

City of Madison position on

WisDOT US 51 (Stoughton Road) North Study

City of Madison Transportation Commission

May 29, 2024

WisDOT Stoughton Road Studies - Timelines

North Section

April – Pref Alt

City comment

Sept – Env Doc

Late 2024 - TPC

South Section

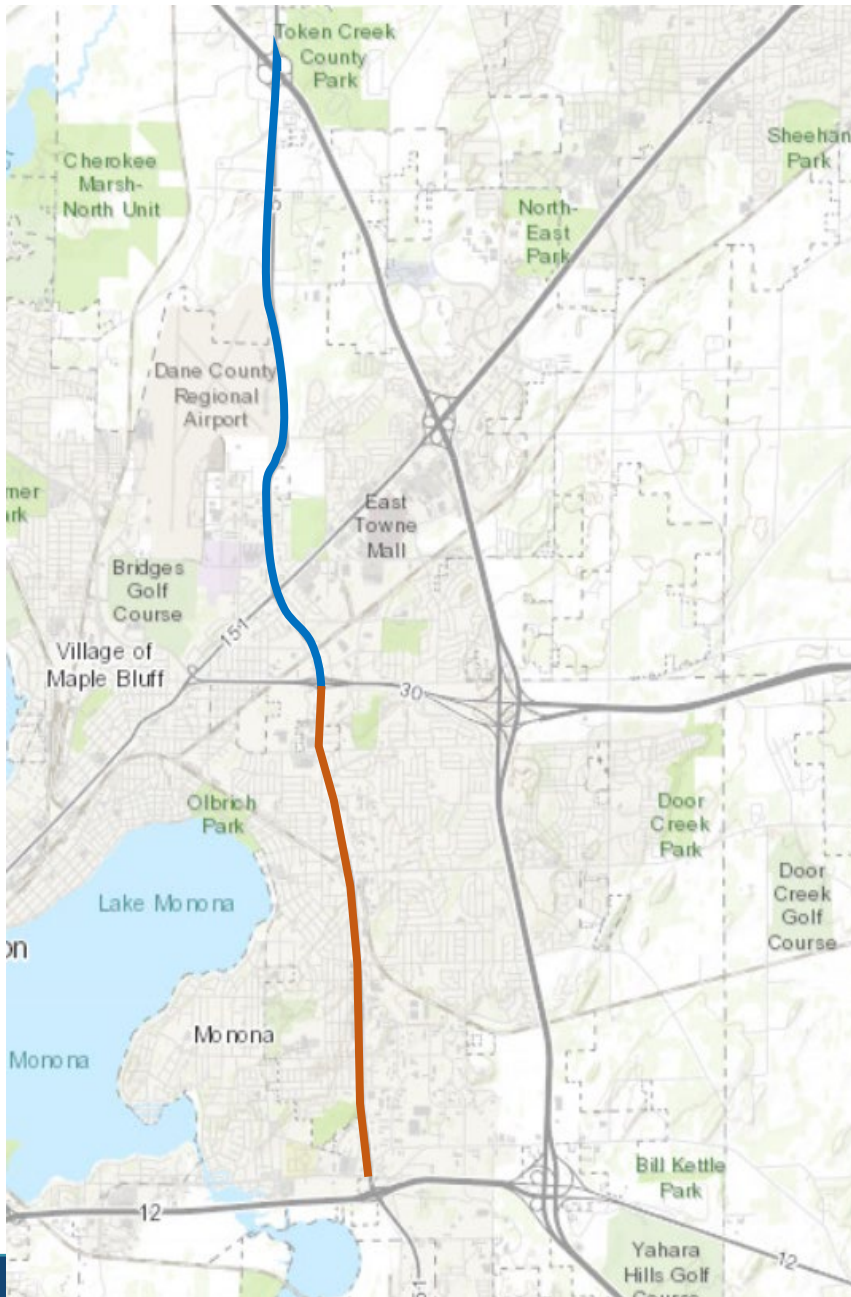
2022 – WisDOT asked if Madison wanted JT

Sept – Alts to Public

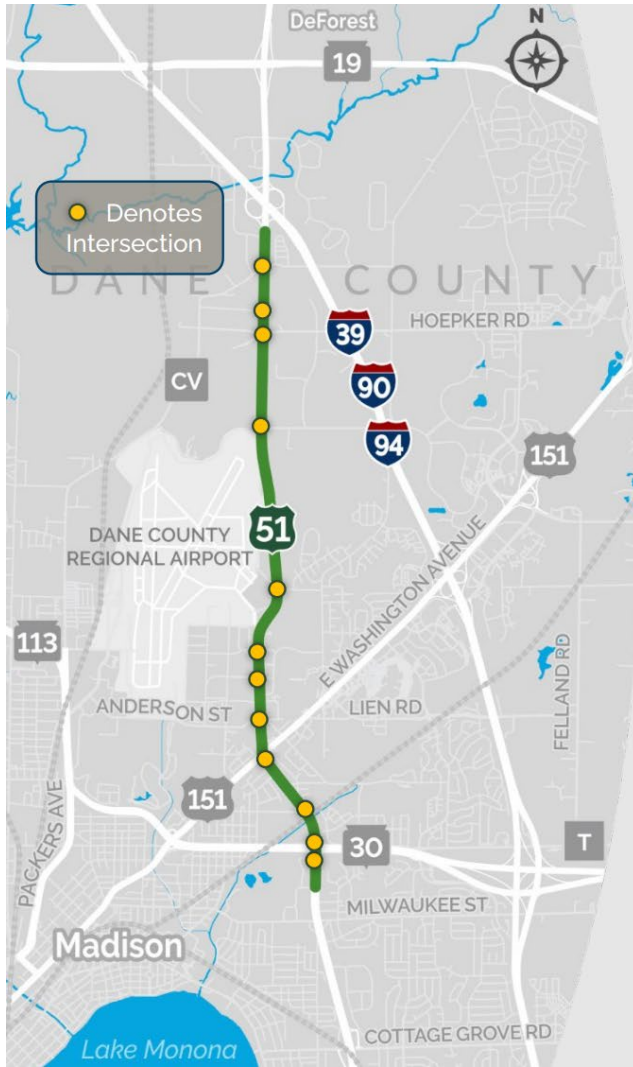
City comment

Winter – Env Doc

Late 2026 - TPC
















North Study – Overview and Timeline

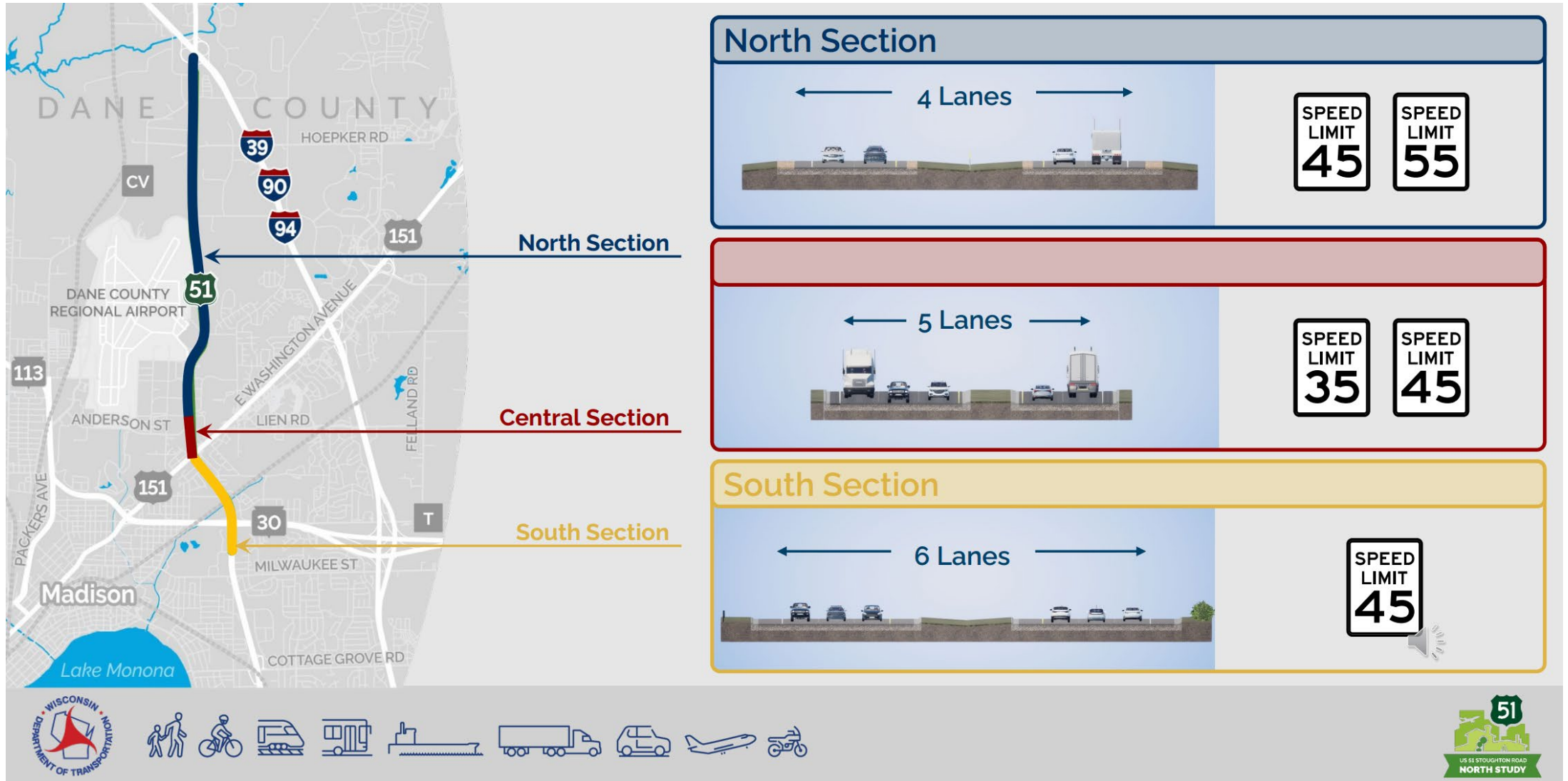


Corridor Overview

13 INTERSECTIONS:


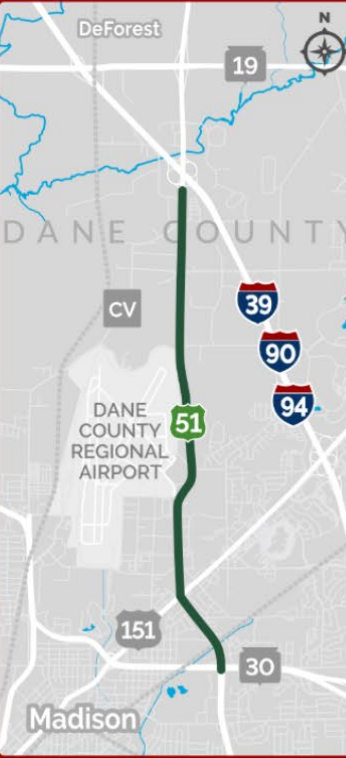
-  County CV/Anderson Road
-  Acker Road
-  Hoepker Road
-  Hanson Road
-  Amelia Earhart Drive
-  Rieder Road
-  Pierstorff Street
-  Kinsman Boulevard
-  Anderson Street
-  US 151/East Washington Avenue
-  Commercial Avenue
-  WIS 30 – North Ramps
-  WIS 30 – South Ramps

Existing Typical Section and Speed Limits



Project Purpose and Need

Accommodate existing and future travel demand with a focus on safety issues that affect travel on Stoughton Road

<p>Safety</p> <p>579 TOTAL CRASHES</p> <p>2 FATAL CRASHES</p> <p>12 SERIOUS INJURY CRASHES</p> <p>FOUR SEGMENT CRASH RATES EXCEED STATEWIDE AVERAGES</p>  <p>CRASH DATA FROM 2017-2021</p>	<p>Travel Demand and Traffic Operations</p> <p>POOR OPERATIONS:</p> <p>6 INTERSECTIONS EXISTING YEAR 2022</p> <hr/> <p>9 INTERSECTIONS FUTURE YEAR 2050</p> <p>*WORST PEAK HOUR MOVEMENT</p>	<p>Roadway Geometric Deficiencies</p> <p>X LARGE SKEW ANGLE AT US 51 AND US 151</p> <p>7 SUBSTANDARD CURVES BETWEEN PIERSTORFF ST AND RIEDER RD</p> <p>7 AREAS WITH HORIZONTAL ALIGNMENT DEFICIENCIES</p> <p>18 AREAS WITH VERTICAL ALIGNMENT DEFICIENCIES</p>	
<p>2 UNMARKED MID-BLOCK PEDESTRIAN CROSSING LOCATIONS</p> <p>US 51 IDENTIFIED AS A HIGH STRESS CORRIDOR FOR BICYCLISTS</p>	<p>Pavement</p> <p>TWO LOCATIONS OF PAVEMENT CONDITIONS AT OR NEARING THE THRESHOLD FOR REPLACEMENT</p>	<p>7 AREAS WITH STOPPING SIGHT DISTANCE DEFICIENCIES</p> <p>10 AREAS WITH CROSS SECTION DEFICIENCIES</p>	



Alternative Development Overview

- Improvements focused on intersections
- Capacity expansion on US 51 mainline not proposed
- Shared-use path proposed on east side of US 51 from WIS 30 to Kinsman Blvd; Hoepker Rd to I-39
- Potential speed limit reduction being considered on southern portion (WIS 30 to E. Washington Ave) from 45 mph to 35 mph

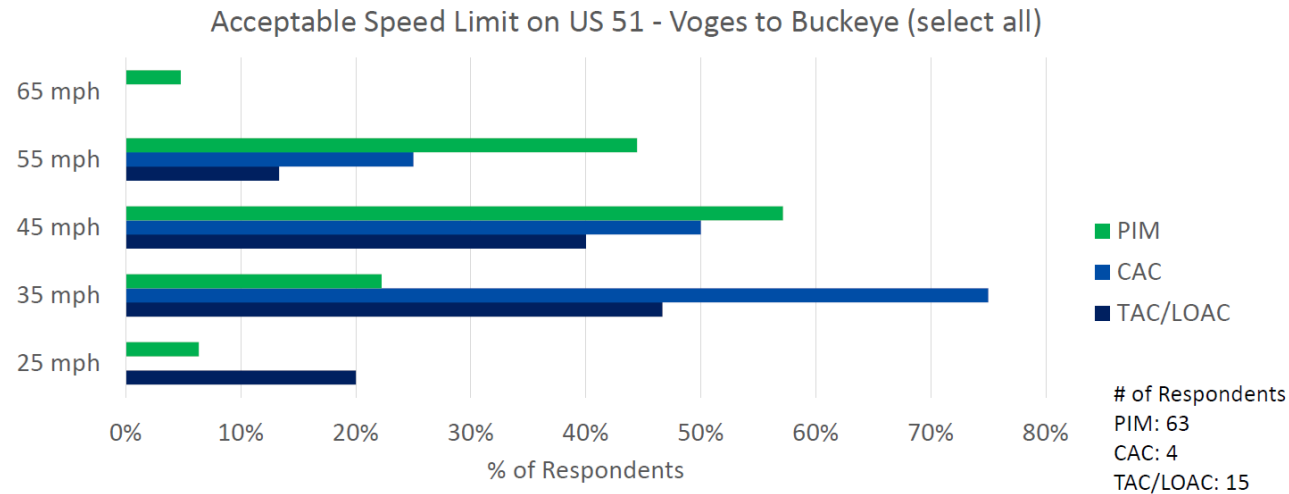
WisDOT is using advisory committees and public surveys to determine support for different alternatives

Important to have consistent Madison messaging

51 TAC/LOAC #2 Recap – Survey Results

- TAC/LOAC #2 **post-meeting** survey results
 - Concept ratings - Participants asked rate their support of the alternative concept, with 1 being not supportive at all and 5 being very supportive
 - East Washington Avenue**
 - Maintain existing: 2.2 Average score
 - SW quadrant intersection: 1.8 Average score
 - Jug handle: 1.8 Average score
 - Single-point interchange: 2.5 Average score
 - US 151 over roundabout interchange: 2.8 Average score
 - Roundabout interchange: 1.5 Average score
 - Squareabout interchange: 2.8 Average score

51 Corridor Concepts



City of Madison – General Staff Comments

- **Speed** – Facility should migrate toward an urban roadway with corridor speeds between 35 and 45 mph
- **Consistency** – Facility should maintain roadway type to the extent possible. Spacing of access points along the northern-most portion is least suited for freeway-types of access treatments.
- **Smaller-scale Infrastructure**

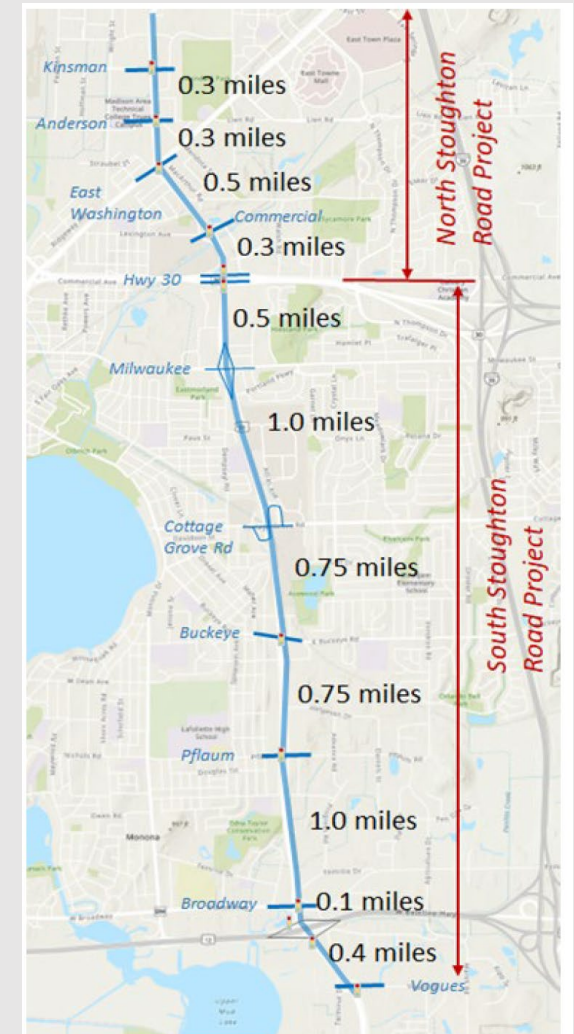
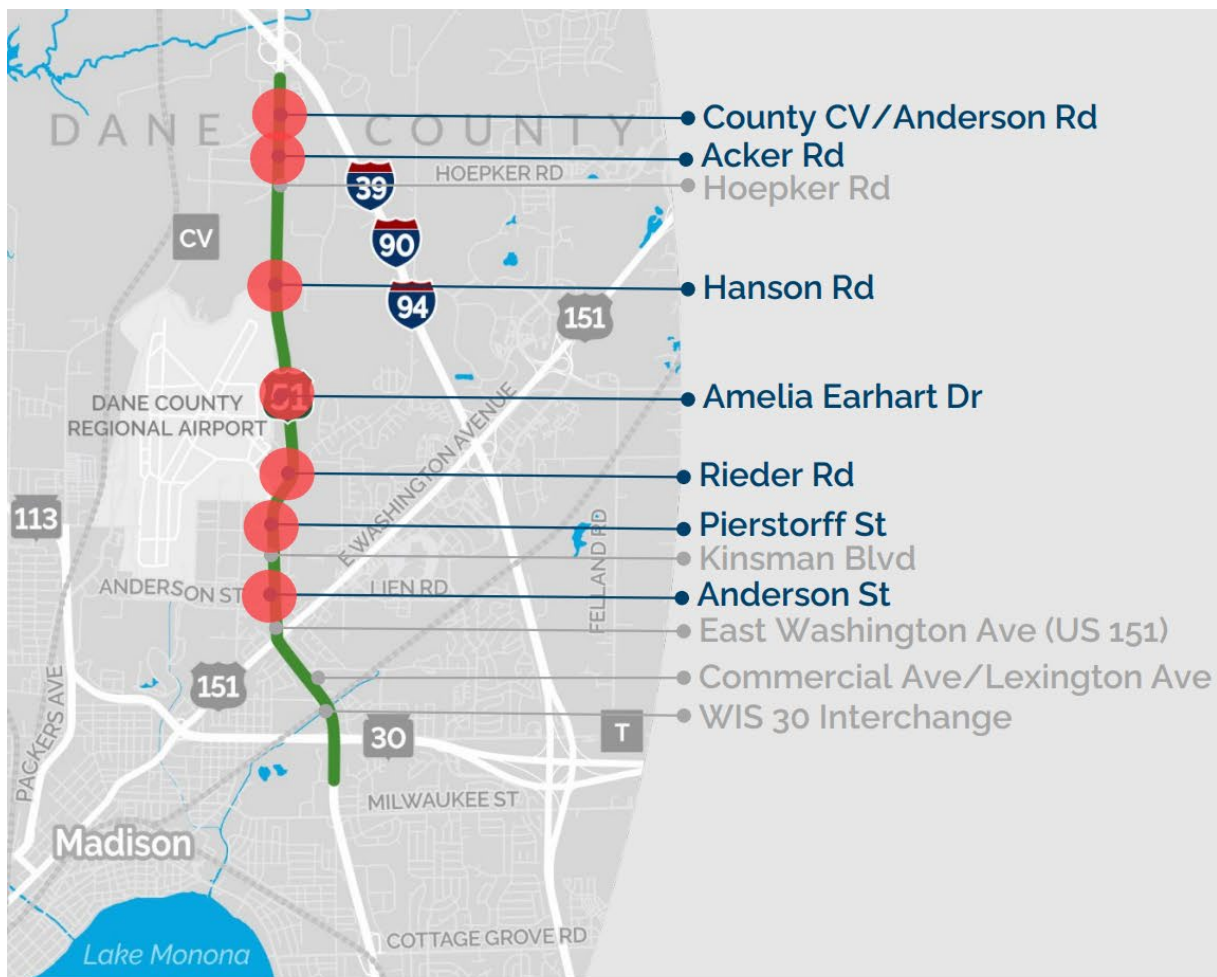


Figure 1 Corridor Access Spacing

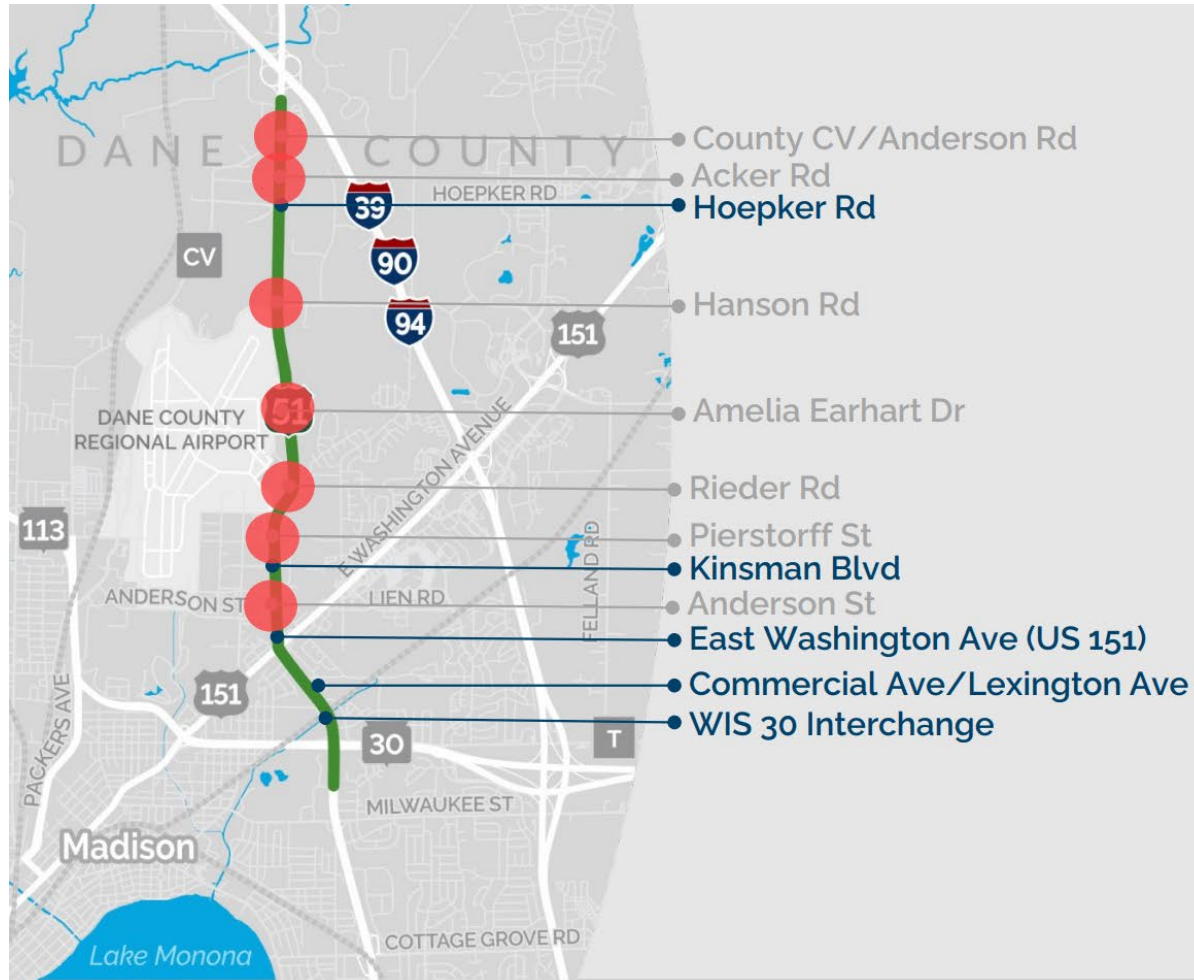
Alternative Development - Intersections



- Maintain existing intersections with minor improvements:
 - Anderson Street
 - Pierstorff Street
 - Rieder Road
 - R-Cut north of intersection
 - Amelia Earhart Drive
 - Hanson Road
 - Acker Road
 - County CV / Anderson Road
- No anticipated future safety or operational issues at these intersections, or any issues will be addressed with minor improvements



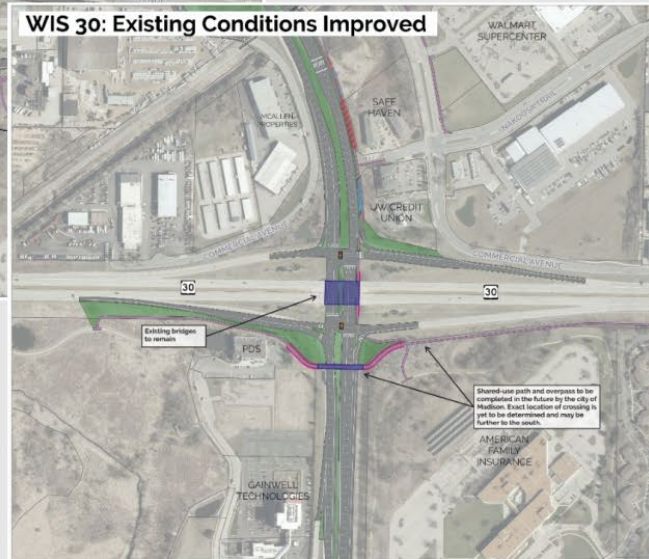
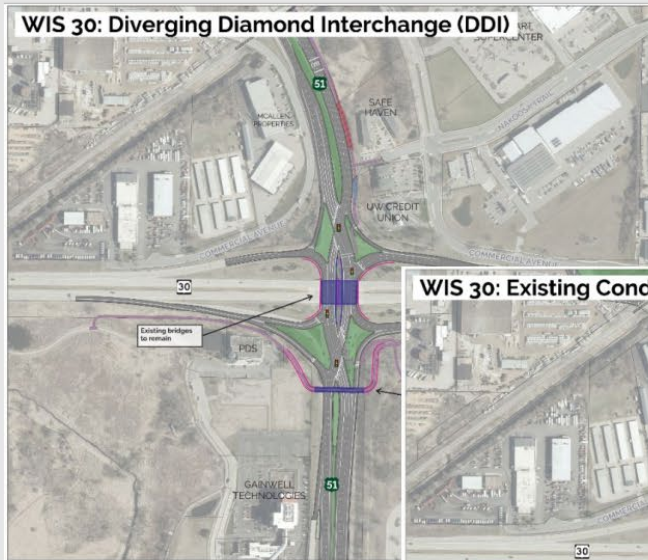
Alternative Development - Intersections



- Five locations have more than one alternative being evaluated
 - WIS 30 interchange
 - Commercial Avenue
 - East Washington Avenue
 - Kinsman Boulevard
 - Hoepker Road
- Recommended Alternative identified
 - Factors
 - How well addresses study Purpose and Need
 - Potential impacts & costs
 - Stakeholder feedback
 - May change as study moves forward
 - Additional information provided on exhibit



Alternatives and WisDOT Recommendations – WIS 30 Interchange



WIS 30 Interchange Alternatives

- Existing Conditions Improved
 - Maintain existing diamond interchange with improvements
- Diverging diamond interchange (DDI)

Recommended Alternative

- Existing Conditions Improved
- Primary factors in recommendation
 - Similar improvements to traffic operations
 - Higher safety for bikes/peds due to less travel lanes crossed
 - Familiar movements for vehicles and bikes/peds

City of Madison Staff Concurs



Alternatives and WisDOT Recommendations – Commercial Ave



Commercial Avenue Alternatives

- Existing Conditions Improved
 - Maintain existing signalized intersection with improvements
 - Railroad crossing to remain at-grade
- Three-Legged Intersection
 - Includes bridge over railroad
- Option dismissed after Public Meeting #2
 - Right-In / Right-Out (RIRO)

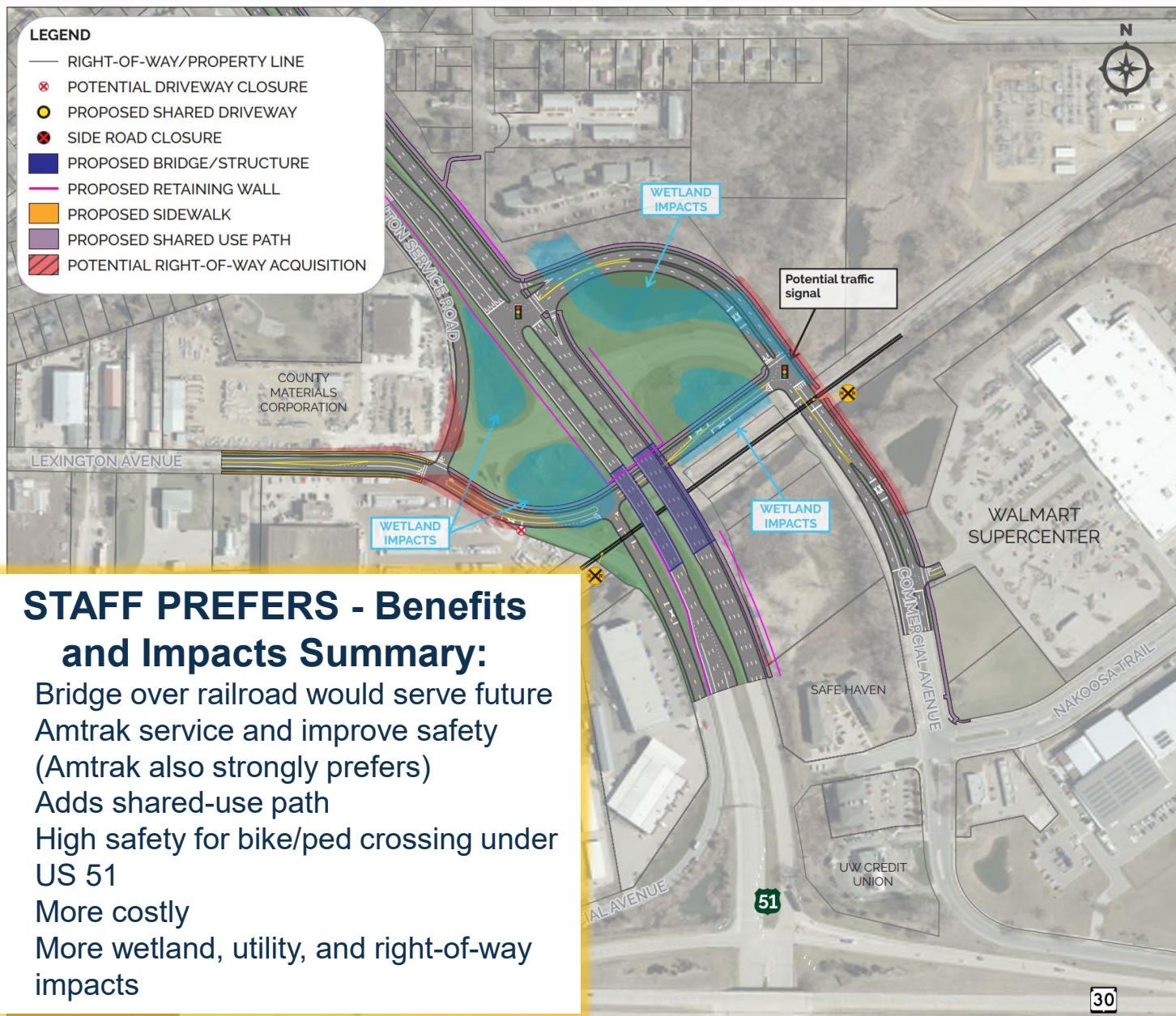
City of Madison Staff Preference

Recommended Alternative

- Existing Conditions Improved
- Primary factors in recommendation
 - Similar improved safety and operations
 - Considerably less overall impacts
 - Considerably less construction costs



Commercial Ave – Three-legged Intersection Details



STAFF PREFERS - Benefits and Impacts Summary:

- Bridge over railroad would serve future Amtrak service and improve safety (Amtrak also strongly prefers)
- Adds shared-use path
- High safety for bike/ped crossing under US 51
- More costly
- More wetland, utility, and right-of-way impacts

Alternative Overview:

- Provides bridges over the existing railroad and new roadway connection underneath US 51
- Realigns US 51 / Commercial Avenue intersection as a three-legged signalized intersection

Geometry:



- Provides grade-separating bridges over railroad
- Provides non-traditional left turning movements
- Requires bridge/retaining wall structures
- Provides auxiliary lane between WIS 30 and Commercial Avenue, increasing capacity

Safety:



- High safety for bike/peds crossing underneath US 51
- Main intersection eliminates vehicle/rail conflicts
- Adds shared-use path to the roadway network

Traffic:



- Improves traffic operations
- Ability to accept additional capacity to accommodate fluctuations in future traffic volumes

Potential Impacts:



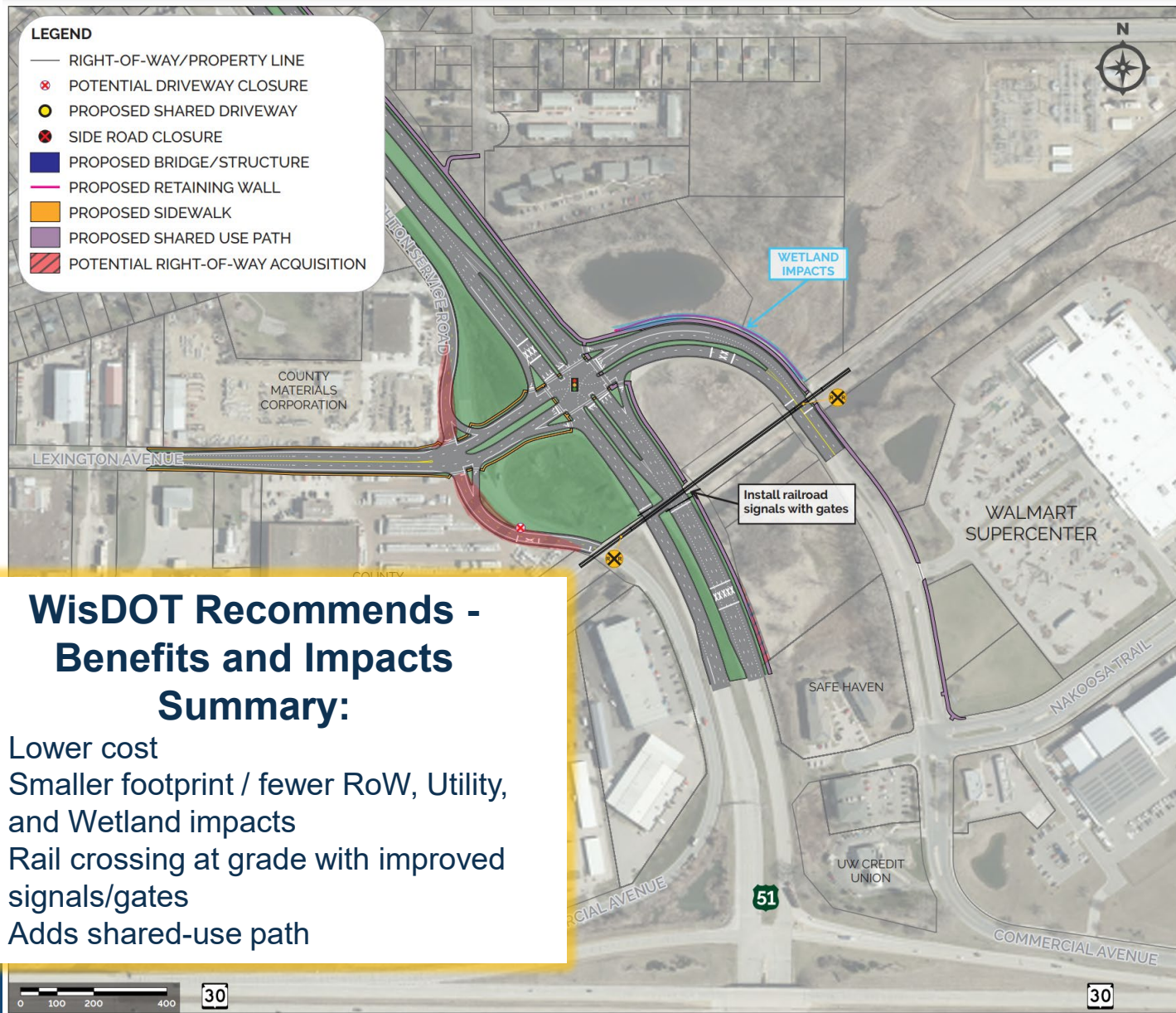
- Right-of-Way | 4.6 acres
- Wetlands | 6.3 acres
- Driveway Access | 1 potential driveway relocation
- Utilities | High impacts. Requires high-voltage utility relocations
- Construction Costs | \$\$\$\$

Public and Stakeholder Feedback:



- Public | High Support
- Stakeholders | High Support

Commercial Ave – Existing Conditions Improved Intersection Details



WisDOT Recommends - Benefits and Impacts Summary:

- Lower cost
- Smaller footprint / fewer RoW, Utility, and Wetland impacts
- Rail crossing at grade with improved signals/gates
- Adds shared-use path

Alternative Overview:

- Existing signalized configuration with improvements
- US 51 railroad crossing remains at-grade with gates

Geometry:



- Adds additional northbound and southbound left turn lanes
- Raises roadway network to improve known drainage issues
- Provides auxiliary lane between WIS 30 and Commercial Avenue, increasing capacity
- Realigns Lexington Avenue/N. Stoughton Service Road intersection to meet standards

Safety:



- Adds railroad signals and gates to improve safety
- Adds crosswalks to all legs of US 51 and Commercial Avenue
- Adds shared-use path to the roadway network

Traffic:



- Improves traffic operations
- Ability to accept additional capacity to accommodate fluctuations in future traffic volumes

Potential Impacts:



- Right-of-Way | 1.5 acres
- Wetlands | 0.9 acres
- Driveway Access | 1 potential driveway relocation
- Utilities | Low impacts
- Construction Costs | \$\$ \$\$\$

Public and Stakeholder Feedback:

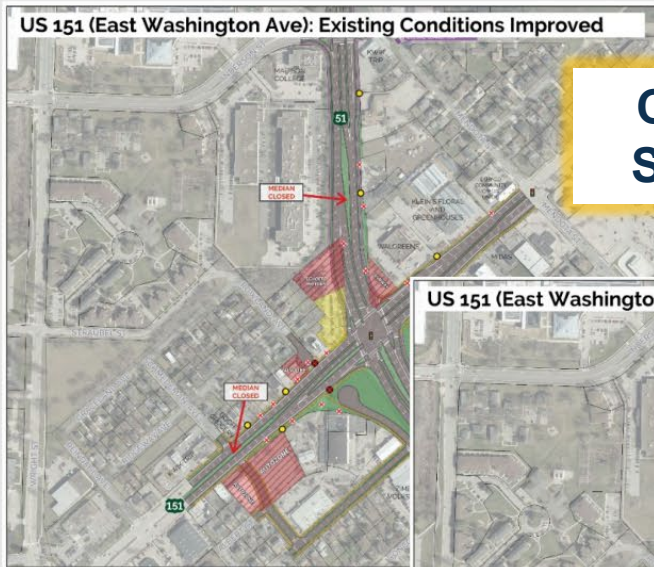


- Public | Moderate Support
- Stakeholders | Moderate Support

Reasons for Recommendation Compared to the Three-Legged Alternative

- Similar improved safety and traffic operations
- Considerably less overall impacts
- Considerably less construction costs

Alternatives and WisDOT Recommendations – E. Washington Ave



East Washington Avenue Alternatives

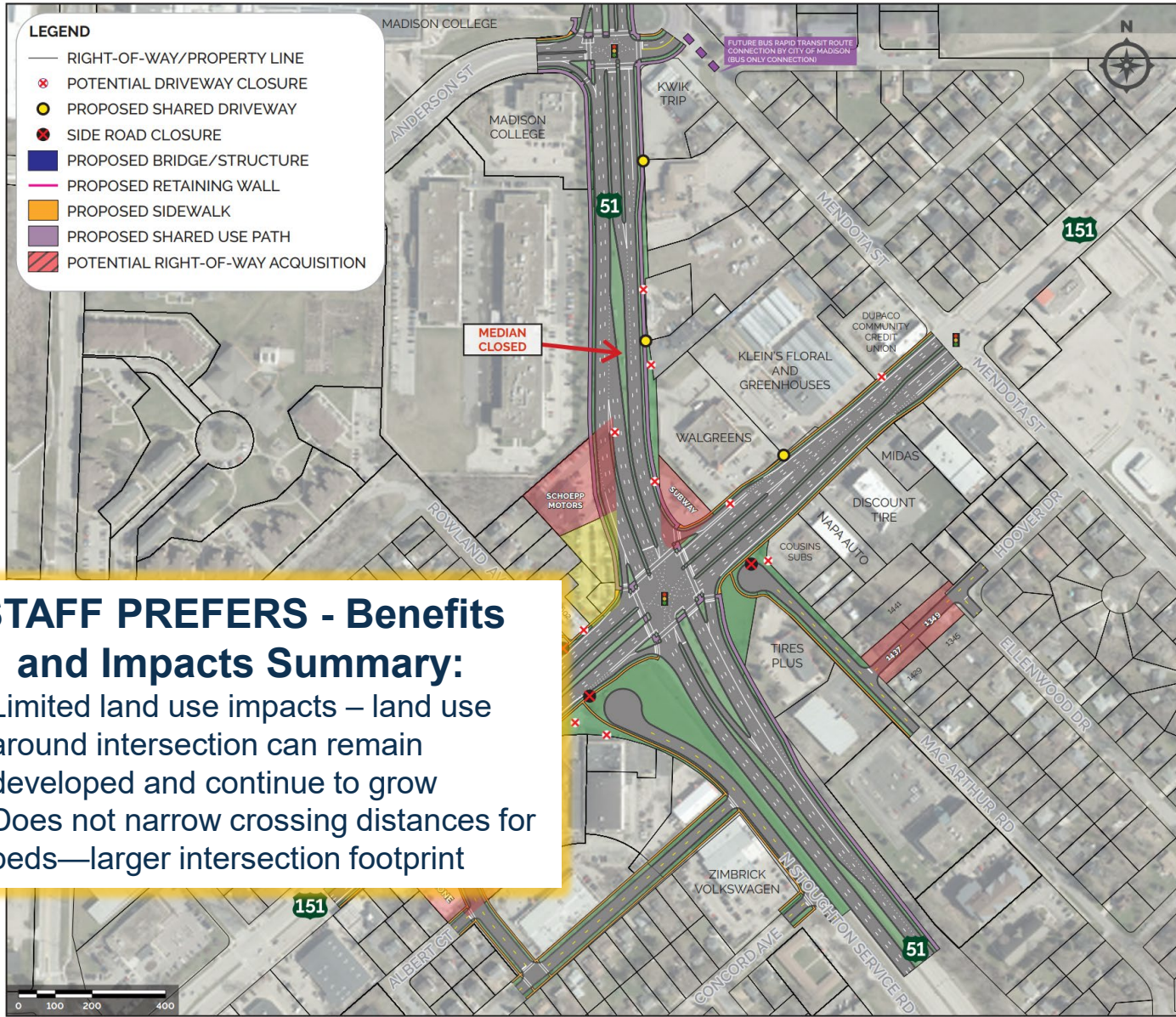
- Existing Conditions Improved
 - Maintain existing signalized intersection with improvements
- Jughandle
- Option dismissed after Public Meeting #2
 - Quadrant intersection
 - Tight diamond interchange

Recommended Alternative

- **Jughandle**
- Primary factors in recommendation
 - Improved safety at US 51 and US 151 intersection
 - Better bike/ped safety at main intersection
 - Improved overall traffic operations and excess capacity at US 51 and US 151 intersection



E. Washington Ave – Existing Conditions Improved Details



Alternative Overview:

- Existing signalized intersection with improvements

Geometry:

- Expands upon the existing intersection footprint providing 1 additional northbound lane, 1 additional southbound left turn lane and 1 additional westbound left turn lane
- Improves intersection skew angle
- Maintains existing 'urban' intersection configuration

Safety:

- Does not reduce traffic conflicts
- Larger intersection footprint reduces bike/ped safety at the intersection
- Provides crosswalks across all legs of the intersection

Traffic:

- Improves traffic operations
- Does not provide significant additional capacity to accommodate fluctuations in future traffic volumes

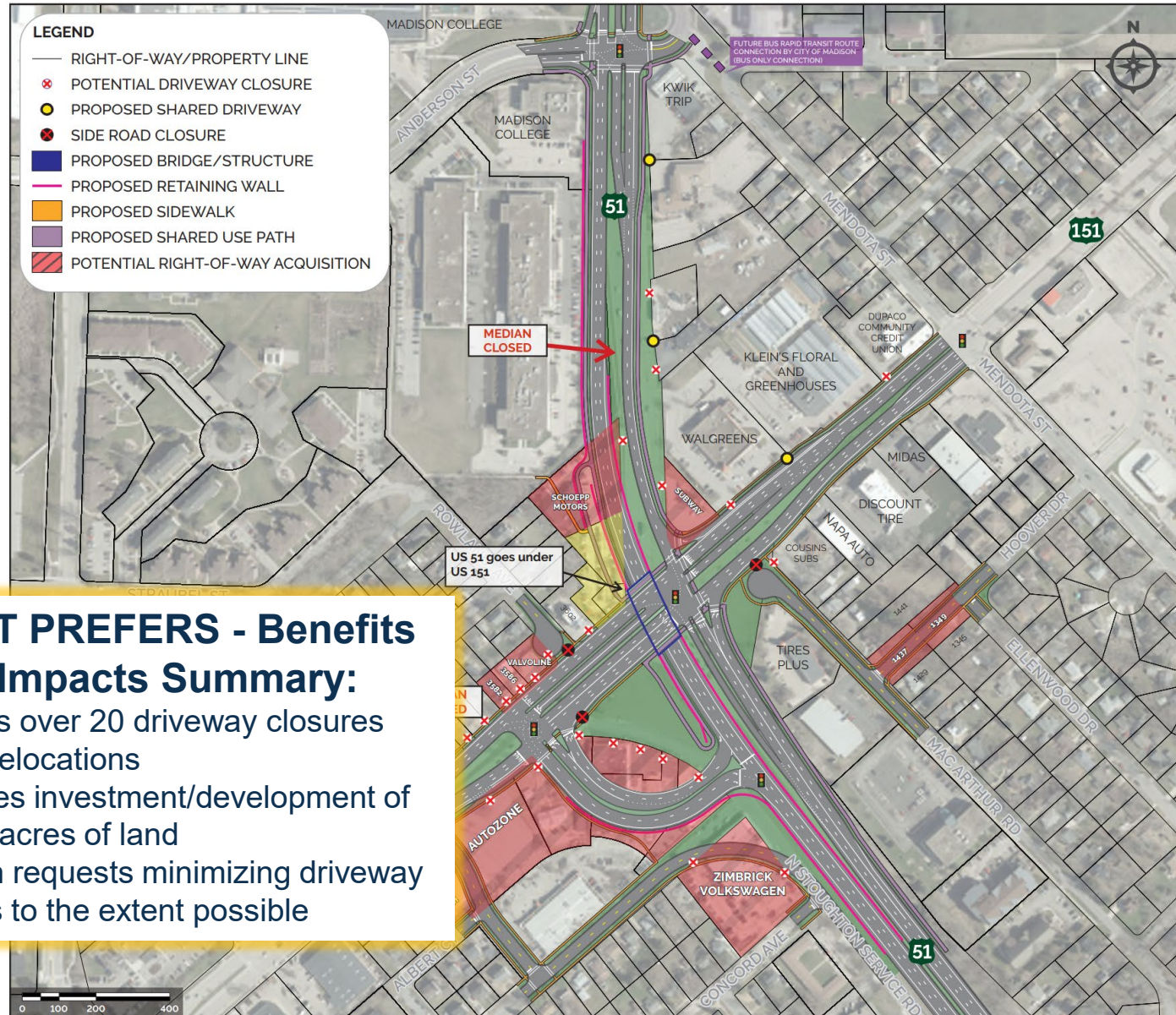
Potential Impacts:

- Right-of-Way | 4 acres
- Side Road Access | 3 closures
- Relocations | 4 business and 2 residential estimated
- Driveway Access | 16 potential driveway closures
- Drainage | Minimal impacts
- Utilities | Minimal impacts
- Construction Costs | \$\$\$

Public and Stakeholder Feedback:

- Public - Moderate Support
- Stakeholders - High Support

E. Washington Ave – Jug Handle Alternative Details



LEGEND

- RIGHT-OF-WAY/PROPERTY LINE
- ⊗ POTENTIAL DRIVEWAY CLOSURE
- PROPOSED SHARED DRIVEWAY
- ⊗ SIDE ROAD CLOSURE
- PROPOSED BRIDGE/STRUCTURE
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED SHARED USE PATH
- ▨ POTENTIAL RIGHT-OF-WAY ACQUISITION

RECOMMENDED ALTERNATIVE

Alternative Overview:

- Provides signalized intersection with partial grade-separation for southbound US 51 traffic
- Redirects key left turn movements to two new signalized intersections

Geometry:

- Improves intersection skew angle
- Southbound US 51 flows freely underneath US 151
- Requires bridge/retaining wall structures
- Similar to the Jughandle at the intersection of Mineral Point Road and Junction Road on Madison's west side

Safety:

- Reduces vehicle conflicts at the main intersection
- Improves safety for bike/peds at the main intersection due to shorter crossings

Traffic:

- Improves traffic operations
- Ability to accept additional capacity to accommodate any fluctuation in future traffic volumes

Potential Impacts:

- Right-of-Way | 11 acres
- Side Road Access | 3 closures
- Relocations | 11 business and 2 residential estimated
- Driveway Access | 23 potential driveway closures
- Drainage | High impacts
- Utilities | Moderate impacts
- Construction Costs | \$\$\$\$\$

Public and Stakeholder Feedback:

- Public | Moderate Support
- Stakeholders | Low Support

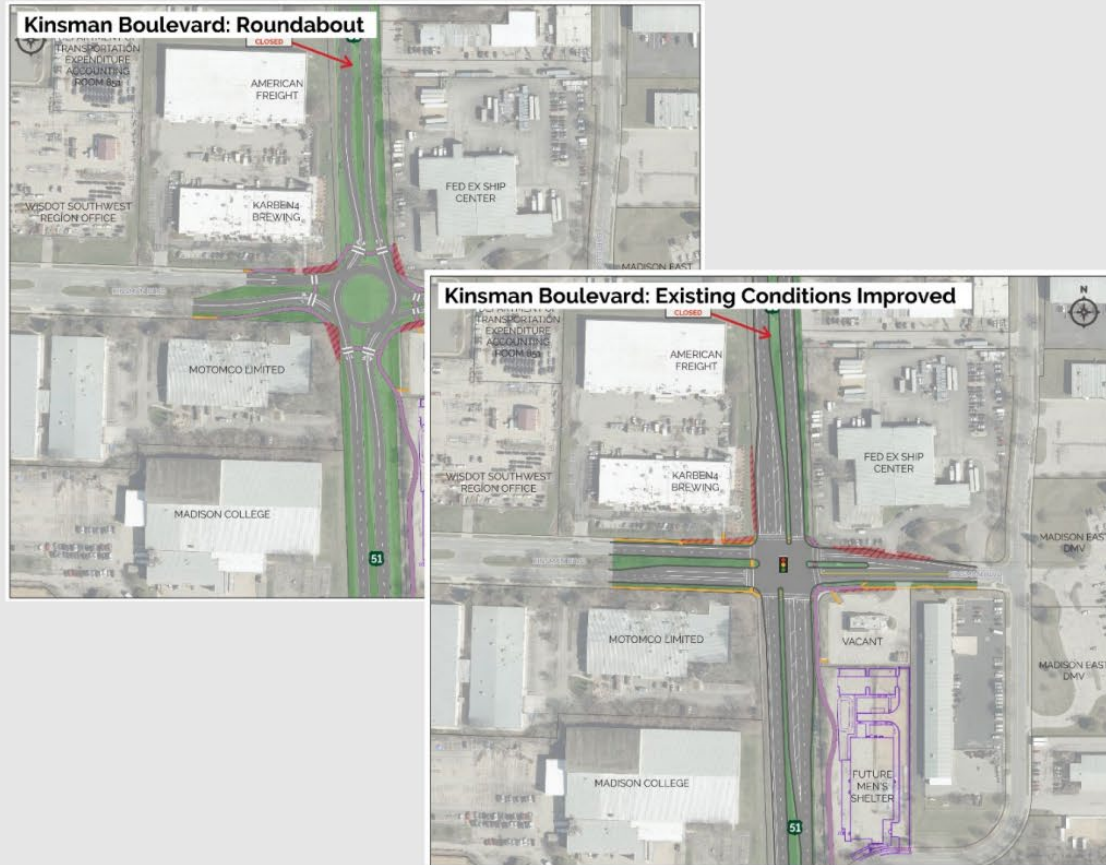
Reasons for Recommendation Compared to the Existing Improved Alternative:

- Improved safety with fewer predicted crashes at the main intersection
- Improved overall traffic operations and ability to accept additional future capacity
- Better bike/ped safety with shorter crossings and reduced conflict points at the main intersection

WISDOT PREFERS - Benefits and Impacts Summary:

- Requires over 20 driveway closures and 11 relocations
- Precludes investment/development of over 10 acres of land
- Madison requests minimizing driveway closures to the extent possible

Alternatives and WisDOT Recommendations – Kinsman Blvd



Kinsman Boulevard Alternatives

- Existing Conditions Improved
 - Maintain existing signalized intersection with improvements

- Roundabout

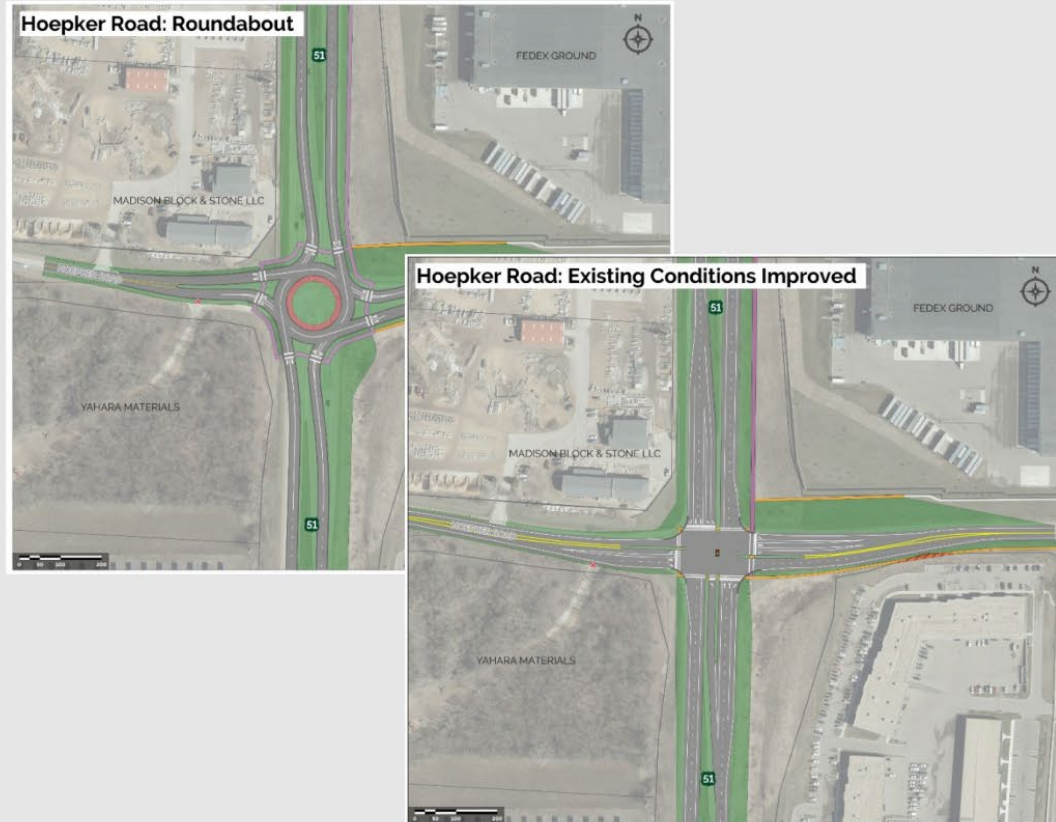
Recommended Alternative

- Existing Conditions Improved
- Primary factors in recommendation
 - Improved safety
 - Controlled crossings for bikes/peds
 - More stakeholder support

City of Madison Staff Concur



Alternatives and WisDOT Recommendations – Kinsman Blvd



Hoepker Road Alternatives

- Existing Conditions Improved
 - Maintain existing signalized intersection with improvements

- Roundabout

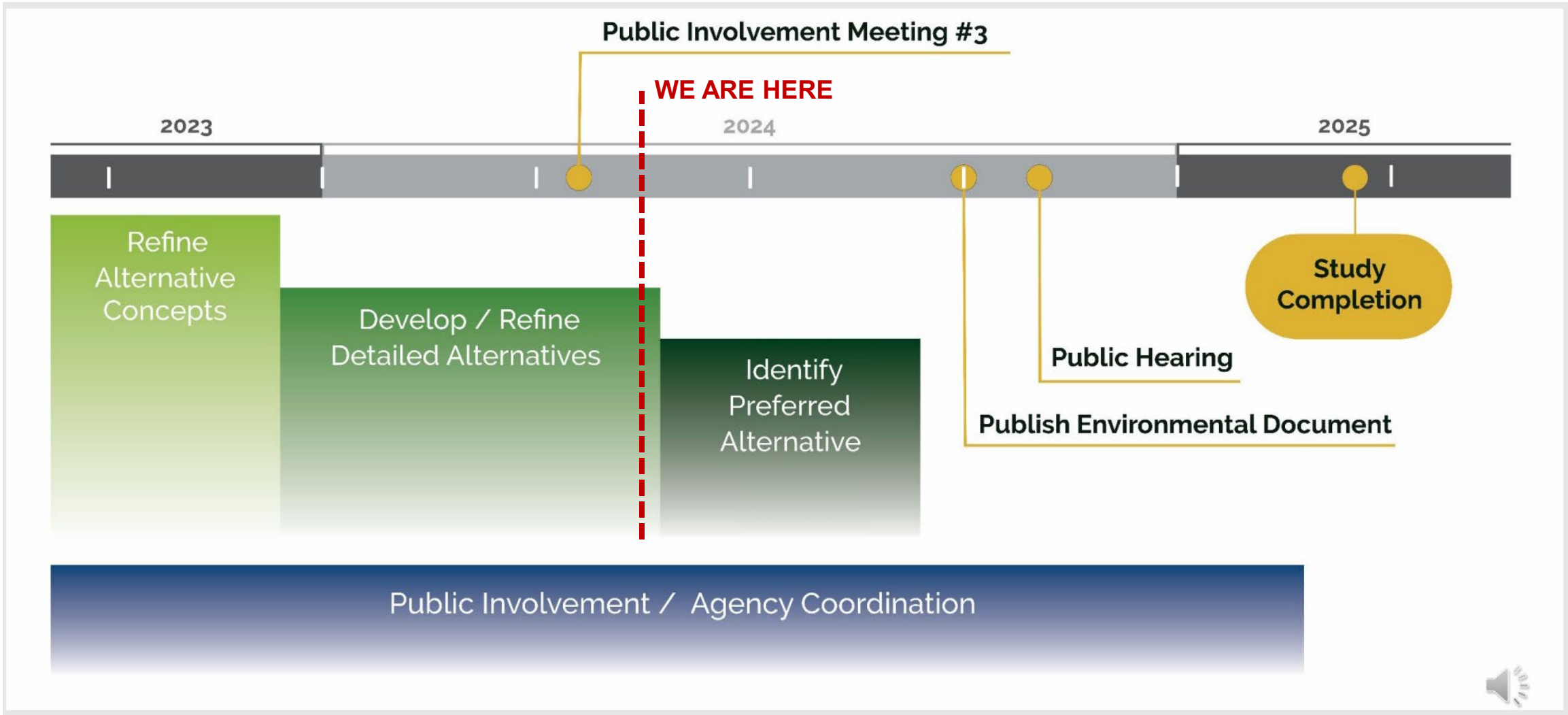
Recommended Alternative

- Existing Conditions Improved
- Primary factors in recommendation
 - Improved safety
 - Controlled crossings for bikes/peds
 - More public and stakeholder support

City of Madison Staff Concurs



US 51 (Stoughton Rd) North Study Timeline



US 51 (Stoughton Rd) South Study Timeline

