US-23 (I-94 to M-14)

Coordination Meeting

Agency and Government Group
Local Advisory Group

MDOT
Michigan Department of Transportation

Wednesday, Sept. 13, 2023

PROJECT TEAM AND INTRODUCTIONS

MDOT
Michigan Department of Transportation

Jason Pittman, P.E.
(Project Manager, University Region)
Jackson TSC Cost and Scheduling Engineer

Mike Davis, Jr. (Planning)
Senior University Region Planner

Aaron Jenkins (Communications)
University Region Communications Representative

Monica Monsma (Environmental Public Outreach)
Public Involvement and Hearings Officer

BERGMANN
ARCHITECTS ENGINEERS PLANNERS
Bergmann has joined Colliers Engineering & Design

Project Management, Lead Road and Bridge Design, Environmental Support - NEPA and Noise

Rob Leppala, P.E.
Project Manager

Jeremy Hedden, P.E.
Technical Lead

OTHER CONSULTANT SPECIALISTS:

AECOM

Lead Traffic Operations Studies, Environmental Support & Road and Bridge Design

Mike Devires, P.E.
Vice President
Lead Traffic Operations Engineer

C2G
CINCAR CONSULTING GROUP

Early Preliminary Engineering, Engineering, Environmental Lead and Engagement and Communications Support

Barbara Arens, P.E., PTOE
Managing Principal

Dena Berrios
Operations/Communications

MKSK

Brad Strader, AICP, PTP
Principal

Ann Marie Kerby, AICP
Senior Associate, Planner

GEI Consultants
NTH Consultants, Ltd. Infrastructure Engineering and Environmental Services
Great Lakes Engineering Group
Infrastructure Engineering
Spicer group
Tetra Tech
Commonwealth
MTC
RS Engineering, LLC

AGENDA

1. Project overview
2. Existing conditions
3. Alternatives
4. What have we heard?
5. Purpose and need
6. Evaluation criteria draft
7. Next steps/meeting

PROJECT OVERVIEW

PROJECT SCOPE

PROJECT STUDY AREA:

US-23 from I-94/US-23 interchange area north to east M-14/US-23 interchange area in the city of Ann Arbor, Pittsfield Township, and Ann Arbor Township in Washtenaw County.

THIS PROJECT INCLUDES THE PREPARATION OF:

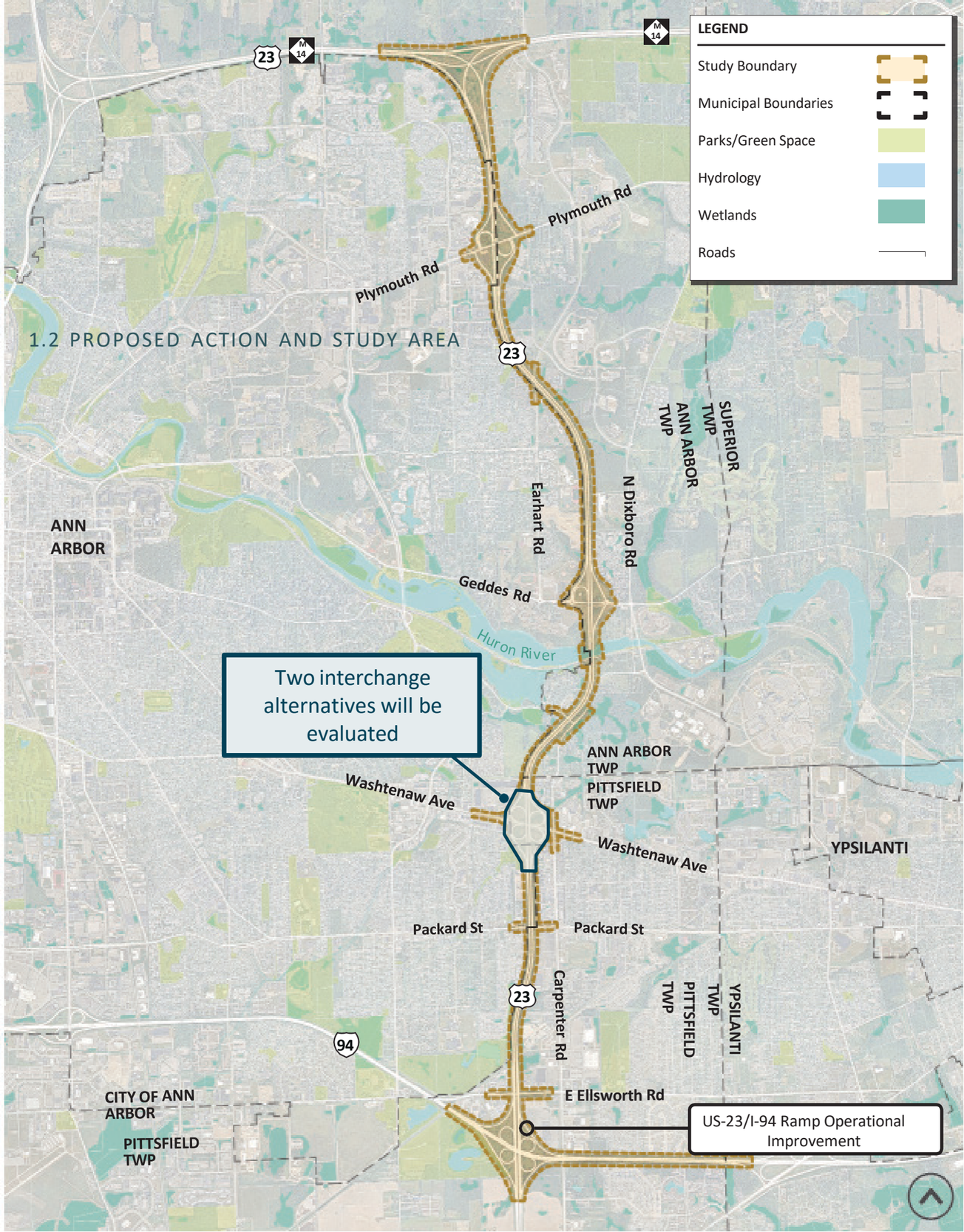
Environmental Assessment

Development Studies

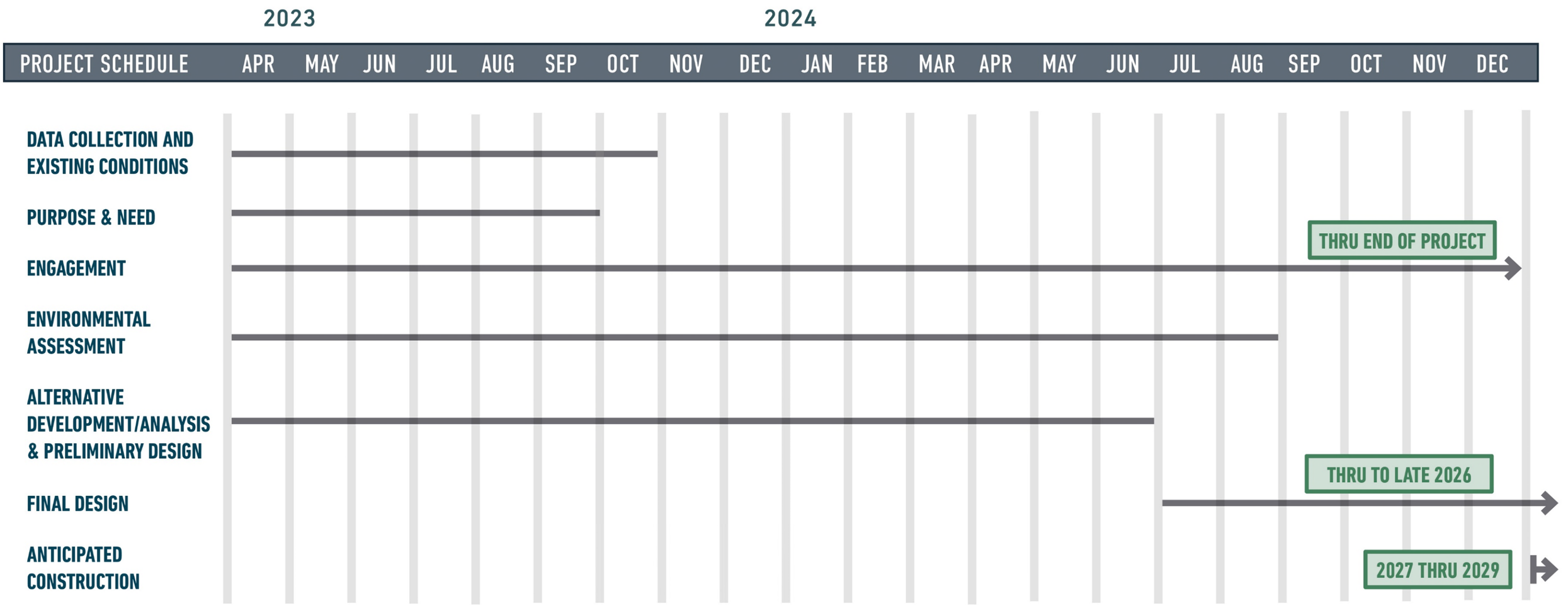
Road and Bridge Design

Our team will coordinate with the other MDOT efforts, including the two ongoing Planning and Environmental Linkage (PEL) studies, in the area.

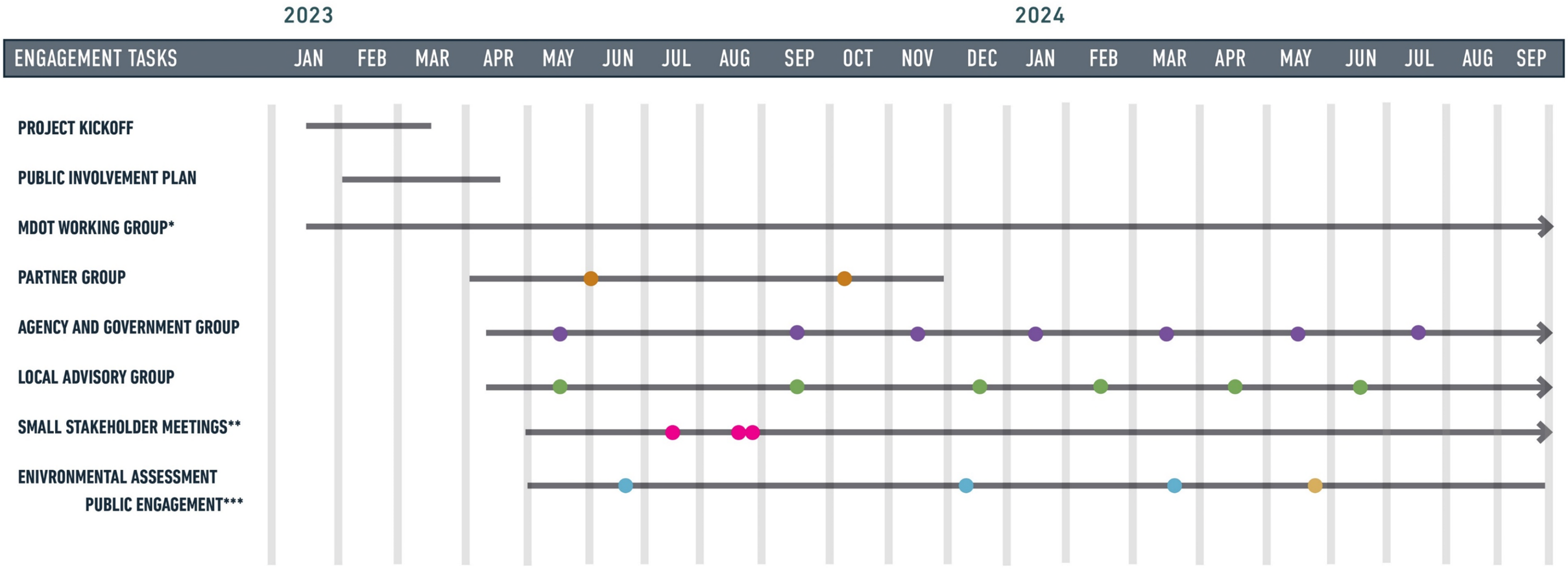
- M-17 (Washtenaw Avenue) PEL study
- M-14/Barton Drive interchange PEL study



PROJECT SCHEDULE



PUBLIC ENGAGEMENT SCHEDULE



- PARTNER GROUP MEETINGS
- AGENCY AND GOVERNMENT GROUP MEETINGS
- LOCAL ADVISORY GROUP MEETINGS
- PUBLIC WORKSHOPS
- PUBLIC HEARING
- SMALL STAKEHOLDER MEETINGS

*MDOT Working Group meetings occuring on a biweekly basis throughout the duration of the project.

**Small Stakeholder meetings occurring throughout the duration of the project.

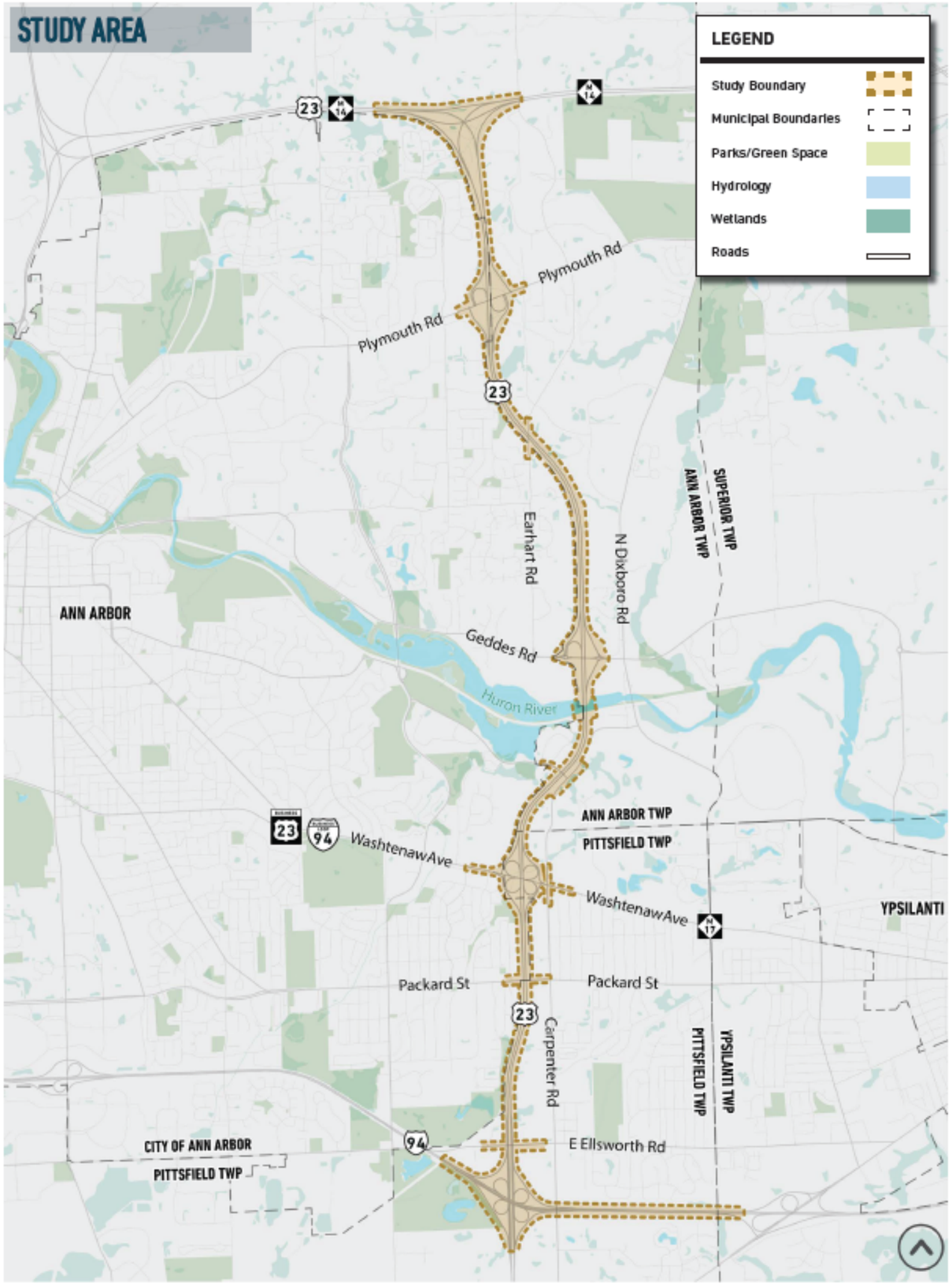
***Public engagement schedule refers to the Environmental Assessment process.

EXISTING CONDITIONS

EXISTING CONDITIONS

Below is a list of data being collected to assess existing conditions and develop a Purpose and Need for the project:

- ✓ Traffic volumes
- ⧗ Crash data analysis
- ✓ Noise assessment
- ⧗ Wetland, stream and floodplain assessments
- ✓ Pavement and bridge condition assessments
- ⧗ Geotechnical investigations
- ⧗ Environmental justice
- ⧗ Flora and fauna: endangered species
- ⧗ Historic assessment
- ⧗ Contamination survey
- ⧗ Archaeology assessment
- ✓ Topographical and right of way surveys



NOISE UPDATES

- Collected real-time noise measurements and traffic volumes for a.m./p.m. peak and off-peak periods.
- Building a computer model of the highway within the project limits.
- Validating the model using the field data collected.
- Utilizing the model with existing traffic volumes to determine baseline noise levels.
- Will build models for project alternatives.
- Will run models with projected future traffic for each alternative and compare to existing noise levels to determine if there are noise impacts.

ALTERNATIVES

ALTERNATIVE CONSIDERATIONS

EVALUATION CRITERIA

Evaluation criteria to be used to compare alternatives.

- MOBILITY AND SAFETY
- CONGESTION/ OPERATIONS
- ENGINEERING FEASIBILITY
- IMPACTS
- AESTHETICS/ DESIGN
- NEEDS AND GOALS CONSISTENCY
- PUBLIC INPUT
- COST

US-23 ALTERNATIVES UNDER CONSIDERATION

FLEX LANE (a new lane in the shoulder, only open during peak hours)

- Adds median flex lane as additional lane to increase capacity during the peak hours
- Overall congestion is alleviated. Flex lanes will likely need to be open for more hours of the day as compared to US-23 Flex Route north of M-14*

GENERAL PURPOSE LANE

- Adds third general purpose lane along NB/SB US-23 from I-94 to M-14
- Alleviates congestion*

HIGH-OCCUPANCY VEHICLE (HOV) LANE
(a new lane for vehicles with more than one driver, buses etc.)

- Adds third lane along NB/SB US-23 from I-94 to M-14 designated as HOV lane
- Not previously studied

REBUILD EXISTING (NO BUILD)

- Maintains the existing lanes
- Extensive queuing and poor traffic operations*

*Based on Previous MDOT Studies

FLEX LANE ALONG US-23 NORTH OF M-14 OPENED IN NOVEMBER 2017

December 2021 Comprehensive Research Study conducted by Michigan State University found that the current US-23 Flex Route:

- Reduced travel time during peak periods
- Improved safety (reduced crashes)
- Had less impact and cost than other alternatives
- Had good performance for events and incidents
- Southbound performed better than northbound
- Northbound had backup and crashes where the flex lane ends (extension of northbound lanes is currently under construction)
- Flex lanes are being considered south of M-14

OPENED FLEX LANE

CLOSED FLEX LANE

HOV LANE ALONG US-23

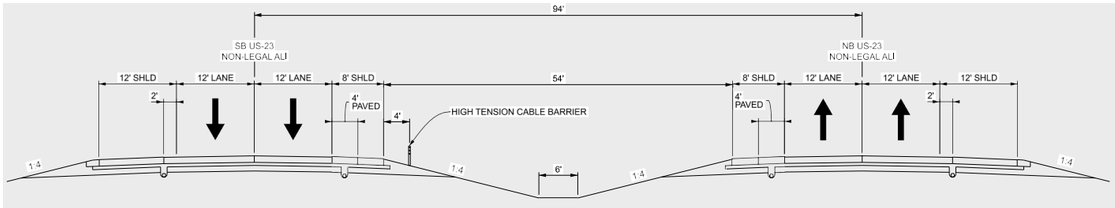
What are high-occupancy vehicle (HOV) Lanes?

- HOV lanes are lanes that could be restricted in peak hours to vehicles with 2+ people, transit vehicles and motorcycles
- Could be used as a general purpose lane for all users in off-peak hours of the day
- HOV lane would not be a toll lane
- Michigan's first HOV lane will be in operation by fall 2023 along I-75 from 12 Mile Road to South Boulevard (14 miles)

HOV LANE

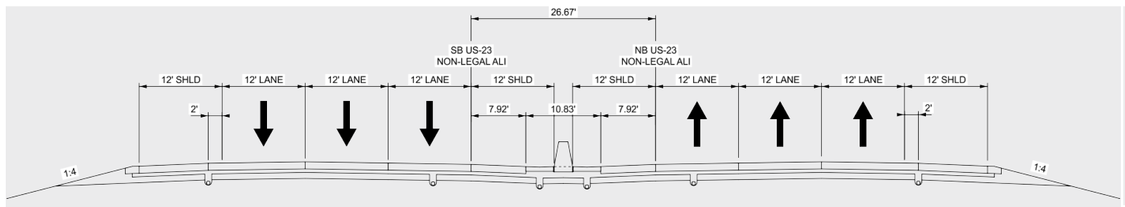
HOV LANE

US-23 ALTERNATIVES UNDER CONSIDERATION



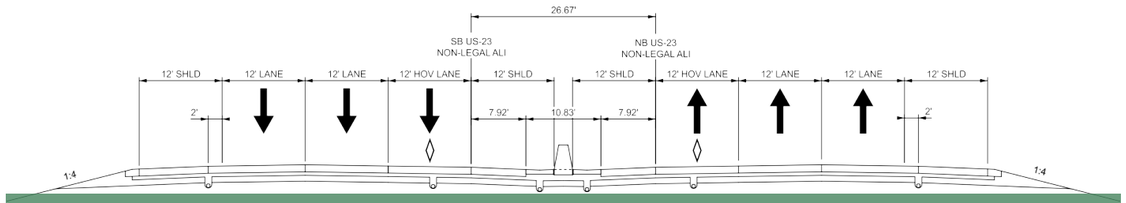
NO BUILD / REBUILD EXISTING

- Maintains the existing lanes
- Extensive queuing and poor traffic operations*



GENERAL PURPOSE LANE

- Adds third general purpose lane along NB/SB US-23 from I-94 to M-14
- Alleviates congestion*



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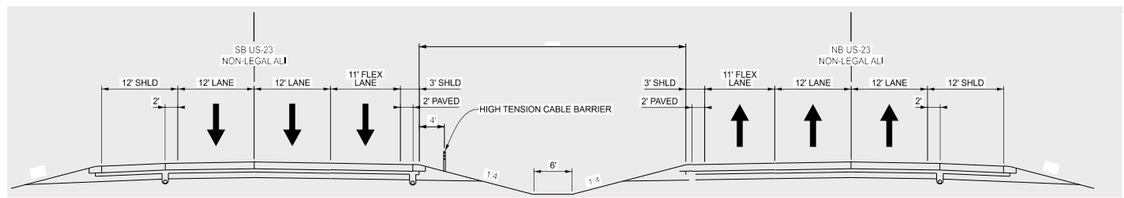

FLEX LANE

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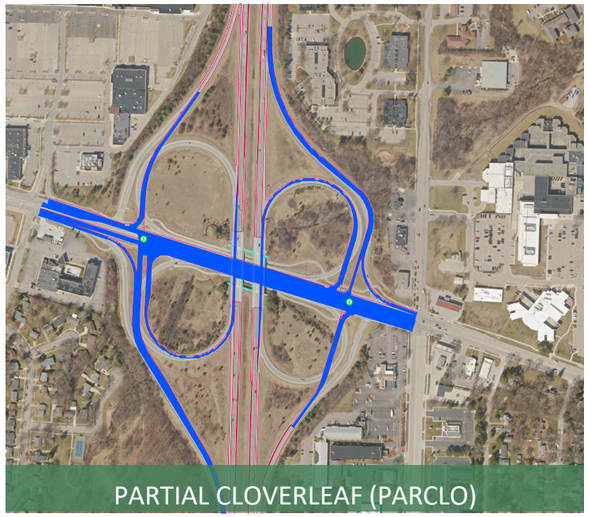
INTERCHANGE ALTERNATIVES

M-17 INTERCHANGE ALTERNATIVES BEING CONSIDERED

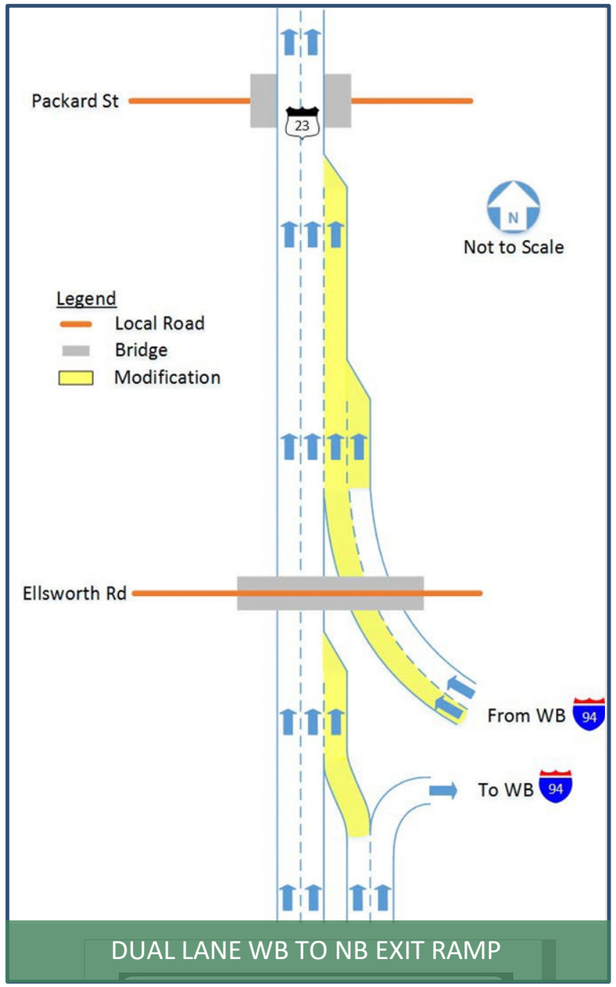
REBUILD EXISTING FULL CLOVERLEAF



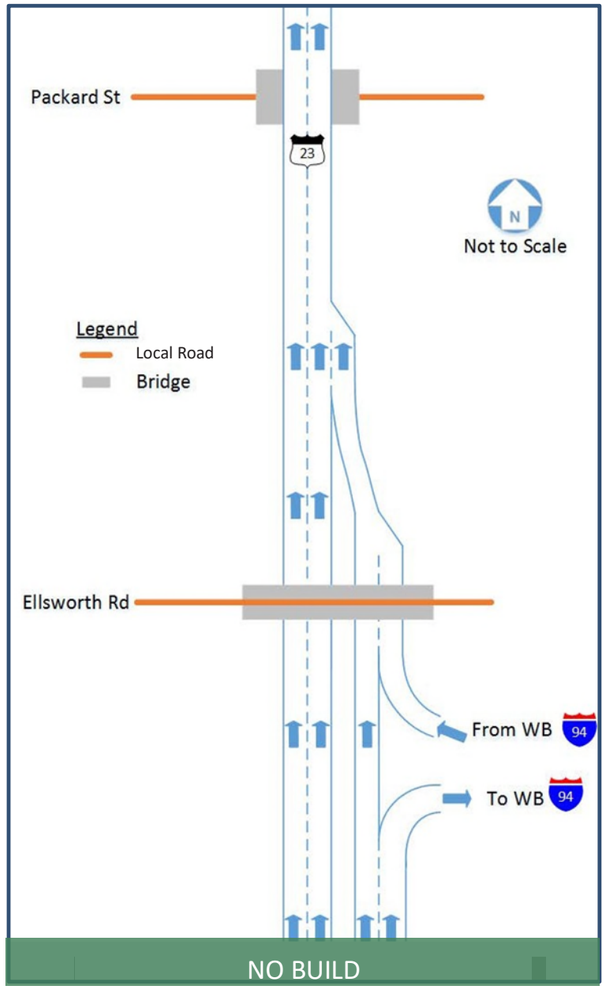
PARTIAL CLOVERLEAF (PARCLO)

SINGLE-POINT URBAN INTERCHANGE (SPUI)

I-94 INTERCHANGE ALTERNATIVES BEING CONSIDERED



DUAL LANE WB TO NB EXIT RAMP



NO BUILD

WHAT HAVE WE HEARD?

APPLYING WHAT WE'VE HEARD

Summary of comments incorporated into Purpose and Need, Evaluation Criteria	AGG	LAG	Open House and Online
Ensuring a robust engagement process		✓	
Improve nonmotorized connectivity and mobility needs	✓		✓
Bridge design considerations for improving connections	✓	✓	✓
Improve safety along the corridor	✓	✓	✓
Address traffic congestion	✓		✓
Environmental impact and considerations	✓		✓
Improve infrastructure capacity	✓		✓
Reduce and mitigate noise pollution		✓	✓
Improve interchange operations and design	✓		✓
Adaptive signal timing	✓	✓	
River crossings		✓	
Accessibility	✓		✓
Align with relevant planning goals and efforts (Vision Zero, carbon neutrality goals)	✓		

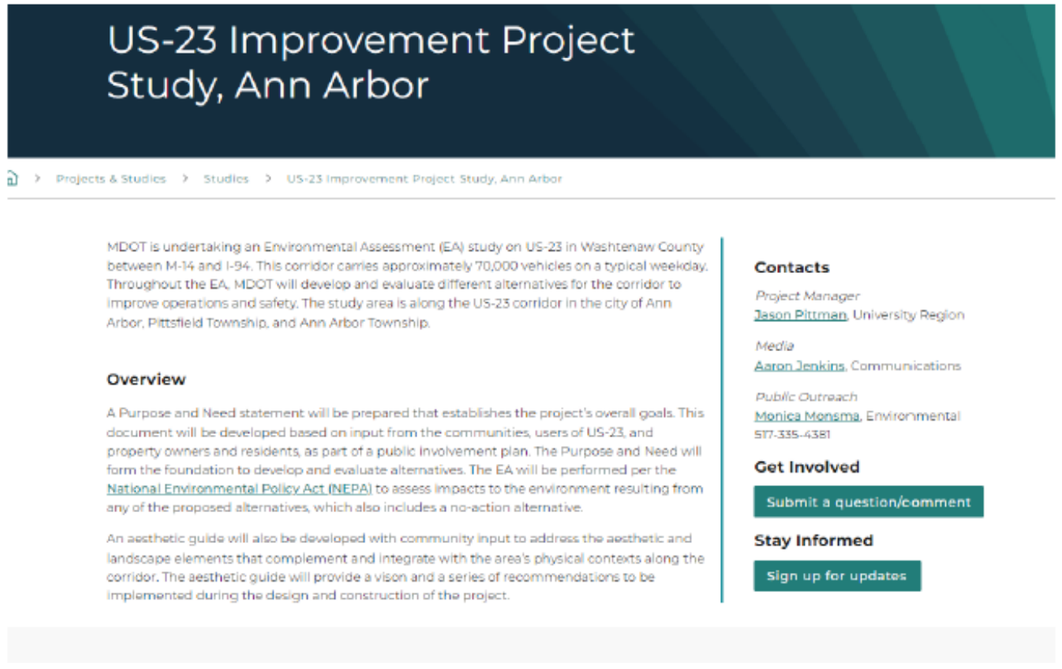
APPLYING WHAT WE'VE HEARD

Additional comments heard taken into consideration
Aesthetic design considerations for bridges
EV and smart vehicle infrastructure
Light rail transit connections
Park and ride lots
Washtenaw Avenue: nonmotorized crossings and aesthetics
Plymouth Road: high-priority corridor for nonmotorized facilities
Packard Street: major bikeway, speed management corridor for the city (speed limit recently lowered from 40 to 35 mph)
Ellsworth Road bridge: important nonmotorized connection but bridges over US-23 and I-94 are a constraint

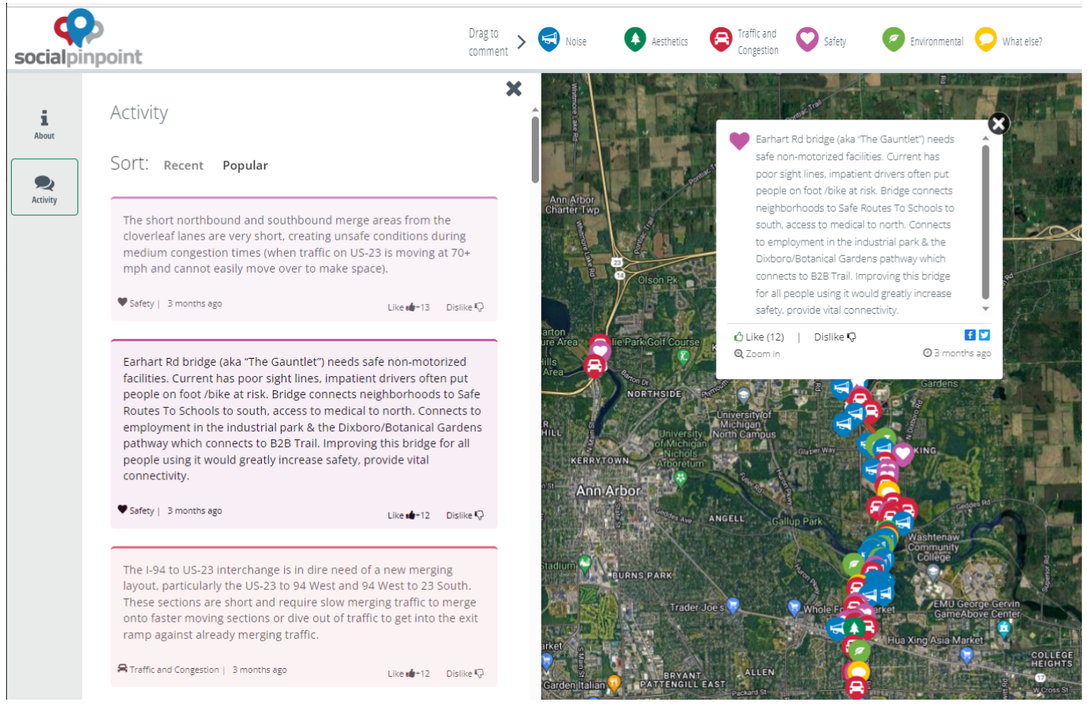
STAY ENGAGED!

Visit the project website to see upcoming events, use the interactive mapping tool, and see other updates.

VISIT OUR WEBSITE TO FIND MORE ENGAGEMENT OPPORTUNITIES AND INFO!



PROJECT WEBSITE



INTERACTIVE MAP

PURPOSE AND NEED

WHAT IS A PURPOSE AND NEED?

The purpose and need helps define a problem, identify action and why it is needed, and decide on solutions and actions responding to the problem.

UPDATED PURPOSE AND GOALS

The purpose items have been updated based on all comments received to date. The study will develop and evaluate alternatives to achieve the following goals:

- Safe operations for all users along and crossing the corridor.
- Address safety and peak-hour congestion along the corridor and at key interchanges by investigating innovative alternatives that preserve the natural environment and complement the character of the area.
- Embrace MDOT's Moving Michigan Toward Zero Deaths initiative.
- Provide an adaptive series of solutions to meet changing mobility needs, including use of transit and existing park and ride lot.
- Embrace the Ann Arbor Moving Together Toward Vision Zero Comprehensive Transportation Plan.
- Create aesthetically pleasing infrastructure and landscape elements, with community input, to complement the communities.
- Offer multiple opportunities for input from agencies, stakeholders, the communities, and the public in selection of a preferred alternative.

NEED

The project will address the following needs for the US-23 corridor:

Aged infrastructure due to roadway and bridges that were built in the early 1960s.

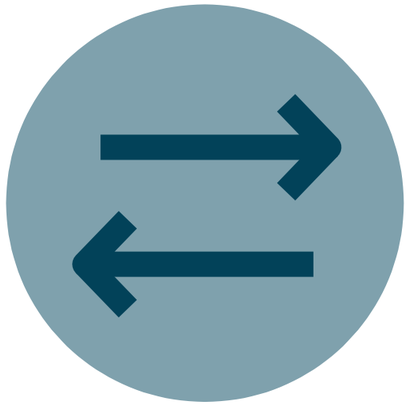
Geometric elements of US-23 are antiquated and require modernization.

Traffic congestion due to more than 70,000 vehicles on a typical weekday.

EVAULATION CRITERIA DRAFT

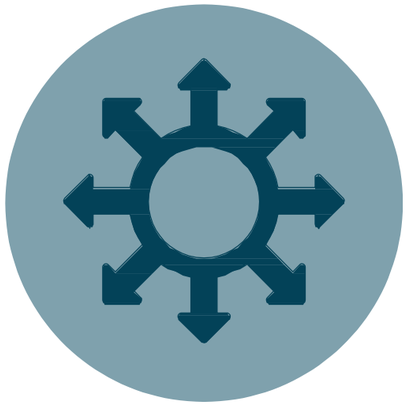
DRAFT EVALUATION CRITERIA

MOBILITY AND SAFETY



CONGESTION/ OPERATIONS

ENGINEERING FEASIBILITY



IMPACTS

AESTHETICS/ DESIGN

NEEDS AND GOALS CONSISTENCY

PUBLIC INPUT

COST

HOW AND WHY EVALUATION CRITERIA WILL BE USED

Evaluation criteria have been created for both US-23 and for the US-23/M-17 interchange. These criteria will be applied to the alternatives.

Criteria categories include:

- Mobility, operations and safety for all users
- Community access and circulation
- Environment
- Social and economic
- Costs

US-23/M-17 Interchange Alternative Evaluation Criteria

Alternatives / US-23/M-17 Interchange Evaluation Categories Rated	No Build (Reconstruct Existing Full Cloverleaf)	Partial Cloverleaf (Parclo)	Single-Point Urban Interchange (SPUI)

US-23 from I-94 to M-14 Alternative Evaluation Criteria DRAFT

Evaluation Categories	Evaluation Criteria
Mobility, Operations, & Safety for All Users	
Operations	Based on traffic projections, does the alternative reduce congestion and if so, to what degree would it be reduced?
Vehicular Safety	Does the project alternative improve safety for motorized users?
Transit Mobility	Does the project alternative provide opportunities for improved transit service?
Non-Motorized Safety & Mobility	Does the project alternative improve connectivity, circulation, accessibility, and safety for the non-motorized network?
Truck Mobility	Does the project alternative improve goods movement?
Community Access and Circulation	
Vehicular	Does the project improve community circulation in and around the corridor?
Transit	Does the project alternative improve circulation and accessibility for transit users?
Environment	
Noise	How does the project alternative affect noise to the surrounding land uses?
Air Quality	How does the project alternative potentially affect air quality to the community?
Wetlands	Does the project alternative affect additional wetlands?
Sensitive Plants/Animals	Does the project alternative affect threatened and endangered plants/animals in the corridor?
Resiliency	Does the project alternative provide a climate resilient solution?
Water Quality	Does the project alternative improve water quality?
4(f)/6(f)	Does the project alternative affect the Gallup Park trailway or waterway differently?
Historic Preservation	Does the project alternative affect historic properties/districts?
Social and Economic	
Environmental Justice	Does the project alternative disproportionally affect areas of persistent poverty?
Right-of-Way (ROW)	Does the project alternative affect ROW, the comparative cost of ROW acquisition, and any relocations?
Local Plans	Is the project alternative consistent with regional and municipal agency policies and plans?
Local Advisory & Government Agency Group Consensus	Do the Local Advisory and Government Agency Group have a preponderance of support for the alternative?
Public Consensus	Does the public have a preponderance of support for the alternative?
Costs	
Maintenance Cost	What is the comparative estimated cost to maintain the alternative?
Construction Cost	What is the relative construction cost compared to other alternatives?
ITS Cost	What are the intelligent transportation system (ITS) costs compared to the other alternatives?

EVALUATION CRITERIA EXERCISE

Instructions:

- Please put your name at the top of the sheet
- Five-10 minutes to review
- Circle your top three priorities (not the blue or green category box)
- Does anything need to be clarified or discussed?
- Is anything missing? (Please add to the bottom of the sheet)

US-23 from I-94 to M-14 Alternative Evaluation Criteria DRAFT

Evaluation Categories	Evaluation Criteria
Mobility, Operations, & Safety for All Users	
Operations	Based on traffic projections, does the alternative reduce congestion and if so, to what degree would it b
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US-23/M-17 Interchange Alternative Evaluation Criteria DRAFT

Evaluation Categories	Evaluation Criteria
Mobility, Operations & Safety for All Users	
Operations	Based on traffic projections, does the alternative reduce congestion and if so, to what degree would it be reduced?
Vehicular Safety	Does the project alternative improve safety for motorized users?
Transit Mobility	Does it provide opportunities for improved transit service?
Non-Motorized Safety & Mobility	Does the project alternative improve safety and mobility for non-motorized users?
Truck Mobility	Does the project alternative improve goods movement?
Community Access and Circulation	
Vehicular	Does the project improve community circulation in and around the corridor?
Non-motorized	Does the project alternative improve connectivity, circulation, and accessibility for the non-motorized network?
Transit	Does the project alternative improve circulation and accessibility for transit users?
Environment	
Noise	How does the project alternative affect noise to the surrounding land uses?
Air Quality	How does the project alternative potentially affect air quality to the community?
Wetlands	Does the project alternative affect additional wetlands?
Sensitive Plants/Animals	Does the project alternative affect threatened and endangered plants/animals in the corridor?
Resiliency	Does the project alternative provide a climate resilient solution?
Water Quality	Does the project alternative improve water quality?
4(f)/6(f)	Does the project alternative affect any lands or facilities acquired with Land and Water Conservation Act funds under the State Assistance program?
Historic Preservation	Does the project alternative affect historic properties/districts?
Social and Economic	
Environmental Justice	Does the project alternative disproportionally impact areas of persistent poverty?
Right-of-Way (ROW)	Does the project alternative impact ROW, the comparative cost of ROW acquisition, and any relocations?
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Public Consensus	Does the public have a preponderance of support for the alternative?
Costs	
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Construction Cost	What is the relative construction cost compared to other alternatives?

US-23 ALTERNATIVES EVALUATION CRITERIA DRAFT

Evaluation Categories	Evaluation Criteria
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Transit Mobility	Does the project alternative provide opportunities for improved transit service?
Non-Motorized Safety & Mobility	Does the project alternative improve connectivity, circulation, accessibility, and safety for the non-motorized network?
Truck Mobility	Does the project alternative improve movement of goods through the study area?
Community Access and Circulation	
Vehicular	Does the project improve community circulation in and around the corridor?
Transit	Does the project alternative improve circulation and accessibility for transit users?

US-23 ALTERNATIVES EVALUATION CRITERIA DRAFT (CONTINUED)

Environment	
Noise	How does the project alternative affect noise to the surrounding land uses?
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US-23 ALTERNATIVES EVALUATION CRITERIA DRAFT (CONTINUED)

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US-23/M-17 INTERCHANGE ALTERNATIVES EVALUATION CRITERIA DRAFT

All criteria are the same as US-23 mainline, except for:

- Added a nonmotorized focus for M-17 through the interchange
- Removed intelligent transportation systems (ITS) cost, as it is not applicable

US-23/M-17 Interchange Summary Evaluation Categories	Evaluation Criteria
Community Access and Circulation	
Vehicular	Does the project improve community circulation in and around the corridor?
Non-motorized	Does the project alternative improve connectivity, circulation, and accessibility for the non-motorized network?
Transit	Does the project alternative improve circulation and accessibility for transit users?

NEXT STEPS

- Finalize evaluation criteria
- Complete existing conditions analysis and findings
- Start alternatives analysis
- Determine impacts of alternatives
- Continue stakeholder and public engagement
- Next public event anticipated: early 2024

COMMENTS OR QUESTIONS?