

# → Study Summary



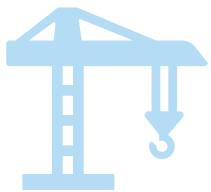
**67** miles

from US 12/18 to US 12/WIS 16 interchange



**15** existing interchanges

are being evaluated for safety and ability to accommodate existing and future traffic demand

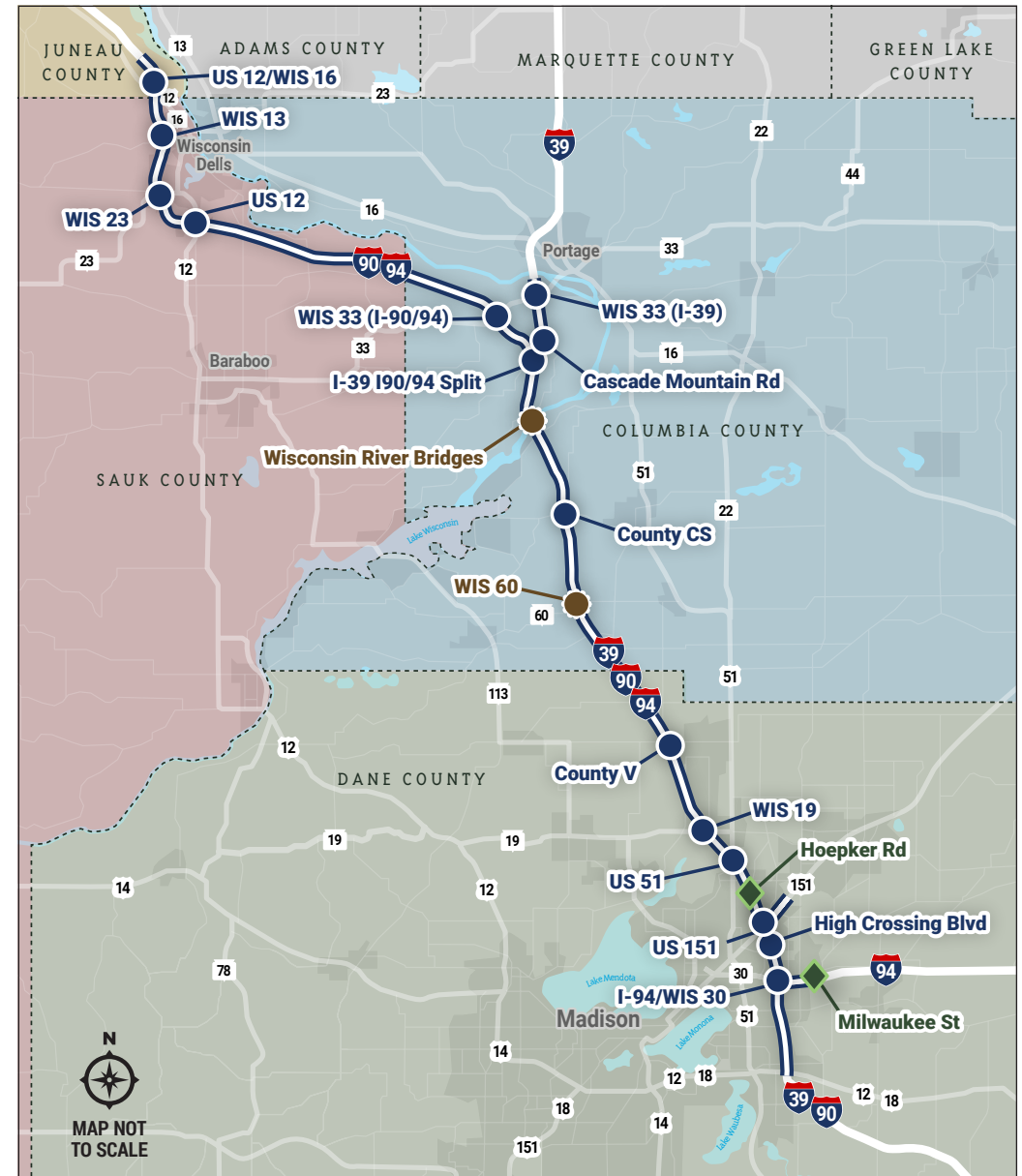


**2** potential new interchanges

are being evaluated at the request of the city of Madison

## LEGEND

	I-39/90/94 Corridor Study Limits		County Borders		Existing Interchanges		Projects not included in Study		Potential New Interchanges
	Dane County Limits		Columbia County Limits		Sauk County Limits		Juneau County Limits		



# Existing Corridor Conditions





# → Impact Summary Table - County V

County V  
No Build  
(Recommended Preferred Alternative)



County V  
Diamond



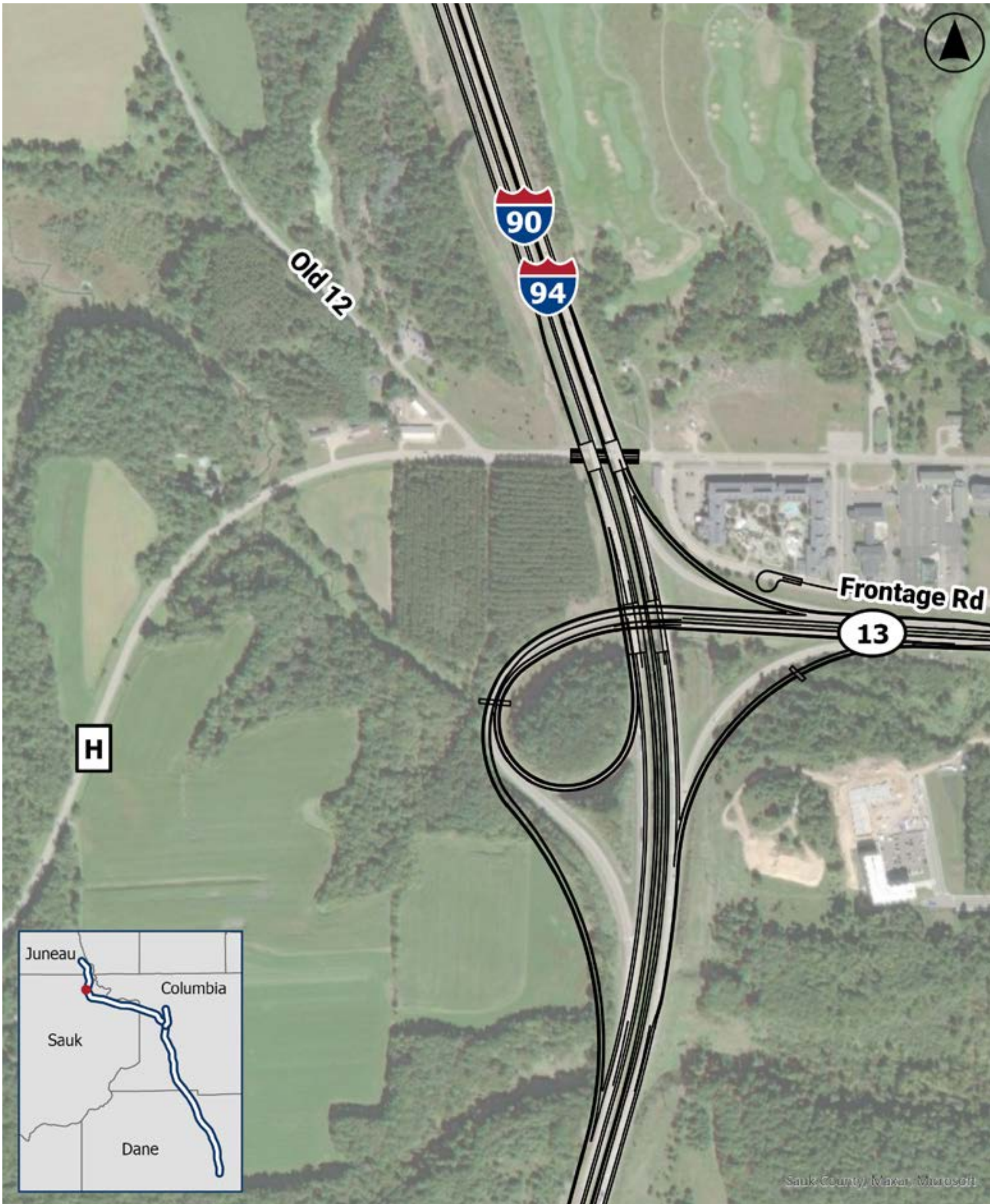
Environmental Factor	No Build (Recommended Preferred Alternative)	County V Diamond
Construction Cost Estimate (2024 Dollars In Millions)	\$7.0*	\$0.5
New Right Of Way (Acres)	0	0
Wetland (Acres)	0	1.3
Federally-Listed Threatened and Endangered Species (Yes/No)	No	Yes
State-Listed Threatened and Endangered Species (Yes/No)	No	Yes
Environmental Justice Disproportionate and Adverse Impact (Yes/No)	No	No - alternative modifies existing ramps
Noise Receptor Units Impacted (Design Year 2050)	Not applicable	0 Receptor units
Indirect Effects	No	No - replaces existing access
Cumulative Effects	No	No - replaces existing infrastructure

\* Costs to be funded through private development.

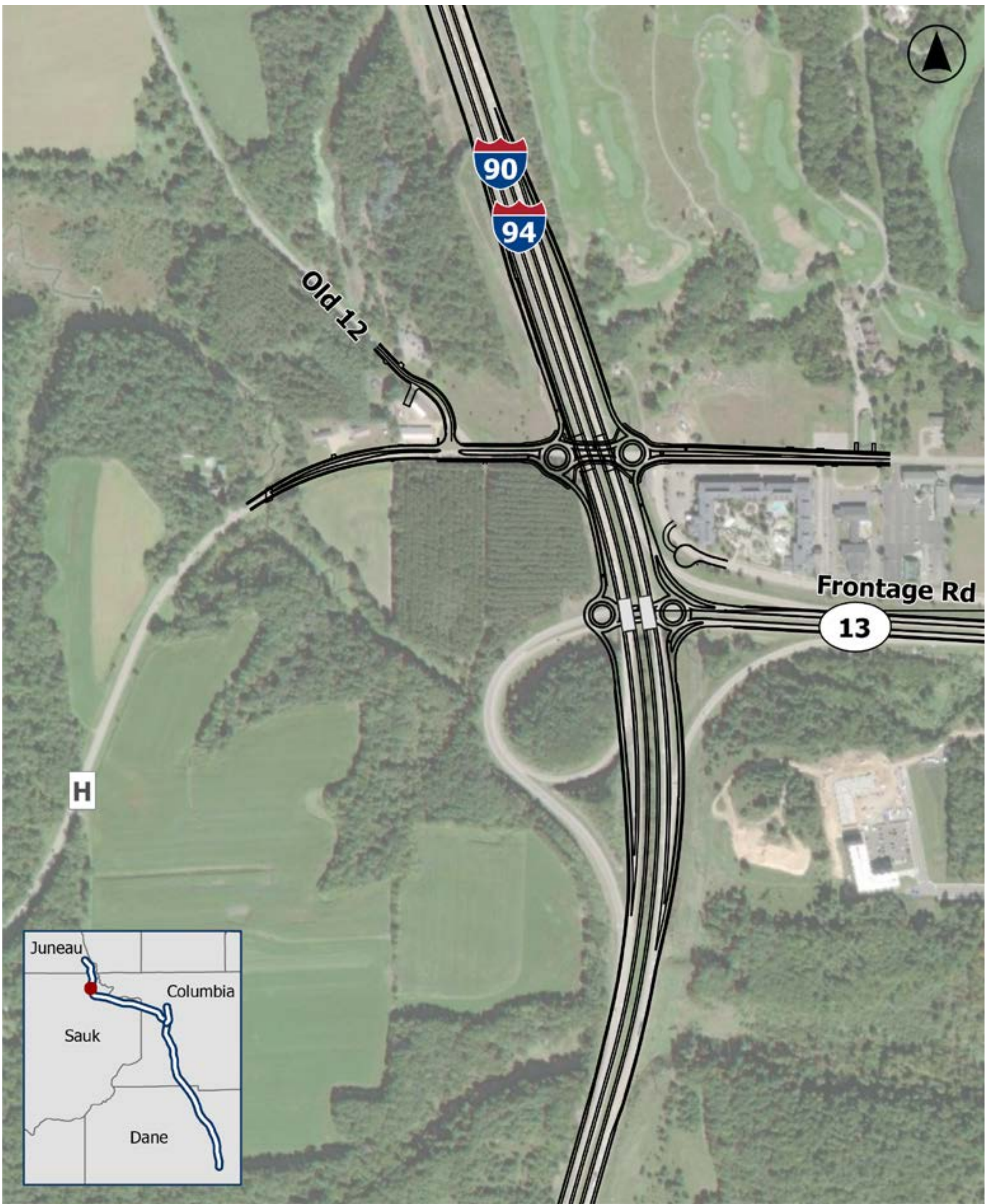


→ Impact Summary Table - WIS 13

WIS 13  
Trumpet  
(Recommended Preferred Alternative)



WIS 13  
Split Diamond



Environmental Factor	WIS 13 Trumpet (Recommended Preferred Alternative)	WIS 13 Split Diamond
Construction Cost Estimate (2024 Dollars In Millions)	\$19.2	\$26.1
New Right Of Way (Acres)	3.5	5.4
Commercial Relocations	1 Maintenance building	1 Retail business, 1 maintenance building, 1 shed
Farmland (Buildings Relocated/Acres Acquired)	15.5	1.7
100-Year Floodplain (Acres)	1.0	0.8
Wetland (Acres)	0.1	0.5
Federally-Listed Threatened and Endangered Species (Yes/No)	Yes	Yes
State-Listed Threatened and Endangered Species (Yes/No)	Yes	Yes
Environmental Justice Disproportionate and Adverse Impact (Yes/No)	No - alternative could facilitate access to employment centers	No - alternative could facilitate access to employment centers
Noise Receptor Units Impacted (Design Year 2050)	9 Receptor units	9 Receptor units
Indirect Effects	No - replaces existing access	Land use effect: local land use controls avoid and minimize potential impact of new Interstate access at County H
Cumulative Effects	Limited effect: mitigation measures minimize effects	Limited effect: mitigation measures minimize effects



# → Study Purpose, Needs and Evaluation Criteria

## Study Purpose

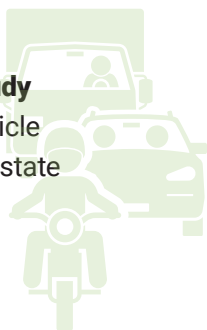
The I-39/90/94 Corridor Study will address existing and future **traffic** demands, **safety** issues, aging and outdated corridor **infrastructure**, and corridor **resiliency**.



## Corridor Needs

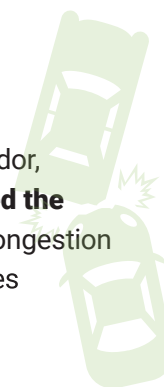
### Traffic

The **volumes of traffic along the study corridor are increasing**, causing vehicle congestion and backups on the Interstate and decreasing travel time reliability.



### Safety

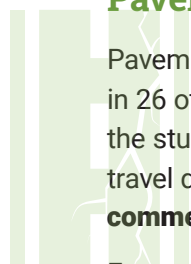
Crash rates along the study corridor, especially at interchanges, **exceed the statewide average crash rate**. Congestion and geometric/design deficiencies contribute to crashes.



### Pavement

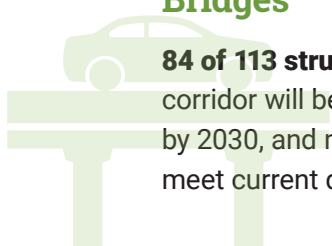
Pavement maintenance projects are anticipated in 26 of the next 30 years somewhere in the study corridor, which presents ongoing travel delay and congestion for daily **commercial and recreational traffic**.

Eventually, full pavement replacement is more cost effective than more repair. Emergency pavement projects also occur which disrupts regular maintenance and construction schedules.



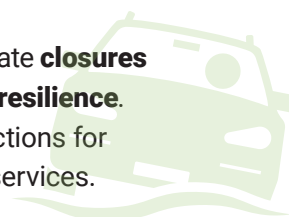
### Bridges

**84 of 113 structures** in the study corridor will be over 50 years old by 2030, and many bridges do not meet current design standards.



### Flooding

Flood events causing Interstate **closures since 2008 impact corridor resilience**. Closures disrupt vital connections for commerce and emergency services.



## Evaluation Criteria

WisDOT's recommended preferred alternative was determined by how well it met purpose and need factors; environmental impacts; feedback from the **public, municipalities, and agencies**; and **projected cost**.





# → What is “Modernization”?

**Modernizing the Interstate is critical to maintaining a safe and accessible transportation network. The I-39/90/94 recommended preferred alternative would upgrade the infrastructure to meet current state and federal standards whenever possible.**



## THE FOLLOWING ELEMENTS CONTRIBUTE to MODERNIZING a FREEWAY:

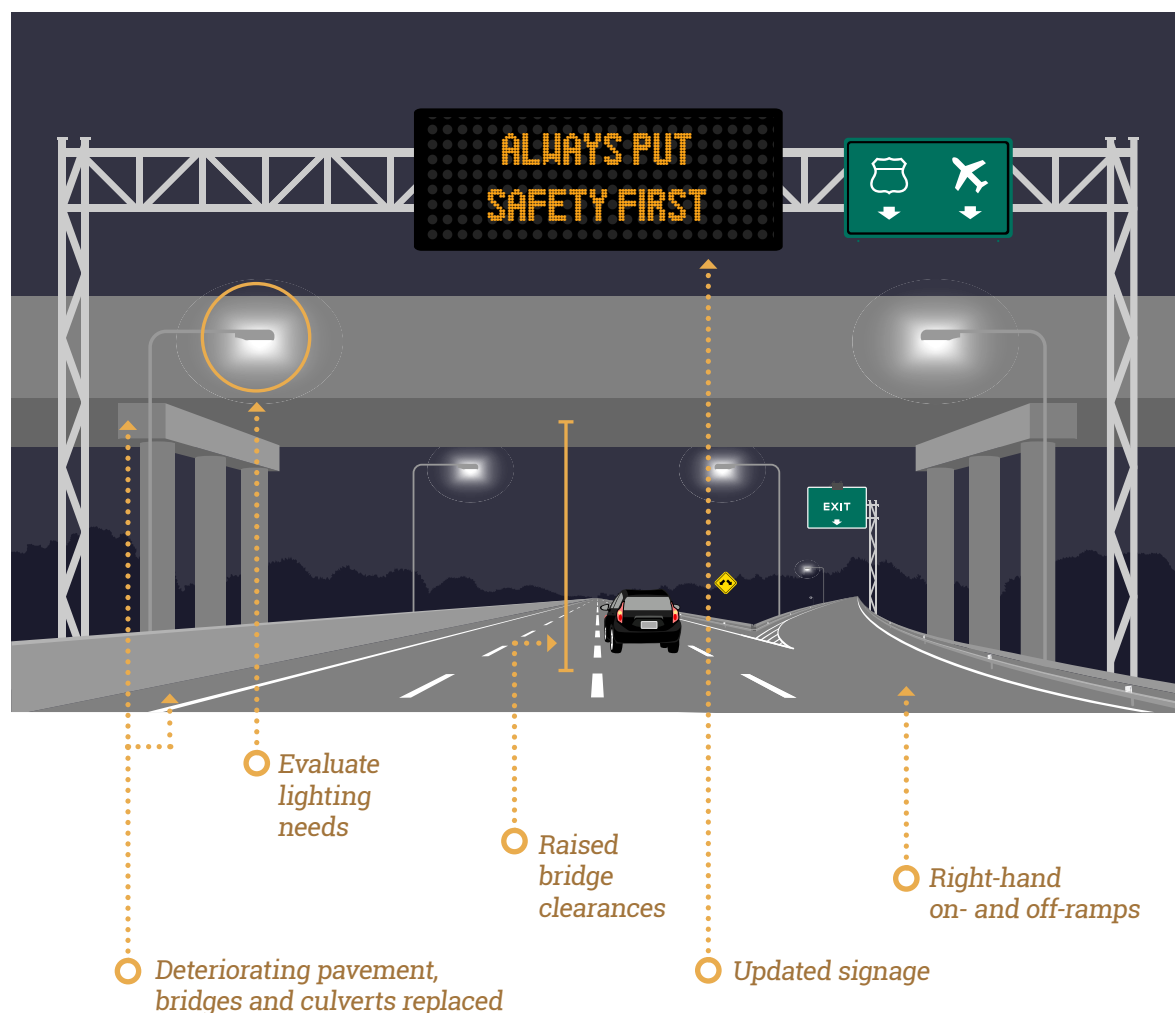
- Consider safety first
- Replace deteriorating pavement, bridges and culverts
- Move ramp movements to the right, eliminating left-hand entrances and exits
- Increase lengths of on- and off-ramps
- Raise bridge clearances
- Expand road shoulder widths
- Improve horizontal and vertical roadway curves
- Evaluate lighting needs
- Update roadway signage
- Consider opportunities to add bike and pedestrian facilities
- Add noise walls, where reasonable and feasible
- Expand capacity, where needed

The American Association of State Highway and Transportation Officials maintains design standards for interstate highways. The association updates these standards to meet the needs of shifting and growing populations, economic development,

increased use and an infrastructure system that is roughly 70 years old. Some Interstates that do not meet current or “modern” design and safety standards must now be modernized.



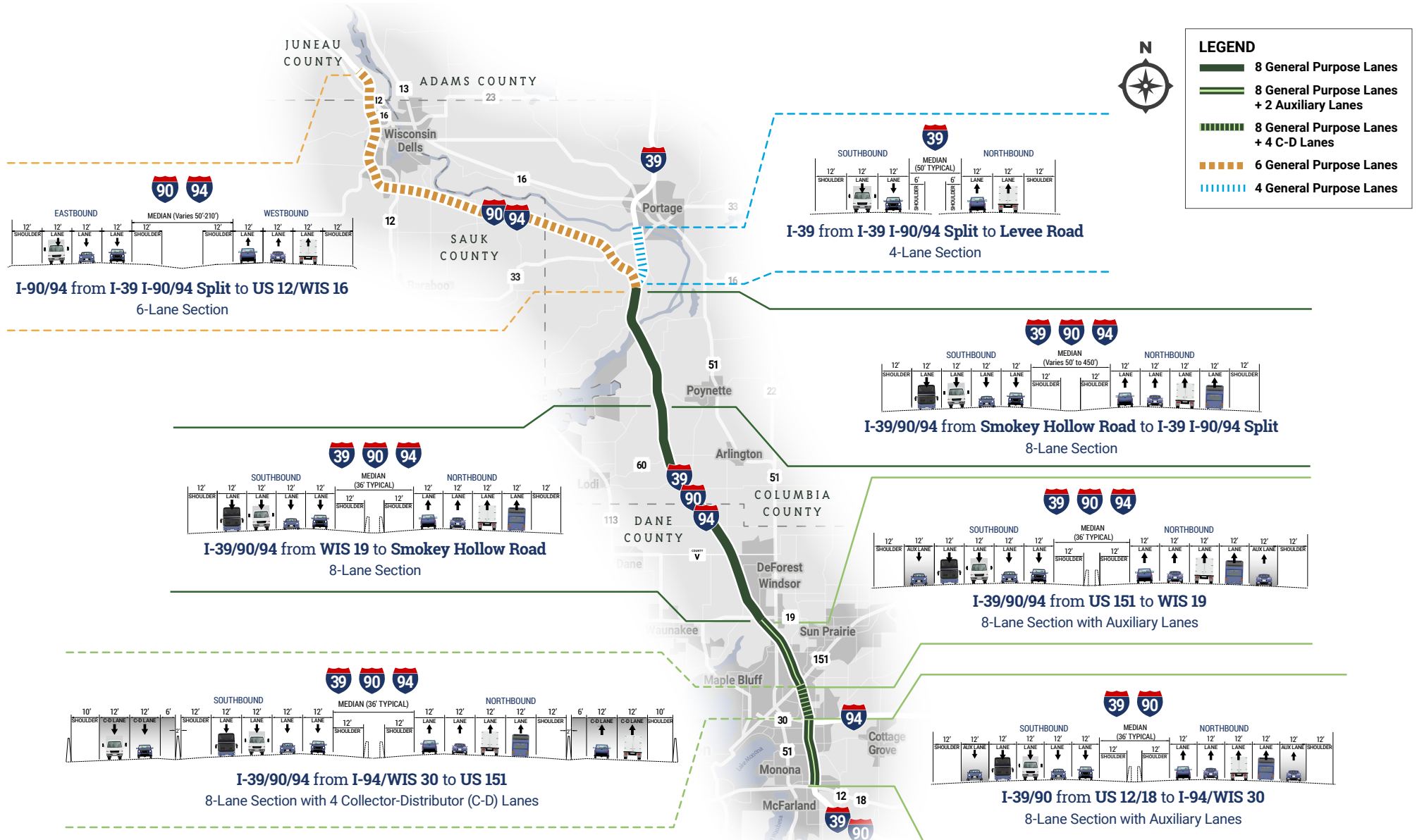
## Elements of a Modernized Freeway





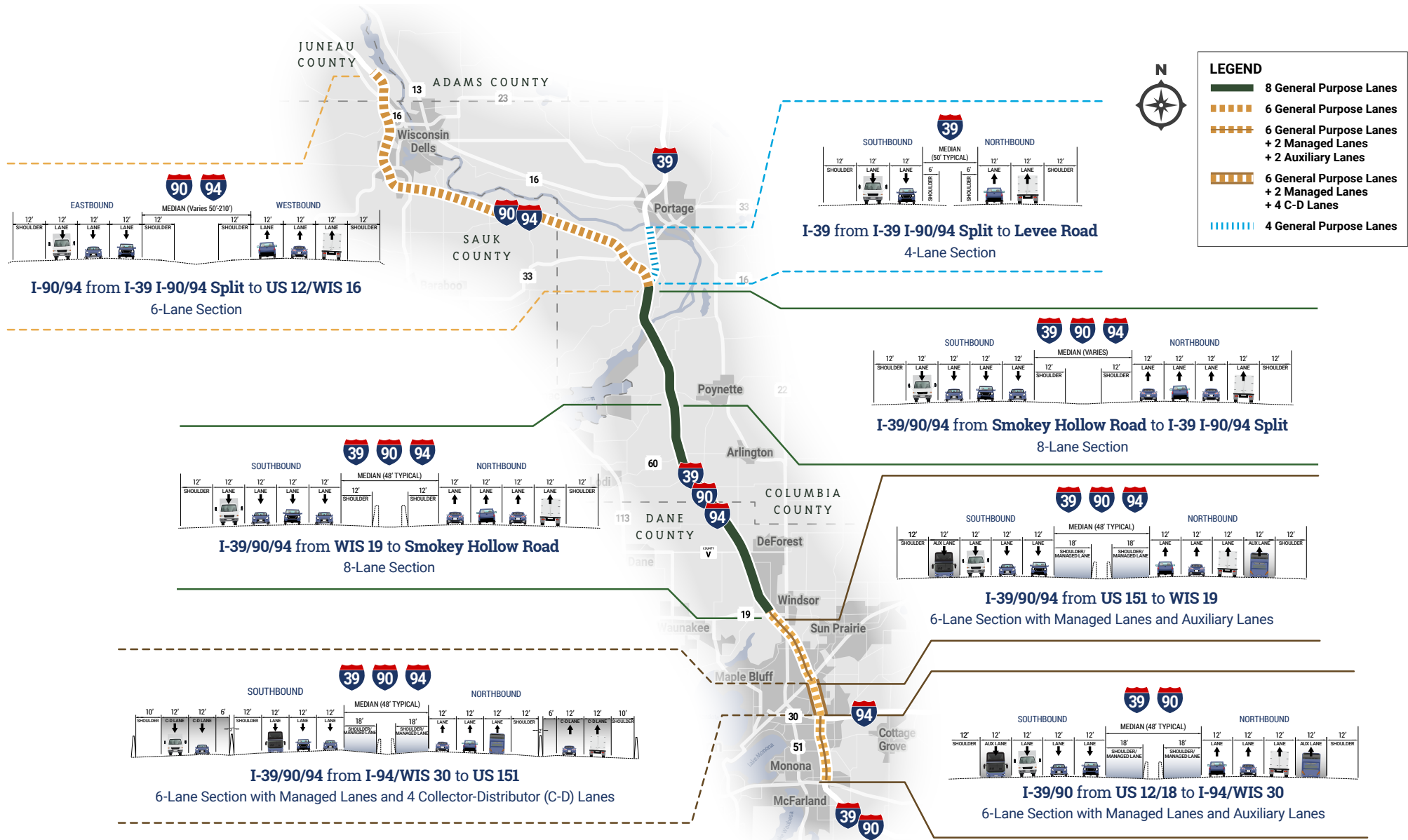
# → Typical Sections: Modernization Plus Added General Purpose Lane

## Recommended Preferred Alternative





# → Typical Sections: Modernization Hybrid

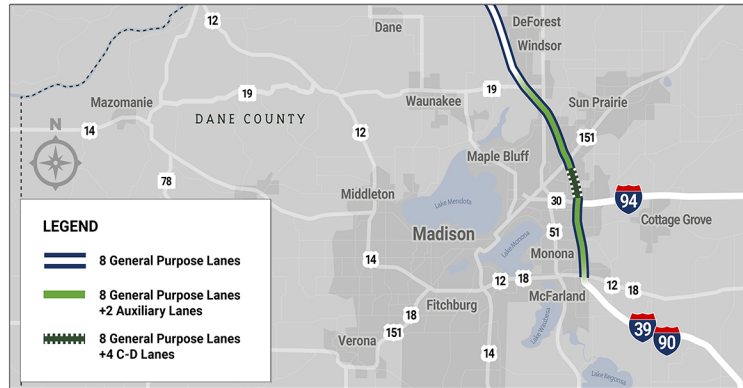




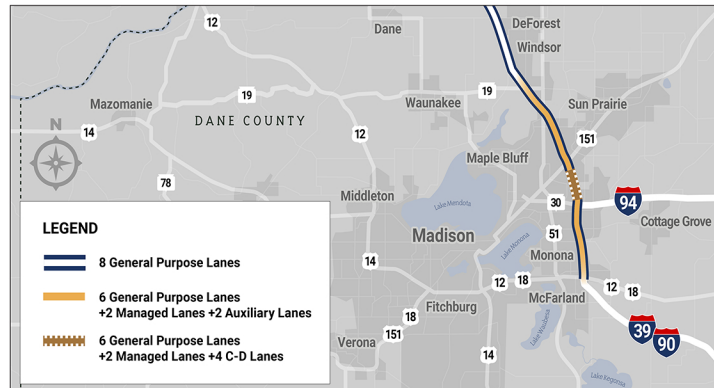
# → I-39/90/94 Mainline Alternative Comparison

## ALTERNATIVE OVERVIEW

### Modernization Plus Added General Purpose Lane



### Modernization Hybrid



## COST

The up-front cost of the Modernization Plus Added General Purpose Lane alternative is higher while the annual cost to maintain and operate the Modernization Hybrid is higher. For this reason, the Modernization Hybrid becomes more costly within 8-15 years of preliminary construction.

The following annual costs included in Modernization Hybrid over Modernization Plus Added General Purpose Lane:



- Traffic Management Center (TMC) operators and engineer staff \*
- County Maintenance Staff \*
- Freeway Service Team \*
- Intelligent Transportation System (ITS) System replacement costs (every 15 years)
- Active response, repair of, and preventative maintenance of ITS equipment
- Camera software and licensing, utility costs, and network monitoring

\* Ongoing vacancies are occurring at TMC and Dane County which are anticipated to cause issues providing these services in the future.

## SAFETY & OPERATIONS

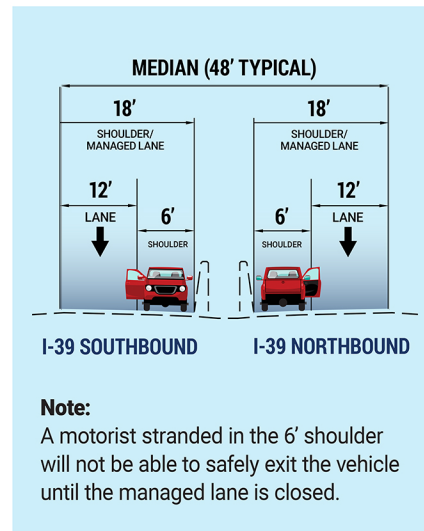
### Predictive Safety

Predicted Crashes are 27% Lower with the Modernization Plus Added General Purpose Lane Compared to Modernization Hybrid



**27.7%**  
reduction in total crashes

**27.3%**  
reduction in fatal/injury crashes



## OTHER CONSIDERATIONS

- The Modernization Hybrid is 12' narrower (6' on both sides of the freeway) than the Modernization Plus Added General Purpose Lane alternative.
- The start and end points of the Modernization Hybrid alternative add additional decision points. Lane drops can have higher crash rates because of traffic weaving and merging conflicts.
- The Modernization Hybrid alternative managed lanes will be unavailable at times. It is anticipated that 25% of the days when the managed lanes are opened, they would subsequently be partially or fully closed due to incidents, large snow events, power outages, etc. *There is a higher risk of traffic diversion to other roadways during outages.*
- A hybrid alternative operates most effectively with a large percentage of familiar drivers (local commuters). High truck volumes are present on all days and high volumes of unfamiliar, recreational drivers are present on high traffic Fridays and Sundays.

## OPERATING HOURS

- Predicted managed lanes operating hours in 2050 between I-94 and US 151 includes:



**WEEKDAYS:** 7-9 a.m., 3-6 p.m. \* **WEEKENDS:** 7-9 a.m. to 8 p.m. \*

- The managed lane would be open for approximately 40% of daylight hours on weekdays and for all daylight hours on weekends.

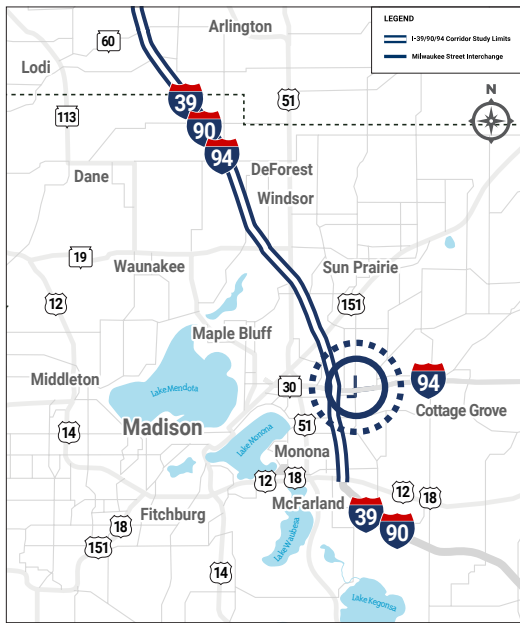
\* These are the predicted hours of operation, but actual hours of operation will be based on field conditions and need.



# Potential New Interchanges: City of Madison Input

## Milwaukee Street Interchange

Population: **+62K** | Households: **+33K** | Employees: **+7K**



### BENEFITS

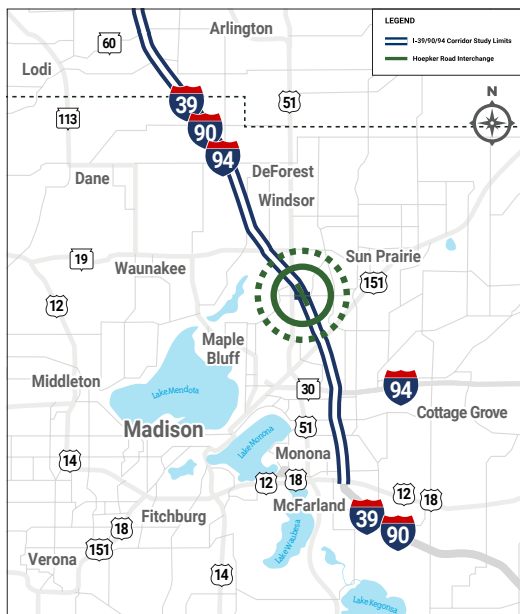
- ◆ Provides Interstate access for existing and future East Side residents and employers
- ◆ Included in adopted City of Madison plans
- ◆ Builds planned Milwaukee Street crossing of I-94
- ◆ Milwaukee Street and Sprecher Road near the planned site are built to accommodate an interchange
- ◆ Increases response coverage by Madison Fire Station 13 (Town Center Drive)

### CHALLENGES

- » Milwaukee Street connection to County T north of I-94 may require extensive grading
- » Would be located relatively close to the I-94-WIS 30 system interchange

## Hoepker Road Interchange

Population: **+10K** | Households: **+6K** | Employees: **+2K**



### BENEFITS

- ◆ Improves Interstate access to area employers and medical facilities
- ◆ Interchange can be constructed with minimal impacts on adjacent properties
- ◆ Serves planned residential growth northeast of the interchange
- ◆ Potentially facilitates further development on sites within the American Center

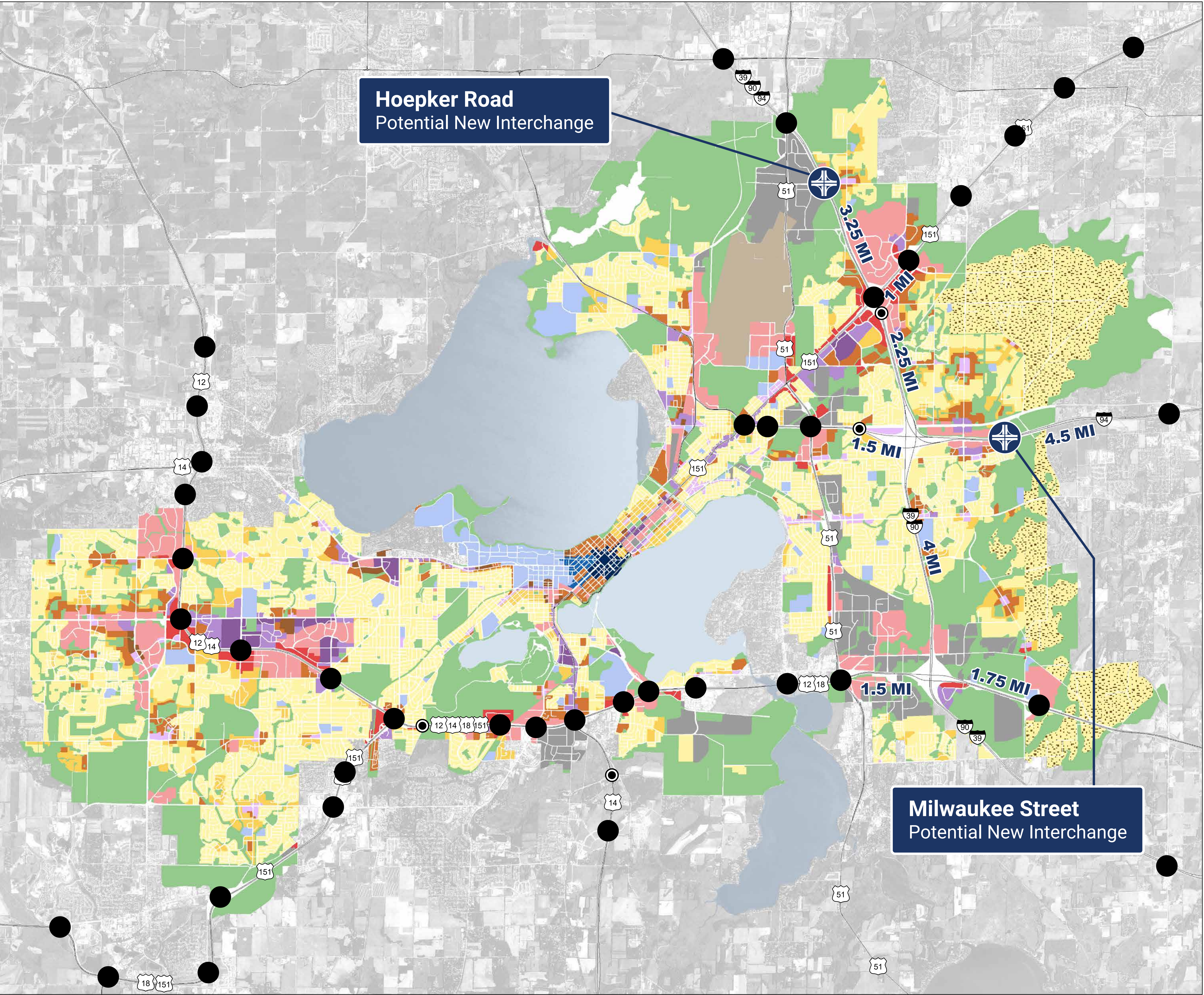
### CHALLENGES

- » Increases traffic on Hoepker and Portage roads, which are rural roads. These local roads may need improvements to accommodate increased traffic
- » Future development somewhat limited by airport height restrictions, existing development and natural areas like Cherokee Marsh and Token Creek
- » Adopted City plans do not currently factor or consider a Hoepker Road interchange.





# Existing and Potential New Interchanges: Planned City of Madison Land Use



Date: 3/13/2023

## Planned City of Madison Land Use with Existing and Potential New Interchanges

- Potential New Interchange
- Existing Full Highway Interchange
- Existing Partial Highway Interchange

### Generalized Future Land Use

- Low Residential
- Low-Medium Residential
- Medium Residential
- High Residential
- Neighborhood Mixed Use
- Community Mixed Use
- Regional Mixed Use
- Downtown Mixed Use
- Downtown Core
- General Commercial
- Employment
- Industrial
- Parks and Open Space
- Special Institutional
- Airport
- Neighborhood Planning Area

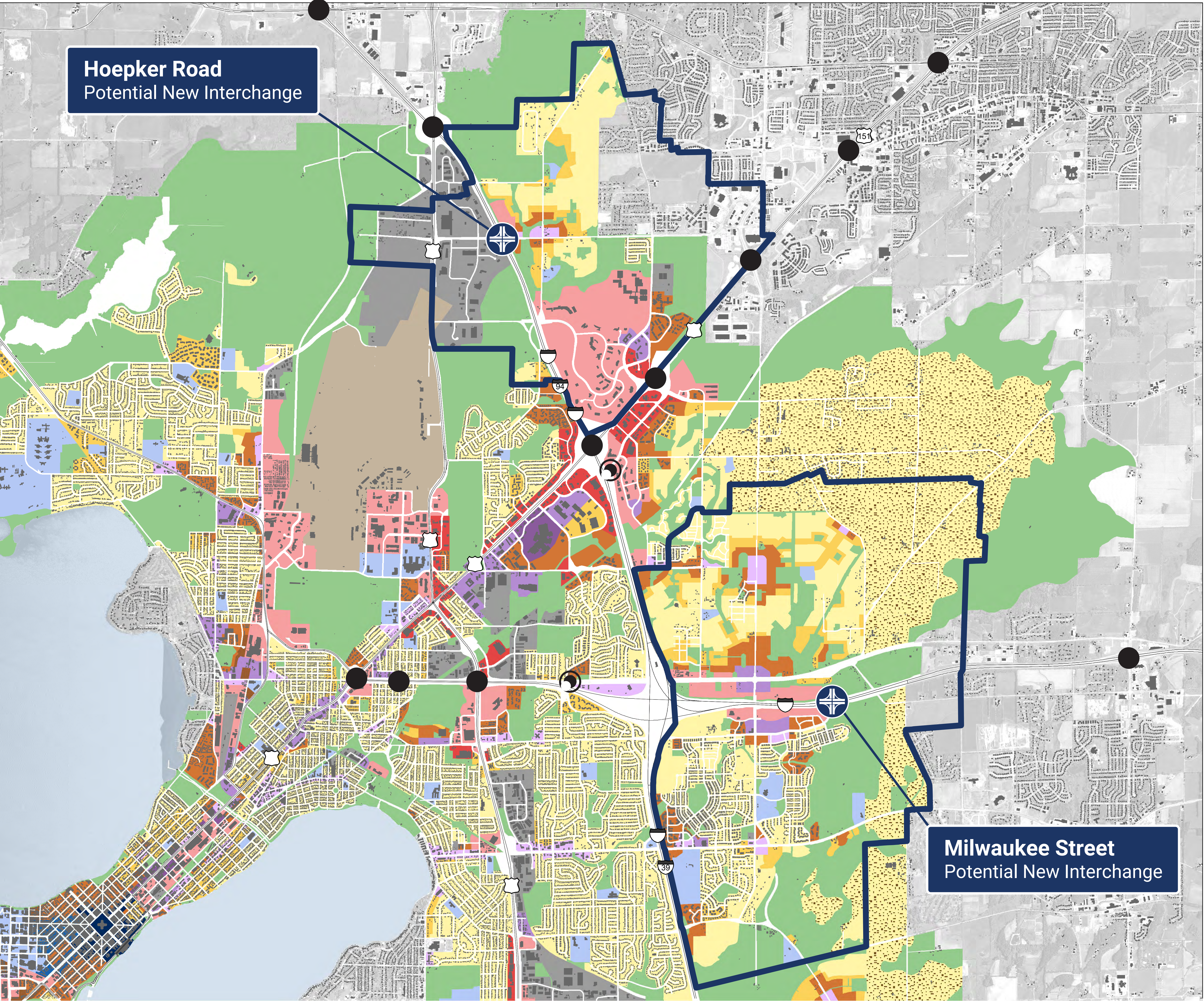
0 1 2 3 4 Miles

\*2018 Comprehensive Plan, updated with land use from adopted plans 2018-2023.  
Sources: City of Madison Planning Division; Dane County





# Potential New Interchanges: Impact Areas



## Planned City of Madison Land Use with Existing and Potential New Interchanges

- Potential New Interchange
- Existing Full Highway Interchange
- Existing Partial Highway Interchange
- Interchange Impact Area
- Building Footprint

## Generalized Future Land Use

- Low Residential
- Low-Medium Residential
- Medium Residential
- High Residential
- Neighborhood Mixed Use
- Community Mixed Use
- Regional Mixed Use
- Downtown Mixed Use
- Downtown Core
- General Commercial
- Employment
- Industrial
- Parks and Open Space
- Special Institutional
- Airport
- Neighborhood Planning Area

0 0.6 1.2 1.8 2.4 Miles

\*2018 Comprehensive Plan, updated with land use from adopted plans 2018-2023.  
Sources: City of Madison Planning Division; Dane County





# → Impact Summary Table

Environmental Factor	No Build	Modernization Plus General Purpose Lane (Preferred Alternative) + Preferred Interchange Alternatives	Modernization Hybrid + Preferred Interchange Alternatives
Construction Cost Estimate (2024 Dollars In Millions)	\$950.4	\$2,571.9	\$2,557.3
New Right Of Way (Acres)	0	225	219.6
Residential Relocations (Housing Units)	0	1	1
Flood Minimization Residential Relocations	0	1	1
Flood Minimization Residential Flood Easements Outside Regulatory Floodplain	0	9	9
Commercial Relocations	0	1 Maintenance building	1 Maintenance building
Flood Minimization Commercial Relocations	0	2, Including 1 vacant	2, Including 1 vacant
Flood Minimization Commercial Flood Easements Outside the Regulatory Floodplain	0	6, Including 3 vacant	6, Including 3 vacant
Farmland (Buildings Relocated/Acres Acquired)	0	1 Barn, 161.5 Acres	1 Barn, 158.5 Acres
Flood Minimization Farmland Impacts (Buildings Relocated/Acres Impacted)	0	6 Structures, 189.8 Acres	6 Structures, 189.8 Acres
Institutional Public Building Relocations	0	1	1
Flood Minimization Institutional Public Building Relocations	0	4	4
100-Year Floodplain (Acres)	0 - Corridor Resiliency not addressed	327	326.8
Wetland (Acres)	0	171.6	170.4
Federally-Listed Threatened and Endangered Species (Yes/No)	No	Yes	Yes
State-Listed Threatened and Endangered Species (Yes/No)	No	Yes	Yes
Adverse Effects To Historic Properties	0	0	0
Archaeological Sites Affected	0	0	0
Environmental Justice Disproportionate and Adverse Impact (Yes/No)	No	No - alternative could facilitate access to employment centers, provide added bicycle and pedestrian connections	No - alternative could facilitate access to employment centers, provide added bicycle and pedestrian connections
Noise Receptor Units Impacted (Design Year 2050)	Not applicable	1,598 Receptor units	1,598 Receptor units
Potential Contaminated Sites (Sites Recommended For Additional Field Testing)	Not applicable	16	16
Section 4(F) Properties - De Minimis Use	0	3	3
Indirect Effects	Does not address study purpose and need; may slow pace of planned development	Land use effect: facilitates planned redevelopment and development in study area	Land use effect: facilitates planned redevelopment and development in study area
Cumulative Effects	No	Limited effect: mitigation measures minimize effects	Limited effect: mitigation measures minimize effects



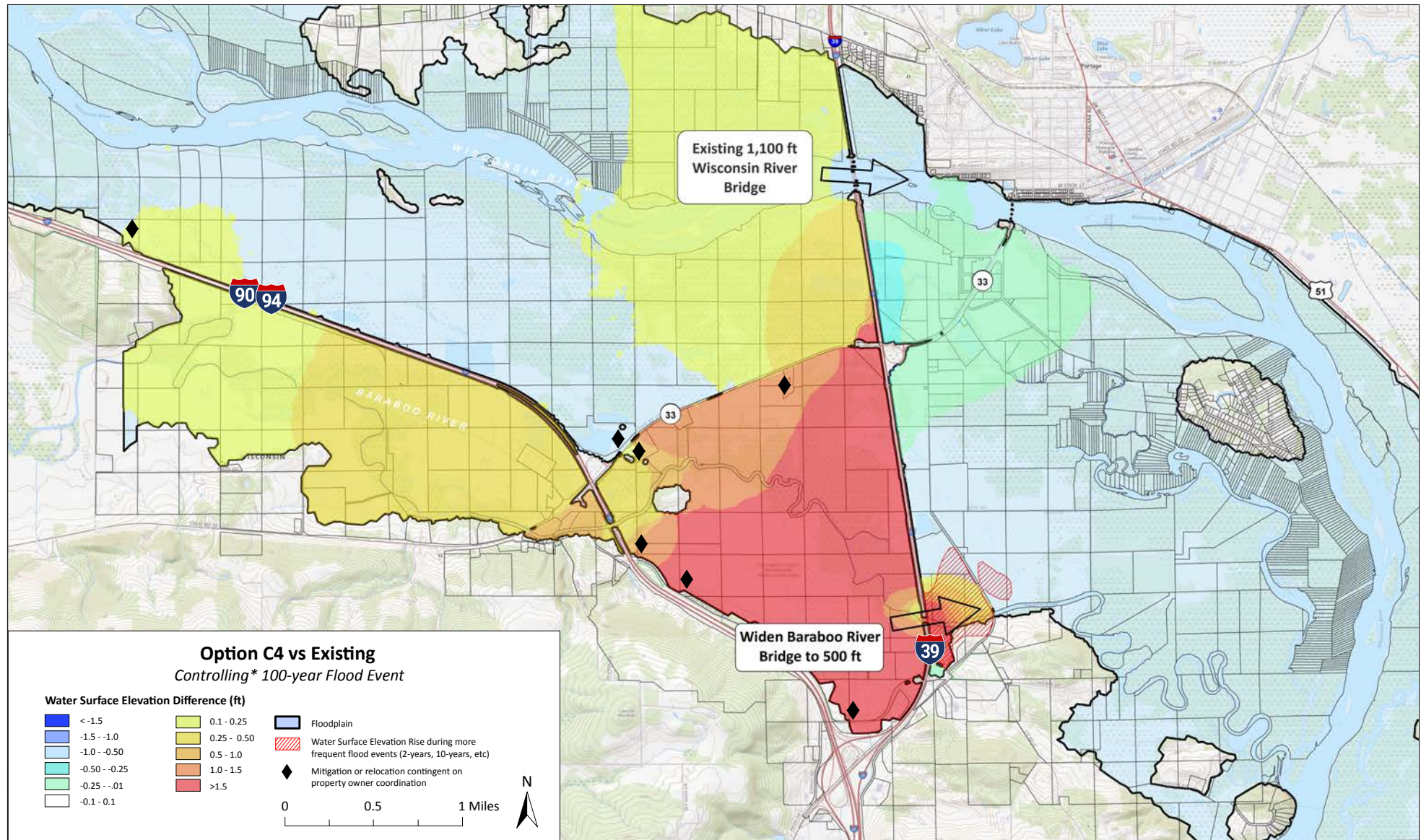
# → Flood Events





# → Flood Mitigation: Recommended Preferred Alternative

## 100-YEAR EVENT





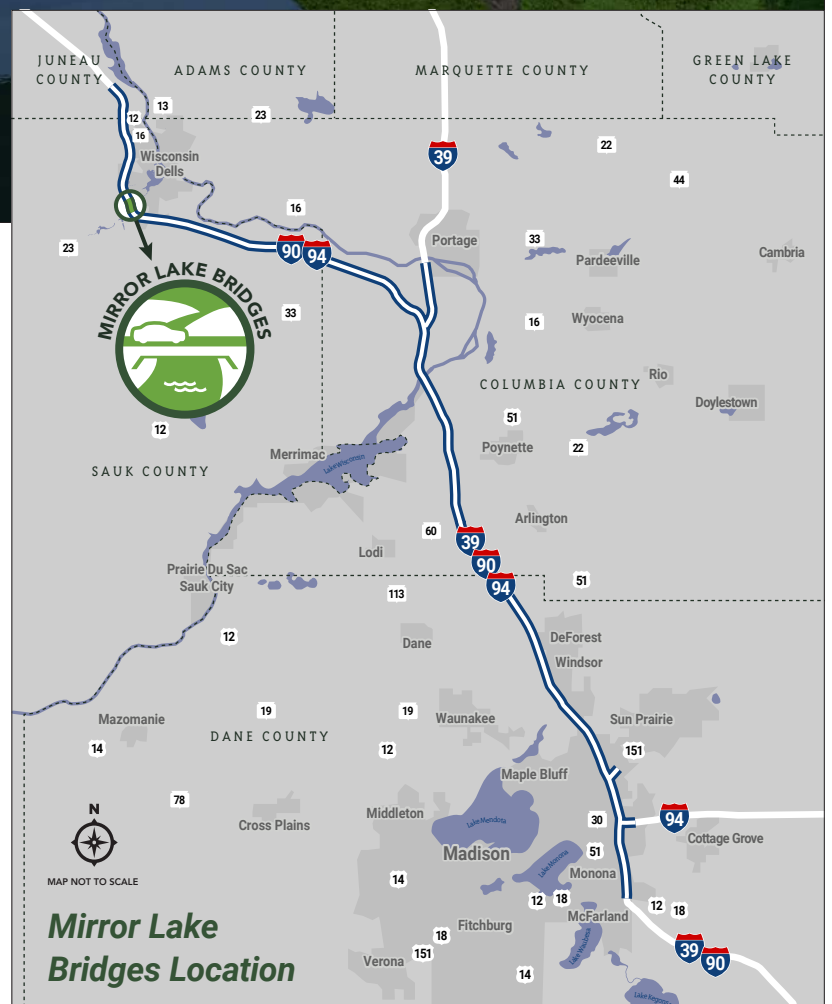
# → Mirror Lake Bridges Concept: Single Span Girder Bridge



## Summary

The image above represents the preferred bridge concept.

- Existing bridges structurally deficient and obsolete
- New bridges built to modern design standards
- New bridges fully span Mirror Lake; no bridge elements within the waterway
- Staged bridge construction allows freeway to remain open to traffic
- Bridge construction is anticipated to temporarily close boat traffic on Mirror Lake



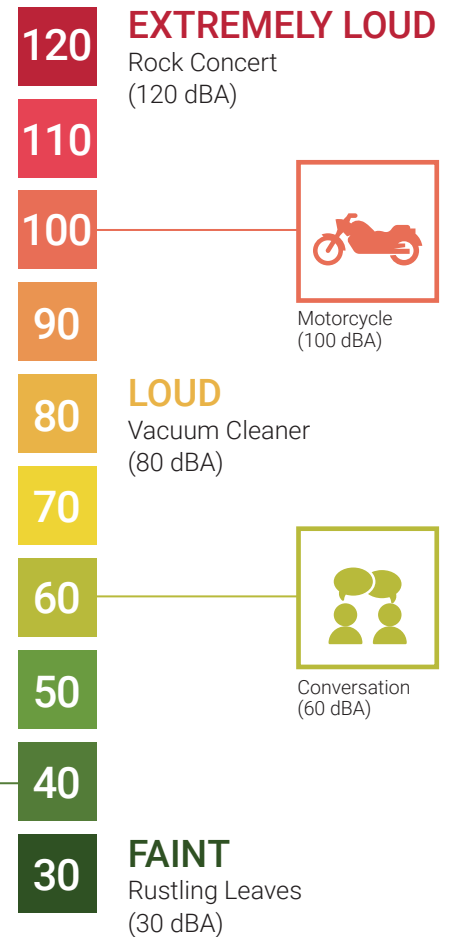
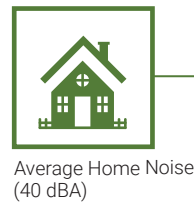


## → Noise Study Process Next Steps

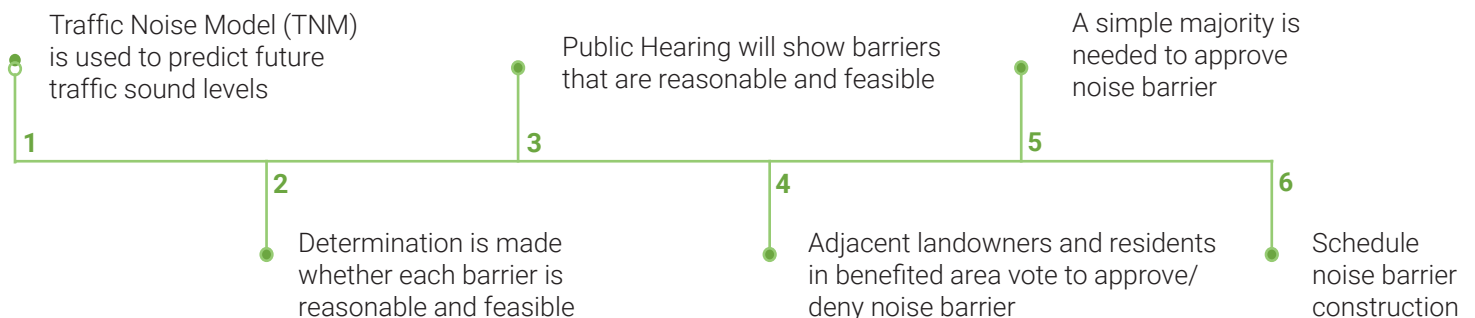
### How is Noise Measured?

Noise is measured using decibels (dBA). The scale to the right shows the range of adjusted decibel levels for everyday sounds.

The volume and speed of traffic, along with the number of heavy-duty and freight trucks present, are factors in measuring noise level along a roadway. Distance from the roadway also affects the perceived noise level. As distance from the roadway doubles, the sound is reduced by 3 dBA.



### Noise Barrier Process



*\*Steps 1-3 are included in the study, steps 4-6 will only proceed if the project is funded.*



# → Noise Analysis Process Overview

**The Traffic Noise Model (TNM) is used to measure existing sound levels, to develop a noise model and to predict future sound levels.**

» Noise impacts occur when:

- A receptor with a predicted future traffic sound level which approaches or exceeds the WisDOT Noise Level Criteria (NLC) for Considering Barriers for different land use categories. NLC is divided into land use categories that include residential areas, serene/quiet lands, parks, schools, hotels, offices, etc.
- When predicted future traffic sound levels exceed existing levels by 15 dB or more.

» In order for abatement to be provided, it must be feasible, reasonable and likely to be incorporated.

## Reasonable:

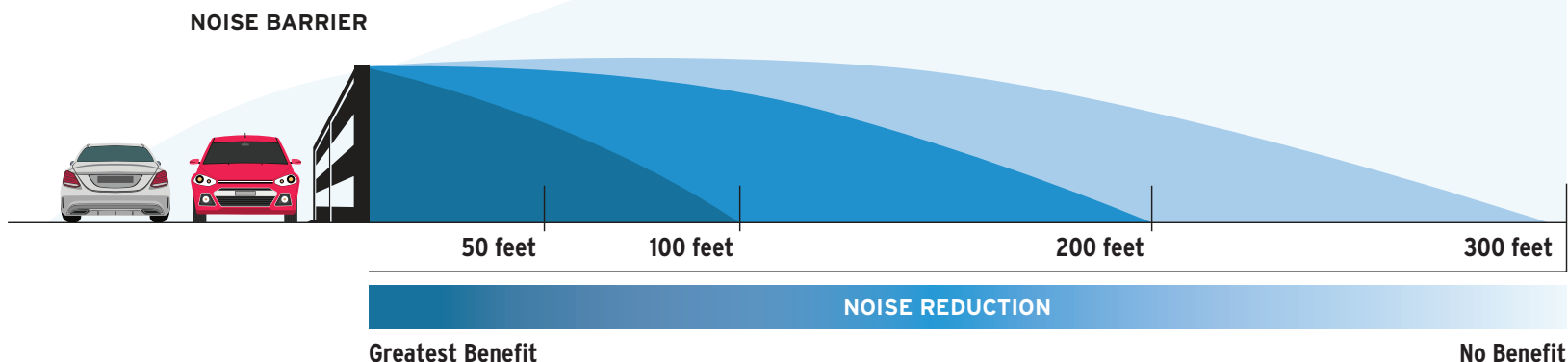
Total cost of the noise barrier may not exceed \$50,000 per benefited receptor. To be considered benefited, a receptor must receive a minimum of eight (8) dB noise reduction. In addition, a minimum of one (1) receptor or common use area must achieve the department's noise reduction design goal of nine (9) dB.

## Feasible:

A minimum of one impacted receptor or common use area must achieve a five (5) dB noise reduction. In addition, abatement that is feasible must be constructible, compatible with the project purpose & need, meet design criteria and guidance, and not result in other impacts that would offset noise reduction benefits.

Should a proposed noise barrier be considered reasonable and feasible, a vote would occur after the study and during final design. A barrier must receive a vote of support from a simple majority of all votes cast by the benefited receptors to be constructed.

*Reasonable and feasible noise barrier proposed locations are displayed on roll plots.*





# Welcome!



# Please Sign In

I-39/90/94 Corridor Study

## Public Hearing

*Madison College*

Sign in digitally at

[tinyurl.com/MadisonCollegePH](https://tinyurl.com/MadisonCollegePH)

or scan the QR code with your smartphone



*WisDOT records your attendance to keep you informed about future meetings and study updates*

Information provided at public meetings including names, addresses, phone numbers, email addresses and signatures is not confidential and may be subject to disclosure upon request, pursuant to the requirements of the Wisconsin open records law, Sections 19.31 - 19.39 of the Wisconsin Statutes.



U.S. Department  
of Transportation  
**Federal Highway  
Administration**



**Commerce.**



**Safety.**



**Tourism.**



# Welcome!



# Please Sign In

I-39/90/94 Corridor Study

## Public Hearing

*Wisconsin Dells High School*

Sign in digitally at  
[tinyurl.com/WDHSPH](https://tinyurl.com/WDHSPH)

or scan the QR code with your smartphone



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U.S. Department  
of Transportation  
**Federal Highway  
Administration**



**Commerce.**



**Safety.**



**Tourism.**



## → Give Us Your Written Testimony

Please complete a written testimony form.

### Complete Here

Fill out comment and contact information on the form and hand to a study team member or drop off at the testimony table.



### Complete at Home

Take a comment form and pre-paid envelope home, then fill out comment and contact information on the form and mail back to WisDOT by **August 12, 2024.**



### Complete Online

Fill out the online form and contact information by **August 12, 2024.**



Scan QR Code or visit the site below



[tinyurl.com/MadisonTestimony](https://tinyurl.com/MadisonTestimony)

***Thank you for participating in this important corridor study!***



# PLEASE PROVIDE



## Private Verbal Testimony

**P** rivate verbal testimony will be given to a court reporter, who will record your comments. Both public and private verbal testimony will be entered into the official record.



Complete the Registration for Verbal Testimony slip included in the hearing packet.



Wait for an opening with the court reporter.



Provide the court reporter with your completed slip.



A court reporter will record your private testimony. Please limit your testimony to three (3) minutes.



All testimony will be part of the official record.

***Thank you for participating in this important corridor study!***



# PLEASE PROVIDE



## Public Verbal Testimony

**P**ublic verbal testimony will be provided to the hearing panel and will be heard by those in attendance. A court reporter will record all public verbal testimony for the official record.



Complete the Registration for Verbal Testimony slip included in the hearing packet.



Submit completed slip to the designated study staff member any time before, during or immediately following the presentation.



Your name will be called in the order it is received to give your three (3) minute testimony.



You can testify again as part of the public verbal testimony after others wishing to testify have done so.



All testimony will be part of the official record.

***Thank you for participating in this important corridor study!***