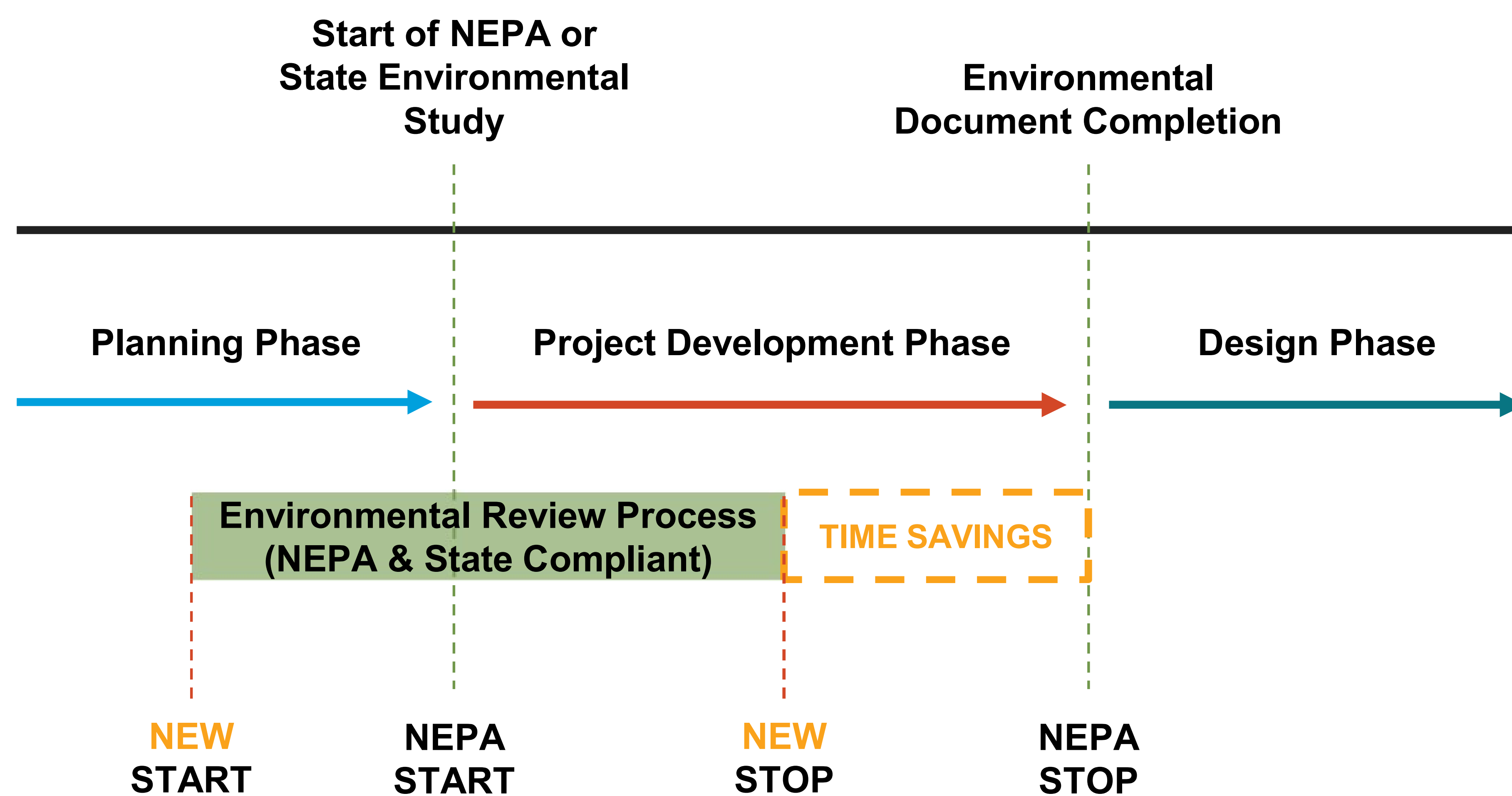


Planning and Environment Linkages (PEL) is a Federal Highway Administration process initiative which bridges the gap between long range/comprehensive planning and project level planning. Products developed during the planning phase, such as traffic studies and alternative development, can be used in the following Environmental Review Process conducted under the National Environmental Policy Act (NEPA).

## Accelerates Project Delivery

The PEL approach accelerates project delivery by shifting advanced work for the Environmental Review Process into the Planning Phase.

The early completion of key tasks shortens the duration of the actual Project Development Phase, allowing the Design Phase to start sooner.



The North Dakota Department of Transportation intends to adopt or incorporate Planning Products from this Study into the federal environmental review process, pursuant to Title 23 U.S.C. § 168(d)(4).

## PEL Benefits



Accelerated project delivery



Consistency with federal and state laws and regulations



Better informed project selection to the State Transportation Improvement Program (STIP)



Enhanced DOT coordination with Local Governments



Early identification of local Stakeholders



Engaging non-transportation agencies in the decision-making process



Fostering relationships between NDDOT and the Public



Creating better, more responsive outcomes for the entire community

\* NEPA stands for National Environmental Policy Act that requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.



# ENVIRONMENTAL CONSIDERATIONS





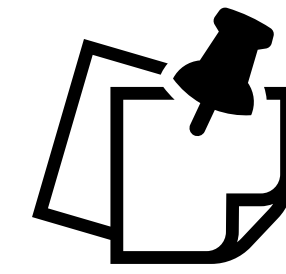
# RANGE OF ALTERNATIVES

## What is a “Range of Alternatives”?

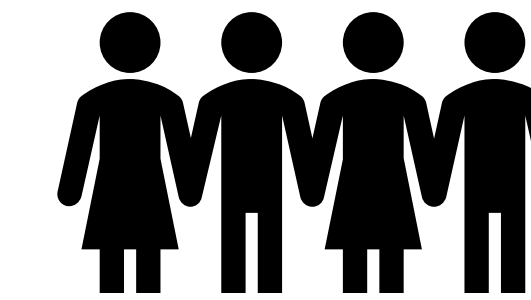
An array of “high-level” alternatives which are viewed as potentially feasible. Typically starts a progressive alternative development and screening process.

Pursuant to 23 USC §139 (f)(4)(B) and other federal provisions, seven high-level alternatives were identified for this project.

## Interact with the Project’s Alternatives



Place a post-it note with your thoughts on any of the high-level alternatives listed below.



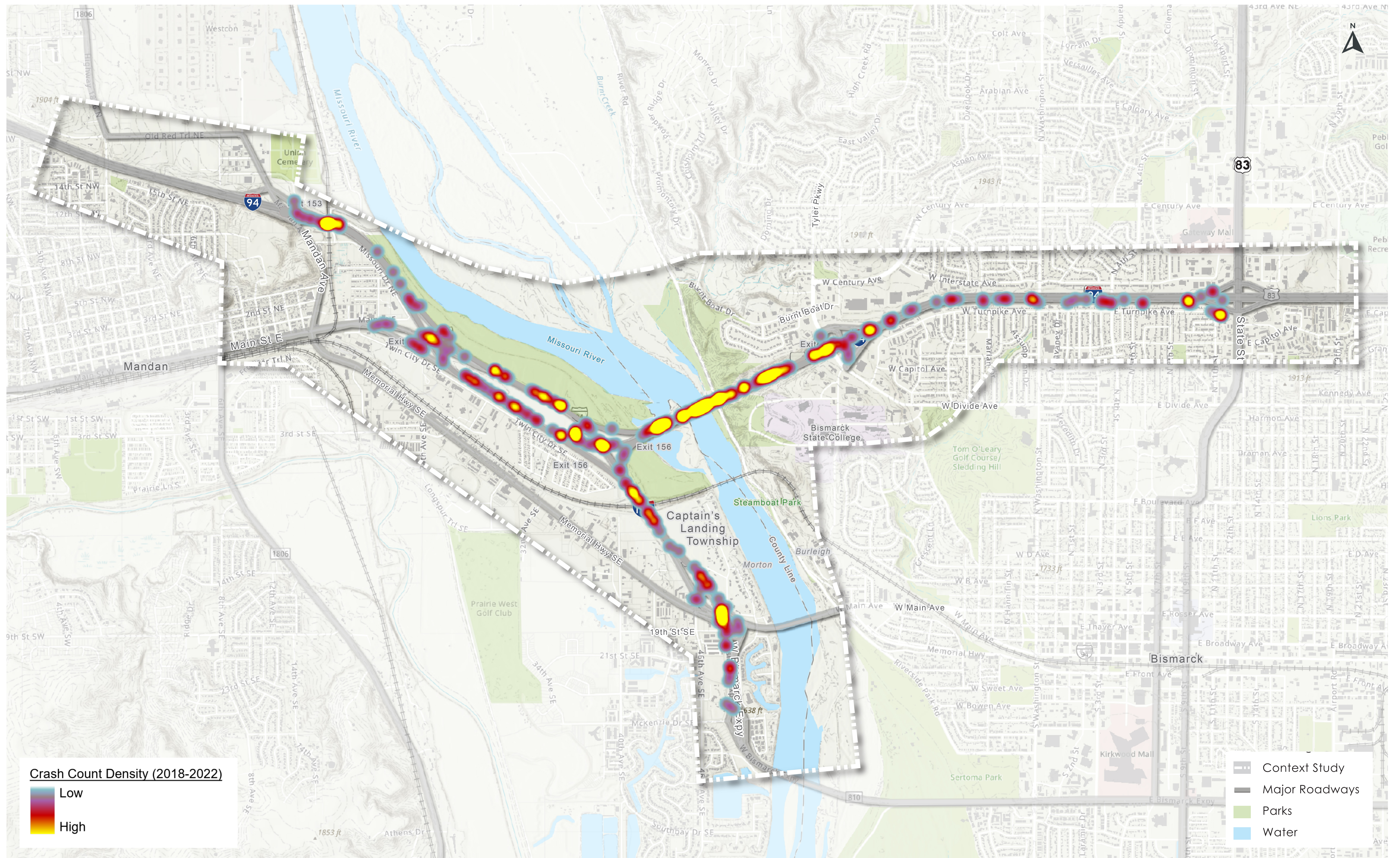
NO BUILD	NO ACTION	TDM	TSM	MASS TRANSIT	IMPROVE EXISTING	AVOIDANCE CONCEPTS
<ul style="list-style-type: none"> <li>Do nothing</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of the US Army Corps of Engineers</li> <li>Project work that does NOT impact the Missouri River or any streams or wetlands</li> <li>Cannot cause reportable discharges of dredged or fill material into Waters of the US</li> </ul>	<ul style="list-style-type: none"> <li>Transportation Demand Management (TDM)</li> <li>A broad scope of strategies typically endorsed by local governments and employers</li> <li>Ridesharing, flexible work schedules, telecommuting</li> <li>Enhance active transportation modes, such as bicycle/pedestrian facilities and e-bike commuting</li> </ul>	<ul style="list-style-type: none"> <li>Transportation System Management (TSM)</li> <li>Live information boards with alternative routing</li> <li>Controlled signals</li> <li>Physical improvements such as managed lanes, extra turn and passing lanes</li> </ul>	<ul style="list-style-type: none"> <li>High capacity people-carriers</li> <li>Bus, streetcar, rail</li> </ul>	<ul style="list-style-type: none"> <li>Reconfigurations to the I-94 Midway corridor, plus bridge replacement solutions</li> <li>Note: <b>most</b> of the project alternatives will fall into this category</li> </ul>	<ul style="list-style-type: none"> <li>Federal law (Section 4(f)/6(f)) requires NDDOT to investigate alternatives that avoid parks and other protected resources</li> <li>Reconfigurations to the north of the Midway corridor, plus north-side bridge replacement solutions</li> <li>Interstate tunnel below the Missouri River</li> </ul>

## Something Else?

Did we miss anything? Place a post-it note below the line with any additional comments..



# SAFETY ISSUES

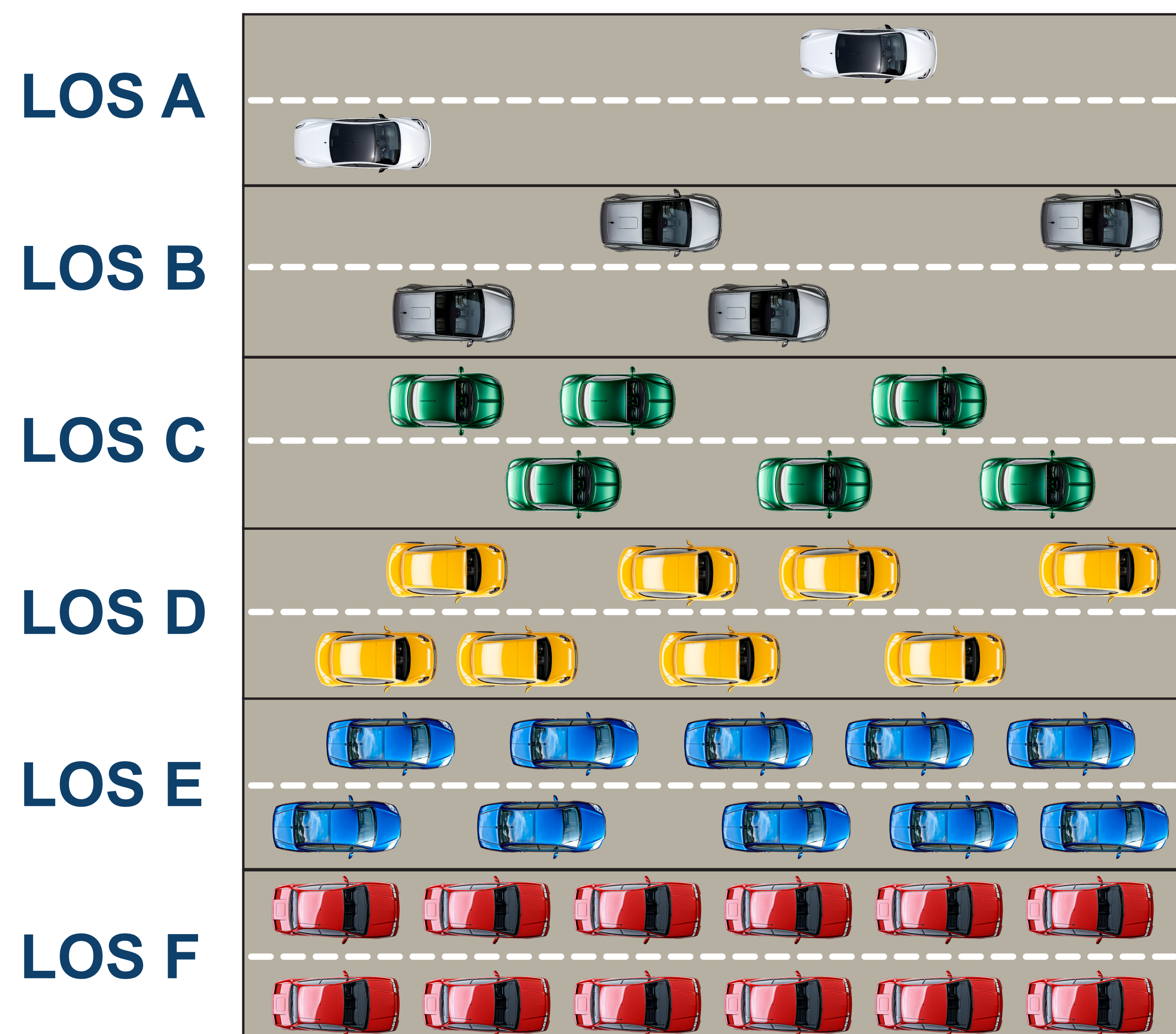




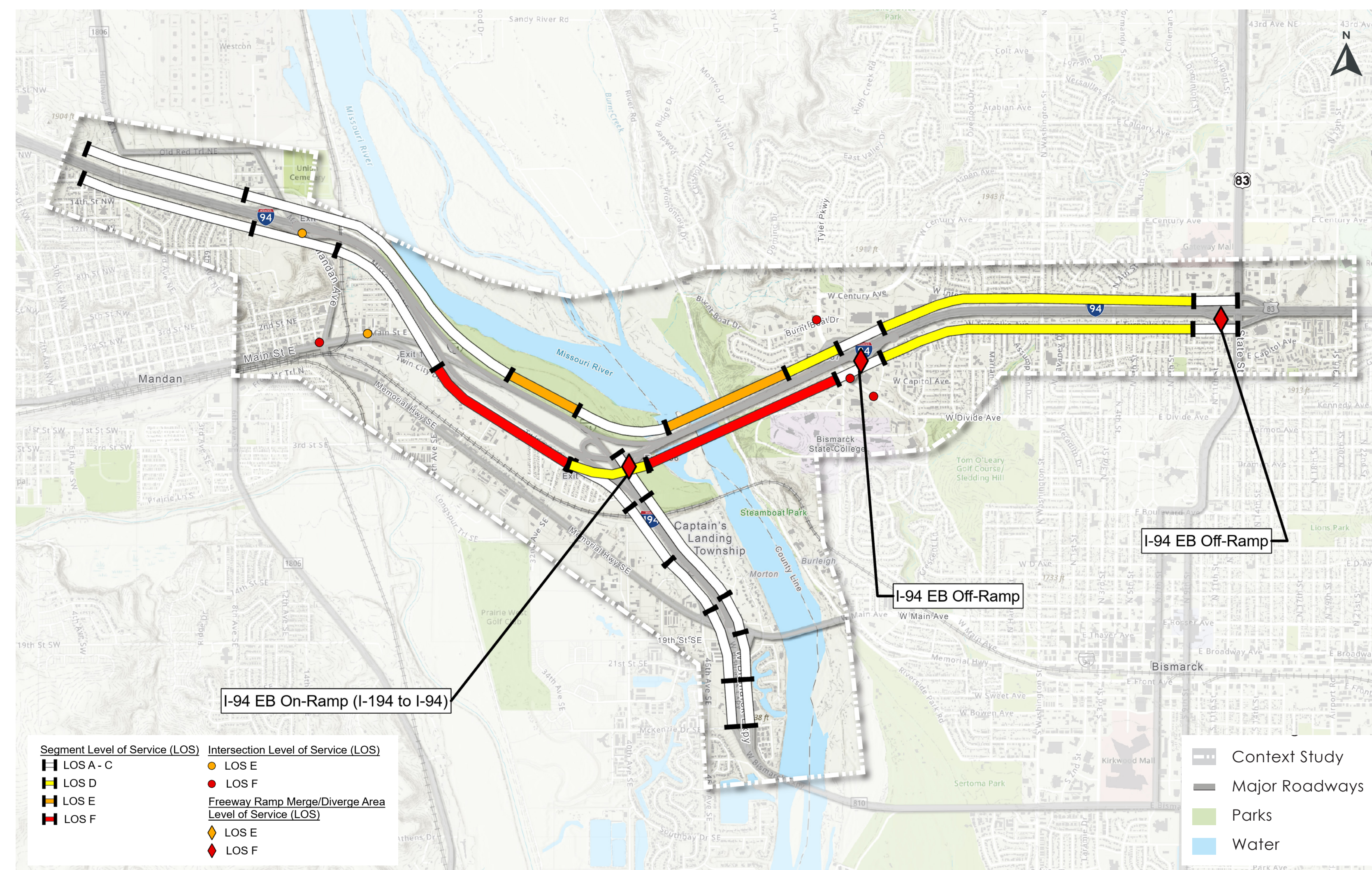
# FUTURE TRAFFIC CAPACITY

## What is LOS?

Intersection Level of Service (LOS) is a measure of traffic flow at intersections. It is dependent upon vehicle delay at the approaches. It ranges from A-F.

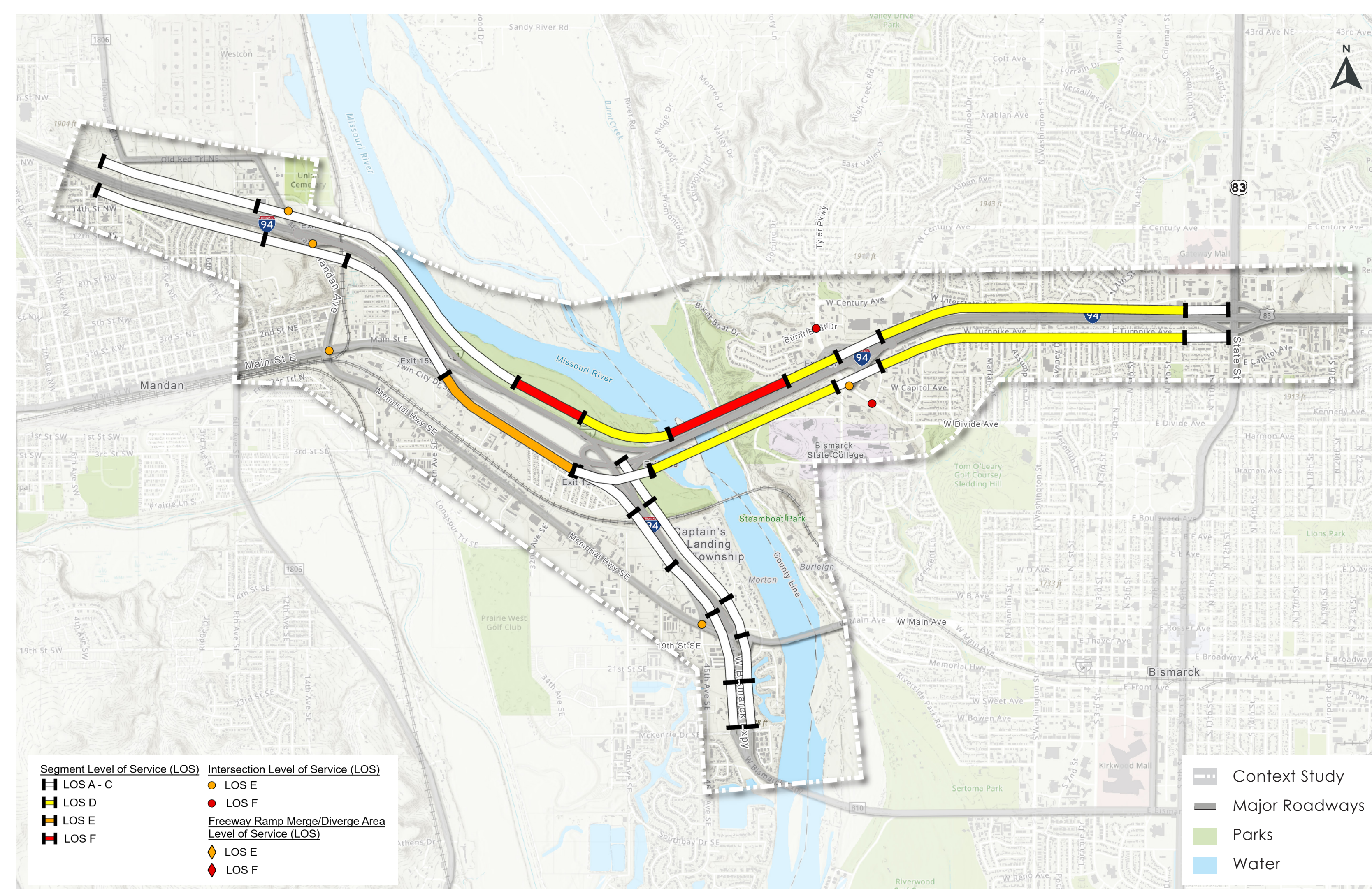


Intersection LOS	Definition
A	Minimal delays.
B	Low levels of delay and queues.
C	Intermittently vehicles wait through more than one signal indication, occasionally backups may develop, traffic flow is still stable and acceptable.
D	Delays at intersections may become extensive, but enough cycles with lower demands occur to permit periodic clearance, preventing excessive backups.
E	Traffic fills intersection capacity, long queues and delays, many vehicles need to wait through more than one green light.
F	Traffic demands exceeds capacity of intersection, very long ques and delays, most vehicles need to wait through more than one green light.



## AM Traffic

Future 2050 AM traffic volumes indicate specific segments of I-94 eastbound and its ramps deteriorate to unacceptable levels of service.

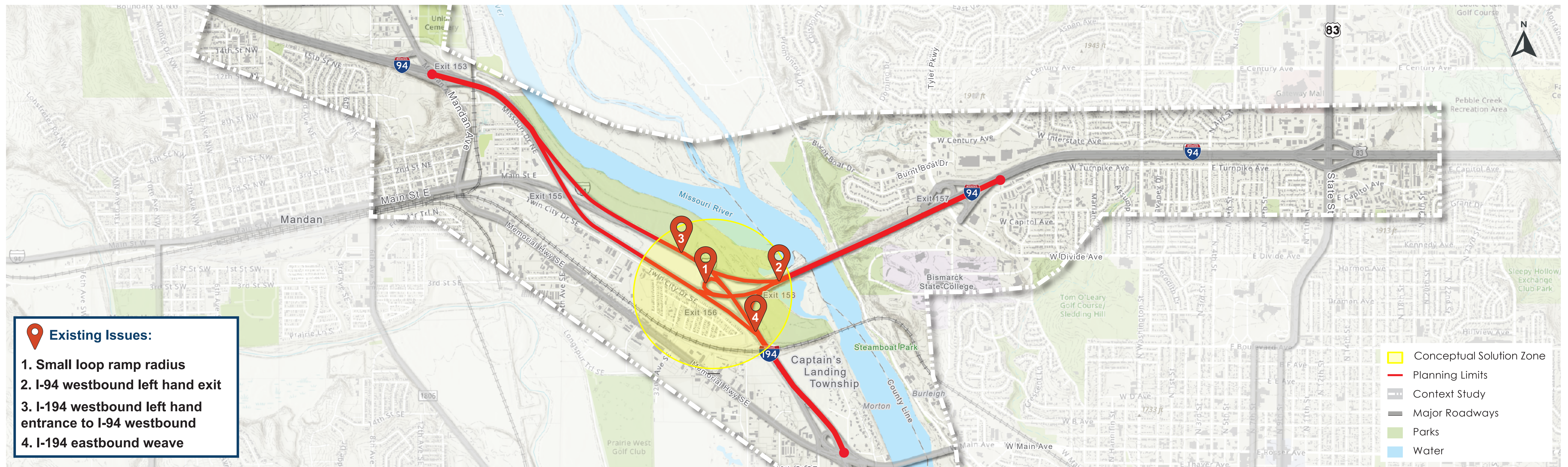


## PM Traffic

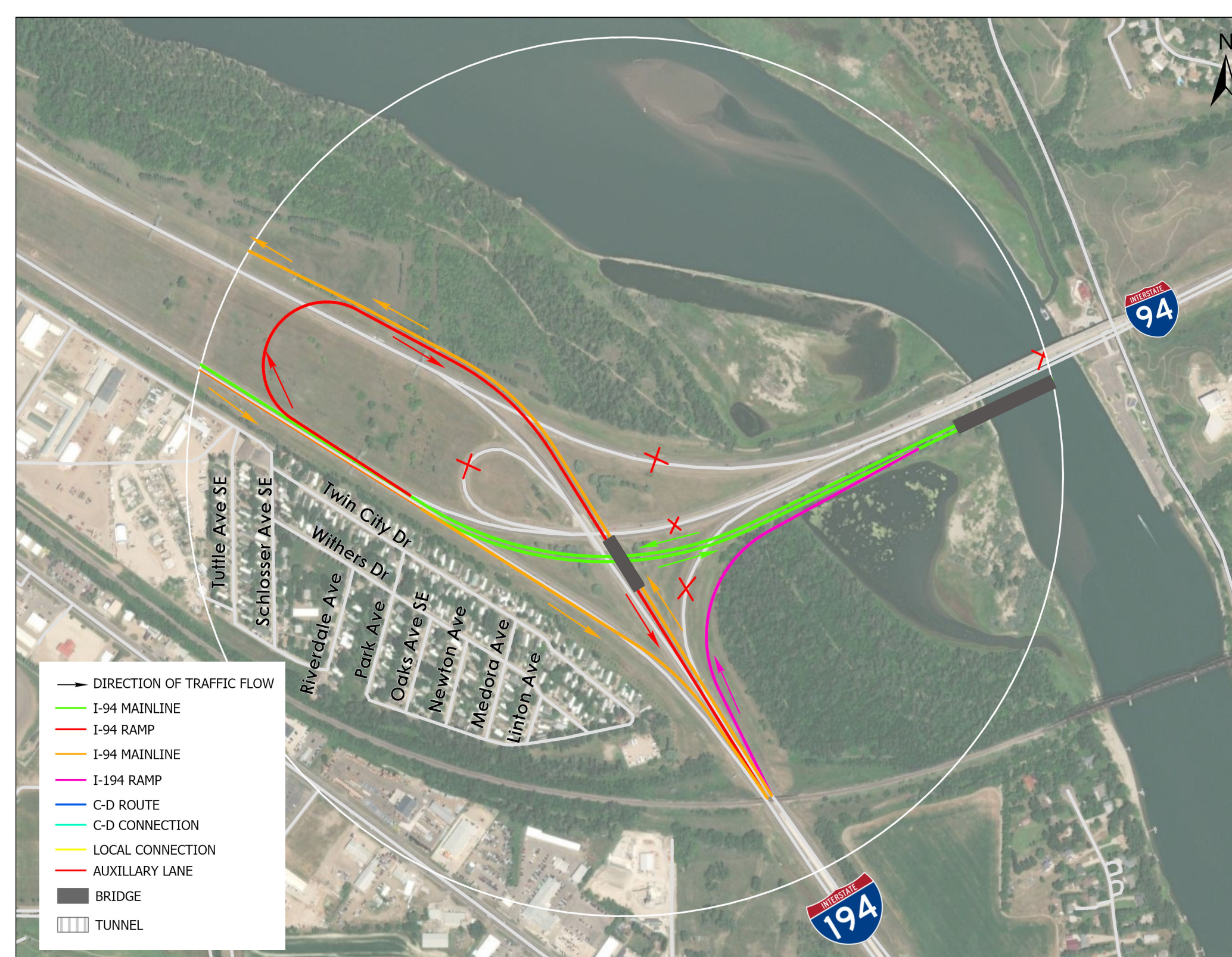
Future 2050 PM traffic volumes indicate specific segments of I-94 westbound deteriorate to unacceptable levels of service.



# CONCEPTUAL SOLUTIONS: I-194 CONNECTIONS



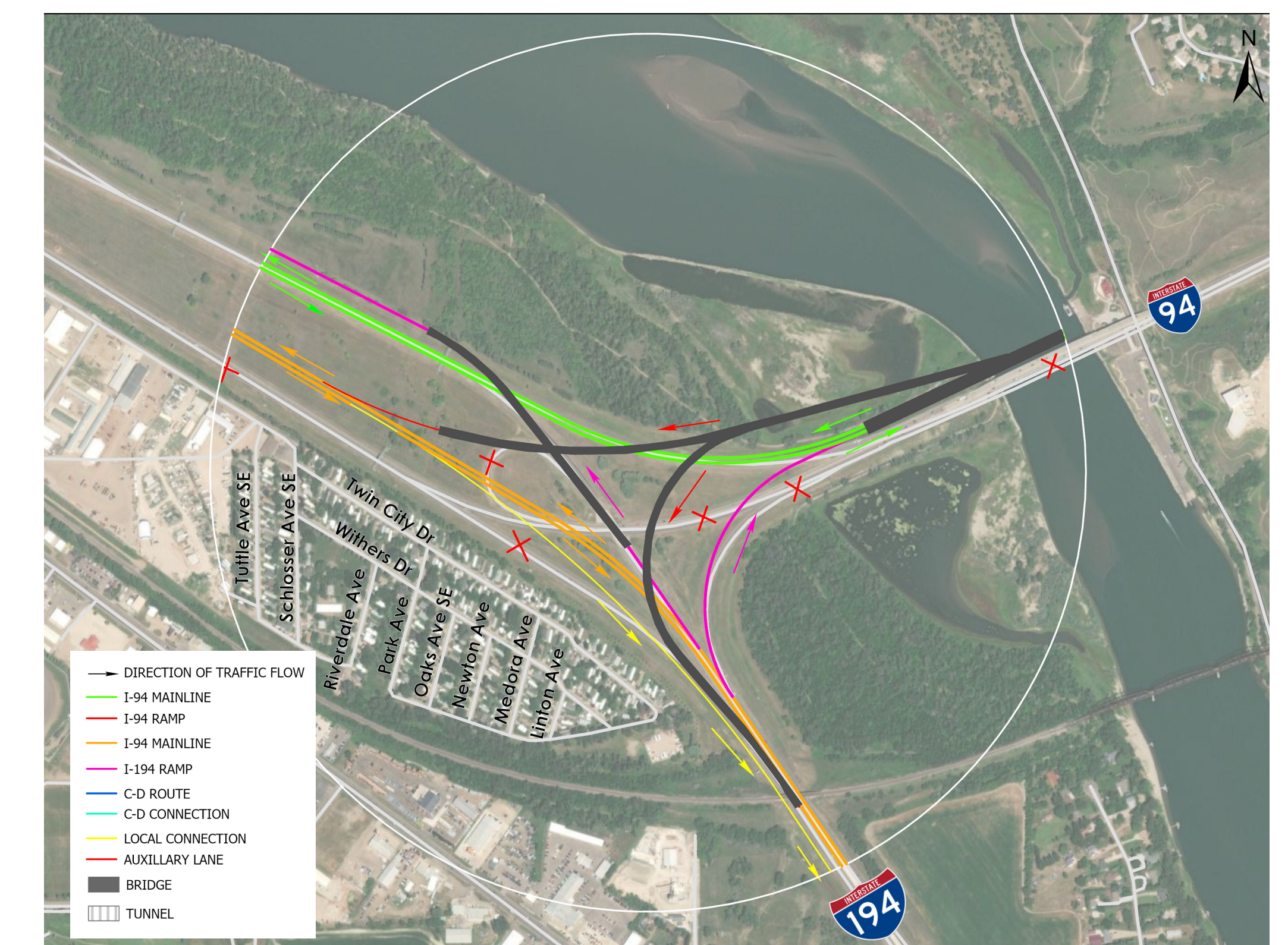
## Existing Issues Addressed



- 1. & 2. Moving westbound alongside I-94 eastbound allows space for an enlarged loop ramp with a right-side exit.
- 3. Moving westbound alongside I-94 eastbound allows I-194 westbound to connect with I-94 westbound from right side.



- 1. & 2. I-94 westbound flyover with right-side exit replaces loop ramp.
- 3. Moving westbound alongside I-94 eastbound allows I-194 westbound to connect with I-94 westbound from right side.
- 4. With a I-94 westbound flyover, Memorial Highway and I-194 connections could be grade separated. The flyover ramp from I-94 westbound to Memorial Highway and I-194 eastbound would drop in between the two ramps from I-94 eastbound heading to Memorial Highway and I-194 eastbound.



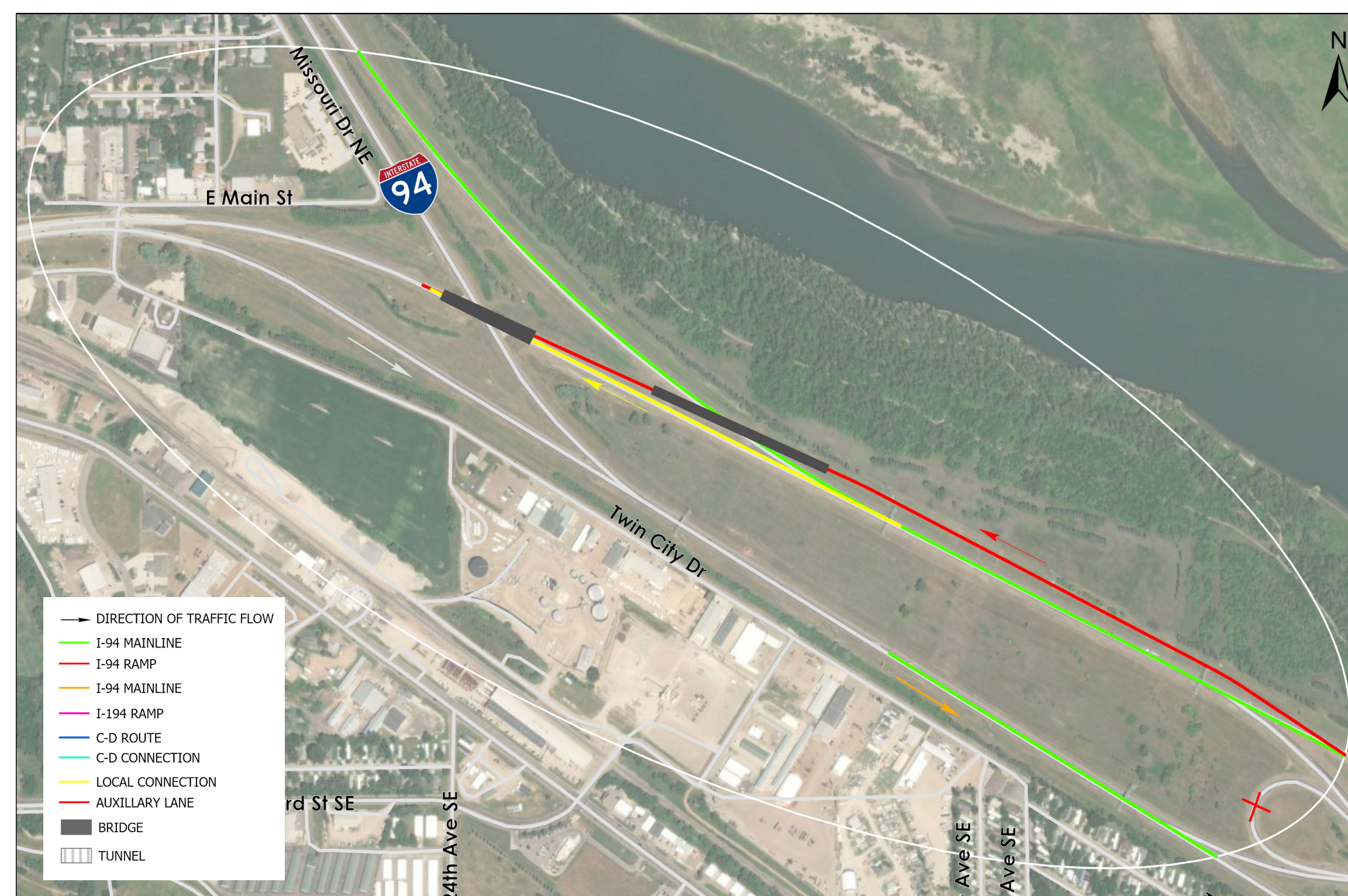
- 1. & 2. Dual exit (155/156) I-94 westbound flyover (I-194 eastbound and East Main Street).
- 3. I-194 westbound flyover I-94 allows I-194 westbound to connect with I-94 westbound from right side.
- 4. With a I-94 westbound flyover, Memorial Highway and I-194 connections could be grade separated. The flyover ramp from I-94 westbound to Memorial Highway and I-194 eastbound would drop in between the two ramps from I-94 eastbound heading to Memorial Highway and I-194 eastbound.



# CONCEPTUAL SOLUTIONS: EAST MAIN STREET CONNECTIONS

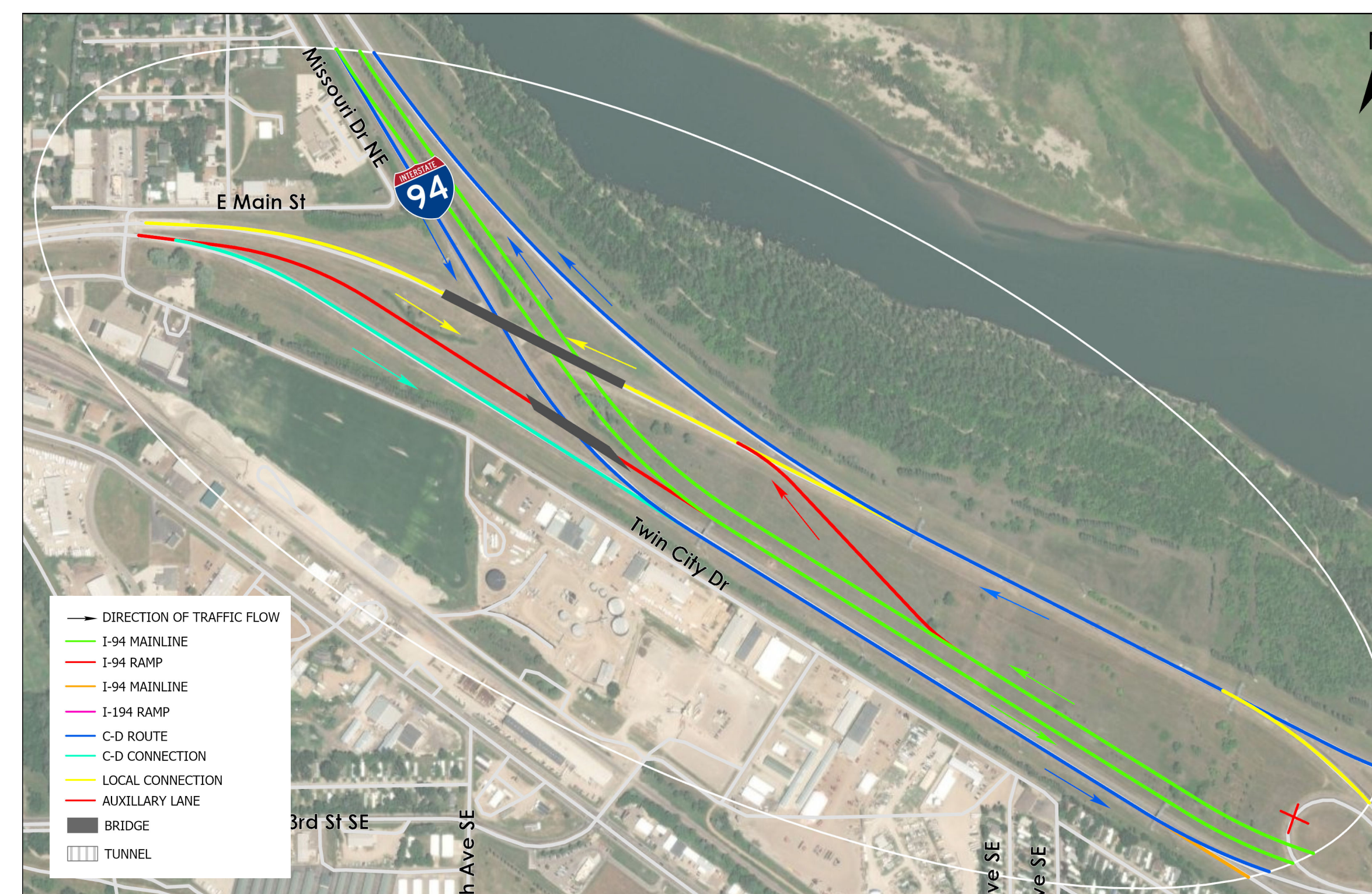


## Existing Issues Addressed



1. Addresses left exit by creating an I-94 westbound flyover to East Main Street.

2. Reduces volume in the I-94 westbound weave by eliminating the I-94 westbound traffic exiting to East Main Street.



1. Eliminates the I-94 westbound weave and left hand entrance/exit by grade separating the movements and shifting this traffic to C-D roads.

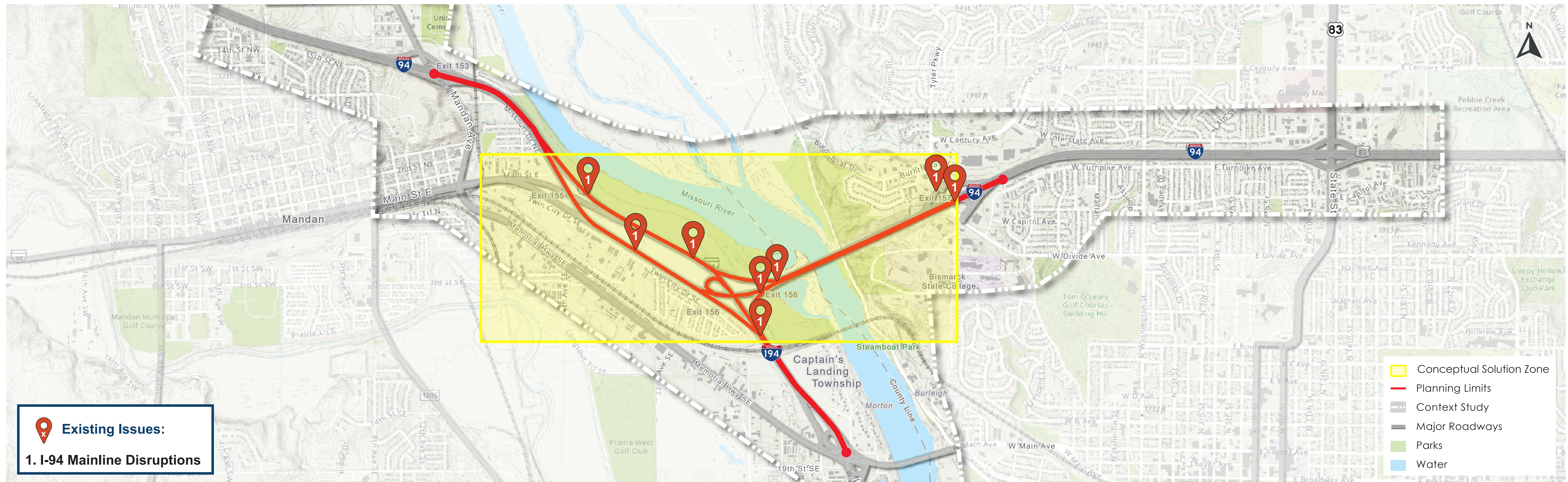
3. I-194 westbound traffic to East Main Street will split from I-194 westbound traffic heading to I-94 westbound prior to reaching the I-94 overpasses.

3. The I-94 eastbound lanes will be alongside the I-94 westbound lanes allowing the traffic separation to occur south of I-94.

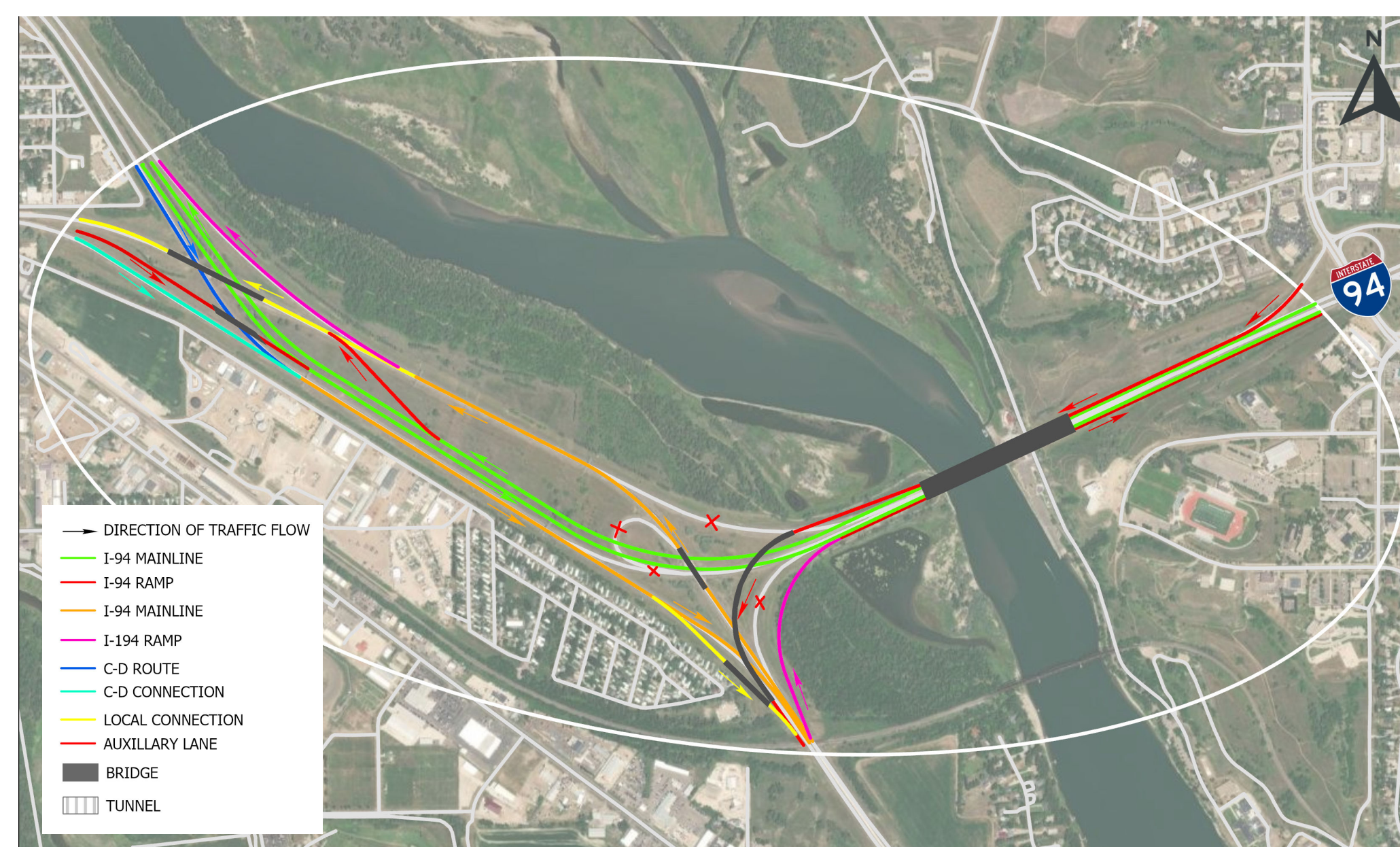
3. East Main Street eastbound traffic to I-94 and I-194 splits to two separate ramps after the last traffic signal at Twin City Drive.



# CONCEPTUAL SOLUTIONS: COLLECTOR-DISTRIBUTOR (C-D) ROADS

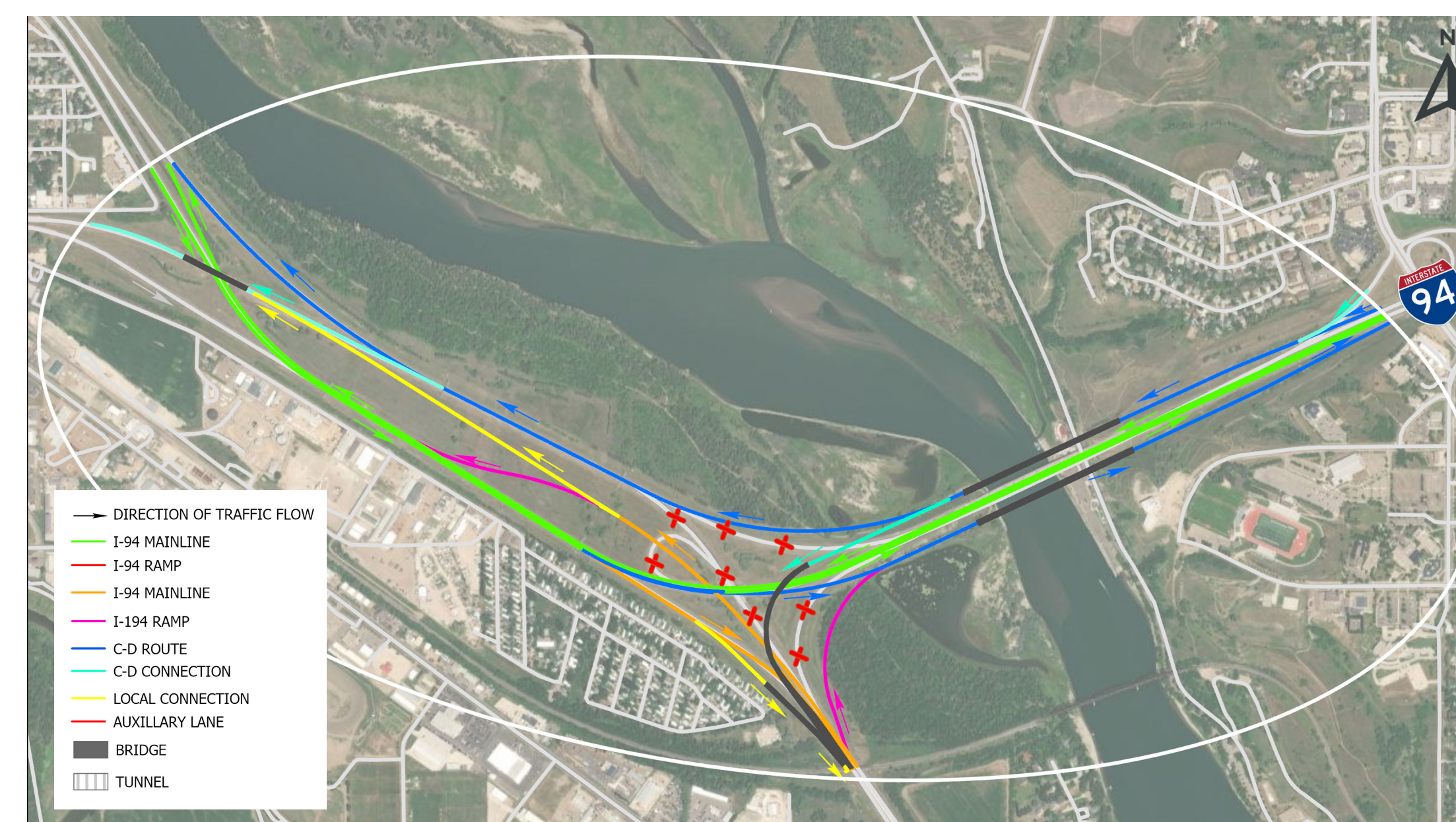


## Existing Issues Addressed



1. Addresses I-94 eastbound mainline disruption by eliminating weave movements between East Main Street and I-194.

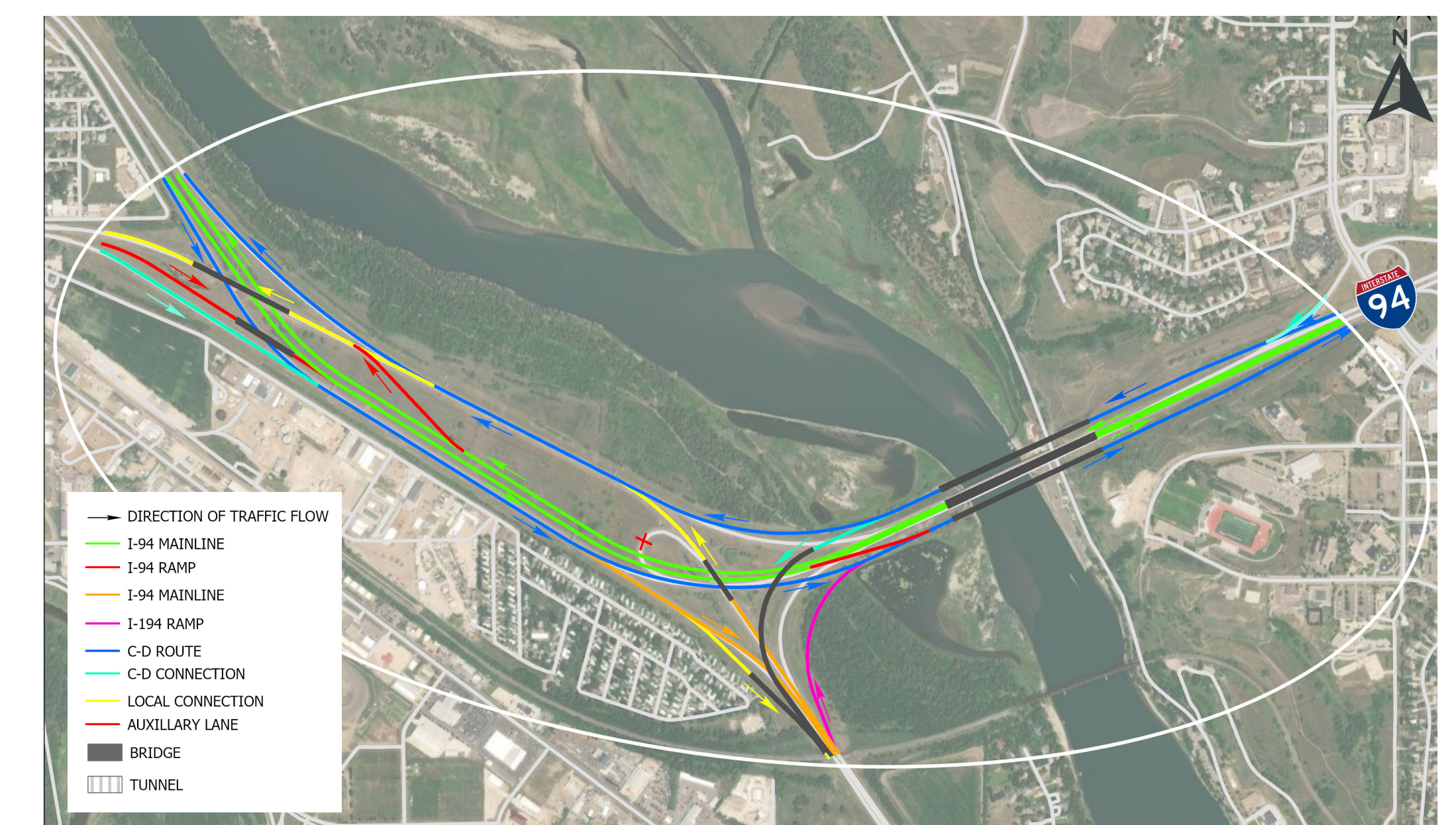
1. I-94 eastbound will access I-194 prior to East Main Street via a new C-D Roadway.



1. Addresses mainline disruption on I-94 westbound by reducing the number of exits and entrances on mainline by combining destinations.

1. I-94 westbound will access I-194 and East Main Street by using a single exit onto the C-D Roadway.

1. I-94 eastbound mainline traffic flow over the river will be improved by eliminating traffic headed to Tyler Parkway and traffic coming from I-194. These two movements will shift to a new C-D Roadway.



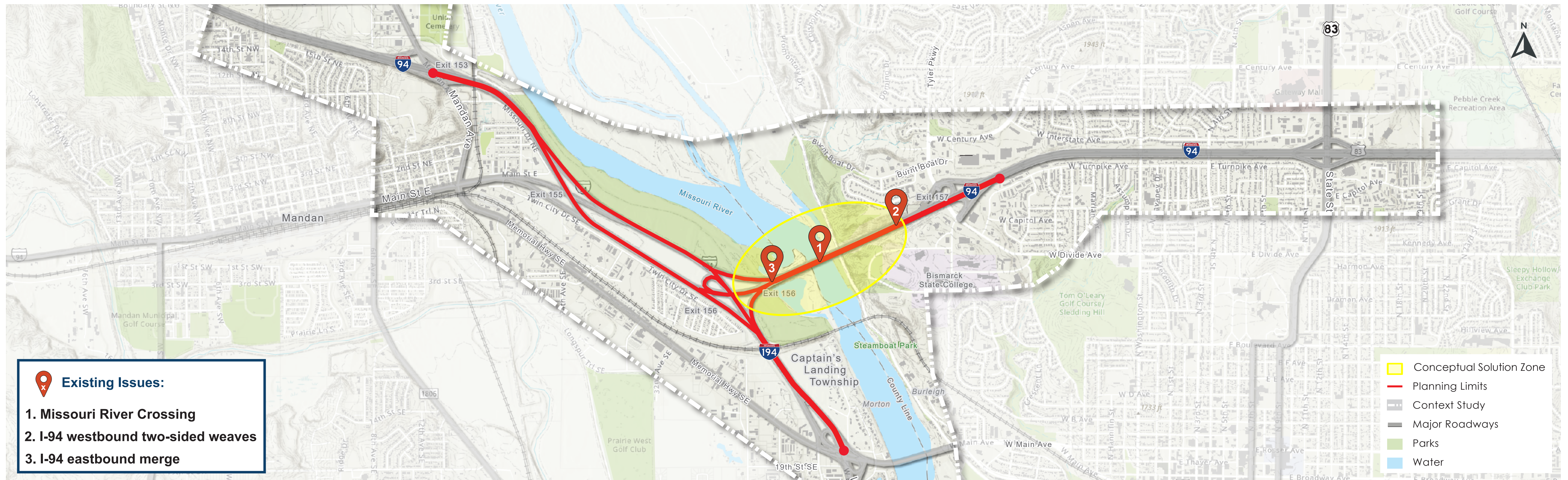
1. Addresses mainline disruption on I-94 westbound by reducing the number of exits and entrances on mainline by combining destinations.

1. I-94 westbound will access I-194 and East Main Street by using a single exit onto the C-D Roadway.

1. I-94 eastbound mainline traffic flow over the river will be improved by eliminating traffic headed to Tyler Parkway and traffic coming from I-194. These two movements will shift to a new C-D Roadway.



# CONCEPTUAL SOLUTIONS: MISSOURI RIVER CROSSING

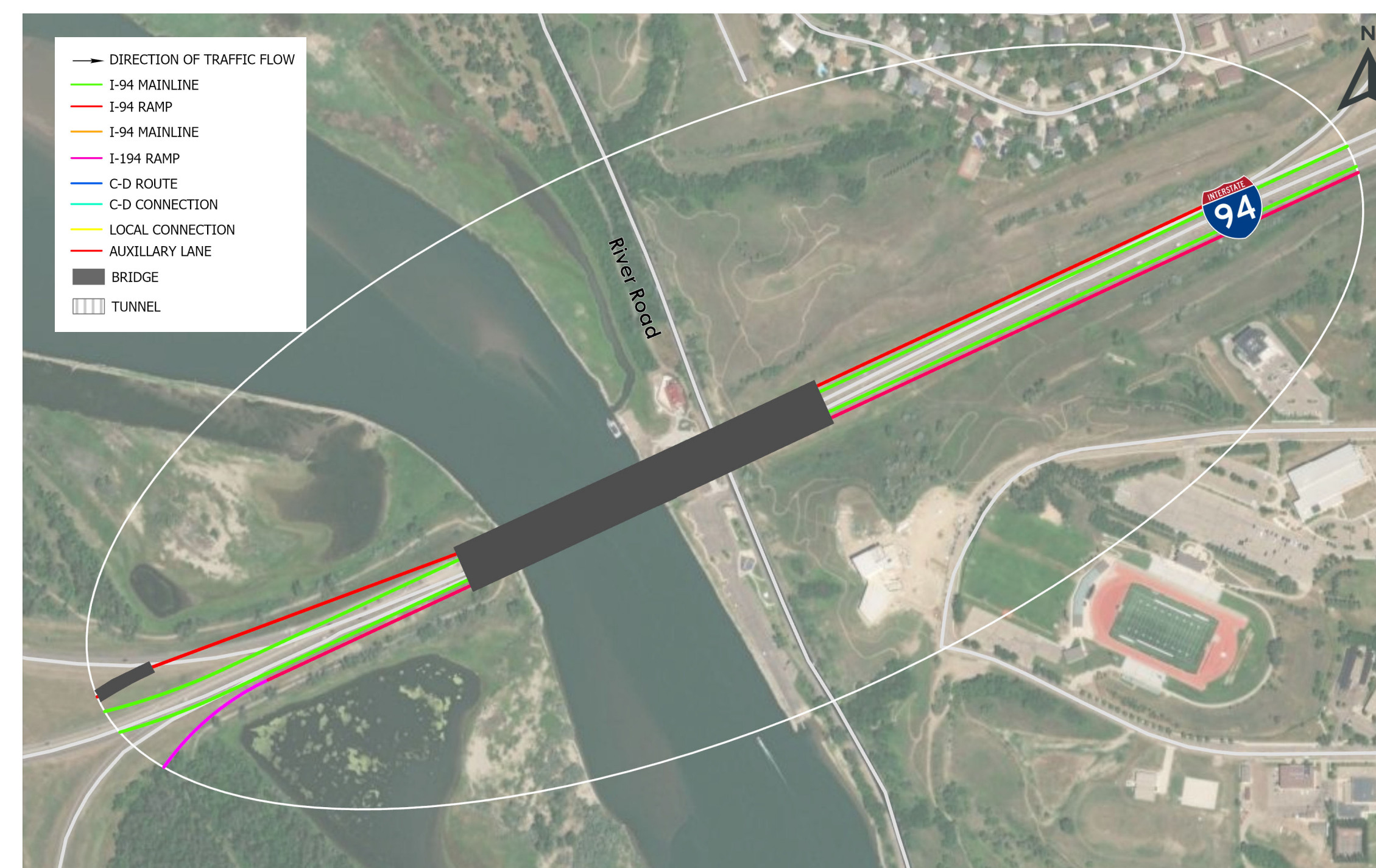


## Existing Issues Addressed



1. Relocation of existing bridge alternative with I-94 westbound flyover.

2. Addresses two-sided weave by moving the I-194 Exit ramp to the right side of the interstate.



1. Auxiliary lanes added to reconstructed bridge with I-94 westbound flyover.

2. Addresses two-sided weave by moving the I-194 exit ramp to the right side of the interstate and constructing an I-94 westbound auxiliary lane between Tyler Parkway and I-194.

3. Removes the merge onto I-94 eastbound mainline through lanes, by constructing a I-94 eastbound auxiliary lane between I-194 and Tyler Parkway.



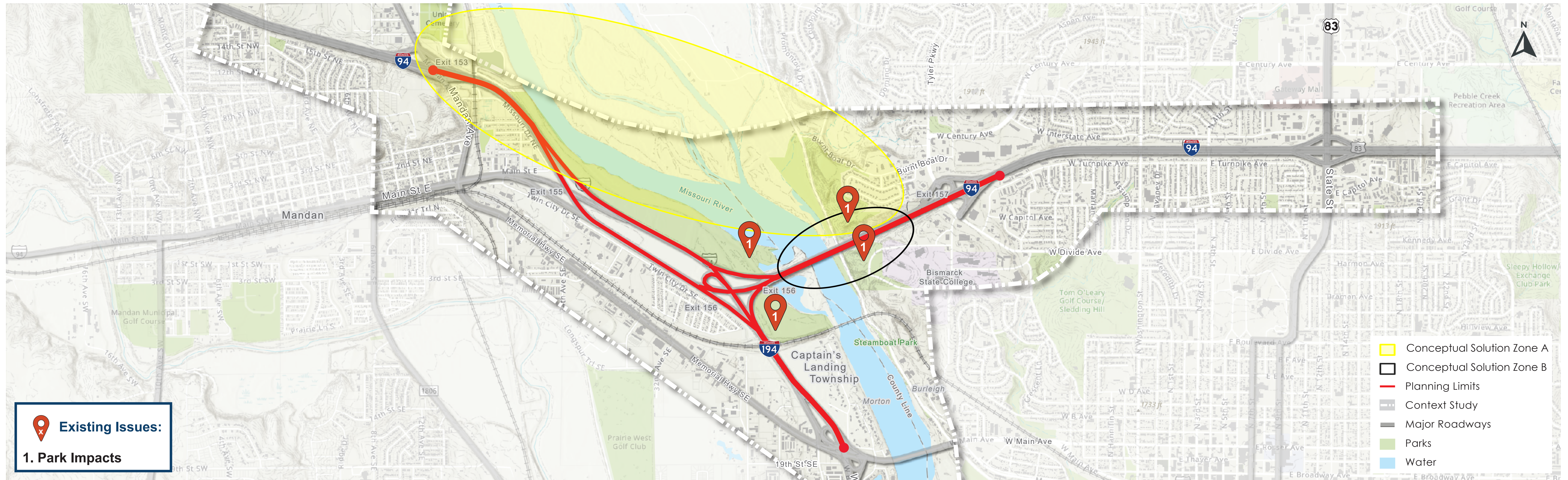
1. C-D freeway lanes and bridges over the river with I-94 westbound flyover added to reconstructed bridge.

2. Addresses two-sided weave from I-94 westbound, by moving the I-194 eastbound connection to the collector route.

3. Addresses merge onto I-94 eastbound mainline through lanes, by moving the merge to the collector route.



# CONCEPTUAL SOLUTIONS: PARKS AVOIDANCE RIVER CROSSINGS



## Existing Issues Addressed



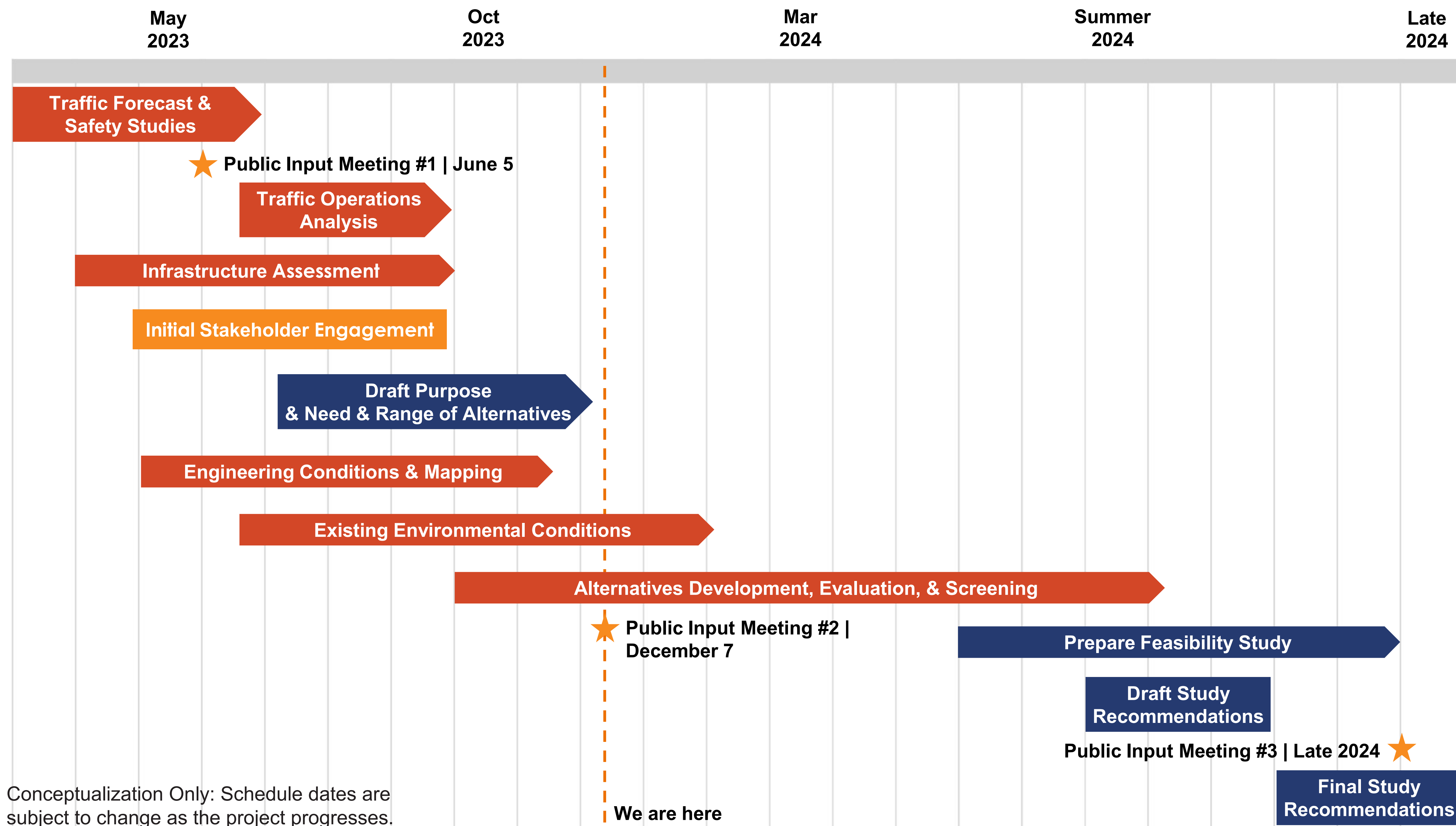
1. Eliminates park impacts by relocating corridor to the north of the parks.



1. Addresses park impacts by tunneling under the Missouri River.



# TENTATIVE SCHEDULE



## Next Steps

