

I-94 over Pipestone Road Interchange Feasibility Study Public Meeting #1



August 8, 2013

Project Background

- MDOT has initiated a feasibility study for the I-94/Pipestone Road interchange.
- Study initiated because of aging I-94 bridges over Pipestone Road.
- Study will include examination of traffic operations and how to best configure the interchange to accommodate future transportation needs.
- Stakeholder and public involvement is a key component of the study.

Goals and Solutions Statement

- The main goal at the I-94 Interchange with Pipestone Road is to replace the functionally-aging structures that carry I-94 over Pipestone Road. In doing so, MDOT anticipates accommodating future interchange operational needs while also improving any identified safety deficiencies.

State Long Range Plan (SLRP)

- SLRP initiatives included with this study:
 - Focus on corridors of highest significance.
 - Facilitate movement of truck freight.
 - Complete Streets and Context Sensitive Solutions.

MI Transportation Plan

Moving Michigan Forward

2035 State Long-Range
Transportation Plan



Overview

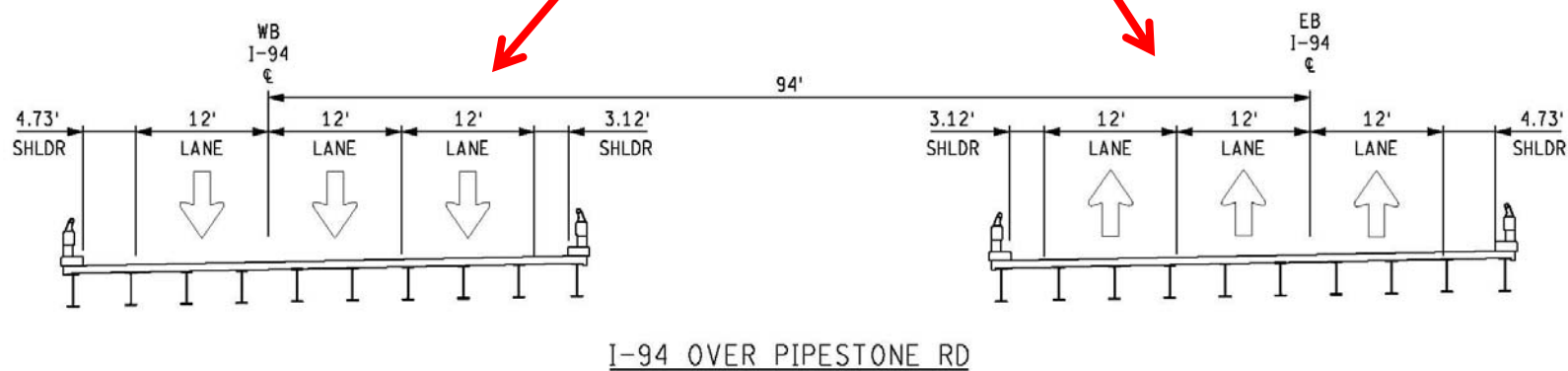
Adopted by the State Transportation Commission September 27, 2012



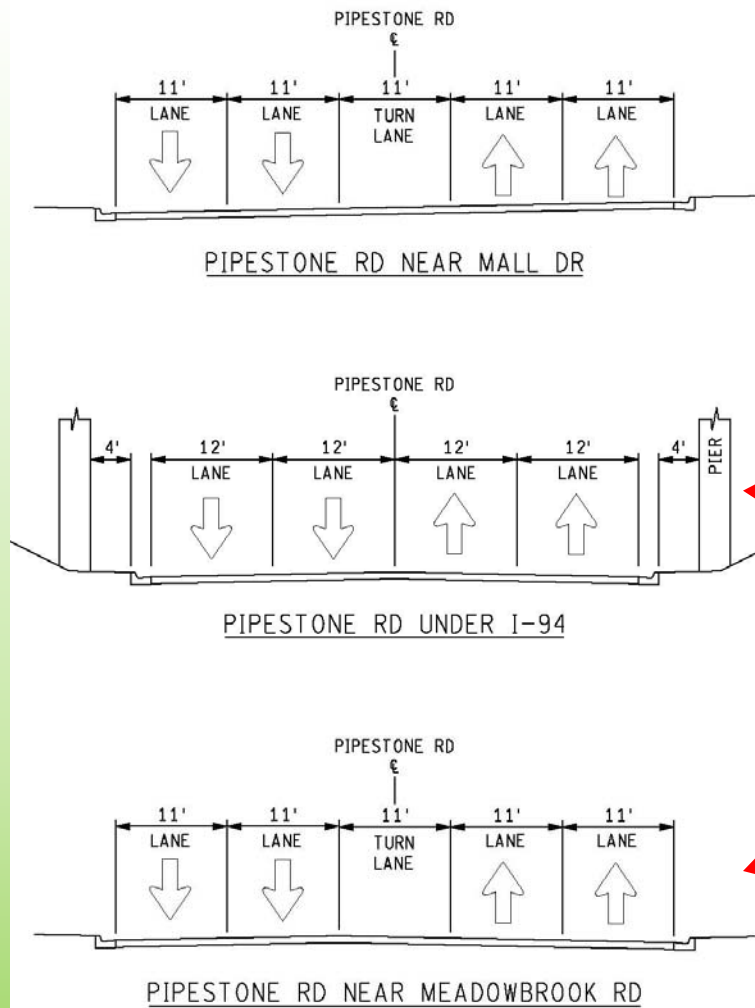
Aerial View



Existing Laneage – I-94



Existing Laneage – Pipestone Road



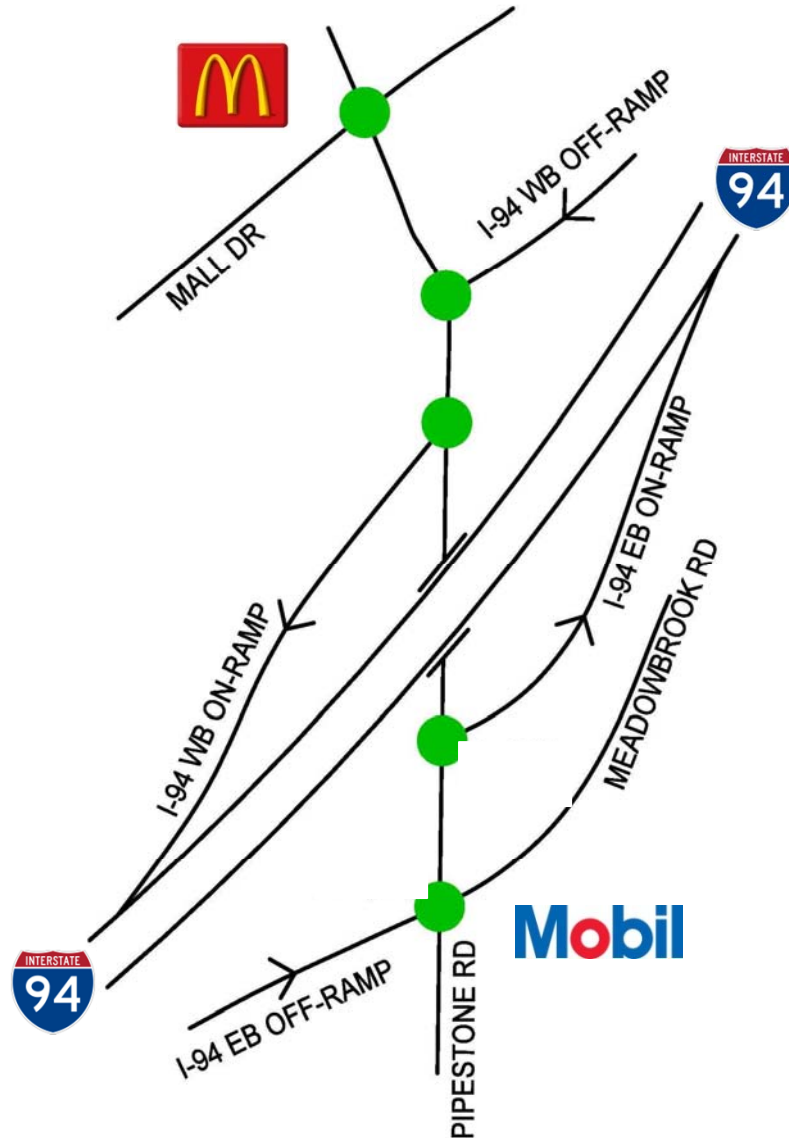
Bridge Condition

- Biannual Inspections



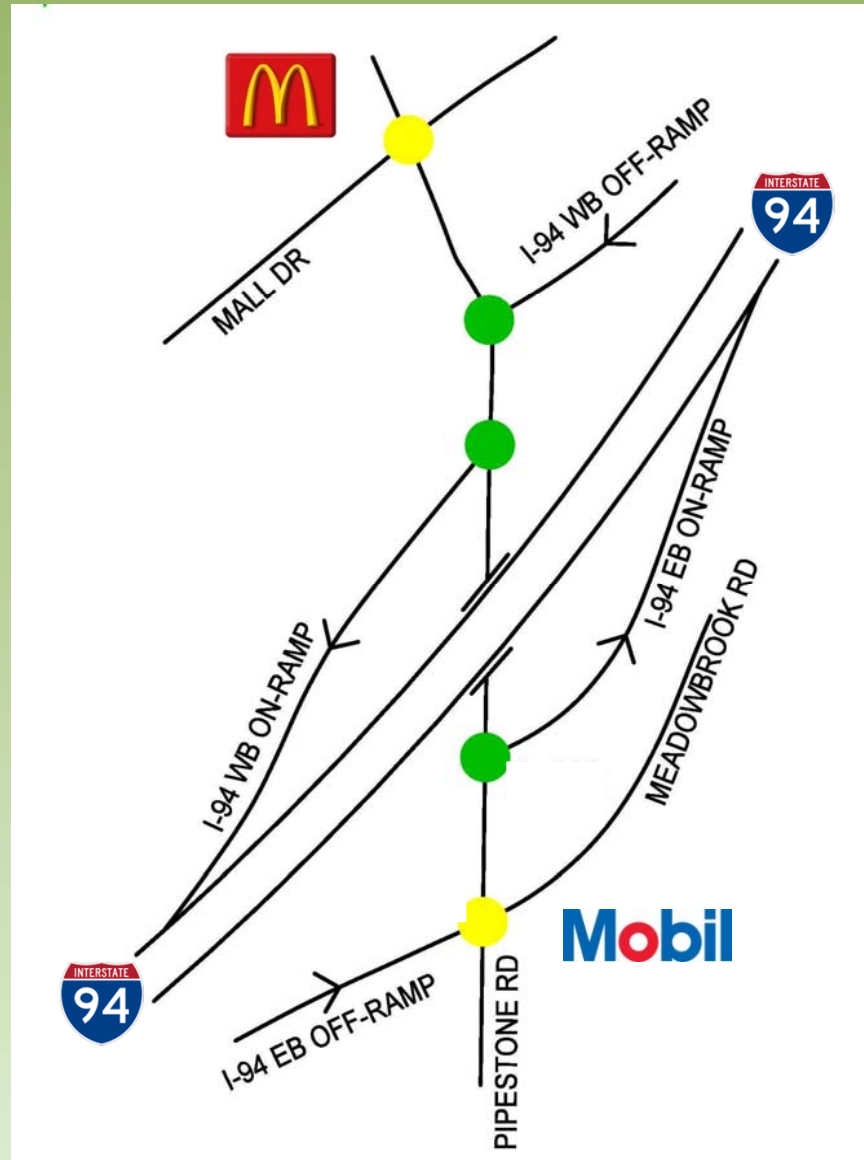
Existing Conditions (2012)

- Existing (2012) Level of Service is "A" and "B" range



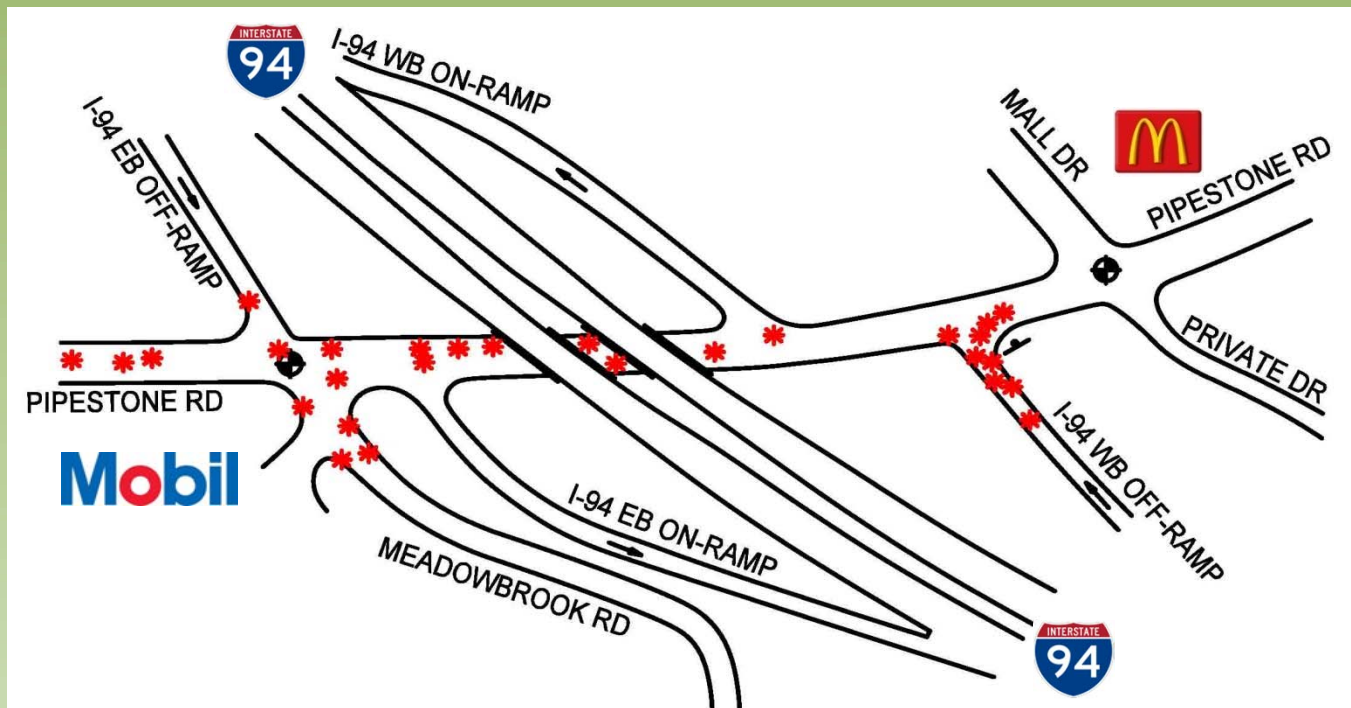
Projected Conditions (2039) – No Build Alternative

- Projected (2039)
Level of Service is
"B" and "C" range



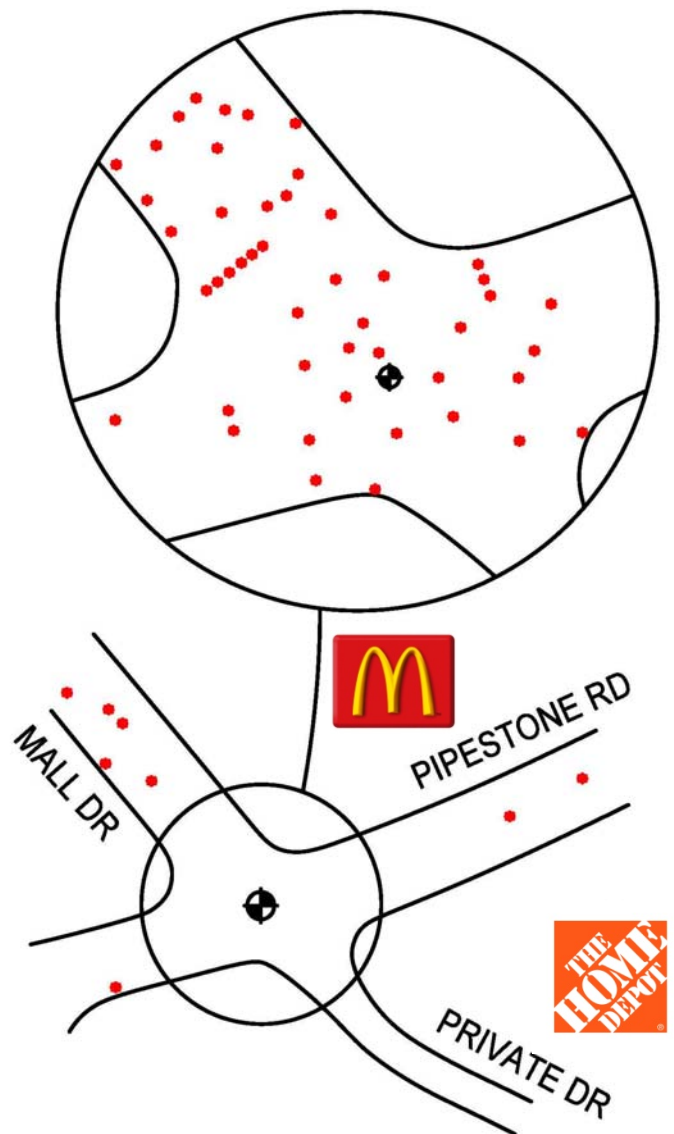
Pipestone Road Crashes (2010-2012)

- Sideswipe crash pattern on westbound off-ramp
- One south-bound crash involved driver confusion at Meadowbrook and EB ramp



Pipestone Road Crashes (2010-2012)

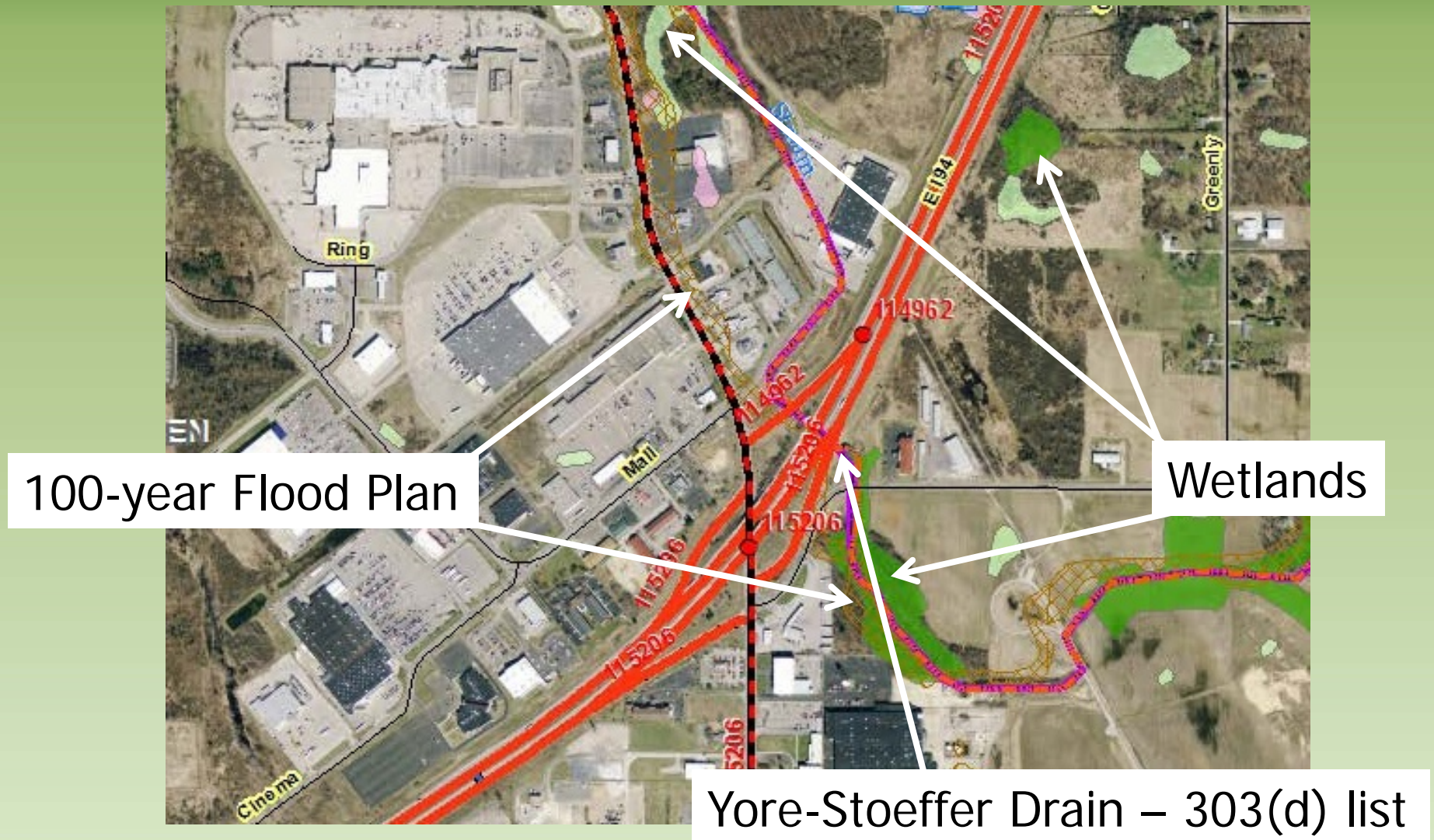
- Crash rate twice the average of intersections with similar volume
- Rear-end pattern on Mall Drive approach
- One fatality in previous three years (motorcyclist lost control approaching signal)



Environmental Considerations

- Study includes Social, Environmental and Economic Review of the Study Area
 - Agricultural
 - Recreational Properties
 - Historic
 - Archaeological
 - Wetlands Streams and Floodplains
 - NPDES
 - Coastal Zone
 - Noise and Air Quality
 - Migratory Birds
 - Endangered Species
 - Indirect Cumulative Impacts

MDEQ Considerations

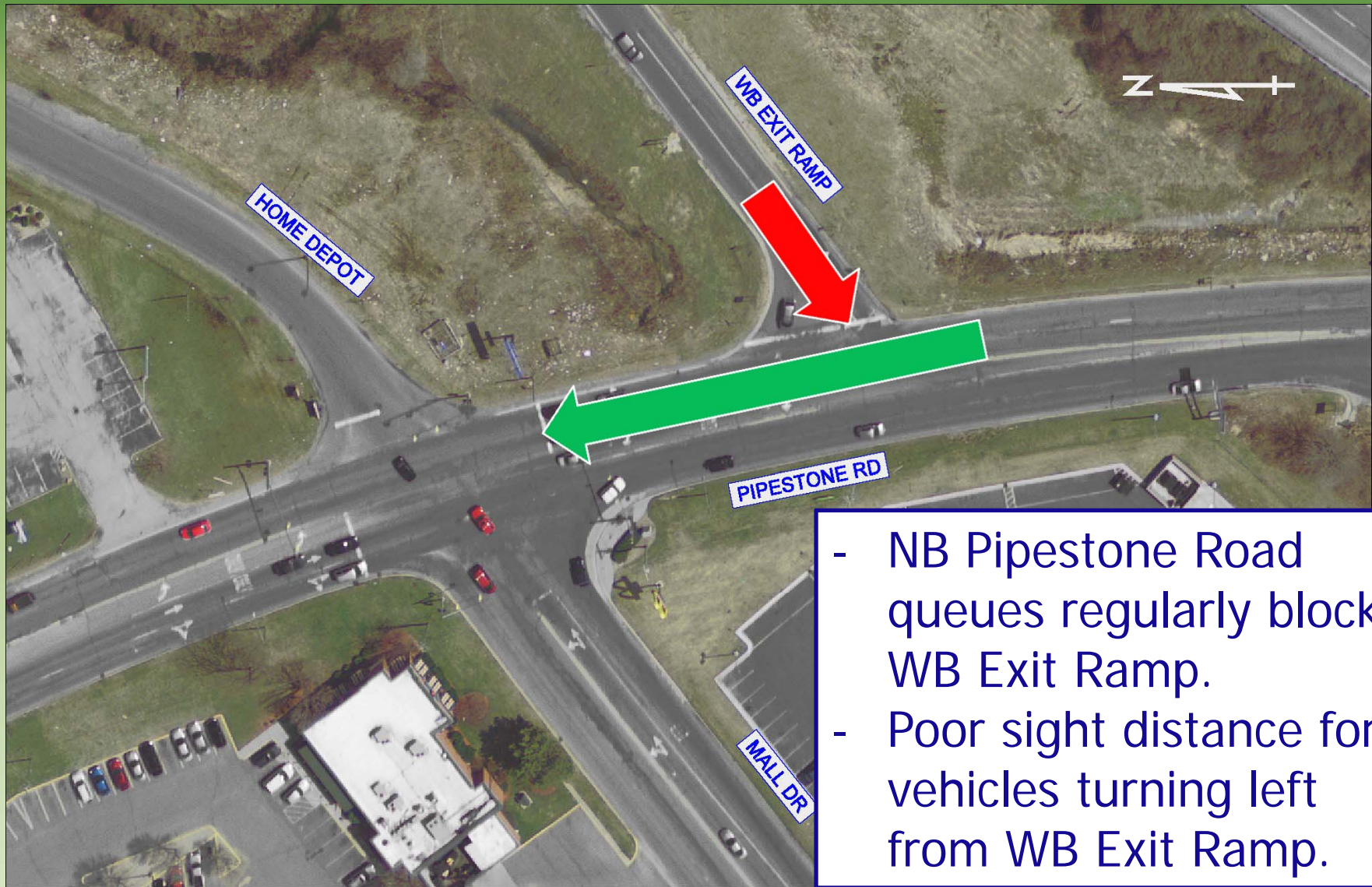


Environmental Considerations

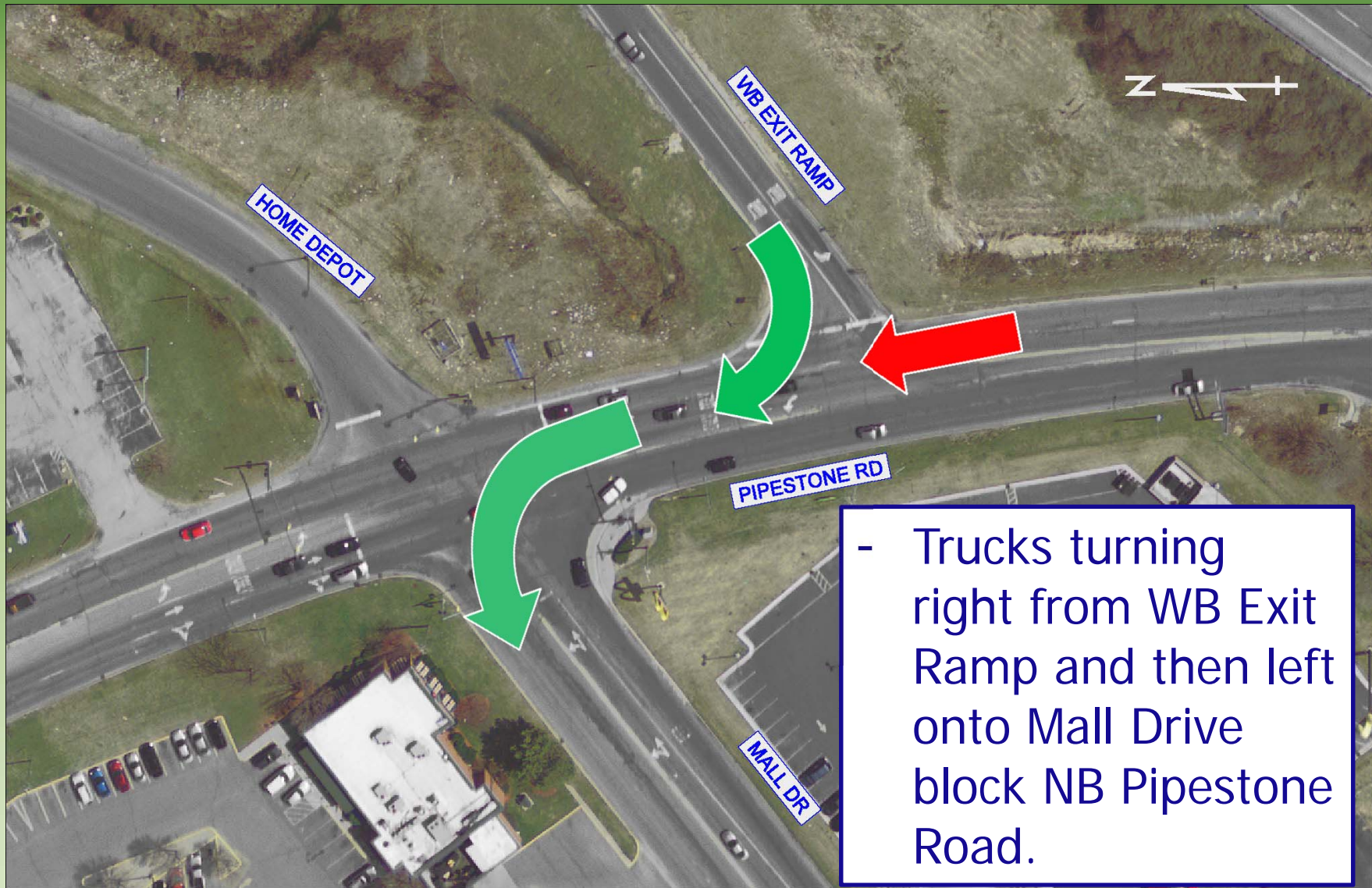
- Study is being completed in accordance with Planning and Environment Linkages (PEL) Process
 - Identify Issues and Concerns
 - Define the Problem
 - Identify Impacts



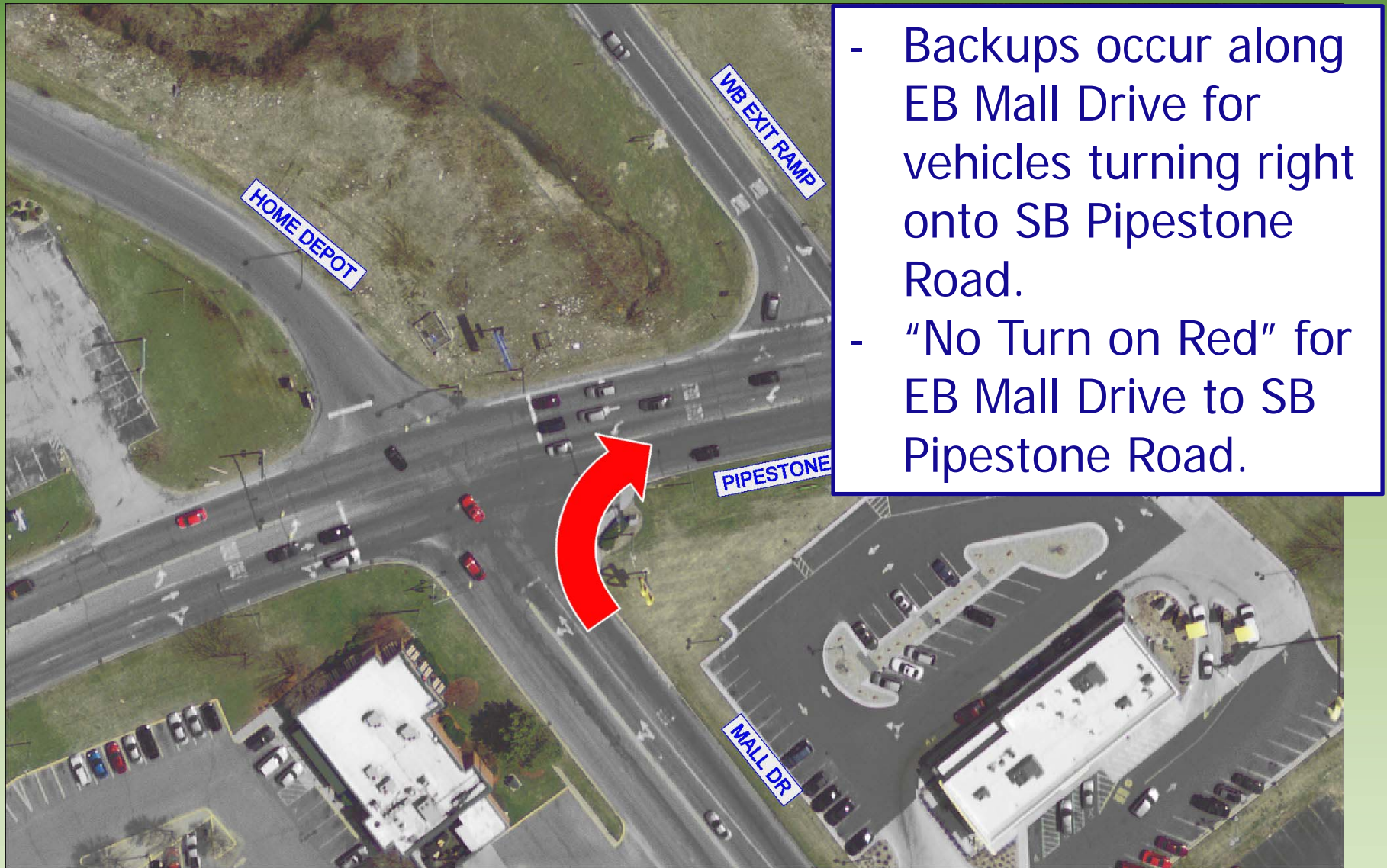
- Stakeholder Meeting(s) - Issues/Concerns



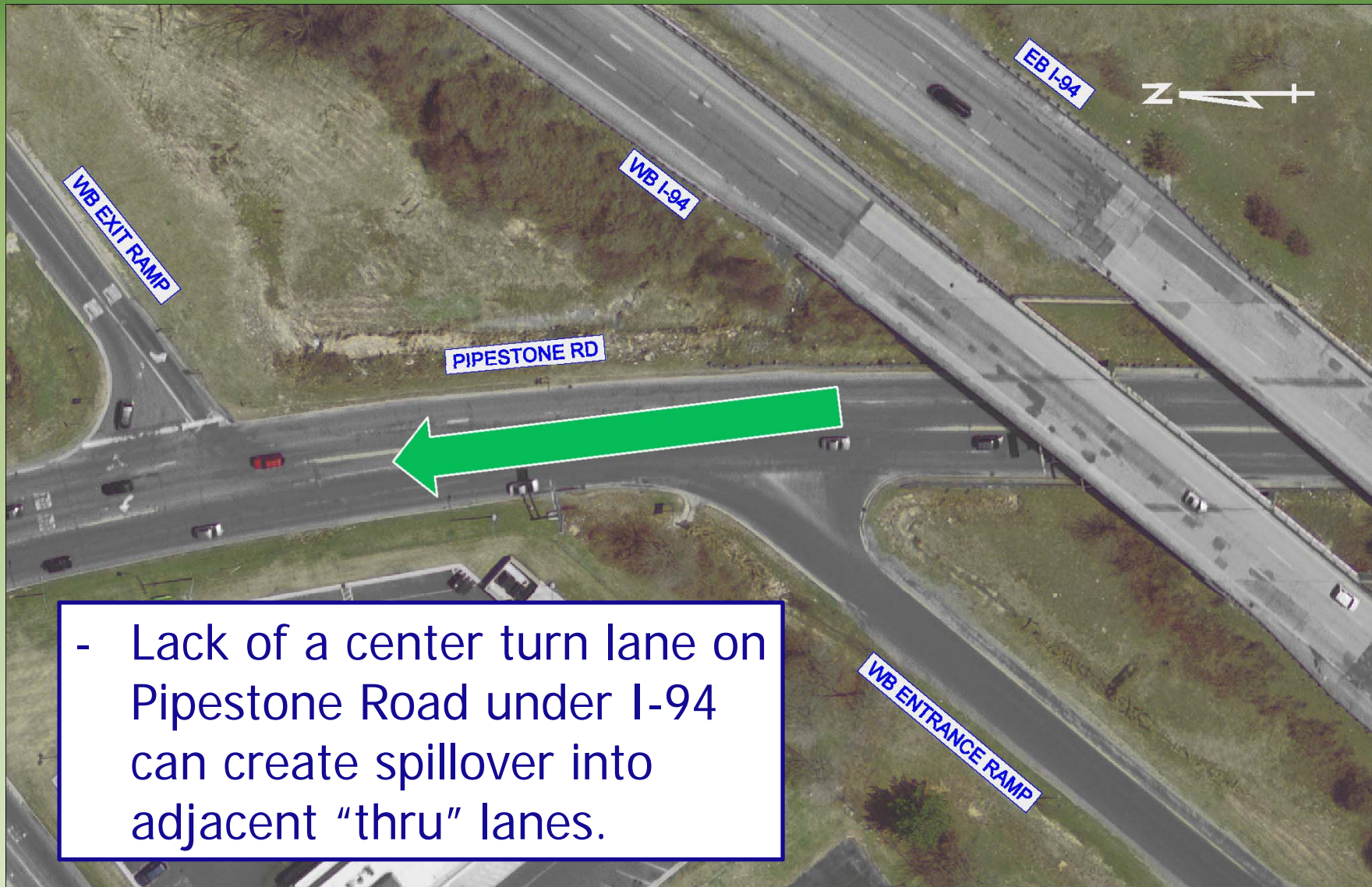
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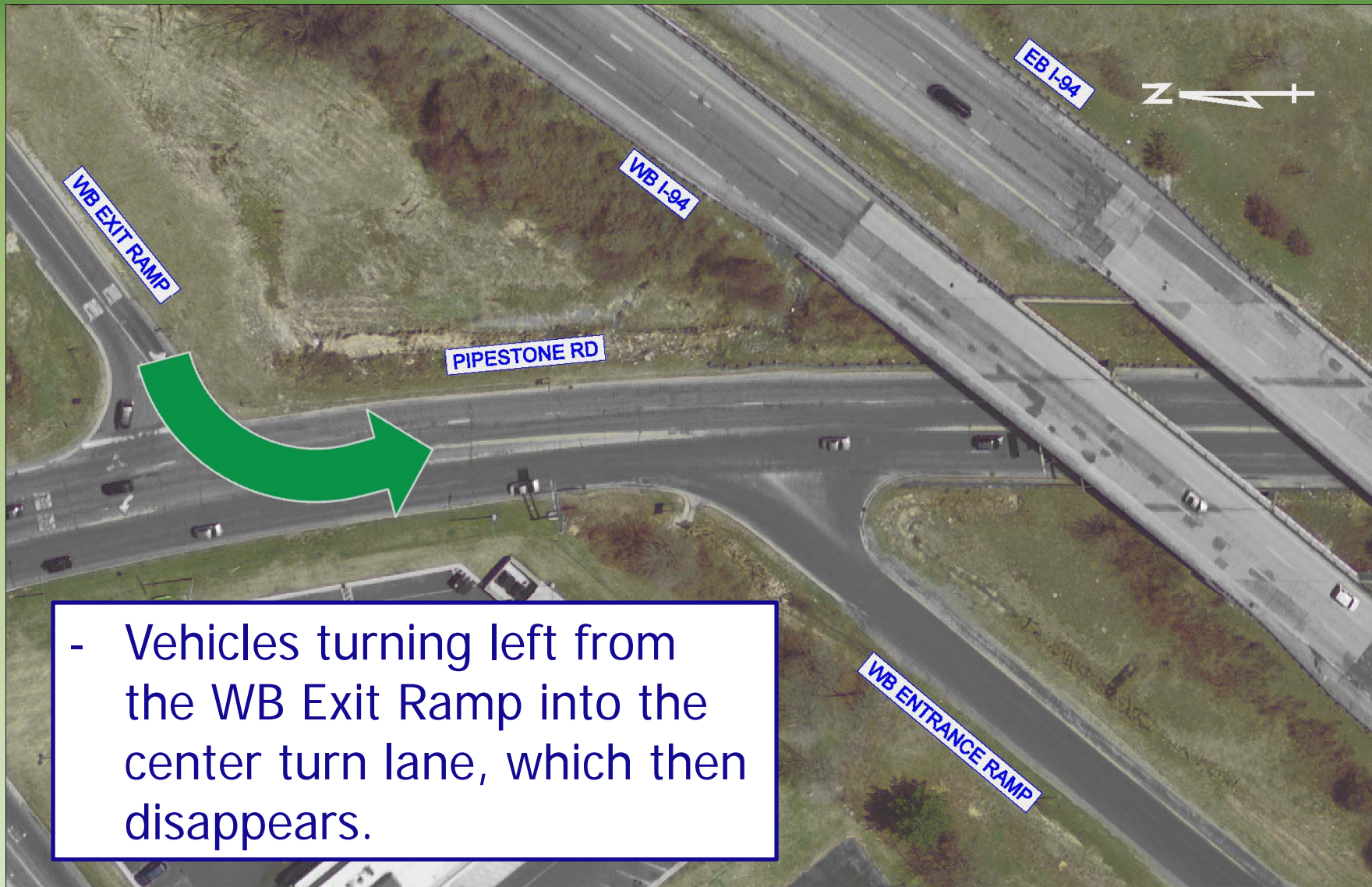


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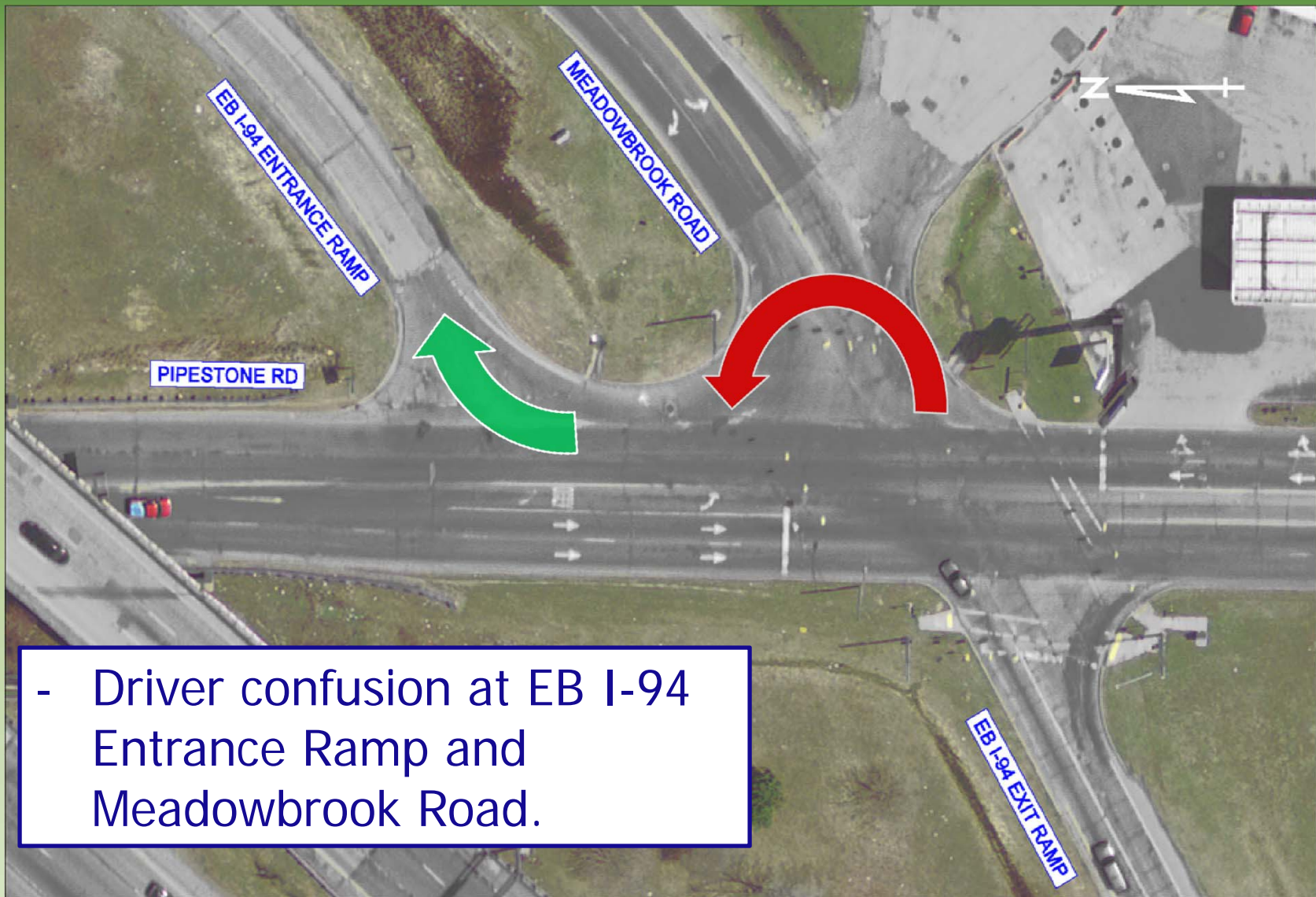


- Lack of a center turn lane on Pipestone Road under I-94 can create spillover into adjacent "thru" lanes.

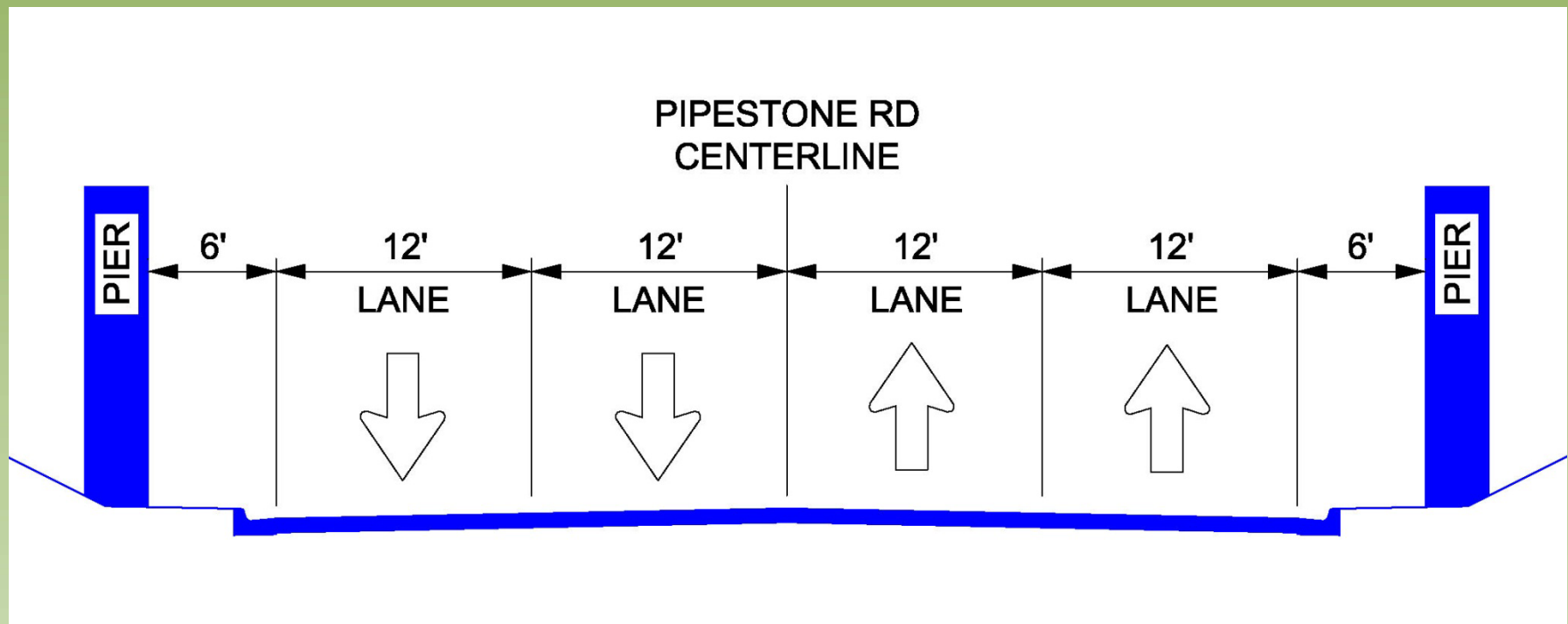
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- Lack of Pedestrian Mobility under I-94.

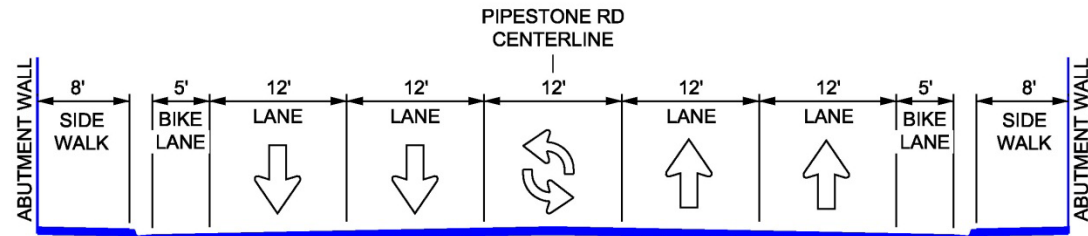
Stakeholder Meeting(s) - Issues/Concerns

- Others
 - Entrance Ramps have steep grades with poor sight distance.
 - Construction staging for I-94 and Pipestone Road.
 - Aesthetics of interchange are in need of improvement.
 - Signals on Pipestone Road at Mall Drive and Meadowbrook Road are not interconnected, impacting traffic signal progression.

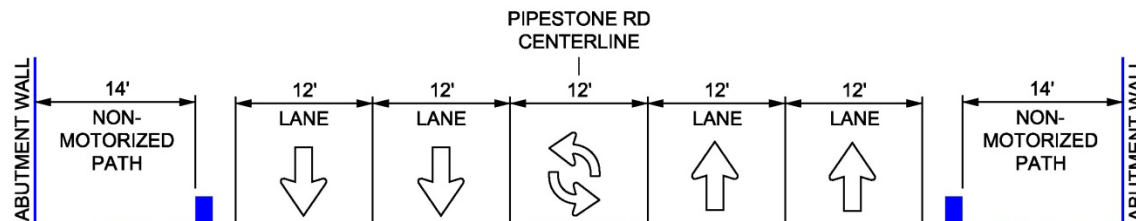
Alternative Comparison Criteria

CRITERIA
Cost
Traffic Operations (LOS)
Right-of-Way
Social/Environmental
Pedestrian Mobility
Geometrics
Constructability
Maintenance
Traffic Safety

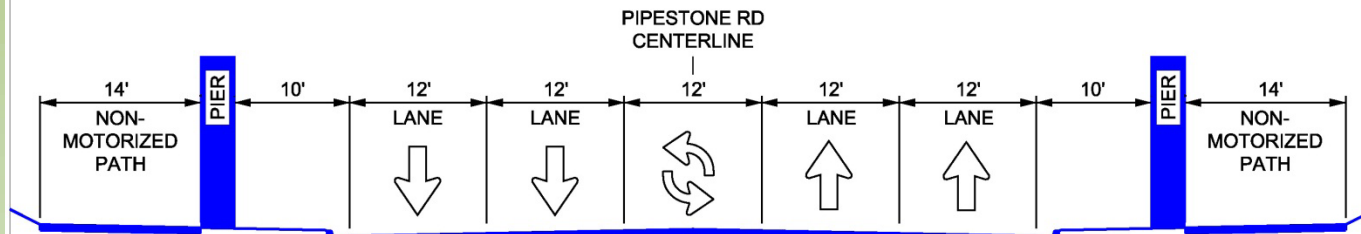
- Pedestrian/Non-Motorized Alternatives Under Consideration



5 LANES WITH BIKE LANES & SIDEWALKS UNDER BRIDGE



5 LANES WITH NON-MOTORIZED PATHS UNDER BRIDGE



5 LANES WITH NON-MOTORIZED PATHS UNDER BRIDGE

- Provide sidewalks, bike lanes, and/or non-motorized paths along Pipestone Road beneath I-94.

No Build Alternative

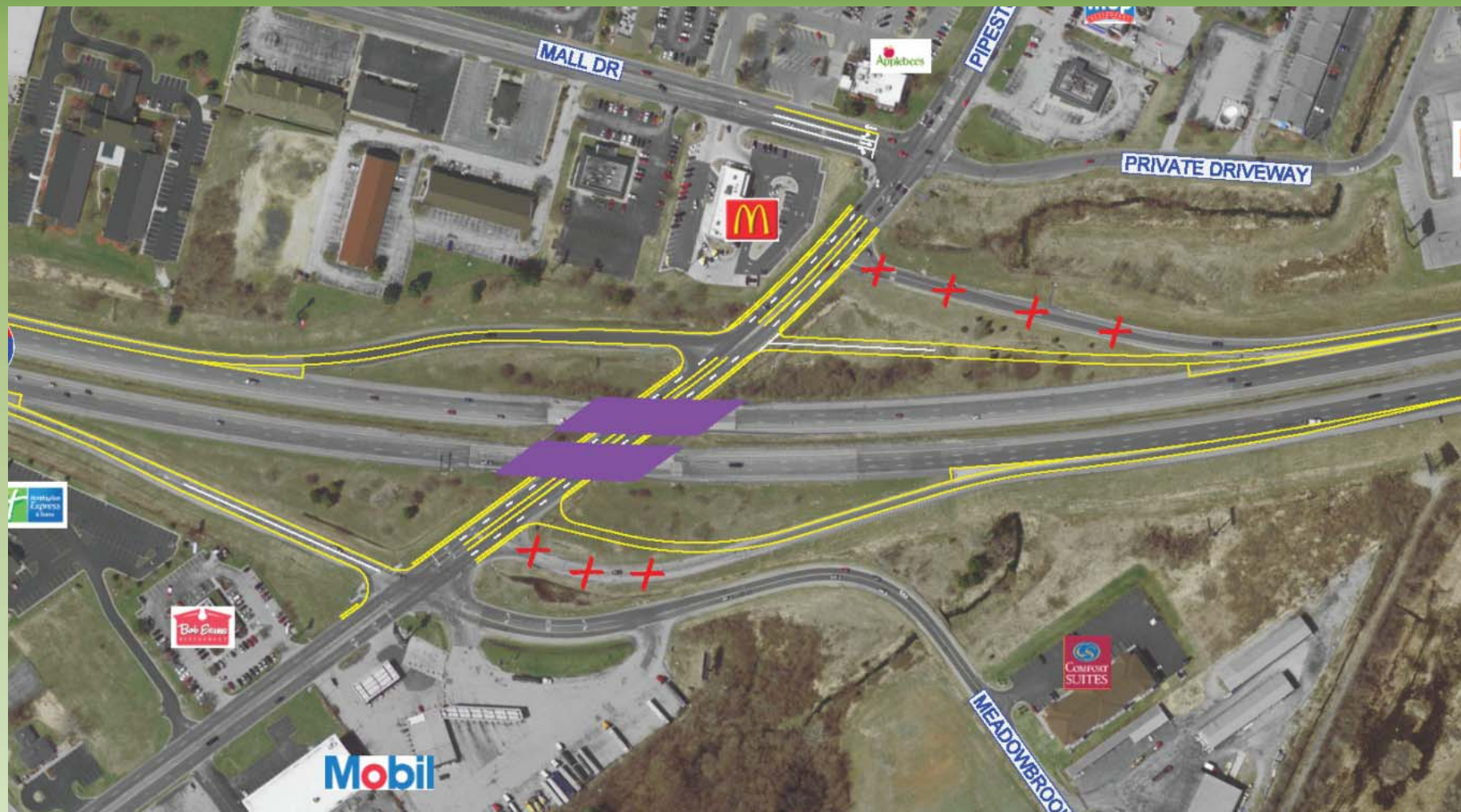


No Build Alternative

The No Build Alternative involves reconstructing the interchange in its current configuration with no changes in roadway width or ramp locations.

- Estimated Construction Cost: \$18.0 – \$19.0 million
- Pros
 - Lowest Construction Cost
 - No Right-of-Way needed
 - Acceptable Geometrics
- Cons
 - Pipestone Road would remain 4 lanes wide between the ramp terminals (under the bridge).
 - Proximity of WB I-94 Exit Ramp to Pipestone Road/Mall Drive Intersection.
 - Proximity of EB I-94 Entrance Ramp to Pipestone Road/Meadowbrook Road Intersection.

Draft Alternative 1 (Diamond)

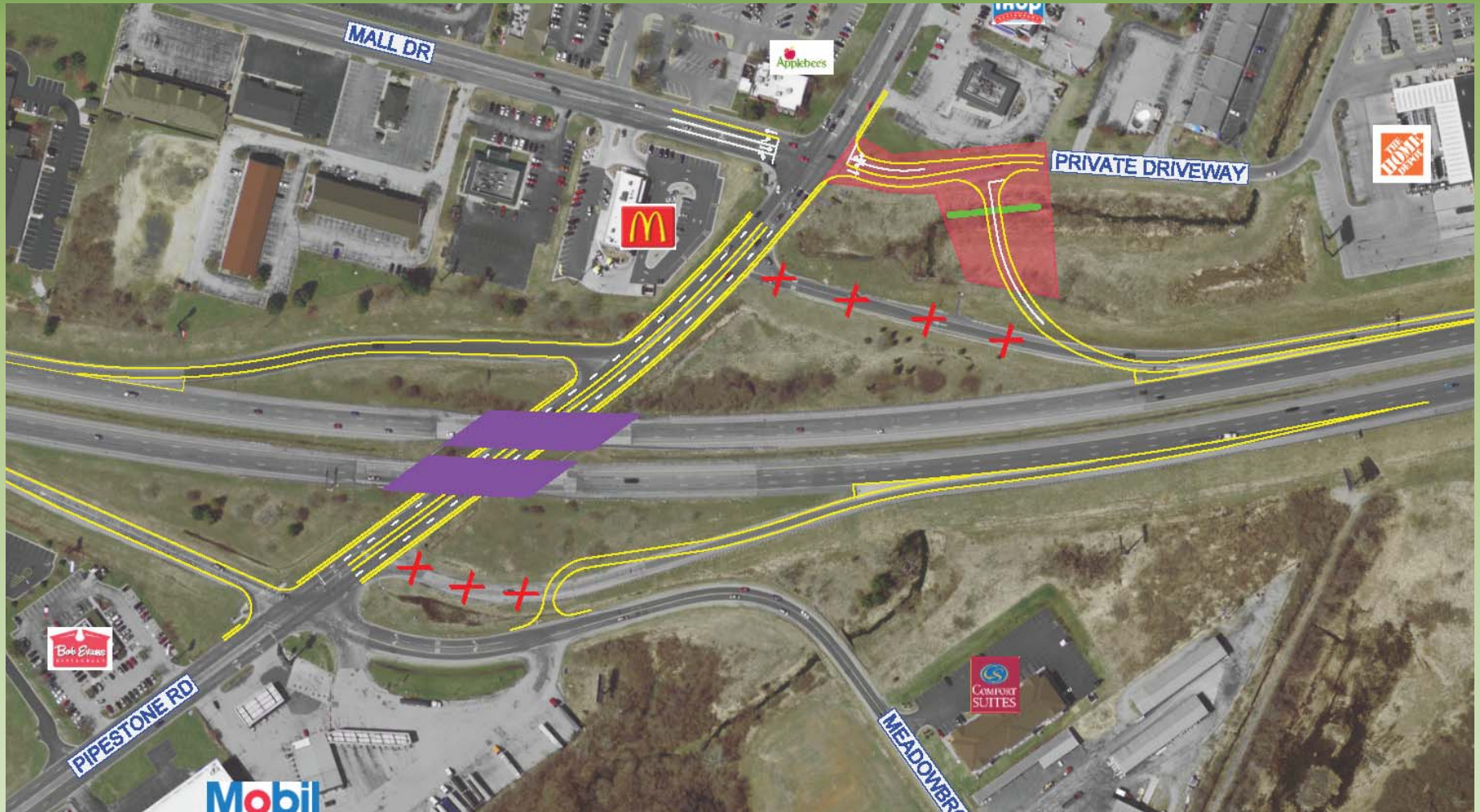


Draft Alternative 1 (Diamond)

Alternative 1 is a diamond interchange with the westbound I-94 Exit Ramp relocated to head up to the westbound I-94 Entrance Ramp, and the I-94 EB Entrance Ramp moved slightly north to increase distance from Meadowbrook Road.

- Estimated Construction Cost: \$18.2 – \$19.2 million
- Pros
 - Lower Construction Cost compared to Alternatives 2 and 6
 - No Right-of-Way needed
 - Improved Geometrics
- Cons
 - Proximity of WB I-94 Exit Ramp to Pipestone Road/Mall Drive Intersection.
 - Proximity of EB I-94 Entrance Ramp to Pipestone Road/Meadowbrook Road Intersection.

Draft Alternative 2 (Side Road Ramps)

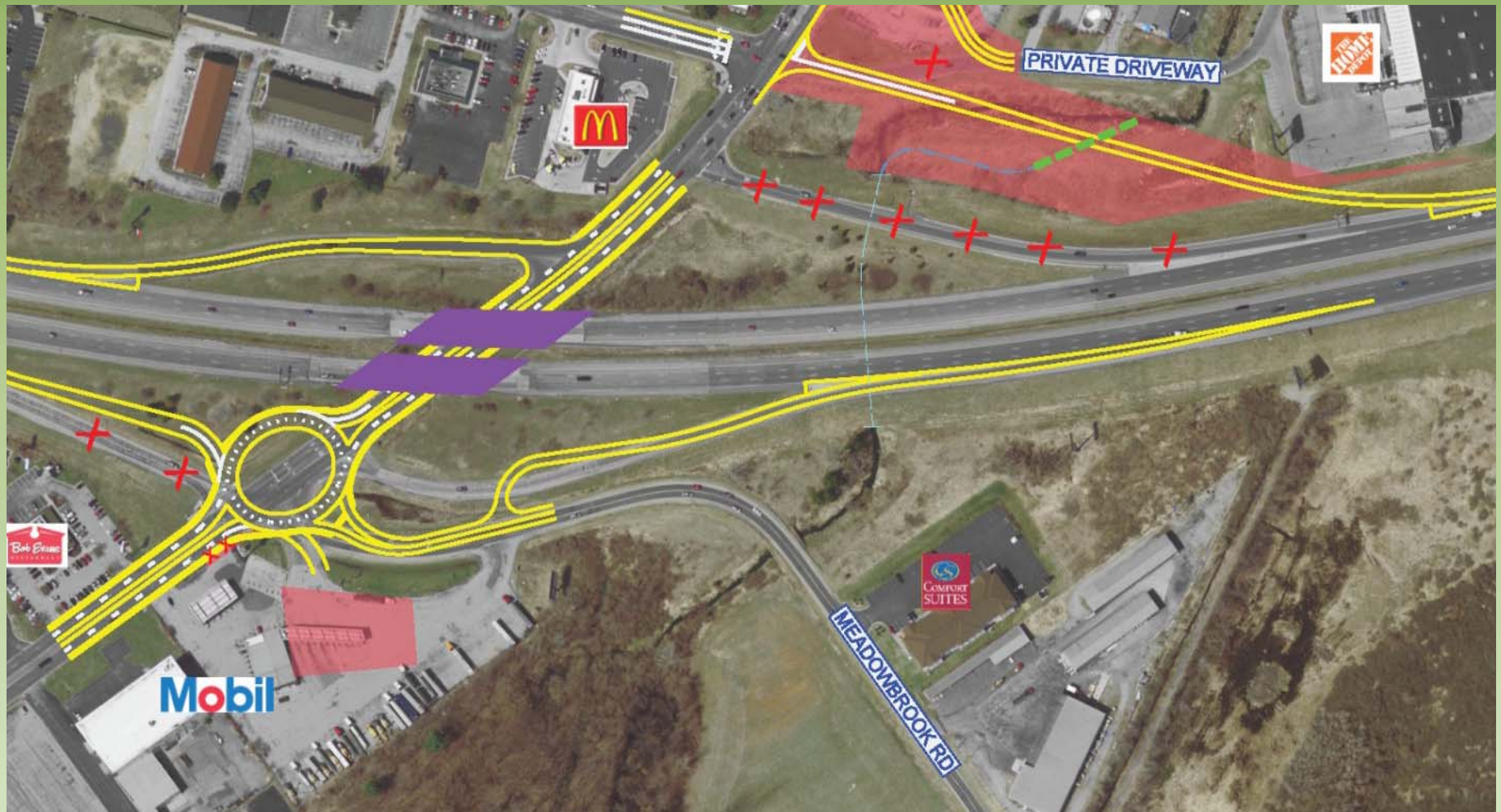


Draft Alternative 2 (Side Road Ramps)

Alternative 2 relocates the westbound I-94 Exit Ramp from Pipestone Road to the existing Home Depot driveway, and the eastbound I-94 Entrance Ramp from Pipestone Road to Meadowbrook Road.

- Cost: \$18.8 – \$19.8 million
- Pros
 - Relocates closely spaced intersections along Pipestone Road to Side Roads.
- Cons
 - Cost is higher than No Build and Alternative #1.
 - Right-of-Way is required.
 - Non-Standard Geometrics.

Draft Alternative 6 (Relocate Private Drive)



Draft Alternative 6 (Relocate Private Drive)

Alternative 6 relocates the westbound I-94 Exit Ramp to head up with Mall Drive, and relocates the existing private drive to the north. The eastbound I-94 Ramps, Pipestone Road, and Meadowbrook Road would be reconfigured with a roundabout.

- Estimated Construction Cost: \$22.0 – \$23.0 million
- Pros
 - Good traffic operations for Pipestone Road Traffic
- Cons
 - Highest Construction Cost
 - Difficult turning movements for trucks at the roundabout, especially related to the existing Gas Station/Truck Stop property.
 - Extensive Right-of-Way impacts.

Project Schedule

- Stakeholder Meeting #1 - May 8, 2013
 - Discuss issues and brainstorm ideas
- Stakeholder Meeting #2 - May 22, 2013
 - Present preliminary alternatives
- Stakeholder Meeting #3 - June 5, 2013
 - Finalize project alternatives
- Public Meeting – August 8, 2013
- Draft Report of Findings - Fall 2013
- Finalize Report of Findings - Winter 2013/2014
- Project Construction Begins – To be determined

Stakeholder and Public Involvement

- MDOT wants your input!
- What kind of input is MDOT looking for?
 - What works well at the interchange?
 - What doesn't work well at the interchange?
 - What is missing?
- Open House format – Study Team available to answer questions. Comment forms are provided for you to write down your issues, ideas, and concerns.
- Study in accordance with MDOT "Complete Streets Policy"



Contact Person

Kyle Rudlaff

Michigan Department of Transportation

Coloma Transportation Service Center

3880 Red Arrow Highway

Benton Harbor, MI 49022

PH: 269-849-2347

rudlaffk@michigan.gov

THANK YOU!!