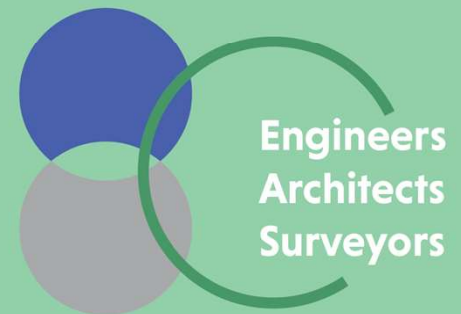




# Wisconsin 81 Corridor Study Public Information Meeting #2

**Beloit Public Library**  
**Beloit, Wisconsin**  
**January 30, 2023**



# Presentation Agenda



Introductions



Project Recap



Project Tasks



Existing Conditions  
Evaluation




Alternatives  
Discussion



Project  
Schedule

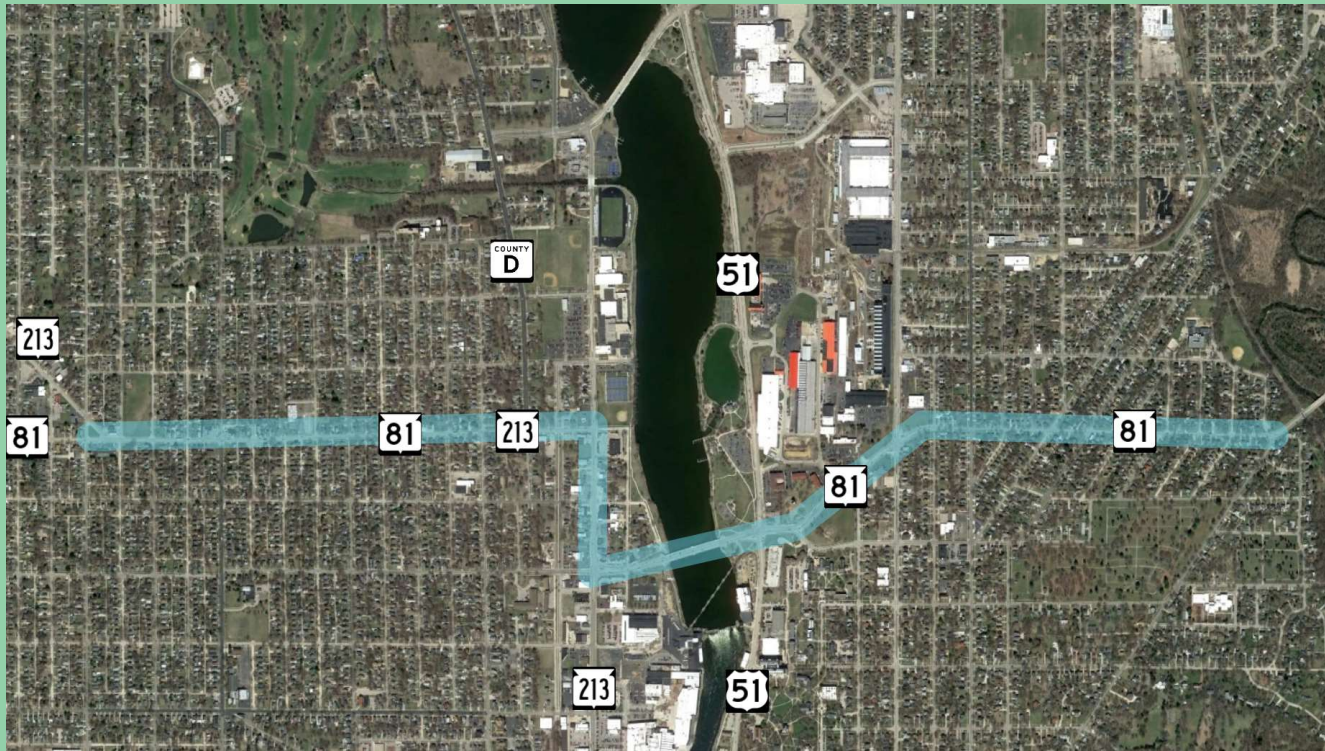
# Introductions



**T.J. Nee (Stateline Area  
Transportation Study, SLATS MPO)**  
Project Manager

**Lee Gibbs (CBS Squared)**  
Consultant Project Manager

# Project Recap



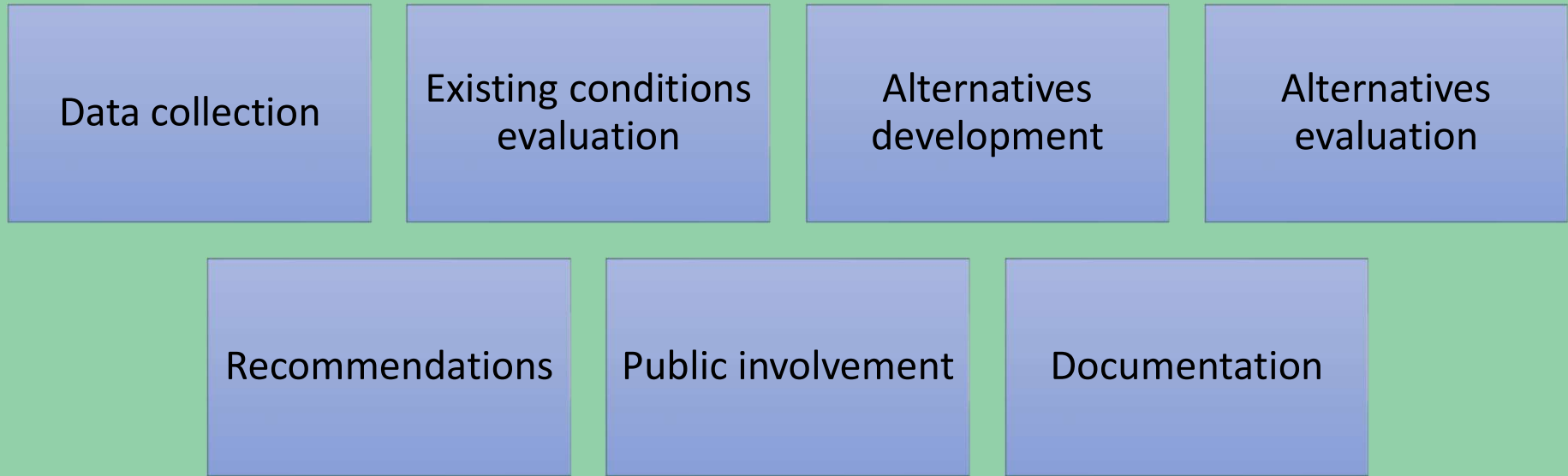
# Project Recap

- Project Goals
  - Evaluation of traffic operations, traffic safety, access, and multimodal accommodations for WIS 81 corridor
  - Recommend improvements to the roadway and intersections to optimize safety and mobility while balancing access and multimodal needs



**There is no construction project associated with the results and recommendations determined in this study**

# Project Tasks



# Existing Conditions Evaluation

- Main findings

- High amount of roadway access along Liberty Avenue and White Avenue
- “Trapping” lane situations at Fourth Street, Woodward Avenue, and Milwaukee Road
- Lack of safe, comfortable bike/ped crossings along Liberty Avenue and White Avenue
- Disjointed multimodal routes along WIS 81
- Future-year traffic growth will create operational deficiencies at several intersections



# Alternatives Discussion

- Developed to balance the needs of mobility, safety, access, and multimodal accommodations along WIS 81
  - Based on existing and future-year traffic operations analysis, traffic safety, long-range plans, and project study goals

Each alternative addresses a project goal or existing/future deficiency

Alternatives are concept-level detail only and not definitive or binding



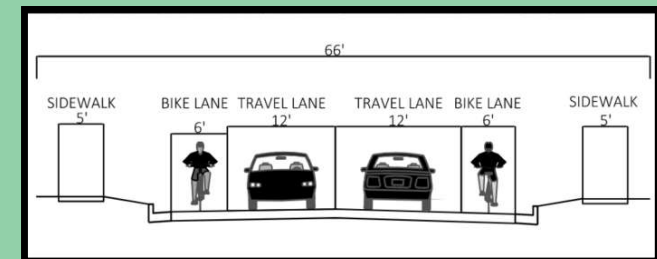
# Alternatives Discussion

- WIS 81 (Liberty Avenue – Madison Road to Fourth Street)
  - Concern: lack of pavement markings along Liberty Avenue may entice motorists to use as a multi-lane roadway
  - Alternative: maintain existing cross-section and provide pavement markings that designate through lanes, parking lane, turn lanes
  - Advantage: clearly identifies lanes and travel paths; may create turn lanes or parking lanes
  - Disadvantage: pavement markings can be disobeyed by motorists



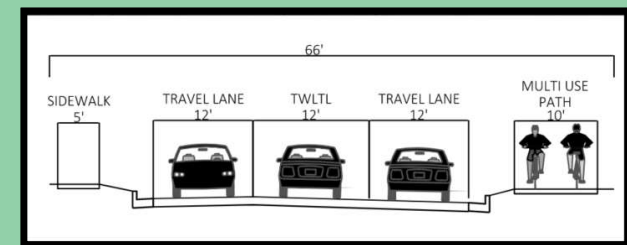
# Alternatives Discussion

- WIS 81 (Liberty Avenue – Madison Road to Fourth Street)
  - Concern: limited cross-section for vehicles and multimodal accommodations
  - Alternative: maintain existing 2-lane cross-section and add on-street bike lanes
  - Advantage: dedicated bike lanes would provide a connection from western Beloit to the high school and downtown areas; no changes to existing roadway
  - Disadvantage: traffic volumes along Liberty Avenue may discourage or make uncomfortable biking experience



# Alternatives Discussion

- WIS 81 (Liberty Avenue – Madison Road to Fourth Street)
  - Concern: existing 2-lane cross-section doesn't provide storage for left-turning vehicles; lack of multimodal accommodations in western Beloit
  - Alternative: provide a 3-lane cross-section with two-way left-turn lane (TWLTL); provide multi-use path on one side of street
  - Advantage: left-turning vehicles are protected from through traffic stream; improved multimodal accommodations; no changes to existing roadway
  - Disadvantage: loss of trees/vegetation in existing terrace; loss of on-street parking along WIS 81



# Alternatives Discussion

- WIS 81 (Liberty Avenue Segment)
  - Concern: numerous full-access roadways, alleyways, and driveways over short distances can increase crash probability
  - Alternative: consider access management strategies to reduce the amount of conflict points along WIS 81 (e.g., consolidate, cross-access, restrict, remove)
  - Advantage: fewer access points along WIS 81 increases mobility (less interruption of traffic flow) and safety (fewer conflict points)
  - Disadvantage: longer travel times for residents on restricted-access streets



# Alternatives Discussion

- WIS 81 (Bluff Street and Sixth Street intersections)
  - Concern: operational and safety issues at Sixth Street (14 angle crashes involving a southbound vehicle)
  - Alternative: switch intersection control so Sixth Street is signalized and Bluff Street is two-way, stop-controlled
  - Advantage: traffic signal serves higher-classification, higher-volume roadway; provides dedicated time for Sixth Street
  - Disadvantage: traffic shift to use Sixth Street; longer delays along Bluff Street



# Alternatives Discussion

- WIS 81 at Fifth Street

- Concern: potential cut-through route to bypass Fourth and Sixth Streets
- Alternative: restrict (right-in, right-out) or eliminate access to WIS 81 (multi-use path would still be able to cross)
- Advantage: reduces/eliminates access point near signalized intersections; streamlines traffic near Beloit Memorial High School
- Disadvantage: longer travel times for residents/businesses along Fifth Street; internal circulation issues for businesses



# Alternatives Discussion

- WIS 81 at Fourth Street
  - Concern: operational inefficiencies as WIS 81 is the south and west legs; significant pedestrian crossings due to high school
  - Alternative: remove east leg from intersection
  - Advantage: improves traffic operations; provides safe passage for pedestrians on east approach without vehicle interaction
  - Disadvantage: removes travel path for proposed Brassworx development; pedestrian on west approach must still enter intersection to cross



# Alternatives Discussion

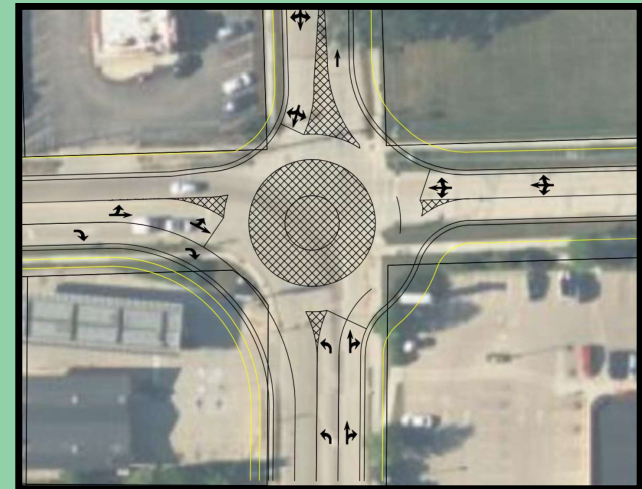
- WIS 81 at Fourth Street
  - Concern: operational inefficiencies as WIS 81 is the south and west legs; significant pedestrian crossings due to high school
  - Alternative: convert north leg to one-way northbound only
  - Advantage: improves traffic operations; can aid in streamlining traffic flow at Beloit Memorial High School
  - Disadvantage: pedestrians must still enter intersection to cross; increases SB traffic to Fifth, Sixth, and Bluff Streets





# Alternatives Discussion

- WIS 81 at Fourth Street
  - Concern: operational inefficiency as WIS 81 is the south and west legs; significant pedestrian crossings due to high school
  - Alternative: convert intersection to a roundabout
  - Advantage: improves traffic operations at intersection; pedestrians provided refuge crossing each approach
  - Disadvantage: right of way acquisition



# Alternatives Discussion

- WIS 81 at Fourth Street

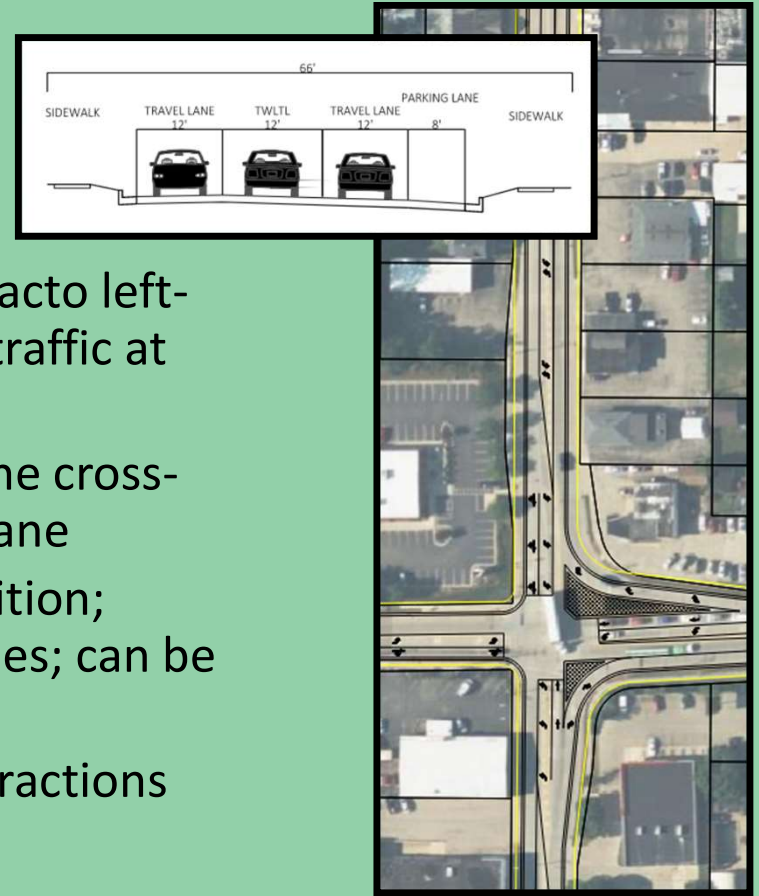
- Concern: operational inefficiency as WIS 81 is the south and west legs; significant pedestrian crossings due to high school
- Alternative: realign WIS 81 as a horizontal curve to remove major turning movement; provide traffic signal at realigned Fourth Street
- Advantage: improves traffic operations for through movement; improves pedestrian operations along east approach
- Disadvantage: right of way acquisition; pedestrian on west approach must still enter intersection to cross; requires access modifications to Fifth Street



# Alternatives Discussion

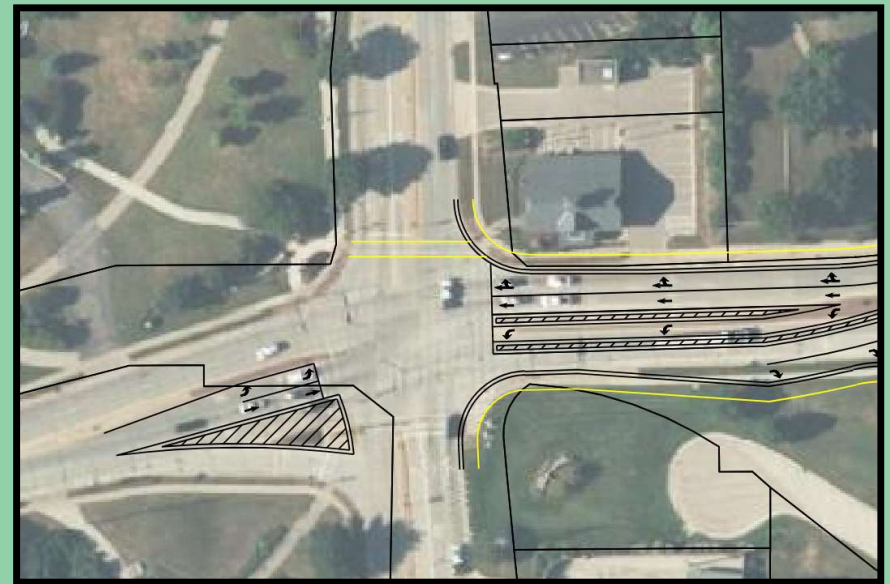
- WIS 81 (Fourth Street)

- Concern: inside through lanes serve as de facto left-turn lanes; “trapping left” for northbound traffic at Liberty Avenue
- Alternative: convert Fourth Street to a 3-lane cross-section with TWLTL and on-street parking lane
- Advantage: eliminates “trapping left” condition; provides left-turn storage for turning vehicles; can be accommodated within existing roadway
- Disadvantage: vehicle / parked-vehicle interactions



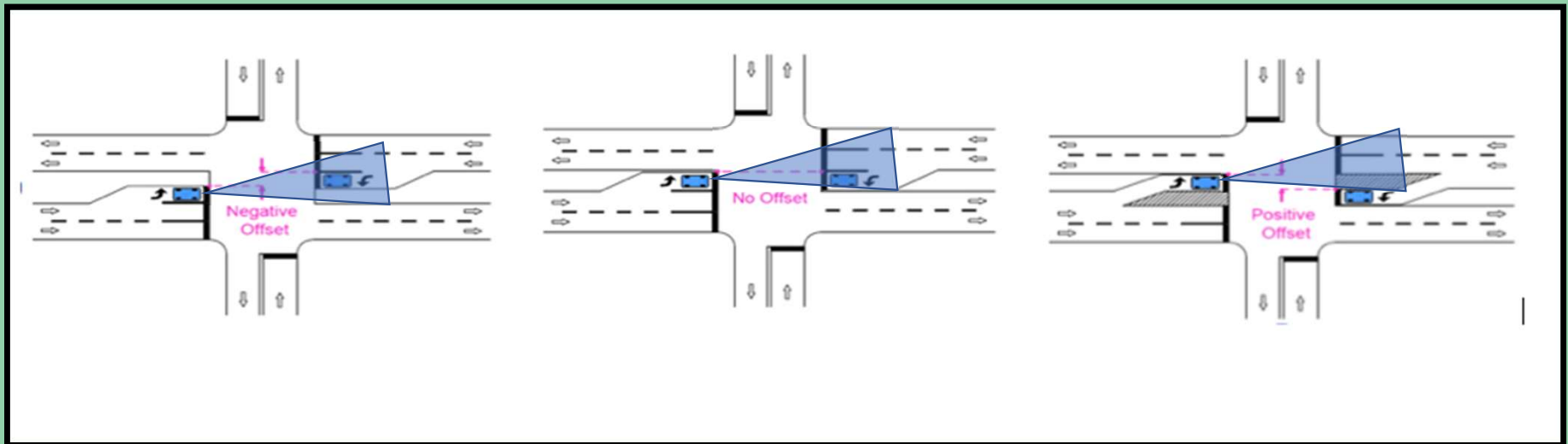
# Alternatives Discussion

- WIS 81 at US 51
  - Concern: “trapping right” condition at Woodward Avenue creates operational and safety concerns (13 crashes at Woodward)
  - Alternative: provide a single through lane for eastbound WIS 81 at US 51
  - Advantage: removes “trapping right” condition; creates positive left-turn offset for EB/WB traffic
  - Disadvantage: eastbound merge will remain, potentially on the bridge



# Left-turn Offset

Seek to improve left-turn offset at intersections



# Alternatives Discussion

- WIS 81 and Woodward Avenue
  - Concern: full access intersection close to US 51 intersection; existing “trapping right” for eastbound traffic
  - Alternative: make Woodward Avenue right-in, right-out access only
  - Advantage: reduces conflict points on WIS 81 and close to the US 51 intersection
  - Disadvantage: left-turning traffic must use Park Avenue for travel



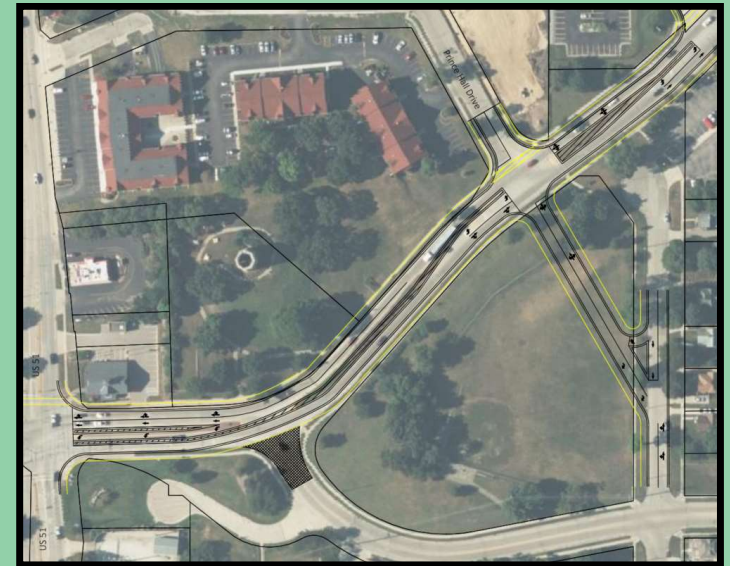
# Alternatives Discussion

- WIS 81 and Woodward Avenue
  - Concern: full access intersection close to US 51 intersection; existing “trapping right” for eastbound traffic
  - Alternative: close access to Woodward Avenue
  - Advantage: removes conflict points on WIS 81 and close to the US 51 intersection
  - Disadvantage: all Woodward traffic must use Park Avenue for travel



# Alternatives Discussion

- WIS 81 and Woodward Avenue
  - Concern: full access intersection close to US 51 intersection; existing “trapping right” for eastbound traffic
  - Alternative: close access to Woodward Avenue and provide fourth leg at Prince Hall Drive
  - Advantage: relocates Woodward access further away from US 51; uses existing intersection for access
  - Disadvantage: right of way acquisition; increased delay at Prince Hall Drive intersection





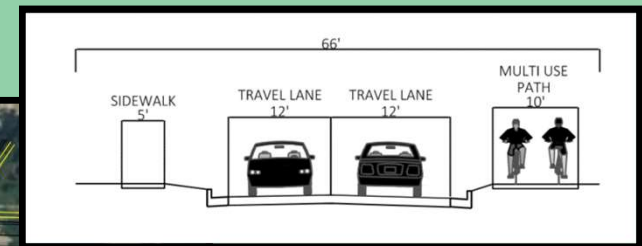
# Alternatives Discussion

- WIS 81 and Park Avenue
  - Concern: operational deficiencies due to existing and future-year volumes; negative left-turn offset along WIS 81
  - Alternative: upgrade intersection to a roundabout
  - Advantage: improves traffic operations; reduces speeds through intersection; allows pedestrians to cross one direction at a time
  - Disadvantage: right of way acquisition



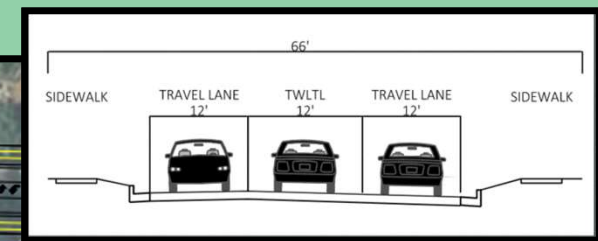
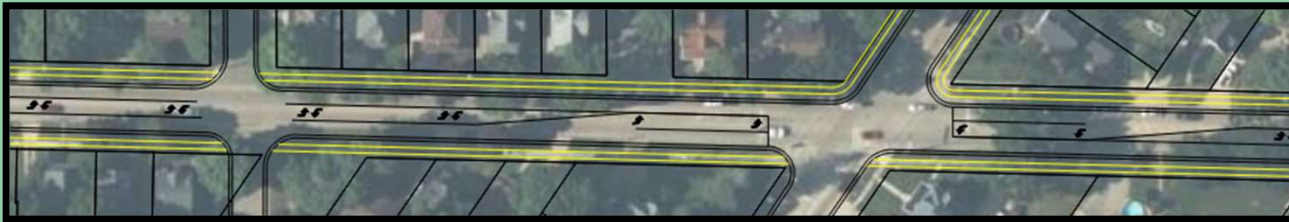
# Alternatives Discussion

- WIS 81 (White Avenue – Park Avenue to Milwaukee Road)
  - Concern: limited multimodal accommodations
  - Alternative: provide multi-use path along one side of WIS 81
  - Advantage: provides dedicated multi-use path along WIS 81; can be accommodated within existing roadway and right of way
  - Disadvantage: does not address vehicle safety and mobility issues



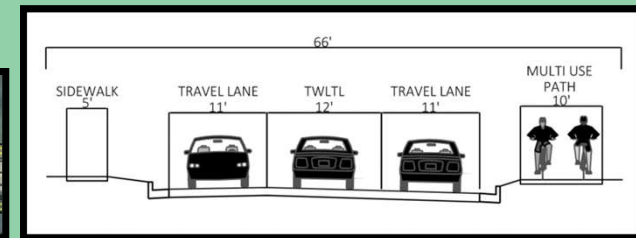
# Alternatives Discussion

- WIS 81 (White Avenue – Park Avenue to Milwaukee Road)
  - Concern: existing 2-lane cross-section doesn't provide storage for left-turning vehicles
  - Alternative: widen to provide TWLTL to cross-section
  - Advantage: left-turning vehicles are protected from through traffic stream; can be accommodated within existing right of way
  - Disadvantage: requires existing curb to be moved; trees/vegetation may need to be removed



# Alternatives Discussion

- WIS 81 (White Avenue – Park Avenue to Milwaukee Road)
  - Concern: existing 2-lane cross-section doesn't provide storage for left-turning vehicles; limited multimodal accommodations
  - Alternative: widen to provide TWLTL to cross-section and provide multi-use path on one side
  - Advantage: left-turning vehicles are protected from through traffic stream; provides dedicated multi-use path along WIS 81
  - Disadvantage: requires existing curb to be moved; trees/vegetation may need to be removed



# Alternatives Discussion

- WIS 81 (White Avenue – Park Avenue to Milwaukee Road)
  - Concern: numerous full-access roadways and driveways over short distances can increase crash probability; skewed intersections can be difficult to navigate
  - Alternative: consider access management strategies to reduce the amount of conflict points along WIS 81 (e.g., consolidate, cross-access, restrict, remove)
  - Advantage: fewer access points along WIS 81 increases mobility (less interruption of traffic flow) and safety (fewer conflict points)
  - Disadvantage: longer travel times for residents on restricted-access streets



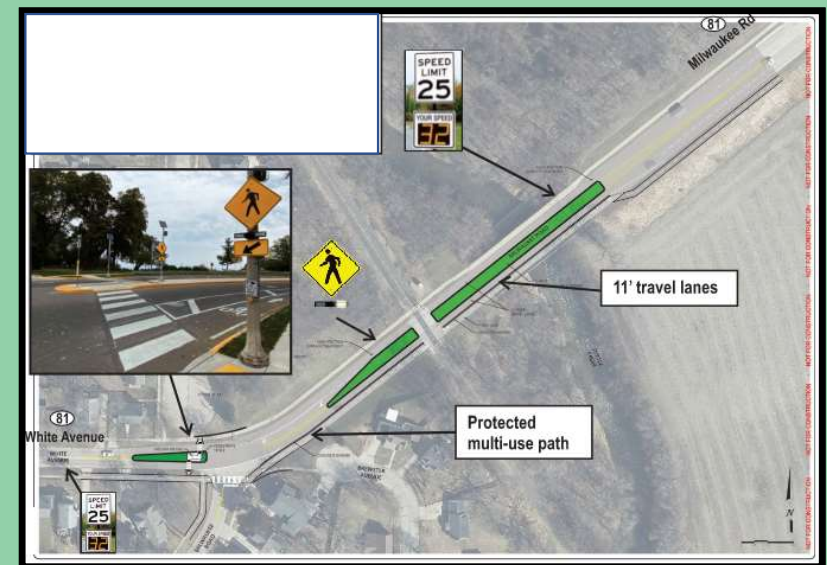
# Alternatives Discussion

- WIS 81 and Milwaukee Road
  - Concern: high travel speeds and sharp horizontal curve has caused numerous crashes and safety concerns
  - Alternative: upgrade intersection to a roundabout
  - Advantage: requires motorists to slow down through roundabout and provides proper travel path through intersection / horizontal curve
  - Disadvantage: right of way acquisition



# Alternatives Discussion

- WIS 81 and Milwaukee Road
  - Concern: high travel speeds and sharp horizontal curve has caused numerous crashes and safety concerns
  - Alternative: reduce WIS 81 to two lanes and install raised medians for pedestrian storage and speed control
  - Advantage: provides “uncomfortable” feeling for motorists, making them more likely to slow down through intersection
  - Disadvantage: no physical changes to horizontal curve



# Other Improvements for Consideration

- Provide enhanced signing/marketing for Fifth Street multi-use path crossing at Liberty Avenue
- Access management near Fourth Street and Portland Avenue for future development
- Provide signing/marketing for Portland Avenue bike lanes to connect to Fifth Street
- Review traffic signal equipment and its placement for improved visibility and clarity for motorists





# Other Improvements for Consideration

- Provide enhanced bike/ped features for safer crossing of White Avenue
- Provide enhanced bike lanes / accommodations parallel to White Avenue
  - If bike accommodations not provided on/along White Avenue
- Review intersection sight triangles and remove obstructions, as necessary



# Project Schedule

Winter 2023

- Alternatives development

Winter 2023

- Alternatives evaluation

February 2023

- Recommendations

Throughout Project

- Public involvement

Feb/Mar 2023

- Documentation

# Questions?

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- Lee Gibbs, [lgibbs@cbssquaredinc.com](mailto:lgibbs@cbssquaredinc.com)