



WELCOME

US 51 (Stoughton Road) South Corridor Study

Public Meeting #3
Tuesday, July 15th, 2025
Robert M. La Follette High School, Madison, WI

Meeting Objectives

- Learn about the intersection concepts
- Provide comments on the study and proposed improvements





Study Location



Corridor Facts

Corridor Limits

Voges Rd./Terminal Dr. to South of WIS 30

Corridor Length

4.4 Miles

Municipalities:

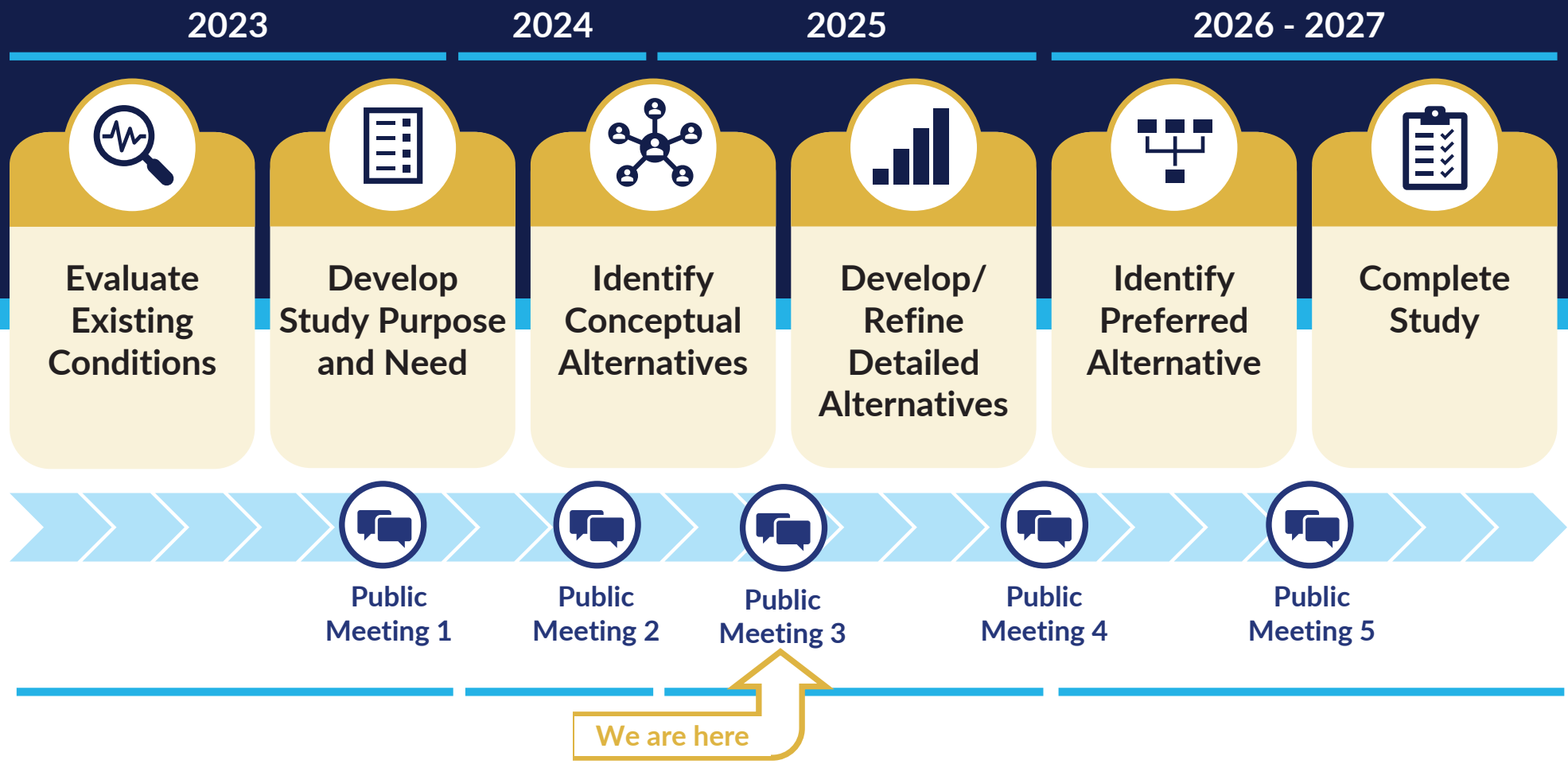
City of Madison, City of Monona, Village of McFarland, Town of Blooming Grove





Study Process

**We are early in a multi-year process.
Your input will steer the remainder of the study.**



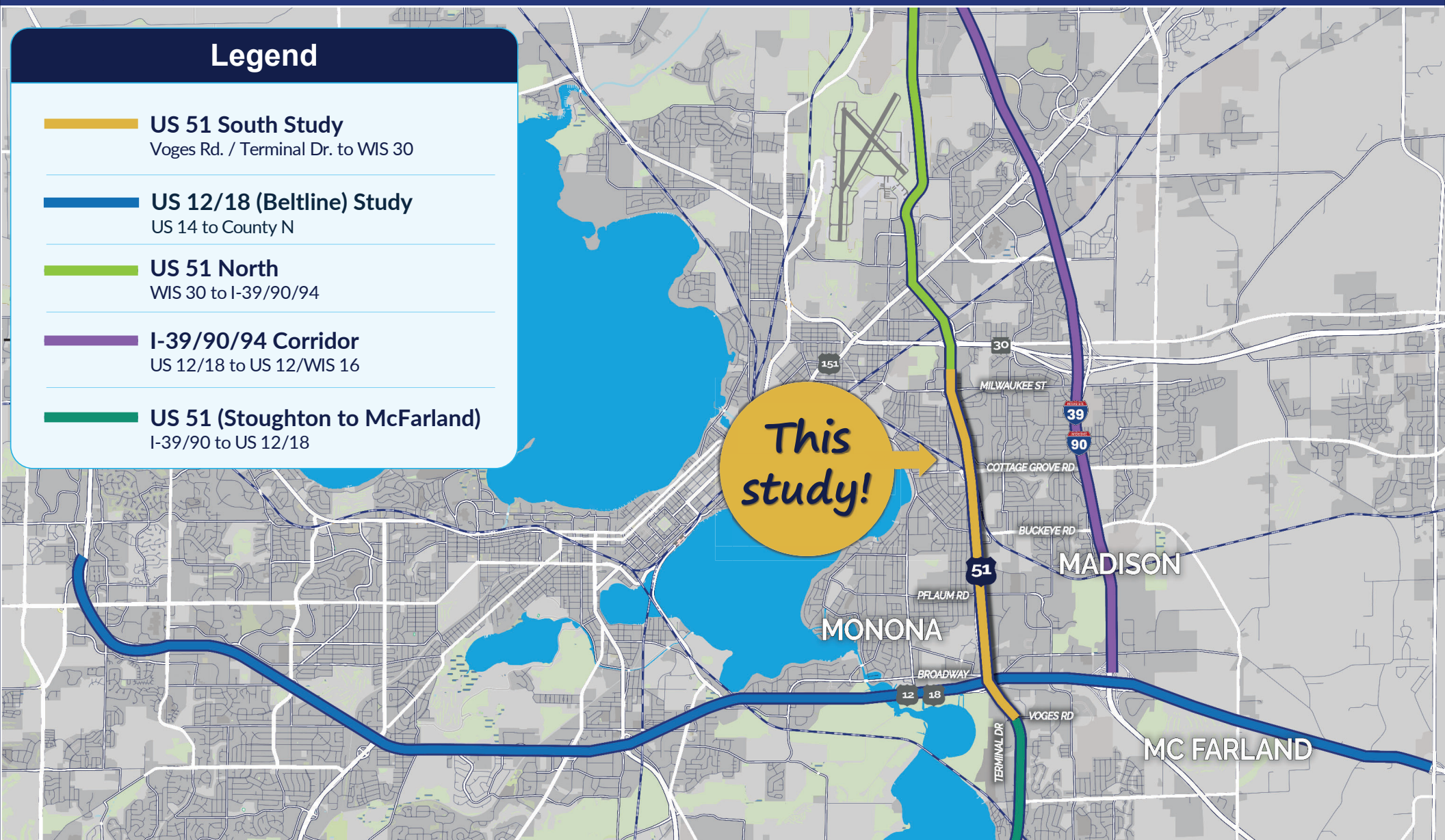


Adjacent Studies and Projects

Legend

- US 51 South Study**
Voges Rd. / Terminal Dr. to WIS 30
- US 12/18 (Beltline) Study**
US 14 to County N
- US 51 North**
WIS 30 to I-39/90/94
- I-39/90/94 Corridor**
US 12/18 to US 12/WIS 16
- US 51 (Stoughton to McFarland)**
I-39/90 to US 12/18

This study!



Environmental Conditions Map





Purpose and Need Summary

The purpose of the US 51 South Study is to improve safety and mobility for all modes of travel and improve community connectivity, guided by local plans and goals.



Safety Issues

2017-2021 Crash Statistics

1,236 total crashes
4 fatal crashes
345 injury crashes

83% of crashes occurred at intersections
54% of crashes were rear end

4x the statewide average crash rate from Broadway to Buckeye Road

8 bicycle/pedestrian injury crashes
2 fatal pedestrian crashes

Broadway and Buckeye Road consistently ranked in Madison's **Top 10 worst** intersection crash locations



Inadequate Mobility

6 intersections have poor operations today

10 intersections anticipated to have poor operations by 2050

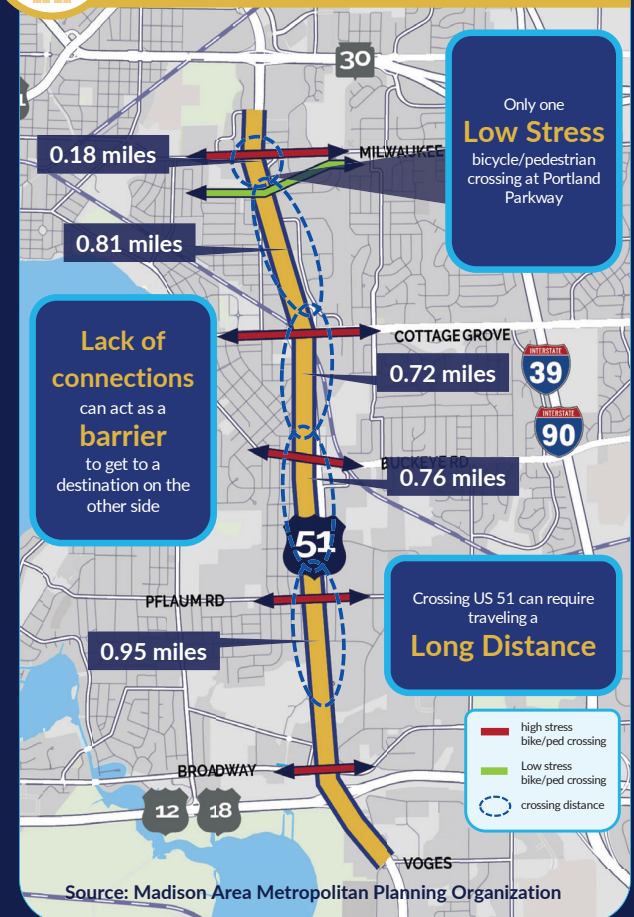
Up to **½ mile** backups anticipated on US 51 in 2050

Eastbound Beltline off-ramp to US 51 backs up onto Beltline and will get worse in the future

Backups on sideroads consistently block frontage road intersections



Poor Connectivity





Need: Safety Issue



Crash Statistics (2017-2021)

1,236

crashes occurred in the study area
of these:

4

were fatal

345

caused injuries

83%

of crashes occurred
at intersections

54%

of crashes
were rear ends

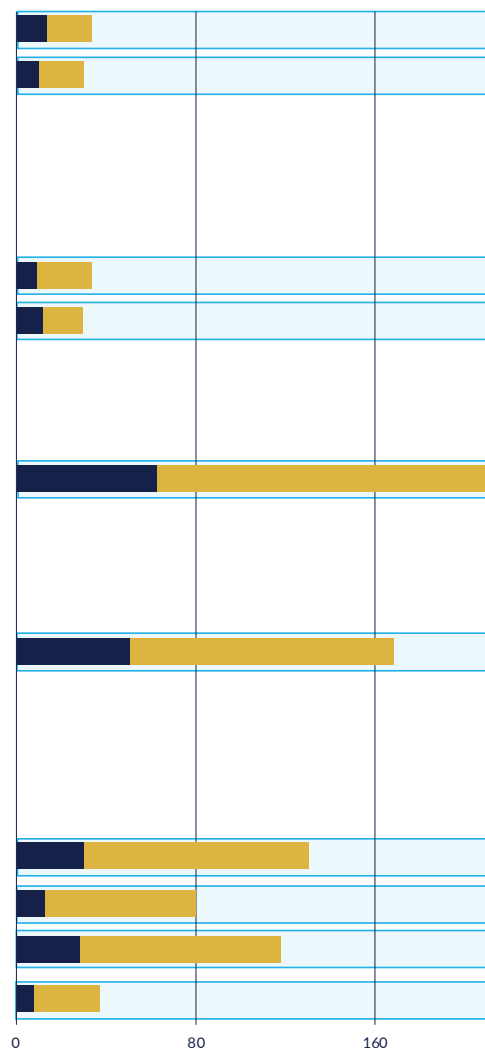
Over
4x

Statewide average for
similar roadways;
crash rate from
Broadway to Buckeye
Road

Crashes from 2017 to 2021

Number of Intersection Vehicle Crashes

■ Injury ■ Property Damage



Bicycle and Pedestrian Crashes on US 51

🚶 Pedestrian Fatal Crash 🚶 Pedestrian Injury Crash 🚲 Bicycle Injury Crash



Need: Inadequate Mobility



Traffic Operations and Volumes



Vehicle Mobility

All the US 51 intersections from Voges Road/Terminal Drive through Buckeye Road are expected to have **poor traffic operations** by 2050

Backups on sideroads **consistently block** frontage road intersections

Backups on the eastbound Beltline off-ramp to US 51 **extend onto the Beltline** during the peak hours

By 2050, US 51 will experience **excessive backups ranging from ¼ to ½ mile** during the peak hours



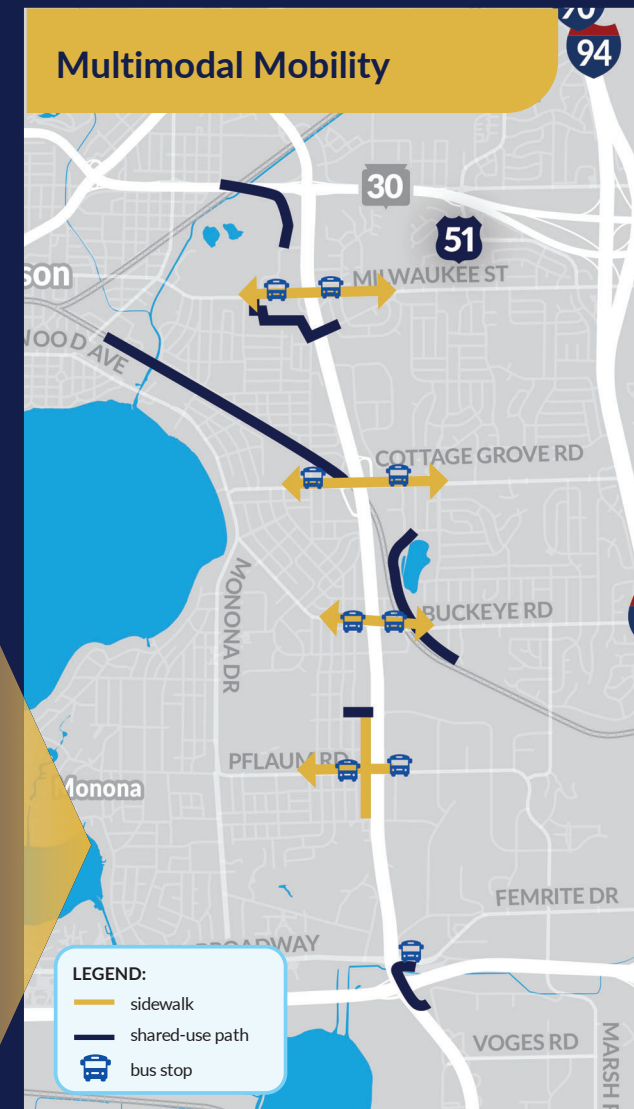
Multimodal Mobility

Bus stops and shared-use paths bring **multimodal traffic** to US 51

Pedestrian and bicyclists would need to **travel along the shoulder** for most of the US 51 corridor

The lack of facilities and high vehicle speeds lower the desire to walk or bike along or across US 51

Multimodal Mobility



Need: Poor Connectivity



The lack of facilities along and across US 51, stress level of crossings, long distances between crossings, and high vehicle speeds along the roadway make US 51 act as a barrier for bicyclists and pedestrians to reach destinations on either side of the road



Only one
Low Stress
crossing at
Portland Parkway
pedestrian overpass



other crossings are
High Stress
and there are
no North / South
Continuous Routes

MONONA

MADISON

51

30

39

90

COTTAGE GROVE RD

BUCKEYE RD

12

18

VOGES RD

BROADWAY

PFLAUM RD

TERMINAL DR

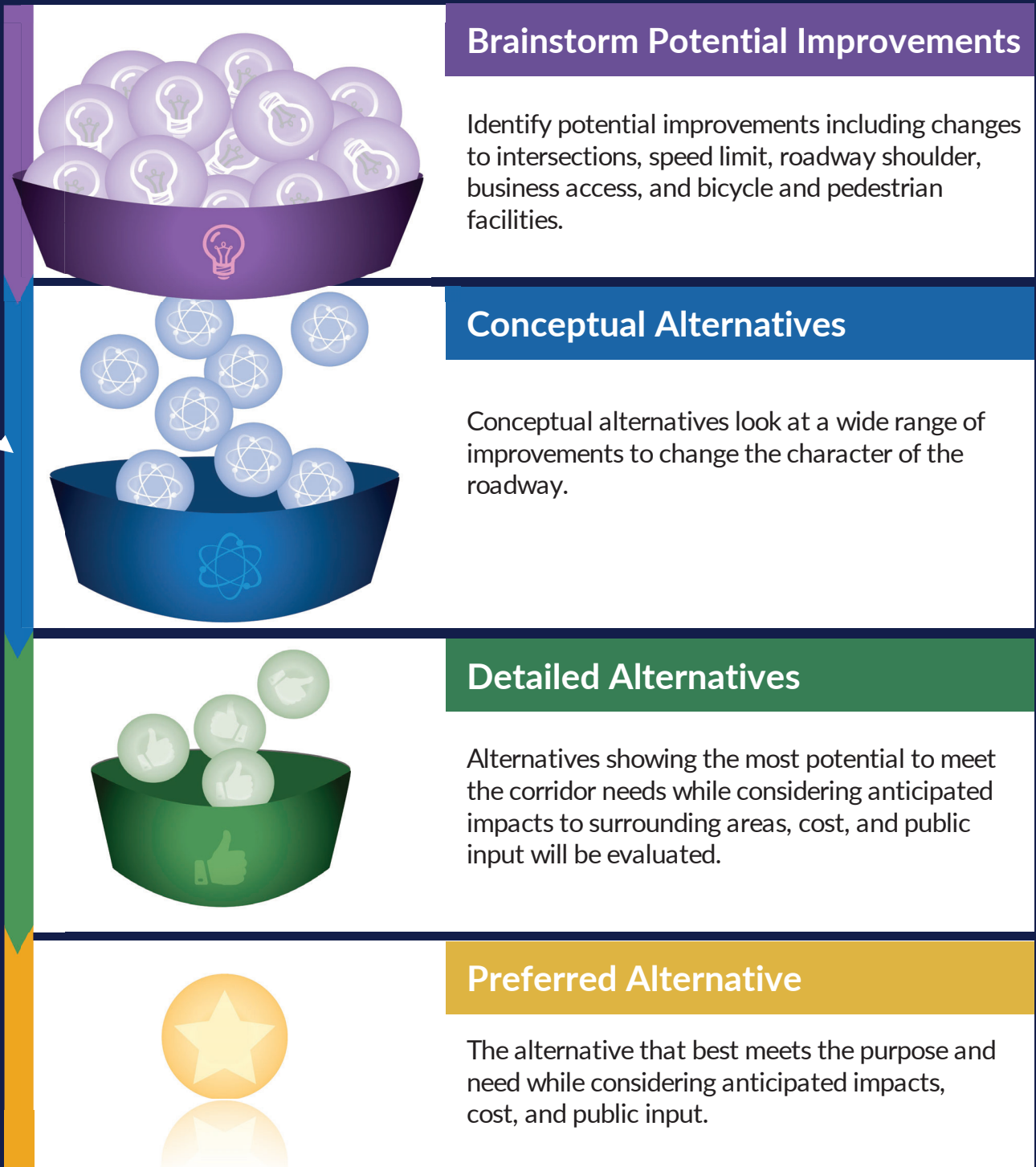
- Residential
- Commercial
- Industrial
- Parks/Rec.
- School

Source: Madison Area Metropolitan Planning Organization

Level of Traffic Stress is a nationally-recognized method developed by the Mineta Transportation Institute (San Jose St University) to provide a quantitative method for evaluating bicycle and pedestrian facilities.

Alternative Development Process

Your feedback on the intersection concepts presented today will help us identify what alternatives move forward for detailed study.



We are here



Summary of Corridors: Presented at Fall 2024 Meeting

Intersections presented today are compatible with multiple corridor concepts

No Build Option

No improvements beyond routine maintenance.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
Varies between 45 mph and 55 mph	Both Sides	None	None

Alt 1: 45 mph

Maintains 45 mph speeds compatible with hybrid intersections that improve east/west crossing.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
45 mph	Both Sides	None	None

Alt 2: Expanded Intersections

Intersection delay is reduced by adding turn lanes and spacing to frontage road improved, but the footprint is large.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
35 mph north of Beltline, 45 mph south of Beltline	Both Sides	None	None

Alt 3: Improved Frontage

Hybrid intersections minimize the impact of keeping frontage roads.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
35 mph north of Beltline, 45 mph south of Beltline	Both sides or west only	1 Helgesen Drive	0-14

Alt 4: Direct Access

Driveways allowed directly onto US 51 improving access.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
35 mph	West only or none	3 Tompkins Drive Helgesen Drive Robertson Road	14-73

Alt 5: Wide Boulevard

Moves US 51 to replace the existing frontage road system and connects business driveways directly onto US 51.



Cross section from Pflaum Road to Buckeye Road

SPEED LIMIT	FRONTAGE ROAD (IN AREA OF BUCKEYE & PFLAUM ROADS)	NEW INTERSECTIONS	DRIVEWAYS ONTO US 51
35 mph	None	4 Tompkins Drive Helgesen Drive Allis Avenue Robertson Road	41-73





Intersection Options

Different intersection configurations are being considered at each major crossing



Traditional Intersection

Provides improvements to existing intersections without the use of bridges



EXAMPLE: E. WASHINGTON AVE & FIRST ST

CONSIDERATIONS:

Added lanes provide more capacity

Lower construction cost

Least potential for improved safety

Bikes and pedestrians conflict with US 51 traffic

Nearby frontage roads must be relocated

POTENTIALLY LOCATED AT:

Buckeye Road, Pflaum Road, Broadway, Voges Road/Terminal Drive



Hybrid Intersection

Provides separation between side road and mainline traffic using a bridge and new connector roadways



EXAMPLE: MINERAL POINT RD & JUNCTION RD

CONSIDERATIONS:

Separates side road and mainline traffic

Safer than traditional intersection

Higher construction cost

Impacts associated with connector roadway

Indirection for some vehicle movements

POTENTIALLY LOCATED AT:

Milwaukee Street, Cottage Grove Road, Buckeye Road, Pflaum Road, Broadway, Voges Road/ Terminal Drive



Existing Interchange Improvements

Provides separation of side road and mainline traffic using a bridge and ramps



EXAMPLE: US 51 & WIS 30

CONSIDERATIONS:

Separates side road and mainline traffic

Safest for vehicles on US 51

Encourages higher travel speed

POTENTIALLY LOCATED AT:

Milwaukee Street, Cottage Grove Road, US 12/18 (Beltline)



What is a Hybrid Intersection?

Hybrid intersections: combine components of traditional intersections and interchanges.



Key Aspects

Improved Operations:

Connector roadways simplify the intersection with the mainline resulting in less congestion and delay

Travel Pattern Changes:

Sideroad traffic is removed from the mainline intersection and all turning movements use the connector roadway between the mainline and sideroad

Reduced Crash Risk:

Drivers will take more right turns instead of left turns, decreasing the risk of injury crashes

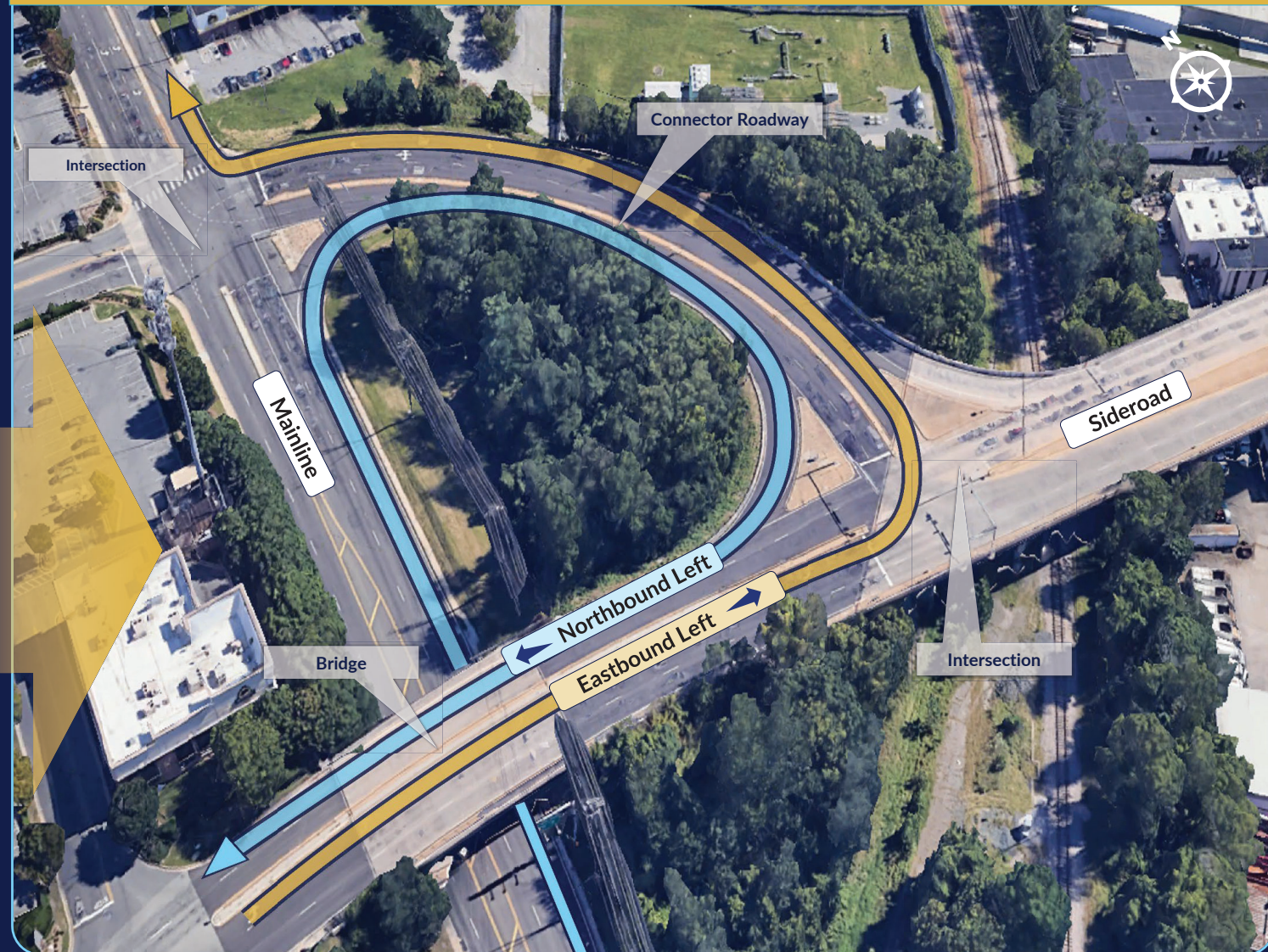
Safer for All Modes:

Bicyclists, pedestrians, and vehicles on side roads no longer interact with mainline traffic

Similar to:

Mineral Point Rd and Junction Rd on the west side of Madison

Components of a Hybrid Intersection



What would a hybrid look like at Pflaum Road?

Example: Looking southeast at Pflaum Road near Farm and Fleet



Milwaukee Street Concepts

Concepts include improvements to existing interchange or a hybrid intersection



Improve Existing Interchange

Extended entrance and exit lanes. Maintains Freeway style roadway.

- + Safest for US 51 traffic
- + Uninterrupted flow along US 51
- + No property relocations expected
- + Minimal impacts to surrounding area
- Difficult merge from Milwaukee St to WIS 30
- Encourages higher travel speed



Hybrid Intersection

Adds northbound US 51 signalized intersection. Promotes slower, urban-style roadway.

- + Eases merge from Milwaukee Street to WIS 30
- + Improves connectivity to Walbridge Avenue neighborhood
- Potential increase in crashes at new intersection
- Adds travel delay at new signal
- May require up to 2 property relocations
- Connector road impacts surrounding area

LEGEND:



New Signal



Improve Existing signal



US 51 Improvements



Existing Bridge



Right Turns Only

Cottage Grove Road Concepts

Concepts include improvements to existing interchange or a hybrid intersection



Improve Existing Interchange

Adds extended entrance and exit lanes. Maintains freeway style roadway.

- + Safest for US 51 traffic
- + Uninterrupted flow along US 51
- Encourages higher travel speed



Hybrid Intersection

Adds one signal northbound and one southbound on US 51 with realigned ramps. Promotes slower, urban-style roadway.

- + New signals help drivers anticipate downstream signals at Buckeye Road and WIS 30
- Potential increase in crashes at new intersections
- Adds delay at new signals

LEGEND:



New Signal



Improve Existing Signal



US 51 Improvements



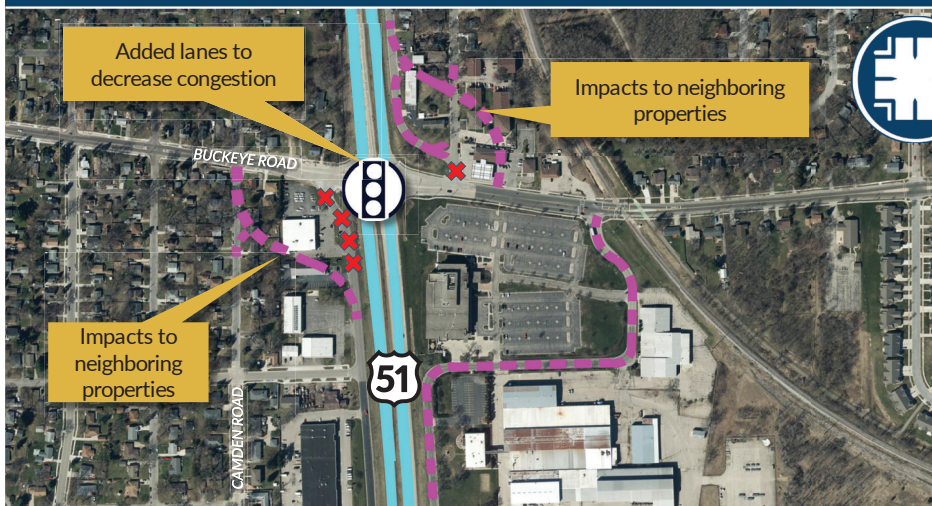
Existing Bridge



Right Turns Only

Buckeye Road Concepts

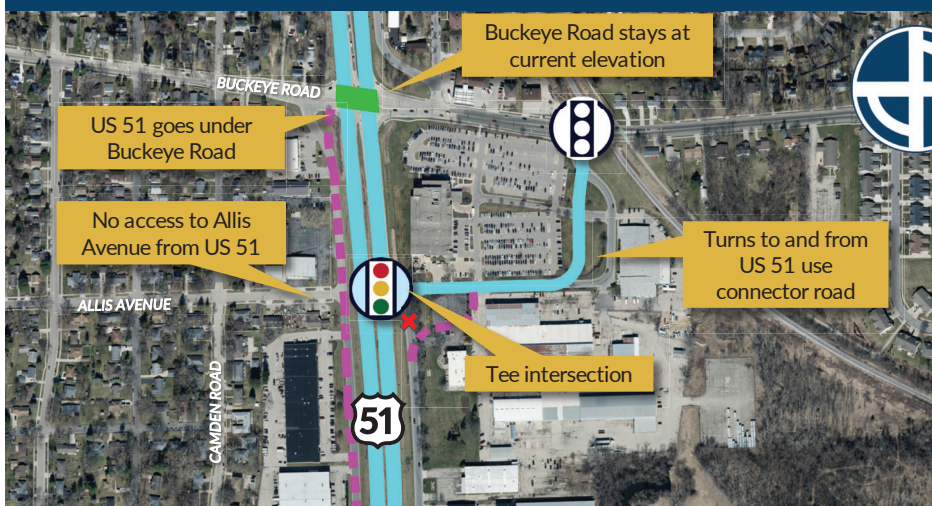
Concepts include expanding the existing intersection or two hybrid intersection options



Expanded Intersection

Adds lanes and increases the spacing to frontage road intersections.

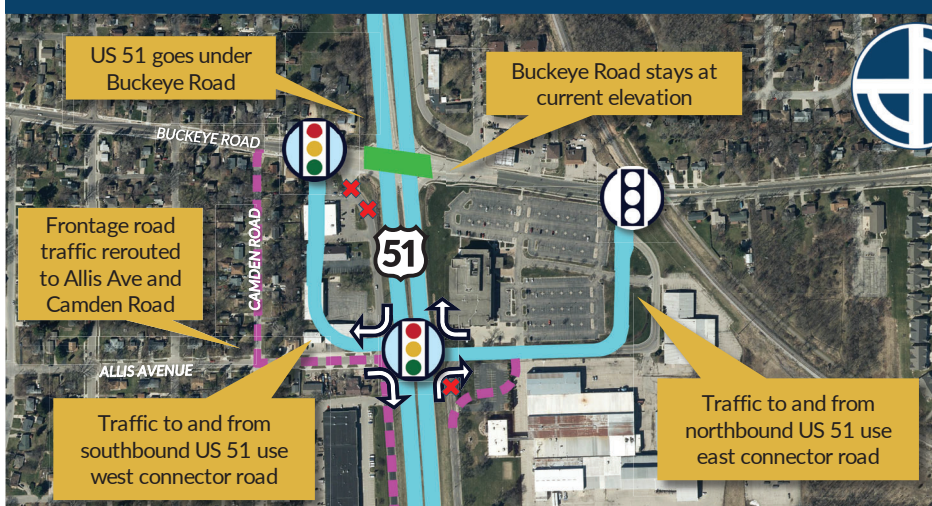
- + Addresses close frontage road intersection spacing
- + Additional lanes improve intersection operations
- + No bridge costs required
- Intersection design does not address high crash rate on US 51
- Bikes and pedestrians must cross a large intersection
- May require up to 15 relocations



One Connector Hybrid

Reroutes all turning vehicles onto a connector roadway.

- + Tee intersection likely to decrease crashes due to fewer left turn movements
- + East/west travelers would no longer interact with US 51 traffic
- + Grade separated bike and pedestrian crossing on Buckeye Road
- + Smaller US 51 intersection reduces delay
- + Uses existing frontage road as connector
- + No property relocations expected
- Indirection for turning traffic
- High cost due to bridge and retaining walls



Two Connector Hybrid

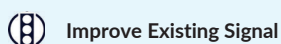
Uses two connector roads for turning vehicles; only right turns on to and off US 51.

- + Right-turn-only concept likely to decrease crashes
- + East/west travelers would no longer interact with US 51 traffic
- + Grade separated bike and pedestrian crossing
- + Right-turn-only concept reduces delay
- Indirection for turning traffic
- Frontage Road rerouted onto local roads
- May require up to 5 potential relocations
- High cost due to bridge and retaining walls

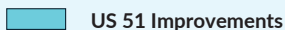
LEGEND:



New Signal



Improve Existing Signal



US 51 Improvements



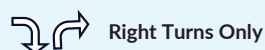
Potential Frontage Road



Remove Roadway



Proposed Bridge



Right Turns Only

Navigating Buckeye Road Hybrid Concepts

One Connector Hybrid



Two Connector Hybrid



LEGEND:

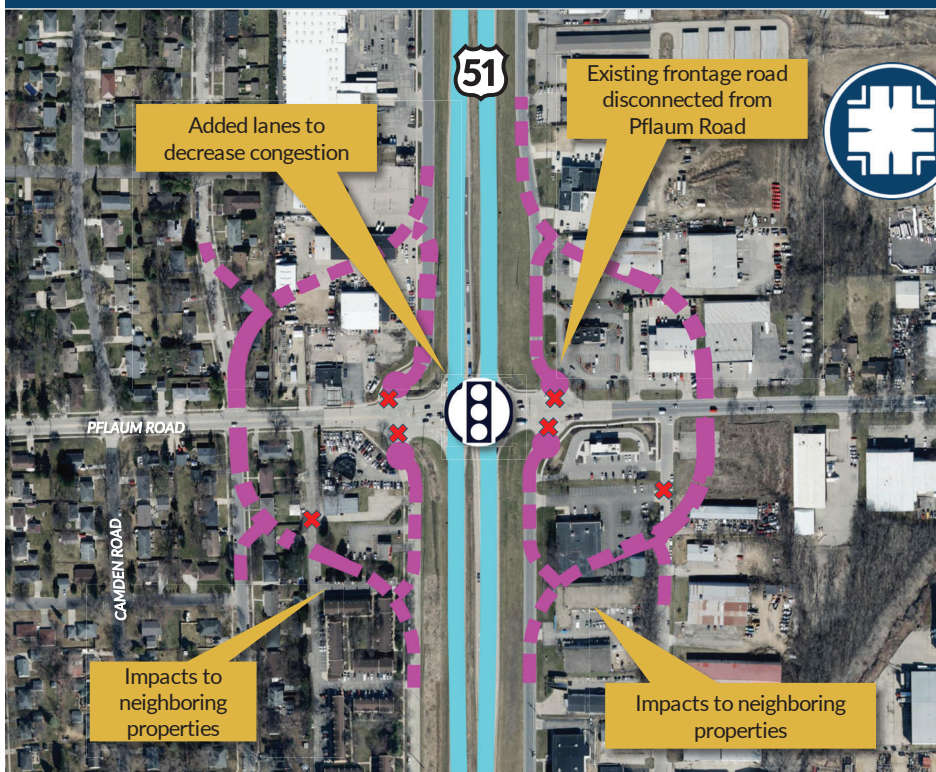
- █ Northbound US 51 to Westbound Buckeye Road
- █ Southbound US 51 to Eastbound Buckeye Road
- █ Eastbound Buckeye Road to Northbound US 51
- █ Westbound Buckeye Road to Southbound US 51

- █ US 51 Improvements
- █ Potential Frontage Road

Only left turns are shown.
Right turns also use the
connector roads. Through
traffic is not changed.

Pflaum Road Concepts

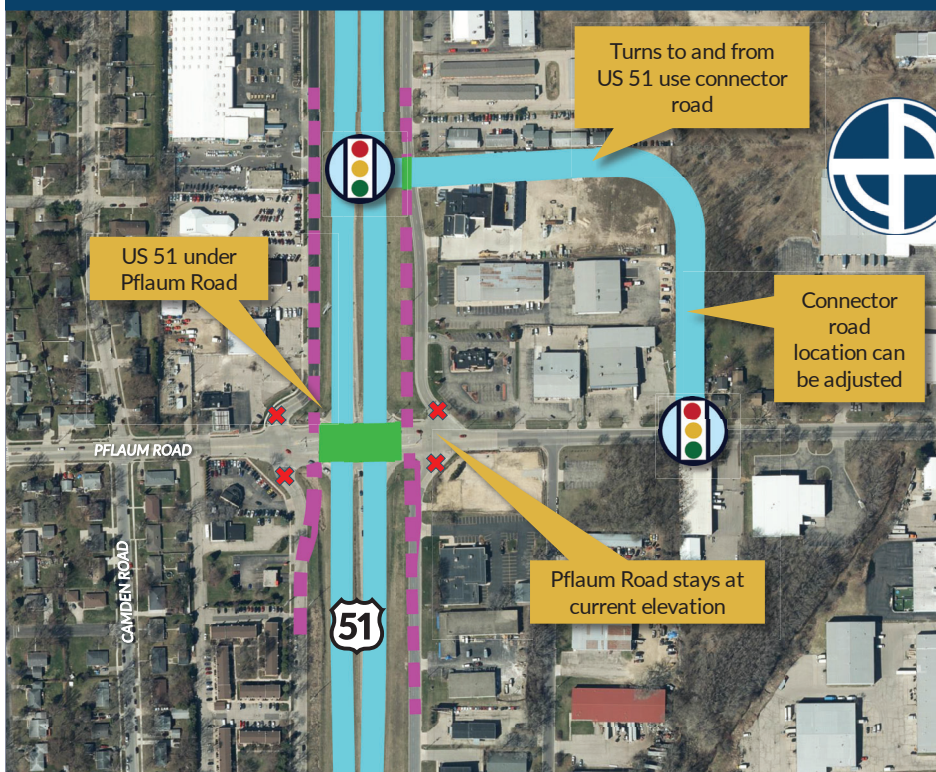
Concepts include expanding the existing intersection or a hybrid intersection



Expanded Intersection

Adds lanes and increases the spacing to frontage road intersections.

- + Addresses close frontage road intersection spacing
- + Additional lanes improve intersection operations
- + No bridge costs required
- Intersection design does not address high crash rate on US 51
- Bikes and pedestrians must cross large intersection
- May require up to 21 property relocations



Hybrid Intersection

Reroutes all turning vehicles onto a connector roadway.

- + Tee intersection likely to decrease crashes due to fewer left turn movements
- + East/west travelers would no longer interact with US 51 traffic
- + Grade separated bike and pedestrian crossing
- + Smaller US 51 intersection reduces delay
- + Provides best intersection operations
- Indirection for turning traffic
- May require up to 4 property relocations
- High cost due to bridge and retaining walls

LEGEND:



New Signal

Improve Existing Signal



US 51 Improvements



Potential Frontage Road



Proposed Bridge



Remove Roadway



Navigating Pflaum Road Hybrid Concept



LEGEND:

- Northbound US 51 to Westbound Pflaum Road
- Southbound US 51 to Eastbound Pflaum Road
- Eastbound Pflaum Road to Northbound US 51
- Westbound Pflaum Road to Southbound US 51

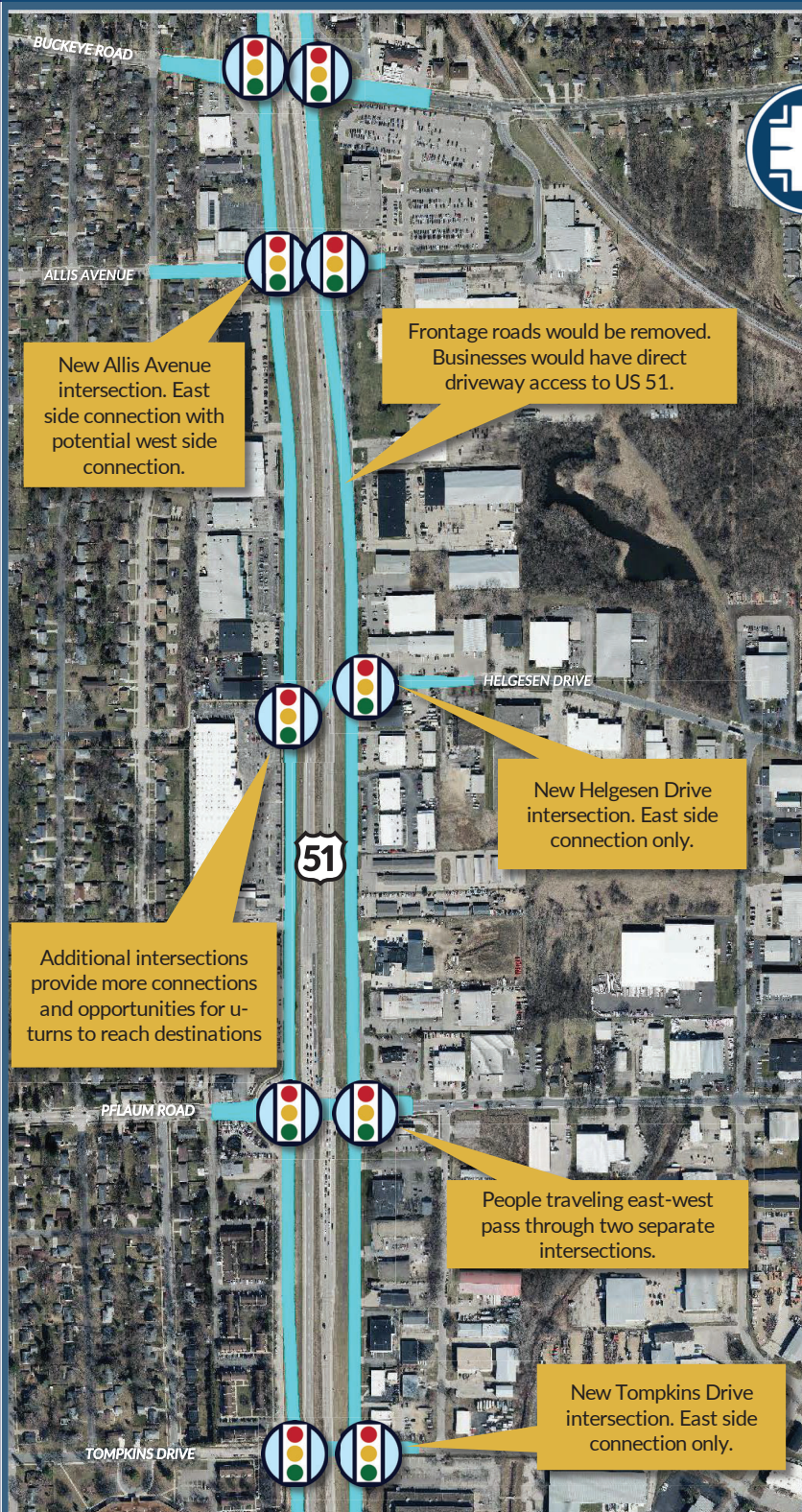
- US 51 Improvements
- Potential Frontage Road

Only left turns are shown.
Right turns also use the
connector roads. Through
traffic is not changed.



Wide Boulevard Intersection

Intersections between Buckeye Road and Tompkins Drive would function as one-way road intersections if the Wide Boulevard concept is chosen



Buckeye Road to Tompkins Drive

Functions as two one-way street crossings.

Frontage roads would be removed and businesses would have direct driveway access to US 51.

Allows vehicles and multi-modal traffic to cross one direction of US 51 at a time.

Encourages a slower, urban-style roadway.

- + Two one-way intersections likely to have fewer crashes than a traditional intersection
- + Efficient signals with minimal delay
- + No bridge costs required
- + Bikes and pedestrians cross smaller/less complex intersections
- Bikes and pedestrians must cross US 51 traffic
- May require up to 2 property relocations

LEGEND:



New Signal



US 51 Improvements

Broadway Concepts

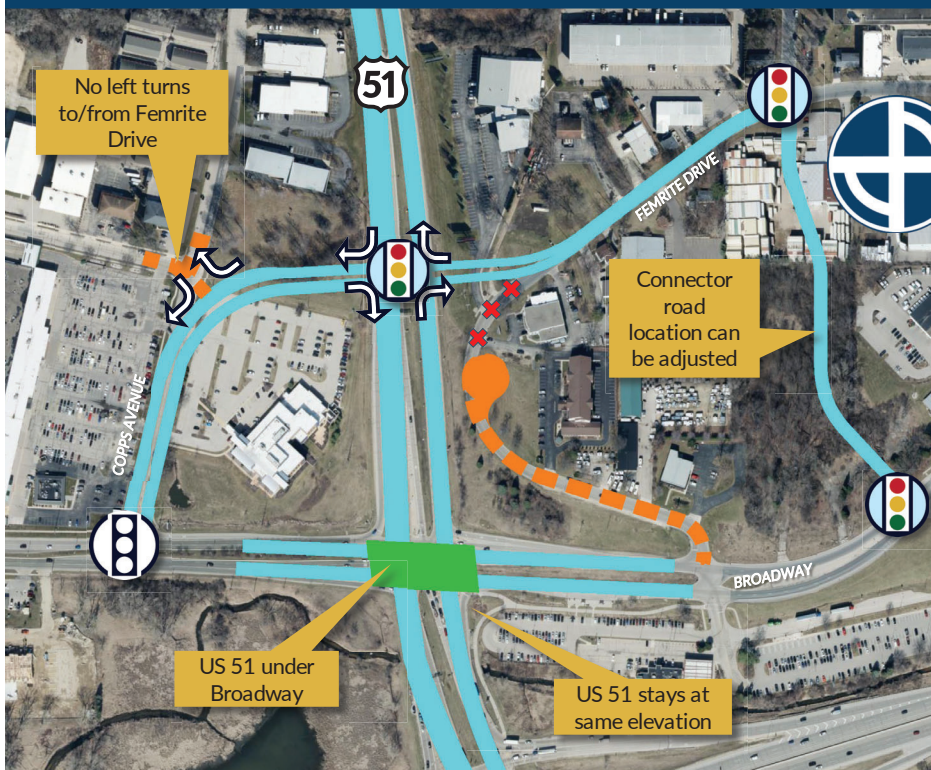
Concepts include splitting the existing intersection into two tee intersections or a hybrid intersection



Offset Tee Intersection

Creates two tee intersections at Femrite Drive (to the east) and Broadway (to the west).

- + Tee intersection likely to decrease crashes due to fewer left turn movements
- + Increased intersection spacing from Beltline, eases merge from Broadway to Beltline
- + Pair of tee intersections would improve intersection operations
- + No bridge costs required
- Some east/west indirection
- East/west travelers rerouted along US 51
- May require up to 5 property relocations



Hybrid Intersection

New intersection near Femrite Drive restricted to right turns only to and from US 51.

- + Right-turn-only concept provides greatest decrease in expected number of crashes
- + East/west travelers on Broadway would no longer interact with US 51 traffic
- + Increased intersection spacing from Beltline
- + Provides best intersection operations
- Indirection caused by right-turn-only intersection design
- Increases traffic volume along Copps Ave
- May require up to 2 property relocations
- High cost due to bridge and retaining walls

LEGEND:

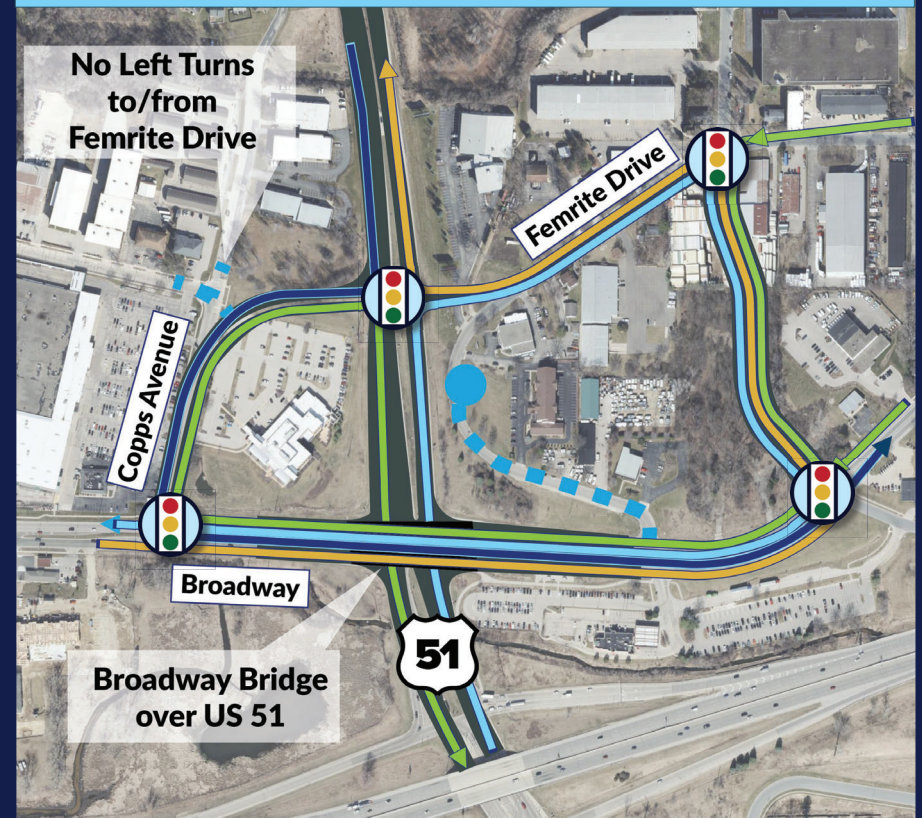
- New Signal
- US 51 Improvements
- Proposed Bridge
- Remove Roadway
- Improve Existing Signal
- Local Road Improvements
- Right Turns Only

Navigating Broadway Road Concepts

Offset Tee



Hybrid



LEGEND:

- Northbound US 51 to Westbound Broadway
- Southbound US 51 to Eastbound Broadway/Femrite Drive
- Eastbound Broadway to Northbound US 51
- Westbound Broadway/Femrite Drive Road to Southbound US 51

- US 51 Improvements
- Local Road Improvements

Right turns and through traffic follows similar routes.

Beltline Interchange Concepts

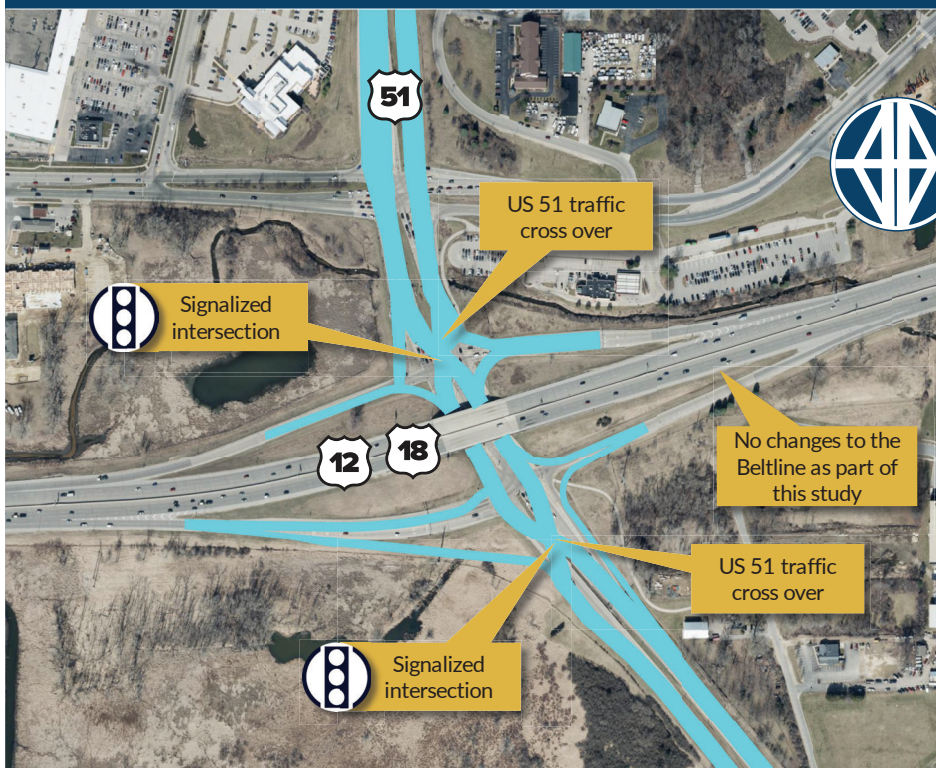
Concepts include maintaining a traditional interchange or converting to a Diverging Diamond Interchange



Improve Existing Interchange

Maintains existing interchange layout. Provides additional lane and extends entrance and exit lanes.

- + Familiar traffic pattern
- + Additional lanes improve intersection operations
- Potential backups into Broadway intersection cause safety concern



Diverging Diamond Interchange

Improved flow onto the Beltline by crossing US 51 through traffic.

- + Reduced backups and improved intersection design would likely reduce crashes
- + Provides best intersection operations
- Unfamiliar traffic pattern

LEGEND:



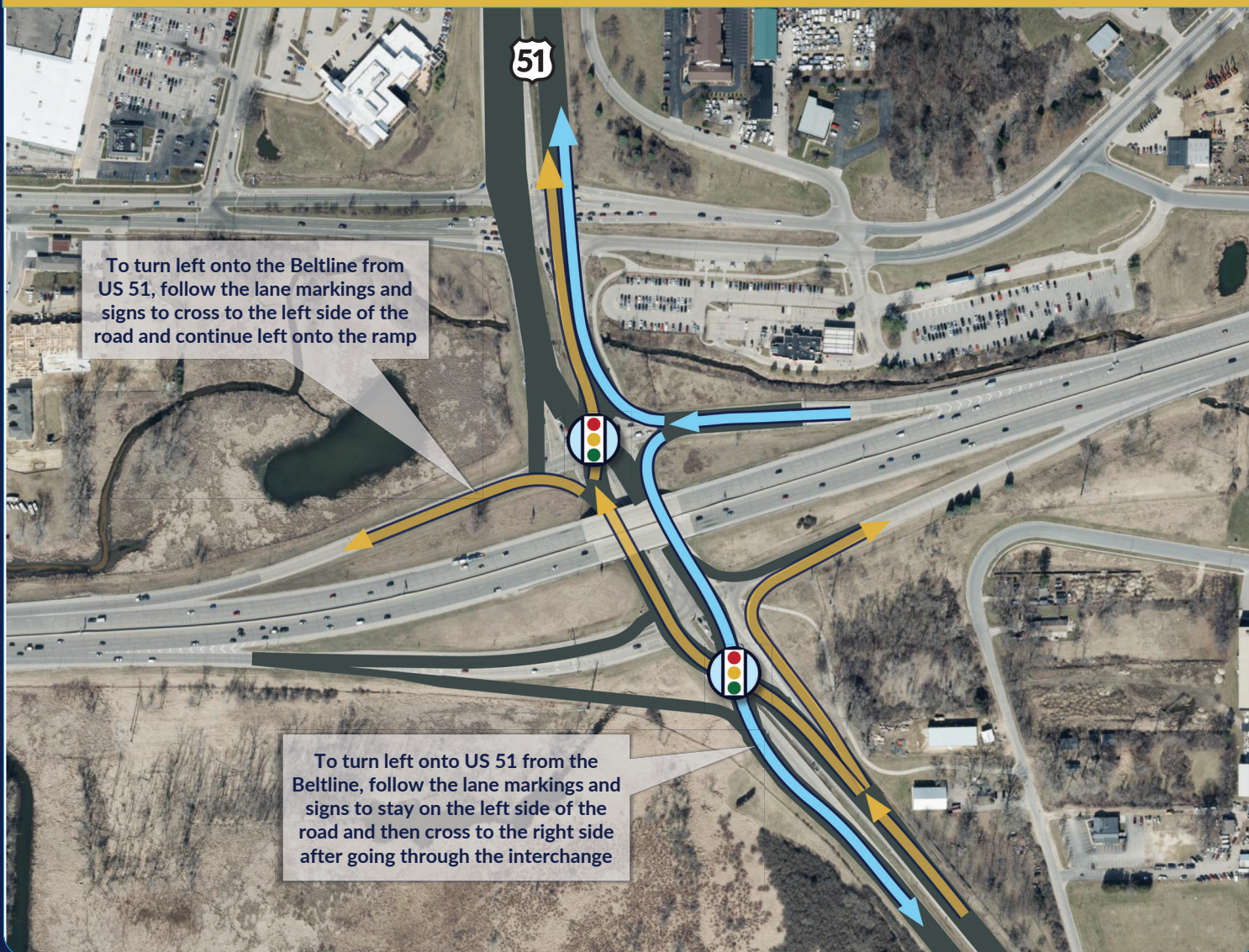
Improve Existing Signal



US 51 Improvements

Navigating a Diverging Diamond Interchange (DDI)

Diverging Diamond Interchange Traffic Flow



What is a DDI?

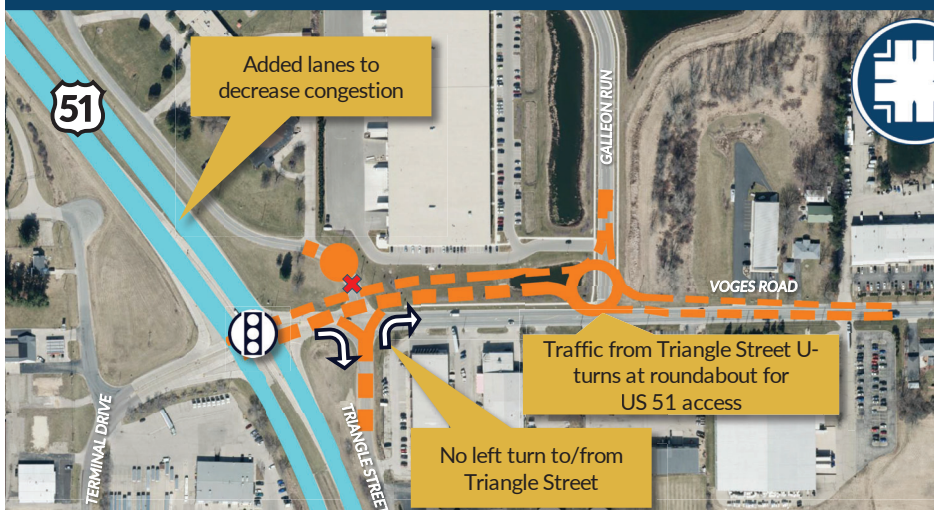
A DDI is a type of interchange that temporarily shifts traffic to the other side of the roadway between freeway ramps to better accommodate high amounts of left turning vehicles.

Advantages

- ✓ Reduces number of vehicle conflict points
- ✓ More efficient signal operations create fewer delays and backups
- ✓ Left turns no longer conflict with oncoming traffic

Voges Road/Terminal Drive Concepts

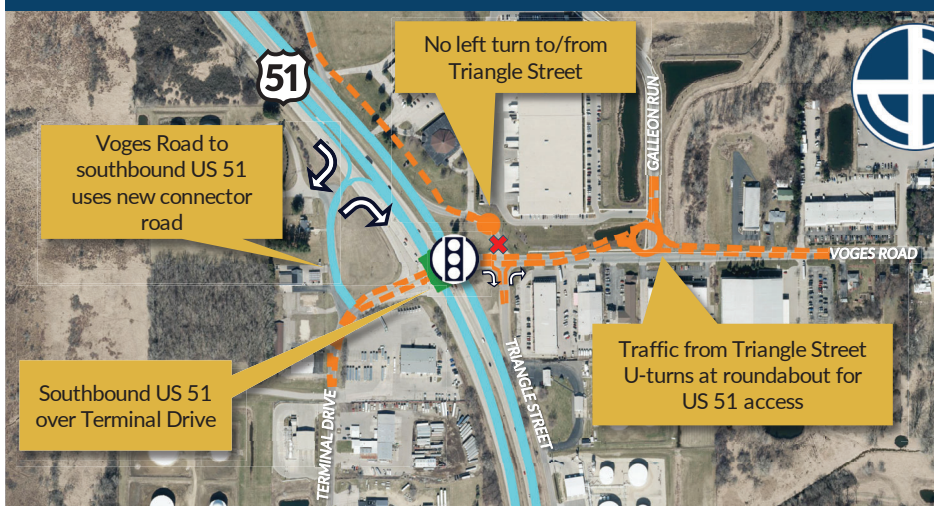
Concepts include expanding the existing intersection or a hybrid intersection



Expanded Intersection

Adds lanes for more capacity and changes frontage road access.

- + Addresses close intersection spacing
- + Additional lanes improve intersection operations
- + Familiar traffic pattern
- + No bridge costs required
- Access changes and impacts to surrounding area
- May require up to 1 property relocations



North Connector Hybrid

Reroutes some turning vehicles onto a northern connector roadway and changes frontage road access.

- + Southbound US 51 traffic doesn't conflict with Voges Road / Terminal Drive
- + Smaller US 51 intersection provides better operation than the Expanded Intersection
- Creates indirection for some users
- Access changes and impacts to surrounding area
- High cost due to bridge and retaining walls
- May require up to 3 property relocations




South Connector Hybrid


Reroutes some turning vehicles onto a southern connector roadway. Only right turns on to and off US 51.

- + Southbound US 51 traffic doesn't conflict with Voges Road / Terminal Drive
- + Smaller US 51 intersection provides better operation than the Expanded Intersection
- + Maintains access to Triangle Street and Dutch Mill Road
- Creates indirection for some users
- Access changes and impacts to surrounding area
- High cost due to bridge and retaining walls
- May require up to 2 property relocations

LEGEND:

 New Signal


 Improve Existing Signal

 US 51 Improvements

 Local Road Improvements

 Remove Roadway

 Proposed Bridge

 Right Turns Only

Navigating Voges Road/Terminal Drive Hybrid Concepts

North Connector Hybrid



South Connector Hybrid



LEGEND:

- Northbound US 51 to Westbound Terminal Drive
- Southbound US 51 to Eastbound Terminal Drive/Voges Road
- Eastbound Terminal Drive to Northbound US 51
- Westbound Terminal Drive/Voges Road to Southbound US 51

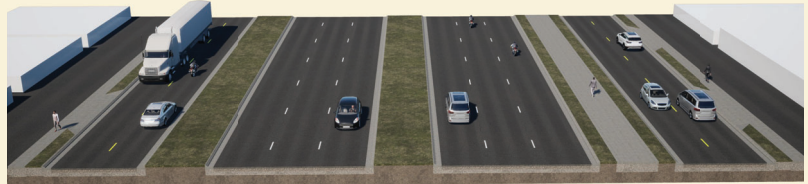
- US 51 Improvements
- Local Road Improvements

Only left turns are shown.
Right turns also use the
connector roads. Through
traffic is not changed.

Next Steps: Detailed Alternatives

Your feedback on the conceptual alternatives will help us identify which concepts move forward for detailed study.

November 2024
public meeting:
Corridor-wide concepts



July 2025
public meeting:
Intersection concepts



A public meeting in winter 2025/2026 will present
3-4 detailed alternatives.



Detailed alternatives will define:

- ✓ Speed limits
- ✓ Roadway design characteristics
- ✓ Frontage road designs
- ✓ Intersection types
- ✓ Any potential new intersections
- ✓ Bicycle/Pedestrian accommodations



We Want to Hear From You!



Visit the study website for more information:

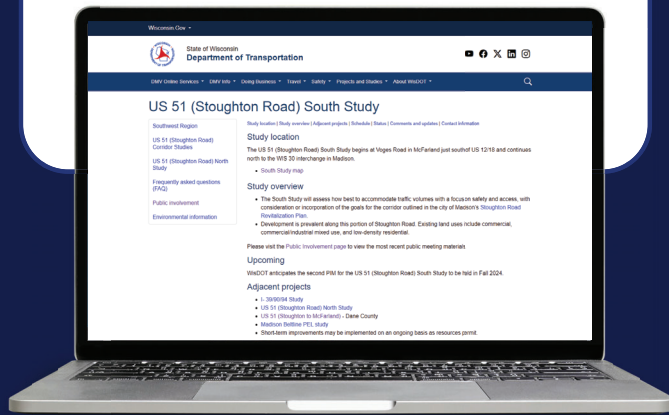
- Study schedule
- Exhibit boards
- Public meeting presentation
- Link to online survey
- Study updates
- and more!



Go to:

tinyurl.com/US51SouthStudy

Public meeting materials will be available online starting July 16, 2025



Take our survey!

Your input will help shape the vision for the corridor.



Who should I contact?

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Project Manager
WisDOT SW Region

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Jeff.Berens@dot.wi.gov



Fill out a comment form!

Comment period is open through August 15, 2025

Leave us a comment:

- By mail
- By Email
- Online

