

Rural Access Management:

“Innovative Approaches to Expressway to Freeway Conversions”

7th Conference on Access Management
Park City, Utah

Darren Fortney, AICP
Jim Hanson, PE, PTOE



What we typically associate access management with...

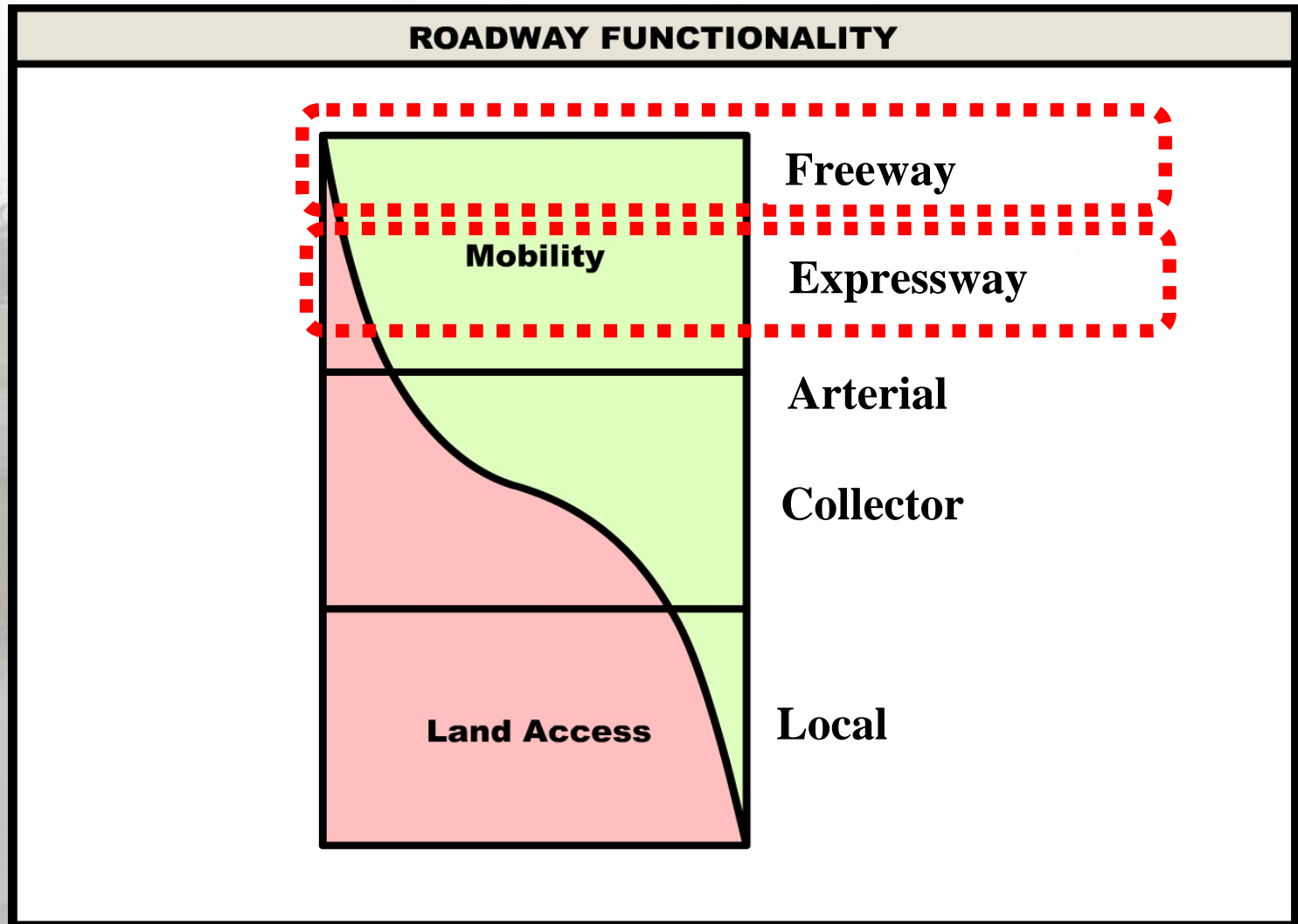


What about higher order access management in rural areas?

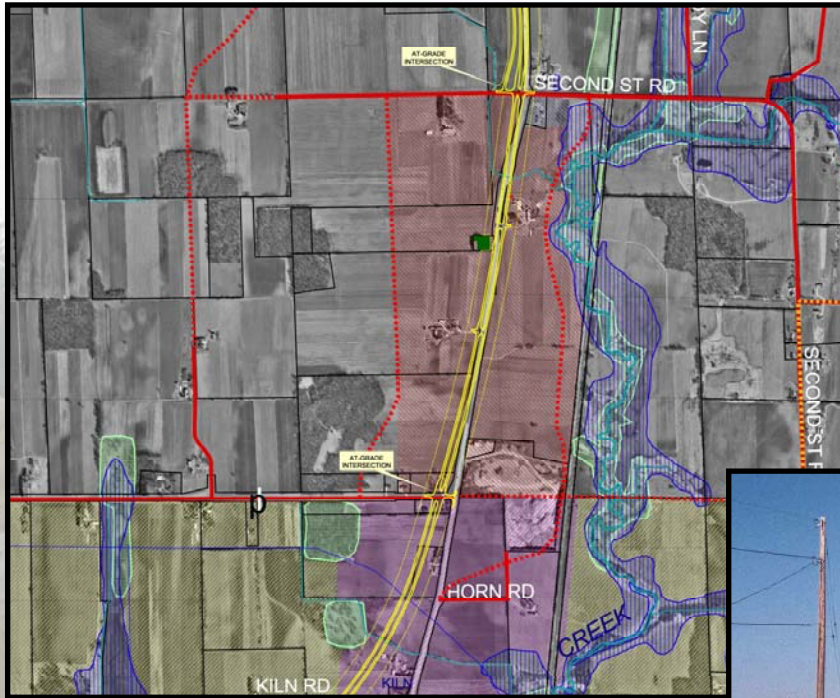


CROSS TRAFFIC
NEXT 14 MILES

Access management applied to a expressway to freeway conversion



Why protect and preserve?



To avoid this...



And avoid this...

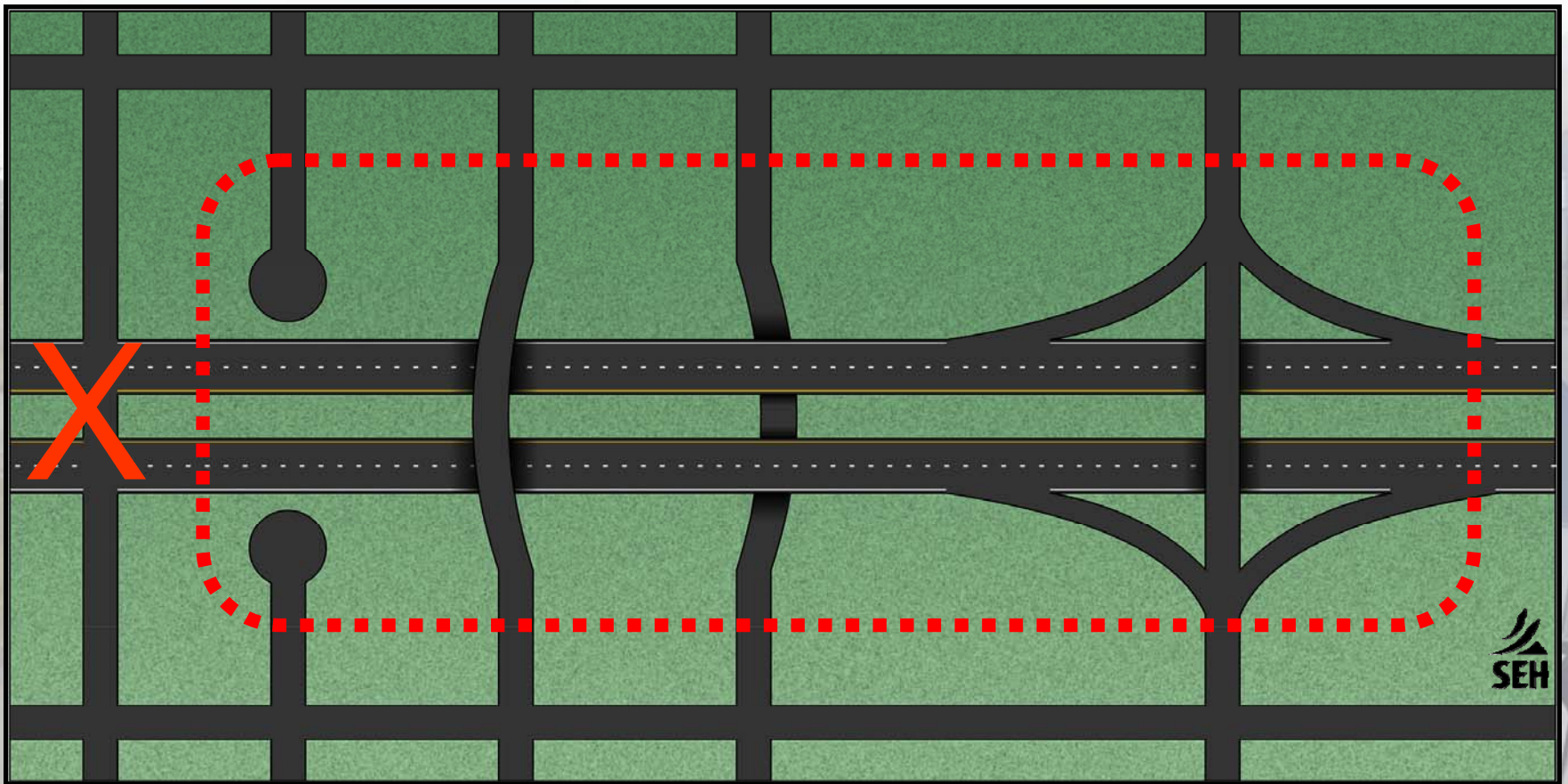


WSJ LOCAL 2-26-06

Wisconsin State Journal

Seeking answers to bypass crashes

What does a freeway conversion consist of?



CROSS TRAFFIC
NEXT 14 MILES

Need for freeway conversion

- Long-term plan and importance of state trunk highway system
- Increasing traffic volumes
- Increasing growth and development pressures
- Long-term safety and operations
- Corridor preservation
 - Establish long-term vision
 - Land use planning integration
 - Continuous management strategies
 - Investment protection
 - R/W footprint mapping and protection



Wisconsin Department of Transportation's (WisDOT) focus on planning and preservation



WisDOT's utilizes unique planning and preservation tool (Wis. Stats. 84.295)

- **Allows for special freeway designation of certain highways**
- **Protects and preserves necessary R/W through official mapping/recording on property deeds**
- **Does not commit WisDOT to constructing freeway improvements and/or purchasing R/W**

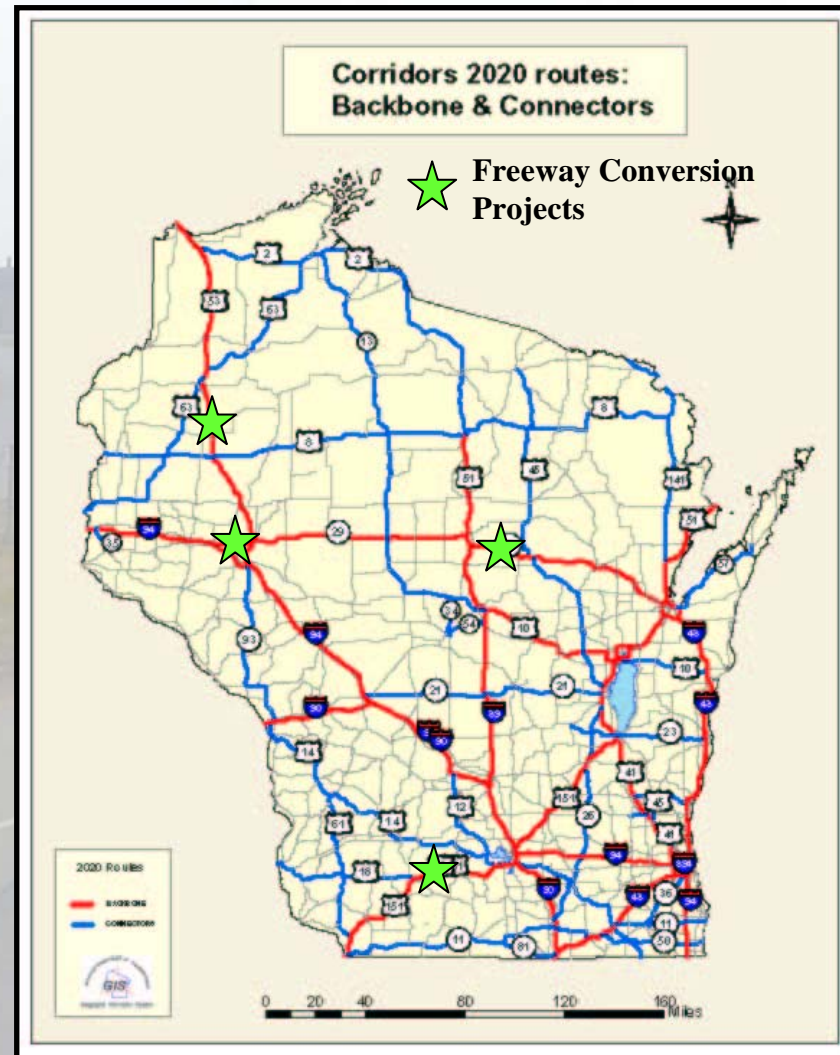


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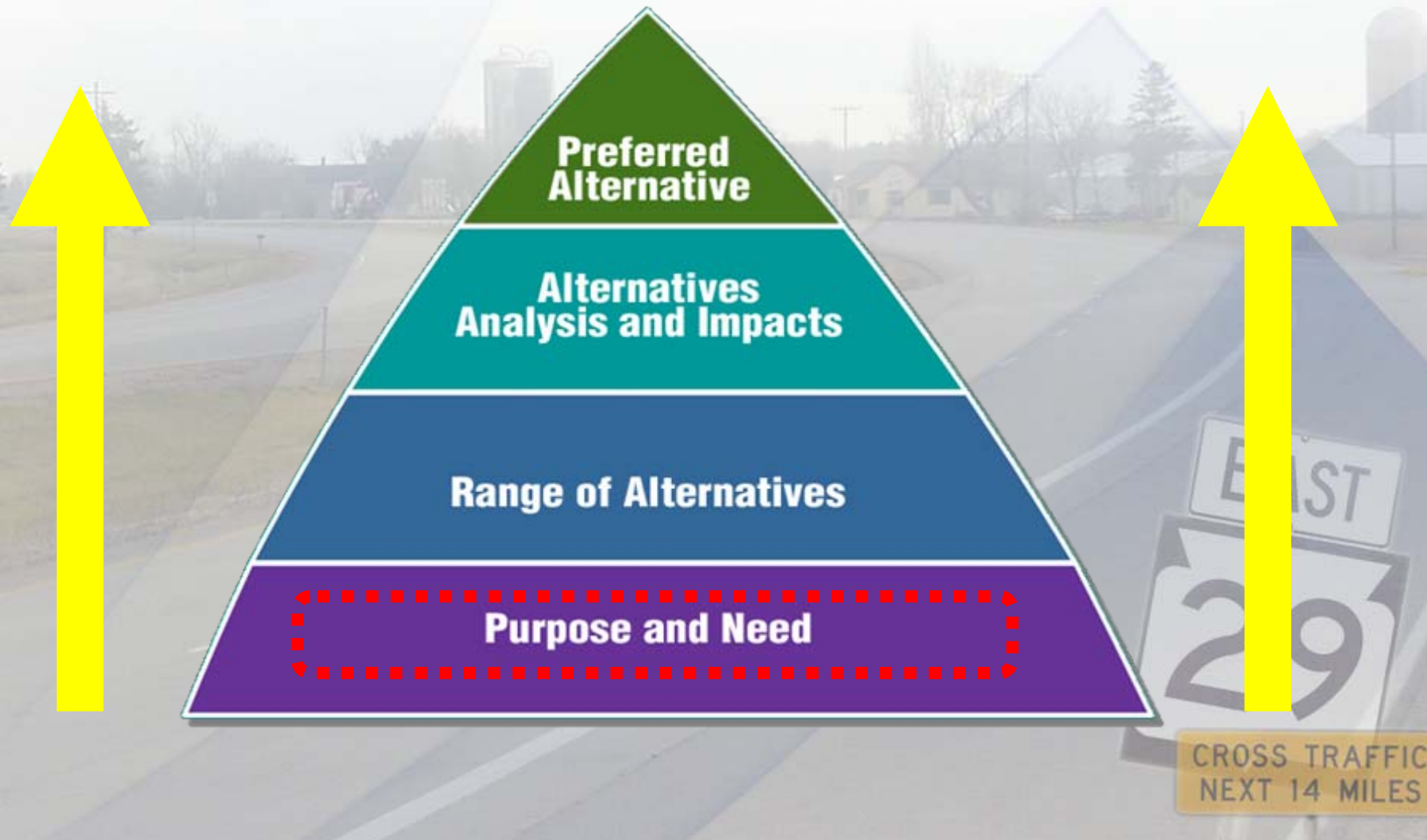
Page 1 of 1

Freeway conversion occurring statewide



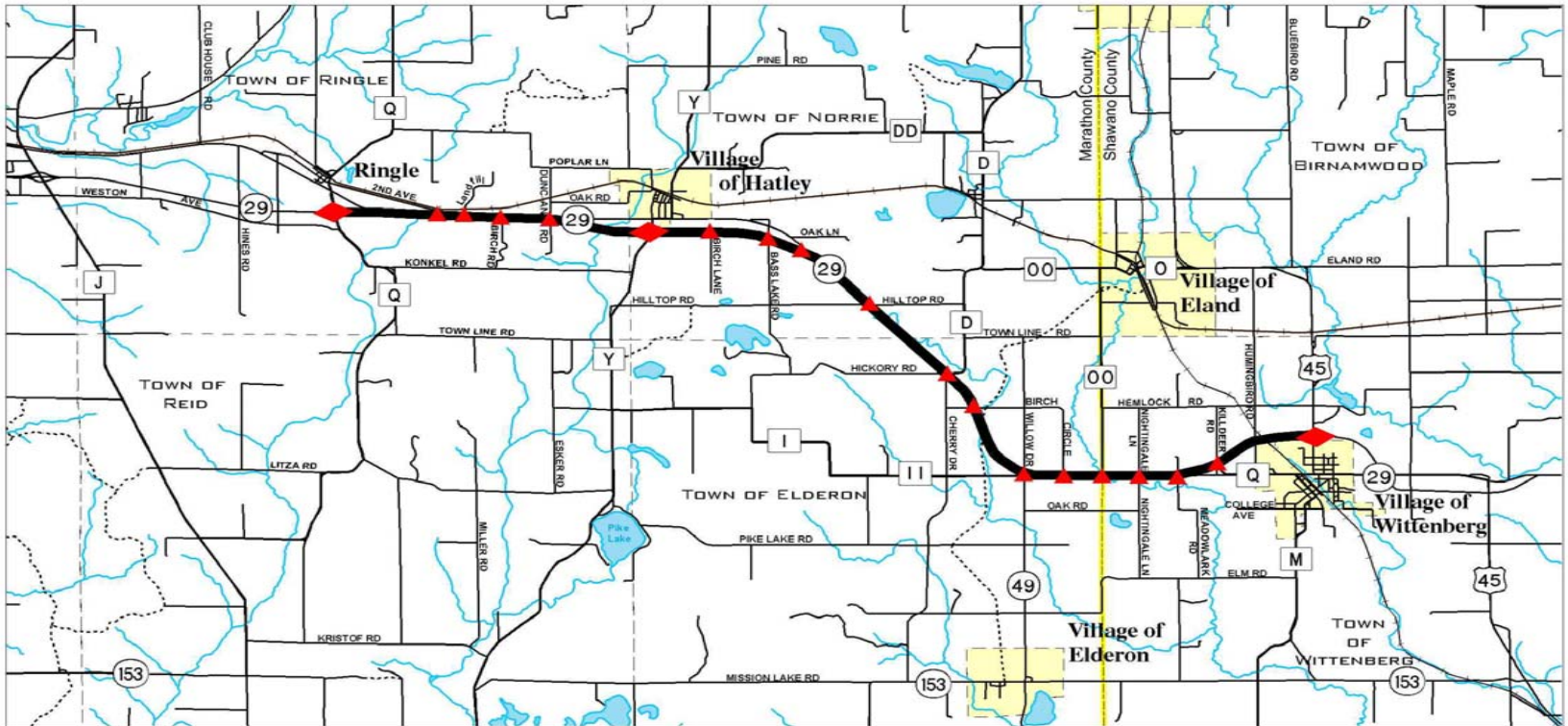
EAST
29
CROSS TRAFFIC
NEXT 14 MILES

Freeway conversion and public involvement must follow process to be effective




TRAFFIC
MILES

WIS 29 East - Location Map



A horizontal scale bar with tick marks at 0, 1.5, 3, and 6. The word "Miles" is written at the right end of the bar.

Legend

- Interchange
 At-Grade Intersection

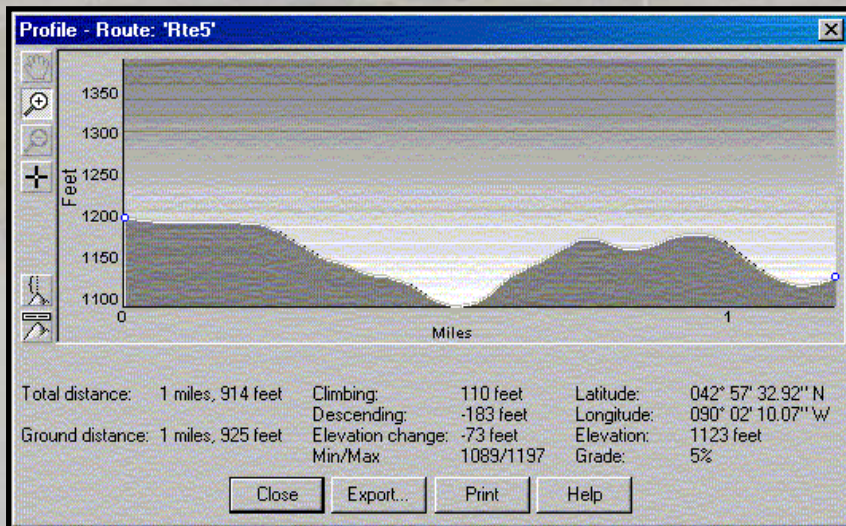


Assess existing roadway network



Inventory of Existing Roads

- Collect traffic volumes
- Analyze existing functional classifications
- Terrain and profiles
- Review existing access locations & uses



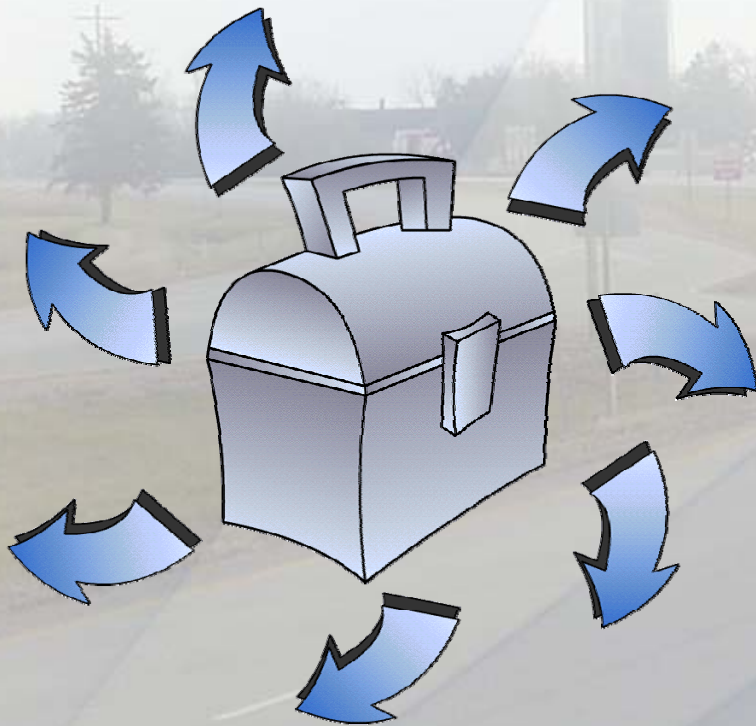
Evaluate existing travel patterns

- Emergency services (police, fire, EMS)
- School bus routes
- Farm operation
- Postal delivery
- Residents/business
- Multi-modal
 - Snowmobiles
 - Bike routes
 - State recreation trails



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Public involvement tools important from start



WIS 29 Preservation Plan (Ringle to Wittenberg)

Frequently Asked Questions



1. Who is conducting the WIS 29 Preservation Plan?

The Wisconsin Department of Transportation (WisDOT), North Central Region is conducting the study. WisDOT will coordinate with local agencies for input and assistance.

2. What is the WIS 29 Preservation Plan all about?

Even though the WIS 29 corridor is operating within the capacity limits it was initially designed to handle, experience around the state has demonstrated that unmanaged and unprotected highways can deteriorate quickly in terms of reduced operations and safety. Increases in traffic and land development perpetuate this deterioration. Of greatest concern to WisDOT are the at-grade intersections along WIS 29. As traffic increases over time, it will become increasingly difficult to turn on, off, and/or cross the highway in a safe manner, and the potential for crashes will increase.

The purpose of the WIS 29 Corridor Preservation plan is to develop a long-term vision for the corridor with the goal of officially designating, mapping, and preserving the corridor as a freeway. In a freeway condition the at-grade intersections would be replaced by well-spaced interchange(s), overpasses, cul-de-sacs, and a local transportation network to safely balance the access and mobility needs of the area.

The WIS 29 Preservation Plan will ultimately map and preserve future footprints and right-of-way necessary to construct the improvements necessary for the conversion. Although there are no immediate project or construction dollars programmed, the land will be protected prior to actual construction through deed restrictions on some private properties. A formal "official map" will be prepared as part of the plan and recorded at the local Register of Deeds offices.

The limits of the plan extend from County Q in the village of Ringle to the western intersection of US 45 in the village of Wittenberg; a distance of approximately 14 miles. The project is located in both Marathon and Shawano Counties.

3. Are you planning to convert WIS 29 to a freeway?

This segment of WIS 29 is currently designed as an "expressway." An expressway typically consists of 55 to 65 mph posted speed limit, a median to separate traffic, and at-grade intersections (meaning you can get directly on/off/across at the intersecting roads). An expressway often has some interchanges and a limited number of private driveways located directly on the highway.

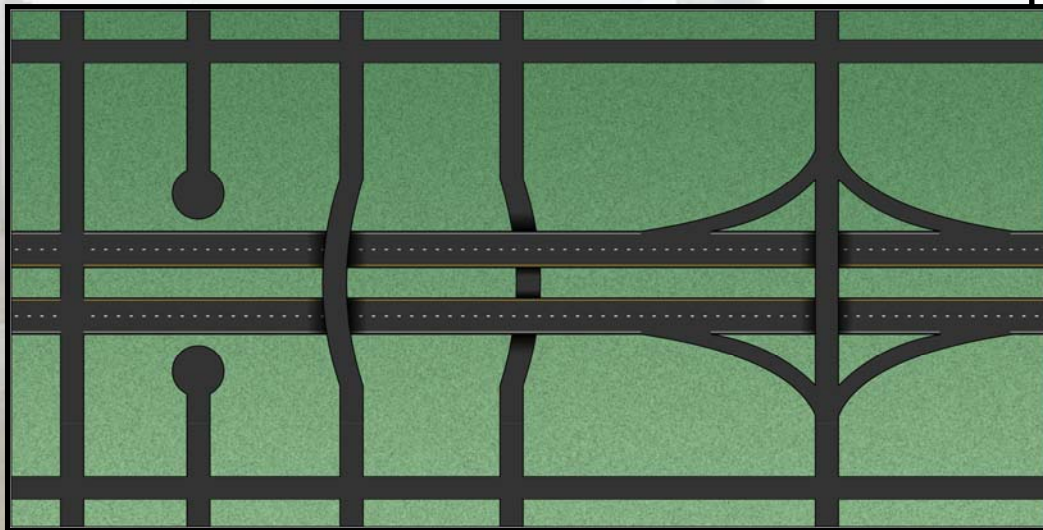
A "freeway" facility is usually a four-lane facility with a median and a 65 mph posted speed limit. Unlike expressways, freeways accommodate access on/off the highway only at interchanges. With a freeway facility, there are no at-grade intersections or private driveways on the corridor. The goal of the plan is the ultimate designation and conversion of WIS 29 from an expressway to a freeway.

4. Why is the plan being done now? Why wasn't access addressed when it was constructed as an expressway?

WIS 29 is one of the most important east/west roadways of the state highway system and is identified as a Backbone route in WisDOT's Corridors 2020 Plan. The plan places a high priority in protecting highway investments that connect major economic/population centers and carry long-distance, statewide traffic. Between 1992 and 2005 WIS 29 has undergone several capacity expansion and safety enhancements between Green Bay and I-94 representing significant investments by WisDOT.

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Education is essential for public understanding and acceptance



US 18/151 Highway Access Study Preliminary Concepts WisDOT ID: 1200-08-00



There are several types of access that can exist along a US or state highway facility including at-grade, grade separated, and interchange access. At-grade access consist of intersections with public streets and private driveways. Private driveways can be commercial, residential, agricultural such as a field access, or a combination such as a farm that provides access for residential and agricultural uses. Grade separations usually allow roadways to cross via a structure and include overpasses and underpasses. Interchanges are also grade separations providing access between roadways via on-ramps and off-ramps. Many of these access types are depicted on the *Maps of Preliminary Concepts*.

How to Use the Maps of Preliminary Concepts

The maps depict existing access locations as well as recommendations for future access and local roadway circulation. It is important to understand what the symbols represent when looking at the maps. The following information lists both the access map symbols and a graphic representation of the type of access that is depicted by the symbol. This allows you to correctly interpret the information that is portrayed on the attached maps. An inventory of the existing access and the recommendation for future access is also depicted in a table format.

MAP SYMBOL

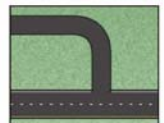
DESCRIPTION

EXAMPLE



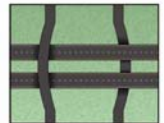
Existing At-Grade Access

Existing at-grade access points along US 18/151 include intersections with public streets and private driveways. Private access points commonly found along the highway include residential driveways, farm access, and field access. A few existing commercial driveways also exist along US 18/151. There are several intersections with public streets along the highway. These include full access intersections where the median is also open allowing left turns onto and off of US 18/151 and "T" intersections.



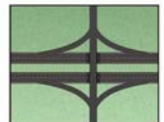
Grade Separation

These locations allow the local street or highway to cross over/under US 18/151, but do not provide direct access to the highway. This allows local circulation to be preserved and reduces the "barrier-effect" of the state highway. Grade separations do not provide access to the highway, but are important for local circulation allowing a vehicle to travel to a location where access to the highway is provided.



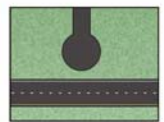
Interchange

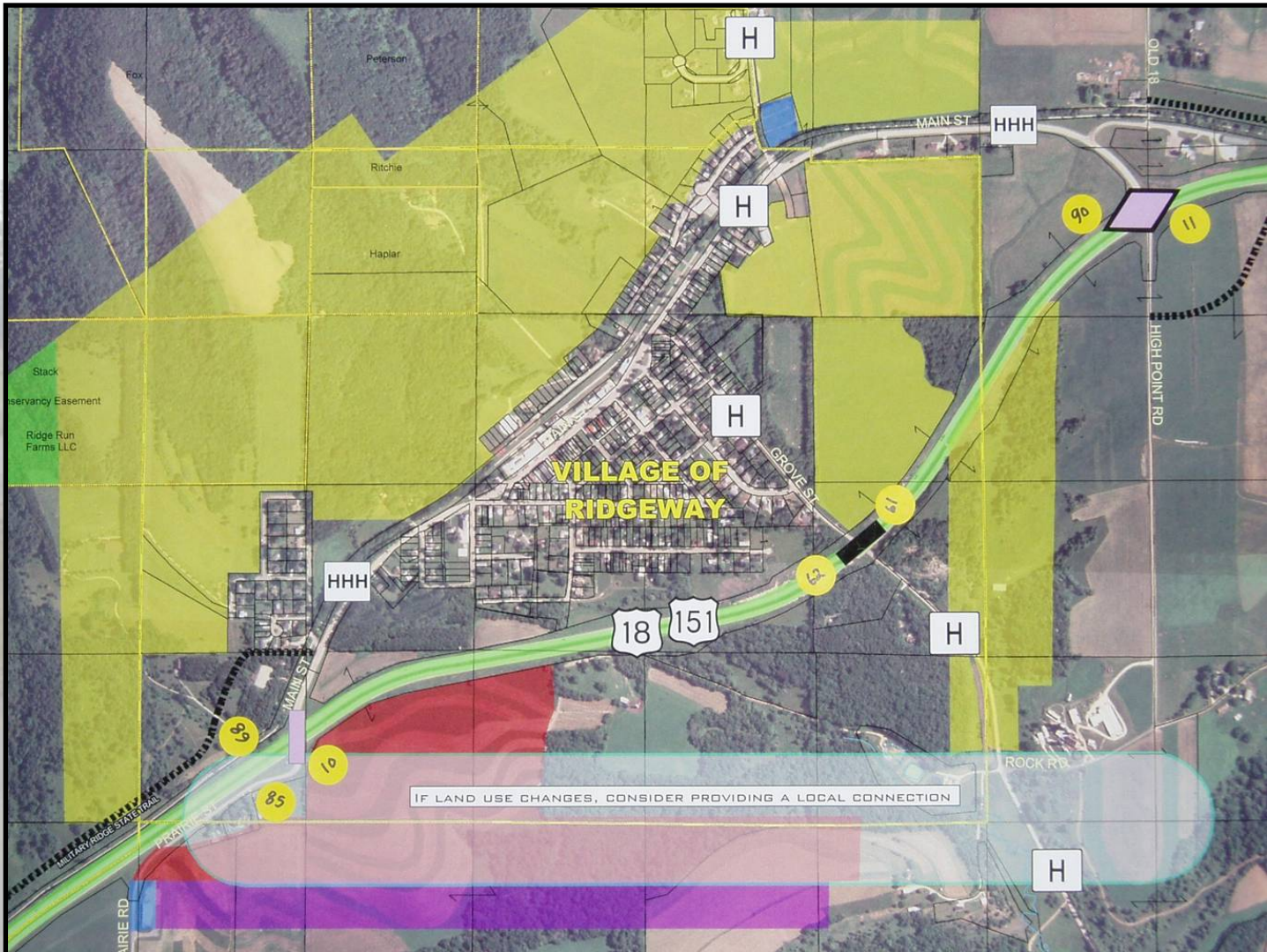
Existing interchanges are typically located where US 18/151 intersects major state and county highways and where a higher degree of need for access exists (village of Barneveld and Mount Horeb). Future interchanges are recommended only at locations that allow adequate spacing between them (2 - 5 miles). In addition, future interchanges are recommended only at locations where future needs are anticipated to be the greatest.



Cul-de-Sac, and Closures/Relocations

Where the existing at-grade access accommodates a very limited amount of traffic and/or has the potential for safety risks, it may be recommended for conversion to a cul-de-sac, relocated to another roadway, consolidated with other access points, or removed from the highway. In these cases, alternate access is provided via another location through enhanced local roadway circulation.





Input exercise



WIS 29 Preservation Plan

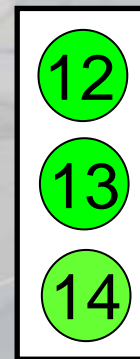
Ringle to Wittenberg

Public Input Form

June 13, 2006

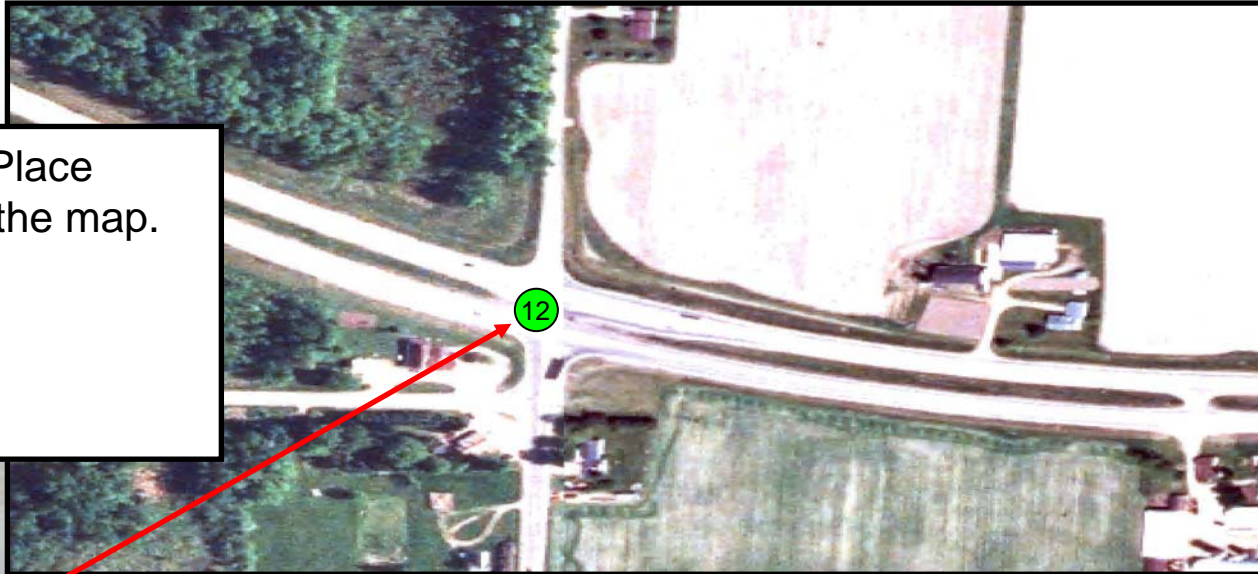
Place a numbered sticker on the map near the location for which you would like to comment. Write the sticker number in the box below and comment in the adjacent spaces:

<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
<input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>



Input exercise

STEP 1 - Place
number on the map.



12

13

14

Place a numbered sticker on the map near the location for which you would like to comment. Write the sticker number in the box below and comment in the adjacent spaces:

WIS 29 Preservation Plan
Route 29
Local Official Input Form
May 15, 2006

Place a numbered sticker on the map near the location for which you would like to comment. Write the sticker number in the box below and comment in the adjacent spaces.

<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	



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Input exercise

STEP 1 - Place number on the map.

STEP 2 - Write number and comment on form.



13

14

Place a numbered sticker on the map near the location for which you would like to comment. Write the sticker number in the box below and comment in the adjacent spaces:

12

It is difficult to turn onto WIS 29 from this intersection during busy times of the day.



WIS 29 Preservation Plan
Study in Wisconsin
Local Official Input Form
May 15, 2006

Place a numbered sticker on the map near the location for which you would like to comment. Write the sticker number in the box below and comment in the adjacent spaces.

<input type="checkbox"/>	
<input type="checkbox"/>	
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<input type="checkbox"/>	



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Early outreach to localized, rural stakeholders critical to corridor understanding

- **Focus groups & surveys**
 - **Emergency services**
 - **School bus**
 - **Agriculture/farm**



US 18/151 Agricultural Operations Survey

Survey Overview:

The purpose of this survey is help the Wisconsin Department of Transportation (WisDOT) and its consultant Short Elliott Hendrickson Inc. (SEH®) understand and prepare for the needs of agriculture enterprises with particular emphasis on their operations, livestock, and equipment. Transportation projects can affect travel time, field access, shipment of goods, and animal movement. Early input in the transportation planning process can help minimize negative consequences and ensure that operations are not unduly disturbed.

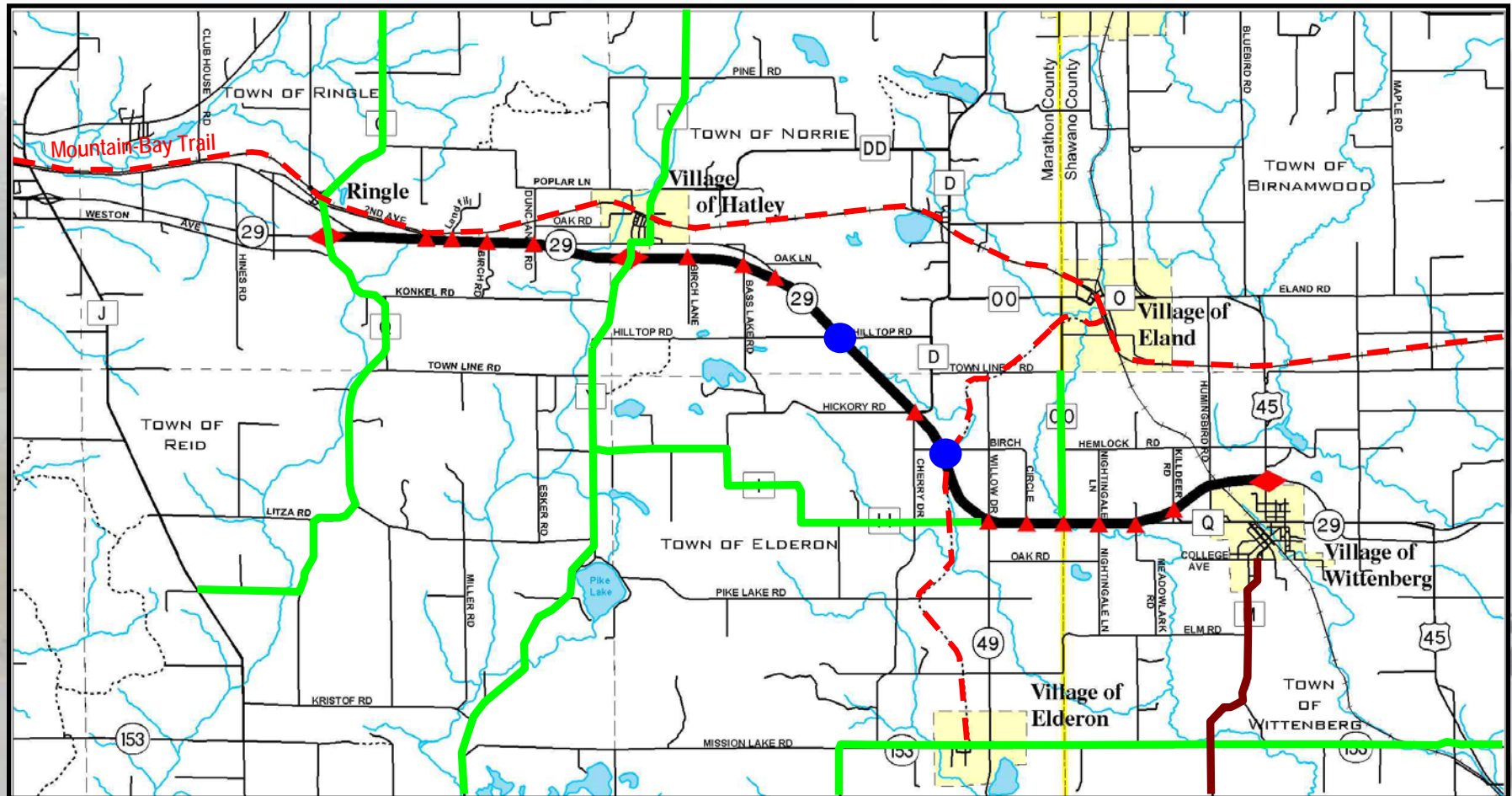
1. Is your farmland (check all that apply):
 - ☐ owned
 - ☐ rented/leased
 - ☐ custom farmed
2. How many acres are:
 - ☐ acres owned
 - ☐ acres rented/leased
 - ☐ acres custom farmed
3. Does your operation include livestock?
 - ☐ Yes
 - ☐ No
4. Does your property have any cattle passes under US 18/151?
 - ☐ Yes
 - ☐ No (If no, go to Question 5)

Cattle Pass Locations	Frequency of Use			
	Never	Daily	Weekly	Monthly
500' west of County P		x		

Multi-modal integration ensures sustainable transportation system



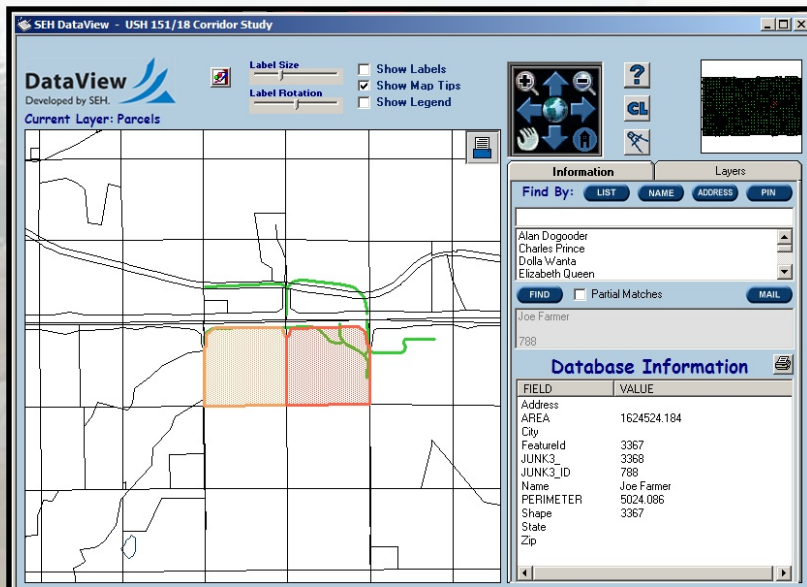
Early multi-modal planning provides transportation facilities for all users



Best Bike Conditions Trails Rustic Road Snowmobile Crossing

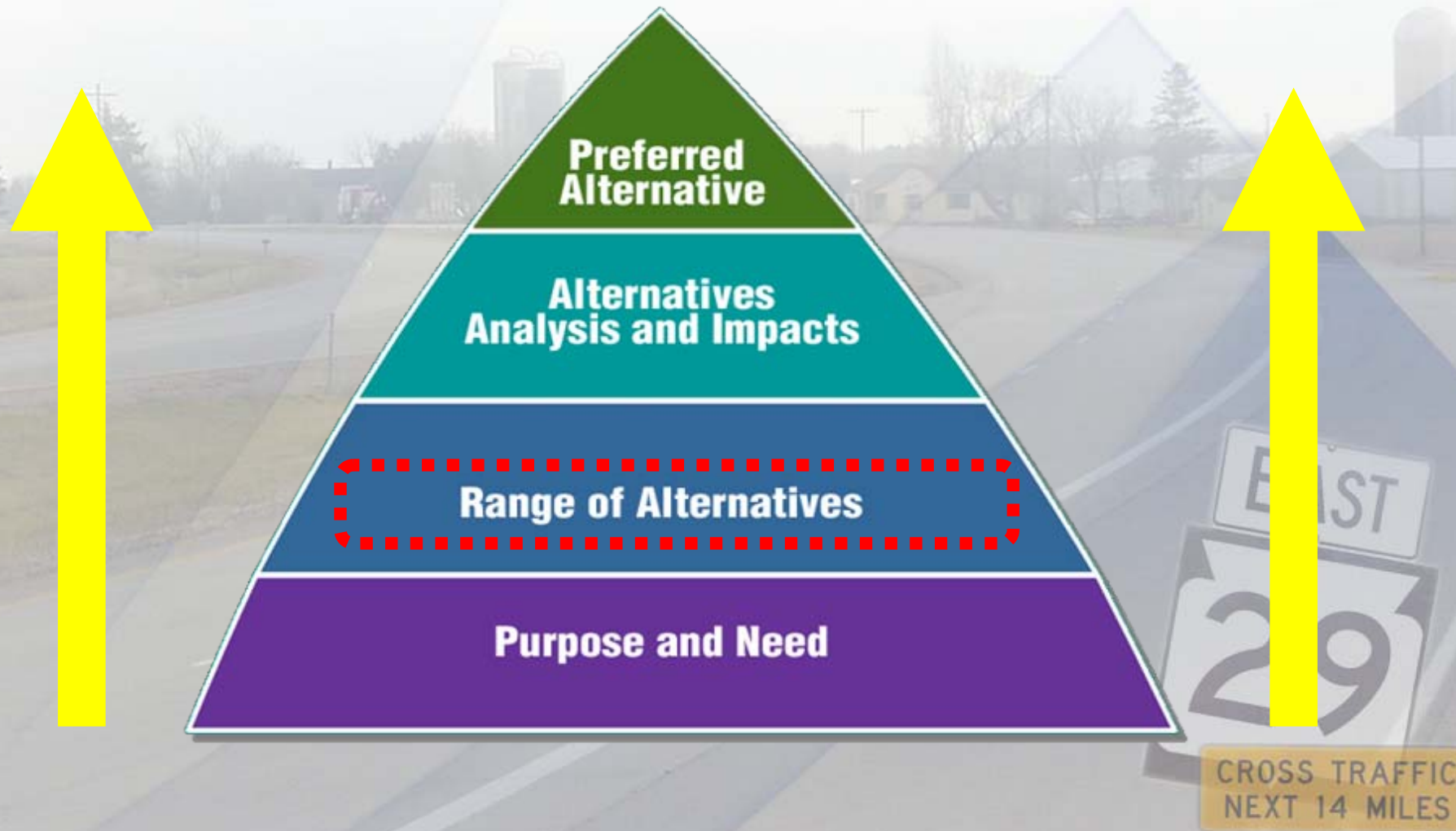
CROSS TRAFFIC
NEXT 14 MILES

Development of GIS system insures pubic input is integrated into alternatives



CROSS TRAFFIC
NEXT 14 MILES

Freeway conversion and public involvement must follow process to be effective



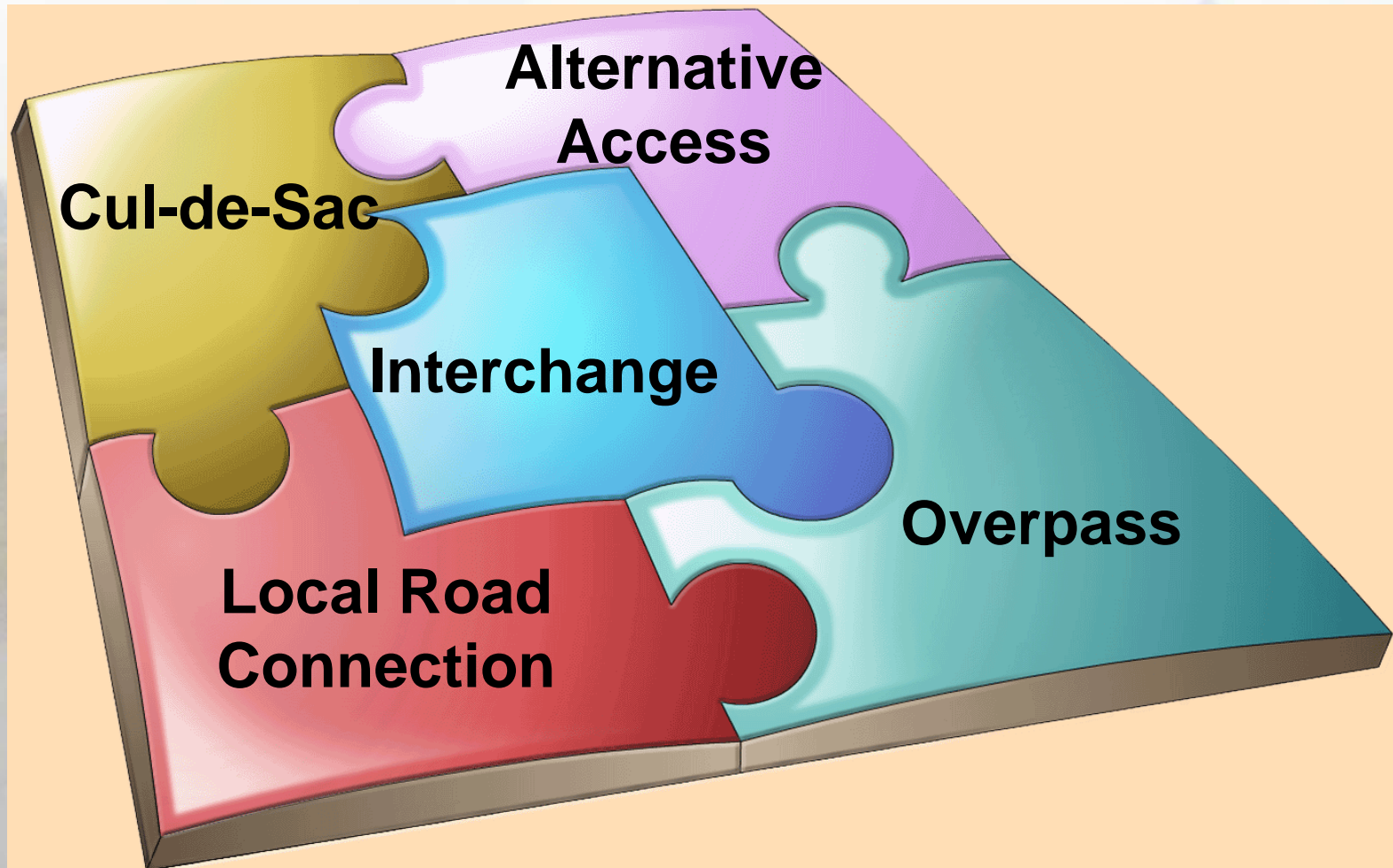
Experience leads the process in the right direction



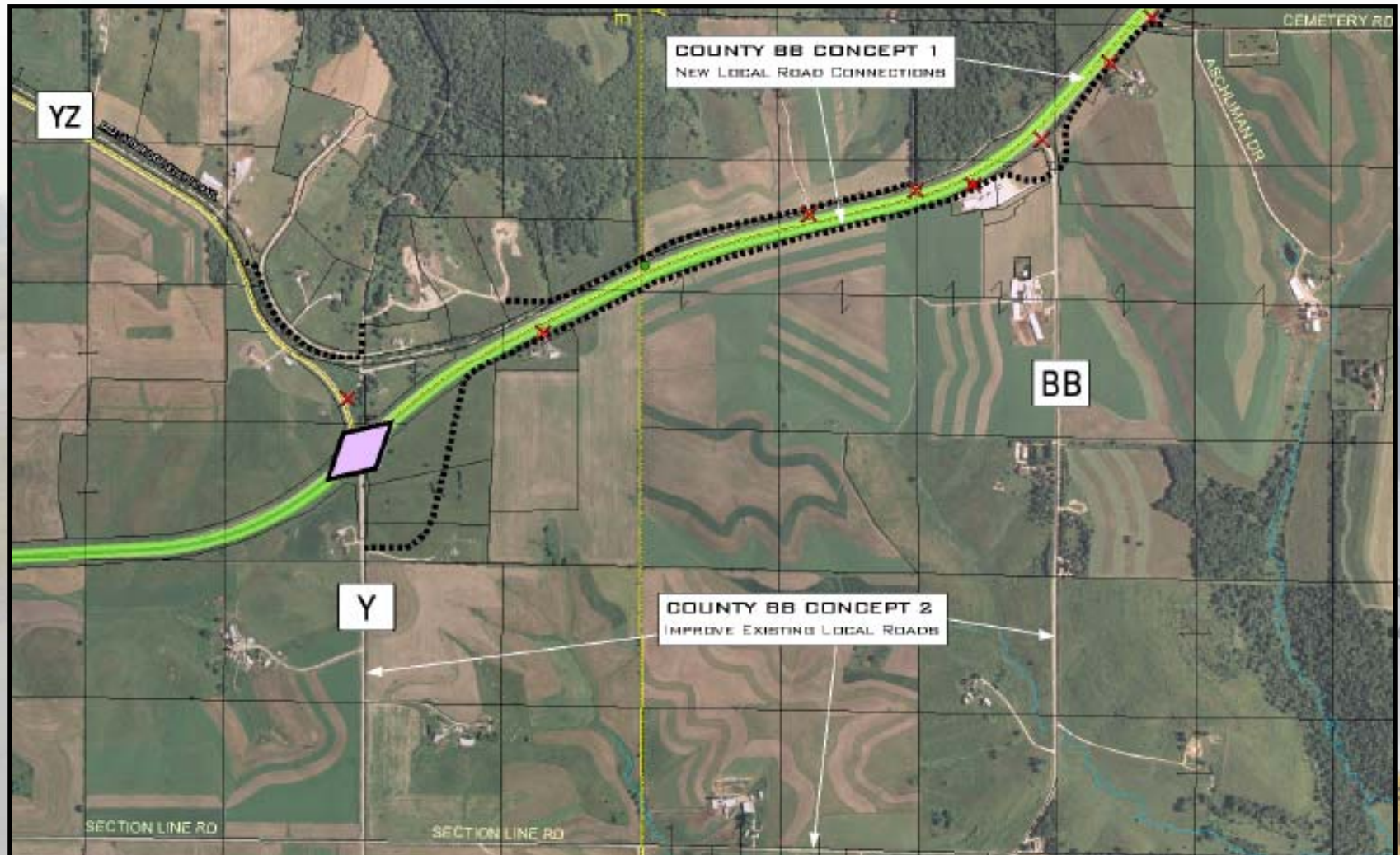
Spot Improvements v. System Approach

CROSS TRAFFIC
NEXT 14 MILES

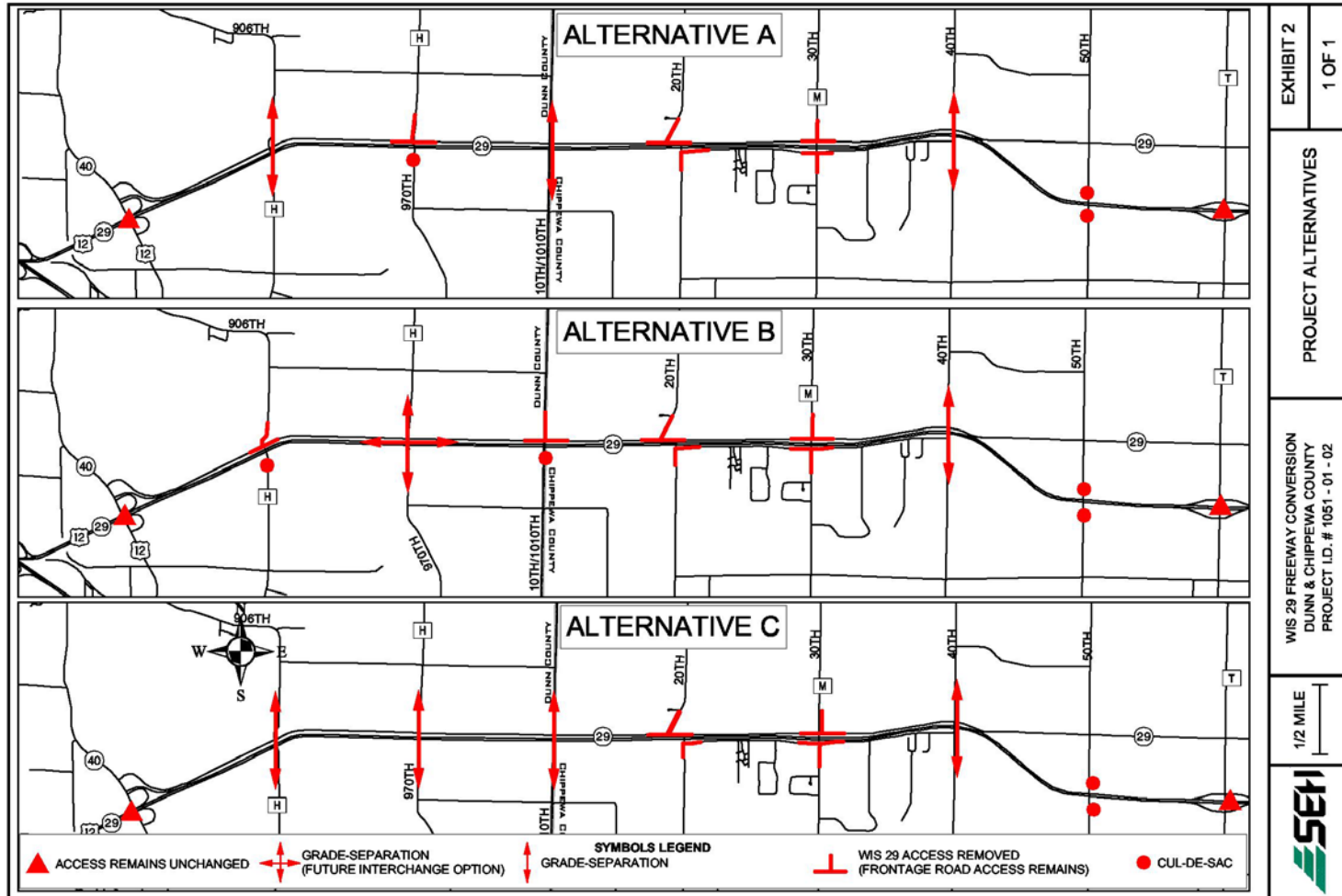
System approach provides for comprehensive solutions



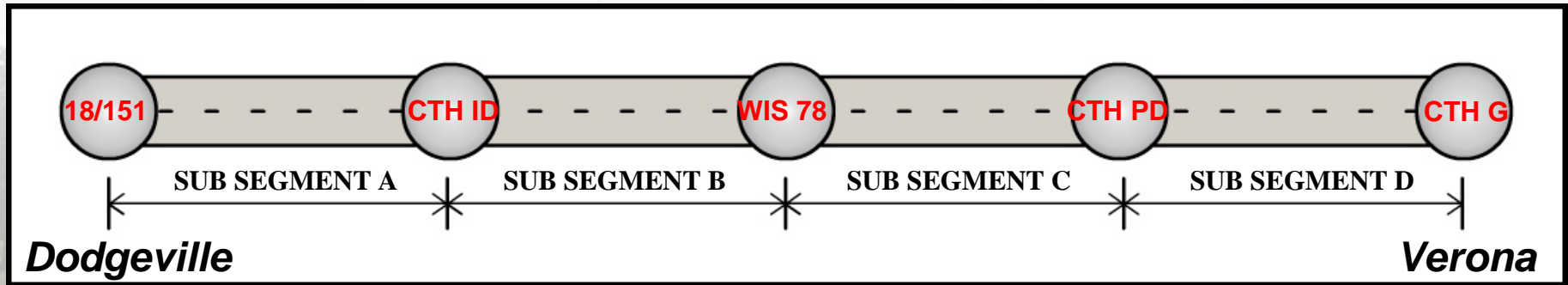
Local road options must be evaluated: new versus improved



System approach is critical



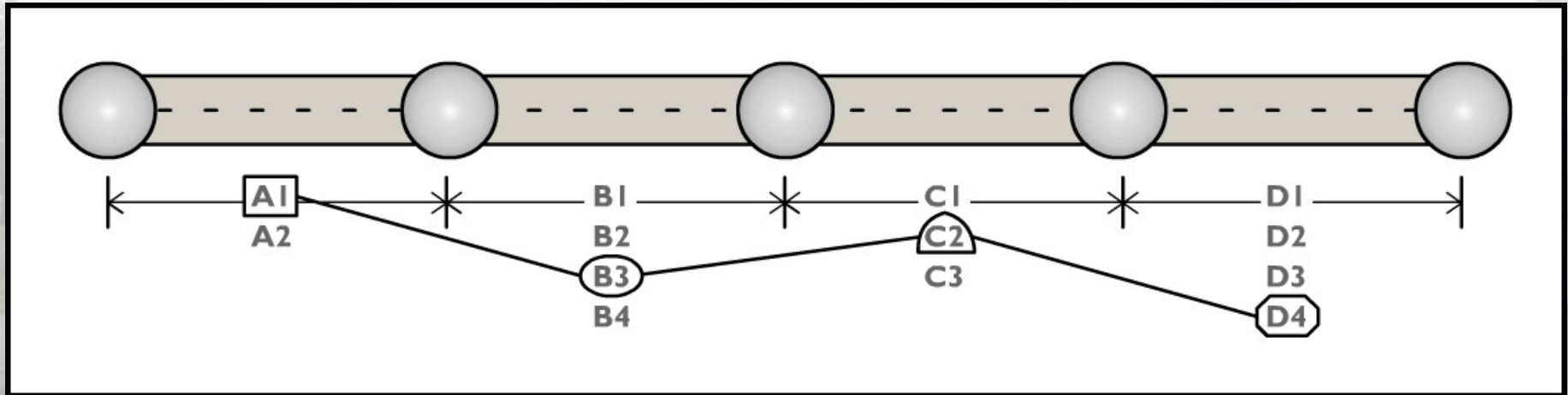
Longer corridor conversions requires system approach with logical segmentation to satisfy NEPA requirements



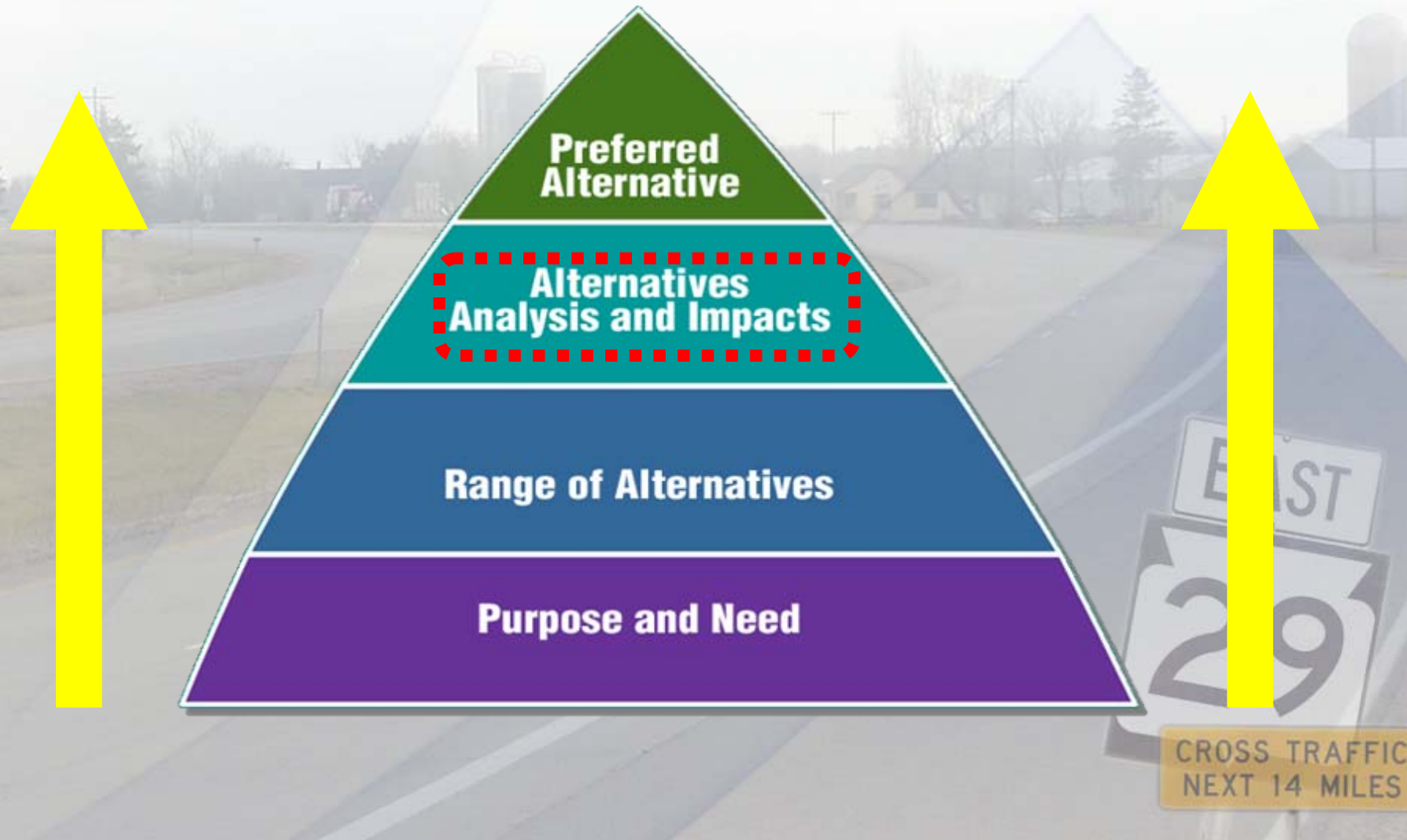
- Supports a long-term system approach
- Accommodates incremental implementation as need arises and/or funding becomes available
- Satisfies public and NEPA's needs for alternative analysis and options



Logical segmentation leads to NEPA-compatible alternative analysis and preferred alternative



Freeway conversion and public involvement must follow process to be effective



Analyze system alternatives

- Interchange locations
 - Spacing
 - Land use
 - Traffic volumes
 - Crash history
- Overpass locations
 - Spacing
 - Land use
 - Traffic volumes
 - Continuity/circulation
- Cul-de-Sac
- Local system connectivity



AST
9
SS TRAFFIC
NEXT 14 MILES

Analyze future travel patterns

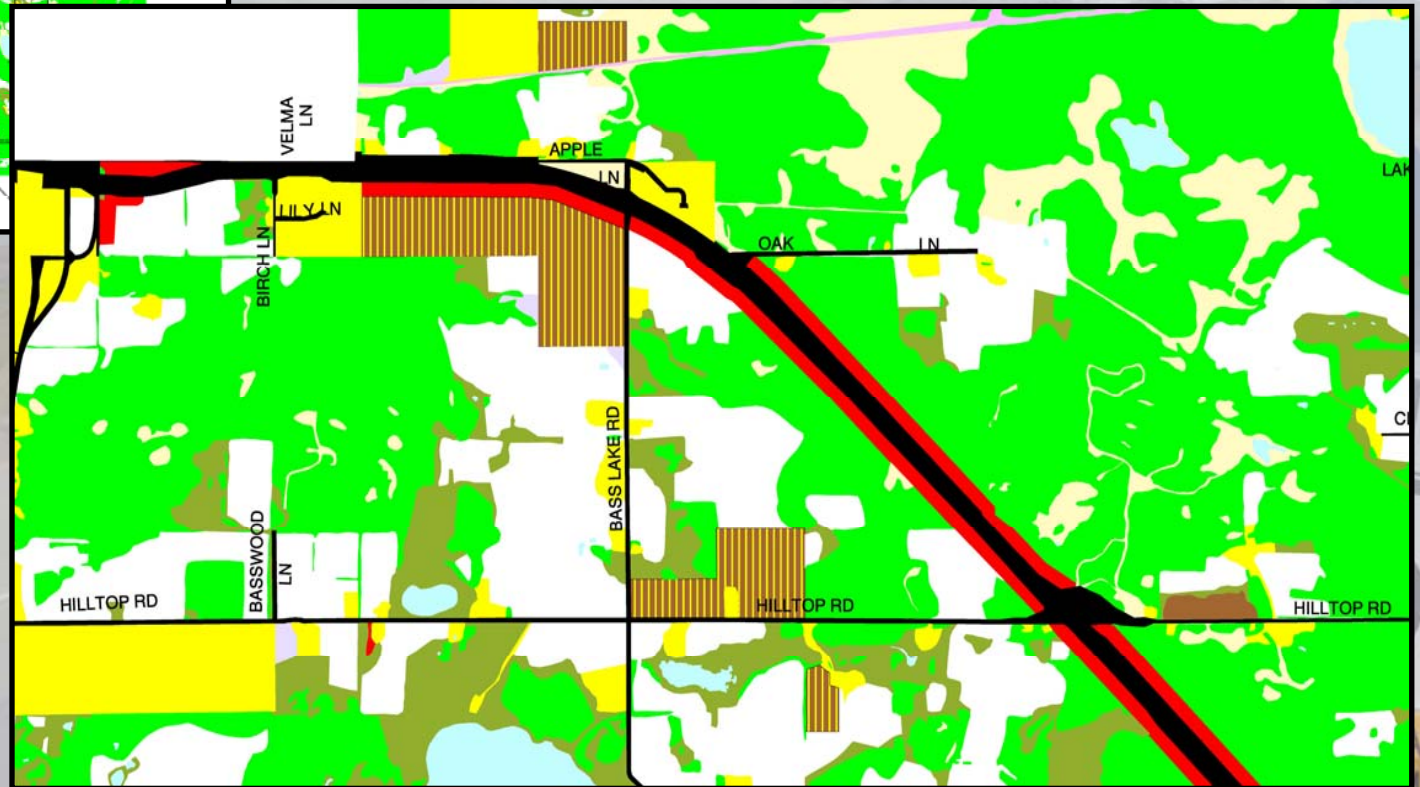
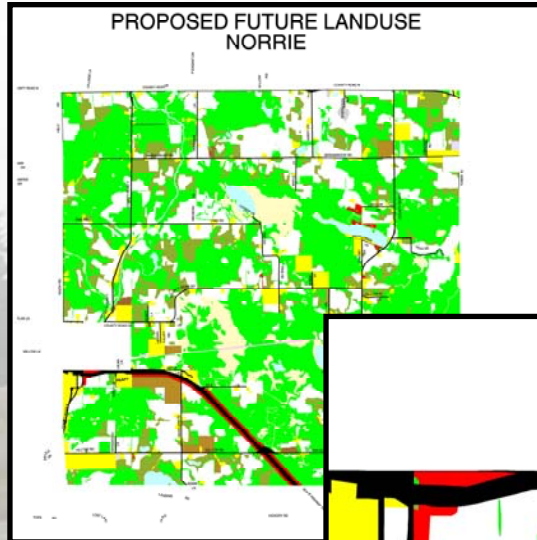
- Emergency services (police, fire, EMS) & response time
- School bus routes
- Farm operations
- Travel time & indirection
- Bike & recreational trail connectivity



Implications must be thought through

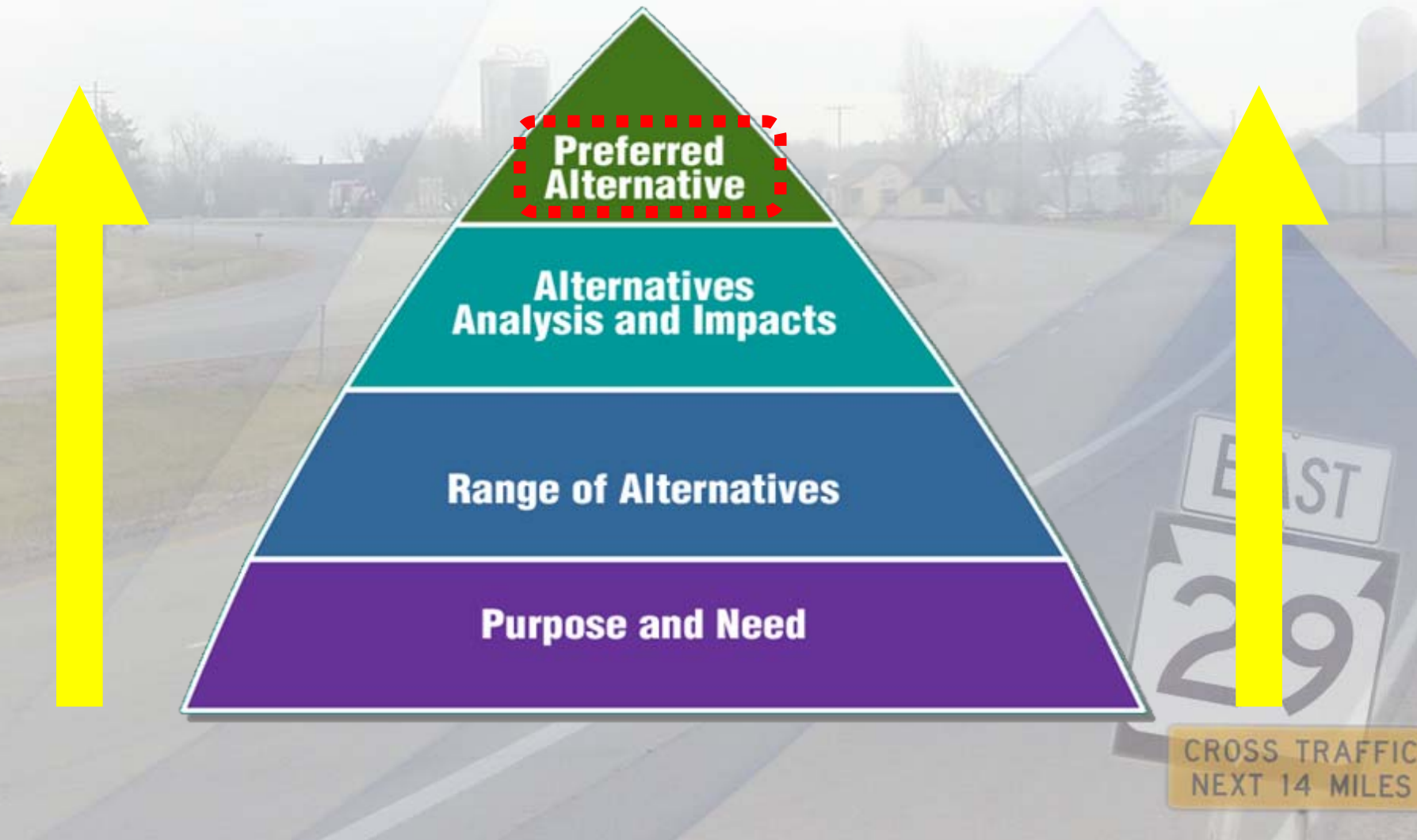


Implications must be thought through



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Freeway conversion and public involvement must follow process to be effective

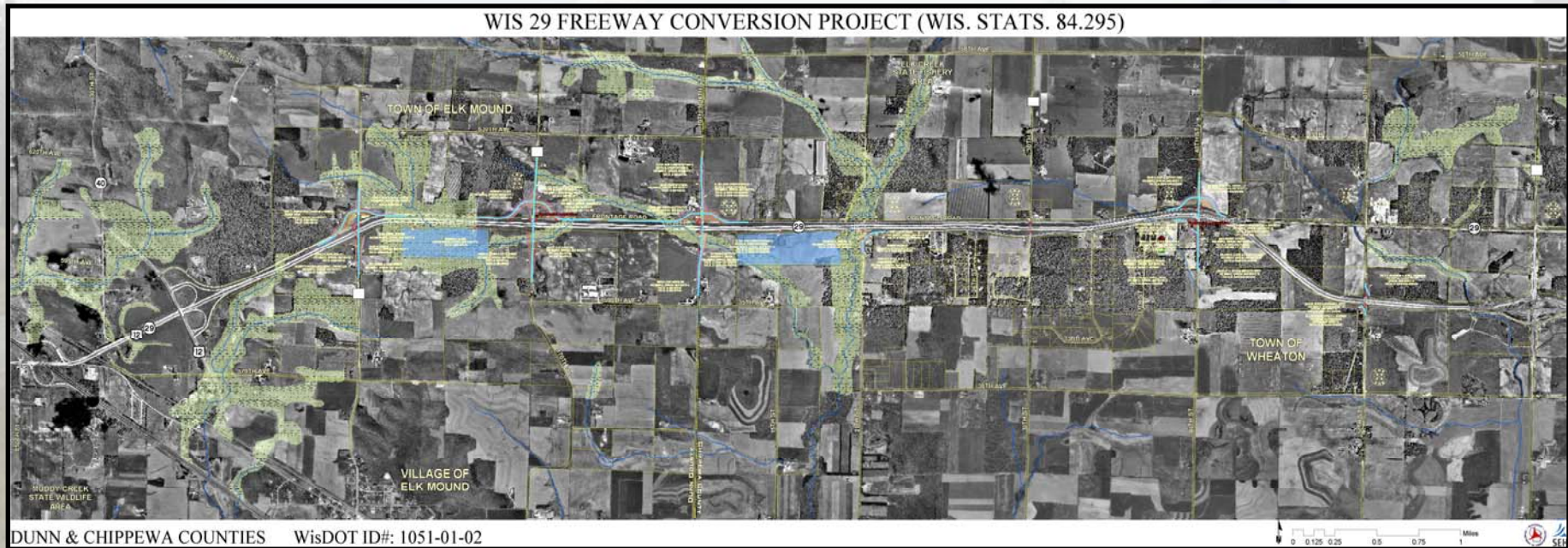


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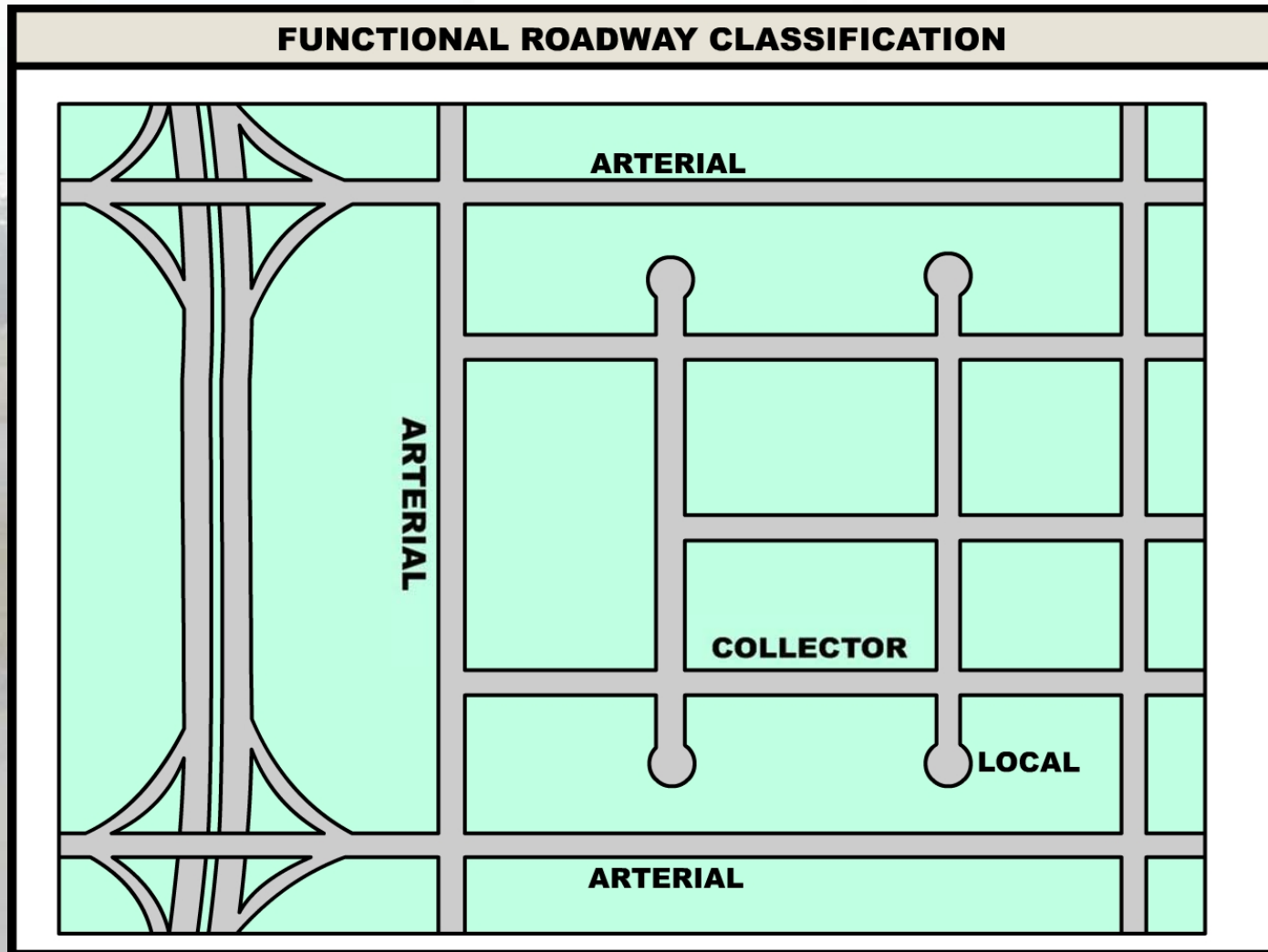
Wis. Stats. 84.295 mapping final deliverables



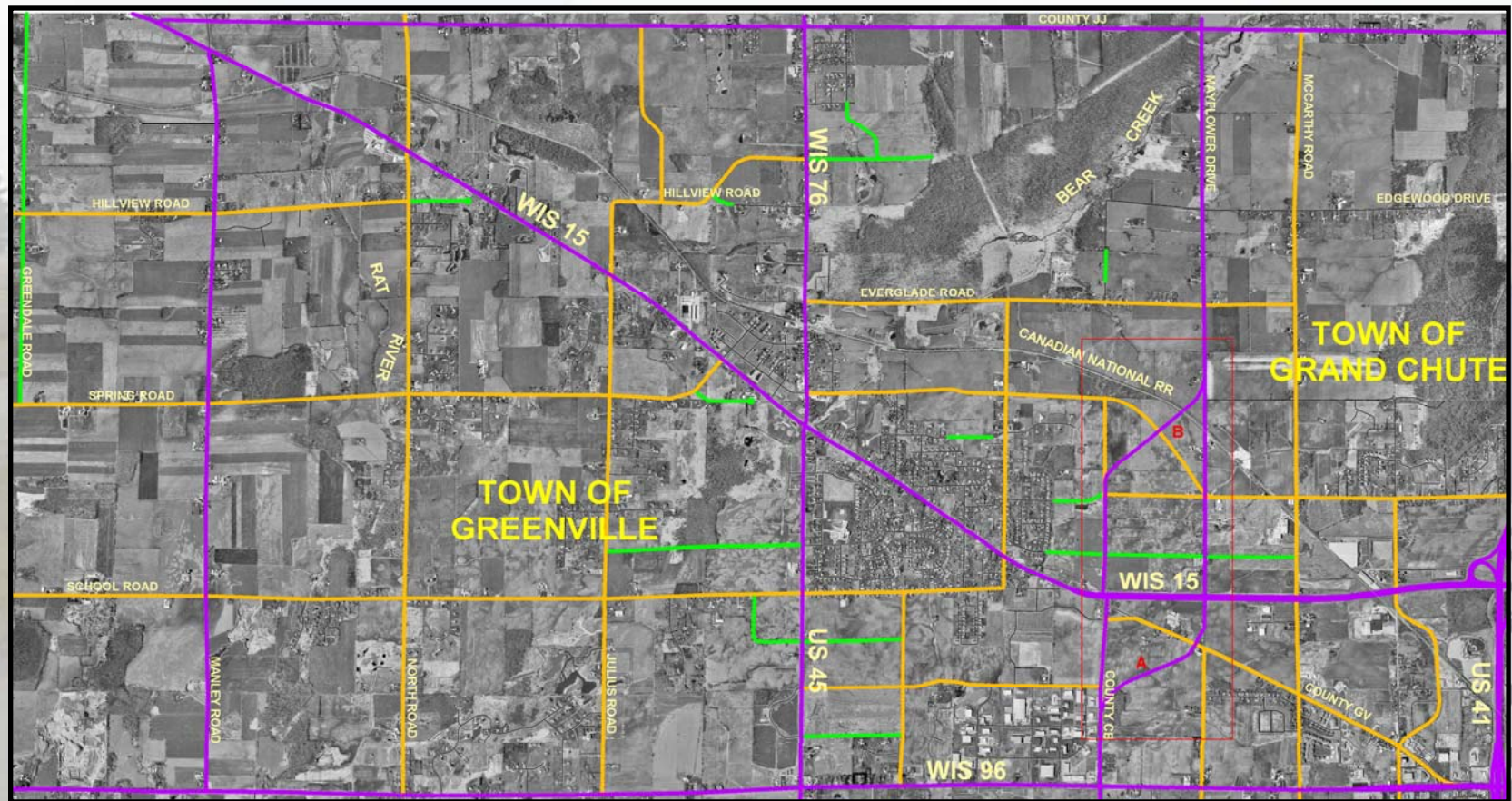
29

CROSS TRAFFIC
NEXT 14 MILES

Reestablishment of roadway network must be completed to preserve roadway system



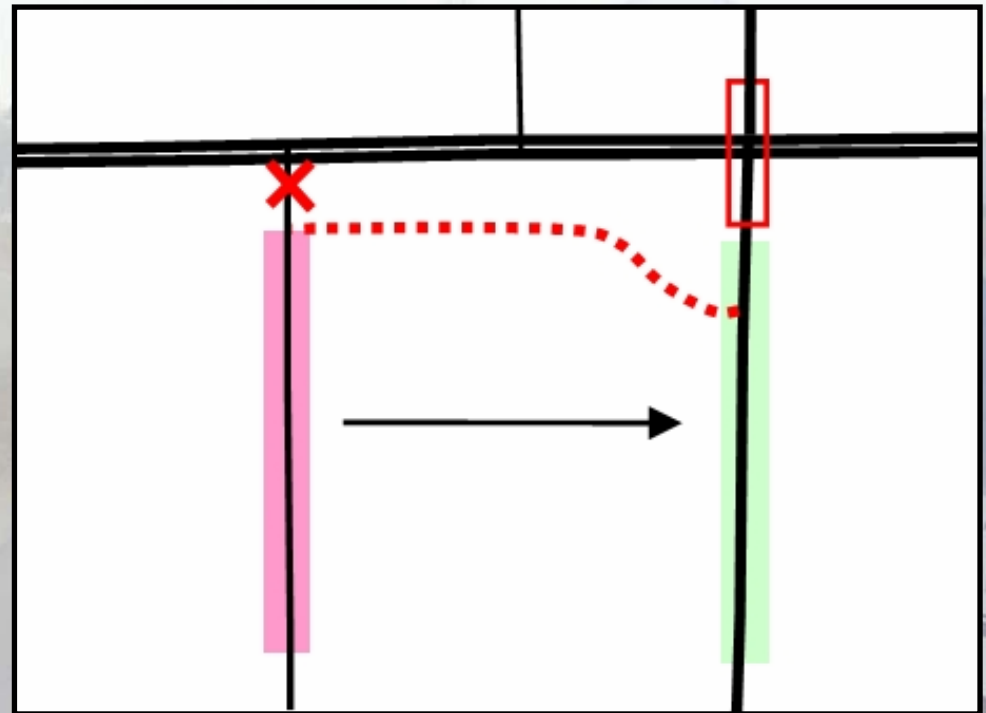
Reestablishment of roadway network must be completed to preserve roadway system



CROSS TRAFFIC
NEXT 14 MILES

Roadway Improvement Prioritization Plan (RIPP) facilitates long-term planning

- Long-term planning tool
- Resource allocation
- Budgeting
- Land use/zoning



CROSS TRAFFIC
NEXT 14 MILES

Thank you

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**“Back in the olden days”
it looked like this...**



WIS 13, Ashland County, at Marengo, 5/4/56

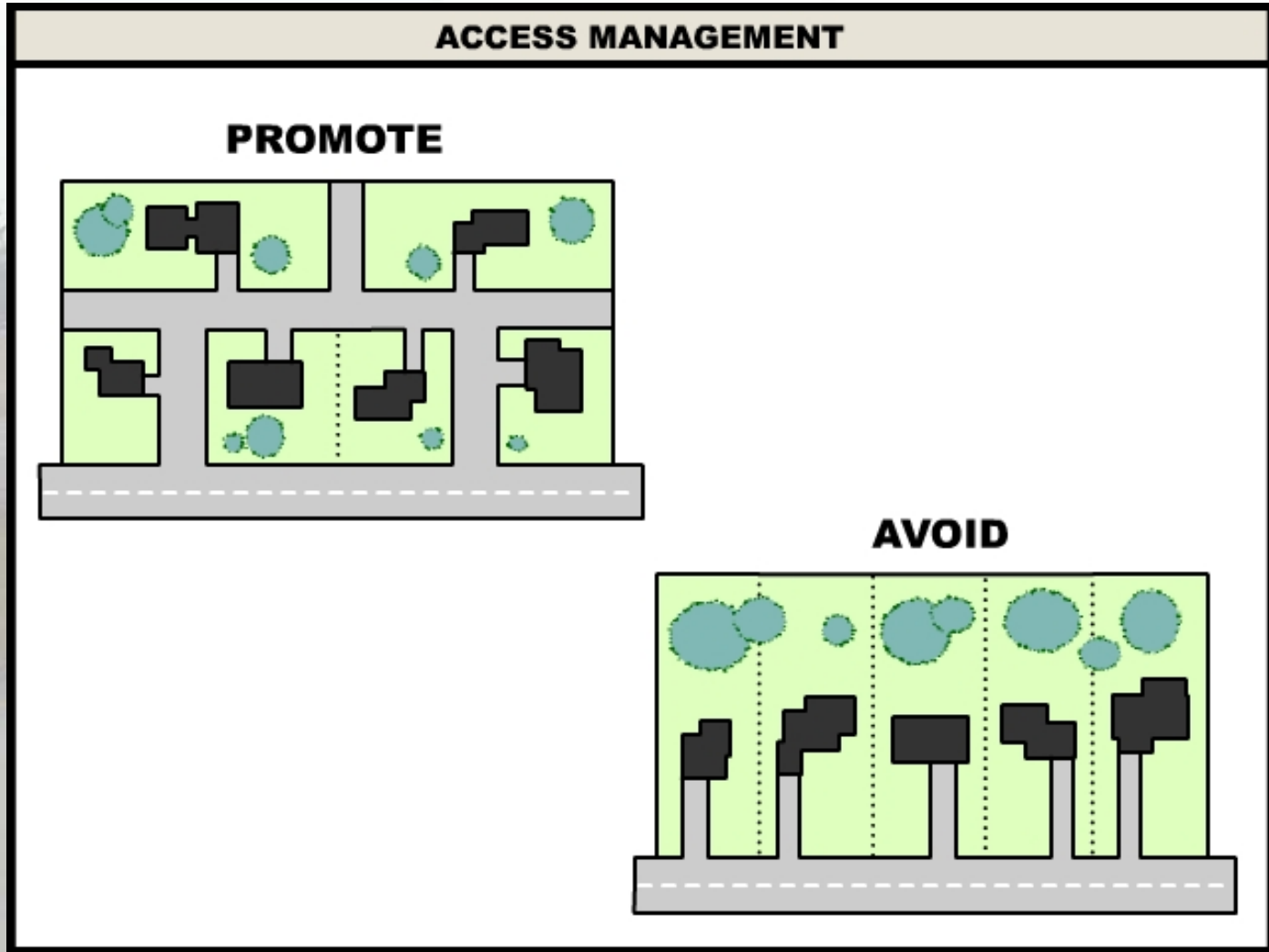
CROSS TRAFFIC
NEXT 14 MILES

**“Back in the olden days”
it looked like this...**



WIS 13, Ashland County, at Marengo, 5/4/56

Or “plan” on doing this...



AST

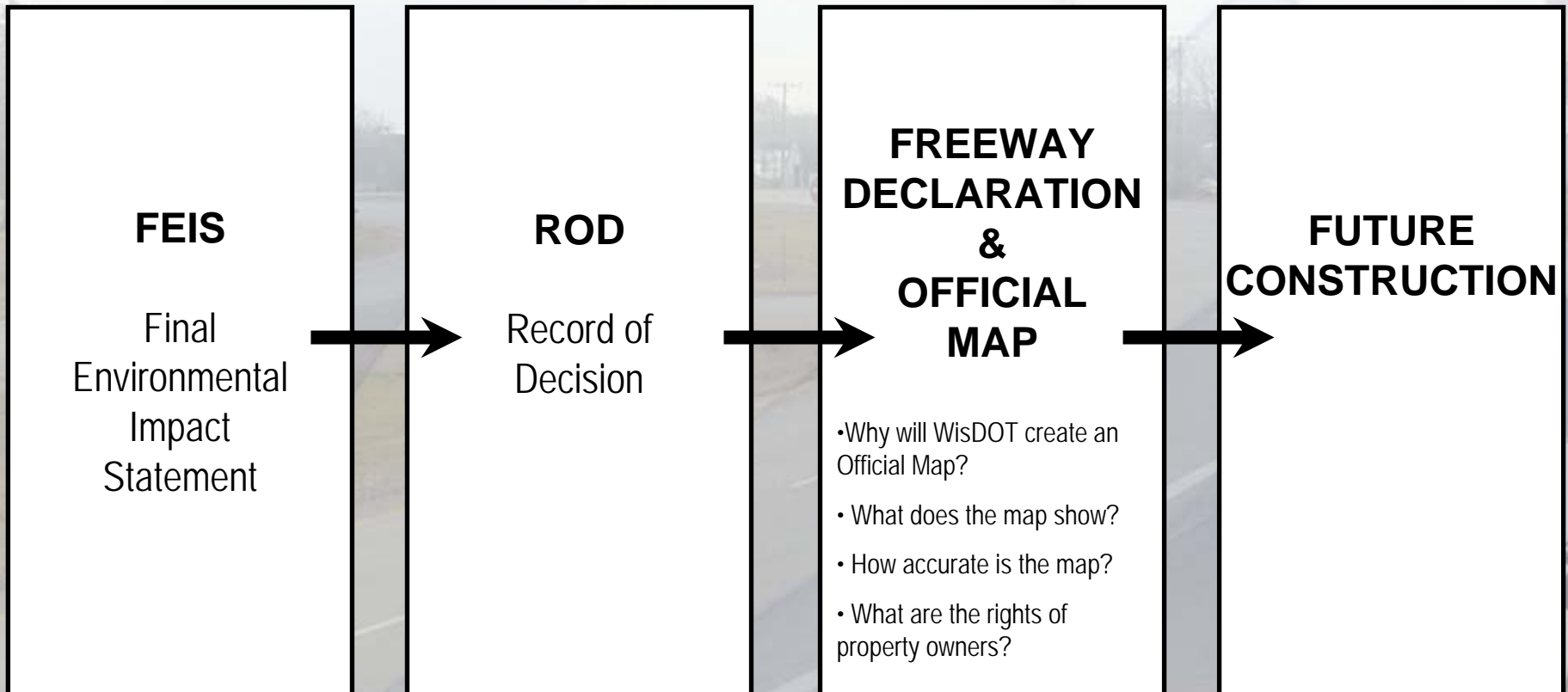
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SS TRAFFIC
NEXT 14 MILES

To avoid this...



Steps of freeway conversion

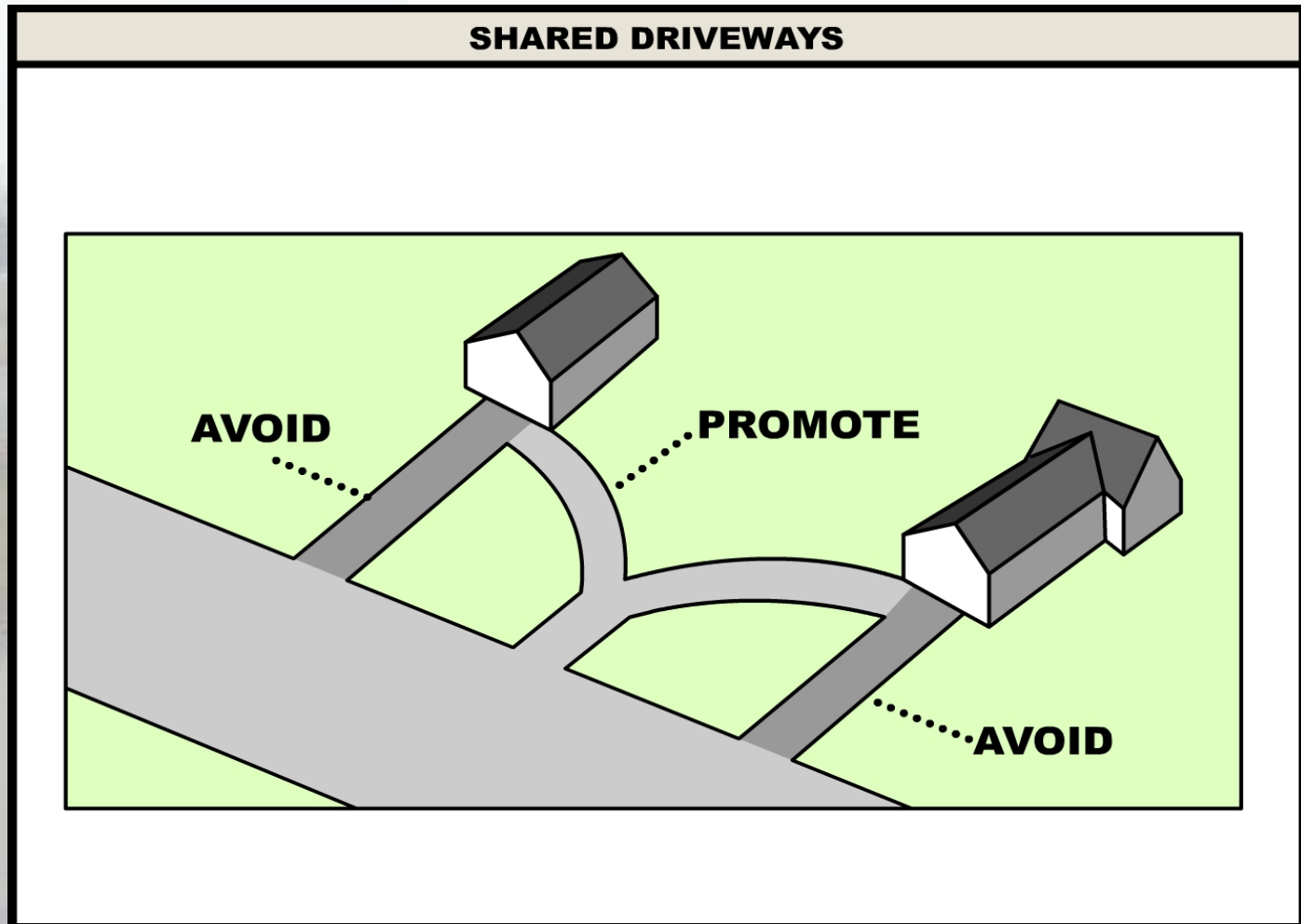


Why does WisDOT create an Official Map?

- State statutes (Wis. Stats. 84.295) authorizes WisDOT to create an official map for future freeway/expressways.
- An official map allows WisDOT to preserve, protect, and set aside future right-of-way for those segments of US 8 where future expressways or freeway design is being planned.
- An official map also informs and enables landowners, the public, and local agencies to plan their future in way that won't conflict with the future highway improvements.



So, we retrofit like this...



What will WisDOT Officially Map?

- **WisDOT will map and preserve land required to convert US 8 to a freeway/expressway under Wis. Stats. 84.295 including:**
 - **New and/or expanded corridors and bypasses**
 - **Interchanges**
 - **Grade separations (over/underpass)**
 - **Removal or alterations to existing public and private access points, including driveways.**
 - **Alterations, removals, or additions to the Local road system.**

EAST
29
CROSS TRAFFIC
NEXT 14 MILES

How accurate is the Official Map?

- **An Official Map is done to the same level of accuracy required for final highway plans and includes the accurate location of all property boundaries and current landowners.**



What are the rights of property owners?

- **If your property falls within the area shown on the WisDOT official map, you will:**
 - **Receive a formal letter from WisDOT informing you of this.**
 - **Have the official map notification recorded on your property.**
- **The only requirement from that point on is that you must notify WisDOT 60-days in advance of any alteration to your property or any structure on your property.**
- **Upon receipt of that notification from the landowner, WisDOT will make a determination to either purchase the property at fair market value or allow the alteration to occur. If the property is acquired a later date, the owner will receive full compensation for the alteration.**
- **However, if a landowner makes any alteration to the property without notifying WisDOT, they will not receive any compensation for that improvement if/when WisDOT decides to purchase the property.**