ENVIRONMENTAL EVALUATION OF FACILITIES DEVELOPMENT ACTIONS

Wisconsin Department of Transportation
DT2094 8/2005

Project ID	Funding Source	Federal Number
1001-07-00	☐ State Only ☒ Federal	
Project Name (Highway, Airport, Rail Line)		**Project Termini**
IH 39/90		Illinois State Line to USH 12/18
Section	**County**	**Estimated Project Cost (Include R/W Acquisition)**
	Rock and Dane Counties	~~$420 million~~ See Env. Addendum (DT 2168)

It is determined, after review of the comments from the public, and coordination with other agencies, that this action would not significantly affect the quality of the human environment. This document is a

☒ Finding of No Significant Impact (FONSI).

☒ Environmental Assessment (EA) No Significant Impacts Indicated by Initial Assessment

☐ Environmental Assessment (EA) EIS Required

☐ Environmental Report (2-ER)

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John H. Kesperman 06/03/2010
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SW Region Planning Chief
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for (Director, Bureau of Equity & Environmental Services) 6/2/10 (Date)
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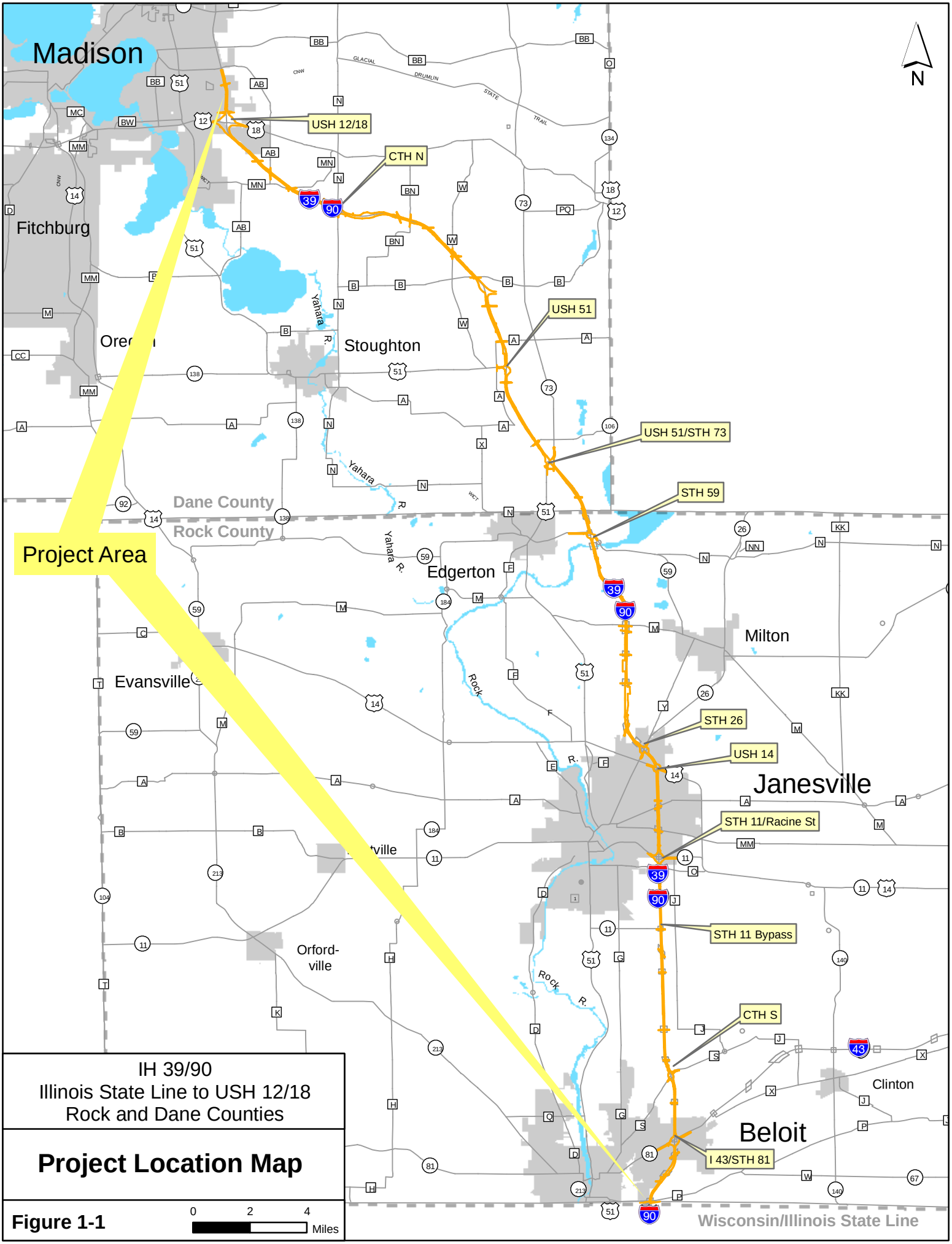
1) Description of Proposed Action (Attach project location map and other appropriate graphics).

The proposed project is located in Dane and Rock Counties in South-Central Wisconsin along Interstate Highway (IH) 39/90. The project begins at the Illinois State Line in Rock County, Wisconsin and continues north to, and including, the USH 12/18 interchange and its east, west, and north approach roadways in Dane County near Madison, Wisconsin. The project is approximately 45.5 miles long. A Project Location Map is shown in Figure 1-1 (page 1A).

The proposed improvement for IH 39/90 involves reconstructing the existing 4-lane divided interstate highway and adding an additional lane in each direction to create a 6-lane divided highway. Minor slope grading will be involved to update the clear zone area to current design standards. The proposed interstate highway will typically consist of three 12-foot travel lanes with 12-foot inside and outside shoulders in each direction separated by a variable width median. A median barrier will be constructed in those areas where the resultant median width would be less than 60 feet (inside edge to inside edge of driving lanes). See Exhibit A-1-4 in Appendix A for interstate roadway typical sections.

The general concept is to utilize the existing interstate highway right of way to the extent practical. Existing right of way varies along the IH 39/90 corridor between 230 and 650 feet wide. From the Illinois State line to north of the STH 26 interchange at Janesville, the additional interstate lanes are proposed to be added



IH 39/90
Illinois State Line to USH 12/18
Rock and Dane Counties

Project Location Map

Figure 1-1

0 2 4 Miles

in the current median area, and no additional right of way would be required for the mainline reconstruction.

From north of Janesville to the USH 12/18 interchange at Madison, the additional interstate lanes are proposed to be added in the current median areas where the current median is wider than 84-feet (edge to edge of driving lanes). If the current median width is 84-feet or less, it is proposed to place the additional interstate lane along the outside edge of the current roadway. Some additional right of way acquisition in the range of 0 to 20 feet would be required for the mainline reconstruction in these outside widening areas. No additional right of way would be required for the mainline reconstruction in the median widening areas. Existing beam guard will be analyzed during design to determine the cost effectiveness of removal vs. constructing safe clear/recovery zones.

Staging during construction would likely consist of bridge widening and use of permanent and temporary roadway to enable four lanes of traffic to safely operate on one side of the interstate while the other side is to be reconstructed, particularly at the Rock River. It is proposed to reconstruct each side of the interstate with full depth pavement for the three travel lanes, plus full depth pavement for the outside shoulder to allow four lanes of traffic to operate safely on one side of the interstate during the construction period. After the first side is reconstructed, then traffic would be shifted to the new pavement while the remaining side is reconstructed. The intent is to maintain all access during construction, including emergency vehicles. Details of this plan will be worked out in the Transportation Management Plan (TMP). The full-depth pavement on the shoulder would allow future conversion of the shoulder to a travel lane for added capacity and to maintain a Level of Service C on the interstate in future years (2035+) should travel volumes warrant an increase to eight lanes. Environmental impacts and costs associated with an auxiliary lane in each direction are considered in this Environmental Assessment.

Additionally, the 11 interchanges within the corridor will be reconstructed to update ramp configurations to current design standards, and to provide multilane divided roadways and bridges between ramp terminals on the connecting side road. Typical sections for interchange exit and entrance ramps will include 15-foot travel lanes, a 4-foot inside shoulder (3-foot paved), and an 8-foot outside shoulder (5-foot) paved.

Interchanges at CTH S, Avalon Road (STH 11 bypass), and CTH N are currently full diamond configurations, and the interchange at USH 51 is a trumpet configuration. These interchanges will be reconstructed to maintain their existing configurations, but will have improvements in ramp configurations and side road bridge crossings. Minor amounts of new right of way will be required at these interchange locations.

The current interchange at STH 11 is a full cloverleaf, and the interchanges at both STH 59 and at USH 51/STH 73 are partial cloverleafs. These interchanges are proposed to be reconstructed and modified from their current configurations to full diamond configurations to meet the area need and current design standards. New right of way will be required for the construction of the diamond ramps in those quadrants where no ramps presently exist.

The STH 26 and USH 14 interchanges at Janesville are located within about one-half mile of each other. These two interchanges are proposed to be reconstructed and connected to each other with a collector-distributor (C-D) road system to improve their operational safety. No new right of way will be required at the USH 14 interchange, and minor amounts of new right of way will be required at the STH 26 interchange.

The interchange at IH 43 is currently a full cloverleaf. This interchange was originally built in the 1960's as a service interchange to then State Highway 15 connecting the cities of Beloit and Milwaukee. Currently, this interchange operates as a system interchange between two high volume interstate highways, IH 43 and IH 39/90. It is proposed to reconstruct this interchange as a high speed free-flow systems interchange that connects IH 43 and IH 39/90 along with a slower-speed diamond service interchange that connects the interstate highways with State Highway 81 and local access to the City of Beloit. New right of way will be required for the reconstruction of this interchange.

The interchange at USH 12/18 is currently a partial cloverleaf. One of primary geometric deficiencies is the left hand off ramp for the northbound to westbound driver. It is proposed to reconstruct this interchange by putting the northbound and southbound interstate lanes in the current median area, and then utilizing the current lane footprints to create a collector-distributor (C-D) road system for southbound vehicles, and a right-hand exit ramp for northbound vehicles. The reconstruction limits will extend about one-half mile or more to the east, west, and north to fully transition the travel lanes in all directions. A minor amount of new right of way will be required at this interchange location.

At the State Line, the proposed action will incorporate lane continuity through the Illinois 75 interchange. Further, cost and design will be coordinated with the Illinois DOT.

2. Purpose and need of proposed action. Include description of existing facilities, abutting facilities, and how the action links into the overall transportation system. When appropriate, show that commitment for future work is not being made without evaluation, and that viable alternatives in a larger framework are not being unduly foreclosed.

The purpose of the proposed IH 39/90 improvements is to meet current design standards, improve overall safety, accommodate future traffic with an acceptable level of service (LOS), and to replace aging pavements and structures. The IH 39/90 corridor was built in the early 1960's. Currently, safety issues, design and pavement deficiencies, and traffic congestion require full reconstruction and redesign.

The project would neither necessitate nor foreclose future transportation improvements within the study area. It is consistent with local and regional transportation and land use planning objectives. The project would provide a safe and efficient transportation system in the IH 39/90 corridor to serve existing and future traffic demand while minimizing disturbance to the natural and built environment.

The following sections explain the need for the project.

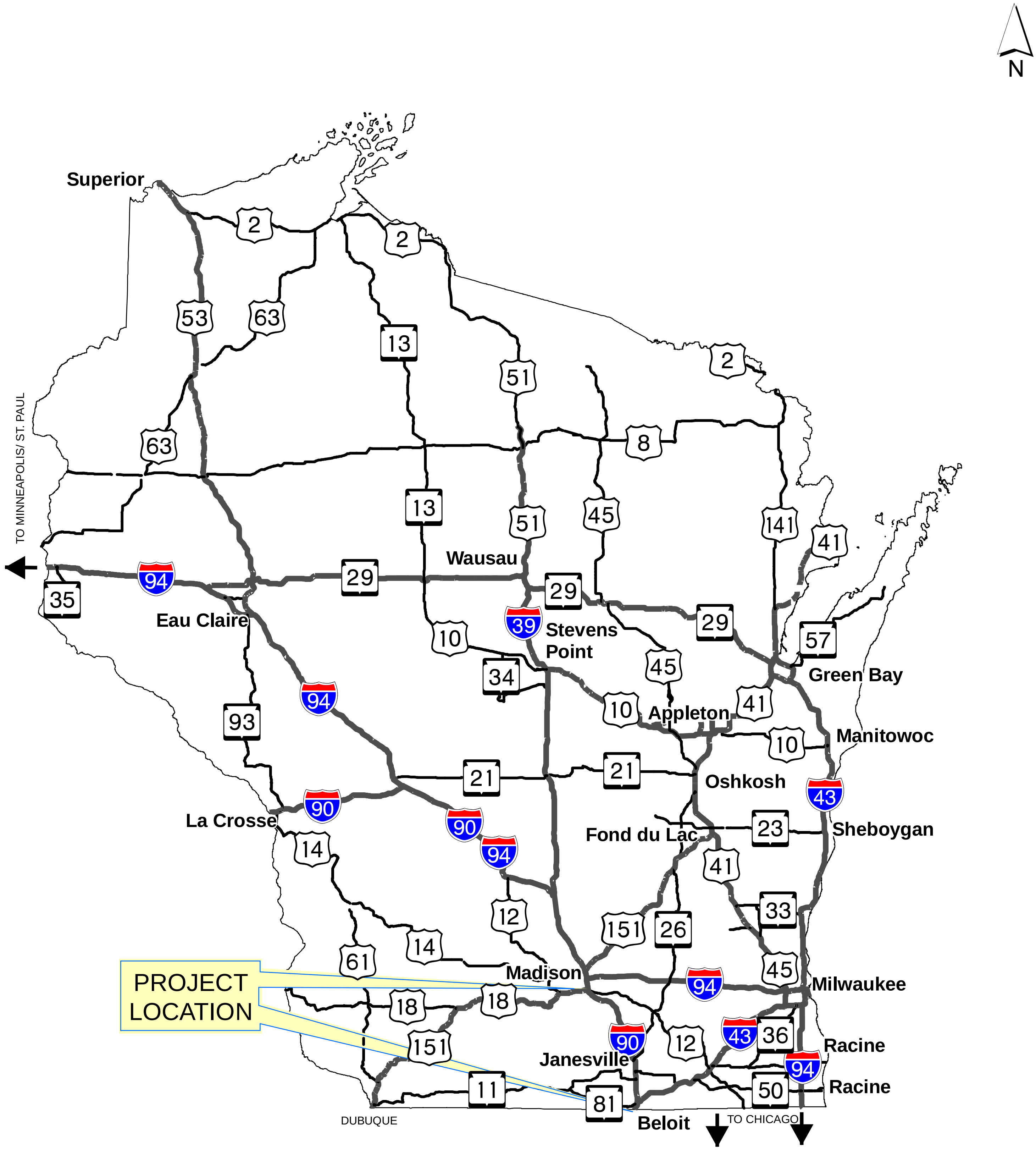
2.1 Route Importance/System Linkage

IH 39/90 is a route of national, state, regional, and local importance. The route is included in the National Highway System (NHS) and is part of Interstate Highway and Defense System that was funded beginning in 1956. Interstate 90 is the longest, most northern, east-to-west interstate highway in the United States. Starting in Seattle, Washington and ending at Logan International Airport in Boston, Massachusetts, this coast to coast route is 3,020 miles long. IH 90 serves such northern cities as Seattle, Chicago, Cleveland, Buffalo, Albany and Boston.

IH 90 is one of the most important transportation corridors in Wisconsin, and is an integral part of the national interstate system. In 1992, IH 39 was added to the IH 90 designation in Wisconsin from the Illinois State line to eastbound STH 29 near Wausau. This designation created the largest triple concurrency of interstate highway (IH 39/90/94) in the country.

IH 39/90 is identified as a Backbone route by the Wisconsin Department of Transportation's (WisDOT) *Corridors 2020* Transportation Plan (Figure 2-1) and as a Principal Highway in the Blackhawk Corridor in *Connections 2030*. It serves as an important regional, state, and national link for business, industry and agriculture. It provides direct system access to several interstates, Backbone routes, and other highways of local and regional importance. These include:

- IH 43 – (*Corridors 2020* Backbone route) connects IH 39/90 with the Milwaukee metropolitan area
- STH 81 – (*Corridors 2020* Connector route) connects Beloit with IH 39/90 and IH 43
- CTH S -- (local and regional importance) connects Beloit and rural community with IH 39/90
- STH 11 bypass (Avalon Road) – connects Janesville industrial area with IH 39/90
- STH 11 – (*Corridors 2020* Connector route) connects Janesville with IH 39/90 (this is also important because it can serve as an alternate route during construction of IH 39/90)
- USH 14 – connects Janesville with IH 39/90 (this is also important because it can serve as an alternate


N
Superior
TO MINNEAPOLIS/ ST. PAUL
Eau Claire
Wausau
Stevens
Point
Green Bay
Appleton
Manitowoc
Oshkosh
Sheboygan
La Crosse
Fond du Lac
Madison
Milwaukee
Racine
Racine
Janesville
Beloit
DUBUQUE
TO CHICAGO
PROJECT
LOCATION
2
2
53
63
13
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81

IH 39/90
Illinois State Line to USH 12/18
Rock and Dane Counties

Corridors 2020
Transportation Plan

Figure 2-1

Legend

Connector Routes

Backbone Routes

route during construction of IH 39/90)
- STH 26 -- (*Corridors 2020* Connector route) connects Janesville, Milton, Fort Atkinson, Jefferson, IH 94, Watertown, and Fox River Valley communities with IH 39/90
- STH 59 -- (local and regional importance) connects Edgerton, Newville, Whitewater, and Milton with IH 39/90
- USH 51 -- (local and regional importance) connects Edgerton and Stoughton with IH 39/90
- STH 73 -- (local and regional importance) connects Fort Atkinson with IH 39/90
- CTH N -- (local and regional importance) connects Stoughton with IH 39/90
- USH 12/18 -- (*Corridors 2020* Backbone and Connector route) connects Madison and surrounding communities with IH 39/90

IH 39/90 within the project corridor provides direct interstate access to the cities of Beloit, Janesville, and Madison. Outside of the project area, IH 39/90 connects to other main interstates and major highways making it an important route in connecting various major cities, including:

- Chicago, IL
- Milwaukee, WI
- Minneapolis, MN
- Green Bay, WI
- Eau Claire, WI

IH 39/90 is one of the largest gateways to Wisconsin's northwoods, a tourism mecca for both in-state and out-of-state tourists. Within the corridor area, IH 39/90 passes through Dane and Rock Counties, where tourism generated over $1.4 billion in revenues in 2006. North of the project area, the IH 39/90 corridor leads tourists to the Wisconsin Dells area which provides major year round recreational opportunities, and is a significant economic generator for Wisconsin.

The IH 39/90 corridor is a federal truck route, with about 30 percent of its total traffic volume consisting of heavy trucks. Truck route designation increases the importance of the route operating safely and efficiently. The high volume of trucks compared to statewide and nationwide averages signifies the importance of the route in movement of goods throughout the state and to other outside national destinations.

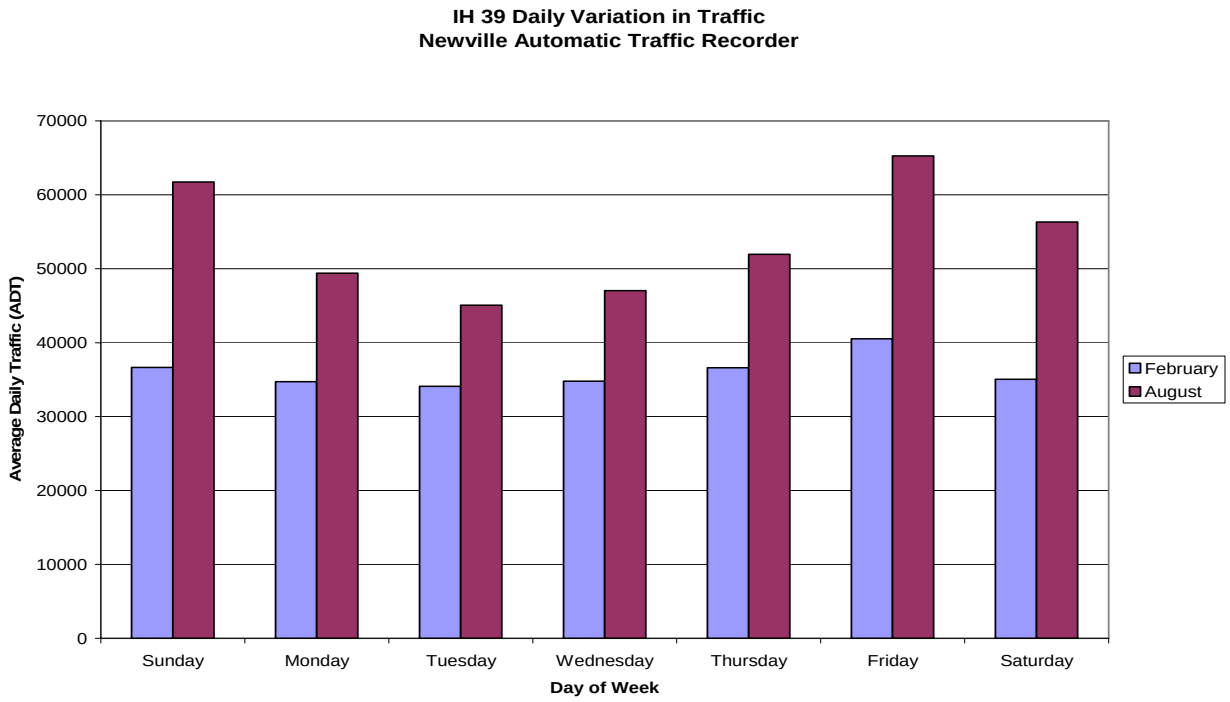
IH 39/90 serves as an important regional and local commuter route. Substantial traffic generators along the corridor include recreational, commercial, and industrial facilities in the Beloit, Janesville, and Madison areas. The route also provides local mobility (or ease of travel) for residents in communities along the corridor.

As an interstate and Backbone route, IH 39/90 must be able to carry heavy volumes of traffic while providing a high level of service. Increasing the mainline capacity and modernizing and reconfiguring interchanges on this segment of IH 39/90 between the Illinois State line and USH 12/18 is necessary to maintain a high level of service.

2.2 Traffic and Roadway Capacity

Existing traffic volumes are continually monitored on this IH 39/90 corridor by an automatic traffic recorder (ATR) at Newville, just south of the STH 59 interchange. The volume of traffic on this rural segment of IH 39/90 differs by month and day as shown on Table 2-1.

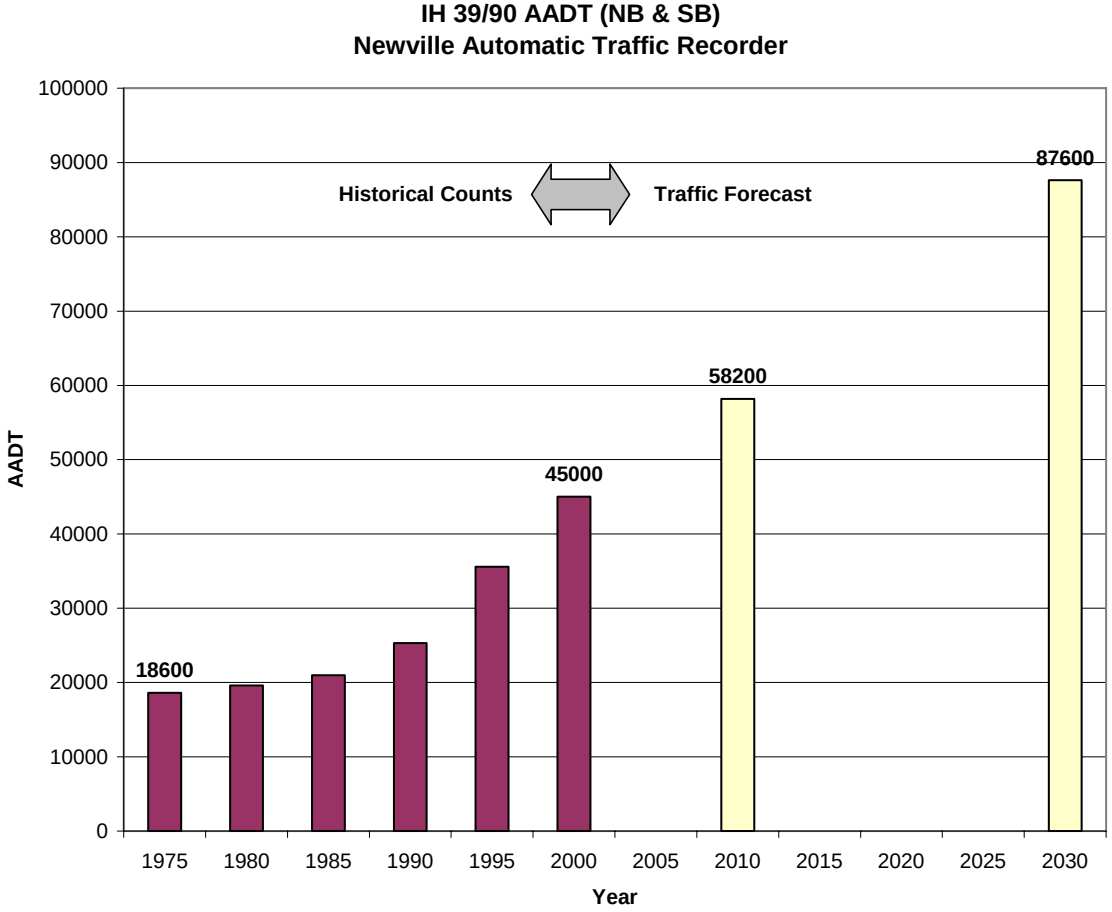
Table 2-1
IH 39/90 Daily Variation in Traffic



Also, interstate segments in developed areas such as Janesville and Beloit carry more volume than segments in undeveloped rural areas. Summer months and weekends have higher traffic volumes reflecting the importance of IH 39/90 to summer tourism travel.

Average annual daily traffic (AADT) was used as the basis for analysis of traffic for this project since it is consistent with accepted traffic procedures and there is a readily available data base. Table 2-2 details how traffic volumes have historically increased on the rural section of interstate highway at Newville, especially between 1990 and 2000. Note that the traffic volume on IH 39/90 at this location is one of the lower traffic volume sections in the project corridor.

Table 2-2
Average Annual Daily Traffic



Traffic in the corridor grew at an annual rate of 2.3 percent between the years of 1975 and 1990, and at an annual rate of 8.0 percent from 1990 to 2000, well over three times the rate traffic grew during the previous 15 years. Heavy trucks make up about 30 percent of the ADT.

The traffic volume projections for the design year 2030 were obtained from Rock and Dane County transportation planning models, which take into account anticipated land use and estimated travel patterns. The Rock County model was developed as part of this study. The Dane County model was obtained from the Dane County Metropolitan Planning Organization (MPO). Table 2-2 also shows the AADT projections for 2010 and 2030 at the Newville location. Appendix B contains the existing 2002 traffic volumes and the future traffic volumes for the No Build and the Build conditions for each segment of IH 39/90. These ADTs are also summarized in Table 2-3.

The volume of traffic a roadway carries is a gauge of how a roadway is being utilized. The roadway's level of service (LOS) is a more comprehensive indicator of how a roadway is performing. Table 2-3 summarizes the existing (2002), 2030 No Build and 2030 Build conditions for AADT and LOS for each segment of the corridor. The IH 39/90 No Build traffic volumes are lower than the Build traffic volumes in the design year. In the No Build condition, IH 39/90 is so congested that drivers choose alternate parallel routes, decreasing the volume on the interstate, increasing pressure on connector highways and local roads. The IH 39/90 Build condition traffic volumes reflect the projected demand of users on the interstate if the capacity constraints are ultimately removed.

Table 2-3
AADT and LOS for Existing and Design Year 2030

IH 39 / 90 Section	Year 2002		Year 2030					
	Existing		No Build (2 Lane)		Build (3 Lane)		Build (3 Lane + Auxiliary Lane)	
	AADT	LOS	AADT	LOS	AADT	LOS	AADT	LOS
State Line to IH 43	59,800	D	90,400	F	90,400	D	90,400	C
IH 43 to CTH S	51,000	C	71,000	D	77,100	C	77,100	N/A
CTH S to STH 11 Bypass	52,600	C	75,800	E	86,700	C	86,700	N/A
STH 11 Bypass to STH 11	55,000	C	77,400	E	91,100	D	91,100	C
STH 11 to USH 14	57,600	D	78,400	F	98,500	D	98,500	C
USH 14 to STH 26	51,000	C	76,400	F	97,300	D	97,300	C
STH 26 to STH 59	46,400	D	77,200	E	87,600	D	87,600	N/A
STH 59 to STH 73	45,400	C	79,200	F	85,200	C	85,200	N/A
STH 73 to USH 51	46,200	C	85,400	F	85,400	C	85,400	N/A
USH 51 to CTH N	43,400	C	80,400	F	80,400	C	80,400	N/A
CTH N to USH 12/18	46,600	D	85,800	F	85,800	C	85,800	N/A

N/A = No auxiliary lane desirable.

Level of service C indicates that the roadway is operating at or near the free-flow speed and minor incidents can be absorbed without traffic backups. Level of service D indicates that the roadway is operating slightly below the free-flow speed, but minor incidents will cause traffic backups. Level of service E indicates that the roadway is operating at capacity. The traffic stream offers no usable gaps to maneuver and any incident will cause extensive traffic backups. Level of service F describes breakdowns in traffic flow. Any maneuver, such as merging, weaving, or lane drop results in traffic backing up. It is desirable that a facility operates at LOS C in the design year.

Highways are typically designed for 20 years and, given the current year of 2008 and proposed construction no earlier than 2012 (dependent on project funding), forecast updates for 2035 are desirable. Straight-line forecasts were therefore made for 2035. The results, provided in Table 2-4, show LOS deteriorating further in 2035.

Table 2-4
AADT and LOS for Existing and Year 2035

IH 39 / 90 Section	Year 2002		Year 2035					
	Existing		No Build (2 Lane)		Build (3 Lane)		Build (3 Lane + Auxiliary Lane)	
	AADT	LOS	AADT	LOS	AADT	LOS	AADT	LOS
State Line to IH 43	59,800	D	95,900	F	95,900	D	95,900	C
IH 43 to CTH S	51,000	C	74,600	E	81,800	C	81,800	N/A
CTH S to STH 11 Bypass	52,600	C	80,000	E	92,800	C	92,800	N/A
STH 11 Bypass to STH 11	55,000	C	81,400	F	97,500	E	97,500	C
STH 11 to USH 14	57,600	D	82,100	F	105,800	E	105,800	C
USH 14 to STH 26	51,000	C	80,950	F	105,600	E	105,600	C
STH 26 to STH 59	46,400	D	82,700	F	95,000	D	95,000	N/A
STH 59 to STH 73	45,400	C	85,250	F	92,300	D	92,300	N/A
STH 73 to USH 51	46,200	C	92,400	F	92,400	D	92,400	N/A
USH 51 to CTH N	43,400	C	87,000	F	87,000	D	87,000	N/A
CTH N to USH 12/18	46,600	D	92,800	F	92,800	D	92,800	N/A

N/A = No auxiliary lane desirable.

As depicted on Tables 2-3 and 2-4, all segments of IH 39/90 will exceed the 60,000 AADT threshold for consideration of a six-lane facility by the design year 2030. Currently, segments in the corridor are operating at LOS C and LOS D. If no capacity improvements are made, the four-lane freeway (No Build condition) will operate at LOS E or LOS F in the design year, indicating breakdowns in traffic flow. In order to maintain acceptable operations on the interstate, a six-lane freeway (Build condition) is necessary. In some higher volume developed sections it may be necessary to construct an auxiliary lane in future years in order to achieve LOS C but that is not considered part of this project. With a six-lane freeway, IH 39/90 will operate at LOS C in the design year, or similar operations to the existing (2002) conditions.

2.3 Safety

There was an average of 608 crashes per year along the IH 39/90 corridor between the Illinois State line and Madison for the 6-year period of 2000 to 2005. Of these, 227 resulted in injuries and five in fatalities. Table 2-5 summarizes the 6-year average crash rates for each segment of IH 39/90.

Table 2-5
Crash Rate Summary

Segment	Segment Length (miles)	Interstate Type (rural or urban)	6-year Average	Statewide Average
State line to IH 43	**2.4**	**Rural**	***77***	**56**
IH 43 to CTH S	**2.3**	**Rural**	***68***	**56**
CTH S to STH 11 bypass	5.2	Rural	51	56
STH 11 bypass to STH 11	**2.5**	**Rural**	***69***	**56**
STH 11 to USH 14	3.2	Urban	56	101
USH 14 to STH 26	**0.8**	**Urban**	***170***	**101**
STH 26 to STH 59	**8.2**	**Rural**	***69***	**56**
STH 59 to STH 73	3.0	Rural	33	56
STH 73 to USH 51	3.7	Rural	49	56
USH 51 to CTH N	9.1	Rural	46	56
CTH N to USH 12/18	**5.1**	**Rural**	***80***	**56**
Entire Corridor	**45.5**	**Rural + Urban**	***61***	**56 (mostly rural)**

Rows in **BOLD** exceed the statewide average for crashes on rural/urban roadways.

Most crashes occur within interchanges, where weaving and merging movements for exiting or entering the interstate create traffic conflicts. Many crashes at interchanges involve fixed-object crashes, such as hitting bridges, parapets, or other barriers such as a guardrail. Statewide average crash rates are not available for interchanges, however the 11 interchanges within the corridor provide a baseline for comparison. Data from 2000 to 2005 shows the highest crash rate is at the USH 12/18 interchange (0.89 per million vehicles entering IH 39/90), and the lowest crash rate is at the STH 11 bypass (Avalon Road) interchange (0.34 per million vehicles entering IH 39/90).

2.4 Mainline Deficiencies

The horizontal alignment of IH 39/90 was evaluated by looking at the combination of existing curve radii and pavement superelevation to determine the existing design speed using current AASHTO standards. Design speed is defined as a speed determined for design and correlation of the physical features of a highway that influence vehicle operation. It is the maximum safe speed that can be maintained over a specified section of highway when conditions are favorable. This segment of IH 39/90 was designed and

constructed in the early 1960's. Since that time, design standards have been updated to allow facilities such as the interstate to operate more efficiently and safely. The posted speed limit for this segment of IH 39/90 is 65 mph.

There are 32 existing horizontal curves northbound on the 45-mile corridor. Based on existing (2008) design standards, eight of these curves have a design speed of 70 mph, seven have a design speed of 65 mph, and the remaining 17 have a design speed of 60 mph. No curve was found to have less than a 60 mph design speed rating. All of the northbound horizontal curves below 70 mph can be upgraded to 70 mph by increasing their superelevation rates.

There are 27 existing horizontal curves southbound on the 45-mile corridor. Based on existing (2008) design standards, seven of these curves have a design speed of 70 mph, three have a design speed of 65 mph, and 17 have a design speed of 60 mph. No curve was found to have less than a 60 mph design speed rating. All the southbound horizontal curves below 70 mph, except one, can be upgraded to 70 mph by increasing their superelevation rates. The one exception is a 65 mph (design speed and posted speed) mainline curve located at the south end of the USH 12/18 interchange. Achieving a 70 mph design speed on this curve, in conformance with the current six percent maximum superelevation standard, would require a new alignment with a greater radius curve.

Speed ratings for each vertical curve were derived based on the WisDOT Facilities Development Manual design standards. In the southbound direction, out of a total of 122 vertical curves, only two sag curves were rated at a design speed lower than the 65 mph posted speed. Similarly, in the northbound direction only two sag curves were found to be rated less than the 65 mph posted speed. The vertical curves for both the northbound and southbound directions are located at the Rock River crossing and between CTH M and Manogue Road in Rock County. The substandard sag curves were found to have a 55 mph design speed rating.

The existing vertical profile on this segment of the interstate exceed the design standard of three percent at two locations on the northbound lanes. The substandard vertical grades are both in a downhill direction, and therefore do not affect slow down in operating speeds of vehicles. One is located at the Rock River crossing (3.4 percent) and the other is between CTH M and Manogue Road (4.0 percent) in Rock County.

While not substandard, there also exist five northbound locations and two southbound locations that contain up to ¾ mile long uphill grades (2-3 percent) that slow down the operating speed of heavy trucks by 10 mph or more. The two southbound locations are between Church Road and CTH A in Dane County and at the Rock River crossing in Rock County. The five northbound locations are between CTH BB and CTH AB, the approach to the northbound weigh station, between CTH B and East Church Road, just south of East Church Road, and near CTH A, all in Dane County.

Due to the high volume of truck traffic on this highway, interstate design standards require a 12-foot wide outside or right shoulder rather than the current 10-foot width.

The existing pavement from the Illinois State line to the Rock River was constructed in 1983-84 as 10 inches of continuous reinforced concrete pavement (CRCP). This segment of interstate pavement was resurfaced in 2004 with a 3.5-inch hot mix asphalt (HMA), demonstrating that it has already outlived its initial construction service life of 20 years.

The use of CRCP in Wisconsin, and in most other states, is no longer preferred because of the higher cost of steel reinforcement, and because past history is showing the condition of the pavement tends to deteriorate at a faster rate than other types of concrete pavement choices. To add a new lane to the existing lanes in this segment would require the continued use of CRCP, and would require the new pavement being on a separate maintenance cycle than the adjacent existing lanes. This would result in frequent traffic control scenarios, and associated traffic slowdowns, being necessary along the interstate

during maintenance cycles.

The existing pavement from the Rock River north to Madison was constructed in 1989 to 1990 as 11 inches of jointed reinforced concrete pavement (JRCP). This segment of interstate is showing significant signs of deterioration and is approaching the end of its initial construction service life. With a HMA resurfacing in the next few years, this reconstruction project could be delayed for about eight years, fitting in well with the anticipated funding schedule for this project. Similar to the Illinois State line to Rock River segment, total reconstruction and pavement replacement becomes more cost effective because reconstruction will put the entire roadway pavement structure on the same maintenance cycle. With the resurfacing alternatives, two of the three lanes in either direction would be on a different maintenance cycle than the new lanes. A life-cycle cost analysis showed an approximate $30 million cost saving by reconstructing versus resurfacing.

2.5 Bridge Deficiencies

There are 90 bridges along this highway either carrying IH 39/90 over or under side roads, waterways, and railroads. Similar to the highway itself, all outside or right shoulder widths on the bridges do not meet the current 12-foot WisDOT standard. Bridge deck replacements for 26 bridges located in Rock County were completed in 2004. Of the remaining bridges, two bridges over the Rock River do not meet minimum clear roadway width standards of 38 feet for a 4-lane divided roadway, and two bridges over STH 26 do not meet desirable clear roadway width standards of 40 feet for a 4-lane divided roadway, though they do meet the minimum standards.

2.6 Interchange Deficiencies

Appendix E, Exhibits E-1 through E-10, show interchange deficiencies for each of the eleven interchanges in the IH 39/90 corridor. These interchanges in the IH 39/90 corridor were designed and constructed in the early 1960s. Since that time, design standards have been updated to allow facilities such as the interstate to operate more efficiently and safely. Most all of the interchanges were designed with a maximum horizontal curve superelevation rate of eight percent. Current standards for Wisconsin require no more than six percent superelevation. As a result, many of the ramp curve radii are too small by current WisDOT standards. In addition, since the initial interstate design, on and off ramp terminal configurations have changed considerably to provide safer exiting and merging movements. Consequently, nearly all the acceleration and deceleration distances currently provided at the interchange ramps are shorter than current design standards. Table 2-6 illustrates some of the more severe substandard ramp terminals.

Most interchanges have a single lane bridge between ramp terminals on the connecting side road. Current and long-term functionality of the connecting side roads indicate a need for multilane divided roadway and bridges between the ramp terminals to safely accommodate traffic volumes and turning movements.

Table 2-6 below provides directions in eastbound (eb) and westbound (wb) directions. IH 90 is an eastbound-westbound route that extends across the United States. However, IH 39 is a northbound-southbound route having dual designation with IH 90 in the project area. For purposes of discussion, IH 90 designation takes precedence, and eastbound-westbound directions are used to the extent possible herein. On a map, therefore, directions called out as eastbound will appear southbound and directions called out as westbound will appear northbound.

Table 2-6
Interchange Ramp Designs

Interchange Location	Existing Ramp Acceleration/Deceleration Distances	Current Design Standards

IH 43	wb and eb exits: 250' wb/sb entrance: 500'	530' Recommend parallel entrance. If tapered, L=1,200'
CTH S	All ramps: 250'	530'
STH 11	nb exit: 350' sb exit: 250' sb entrance: 469'	530' 530' Recommend parallel entrance. If tapered, L=1,200'
USH 14	nb exit: 300' and non-linear due to being located on mainline curve. sb exit: 250'	Recommend parallel entrance. If tapered, L=1,200' 530'
	nb entrance: 600' and tapered sb entrance: 350' and tapered	Parallel entrance with L=600'. If tapered, L=1,200'
STH 26	nb exit: 217'	530'
STH 59	nb exit: 525' sb exit: 250' nb entrance: Tapered with L=864' sb entrance: Tapered with L=936'	530' 530' 1,200' if tapered 1,200' if tapered
USH 51/STH 73	nb exit: 525' sb exit: 525' nb entrance: 900' tapered sb entrance: 900' tapered	530' 530' 1,200' if tapered 1,200' if tapered
USH 51	sb exit: 480' sb entrance to USH 51: 509' tapered nb entrance: 650' tapered sb exit from USH 51: 250' sb entrance to IH 39: 1,050'	530' 1,200' if tapered 1,200' if tapered 530' 1,200' if tapered
CTH N	nb exit: 480' sb exit: 480' nb entrance: 1,050' tapered sb entrance: 1,050 tapered	530' 530' 1,200' if tapered 1,200' if tapered

Following is a brief summary of geometric deficiencies at each of the 11 interchange locations.

IH 43 Interchange

This interchange is currently a full cloverleaf configuration that provides access to IH 43 and STH 81. The interchange was originally built in the 1960s as a service interchange to then STH 15 connecting the cities of Beloit and Milwaukee. During the mid 1970's, STH 15 was upgraded to a four-lane freeway, and in the mid 1980's, STH 15 had its designation changed to IH 43. As a result, this interchange, which was once a service interchange, currently operates as a system interchange between two high volume interstate highways, IH 39/90 and IH 43, and provides local access to the city of Beloit via STH 81.

The primary deficiency at this interchange is that the two heaviest traffic volumes, northbound IH 39/90 to eastbound IH 43 and westbound IH 43 to southbound IH 39/90, are served by single lane, low speed ramps that do not provide sufficient capacity for the traffic volumes. In addition, the four existing loop ramps have a design speed of 30 mph and should be replaced with higher speed (60 mph) directional or semi-directional ramps. The traffic weaving areas, between the IH 39/90 on and off ramps, have insufficient length for safe lane changes.

A secondary deficiency at this interchange is that drivers headed westbound on IH 43 have the perception that the high speed interstate continues into Beloit, whereas once west of the interchange the freeway becomes a state highway (STH 81) with side road access. A disproportionately high number of crashes, mostly sideswipes and rear-end collisions, result at the first set of signals just west of IH 39/90 because of this problem of perception. Conceptually, this interchange needs to emphasize that interstate-to-interstate connections are the dominant movements.

CTH S (Shopiere Road) Interchange

The two-lane bridge carrying Shopiere Road over the interstate does not meet current width requirements. This interchange is currently a diamond configuration that provides local access to CTH S, also known as Shopiere Road. As previously mentioned, the ramp pavement superelevation rates and ramp terminal acceleration/deceleration lengths at this interchange are substandard. The existing parapet and railings on the narrow bridge over the interstate create safety concerns due to sight distances at the ramp terminals. In addition, the southbound on ramp contains a substandard horizontal curve radius. Current WisDOT standards call for Shopiere Road to be divided at the interchange to prevent wrong way left turns onto the exit ramps.

STH 11 (Avalon Road) Interchange

The bridge carrying Avalon Road over the interstate does not meet width requirements for a future rural four lane divided roadway structure. This interchange is currently a diamond configuration that provides access to State Highway 11 to the west and Avalon Road to the east. The interchange was constructed in 1989, so it is fairly new. This interchange meets current design standards, with the exception of the ramp taper rate at the two off ramps.

STH 11 (E. Racine Street) Interchange

The bridge carrying E. Racine Street over the interstate does not meet current width requirements. This interchange is currently a full cloverleaf configuration that provides access to STH 11 and Bus. 14 to the east and local access to the City of Janesville to the west via E. Racine Street. The ramp pavement superelevation rates and ramp terminal acceleration/deceleration lengths at this interchange are substandard. The four loop ramps have horizontal curves that provide for a 25 mph design speed that is lower than the current 30 mph minimum standard. The existing traffic weaving areas, between the IH 39/90 on and off loop ramps, are approximately 500’ long, which is insufficient for vehicle acceleration onto IH 39/90. The at grade intersection of STH 11 and Midland Road is only 350’ east of a ramp taper which is lower than the current 1,000’ minimum WisDOT standard.

USH 14 Interchange

The bridge carrying USH 14 over the interstate does not meet current width requirements. This interchange is currently a partial cloverleaf configuration that provides access to STH 14 and the City of Janesville. The ramp pavement superelevation and ramp terminal acceleration/deceleration lengths at this interchange are substandard. The loop ramp in the southwest quadrant functions at a design speed of 25 mph which is less than the current 30 mph minimum standard. The two at grade intersections, Pontiac Drive and Deerfield Drive, on opposite sides of the interchange, are spaced less than the minimum design standard (250’) to the ramp tapers resulting in operational deficiencies on USH 14.

STH 26 Interchange

The bridge carrying STH 26 over the interstate does not meet current width requirements. This interchange is currently a partial cloverleaf configuration that provides access to STH 26 and the City of Janesville. This interchange is located ½ mile north of the USH 14 interchange, which is less than the standard urban interstate two-mile interchange spacing. Consequently, the distances on IH 39/90 between successive (merge/diverge) on and off ramps for the two interchanges are not long enough. In addition, the distance between successive ramps within the STH 26 interchange is too short. As traffic demand from Janesville and on IH 39/90 increases, the merging and weaving movements will reduce the level of service on IH

39/90. WisDOT has recently constructed auxiliary lanes on IH 39/90, between on and off ramps, to improve traffic flow. Both loop ramps have substandard radii, design speed, and superelevation.

STH 59 Interchange

The bridge carrying STH 59 over the interstate does not meet current width requirements. This interchange is currently a partial cloverleaf configuration that provides access to STH 59. Acceleration and deceleration distances for merging and exiting traffic to and from IH 39/90 are substandard. Both loop ramps have substandard radii, design speed, and superelevation. Directly across from the east ramp terminal is a commercial driveway for a fast food restaurant. This interchange configuration causes directional confusion to both travelers on STH 59 and customers from the restaurant needing to get back on the interstate. STH 59 is an undivided roadway and therefore does not provide protection against wrong way left turns onto the off ramps.

USH 51/STH 73 Interchange

The bridge carrying USH 51/STH 73 over the interstate does not meet current width requirements. This interchange is currently a partial cloverleaf configuration that provides access to USH 51 to the west and STH 73 to the east. Acceleration and deceleration distances for merging and exiting traffic to and from IH 39/90 are substandard. Both loop ramps have substandard radii, design speed, and superelevation. The USH 51/STH 73 crossroad is an undivided roadway and therefore does not provided protection against wrong way left turns onto the off ramps.

USH 51 Interchange

The bridge carrying USH 51 over the interstate does not meet current width requirements. This interchange is currently a trumpet configuration (three-leg) that provides access to USH 51. Acceleration and deceleration distances for merging and exiting traffic to and from IH 39/90 are substandard. The single loop ramp has substandard radii, design speed, and superelevation. The CTH A at grade intersection is located approximately 500’ from the end of the ramp tapers which does not meet the minimum intersection spacing of 1000’.

CTH N Interchange

The bridge carrying CTH N over the interstate does not meet current width requirements. This interchange is currently a diamond configuration that provides access to CTH N. Acceleration and deceleration distances for merging and exiting traffic to and from IH 39/90 are substandard. The CTH N crossroad is an undivided roadway and therefore does not provide protection against wrong way left turns onto the off ramps.

USH 12/18 (West Beltline) Interchange

The bridge carrying the West Beltline over the interstate does not meet current width requirements. This interchange is currently a semi-direct, partial cloverleaf configuration that provides access to USH 12/18. The west leg of this interchange serves USH 12/18 (west beltline), a major traffic corridor leading into and around the City of Madison. As a result, the heaviest traffic movements at this interchange are to and from the west beltline. One of the primary geometric deficiencies is the left hand off ramp for the northbound to westbound driver. Research has shown that the left hand exits are contrary to driver expectations and less safe than the conventional right hand exits. Similarly, because the southbound off ramp is at the end of approximately 40 miles of the outside mainline through lane, drivers tend to make sudden lane changes in the area of the lane drop. Finally, there is insufficient merge distance and substandard sight distance at the right point where the westbound to northbound ramp converges with the eastbound to northbound ramp. Acceleration and deceleration distances at the ramp terminals are substandard.

3. Summary of the alternatives considered and if they are not proposed for adoption, why not. (Identify which, if any, of the alternatives is the preferred alternative.)

This section is separated into two parts. Section 3.1, discusses the summary of alternatives considered for the mainline of IH 39/90. Section 3.2 discusses the summary of alternatives considered for each of the 11

interchanges within the IH 39/90 study limits.

3.1 IH 39/90 Mainline

The purpose of the proposed IH 39/90 improvements is to meet current design standards, improve overall safety, accommodate future traffic with an acceptable level of service (LOS), and to replace aging pavements and structures on a corridor having national, state, regional, and local importance. An alternative that satisfies the project purpose should reduce congestion and travel time, enhance safety, provide an adequate level of service for forecast traffic volumes, support local community needs and interests, replace aging pavement and structures, and accommodate regional and national transportation needs of those communities along IH 39/90.

Two mainline alternatives were considered in order to continue providing safe and efficient transportation through the corridor, a No Build Alternative and a Build Alternative with three options. The Build Alternative with three options was developed to meet the purpose and need of the project. A primary consideration included in the development of the Build Alternative was the need to maintain four lanes of traffic during construction. Also considered in the development of the Build Alternative was the need to upgrade the "clear zone" area to reduce the amount of guardrail needed throughout the corridor. The alternatives brought forward in the analysis are:

1. No Build Alternative
2. Transportation Demand Management Alternative
3. Transportation System Management Alternative
4. Build Alternative, with Options:
    i. Outside Travel Lane Option
    ii. Inside Travel Lane Option
    iii. Reconstruction Option

No Build Alternative

The No Build Alternative does not meet the purpose and need requirements of this project. IH 39/90 was originally built as a four-lane divided freeway in the 1960's. Since that time, the average daily traffic volumes (ADT) have increased in the rural area from 18,600 vehicles in 1975 to 45,000 vehicles in 2002, or about 4.7 percent per year. About 30 percent of these vehicles consist of heavy trucks. Traffic volumes are higher in urban segments of IH 39/90, and they are higher on weekends.

Under the No Build Alternative the freeway would continue to receive regular bridge and roadway maintenance, though no improvements would be conducted. The No Build Alternative would not improve the highway's ability to handle increasing volumes. According to traffic studies, the existing freeway would achieve LOS of F by 2030, with substantial backups along the freeway and overloading of other roadways in the area.

Over the past 45 years, design standards have been updated to allow facilities such as the interstate to operate more efficiently and safely. The existing IH 39/90 interstate mainline now has some geometric deficiencies as a result of the updated design standards. Along the route, 17 northbound horizontal curves and 17 southbound horizontal curves were rated at design speeds less than the posted 65 mph speed. The No Build Alternative does nothing to correct these deficiencies.

Existing longitudinal grades on this segment of the interstate exceed the design standard of three percent at two locations on the northbound lanes. The high volume of truck traffic on this interstate requires a 12-foot wide outside or right shoulder rather than the current 10-foot width. The bridges along this highway either carrying IH 39/90 over or under side roads, waterways, and railroads are substandard design, all outside shoulder widths on the bridges do not meet the current 12-foot WisDOT standard. The No Build Alternative does not correct these deficiencies.

The No Build Alternative has fewer environmental impacts but would not be consistent with the *Corridors 2020* plan and its intended highway function as a Backbone route of national, regional, state, and local importance. Although the No Build Alternative does not meet the purpose and need and does not improve the highway's safety or LOS, this alternative was carried forward as a detailed study alternative to serve as a baseline for comparison to the Build Alternative's three options and for evaluation of their environmental impacts.

Transportation Demand Management Alternative

The Transportation Demand Management Alternative attempts to reduce the number of auto trips in the corridor through increased transit ridership. Van Galder Bus Company currently operates 14 daily trips from Janesville to Madison and 22 daily trips from Madison to Janesville. Service is also offered from Madison/Janesville to the following destinations in Illinois: South Beloit, Rockford, Downtown Chicago, O'Hare airport, and Midway airport.

In addition to these regional transit options, the Cities of Madison, Janesville, and Beloit operate local bus routes. Madison Metro operates an extensive bus service within the City of Madison. Service is offered seven days a week and on holidays. Weekday buses start as early as 5:00 AM and run as late as 1:00 AM. On the weekends, service typically operates from approximately 7:00 AM until 11:00 PM.

The Janesville Transit System (JTS) offers regular bus service Monday through Saturday on six routes inside Janesville and the Beloit-Janesville Express that operates weekdays between the two cities. Bus service hours are from 6:15 AM – 10:15 PM Monday through Friday and from 8:45 AM – 6:15 PM on Saturdays. The Beloit-Janesville Express (BJE) route provides 12 weekday round trips between the two cities. The Beloit Transit System (BTS) also offers regular bus service Monday through Saturday on 5 routes inside Beloit. Hours of operation are from 6:00 AM – 5:30 PM Monday through Friday and from 9:00 AM – 4:00 PM on Saturdays.

Although improvements and/or expansions to the bus services currently in the corridor would be beneficial to the traveling public, they would not address the need to correct the operational, geometric, and aging pavement and structure deficiencies on existing IH 39/90. For these reasons, the Transportation Demand Management Alternative was not carried forward to the detailed study stage.

Transportation System Management Alternative

The Transportation System Management Alternative attempts to maximize the efficiency of the highway system to help alleviate or postpone the need to expand capacity. Transportation System Management (TSM) measures are designed to improve traffic flow and safety. Examples of TSM measures for the IH 39/90 corridor include improving intersection capacity, widening shoulders, adding traffic signals, and a variety of Intelligent Transportation Systems (ITS) measures such as ramp metering, variable message signs, closed-circuit cameras that post images of traffic conditions, crash investigation sites, and enhanced freeway patrols.

The Transportation System Management Alternative will not, by itself, meet the purpose and need for the project, and fully address the operational, geometric, and aging pavement and structure deficiencies on existing IH 39/90. For these reasons, the Transportation System Management Alternative, by itself, was not carried forward to the detailed study stage. The preferred alternative may include TSM elements, and the environmental impacts and costs associated with ITS elements are considered in this Environmental Assessment.

Build Alternative

The Build Alternative improves the ability of the roadway to meet traffic demands safely and efficiently by improving the existing roadway and connections to it. This alternative meets the purpose and need requirements of this project while minimizing impacts to the natural and human environment. In each of its three options, it addresses capacity and level of service, corrects geometric and operational problems associated with safety, replaces aging pavement and structures, and will provide system continuity and

roadway function consistent with a Backbone route of national, regional, state, and local importance. The Build Alternative was evaluated in this report on environmental factors, right of way required, and construction cost.

Three options to the Build Alternative were considered. The Outside Travel Lane Option added a new travel lane in each direction along the outside (right shoulder) edge, and included resurfacing the existing interstate lanes. The Inside Travel Lane Option also added a new travel lane in each direction, but along the inner median edge, and included 12-foot travel lanes. The Reconstruction Option consisted of total reconstruction of the existing interstate lanes while at the same time adding a third lane in each direction.

All three options ultimately provide similar capacity, LOS, and safety. All three options may include ITS elements. Exact ITS technologies will be studied and determined during the design phase, and may include measures such as ramp metering, detection, incident management, signal improvements, surveillance, traffic flow management, and traveler information. During design, alternative routes for interstate traffic will be studied for possible improvements needed to handle diversion of traffic during construction and incident management.

After evaluating engineering and environmental factors for the Build alternative along the mainline, and careful consideration of comments from various agencies, affected communities and property owners, the Reconstruction Option of the Build Alternative is recommended. The Outside Travel Lane and Inside Travel Lane Options would meet the purpose and need criteria, and would have a lower initial cost than the Preferred Build Alternative. A present worth life-cycle cost analysis showed the Reconstruction Option to have about a $30 million cost savings over the Travel Lane Options. In addition, the Travel Lane Options would require more frequent maintenance cycles on the interstate lanes, resulting in additional costs and frequent traffic control concerns. For these reasons, the Travel Lane Options were dismissed from further consideration. The Preferred Build Alternative is shown on Exhibit C-1 in Appendix C.

Preferred Build Alternative: The preferred Build Alternative consists of the removal and reconstruction of the existing freeway lanes with the addition of a third lane during reconstruction to create a 6-lane divided highway. Minor slope grading will be involved to update the clear zone area to current design standards. The proposed interstate highway will typically consist of three 12-foot travel lanes with 12-foot inside and outside shoulders in each direction separated by a variable width median. A median barrier will be constructed in those areas where the median width will be less than 60 feet (inside edge to inside edge of driving lanes). See Exhibit A-1 in Appendix A for interstate roadway typical sections.

It is proposed to reconstruct each side of the interstate with full depth pavement for the three travel lanes, plus full depth pavement for the outside shoulder to allow four lanes of traffic to operate safely on one side of the interstate during the construction period. The intent is to maintain all access during construction, including emergency vehicles. Details of this plan will be worked out in the Transportation Management Plan (TMP). The full-depth pavement on the shoulder would allow future conversion of the shoulder to a travel lane for added capacity and to maintain a Level of Service C on the interstate in future years (2035+) should travel volumes warrant an increase to eight lanes.

The general concept for the Preferred Build Alternative is to stay within the existing interstate highway right of way to the extent practical. Existing right of way varies along the IH 39/90 corridor between 230 and 650 feet. From the Illinois State Line to north of the STH 26 interchange at Janesville, the additional interstate lanes are proposed to be added in the current median area, and no additional right of way would be required for the mainline reconstruction. This placement was the most cost effective for this segment, and was supported by the cities, townships, and property owners along the corridor and preserved farmland. This placement was also supported by the fact that 28 bridges south of Janesville had been redecked and widened to the inside in 2001 and 2002, thus there will be no cost of improvement to these bridges if the third lane was added to the inside.

From north of Janesville to the USH 12/18 interchange at Madison, the additional interstate lanes are

proposed to be added in the current median areas in which the current median is wider than 84 feet (edge to edge total width of driving lanes). If the current median is 84 feet or less, it is proposed to place the additional interstate lane along the outside edge of the current roadway. This minimizes the use of median barriers which become necessary for safety should the median width narrow to less than 60 feet. Some additional right of way in the range of 0 to 20 feet on each side would be required for the mainline reconstruction in these outside widening areas. No additional right of way would be required for the mainline reconstruction in the median widening areas.

The preservation of the median area, and the elimination of the need for median barriers when practical, was supported by Dane County and cities and townships along this segment of IH 39/90 north of Janesville. The preserving of the median area has the advantage of maintaining a green space for surface water runoff and visual appearance, as well as for future transportation uses. In addition, the Dane County Highway Department stated a significantly higher maintenance cost for maintaining a barrier median area versus a grassed area. The advantage with the reconstruction alternative is that the ultimate location for lane placement can be adjusted slightly. In areas where the median is currently greater than 60 feet wide, the entire alignment can shift toward the median to reduce the amount of additional right of way required, still without necessitating a median barrier. If the freeway was only resurfaced and the additional lane was added to the outside, more right of way would have to be purchased to construct the third lane.

The general concept for staging during construction is to perform work necessary to widen bridges, and to use a combination of permanent and temporary roadway to enable four lanes of traffic to safely operate on one side of the interstate while the other side is reconstructed. After the initial side is reconstructed, then traffic would be shifted to the new pavement while the second side is reconstructed. The intent is to maintain all access during construction, including emergency vehicles. Details of this plan will be worked out in the Transportation Management Plan (TMP). Plans for management of stormwater and erosion control during and after construction will be developed during the design phase of the project.

Interstate bridges from the Illinois State Line to north of the STH 26 interchange at Janesville were re-decked and widened sufficiently into the median area to handle 4 lanes of traffic during 2004-5. A construction staging scenario in this area could consist of adding 28 feet of permanent and temporary roadway to one side of the freeway in the median area in order to handle four lanes of traffic (two in each direction) during construction. This would free up the other side for total reconstruction. The first side to be reconstructed would have three 12-foot travel lanes, plus a full depth 12-foot shoulder to function as a fourth travel lane during reconstruction of the second side. The full depth pavement on the shoulder also allows a future conversion of the shoulder to a travel or auxiliary lane for added capacity on the interstate in future years should travel volumes warrant it.

From north of Janesville to the USH 12/18 interchange at Madison, a construction staging scenario could include bridge work and widening as an initial phase of construction. Adding 28 feet of permanent and temporary roadway to one side of the freeway, either the median area or adjacent to the outside lanes, could then occur to handle four lanes of traffic (two in each direction) during construction. Again, this would free up the other side for total reconstruction. The typical section, including a full depth pavement on the shoulder, would be similar to that described above. More detailed traffic control and staging plans will be prepared during final design phases of this project and funding availability for project segments is known..

The Reconstruction Option of the Build Alternative addresses the aging pavement condition in the corridor, as identified in the purpose and need. The increased pavement service life will decrease the need for frequent traffic control along the interstate.

The reconstruction alternative also allows for less right of way acquisition and less environmental impacts than widening on the outside. In concept, the removal of the existing lanes allows reconstruction to take place on a slightly revised alignment. This will permit the flexibility to maximize use of the existing interstate right of way while minimizing use of median barrier.

Other Alternatives: No other alternatives were considered. New alignments would produce significant impacts in developed, developing, and rural areas at significant financial cost. Using the current alignment is the only reasonable Build Alternative for this project.

3.2 IH 39/90 Interchanges

The 11 interchanges in the corridor, with the exception of STH 11 bypass (Avalon Road), were designed and constructed in the early 1960's. Since that time, interchange design standards have been updated, and on and off ramp configurations have been modified to provide safer exiting and merging movements. Consequently, almost all of the acceleration and deceleration lane distances provided at the existing interchange ramps are shorter than current design standards.

Most interchanges have a single lane in each direction between ramp terminals on the connecting side road. Current and long term functionality of the connection side roads indicate a need for multilane divided roadway and bridges between ramp terminals to safely accommodate traffic volumes and turning movements. All eleven interchanges in the IH 39/90 corridor are proposed for reconstruction due to the need to update ramp configurations and, in most locations, the need to provide multilane divided roadways and bridges between ramp terminals on the connecting side roads.

A ***No Build Alternative*** was included in the analysis of each interchange. Under this alternative, each interchange would continue to receive regular bridge and roadway maintenance, though no improvement would be conducted. The interchange No Build Alternative does not solve any of the interchange geometric or operational deficiencies, replace aging pavement and structures, or meet local community needs. The interchange No Build Alternative does not meet the purpose and need nor do they improve the highway's safety or LOS.

Most of the interchanges could be improved under the Build Alternative. Each interchange alternative was evaluated using a matrix that considers operational factors, safety, environmental impact, implementation, and cost. This evaluation matrix is included in Appendix D.

The following sections discuss the Build Alternative(s) for each interchange and outline the reasons for the preferred interchange alternatives. The preferred Build Alternatives for each interchange were selected after evaluating engineering and environmental factors for interchange alternatives (see Appendix D), and careful consideration of comments from various agencies, affected communities and property owners.

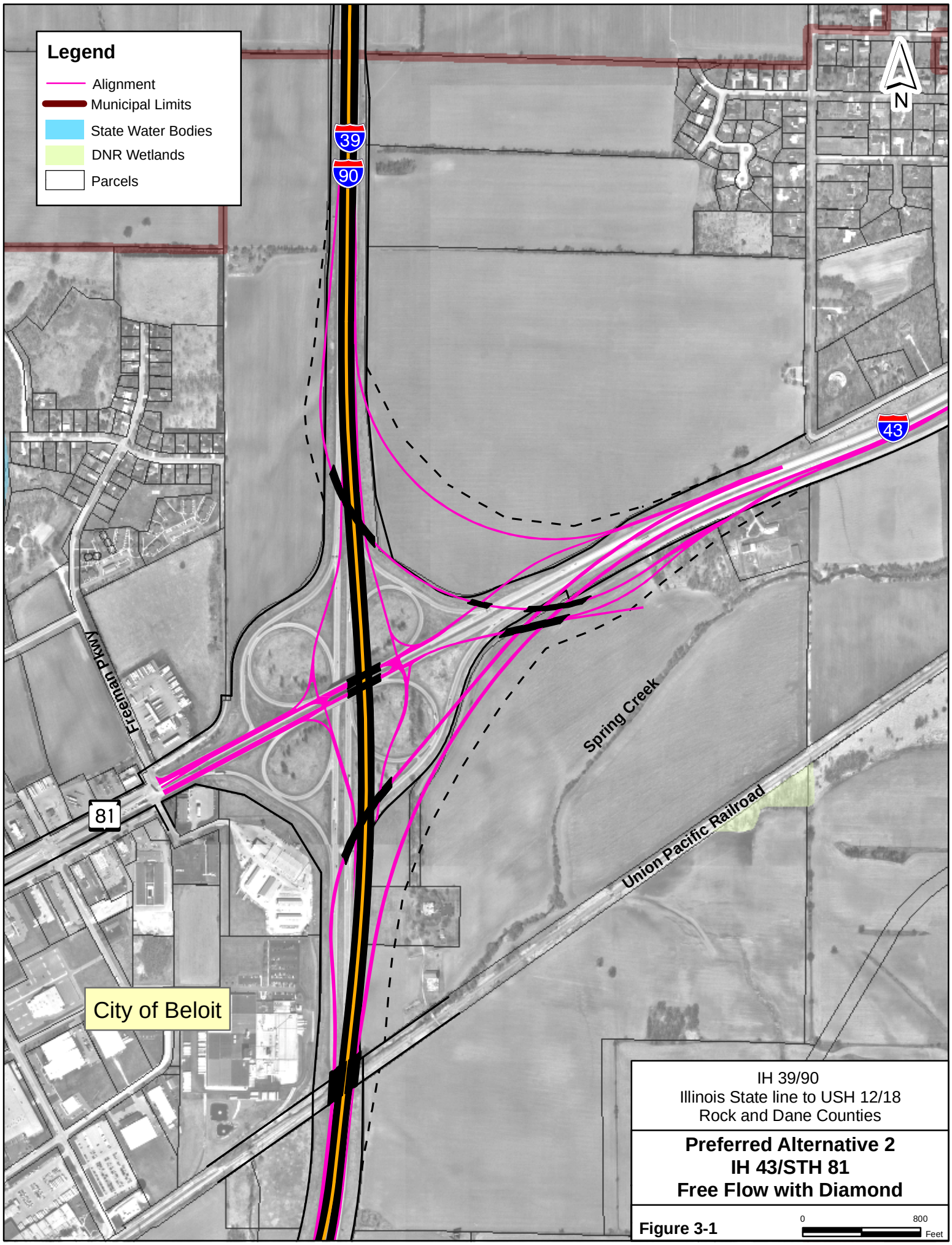
IH 43/STH 81

This interchange was originally designed and constructed to function as a service interchange connecting what was then State Highway 15 to IH 90. Over the years, State Highway 15 was upgraded to a four-lane freeway and had its designation changed to Interstate Highway 43. As a result, this interchange currently operates as a system interchange between two high volume interstate highways, IH 39/90 and IH 43, and also provides local access to the city of Beloit via STH 81.

Conceptually, design of this interchange needs to emphasize that interstate-to-interstate connections are the dominant movements and they need to be accomplished by right-hand exit and entrances. Proposed design speeds for free flow interstate-to-interstate system interchange connections are 60 mph. Since westbound to northbound and its reverse movement are both relatively low in volume, it may be possible to save substantial right of way in the northeast quadrant by using a lower design speed. Two Build Alternatives were evaluated for this interchange:

Alternative 1 -- Free Flow
Alternative 2 -- Free Flow with Diamond

Both Build Alternatives improve existing operational conditions by eliminating weaving movements and providing right-hand acceleration and deceleration lanes of sufficient lengths for the interstate-to-interstate connections. Exhibit E-1 in Appendix E shows the interchange deficiencies and the two Build Alternatives



IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative 2
IH 43/STH 81
Free Flow with Diamond

Figure 3-1

0 800 Feet

considered for this interchange.

Preferred Interchange Alternative – Alternative 2 -- Free Flow with Diamond*:* The Free Flow with Diamond Alternative (Figure 3-1) provides for high-speed 60 mph directional connections for interstate-to-interstate movements. Slower speed connections to STH 81 and the City of Beloit are provided by a diamond interchange. This alternative allows drivers who mistakenly exit IH 39/90 to re-enter IH 39/90 or enter IH 43, and provides a backup interchange for the directional ramps in the event of an incident or construction. The Free Flow with Diamond Alternative provides a greater distance between the west diamond ramp terminal and the first side road, Freeman Parkway. This alternative is considered to be preferable because it provides better traffic flow and roadway design, requires less right of way, and is less costly.

Other Alternatives: Alternative 1 provides free-flow traffic movements for all connections. Interstate-to-interstate connections are made by high-speed directional ramps, and STH 81 connections utilize a semi-directional ramp and a tight loop ramp. This alternative provides less distance between the west ramp terminal and the first side road, Freeman Parkway. This alternative is more costly, requires more right of way and scored lower on the interchange evaluation matrix (Appendix D).

CTH S (Shopiere Road)

Only one Build Alternative was evaluated for this interchange. Due to the rural nature and lower traffic volumes of this interchange, a diamond configuration is the only reasonable alternative for the interchange. Exhibit E-2 in Appendix E shows the interchange deficiencies and the alternative considered for this interchange.

Preferred Interchange Alternative -- Diamond: The Diamond Alternative for this interchange (Figure 3-2) has a design speed of 40 mph on the ramps. The preferred alternative includes reconstructing CTH S as a divided four-lane roadway in the interchange area. The preferred alternative provides sufficient acceleration and deceleration lengths for interstate exit and entrance ramps. CTH S will be divided and ramp alignments will be offset to prevent wrong-way entrances onto the interstate. The narrow bridge on CTH S over IH 39/90 will be updated. The southbound exit ramp terminal at CTH S will provide sufficient sight distance. Despite these improvements, existing access points along CTH S will remain less than 1,000 feet from exit ramp terminals, both west and east of IH 39/90. This alternative does have a higher score on the interchange evaluation matrix than the No Build Alternative (Appendix D).

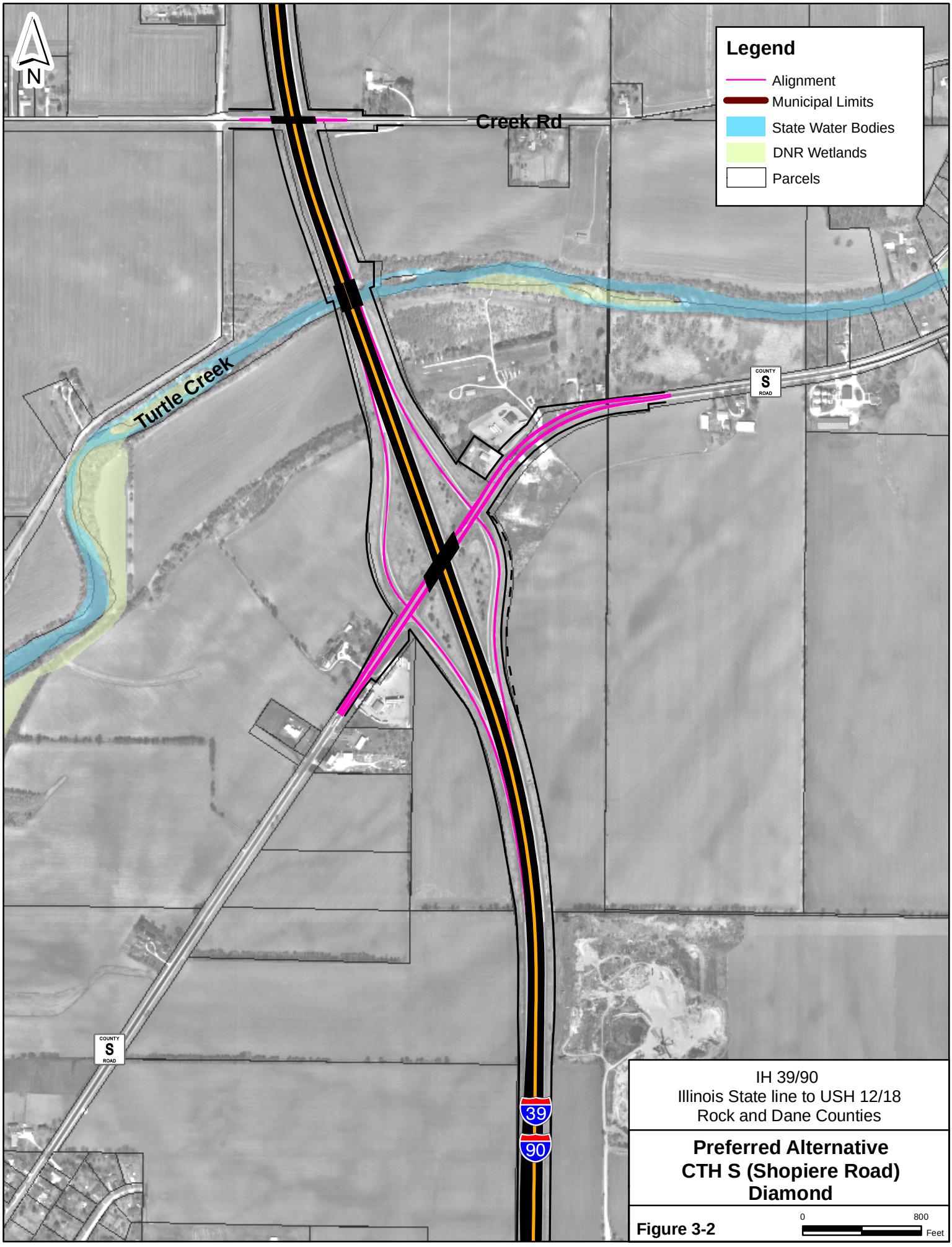
STH 11 (Bypass) (Avalon Road)

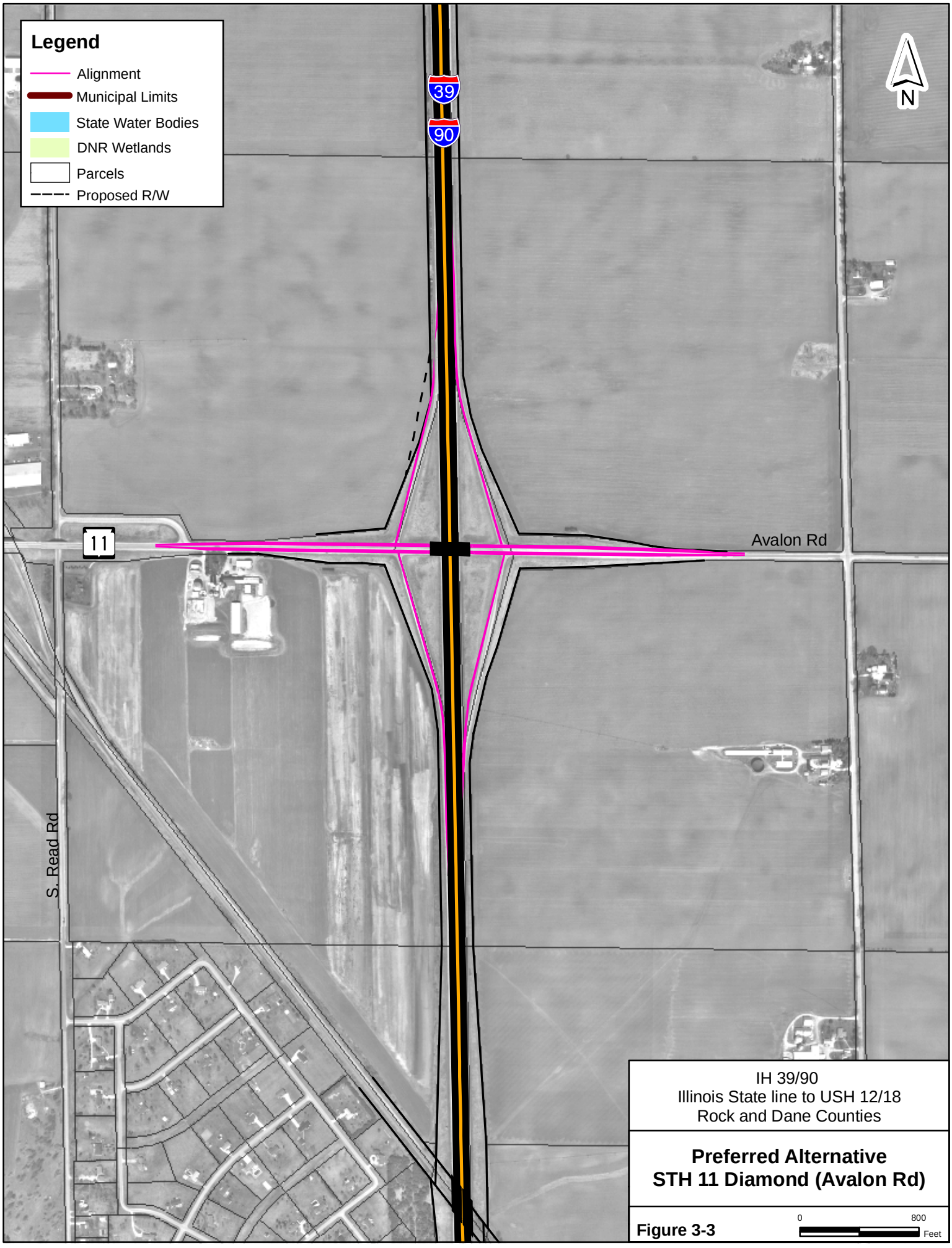
Only one Build Alternative was evaluated for this interchange. The interchange was constructed in 1989 and meets current design standards, with the exception of the ramp taper rate at the two off ramps. Additionally, there is a need to provide a multilane divided roadway and bridges between the ramp terminals. Due to the rural nature of this interchange, a diamond configuration is the only reasonable alternative for the interchange. Exhibit E-3 in Appendix E shows the interchange deficiencies and the alternative considered for this interchange.

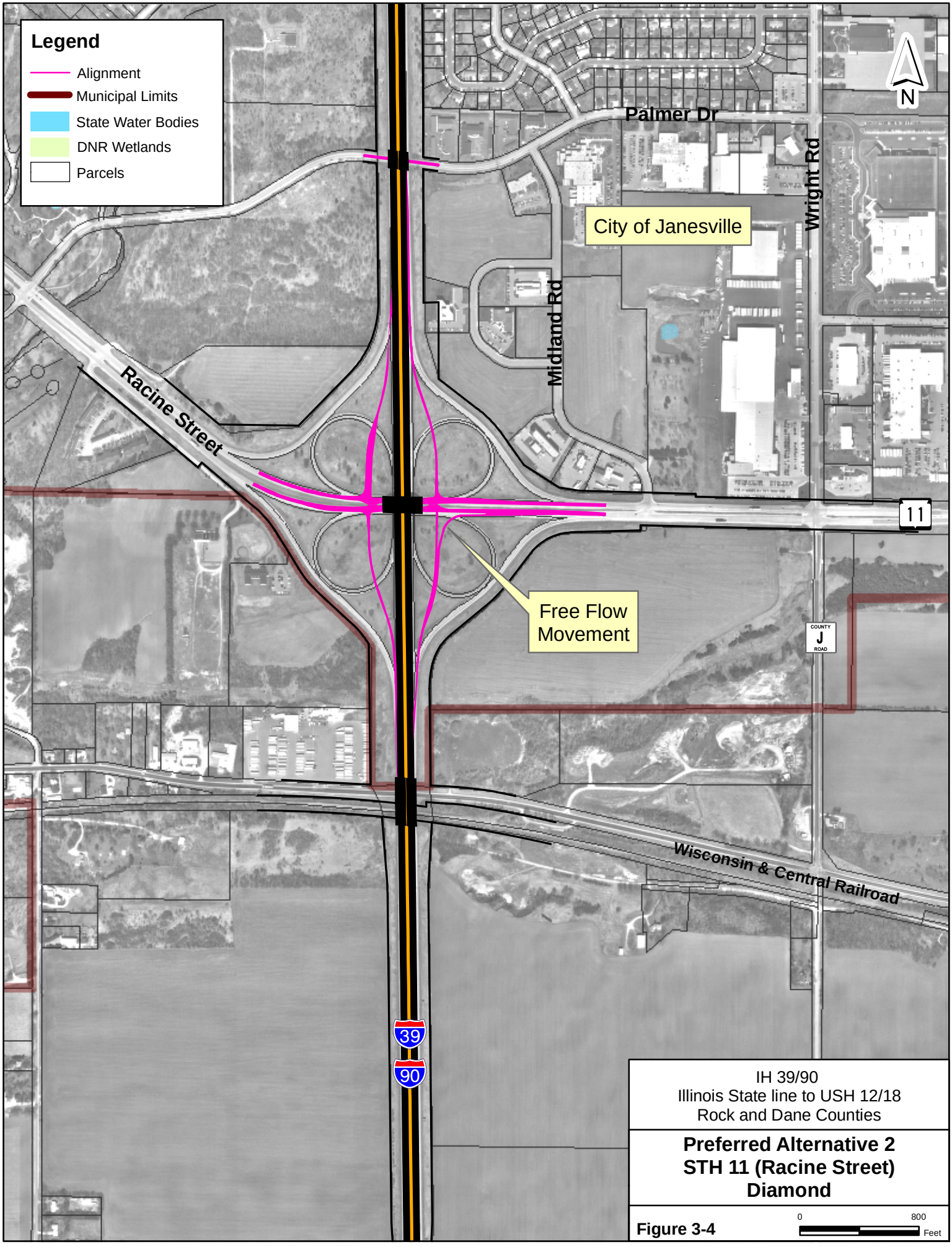
Preferred Interchange Alternative -- Diamond: The Diamond Alternative for this interchange (Figure 3-3) provides sufficient acceleration and deceleration lengths for interstate exit and entrance ramps. It includes reconstructing STH 11 Bypass/Avalon Road as a divided four-lane roadway, and ramp alignments will be offset to prevent wrong-way entrances onto the interstate. This alternative is consistent with anticipated growth in the immediate area and does not preclude any options under current study determining the need for connecting the STH 11 Bypass from Janesville to I-43. That study, known as the *US 14/WIS 11 Corridor Study*, extends from just west of Janesville east to the I-43/US 14 interchange ramp. Alternatives for the Corridor Study are currently being evaluated. In addition, this alternative has a higher score on the interchange evaluation matrix than the No Build Alternative (Appendix D).

STH 11 (Racine Street)

Two Build Alternatives were evaluated for this interchange:


N
Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
Creek Rd
Turtle Creek
COUNTY S ROAD
COUNTY S ROAD
39
90
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
CTH S (Shopiere Road)
Diamond
Figure 3-2
0
800
Feet


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
Proposed R/W
39
90
N
11
Avalon Rd
S. Read Rd
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
STH 11 Diamond (Avalon Rd)
Figure 3-3
0
800
Feet


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
Palmer Dr
Wright Rd
City of Janesville
Midland Rd
Racine Street
11
Free Flow Movement
COUNTY J ROAD
Wisconsin & Central Railroad
39
90
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative 2
STH 11 (Racine Street)
Diamond
Figure 3-4
0
800
Feet

Alternative 1 -- Cloverleaf
Alternative 2 -- Diamond

Both Build Alternatives provide sufficient acceleration and deceleration lengths for interstate exit and entrance ramps. Importantly, weaving sections are eliminated from the interstate through movement. Exhibit E-4 in Appendix E shows the interchange deficiencies and the two alternatives considered for this interchange.

***Preferred Interchange Alternative – Alternative 2 -- Diamond**:* The preferred alternative is Alternative 2, a diamond interchange configuration (Figure 3-4). This alternative does not provide free-flow movements in any direction to Racine Street, with the exception of northbound IH-39 to eastbound STH 11. Alternative 2 also corrects an access spacing deficiency between the IH 39/90 exit terminal and Midland Road along eastbound STH 11. This alternative is considered preferable because it removes high speed free-flow ramps in close proximity to local urban signalized intersections, provides a more conventional type diamond configuration, provides better traffic flow overall, allows adjacent local road connections to remain open, requires less right of way, and is less costly.

***Other Alternatives**:* Alternative 1 provides a full cloverleaf interchange that utilizes a collector-distributor roadway (Exhibit E-4, Appendix E). The tight loop ramps have a design speed of 30 mph while three of the outer connection ramps have design speeds of 50 mph and one has a design speed of at least 40 mph. The City of Janesville has expanded its municipal boundaries east of the interstate, and this interchange location no longer needs higher speed exit ramps because of the surrounding development and signalized intersections along STH 11 (Racine Street) that have occurred since its initial construction. Alternative 1 does not rectify the access spacing deficiency between the IH 39/90 exit terminal and Midland Road along eastbound STH 11. This alternative is more costly, requires more right of way, and scored lower on the interchange evaluation matrix (Appendix D).

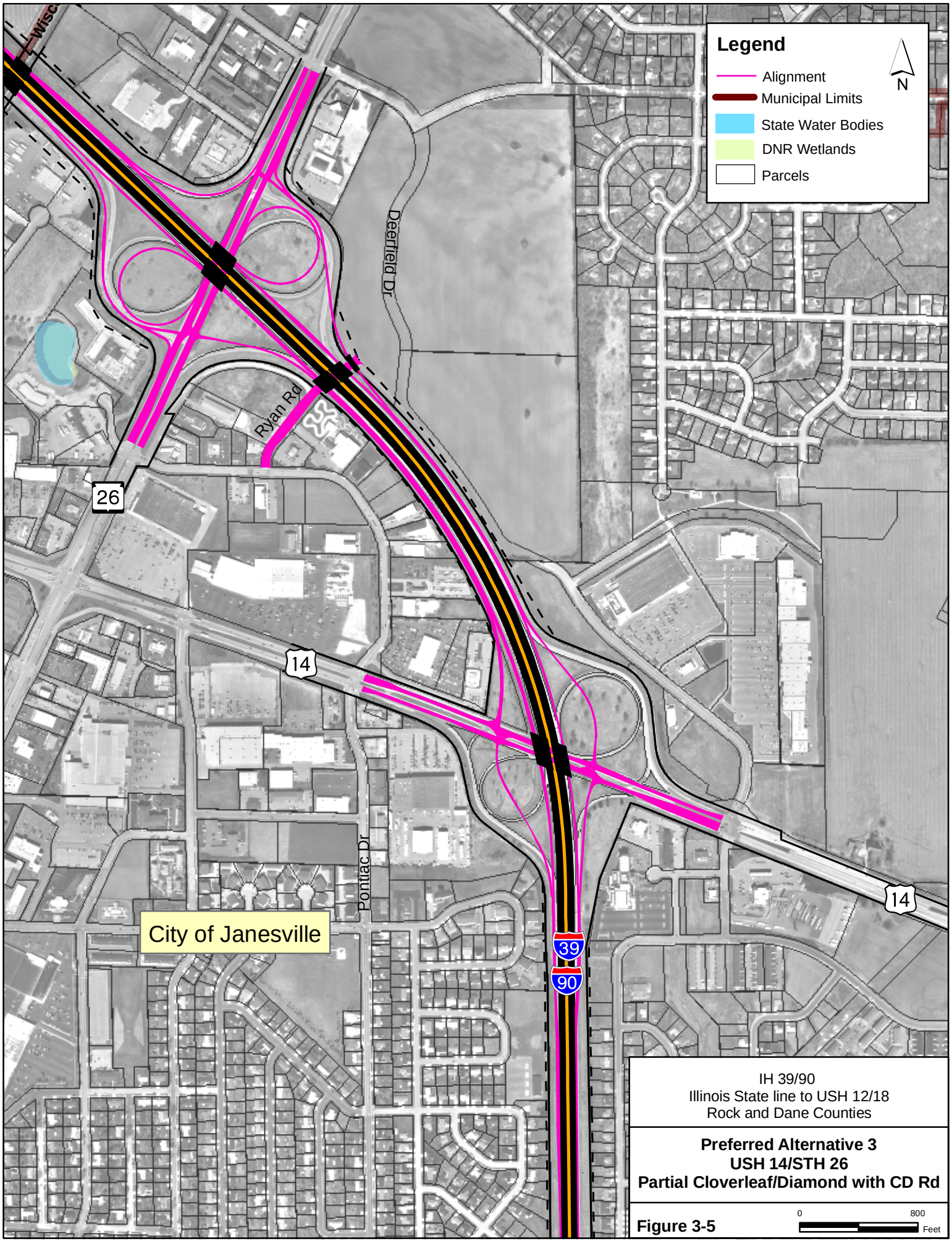
USH 14 & STH 26

The USH 14 and STH 26 interchanges are situated very close together, posing potential problems that are best considered simultaneously. Three Build Alternative were evaluated for this interchange:

Alternative 1 – Partial Cloverleaf at USH 14 and STH 26
Alternative 2 – Diamond at STH 26 and USH 14
Alternative 3 – Partial Cloverleaf at STH 26 and Diamond at USH 14 with Collector-Distributor (CD) Road Connecting Interchanges

All three alternatives allow all acceleration and deceleration lengths to be designed to current standards and ease traffic flow from the interstate system to the connector routes. All three alternatives propose construction of a new underpass bridge and roadway connecting Pontiac Drive (west of the STH 26 interchange) and existing development with Deerfield Drive and future development. The proposed roadway (Ryan Road) is a 4-lane undivided urban roadway with bike lanes in each direction and 5-foot sidewalks on both sides of the roadway. Traffic projections indicate that about 10,000 AADT would utilize this connection by 2030, thereby reducing a similar amount of vehicles needing to go through the interchanges on STH 26 or USH 14. In 2004, auxiliary lanes were added to northbound and southbound lanes between USH 14 and STH 26. Exhibit E-5 in Appendix E shows the interchange deficiencies and the alternatives considered for this interchange.

***Preferred Interchange Alternative – Alternative 3 -- Partial Cloverleaf/Diamond with CD Road**:* The preferred alternative is Alternative 3 (Figure 3-5). This alternative provides a CD roadway – similar to a frontage road – between the two interchanges for slower speed local traffic to enter and exit the interstate. The local traffic volumes for USH 14 and STH 26 are estimated to be about 30,000 AADT by the design year 2030. STH 26 is a Connector Route on WisDOT's *Corridors 2020* plan, and is currently under design for improvement as a four lane divided freeway/expressway between Janesville and Watertown. The preferred interchange alternative for STH 26 maintains the partial cloverleaf loop ramps, and free flow


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
Deerfield Dr
Ryan Rd
26
14
Pontiac Dr
City of Janesville
39
90
14
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative 3
USH 14/STH 26
Partial Cloverleaf/Diamond with CD Rd
Figure 3-5
0
800
Feet

condition, for the heavier southbound STH 26 to southbound IH 39/90 and northbound STH 26 to northbound IH 39/90 movements. USH 14 would be reconstructed to a diamond configuration for better signalization and traffic flow. STH 26 is proposed as a 6-lane divided urban roadway (3 in each direction separated by a 30-foot raised median), with a 10-foot combination pedestrian/bicycle path along the east side of the road. This alternative is considered preferable because of the three alternatives it manages traffic flow best.

***Other Alternatives**:* Alternative 1 utilizes partial cloverleaf configurations for both the USH 14 and STH 26 interchanges (Exhibit E-5, Appendix E). This proposed alternative is essentially the existing system designed to current standards, adding needed turning movements at ramp terminals adjacent to USH 14 and STH 26 to ease traffic flow. This alternative does not manage traffic flow as well as the preferred alternative and requires additional right of way. This alternative scored lower on the interchange evaluation matrix (Appendix D).

Alternative 2 utilizes a diamond configuration for both the USH 14 and STH 26 interchanges (Exhibit E-5, Appendix E). This alternative allows southbound IH 39/90 traffic to exit to USH 14, a traffic movement that currently is not served. This alternative does not manage traffic flow as well as the preferred alternative due to the close spacing of the two interchanges, and presents potential weaving conflicts between entrance and exit ramps. This alternative scored lower on the interchange evaluation matrix (Appendix D).

STH 59

Three Build Alternative were evaluated for this interchange:

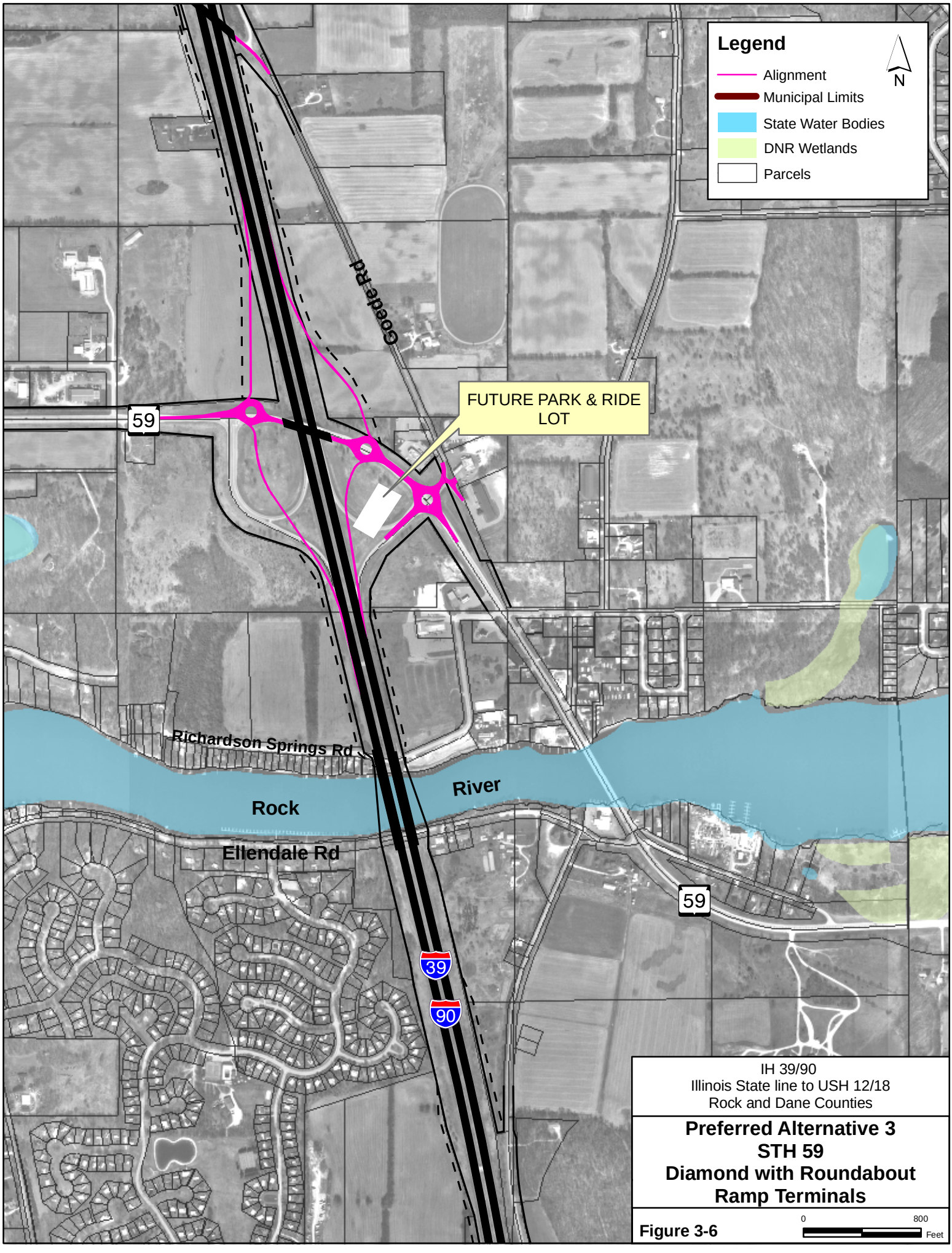
Alternative 1 – Partial cloverleaf
Alternative 2 – Diamond ramps west side and partial cloverleaf east side
Alternative 3 – Diamond with roundabout ramp terminals

Each alternative allows all acceleration and deceleration lengths to be designed to current standards. For Alternatives 1 and 2, STH 59 would be reconstructed as a four-lane divided roadway in the area of the interchange. Alternative 3, because of the use of roundabout ramp terminals, allows STH 59 to remain as a two-lane rural highway, and allows a two-lane structure crossing the interstate to be on a straight alignment rather than on a curve. Exhibit E-6 in Appendix E shows the interchange deficiencies and the alternatives considered for this interchange.

***Preferred Interchange Alternative – Alternative 3 – Diamond with Roundabout Ramp Terminals**:* The preferred alternative is Alternative 3, a diamond with roundabout ramp terminals (Figure 3-6). The diamond configuration addresses the existing high speed southbound IH 39/90 exiting vehicles going into a low speed sharp STH 59 loop ramp. The diamond configuration also eliminates the confusing northbound STH 59 to northbound IH 39/90 movement. The use of roundabout ramp terminals allows for STH 59 to remain as a two-lane rural highway, and allows the interchange structure to be constructed on a straight alignment rather than on a curve, all resulting in cost savings. This alternative also realigns the intersection of STH 59 and Goede Road to provide better spacing between the intersection and the northbound exit ramp terminal. The diamond configuration allows WisDOT to construct a future park and ride lot in the excess right of way in the southeast quadrant. A park and ride lot at this location is compatible with WisDOT's long range plans. Alternative 3 is considered preferable because it provides better traffic flow, has better design characteristics, costs less, and allows space for a future park and ride lot.

***Other Alternatives**:* Alternative 1 is a partial cloverleaf configuration that essentially replaces the existing facility, but is designed to current standards (Exhibit E-6, Appendix E). This alternative is more costly and does not resolve the STH 59 northbound to IH 39/90 northbound driver perception concern for location of an entrance ramp opposite a frontage road. This alternative scored lower on the interchange evaluation matrix (Appendix D) than the preferred alternative.

Alternative 2 combines a diamond configuration for southbound interstate traffic and a partial cloverleaf


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
Goede Rd
FUTURE PARK & RIDE LOT
59
Richardson Springs Rd
Rock River
Ellendale Rd
59
39
90
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative 3
STH 59
Diamond with Roundabout
Ramp Terminals
Figure 3-6
0
800
Feet

configuration for the northbound interstate traffic (Exhibit E-6, Appendix E). This alternative addresses the current west side interchange ramp concerns, but not the east side concerns. This alternative is more costly, does not improve traffic flow, and scored lower on the interchange evaluation matrix (Appendix D) than the Preferred Alternative.

USH 51/STH 73

Two Build Alternatives were evaluated for this interchange:

Alternative 1 – Partial cloverleaf
Alternative 2 -- Diamond

Both Build Alternatives allow all acceleration and deceleration lengths to be designed to current standards. The southbound IH 39/90 to southbound USH 51 off ramp will be moved northward, improving the separation distance of the ramp and Albion Road along USH 51 by nearly 400 feet. In addition, USH 51 and STH 73 would be reconstructed as a four-lane divided roadway in the area of the interchange. The ramps would be designed with offset alignments to prevent wrong-way entrances onto IH 39/90. Exhibit E-7 in Appendix E shows the interchange deficiencies and the alternatives considered for this interchange.

***Preferred Interchange Alternative – Alternative 2 -- Diamond**:* The preferred alternative is Alternative 2, a diamond interchange configuration (Figure 3-7). This configuration provides proper access spacing between exit terminals and adjacent intersections along USH 51 and STH 73. It also provides a right-hand turning movement for trucks leaving the truck stop in the adjacent southwest quadrant to enter southbound IH 39/90. This alternative is considered preferable because it uses less right of way, lessens wetland impacts, is more easily implemented, and is less costly.

***Other Alternatives**:* Alternative 1 utilizes a partial cloverleaf configuration with a realigned frontage road along northbound IH 39/90 and STH 73 that provides 1,000 feet of space between the northbound exit terminal and the intersection of STH 73 and the frontage road (Exhibit E-7, Appendix E). However, the intersection of Albion Road and USH 51 is less than 1,000 feet from the southbound IH 39/90 exit terminal. This alternative maintains the existing left-hand turning maneuver for northbound USH 51 vehicles to southbound IH 39/90. This alternative is more costly and scored lower on the interchange evaluation matrix (Appendix D).

USH 51

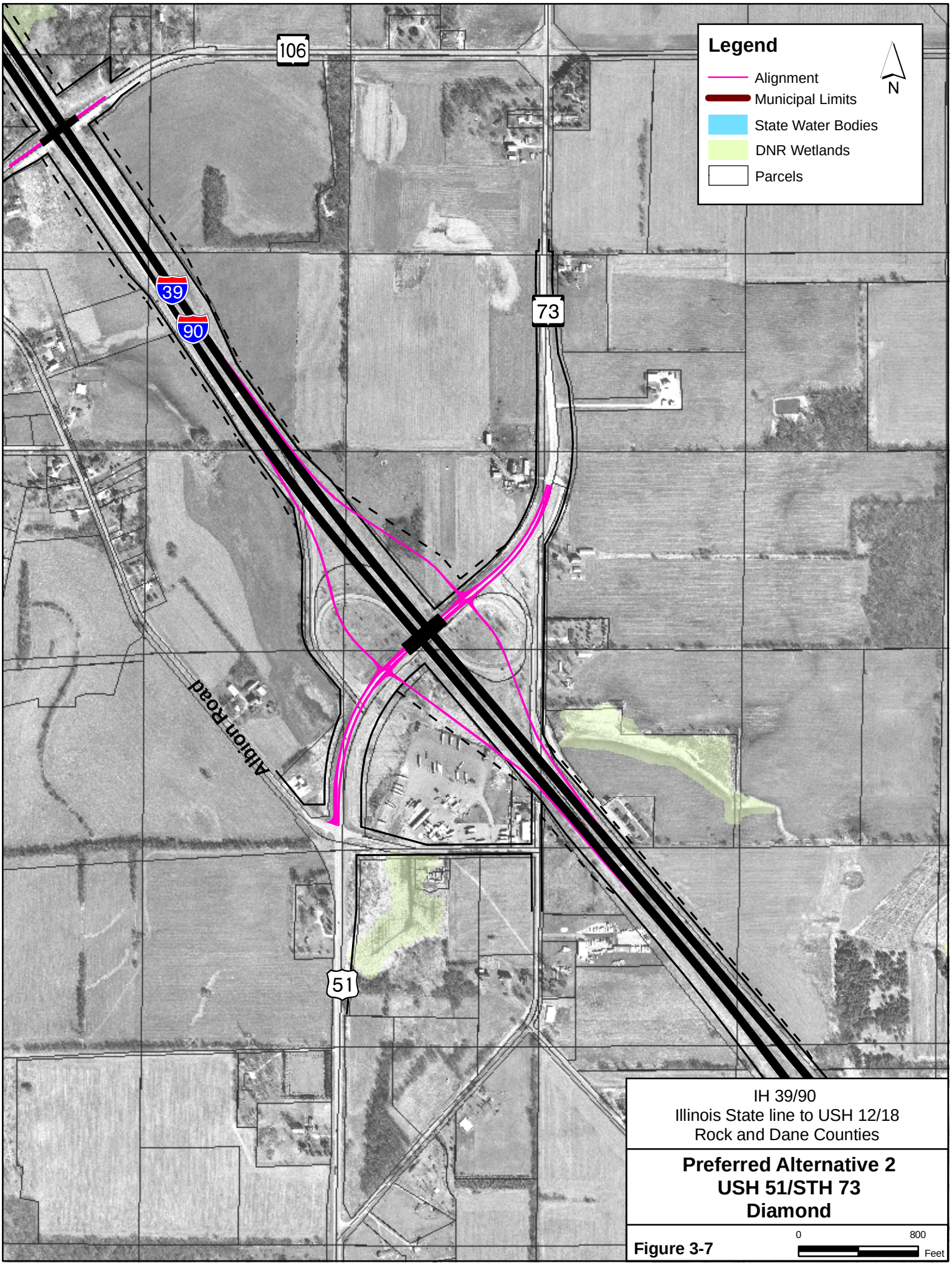
Only one Build Alternative was evaluated for this interchange. A large wetland to the east of the existing interchange limits possible changes. There are no roadways east of the interstate that require an easterly extension of USH 51. Exhibit E-8 in Appendix E shows the interchange deficiencies and the alternative for this interchange.

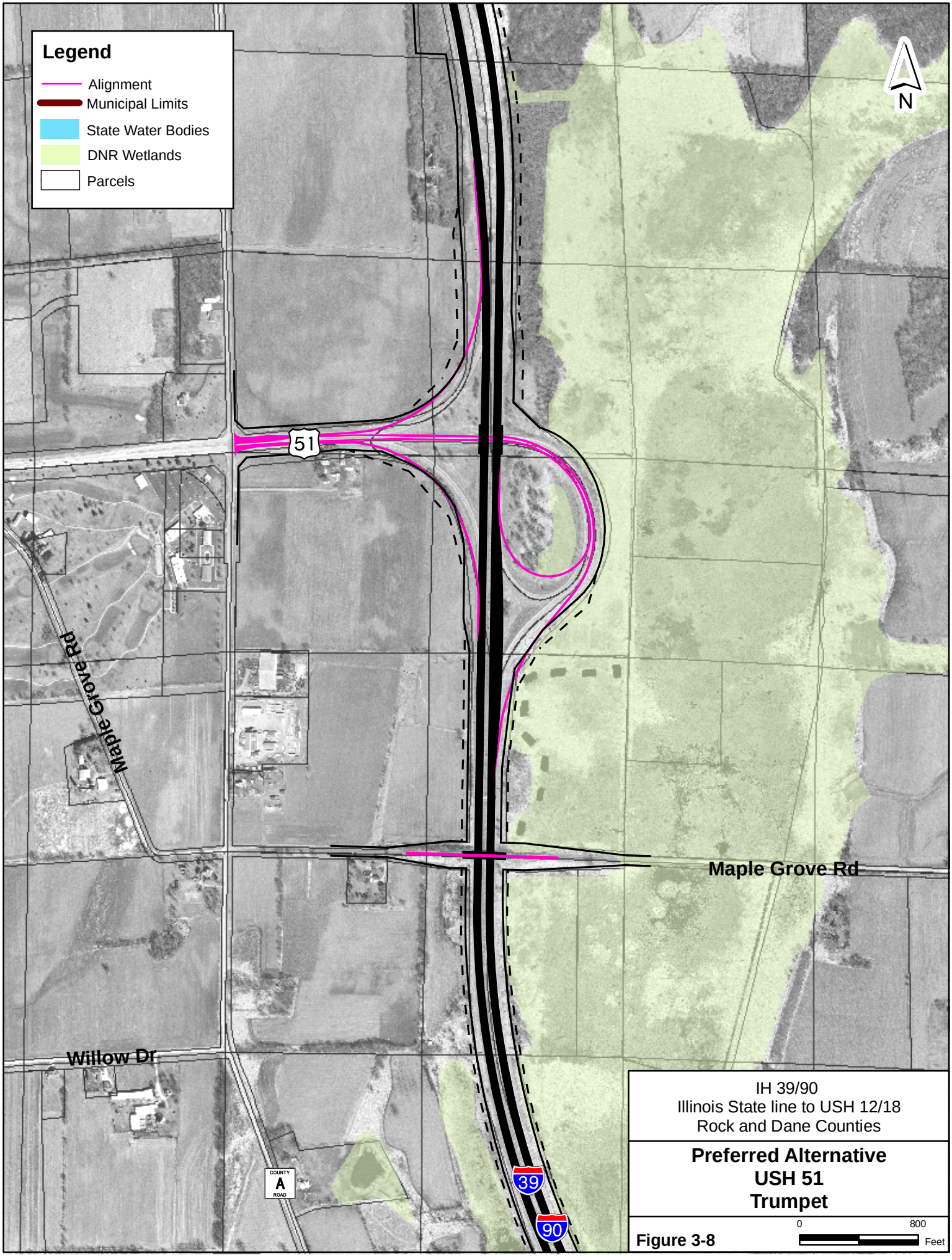
***Preferred Interchange Alternative -- Trumpet**:* The preferred alternative utilizes the current trumpet configuration but updates the design to current geometric standards, including design speeds of 60 mph adjacent to IH 39/90 ramp terminals and 50 mph adjacent to USH 51 ramp terminals (Figure 3-8). The tight loop ramp would have a design speed of 30 mph. Signing on the interstate for this interchange would also be improved. This is necessary because drivers regularly exit at this interchange, mistakenly assuming the interchange provides access to northbound and southbound USH 51.

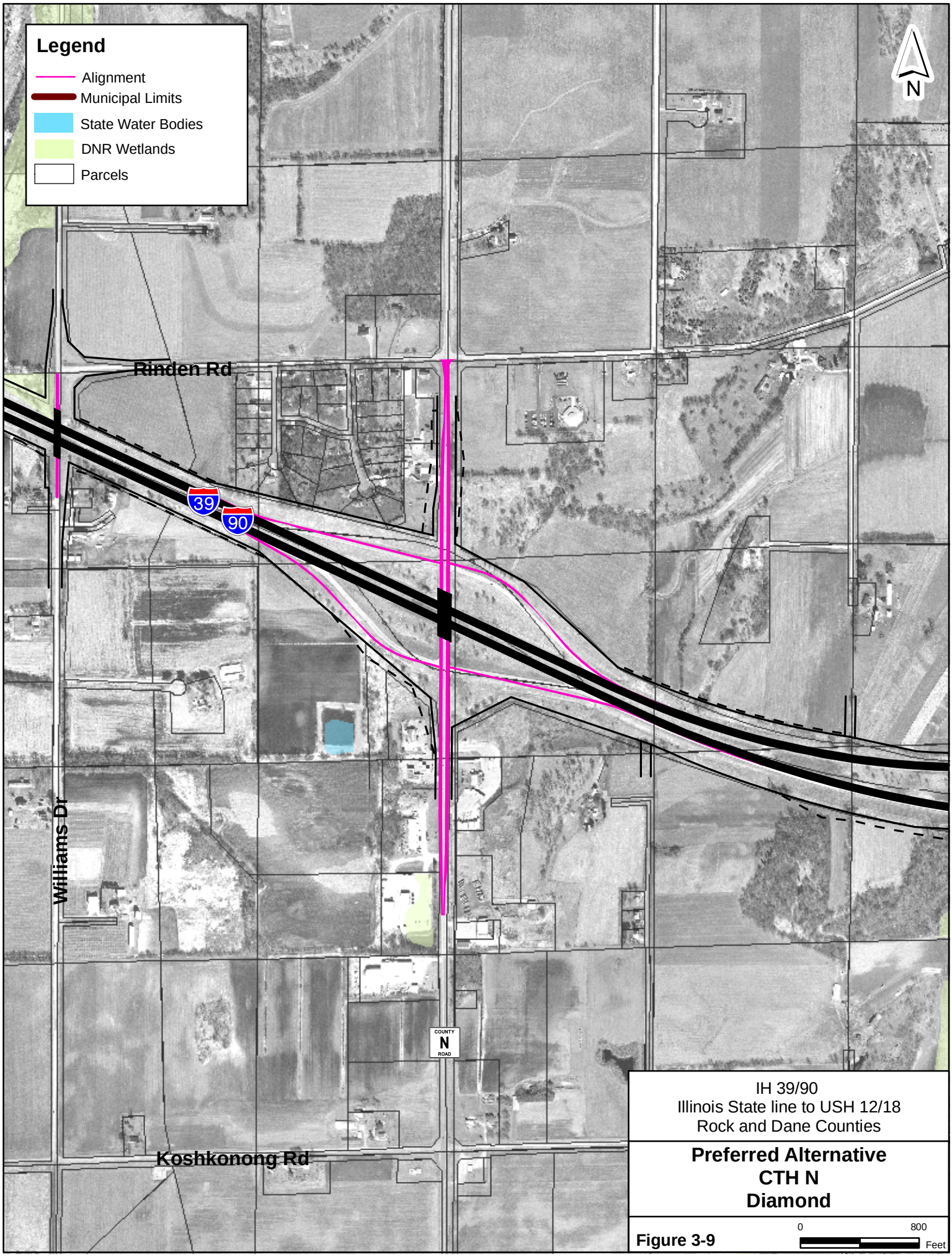
The Preferred Alternative allows all acceleration and deceleration lengths to be designed to current standards. This alternative does have a higher score on the interchange evaluation matrix than the No Build Alternative (Appendix D).

CTH N

Only one Build Alternative was evaluated for this interchange. Due to the rural nature of this interchange, a diamond configuration is the only reasonable alternative for the interchange. Exhibit E-9 in Appendix E shows the interchange deficiencies and the alternative for this interchange.


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
106
39
90
73
51
Albion Road
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative 2
USH 51/STH 73
Diamond
Figure 3-7
0
800
Feet


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
51
Maple Grove Rd
Maple Grove Rd
Willow Dr
COUNTY
A
ROAD
39
90
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
USH 51
Trumpet
Figure 3-8
0
800
Feet


Legend
Alignment
Municipal Limits
State Water Bodies
DNR Wetlands
Parcels
N
Rinden Rd
39
90
Williams Dr
COUNTY
N
ROAD
Koshkonong Rd
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
CTH N
Diamond
Figure 3-9
0
800
Feet

***Preferred Interchange Alternative -- Diamond**:* The preferred alternative utilizes the current diamond configuration (Figure 3-9). The preferred alternative allows all acceleration and deceleration lengths to be designed to current standards. In addition, CTH N would be reconstructed as a four-lane divided roadway in the area of the interchange to accommodate future growth, particularly growth in the Stoughton area to the south. The ramps will be designed with offset alignments to help in preventing wrong-way entrances onto IH 39/90. The nearest access driveway on CTH N will remain within 1,000 feet of the southbound exit terminal. This alternative does have a higher score on the interchange evaluation matrix than the No Build Alternative (Appendix D).

USH 12/18 (West Beltline)

Four Build Alternative were evaluated for this interchange:

Alternative 1 – Existing footprint but relocate southbound lanes to median and use existing southbound lanes as collector-distributor road

Alternative 2 – Same as Alternative 1, and move northbound lanes to median and use existing northbound lanes as right-hand exit ramp to Cambridge and Madison (eliminates left-hand exit to Madison)

Alternative 3 – Same as Alternative 2, and move eastbound USH 12/18 lanes to median and create right-hand exit to IH 39/90 for eastbound USH 12/18 vehicles

Alternative 4 -- Free Flow

This interchange is currently a semi-direct, partial cloverleaf configuration. Alternatives 1, 2 and 3 are sequentially phased variations of the existing configuration that maximize the use of the existing lanes and footprint of the interchange. Each provides an additional level of improvement that addresses the deficiencies at this location. Alternative 4 is a modification of the existing interchange to provide high speed free-flow movements in all directions. Exhibit E-10 in Appendix E shows the interchange deficiencies and the alternatives considered for this interchange.

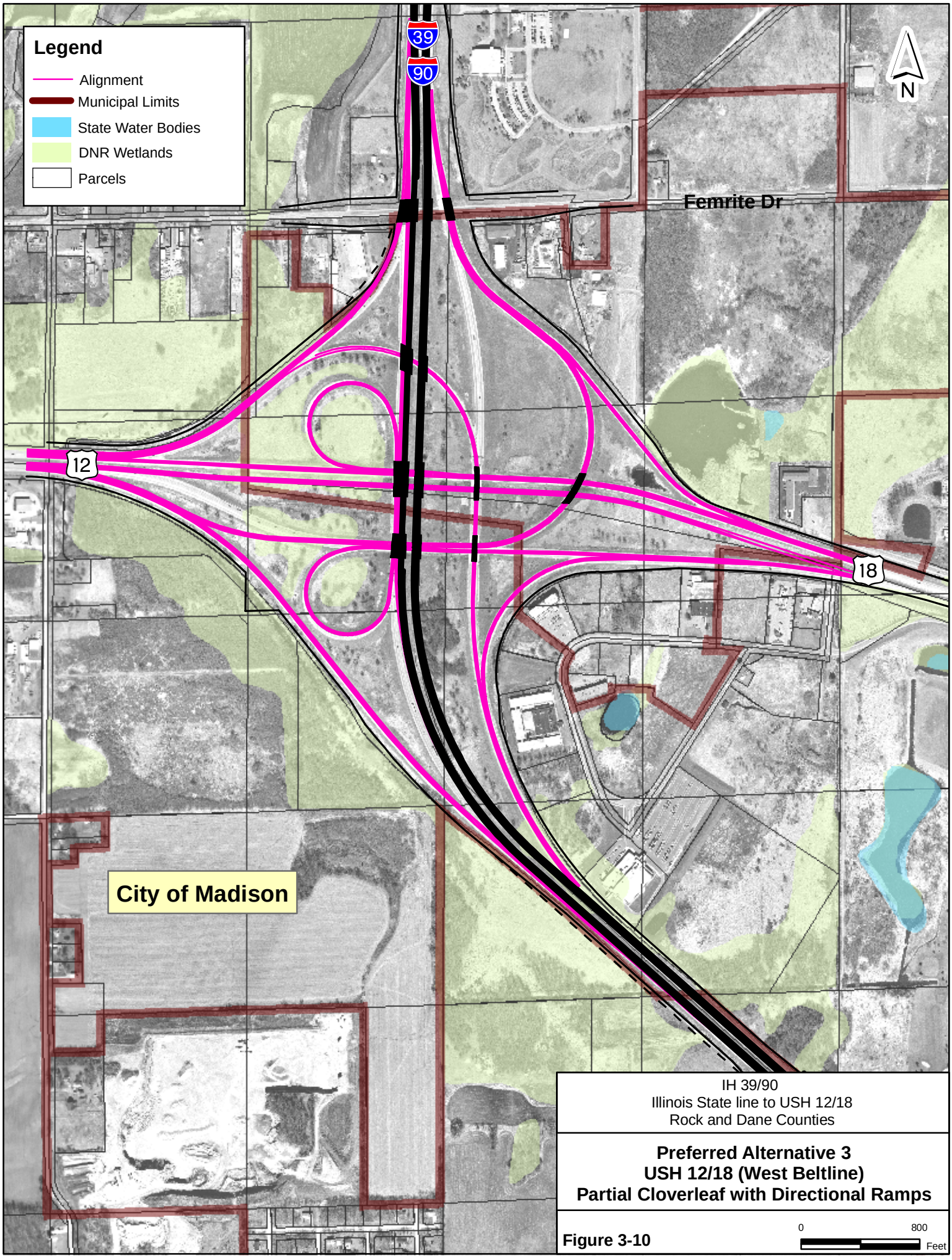
***Preferred Interchange Alternative – Alternative 3 – Partial Cloverleaf with Directional Ramps**:* The preferred alternative is Alternative 3. This alternative moves the IH 39/90 southbound lanes to the median area. It uses the existing southbound lane footprint to create a collector-distributor (C-D) roadway for southbound exit and entrance ramps, including the tight loop ramps (Figure 3-10). The southbound IH 39/90 exit ramp to westbound USH 12/18 would be realigned slightly to allow a design speed of 60 mph. The merge distance for the USH 12/18 eastbound and westbound to northbound IH-39 ramps would be lengthened.

The northbound IH 39/90 lanes would be relocated and reconstructed parallel to the southbound lanes in the median and separated by a barrier. The existing northbound lane footprint would then be used as a right-hand exit for northbound IH 39/90 vehicles to either eastbound (Cambridge) or westbound (Madison) USH 12/18. This eliminates the current left-hand exit for northbound IH 39/90 vehicles into Madison.

The eastbound USH 12/18 lanes would be relocated and reconstructed parallel to the existing westbound USH 12/18 lanes. The existing eastbound USH 12/18 lane footprint would then be used as a right-hand exit for eastbound USH12/18 vehicles that want to exit to IH 39/90 either in the northbound or southbound direction.

This alternative is considered preferable because it provides the best combination of capacity, traffic flow, and roadway design. It maximizes the use of the existing USH 12/18 interchange footprint and minimizes environmental impacts, particularly wetland impact. It is easily implemented and has a reasonable cost for the benefits it provides.

***Other Alternatives**:* Alternative 1 is similar to the preferred alternative, except that the northbound IH 39/90 lanes would not be reconstructed (Exhibit E-10, Appendix E). The IH 39/90 northbound auxiliary lane would be lengthened to improve traffic merging movements. This alternative was not selected because it does not



IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative 3
USH 12/18 (West Beltline)
Partial Cloverleaf with Directional Ramps

Figure 3-10

0 800 Feet

address all the deficiencies at this location, particularly the northbound IH 39/90 to westbound USH 12/18 left-hand exit.

Alternative 2 is also similar to the preferred alternative with the exception that the eastbound USH 12/18 lanes would not be relocated (Exhibit E-10, Appendix E). This alternative was not selected because the relocation of the eastbound USH 12/18 lanes, while not needed immediately, will be required by the design year 2030, and it would be preferable to widen and construct structures to accommodate this future relocation now.

Alternative 4 reconstructs the interchange as a high-speed free-flow interchange (Exhibit E-10, Appendix E). The only ramp to remain in its existing condition is the tight loop ramp that serves traffic from westbound USH 12/18 to southbound IH 39/90. Northbound IH 39/90 lanes would be reconstructed parallel to the southbound lanes with a barrier median. Mainline USH 12/18 would remain on its existing alignment. This alternative was not selected as it would require more right of way, would impact more wetlands, would be difficult to implement, and scored relatively lower on the interchange evaluation matrix (Appendix D).

4. In general terms, briefly discuss the construction and operational energy requirements and conservation potential of the various alternatives under consideration. Indicate whether the savings in operational energy are greater than the energy required to construct the facility.

   Energy requirements for construction of the Preferred Alternative would be greater than those required for the No Build Alternative. Operational energy requirements for the Preferred Alternatives would be less than those required for the No Build Alternative. Over the design life of the facility, savings in operational energy would be greater than the energy required to construct the facility.

5. Describe existing land use (Attach land use maps if available).

   a. Land use in immediate area.

      The majority of the 45-mile corridor is adjacent to farmland or open space. As the corridor passes through the cities of Madison, Janesville, and Beloit, commercial and industrial land uses are common. In Madison, there is some residential development in the southwest quadrant of the I-39/90 and USH14/18/151 interchange, and the corridor passes through several miles of residential development in Janesville, between the USH 14/26 and USH 11 interchanges. Most development along the rest of the corridor in Janesville is commercial or industrial. In Beloit, most development adjacent to the corridor is commercial, with some industrial on the southeast quadrant of the I-43 interchange. See also Tables 6-1, 6-2, and 6-3, below.

   b. Land use in area surrounding project area.

      The most prevalent land use in the area surrounding the immediate project area is farmland and open space. Developed areas in the cities of Madison, Janesville, and Beloit contain residential, commercial, and industrial development. See also Tables 6-1, 6-2, and 6-3 below.

6. Briefly identify adopted plans for the area and discuss whether the proposed action is compatible with the plan. (For example, the following may be considered: Regional Planning Commission Plans, Transportation Improvement Program, State Transportation Improvement Plan, Local zoning and land use plans, DOT Storm Water Management Plans, others.)

   The Preferred Build Alternative is compatible with currently adopted plans for the area The plans are summarized below.

Table 6-1
Summary of Town Land Use Plans

Town	Year Land Use/Zoning Adopted/ Amended	Approximate % of Town designated for long-term ag. preservation	Agricultural or rural planning/zoning category	Density policy in agricultural or rural area	Notes
Dane County					
Summary:	All towns are under county A-1 Exclusive Agricultural zoning, and allow a density of 1 dwelling unit (d.u.) per 35 acres (ac) of land owned as the basis for controlling the number of new dwelling units. Each town's density policies have small differences that result in variations in the actual density allowed. Most towns try to limit new non-farm development to areas with soils that are not suitable for farming.				
Town of Albion	1999	85%	Agricultural Preservation Land Use District	1 d.u. per 35 ac	Areas designated as appropriate for future development include land within the Lake Koshkonong limited sewer service area, rural residential areas between Goede Road and IH 39/90 and north of the City of Edgerton, and a planned recreational district between the Interstate and Lake Koshkonong. The Town is updating their Plan as part of the Southeast Dane County Comprehensive Planning process.
Town of Blooming Grove	2000	20%	Agricultural Preservation Land Use District	1 d.u. per 35 ac	The Town designates a small percentage of its land for agricultural preservation. All land in the Town is subject to Madison's extraterritorial jurisdiction. The Town is updating its Plan as part of the Southeast Dane County Comprehensive Planning process.
Town of Christiana	2003	100%	Agricultural Preservation Land Use District	1 d.u. per 35 ac	The Town plans no areas for more intensive development.
Town of Pleasant Springs	2003	90%	Agricultural Preservation Land Use District	1 d.u. per 35 ac	Most land along I-39/90 is designated for agricultural preservation, except for some land around the County N interchange planned for commercial use. The Town is updating their Plan as part of the Southeast Dane County Comprehensive Planning process.
Rock County					
Summary:	Each town in Rock County has their own zoning. All towns have at least three different agricultural zoning categories. The majority of each town is under A-1 zoning, which essentially allows 1 dwelling unit/35 acres. The towns commonly limit non-farm development to areas with soils that are poor for farming.				

Town	Year Land Use/Zoning Adopted/ Amended	Approximate % of Town designated for long-term ag. preservation	Agricultural or rural planning/zoning category	Density policy in agricultural or rural area	Notes
Town of Fulton	2000	80%	A-1 Ag. Dist.	1 d.u. per 35 ac	Some new rural residential development planned east of IH 39/90, near Newville. Commercial highway interchange uses designated for all quadrants of WIS 59 interchange.
Town of Harmony	1998	80%	A-1 Ag. Dist.	1 d.u. per 35 ac	The Town has designated some rural residential growth areas, which are mainly around existing rural subdivisions. Janesville has annexed significant portions of land in the southwest corner of the Town. Town is looking to work with the County on updating to Smart Growth standards.
Town of Janesville	1997	60%	A-1 Exclusive Ag. Dist.	1 d.u. per 35 ac	Town has a large amount of rural residential development, particularly adjacent to the west side of the City.
Town of La Prairie	2003	95%	A-1 Exclusive Ag. Dist. (see note)	1 d.u. per 50 ac	La Prairie is extremely committed to preserving agricultural land. The Town recently created a new category, "A-4 Agricultural," to replace A-1 Agricultural, which essentially raises allowable density to 1 dwelling unit per 50 acres. No non-agricultural uses are planned in the town.
Town of Milton	2001	80%	A-1 Ag. Dist.	1 d.u. per 35 ac	Designated transition areas near Milton and Lake Koshkonong.
Town of Turtle	1998	70%	A-1 Ag. Dist.	1 d.u. per 35 ac	Designated areas for more intensive regional commercial uses around the Shopiere Road interchange, with mixed use indicated south of the interchange.

Table 6-2
Summary of City Land Use Plans

Municipality	Adopted Plans	Existing Land Uses in IH 39/90 Corridor	Planned Land Uses in IH 39/90 Corridor
Dane County			
Madison	City of Madison Peripheral Development Plan, 1990. City of Madison Marsh Road Neighborhood Plan, 1999.	Industrial and commercial development near the I-39/US 12-18 interchange.	The Marsh Neighborhood Plan for the southwest quadrant of the interchange shows industrial and residential development south of 12/18. The rest of the interchange area is also generally recommended for industrial and residential development.
Stoughton	City of Stoughton Master Plan, 1992.	The City does not plan to grow into the IH 39/90 corridor area within the planning period of their master plan. However, the Interstate is extremely important to the City's economic vitality.	
Rock County			
Milton	City of Milton Comprehensive Plan, 1999. Currently working on update.	The City's Comprehensive Plan does not show growth to the Interstate. However, access to the Interstate via WIS 26 is an important resource for the City.	
Edgerton	City of Edgerton Master Plan 1994. City of Edgerton Zoning Ordinance, 1999. Currently working on Smart Growth Comprehensive Plan.	The City does not plan to grow into the IH 39/90 corridor area in the time period of their plan. However, Interstate access is important to the City's economic vitality, particularly the business/industrial park on the City's northeast side.	
Janesville	City of Janesville Southeast Area Plan, 1987. City of Janesville Comprehensive Planning Program, 1982; City of Janesville Northeast Area Plan, 1999. Currently working on update to Southeast Area Plan. Comprehensive Plan update to start in 2006.	Land use is primarily commercial near the WIS 26 and USH 14 interchanges. Residential areas exist on either side of I-39/90 south of the USH 14 interchange. The area around the WIS 11 interchange has some existing industrial uses.	North of WIS 26 interchange, planned office and residential. Between WIS 26 and USH 14 interchanges, high-quality commercial. Surrounding the USH 11 interchange, primarily industrial.
Beloit	City of Beloit Comprehensive Plan, 1996. City of Beloit Zoning Ordinance.	Some commercial and rural residential development in the SW and NE quadrants of the Shopiere Road interchange (inn the Town of Turtle). The IH 43 interchange has existing industrial development in the SW quadrant and a commercial use (truck stop) in the NW quadrant. The SE quadrant is the Gateway Area, with industrial, commercial, and residential areas.	The Gateway development has commercial and industrial uses adjacent to the interchange, with multi-family residential. The northeast and northwest quadrants of the IH 43 interchange are planned for mostly future residential development.

Table 6-3
Summary of Planning Agency Plans

Agency	Plan	Recommendations/Programmed Improvements
Madison Area Metropolitan Planning Organization	Transportation Improvement Program for the Dane County Area 2008-2012	Asphalt overlay USH 12/18 to USH 51 east of Stoughton
Stateline Area Transportation Study	Stateline Area Bicycle and Pedestrian System Plan; Transportation Improvement Plan 2003-2008	Improved pedestrian and bicycle access over Interstate at Shopiere Road Asphalt overlay IH 39, USH 14 to State Line
WisDOT	US 14/WIS 11 Corridor Study	Improved mobility, access and safety on US 14/WIS 11 that meets the local and regional transportation needs of the corridor, including using portions of USH 14 and WIS 11 as alternate routes in the event of a closure or incident on IH 39/90.

7. Early coordination with Agencies.

a. Intra-Agency Coordination

i) Bureau of Aeronautics

☒ No - Coordination is not required. Project is not located within 2 miles (3.22 kilometers) of a public or military use airport, nor would the project change the horizontal or vertical alignment of a transportation facility located within 6.44 kilometers (4 miles) of a public use or military airport.

☐ Yes - Coordination has been completed and project effects have been addressed. Explain.

ii) Regional Office Real Estate Section

☒ No - Coordination is not required because no inhabited houses or active businesses will be acquired.

☐ Yes - Coordination has been completed. Project effects and relocation assistance have been addressed. Conceptual Stage Relocation Plan attached as Exhibit _____.

b. Interagency Coordination

STATE AGENCY	COORDINATION	COMMENTS
	Correspondence Attached Y/N	Explain or give results. If no correspondence is attached to this document, indicate when coordination with the agency was initiated and, if available, when coordination was completed.
Agriculture (DATCP)	Y	Coordination with DATCP is complete. See Appendix F, pages 14 and 36. An Agricultural Impact Statement was published 2/29/08. Concern about drainage impacts was the one most widely expressed by land owners. See summary of recommendations in Appendix G, pages 8-9.
Natural Resources (DNR)	Y	Air Management -- Screening review not necessary at this time. See Appendix F, page 1. Bureau of Endangered Resources -- NHI review letter 5/31/06. See Appendix F, pages 7-10. Southern District -- See Appendix F, pages 18-19, 24-35, and 39-43.
State Historical Society (SHS)	Y	In a letter dated 12/3/07, the Wisconsin Historical Society concluded that the proposed undertaking will result in no historic properties affected pursuant to 36 CFR 800.4(d)(1). See Appendix F, page 37.
Others:		
FEDERAL AGENCY		
Advisory Council on Historic Preservation (ACHP)	N	No coordination with ACHP required.
US Army Corps of Engineers (USACOE)	Y	E-mail from COE to FHWA on 02/02/06 asking for range of wetland and waterway impacts, and major issues on projects. Response e-mail to COE on 02/13/06. See Appendix F, pages 2-3. Information letter summarizing wetland, woodland, and stream impacts sent to COE on 06/15/06.
US Environmental Protection Agency (EPA)	Y	Information letter summarizing wetland, woodland, and stream impacts sent to EPA on 06/15/06. E-mail esponses received on 06/30/06 indicating no problems with an EA being prepared. See Appendix F, page 11. Email response received 07/12/06 providing tips for EA regarding responses to wetlands and water bodies. See Appendix F, page 12.
National Park Service (NPS)	No	No coordination with NPS required.
Natural Resource Conservation Service (NRCS)	Y	Farmland Conversion Impact Rating Form (Appendix F, page 13). Comments returned by NRCS 08/7/07 state there are no viable alternatives for the project, the provisions of the FPPA do not apply, and no further action is needed. See Appendix F, page 23.
US Coast Guard (USCG)	Yes	Letter dated 12/11/07 determines the project does not involve bridges over navigable waters of the US, and no USCG bridge permit is required. See Appendix F, page 38.
US Fish & Wildlife Service (FWS)	Yes	Letter dated 6/28/07 identifies a species of rattlesnake found in similar habitats in Rock County, the need to minimize impacts to migratory birds, the need to avoid and, where unavoidable, mitigate wetland impacts. See Appendix F, pages 20-22.
Other(Identify) Native American Tribes	Y	Letter received from: *Sac and Fox Nation of Missouri in Kansas and Nebraska on 03/17/06 indicating no objection regarding project. See Appendix F, page 4. *Ho Chunk Nation on 03/27/06 requesting to be kept informed of arch and historical studies. See Appendix F. page 5. *Sac & Fox Nation of the Mississippi and Iowa on 04/05/06 indicating no objection regarding project. See Appendix F, page 6.

c. Local Government Coordination

LOCAL UNIT OF GOVERNMENT	COORDINATION	COMMENTS
	Correspondence Attached Y/N	Explain or give results. If no correspondence is attached to this document, indicate when coordination with the agency was initiated and, if available, when coordination was completed.
Dane County	N	Local residents, business people, and government agencies were kept informed of the project through a policy/study committee and two Public Involvement Meetings during the course of the project.
Northern Rock County	N	Same as above
Southern Rock County	No	Same as above
City's and Townships in Dane & Rock Co nearby to IH 39/90 corridor	Y	Same as above Traffic Noise letters sent out 3/30/07. See Appendix F, pages 15-17.
Drainage Districts	Yes	Coordination letters sent out on 5/04/07 and no response was received. Further coordination will be conducted during final design.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	*N/A	Comments
SOCIO-ECONOMIC FACTORS					
General Economics	☐	☒	☐		Generally positive effects.
Community & Residential	☐	☒	☐	☐	Generally positive effects.
Economic Development and Business	☐	☒	☐	☐	Generally positive effects.
Agriculture	☐	☐	☒	☐	Generally no effect.
Environmental Justice	☐	☐	☒	☐	Generally no effect.
NATURAL ENVIRONMENT FACTORS					
Wetlands	☒	☐	☐	☐	Adverse impacts minimal due to small takings. Impacts will be mitigated.
Streams & Floodplains	☒	☐	☐	☐	Adverse impacts minimal due to small takings.
Lakes or Other Open Water	☐	☐	☒	☐	
Upland Habitat	☒	☐	☐	☐	Adverse impacts minimal due to small takings.
Erosion Control	☒	☒	☐	☐	The adverse effect is increased erosion due to construction activities. The benefit is better erosion control devices that will be in place following construction.
Storm Water Management	☒	☒	☐	☐	The adverse effect is increased runoff from additional pavement. The benefit is that all stormwater runoff will be treated in conformance with permit requirements.
PHYSICAL ENVIRONMENT FACTORS					
Air Quality	☐	☐	☒		
Construction Stage Sound Quality	☒	☐	☐		Construction will be limited to certain time periods in urban areas along the route.
Traffic Noise	☒	☐	☐		Construction of noise barriers was investigated and will be considered for those areas that meet the criteria and cost effectiveness. As a result of investigations to date, only the City of Janesville, between STH 11 and USH 14, will be considered for noise barriers.
CULTURAL ENVIRONMENTAL FACTORS					
Section 4(f) and 6(f)	☐	☐	☐	☒	
Historic Resources	☐	☐	☒	☐	
Archaeological Resources	☐	☐	☒	☐	
Hazardous Substances or USTs	☒	☐	☐	☐	Further site investigation is required on 4 properties where petroleum contaminated soil or groundwater may be present. Follow-up with WDNR and DCOMM is required to update the status of ongoing site investigations on 2 properties where petroleum and methane gas

					contamination are suspected.
Aesthetics	☐	☐	☒		The project will have little effect on the visual character of the landscape since the improvements are generally contained with the existing highway right of way or adjacent to existing interstate corridor.
Coastal Zone	☐	☐	☐	☒	
Other	☐	☐	☐	☒	

* N/A – Blacked out cells in this column require a check in at least one of the other columns.

ENVIRONMENTAL COST MATRIX

Transportation Improvements

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Build	Build Inside Lanes	Build Outside Lanes	Recon-struction		
Project Length	Mi (Km)	44.5	44.5	44.5	44.5		
Cost $							
Construction	Million $	$0.00	$410.40	$445.80	$415.20		
Real Estate	Million $	$0.00	$6.20	$7.50	$6.70		
Total	Million $	$0.00	$416.60	$453.30	$421.90		
Land Conversions							
Total Area Converted to R/W	Acres (Hectares)	0	128.9 (52.3)	418.0 (169.3)	228.8 (92.7)		
Wetland Area Converted to R/W	Acres (Hectares)	0	12.1 (4.9)	16.8 (6.7)	14.2 (5.8)		
Upland Area Converted to R/W	Acres (Hectares)	0	18.8 (7.6)	31.0 (12.6)	22.8 (9.2)		
Other Area Converted to R/W	Acres (Hectares)	0	23 (9)	59 (24)	57 (23)		
Real Estate							
Number of Farms Affected	Number	0	25	212	128		
Total Area From Farm Operations Required	Acres (Hectares)	0	75 (30)	311 (126)	135 (55)		
AIS Required	Yes/No	No	No	Yes	Yes		
Farmland Rating	Score	N/A	N/A	N/A	N/A		
Total Buildings Required	Number	0	0	0	0		
Housing Units Required	Number	0	0	0	0		
Commercial Units Required	Number	0	0	0	0		
Other Buildings or Structures Required	Number (Type)	0	0	0	0		
Environmental Issues							
Flood Plain	Yes/No	No	No	No	No		
Stream Crossings	Number	10	10	10	10		
Endangered Species	Yes/No	No	No	No	No		
Historic Properties	Number	0	0	1	0		
Archeological Sites	Number	0	0	0	0		
106 MOA Required	Yes/No	No	No	No	No		
4(f) Evaluation Required	Yes/No	No	No	No	No		
Environ Justice At Issue	Yes/No	No	No	No	No		
Air Quality Permit	Yes/No	No	No	No	No		
Design Year Noise Sensitive Receptors	Number	941	1776	1776	1776		
No Impact	Number	19	36	36	36		
Impacted	Number	922	1740	1740	1740		
Exceed dBA Levels		922	1740	1740	1740		
Contaminated Sites	Number	0	6	6	6		

8) Describe how the project development process complied with Executive Order 12898 on Environmental Justice. (EO 12898 requires agencies to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects on minority populations and low-income populations, including the interrelated social and economic effects. Include those covered by the Americans with Disabilities Act and the Age Discrimination Act.)

No disproportionately high or adverse effects are predicted from the proposed action.

a) Identify sources of data used to determine presence of minority populations and low-income populations.

☐ Windshield Survey
☐ WisDOT Real Estate
☐ Real Estate Company
Identify Real Estate Company
☐ Human Resource Agency
Identify Agency
☐ Survey Questionnaire
☒ US Census Data
☐ Door to Door
☒ Official Plan

Identify Plan, Approval Authority, and Date of Approval :City of Beloit Comprehensive Plan, 1996; City of Janesville Southeast Area Plan, 1987. City of Janesville Comprehensive Planning Program, 1982; City of Janesville Northeast Area Plan, 1999.

b) Indicate whether a minority population or a low-income population, including the elderly and the disabled, is in the project's area of influence.

i) The requirements of EO 12898 are met if both "No" boxes are checked below.

☐ No minority population is in the project's area of influence.

☐ No low-income population is in the project's area of influence.

ii) If either or both of the "Yes" boxes are checked, item c) below must be completed.

☒ Yes, a minority population is within the project's area of influence.

☒ Yes, a low-income population is within project's area of influence.

c) How was information on the proposed action communicated to the minority and/or low- income population(s)? Check all that apply.

☐ Advertising
☐ Notices
☐ Public Service Announcements
☒ Other (Identify) City of Janesville website, WisDOT website
☐ Brochures
☐ Utility Bill Stuffers
☒ Direct Mailings
☒ Newsletter
☐ E-mail
☐ Key Person

d) Identify how input from the minority population and/or low-income population was obtained. Check all that apply.

☐ Mailed Survey
☒ Public Meeting
☐ Targeted Small Group Informational Meeting
☐ Other (Identify)
☐ Door-to-door interview
☐ Public Hearing
☐ Focus Group Research
☐ Key Person Interview
☒ Targeted Workshop/Conference

e) Indicate any special provisions, which were made to encourage participation from the minority population and/or low-income population(s)

☒ Interpreter
☐ Transportation Provided
☐ Other (Identify)
☐ Listening Aids
☐ Child Care Provided
☒ Accessibility for Elderly and Disabled
☐ Sign Language

9) Briefly summarize the status and results of public involvement. Briefly describe how the public involvement process complied with EO 12898 on Environmental Justice.

The newsletters for this project included notices of the public meetings and information about the Policy Committee. Included on the mailing list for the newsletters were special groups and agencies, including groups serving area seniors, veterans, and Dane County and Rock County Human Services.

The first set of Public Information Meetings was held to present to the public traffic trends and projections, crash information, third lane sections, noise impacts and potential mitigation measures, and interchange deficiency analysis and alternatives. A total of 70 people attended the meetings, which were held December 3, 2003 at Marshall Middle School in Janesville (27 attending), December 9 at the Town of Turtle Hall, east of Beloit (22 attending), and December 11 at the Veteran's Memorial Center in Edgerton (21 attending). In general, the comments received indicated that participants at all three meetings supported adding a third lane to the Interstate, and, when given a choice, would prefer to add the lane in the median to keep costs down and to avoid taking prime farmland and land near commercial areas. Attendees at the meeting in Janesville commented on noise problems, and were strongly in favor of adding noise walls.

The second set of Public Information Meetings was held on Monday, April 10, 2006 at the Town of Turtle Hall (25 attending); Wednesday, April 12, 2006 at the Edgerton Public Library (55 attending); and, on Wednesday, April 19, 2006 at Marshall Middle School in Janesville (175 attending). Special invitations were sent out to residents potentially impacted by traffic noise in the Janesville area inviting them to the Janesville meeting to discuss noise issues and potential noise barriers. Preferred alternatives for IH 39/90 mainline and its eleven interchanges were presented at all three informational meetings. In addition, noise impacts and barriers were discussed at the Janesville meeting. At the Janesville meeting, 107 residents submitted written comment forms supporting the City of Janesville passing a resolution supporting the construction of noise barriers for the portion of IH 39/90 between USH 14 and STH 11/Racine Street in Janesville as part of the IH 39/90 reconstruction project.

An Opportunity for a Public Hearing to comment on the Environmental Assessment and project will be offered to the general public in the summer of 2008.

a) Identify groups (e.g., elderly, handicapped), minority populations and low-income populations that participated in the public involvement process. This would include any organizations and special interest groups.

No groups identified with elderly, handicapped, minority, or low-income populations expressed special interest in the public involvement process.

The Township of La Prairie participated in study committee meetings, representing farmers from their area south of Janesville.

Local residents in the area of IH 39/90 between USH 14 and STH 11/Racine Street in Janesville participated in public information meetings to discuss noise abatement concerns for their area.

b) Describe, briefly, the issues, if any, identified by any groups, minority populations and/or low-income populations during the public involvement process.

Farmers in the southern half of Rock County expressed concern and interest for preserving farmland. They expressed a strong desire for WisDOT to use the existing median area first for adding additional lanes, and preserve the outside area for farming interests over the next 20 years. They also expressed a willingness to have a building setback requirement on their lands in order to ensure availability of vacant land adjacent to the interstate corridor or future adding of capacity lanes.

Local residents adjacent to the interstate corridor between USH 14 and STH 11/Racine Street in Janesville expressed high interest in having noise barriers constructed in their area. They felt walls should be constructed as soon as possible, and that walls should be constructed prior to road improvement work to alleviate noise levels during construction.

Dane County expressed the desire to preserve the existing median area of the interstate as green space to

eliminate future maintenance costs associated with median barriers. Also, the green space would provide an area for stormwater runoff, snow storage, and provide a space for future transportation needs within the IH 39/90 corridor.

No other special issues were identified by groups during the public involvement process.

c) Briefly describe how the issues identified above were addressed. Include a discussion of those that were avoided as well as those that were minimized and those that are to be mitigated. Include a brief discussion of proposed mitigation, if any.

Adding travel lanes to the inside of the corridor and taking as little additional right of way as possible would address concern about loss of farmland south of Janesville. This alternative is being moved forward.

Noise barriers, if they continue to be desirable in Janesville between USH 14 and USH 11/Racine Street, will move forward for WisDOT consideration upon passage of municipal resolution of support.

In Dane County, adding travel lanes to the outside of the existing lanes, or adding travel lanes to the inside when the median is wide enough to preclude the use of median barriers, would address concern about preserving the existing median area of the interstate as green space. This alternative is being moved forward to the extent practical.

TRAFFIC SUMMARY

	ALTERNATE	Preferred (Reconstruction)	Inside Lane	Outside Lane	
	SEGMENT TERMINI	all data summarized in Appendix B			
TRAFFIC VOLUMES Existing	ADT Yr. 2002				
Const. Year	ADT Yr. 2010				
Const. Plus 10 Years	ADT Yr. ____				
Design Year	ADT Yr. 2030				
	DHV Yr. 2030				
TRAFFIC FACTORS	K_{100} ($_{100/200}$, or %)	10.0	10.0	10.0	
	D (%)	60	60	60	
Design Year	T (% of ADT)	30	30	30	
	T (% of DHV)	30	30	30	
	Level of Service	See Chart p. 7 of 43	See Chart p. 7 of 43	See Chart p. 7 of 43	
SPEEDS Existing	Posted	65	65	65	
	Posted	65	65	65	
Design Year	Project Design Speed	70	70	70	
OTHER (Specify)	P (% of ADT)	14.5			
	K (% OF ADT)				

ADT = Average Daily Traffic
DHV = Design Hourly Volume
$K_{100/200}$ or % = K_{100} = Rural, K_{200} = Urban, % = ADT in DHV
D = % DHV in predominate direction of travel
T = Trucks
P = % ADT in peak hour
K_8 = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

ENVIRONMENTAL ISSUES

Indicate whether the issue listed below is a concern for the proposed action or alternative. If the issue is a concern, explain how it is to be addressed or where it is addressed in this environmental document.

1) Would the proposed action stimulate substantial secondary environmental effects?

☒ No

☐ Yes - Explain or indicate where addressed.
Some secondary impacts resulting from this project can be expected, but they are not anticipated to be substantial. The primary secondary impact that could occur is the possible induced land use change that might result from the interstate capacity expansion and improvement. These land use changes would be most prevalent in the urban fringe areas of Beloit, Janesville, and Madison where sewer and water services are available for development purposes. In each of these urban areas, planning and public policy currently encourages growth not only in the immediate corridor area of the interstate, but also in many other parts of these communities. Development that might occur after the interstate improvement is generally consistent with the development envisioned by these communities in local plans prior to the improvement. Additionally, access to IH 39/90 is restricted to interchanges. This project does not create new access. The location and frequency of interchanges will remain the same after the proposed higway improvements are completed which can reasonably be expected to reduce to potential secondary impacts related to this project. A primary purpose for this project is to maintain an acceptable Level of Service (LOS) for the interstate. Currently, the interstate has a LOS C. By 2030, with the proposed improvements, the interstate will maintain a LOS C. Air quality throughout the corridor should be improved as the improvements will result in fewer stopping and starting of vehicles.

2) Would the creation of a new environmental effect result from this proposed action?

☒ No

☐ Yes - Explain or indicate where addressed.

3) Would the proposed action impact geographically scarce resources?

☒ No

☐ Yes - Explain or indicate where addressed.

4) Would the proposed action have a precedent-setting nature?

☒ No

☐ Yes - Explain or indicate where addressed.

5) Is the degree of controversy associated with the proposed action high?

☒ No

☐ Yes - Explain or indicate where addressed.

6) Would the proposed action have any conflicts with official agency plans or local, state, or national policies, including conflicts resulting from potential effects of transportation on land use and land use on transportation demand?

☒ No

☐ Yes - Explain or indicate where addressed.

7) Would the proposed action contribute to cumulative environmental impacts of repeated actions?

☐ No

☒ Yes - Explain or indicate where addressed.

The IH 39/90 expansion could generate land use impacts which could adversely affect farmland and farm operations in the region. The improved interstate and interchanges could attract business and residential development. The interstate improvements should reduce travel times between the major employment centers in the region, which could have the incremental affect of making certain areas more attractive for development.

ENVIRONMENTAL COMMITMENTS

Identify and describe any commitments made to protect the environment. Indicate when the commitment should be implemented and who in WisDOT would have jurisdiction to assure fulfillment for each commitment.

ATTACH THIS PAGE TO THE DESIGN STUDY REPORT

A. General Economics	No Commitments Needed	
B. Community & Residential	No Commitments Needed	
C. Commercial & Industrial	Not Applicable	
D. Agriculture	Commitments Made	Design will minimize or avoid farmland acquisition where possible by use of maximum slopes where feasible. Recommendations contained in the Agriculture Impact Statement (AIS) will be considered during design and construction, and implemented when practical.
E. Environmental Justice	No Commitments Needed	
F. Wetlands	Commitments Made	Section 404 permits -- both individual and general -- will be required for this project. For impacts that cannot be avoided, side slopes will be increased outside of the clear zone to minimize wetland impacts when possible, and excess soil that may be generated during construction will be disposed of at an upland location to be designated during final design. Compensation will be sought for unavoidable loss, with on-site replacement considered first, near-site or off-site replacement considered next, and a wetland mitigation bank used if necessary. A field survey and sediment sampling will be conducted to determine if habitat for the redfin shiner exists in the location of the pier and abutment widening at the Rock River crossing. For impacts along adjacent wetlands of Turtle and Spring Creeks, a field survey will be conducted to identify their potential to provide habitat for unspecified state or federally listed species.
G. Streams & Floodplains	Commitments Made	Crossings of waterways are all in existence today, but where widened or lengthened for this project they will be designed to allow continuity of riparian corridors under bridges to reduce potential species mortality.
H. Lakes or Other Open Water	Not Applicable	
I. Upland Habitat	Commitments Made	A field survey to determine if habitat exists and/or species are present for the eastern massasauga rattlesnake (Sistrurus catenatus catenatus) -- a federally listed species -- will be conducted within the Turtle Creek corridor. An update to the records search for

		threatened and endangered species is requested for a time lag of more than 12 months (post June 28, 2008) between plan completion and execution.
J. Erosion Control	Commitments Made	Standard erosion control practices will be implemented during construction. Clearing and grubbing activities will be limited to the proposed project corridor. Following construction, adjacent habitats will be reestablished to function similar to preconstruction conditions.
K. Storm Water Management	Commitments Made	WisDOT will coordinate with the cities of Madison, Janesville and Beloit as well as Dane County to ensure that their respective stormwater requirements are met. Stormwater detention/retention areas will be considered in the loop ramp areas of the interchanges to provide for management of stormwater. Stormwater will be analyzed in further detail, and a stormwater management plan will be developed.

L. Air Quality

☒ The project is exempt from permit requirements per Wisconsin Administrative Code – Chapter NR 411 criteria.

☐ A construction permit is required for this project and an application has been submitted to the Department of Natural Resources – Bureau of Air Management. Construction on the project will not begin until the Construction Permit has been issued. See the Air Quality Factor Sheet.

☐ A construction permit is required for this project and has been issued by the Department of Natural Resources – Bureau of Air Management. The Construction Permit Number is . See the Air Quality Factor Sheet.

M. Construction Stage Sound Quality

☐ No receptors are located in the project area. No impacts are anticipated from construction noise.

☒ To reduce the potential impact of Construction Noise, the special provisions for this project will require that motorized equipment shall be operated in compliance with all applicable local, state and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. At a minimum, the special provisions will require that motorized construction equipment shall not be operated between TBD PM and TBD AM without prior written approval of the project engineer. All motorized construction equipment will be required to have mufflers constructed in accordance with the equipment manufacturer's specifications or a system of equivalent noise reducing capacity. It will also be required that mufflers and exhaust systems be maintained in good working order, free from leaks or holes. See Construction Stage Sound Quality Factor Sheet.

N. Traffic Noise	Commitments Made	Noise mitigation will be provided for residential neighborhoods in Janesville if the neighborhoods and the city indicate that it is desired.
O. Section 4(f) and 6(f)	Not Applicable	
P. Historic Resources	No Commitments Needed	
Q. Archaeological Resources	Not Applicable	
R. Hazardous Substances or USTs	Commitments Made	Additional site investigations are required on four properties where petroleum-contaminated soil or groundwater may be present. Follow up with WDNR and DCOMM will be completed to update the status of ongoing site investigations on two properties where petroleum contamination and methane gas/groundwater contamination are suspected. A "Notice to

		Contractor" special provision will be included for actions to be taken by the contractor during construction in the event that any hazardous materials are found during construction. Final design details will avoid locations of known contamination where feasible, and if unavoidable, specifications will require remediation in accordance with WisDOT standards.
S. Aesthetics	No Commitments Needed	
T. Coastal Zone	Not Applicable	
U. Other	Not Applicable	

GENERAL ECONOMICS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2078 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Portion of Project This Sheet is Evaluating	
Entire Project	

1) Describe, briefly, the existing economic characteristics of the area around the project. This could include type(s) of farming, retail or wholesale businesses, manufacturing, tourism, or other elements contributing to the area's economy and potentially affected by the project.

The project area stretches from the city of Madison to the Illinois state line, a corridor approximately 45 miles long. The corridor abuts residential and commercial properties in Madison, Janesville, and Beloit. Commercial and residential properties are also found at some of the interchanges along the corridor. The majority of land between cities is in agricultural use. Areas of wetland or woodland are also found along the corridor, where land is low or topography is steep.

In Madison, the project area begins at the IH 39/USH 12-18 interchange. The northeast and northwest quadrants of the interchange includes vacant land and industrial/warehouse uses. The southwest quadrant is vacant land, wetland, and land slated for residential development. The southeast quadrant has several commercial properties, including a casino that draws a fair amount of traffic.

Between Madison and Janesville, the corridor abuts agricultural land and natural areas (wetlands and woodlands). Just north of Janesville, the area along the corridor is particularly hilly, resulting in attractive wooded vistas. The highway is split by a hilly, wooded median area.

In Janesville, the corridor abuts industrial and commercial areas north of USH 14, with some newer residential areas further from the corridor. Between USH 14 and STH 11 the corridor is mostly single-family and multi-family residential. Commercial uses surround the STH 11 interchange.

Between Janesville and Beloit the land is very flat and highly productive agricultural land. In 2006, Rock County ranked first among Wisconsin's 72 counties in the production of soybeans, and second in the production of corn for grain. The corridor in the City of Beloit is mainly commercial, with some areas of residential north of Shopiere Road and in the southeast quadrant of the IH 39/43 interchange.

2) Discuss the economic advantages and disadvantages of the proposed action. Indicate how the project would affect the characteristics described in item 1 above.

Adding lanes to the corridor could have an economic positive affect for commercial entities by improving traffic flow through the entire corridor and reducing congestion and travel delays. There will be a negative economic affect to agricultural interests In areas throughout the project where it is proposed to place the additional interstate lane along the outside edge of the current roadway due to 0-20 feet right of way acquisition, much of which is farmland. There should be minimal or no economic affect on residential property.

Representatives from the City of Beloit expressed interest in having access provided from the proposed IH 39/IH 43 interchange into a new business park development of the city that is located in the southeast quadrant of the interchange. This new development is a 450 acre mixed-use area called Gateway Business Park. The proposed interchange redesign will enhance access to the Gateway Business Park by providing a slip ramp into the development. The city is responsible for connecting the internal roadway system of the Gateway Business Park to the new slip ramp.

3) In general, will the proposed action increase or decrease the potential for economic development in the area influenced by the project?

The Build Alternative will generally increase the potential for economic development in the area within the constraints of local zoning ordinances and land use planning efforts. The proposed improvements to IH 39/90 do not change the number or location of the existing interchange access points along the corridor for local access.

ECONOMIC DEVELOPMENT AND BUSINESS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2095 2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Project This Sheet is Evaluating
45.5 Miles

1) Describe the economic development or existing business areas affected by the proposed action.
Existing business areas in the cities along the corridor consist of service and commercial businesses and industries. All communities along the corridor have industrial parks with access on highways and streets other than the Interstate, but are dependent on the interstate and its interchanges for movement of goods. Adjacent to many interchanges throughout the corridor are businesses oriented towards service, such as restaurants, gas stations, motels and truck stops. Good interchange access and visibility from the Interstate is important to some of these businesses. Tourism is a major industry in Wisconsin. According to a 2007 economic study by the Wisconsin Dells Visitor & Convention Bureau, spending in the Dells area was $1.03 billion which translated into nearly 24,000 full-time equivalent jobs. Businesses in the Wisconsin Dells area are highly dependent on this interstate corridor for tourism traffic to reach their destination.

2) Identify and discuss the existing modes of transportation and their traffic within the economic development or existing business area.
The Interstate is a vital link in the transportation system. Most businesses along this corridor depend on the automobile and trucks for transporting goods and providing access for customers and employees. In urban communities such as Beloit, Janesville and Madison, businesses workers can go to work by city buses, taxi, bicycling, or walking, in addition to use of a personal vehicle. Service businesses such as restaurants, gas stations, motels, and truck stops rely on the majoirty of their business coming from the interstate. Industrial parks rely on the interstate for transporting their goods. Tourism depends on the interstate for arrival and departure of visitors. Poor functioning of the Interstate and its interchanges affects all roadways to which it is linked.

3) Place an "X" in the appropriate box below if one of the populations indicated would be affected by the proposal. Give a brief description of the community/neighborhood and population affected by the proposed action. Include demographic characteristics of those affected by the proposal.

For the populations shown below, The Orders issued by the U.S. Department of Transportation and its implementing agencies to satisfy the requirements of Executive Order 12898 require an evaluation to determine whether a minority and/or low income population would experience a disproportionately high and adverse effect. If any of the populations shown below are affected, DT2093, Environmental Justice Impact Evaluation, along with the remaining items on this worksheet, will need to be completed to satisfy Environmental Justice requirements.

a) ☐ No - Disabled population is not affected.

☒ Yes - Disabled population is affected. See DT2093, Environmental Justice Impact Evaluation.

b) ☐ No - Elderly population is not affected.

☒ Yes - Elderly population is affected. See DT2093, Environmental Justice Impact Evaluation.

c) ☐ No - Minority population is not affected.

☒ Yes - Minority population is affected. See DT2093, Environmental Justice Impact Evaluation.

d) ☐ No - Low-income population is not affected.

☒ Yes - Low income population is affected. See DT2093, Environmental Justice Impact Evaluation.

4) Identify and discuss effects on the economic development potential and existing businesses that are dependent upon the transportation facility for continued economic viability.

☐ The proposed project will have no effect on a transportation-dependent business or industry.

☒ The proposed action will change the conditions for a business that is dependent upon the transportation facility. Identify effects, including effects which may occur during construction.
The effect of the Preferred Build Alternative should be positive for businesses dependent upon the transportation facility. Improving travel time and safety on the Interestate will result in improved freight shipping and easier customer and employee access. Consistent travel times for visitors to tourism destinations will increase economic development in those areas. No new access points are being created, and the only change in existing access points will be improved functionality.

The construction period may have some adverse effects on these same businesses by causing travel delays that will be minimized to the extent practical. During construction, 4-lanes of traffic (two in each direction) will be maintained at all times. Ramp closures are not anticipated. Traffic control will be more fully detailed in the project's TMP which will be developed during the design phase.

5) Estimate the number of businesses and jobs that would be created or displaced because of the project.

a) Total number created 0 ☒ None

Number created by type including number of jobs.

Retail businesses created	Retail jobs created
Service businesses created	Service jobs created
Wholesale businesses created	Wholesale jobs created
Manufacturing businesses created	Manufacturing jobs created

b) Total number displaced. ☒ None

Number displaced by type and number of jobs.

Retail businesses displaced	Retail jobs displaced
Service businesses displaced	Service jobs displaced
Wholesale businesses displaced	Wholesale jobs displaced
Manufacturing businesses displaced	Manufacturing jobs displaced

6) Identify any special characteristics of the created or displaced businesses or their employees.

a) Number of created businesses by special characteristics ☒ None

Number of created businesses that will employ elderly
serve elderly
Number of created businesses that will employ disabled
serve disabled
Number of created businesses that will employ low income people
serve low income people
Number of created businesses that will employ a minority population
serve a minority

b) Number of displaced businesses by special characteristics ☒ None

Number of displaced businesses that will employ elderly
serve elderly
Number of displaced businesses that will employ disabled
serve disabled
Number of displaced businesses that will employ low income people
serve low income people
Number of displaced businesses that will employ a minority population
serve a minority

7) Is Special Relocation Assistance Needed?

☒ No

☐ Yes – Describe special relocation needs.

8) Describe the business relocation potential in the community.

a) Total number of available business buildings in the community.

b) Number of available and comparable business buildings by location

Number of available and comparable business buildings within

Number of available and comparable business buildings within

Number of available and comparable business buildings within

c) Number of available and comparable business buildings by type and price (Include business buildings in price ranges comparable to those being dislocated, if any.)

Number of available and comparable single business buildings in the price range of

Number of available and comparable single business buildings in the price range of

Number of available and comparable single business buildings in the price range of

Number of available and comparable multi- business buildings in the price range of

Number of available and comparable multi-business buildings in the price range of

Number of available and comparable multi- business buildings in the price range of

9) Identify all the sources of information used to obtain the data in item 8.

☐ WisDOT Real Estate
☐ Multiple Listing Service (MLS)
☐ Newspaper listing(s)
☐ Other - Identify:

10) Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24.
Not applicable

11) Identify any difficulties for relocating a business displaced by the proposed action and describe any special services needed to remedy identified unusual conditions.
Not applicable

12) Describe any additional measures which would be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected.
Efforts will be made during construction of the Preferred Build Alternative to minimize inconveniences to area businesses. Construction staging will be designed to minimize traffic congestion whenever possible (see Construction Stage Sound Quality Impact Evaluation for discussion of construction staging). Businesses affected by construction may be provided assistance in designing promotional efforts to keep customers informed of construction progress and means of access to the businesses.

Noise mitigation along the interstate corridor in Janesville will be considered if the city provides the Department with a Resolution of Support for construction of a barrier and provides evidence of land use controls that would reasonably eliminate the need for future state-funded noise barriers in highway rights of way for future developments.

13) Generally describe both the beneficial and adverse effects accruing to:

a) The area’s economic development potential or existing business area caused by the proposed action. Include any factors identified by business people that they feel are important or controversial.

The Preferred Build Alternative will have a beneficial effect by improving traffic flow to existing businesses. Ease of access should positively affect the area's ability to attract additional businesses. There should not be any

adverse impact on the area's economic development caused by the proposed improvements except for short term delays and access issues created during construction.

b) The employment potential and existing employees in businesses affected by the proposal. Include, as appropriate, a discussion of effects accruing to minority populations or low-income populations.

The Preferred Build Alternative will improve some employees' travel to and from workplaces by decreasing congestion on the Interstate and related roadways. Pedestrian and bicycle facilities will be incorporated into redesigned interchanges. Improved travel should also positively affect employment potential of area businesses. A short term adverse impact could occur during construction due inconveniences expected in traveling through construction zones in urban areas.

AGRICULTURAL IMPACT EVALUATION

Wisconsin Department of Transportation

DT2063 2003

Alternative Preferred Build (Reconstruction)	Length of Center line and termini this sheet is evaluating if different from Sheet 1. mi.
Preferred Yes	

Type of Land Acquired From Farm Operations	Type of Acquisition		Total Area Acquired
	Area Acquired In Fee Simple	Area Acquired By Easement	
Crop land and pasture	111 Acres	0 Acres	111 Acres
Woodland	4.4 Acres	0 Acres	4.4 Acres
Land of undetermined or other use (e.g., wetlands, yards, roads, etc.)	20 Acres	0 Acres	20 Acres
TOTAL	135 Acres	0 Acres	135 Acres

1. Indicate the number of farm operations from which land will be acquired.

   Total Number of Farm Operations from which land will be acquired 128

   a) 87 Number of Farm Operations from which 1 acre or less will be acquired.

   b) 41 Number of Farm Operations from which more than 1 acre but less than 5 acres will be acquired.

   c) 0 Number of Farm Operations from which more than 5 acres will be acquired.

2. Identify and describe the effects to farm operations because of land lost due to the project.

   ☐ Does Not Apply

   The project results in a decrease of usable land and potential crop production for harvest due to roadway and interchange reconstruction. The Preferred Build Alternative primarily consists of strip acquisition (0-20 feet wide) adjacent to the existing right of way, so the impact to the actual farm operations is likely to be minimal. The number of farm operations and acreages actually impacted will likely be lower than what is listed above as additional right of way widths were estimated for this project to compensate for potential drainage issues that may or may not occur during final design.

3. Describe changes in access to farm operations caused by proposed action.

   ☒ Does Not Apply

   Since the proposed action primarily includes widening of the existing corridor and strip acquisition adjacent to the existing highway right of way, access to existing farm operations will not change. IH 39/90 is an access-controlled facility and access is provided to adjacent properties from the local road system.

4. Indicate whether a farm operation will be severed because of the project and describe the severance (include area of original farm and the size of any remnant parcels).

   ☒ Does Not Apply

   No farms will be severed as a result of the proposed action.

5. Identify and describe effects generated by the acquisition or relocation of farm operation buildings, structures or improvements, e.g., barns, silos, stock watering ponds, irrigation wells, etc. As appropriate, address the location, type, condition and importance to the farm operation.

☒ Does Not Apply

No farm improvements will be acquired.

6. Describe effects caused by the elimination or relocation of a cattle/equipment pass or crossing. Attach plans, sketches, or other graphics as needed to clearly illustrate existing and proposed location of any cattle/equipment pass or crossing.

   ☒ Does Not Apply

   ☐ Replacement of an existing cattle/equipment pass or crossing is not planned. Explain.

   ☐ Cattle/equipment pass or crossing will be replaced.

   ☐ Replacement will occur at same location.

   ☐ Cattle/equipment pass or crossing will be relocated. Describe.

7. Describe the effects generated by the obliteration of the old roadway.

   ☒ Does Not Apply

8. Identify and describe any proposed changes in the land use or secondary development that will affect farm operations and is related to the development of this project.

   ☒ Does Not Apply

   Many of the municipalities and townships within the study area have adopted land use plans and land use regulations that encourage farmland preservation and discourage the conversion of farmland to non-farm uses outside of planned growth boundaries. Many of the rural townships have invoked exclusive agricultural zoning, which strictly limits the use of agricultural land for purposes other than agriculture.

9. Describe any other project-related effects identified by a farm operator or owner which may be adverse, beneficial or controversial.

   ☐ No effects indicated by farm operator or owner.

   Farmers along the corridor in southern Rock County (south of Janesville) are very interested in preserving their farmland, and want any widening of the corridor to be accomplished by utilization of the median area first so as to minimize farmland loss. Farmers, in general, along the entire corridor are concerned about possible adverse drainage impacts that could be caused by the improvement proejct.

10. Indicate whether minority population or low-income population farm owners, operators, or workers will be affected by the proposal. (Include migrant workers if appropriate.)

    ☒ No effects will accrue to farm owners, operators or workers from minority populations or low-income populations

    ☐ Yes – Discuss.

11. Describe measures to minimize adverse effects or enhance benefits.

    Measures to minimize adverse effects include using the median for lane expansion which avoids farmland acquisition where possible and minimization of farmland taking by use of maximum slopes where feasible. Benefits are enhanced by maintaining all existing overpasses and underpasses to allow farm-related traffic to cross the IH 39/90 corridor and increases in capacity to IH 39/90 corridor will help improve the movement of farm-related goods and services in the southern Wisconsin and northern Illinois region.

    A stormwater management plan will be developed and incorporated into the project's design to reduce or minimize runoff impacts in coordination with the WDNR/WisDOT cooperative agreement and Trans 401.

    In addition, NRCS has concluded that "because there are no viable alternatives to consider for this project, provisions of the Farmland Protection Policy Act do not apply."

ENVIRONMENTAL JUSTICE IMPACT EVALUATION

Wisconsin Department of Transportation

DT2093 3/2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Center Line and Termini This Sheet is Evaluating

45.5 Miles

Instructions: For definitions of Environmental justice protected populations, visit: www.fhwa.dot.gov/legsregs/directives/orders/6640_23.htm , www.aoa.gov/prof/poverty_guidelines/poverty_guidelines.asp

1. Determine the presence and estimate the size of the minority population and/or low-income population affected by the proposed action.

   ☐ No minority populations or low-income populations are present in the project's area of influence. (Process is complete.)

   ☒ Yes, a minority population or low-income population is located in the project's area of influence. (Proceed with the evaluation.)

2. Identify and give a brief description of the minority populations or low-income populations affected by the proposed action. Include the relative size of the populations and their pertinent demographic characteristics. (Check all that apply.)

   ☒ Black (having origins in any of the black racial groups of Africa)
   ☒ Low income ☒ Elderly ☒ Disabled

   ☒ Hispanic (of Mexican, Puerto Rican, Cuban or South American, or other Spanish culture or origin, regardless of race)
   ☒ Low income ☒ Elderly ☒ Disabled

   ☒ Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands)
   ☒ Low income ☒ Elderly ☒ Disabled

   ☐ American Indian and Alaska Native (having origins in any of the original people of North American and who maintains cultural identification through tribal affiliation or community recognition)
   ☐ Low income ☐ Elderly ☐ Disabled

   ☒ White and any combination of the above.
   ☐ Low income ☒ Elderly ☒ Disabled

   ☒ Non-minority low-income population
   ☒ Elderly ☒ Disabled

   The cities of Madison, Janesville, and Beloit are the areas in the corridor with significant residential areas. Minority and low-income populations are present in residential areas near the study corridor. Their concentrations in the corridor area do not differ significantly from that found in the population of the cities in general, and in some cases are much lower. Populations for the corridor areas in Madison, Janesville, and Beloit are shown below, and compared to the total population of each city.

Minority and Low-Income Population in IH 39/90 Corridor

	City of Beloit								Corridor Area in Beloit[1]							
Total Population:	35,653								3,407							
			Low-Income		Disabled		Elderly				Low-Income		Disabled		Elderly	
White	27,005	75.7%	2,373	8.8%	9,142	33.9%	4,281	15.9%	2,937	86.2%	133	4.5%	693	23.6%	352	12.0%
Black	5,345	15.0%	1,215	22.7%	2,220	41.5%	375	7.0%	188	5.5%	49	26.1%	12	6.4%	0	0.0%
AIAN	169	0.5%	22	13.0%	90	53.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	519	1.5%	38	7.3%	186	35.8%	44	8.5%	62	1.8%	0	0.0%	0	0.0%	0	0.0%
Hispanic or Latino	3220	9.0%	778	24.2%	908	28.2%	19	0.6%	274	8.0%	18	6.6%	94	34.3%	0	0.0%
Two or more races	880	2.5%	213	24.2%	396	45.0%	25	2.8%	48	1.4%	0	0.0%	17	35.4%	0	0.0%

	City of Janesville								Corridor Area in Janesville[2]							
Total Population:	59,366								12,034							
			Low-Income		Disabled		Elderly				Low-Income		Disabled[3]		Elderly	
White	55,749	93.9%	3,070	5.5%	15,434	27.7%	7,548	13.5%	11,360	94.4%	415	3.7%	5,748	50.6%	1,535	13.5%
Black	700	1.2%	274	39.1%	168	24.0%	23	3.3%	114	0.9%	0	0.0%	21	18.4%	0	0.0%
AIAN	214	0.4%	5	2.3%	114	53.3%	0	0.0%	23	0.2%	0	0.0%	0	0.0%	0	0.0%
Asian	489	0.8%	59	12.1%	77	15.7%	27	5.5%	100	0.8%	0	0.0%	29	29.0%	8	8.0%
Hispanic or Latino	1,623	2.7%	259	16.0%	452	27.8%	66	4.1%	402	3.3%	59	14.7%	72	17.9%	15	3.7%
Two or more races	650	1.1%	108	16.6%	229	35.2%	8	1.2%	35	0.3%	0	0.0%	32	91.4%	8	22.9%

	City of Madison								Corridor Area in Madison[4]							
Total Population:	207,525								12,298							
			Low-Income		Disabled		Elderly				Low-Income		Disabled		Elderly	
White	170,522	82.2%	19,689	11.5%	36,359	21.3%	18,288	10.7%	11,760	95.6%	258	2.2%	1,827	15.5%	972	8.3%
Black	11,553	5.6%	3,145	27.2%	3,924	34.0%	359	3.1%	46	0.4%	0	0.0%	8	17.4%	16	34.8%
AIAN	835	0.4%	87	10.4%	101	12.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	11,641	5.6%	3,338	28.7%	2,106	18.1%	350	3.0%	299	2.4%	0	0.0%	58	19.4%	0	0.0%
Hispanic or Latino	8,638	4.2%	2,073	24.0%	2,033	23.5%	149	1.7%	102	0.8%	0	0.0%	12	11.8%	0	0.0%
Two or more races	4,974	2.4%	1,191	23.9%	1,387	27.9%	71	1.4%	82	0.7%	0	0.0%	44	53.7%	0	0.0%

All data from Census 2000 Summary File 3 (SF 3)-Sample Data

[1]Census Tract 26.02

[2]Census Tract 7, Block Groups 1 and 2; Tract 8, Group 1; Tract 9, Groups 1 and 2, Tract 13.01, Group 2; Tract 13.02, Groups 2 and 3

[3]Disabled population for Janesville corridor area derived from Census Tract rather than Block Group

[4]Census Tracts 105 and 114

3. As a result of public involvement and inter-agency coordination, identify and describe issues of concern or controversy to the minority population or low-income population.

☒ No issues of concern or controversy identified.
☐ Issues of concern or controversy identified below. Describe issues and how they were resolved.

4. Based on data and scientific analyses (e.g., modeling, regression analysis, etc.), identify and describe effect(s) to the minority population or low-income population.

The effect of the proposed action on low-income and minority populations is not expected to differ from the effect on the population at large. Those effects are both positive (increased mobility for all modes of transportation, potential for economic development and job creation) and negative (construction stage noise and congestion).

Indicate which other environmental factors are involved or inter-related.

☒ General Economics	☒ Community & Residential	☒ Economic Development & Business
☒ Agriculture	☐ Wetlands	☐ Streams & Floodplains
☐ Lakes & Other Open Water	☐ Upland	☐ Erosion Control
☐ Storm Water Management	☐ Air Quality	☐ Construction Stage Sound Quality
☒ Traffic Noise	☐ Section 4(f) & 6(f)	☐ Historic Resources
☐ Archeological Resources	☐ Hazardous Substances & USTs	☐ Aesthetics
☐ Coastal Zone	☐ Noise	☐ Other

(NOTE: 3 and 4 above may overlap)

5. Indicate whether effects to a minority population or a low-income population are beneficial or adverse.

☐ Only beneficial effects will occur. Describe effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to enhance beneficial effects. (Process is complete.)

☒ Identified adverse effects are proportionate to those experienced by the general population. Describe effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to avoid, minimize, or mitigate adverse effects. (Process is complete.)

The effect of the proposed action on low-income or minority populations is not expected to differ from the effect on the population at large. Access to and from the facility is not being added or significantly changed, and no buildings or businesses are being displaced. Improved travel on the Interstate and associated roadways is a direct effect that is expected to benefit all who use the facility, regardless of the mode of transportation (personal vehicle, bus, bicycle, or walking). Potential business expansion along the corridor as a result of the proposed action could be an indirect or cumulative effect that could benefit the general population, including low-income and minority persons, by providing additional employment opportunities. Potential adverse effects during construction will be minimized by construction staging and cooperation between WisDOT and local jurisdictions and businesses.

☐ Identified effects are disproportionately high and adverse. A disproportionately high and adverse effect means an adverse effect that: 1) is predominately borne by a minority population and/or a low-income population; or 2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in

magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Describe disproportionately high and adverse effects on affected population and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to avoid, minimize, or mitigate disproportionately high and adverse effects or enhance beneficial effects.

6. Indicate whether the individuals in the affected population(s) are protected under Title VI of the 1964 Civil Rights Act. (Title IV prohibits discrimination on the basis of race, color, or country of origin. See item 2 above for definitions of Title VI minorities.)

   ☐ No – Title VI protections do not apply, but other requirements under the Age Discrimination Act or Americans With Disabilities Act do apply. Describe effects and how they will be avoided, minimized or mitigated.

   ☐ Yes - Title VI protections apply. Describe any special services, considerations, or mitigation that will be used to avoid, minimize, or mitigate effects to Title VI individuals.

7. Will the Alternative/Project be carried out even with disproportionately high and adverse effects on a minority population or low-income population?

   ☐ No, the Alternative/Project will not be carried out because of disproportionately high and adverse effects on a minority population or low-income population.

      ☐ There is no substantial need for the Alternative/Project.

      ☐ Another alternative with less severe effects on the minority population or low-income population can meet the needs of this and is practical.

   ☐ Yes, the Alternative/Project will be carried out with the mitigation of disproportionately high and adverse effects.

   ☐ Yes, a substantial need for the Alternative/Project exists based on the overall public interest. Alternatives that would have less adverse effects on minority populations or low-income populations have either:

      ☐ Adverse social, economic, environmental, or human health impacts that are more severe; or

      ☐ Would involve increased costs of an extraordinary magnitude.

8. Identify and discuss mitigation and enhancement efforts to address disproportionately high and adverse effects to Title VI protected minority people if different from those shown in item 5 above.

WETLANDS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2099 11/2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Center Line and Termini This Sheet is Evaluating
45.5 miles

1) Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other.

Eighty (80) wetland areas (Areas R-1 through R-21and D-1 through D-59) were identified in the project area and field verified based upon early growth vegetation in April/May 2003. Fifty one (51) of these sites are unavoidable by the Preferred Build Alternative. The excavation of marsh soil and placement of suitable granular fill within the 51 unavoidable wetland areas results in 14.2 acres of total wetland impact by the Preferred Build Alternative. Full delineation, which may identify additional acreages or areas previously not characterized, will occur prior to construction.

These wetland impacts are permanent impacts and will be minimized to the extent practical during final design of the project.

2) Describe the location of wetland(s) affected by the proposal. Include wetland name(s), if available. (Use maps, sketches, or other graphic aids.)

Table W-1 presents a summary of the wetlands associated with the Preferred Build Alternative, including wetland classifications and locations. Exhibits E-1 through E-17 in Appendix E show the wetland boundary locations.

3) This wetland is:

☒ Isolated from stream, lake or other surface water body.

☒ Not contiguous, but within 5-year floodplain.

☒ Contiguous (in contact) with a stream, lake, or other water body.

Identify corresponding stream, lake, or other water body by name or town-range location:
Wetland Areas R-2, D-16, and D-35 are considered depressional isolated wetlands.
Wetland Areas R5 and R6 are located next to Turtle Creek; R9 and R10 are next to Spring Brook
Wetland Areas D-5, D-6, and D10 are located next to a Tributary to Saunders Creek; D-30 and D-33 are next to Door Creek.
The remaining wetland areas are located within the 5-year floodplain.

NOTE: If wetland is contiguous or adjacent to a stream, complete form DT2097, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete form DT2071, Lake or Water Body Impact Evaluation.

4) List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland. (List should include both permanent and seasonal residents).

Wildlife species observed in the wetlands during the site reconnaissance completed in spring 2003 include various songbird species, crows, turkey, and whitetail deer. Other wildlife species common to central Wisconsin likely inhabit these wetland habitats. Expected seasonal residents include other waterfowl, songbirds and shorebirds. Expected permanent residents include songbirds, raptors, herpitiles, and mammals (small mammals, furbearers, and whitetail deer).

5) Are there any known endangered or threatened species affected by the project?
☐ No

☒ Yes - Identify the species and indicate whether it is on Federal or State lists.

A review was conducted by the WDNR Bureau of Endangered Resources. The Natural Heritage Inventory data files indicated the possibility of endangered or threatened species and natural communities occurring in or adjacent to the project corridor (within two miles) located in sections of T1-7N R10-13E in Rock and Dane Counties. A letter from the Bureau of Endangered Resources is included in Appendix F. A review of this list was conducted and it was determined that based upon the initial wetlands field survey it was unlikely that any of the listed plants exist within the areas that would be impacted by this project.

In the Rock River, the redfin shiner (lythrurus umbratilis), a State Threatened species, is historically known to occur. It is recommended that during final design for the piers in the Rock River, a field survey should be conducted and sediment sampling be completed to determine if any habitat for this fish will be impacted.

The US Fish and Wildlife Service (FWS)conducted a review of the project area. The eastern massasauga rattlesnake (Sistrurus catenatus catenatus) has been recorded in habitats similar to those that are in or adjacent to areas that could be potentially affected by the project, including the Turtle Creek corridor. FWS notes that there are "also several rare and/or state-listed species found in the Turtle Creek watershed, and recommends that if the project will involve impacts to Turtle or Spring Creeks or their adjacent wetlands or uplands, that those areas be reviewed for their potential to provide habitat for state or federally listed species." Further, they recommend that crossings of those waterways be designed to allow continuity of riparian corridors under the bridges to reduce the potential species mortality. An update to the records search is requested for a time lag of more than 12 months between plan completion and execution.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

6) FHWA Wetland Policy

☐ Not Applicable - Explain

☒ Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.
The project involves adding a lane of traffic in each direction to IH 39/90 from the Illinois State Line to the USH 12/18 intersection. Since the wetlands identified are located within or adjacent to IH 39/90 right of way, including both outside and between the existing travel lanes, wetland impacts that remain were unaviodable and have been minimized to the extent practicable.

☐ Statewide Wetland Finding. **NOTE: All must be checked for the Statewide Wetland Finding to apply.**

☒ Project is either a bridge replacement or other reconstruction within 0.5 km (0.3 mile) of the existing location.

☐ The project requires the use of 3 hectares (7.4 acres) or less of wetlands.

☒ The project has been coordinated with the DNR and there have been no significant concerns expressed over the proposed use of the wetlands.

7) Erosion control or storm water management measures which will be used to protect the wetland are shown on form (either or both)

☒ DT2080, Erosion Control Impact Evaluation

☒ DT2076, Stormwater Impact Evaluation

☐ Neither form - Briefly describe measures to be used

8) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled 14.2 Acres (5.8 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.
Indicate which GP or LOP required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

9) Section 10 Waters. For navigable waters of the United States (Section 10) indicate which Nationwide Permit is required.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a Section 10 Nationwide Permit is not required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required
☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

10) Identify wetland type(s) which will be filled or converted to another use. Use the DOT Wetland Bank System. (See FDM Procedutre 24-5-10, Figure 2.) If the National Wetlands Inventory (NWI) or Wisconsin Wetlands Inventory (WWI) are used to identify the types of wetlands, translate them to the DOT Wetland Bank System, wetland types.

a) Approximate areas of wetlands filled or converted by type.

Wetland Type	Area of Wetland Type	Acres	Hectares
M (not mutually exclusive)	34 areas	10.1	4.1
WS (not mutually exclusive)	9 areas	2.6	1.1
SS (not mutually exclusive)	6 areas	1.6	0.6
RPE/RPF (not mutually exclusive)	4 areas/8 areas	1.3/1.5	0.5/0.6

11) Wetland Mitigation
(NOTE: Avoidance and minimization mitigation are required.)

a) Wetland Avoidance

i) Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.

Complete avoidance of wetlands is not possible on this project as all wetland areas are within or adjacent to the existing interstate right of way. Relocation of the interstate highway would result in an alternative that is not cost effective, and would have significantly more environmental impacts including destruction of wetlands.

The Preferred Build Alternative avoids some use of wetlands, reducing the impact by 2.9 acres from the complete outside widening build alternative.

The Preferred Build Alternative includes inside lane widening entirely from the Illinois State line (southern project limit) to just north of the STH 26 interchange at Janesville, and therefore avoids and minimizes the amount of land (and wetland) needed to be converted to right of way (see Exhibit C-1). In addition to widening within the interior right of way, minor shifts in alignment were considered where possible to avoid impacts.

Preservation of a green space median area is considered beneficial in that it provides a space for snow storage, storm-water runoff, infiltration prior to being released to surrounding lands, safety location for errant vehicles, and a location for future transportation projects in the corridor without having to purchase additional right of way (and adjacent wetland areas).

North of the STH 26 interchange to USH 12/18 (northern project limit), the Preferred Build Alternative minimizes the amount of new right of way by using a combination of inside and outside widening to preserve the existing green space median area. Additional lanes are added to the median side in all areas that are currently wide enough such that the resultant median width after improvement will be 60 feet or greater. Additional lanes are added along the outside in those areas such that the resultant median after improvement would remain at least 60 feet in width, and would therefore not require installation of median barrier. The Preferred Build Alternative results in about 1.8 acres more wetland loss than the entire inside widening alternative, and about 2.9 acres less than the entire outside widening alternative. Some smaller wetlands were avoided to the extent possible via minor alignment shifts, including wetlands near the welcome/rest area near the south end of the project, just south of Janesville, near Drotning Road, and numerous isolated wetlands along the right of way. Similarly, impacts to larger wetland areas were minimized near Lake Drive, Maple Grove Road, Hammon Road, the truck weigh station, and Williams Drive. In addition, since work was previously undertaken on many bridges, additional wetland impacts to wetlands adjacent to these bridges are able to be avoided.

ii) Indicate the total area of wetlands avoided

2.9 acres

b) Minimize the amount of wetlands affected

i) Describe methods used to minimize the use of wetlands, such as a steepening of side slopes or use of retaining walls, equalizer pipes, upland disposal of hydric soils, etc.

The project alternatives are located in areas that contain jurisdictional wetlands that are considered common to central Wisconsin. Side slopes will be examined during final design for steepening to minimize wetland impacts when possible without sacrificing safety features. Construction staging will not be conducted within adjacent wetlands.

ii) Indicate the total area of wetlands saved through minimization

1.4 Acres
0.6 (Hectares)

c) Compensation for unavoidable loss

Is compensation of unavoidable wetland loss required?

☒ Yes
☐ No. Explain.

d) Type and amount of compensation

☒ On-Site Replacement- Wetland replacement located in the general proximity of the project site within the same local watershed. These replacements are often contiguous to the project.

Wetland type of on-site replacement
Mitigation for unadvoidable wetland impacts on this project will be considered in median areas that are outside the clear zone.

Total area of on-site replacement
Unknown at this time Acres
Unknown at this time (Hectares)

☒ Near-Site or Off-site Replacement - Replacement opportunity for wetland compensation within a 8.05 kilometers (5 mile) corridor centered over the highway alignment or a wetland replacement located away from the project site, generally outside the project's local watershed.

Wetland type of off-site replacement
WisDOT is reviewing potential for near-site mitigation.

Total area of off-site replacement

Unknown at this time. Acres
Unknown at this time. (Hectares)

☐ No near or off-site replacement - Describe reasons no near or off-site opportunities were found.

☒ Wetland Mitigation Bank Site - A wetland compensation site containing wetland credit areas and wetland types from bank developed wetland restoration/creation projects or surplus areas from the wetland compensation projects of specific DOT facility development projects.

Indicate name or location of wetland mitigation bank site to be used for the replacement of unavoidable wetland loss.
Unknown at this time. Unavoidable wetland impacts that connot be mitigated on or near the site will be mitigated at a WisDOT Statewide Wetland Bank site at a ratio determined in accordance with WisDOT Mitigation Banking Technical Guidelines..

Wetland type of bank-site replacement
Replacement acreage will be similar to the type impacted, if available.

Total area of bank-site replacement
Unknown at this time.. Acres
Unknown at this time. (Hectares)

Describe decision process used to determine the use of the bank-site and provide any coordination documentation with regulatory or resource agencies.

Mitigation will be in accordance with the WisDOT Mitigation Banking Technical Guidelines.

TABLE W-1
SUMMARY OF POTENTIAL WETLAND IMPACTS
IH 39/90 CORRIDOR

COUNTY	WETLAND CODE NO.	STATION	WETLAND IMPACTED AREA (ACRES)	WETLAND TYPE	QUALITY OF WETLAND FUNCTIONAL VALUES
Rock	R-2	K 833 - K 834 (RT)	0.07	M	Low - Medium
Rock	R-4	K 671 - K 673 (RT)	0.04	WS	Low
Rock	R-5	K 628 - K 630 (LT)	0.06	RPF	Low - High
Rock	R-6	K 628 - K 630 (RT)	0.16	RPF	Low - High
Rock	R-20	K 431 - K 432 (RT)	0.01	M	Low
Rock	R-7	K 417 - K 418 (RT)	0.14	WS	Low
Rock	R-8	K 417 - K 418 (LT)	0.11	M	Low
Rock	R-9	K 198 - K 199 (LT)	0.11	RPF	Low - High
Rock	R-10	K 198 - K 199 (RT)	0.13	RPF	Low - High
Rock	R-13	J 394 - J 396 (LT)	0.14	M	Low - Medium
Rock	R-14	J 244 - J 246 (LT)	0.32	M	Low - Medium
Rock	R-17	J 263 - J 268 (LT)	0.30	RPF	Low - Medium
Rock	R-18	J 263 - J 268 (RT)	0.41	RPF	Low - Medium
Rock	R-21	J 468 - J 469 (RT)	0.03	M	Low
Dane	D-1	H 548 - H 55 (LT)	0.79	M	Low - Medium
Dane	D-2	H 545 - H 556 (RT)	0.32	WS	Low - Medium
Dane	D-3	H 551 - H 553 (MED)	0.11	M	Low
Dane	D-6	H 387 - H 399 (LT)	0.28	RPE	Low - High
Dane	D-7	H 330 - H 373 (LT)	0.18	RPE	Low - High
Dane	D-9	H 265 - H 329 (LT)	0.30	RPF	Low - High
Dane	D-12	G 464 - G 521 (RT)	0.09	M and SS	Medium - High
Dane	D-13	G 491 - G 498 (MED)	0.70	M	Low
Dane	D-14	G 578 - G 588 (RT)	0.87	M and SS	Low - Medium
Dane	D-15	G 598 - G 599 (RT)	0.03	M	Low
Dane	D-16	G 672 - G 681 (RT)	0.62	WS	Low
Dane	D-17	H 206 - H 227 (RT)	0.07	M and SS	Low - Medium
Dane	D-18	H 205 - H 213 (MED)	0.94	M	Low
Dane	D-19	H 260 - H 267 (LT)	0.19	M	Low
Dane	D-21	H 207 - H 212 (LT)	0.14	M & SS	Low - Medium
Dane	D-22	G 612 - G 620 (LT)	0.09	M	Low
Dane	D-23	G 598 - G 599 (LT)	0.04	RPF	Low
Dane	D-24	G 587 - G 591 (LT)	0.85	M	Low
Dane	D-25	G 543 - G 545 (LT)	0.08	M	Low
Dane	D-26	G 145 - G 190 (RT)	0.11	M,SS,WS	Medium - High
Dane	D-27	G 244 - G 250 (RT)	0.97	M	Low - Medium
Dane	D-29	G 275 - G 280 (RT)	0.53	M and WS	Low - Medium
Dane	D-30	G 310 - G 313 (RT)	0.42	RPE	Low - Medium
Dane	D-33	G 304 - G 313 (LT)	0.37	RPE	Medium
Dane	D-34	G 278 - G 281 (LT)	0.16	WS	Low
Dane	D-35	G 243 - G 248 (LT)	0.38	M and WS	Low
Dane	D-36	G 181 - G 198 (LT)	0.33	M,SS,WS	Low - Medium
Dane	D-40	G 145 - G 147 (LT)	0.11	M	Low
Dane	D-41	G 144 - G 146 (RT)	0.50	M	Low
Dane	D-46	G 144 - G 147 (LT)	0.04	M	Low
Dane	D-49	G 170 - G 177 (MED)	0.88	M	Low
Dane	D-52	G 139 - G 143 (MED)	0.19	M	Low
Dane	D-53	G 144 - G 147 (RT)	0.03	M	Low
Dane	D-56	H 166 - H 170 (RT)	0.14	M	Low
Dane	D-57	G 651 - G 654 (RT)	0.06	M	Low
Dane	D-58	G 626 - G 630 (LT)	0.14	M	Low
Dane	D59	G 612 - G 614 (RT)	0.06	M	Low
Total Wetland Impact Acreage			**14.2**		

RPE: Riparian wetland (emergent), sedge & wet meadows, bars & mudflats, shallow & deep marsh in riverine or lacustrine system.

RFE: Riparian wetland (wooded), floodplain forests, shrub carr & alder thickets in riverine or lacustrine system.

M: Wet & sedge meadows, wet prairie, vernal pools, fens.

WS: Wooded swamp.

SS: Shrub swamp.

TABLE SF-1
Stream/Waterway/Ag Ditch Crossings
ID 1001-07-00
IH 39/90
Illinois State Line – USH 12/18
Rock and Dane Counties

Stream Name	Existing Structure Type	County	Location	Exhibit Reference Sheet Number	Approximate Watershed Size (sq. miles)	Substrate Type	Approximate Water Depth (ft.)
Spring Creek (channelized)	2-bridges (EB & WB)*	Rock	T1N, R13E, S29	1 of 17	20 – 40	Silt	2
Turtle Creek	2-bridges (EB & WB)**	Rock	T1N, R13E, S8	2 of 17	100 –200	Silt	5
Spring Brook (channelized)	2-bridges (EB & WB)**	Rock	T3N, R13E, S32	5 of 17	20 – 40	Silt	2
Tributary to Spring Brook (intermittent)	Box Culvert	Rock	T3N, R13E, S29	6 of 17	<5	Silt	1
Rock River	2-bridges (EB & WB)	Rock	T4N, R12E, S12	9 of 17	>1000	Silt, cobbles	15
Tributary to Saunders Creek (channelized)	2-bridges (EB & WB)	Dane	T5N, R12E, S22	10/11 of 17	5 – 10	Silt	2
Tributary to Saunders Creek (channelized)	Box Culvert	Dane	T5N, R12E, S16	11 of 17	10 – 20	Silt	3
Mud Creek	Box Culvert	Dane	T6N, R11E, S13	13 of 17	5 – 10	Silt	1
Tributary to Yahara River	Box Culvert	Dane	T6N, R11E, S11	14 of 17	5 – 10	Silt	1
Door Creek**	2-bridges (EB & WB)***	Dane	T6N, R11E, S6	16 of 17	10 – 20	Silt	3
Ag Ditch #1	Culvert	Dane	T5N, R12E, S9	11 of 17	N/A	N/A	N/A
Ag Ditch #2	Culvert	Dane	T6N, R12E, S33/32	12 of 17	N/A	N/A	N/A
Ag Ditch #3	Culvert	Dane	T6N, R12E, S29	12 of 17	N/A	N/A	N/A
Ag Ditch #4	Culvert	Dane	T7N, R10E, S26	17 of 17	N/A	N/A	N/A

Note:

* EB & WB bridges were reconstructed and widened in 2003/2004. No further widening of IH 39/90 bridges is necessary, but additional widening and/or new bridges to accommodate IH 43 exit and entrance ramps will occur.

** EB & WB bridges were reconstructed and widened in 2003/2004.. No further widening of bridges or work over water will occur.

*** EB & WB bridges were reconstructed and widened in 2005. No further widening of bridges or work over water will occur.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Spring Creek	2) Stream Location T1N, R13E, S29 NE1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 2 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown.
d) Identify Fish Species Present Bluntnose Minnow, Brook Stickleback, Common Carp, Creek Chub, Fathead Minnow, Green Sunfish.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

An industrial plant exists on the land north of Spring Creek and west of IH 39/90. The remaining land use is primarily agricultural in nature. Spring Creek crosses IH 39/90 in a 10 foot channelized (riprap) ditch adjacent to the Union Pacific Railroad corridor.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☒ Not Applicable - No fill to be placed in wetlands.

☐ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.0 Acres (<0.0 Hectares)

☐ Individual Section 404 Permit required

☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☐ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

The current bridges over Spring Creek were widened and had deck replacements constructed in 2003 and 2004. Work done under that project is sufficient for the proposed widening of the mainline of IH 39/90. Additional widening and/or new bridges over Spring Creek and the railroad will be required to accommodate the entrance and exit ramps for the proposed IH 43 interchange. The mainline IH 39/90 approach roadways will be widened up to the existing bridges. The new ramp bridges will span Spring Creek, and therefore there will be no direct impacts to the stream. The stream hydraulics will not change from existing conditions because of the proposed work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The stream hydraulics resulting from the widened or new bridges will not change from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood Insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is mostly agricultural fields and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative Preferred Build (Reconstruction)	Preferred ☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Turtle Creek	2) Stream Location T1N, R13E, S8, NE1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 5 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Banded Darter, Bigmouth Buffalo, Bigmouth Shiner, Black Bullhead, Black Crappie, Blacknose Dace, Blacknose Shiner, Blackside Darter, Bluegill, Bluntnose Minnow, Brassy Minnow, Brook Stickleback, Burbot, Central Mudminnow, Central Stoneroller, Channel Catfish, Common Carp, Common Shiner, Creek Chub, Fantail darter, Fathead Minnow, Golden Redhorse, Golden Shiner, Gravel Chub, Greater Redhorse, Green Sunfish, Hornyhead Chub, Johnny Darter, Largemouth Bass, Largescale Stoneroller, Northern Hog Sucker, Ozark Minnow, Quillback, Rainbow Darter, Rainbow Trout, Rock Bass, Rosyface Shiner, Sand Shiner, Shorthead Redhorse, Slenderhead Darter, Smallmouth Bass, Southern Redbelly Dace, Spotfin Shiner, Stonecat, Suckermouth Minnow, White Bass, White Sucker, Yellow Bullhead.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☐ No

☒ Yes - Identify the species and indicate whether it is on Federal or State lists.
The US Fish and Wildlife Service (FWS) conducted a review of the project area. The eastern massasauga rattlesnake (Sistrurus catenatus catenatus) -- a federally listed species -- has been recorded in habitats similar to those that are in or adjacent to areas that could be potentially affected by the project, including the Turtle Creek corridor. FWS notes that there are "also several rare and/or state-listed species found in the Turtle Creek watershed, and recommends that if the project will involve impacts to Turtle or Spring Creeks or their adjacent wetlands or uplands, that those areas be reviewed for their potential to provide habitat for state or federally listed species." Further, they recommend that crossings of those waterways be designed to allow continuity of riparian corridors under the bridges to reduce the potential species mortality. An update to the records search is requested for a time lag of more than 12 months between plan completion and execution.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

A small private campground exists on the land south of Turtle Creek and east of IH 39/90. The remaining land use around Turtle Creek is primarily agricultural in nature. Wetland areas R-5 (RPF) and R-6 (RPF) lie adjacent to Turtle Creek on the east and west sides of IH 39/90.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☒ Not Applicable - No fill to be placed in wetlands.

☐ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. Acres (Hectares)

☐ Individual Section 404 Permit required

☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

The span bridge over Turtle Creek was widened in 2003/2004. No work on the actual bridge will occur during this project. The approach roadways will be widened up to the bridge. The current bridge will remain in place. Therefore there will be no direct impacts to the stream and no change in bridge hydraulics from existing conditions.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

There are no changes to the bridge, therefore no backwater will be created by the proposed action.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the bridge or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is agricultural fields and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

No work is anticipated on the bridge over Turtle Creek as part of this project. Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. Since this project is located on the existing alignment, with some widening of the existing roadway, the project will not cause significant adverse impacts to the local biological community.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative Preferred Build (Reconstruction)	Preferred ☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Spring Brook	2) Stream Location T3N, R13E, S32, NW1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 2 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Brassy Minnow, Brown Trout, Common Carp, Fathead Minnow, Largemouth Bass, Rainbow Trout, Smallmouth Bass, Southern Redbelly Dace, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

This land use adjacent to this crossing is park land south of Spring Brook and west of IH 39/90. The remaining land use is residential development. Wetland areas R-9 (RPF) and R-10 (RPF) lie adjacent to Spring Brook on the east and west sides of IH 39/90.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☒ Not Applicable - No fill to be placed in wetlands.

☐ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. 0.0 Acres (0.0 Hectares)

☐ Individual Section 404 Permit required

☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☐ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

No work will be conducted on the bridges over Spring Brook as part of this project. The current bridges were widened and had deck replacements constructed during 2003/2004, and work done under that project is sufficient for this widening project. The approach roadways will be widened up to the bridge. The current bridge will remain in place. Therefore there will be no direct impacts to the stream and no change in bridge hydraulics from existing conditions.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

There are no changes to the bridge, therefore no backwater will be created by the proposed action.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the bridge or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

A city greenbelt extends along Spring Brook and goes through adjacent residential development and parkland. This existing floodplain consists of grass and natural areas, and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this urban setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

No work is anticipated on the bridges over Spring Brook as part of this project. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative Preferred Build (Reconstruction)	Preferred ☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Tributary to Spring Brook	2) Stream Location T3N, R13E, S29, NW1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☐ Permanent Flow (year-round) ☒ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 1 foot	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Brassy Minnow, Brown Trout, Common Carp, Fathead Minnow, Largemouth Bass, Rainbow Trout, Smallmouth Bass, Southern Redbelly Dace, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

The land use adjacent to this crossing is primarily residential development. A city greenbelt extends along the Tributary to Spring Brook and goes through adjacent residential development. Wetland areas R-11 (RPF) and R-12 (M) lie adjacent to Spring Brook on the east and west sides of IH 39/90, but are outside the project limits and are not impacted by the project.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.05 Acres (<0.02 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

This existing box culvert carrying the tributary to Spring Brook across IH 39/90 will be lengthened to accommodate the widening of the Interstate. The stream hydraulics will not be changed by this work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The hydraulics of the lengthened culvert will not change from existing conditions; therefore the flood elevations will not be increased by the proposed

action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the culvert or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

A city greenbelt extends along Spring Brook and goes through adjacent residential development. The existing floodplain consists of grass and natural areas, and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this urban setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities due to turbidity and disturbance of the stream bed. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Rock River	2) Stream Location T4N, R12E, S12, NW1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☒ Cobbles ☐ Other-describe:	
b) Average Water Depth 15 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present American Eel, Bigmouth Buffalo, Bigmouth Shiner, Black Bullhead, Black Crappie, Blacknose Dace, Blackside Darter, Blackstripe Topminnow, Bluegill, Bluntnose Minnow, Bowfin, Brassy Minnow, Brook Silverside, Brook Stickleback, Brown Bullhead, Burbot, Central Mudminnow, Central Stoneroller, Channel Catfish, Common Carp, Common Shiner, Creek Chub, Emerald Shiner, Fantail darter, Fathead Minnow, Freshwater Drum, Golden Redhorse, Golden Shiner, Gravel Chub, Greater Redhorse, Green Sunfish, Hornyhead Chub, Iowa Darter, Johnny Darter, Largemouth Bass, Least Darter, Log Perch, Mimic Shiner, Muskellunge, Northern Hog Sucker, Northern Pike, Northern Redbelly Dace, Orange Spotted Sunfish, Pearl Dace, Pugnose Minnow, Pumpkinseed, Quillback, Rainbow Darter, Rainbow Trout, Redfin Shiner, Rock Bass, Sand Shiner, Shorthead Redhorse, Silver Redhorse, Slenderhead Darter, Smallmouth Bass, Southern Redbelly Dace, Spotfin Shiner, Spottail Shiner, Stonecat, Tadpole Madtom, Walleye, White Bass, White Crappie, White Sucker, Yellow Bass, Yellow Bullhead, Yellow Perch.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, the Rock River is a 303(d) impaired water (see #18).

6) Are there any known endangered or threatened species affected by the project?

☐ No

☒ Yes - Identify the species and indicate whether it is on Federal or State lists.
A review was conducted by the Bureau of Endangered Resources. The Natural Heritage Inventory data files indicated that in the Rock River, the redfin shiner (lythrurus umbratilis), a State Threatened species is historically known to occur.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☒ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.
Initial coordination with DNR has been completed, but coordination will be on-going during the design and construction phases of the project. The redfin shiner (lythrurus umbratilis) is not known or anticipated to occur at this bridge location, but It is recommended that during final design for the piers, a field survey should be conducted and sediment sampling be completed to determine if habitat for this fish will be impacted.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

The area surrounding the Rock River crossing is primarily residential and commercial development. There are no wetlands in the vicinity of the IH 39/90 crossing.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.05 Acres (<0.02 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

The existing two lane span bridges (WB and EB) crossing over the Rock River will be removed and reconstructed as three lane (minimum) span bridges as part of this project. There will likely be a slight shift in roadway and bridge alignment in this area to accommodate construction staging and maintenance of 4 lanes of traffic (two in each direction) during the reconstruction. The stream hydraulics will not change because of this proposed work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The stream hydraulics resulting from the reconstructed bridges will not change from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor’s Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The floodplain in the vicinity of the IH 39/90 crossing is located within the vegetated stream bank of the Rock River. A number of river-front houses are situated along the top of the stream bank on both sides of the river. The vegetated stream bank provides wildlife habitat and floodwater storage within this setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. Since this project is located within the existing IH 39/90 corridor, with some minor alignment shifting to accommodate reconstruction of the existing roadway, the project will not cause significant adverse impacts to the local biological community.

The Rock River is a 303(d) impaired water. The primary water quality problems are excessive growth of algae, reduced dissolved oxygen levels, and poor water clarity (turbidity). The listed impairments are dissolved oxygen, sedimentation, and a fish consumption advisory.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Tributary to Saunders Creek	2) Stream Location T5N, R12E, S22, NW1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 2 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Bigmouth Shiner, Black Bullhead, Bluntnose Minnow, Brassy Minnow, Brook Stickleback, Central Mudminnow, Central Stoneroller, Common Carp, Common Shiner, Creek Chub, Fantail darter, Fathead Minnow, Golden Shiner, Green Sunfish, Hornyhead Chub, Johnny Darter, Northern Pike, Northern Redbelly Dace, Pearl Dace, Rock Bass, Southern Redbelly Dace, Stonecat, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

This land use adjacent to this crossing is forest. Wetland D-5 (RPF) and D-11 (RFE) are located east and west of IH 39/90, but are not impacted by the project.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.05 Acres (<0.02 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

The existing bridges crossing the tributary to Saunders Creek will be widened and will have a deck replacement to accommodate a widening of the road. The stream hydraulics will not be changed by this work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The proposed bridge will not be changed from existing configuration and backwater will not change from existing conditions. The bridge hydraulics will be unchanged from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the bridges or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is forest and wetland (RPF/RPE), and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Tributary to Saunders Creek	2) Stream Location T5N, R12E, S16, SE1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 3 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Bigmouth Shiner, Black Bullhead, Bluntnose Minnow, Brassy Minnow, Brook Stickleback, Central Mudminnow, Central Stoneroller, Common Carp, Common Shiner, Creek Chub, Fantail darter, Fathead Minnow, Golden Shiner, Green Sunfish, Hornyhead Chub, Johnny Darter, Northern Pike, Northern Redbelly Dace, Pearl Dace, Rock Bass, Southern Redbelly Dace, Stonecat, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

This land use adjacent to this crossing is wetland D-6 (RPE) and D-10 (RPF). Agricultural land is located east and west of IH 39/90, but outside the stream crossing location.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the ROW corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.05 Acres (<0.02 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

This existing box culvert carrying the tributary to Saunders Creek across IH 39/90 will be lengthened to accommodate a widening of the road. The stream hydraulics will not be changed by this work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The hydraulics of the lengthened culvert will not change from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the culvert or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is wetlands and agricultural fields. These provide wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Mud Creek	2) Stream Location T6N, R11E, S13, NE1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 1 foot	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Banded Killifish, Black Bullhead, Blacknose Shiner, Bluntnose Minnow, Brassy Minnow, Brook Stickleback, Central Mudminnow, Central Stoneroller, Common Carp, Common Shiner, Creek Chub, Fantail darter, Fathead Minnow, Golden Redhorse, Hornyhead Chub, Johnny Darter, Largemouth Bass, Northern Pike, Northern Redbelly Dace, Pearl Dace, Redfin Shiner, Southern Redbelly Dace, Tadpole Madtom, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

This land use adjacent to this crossing is primarily agricultural. Wetland D-15 (M) is located on the west side of IH 39/90, and D-23 (RPF) is located on the east side of IH 39/90.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the right of way corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. 0.07 Acres (0.03 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

This existing box culvert carrying Mud Creek across IH 39/90 will be lengthened to accommodate a widening of the Interstate. The stream hydraulics will not be changed by this work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The hydraulics of the lengthened culvert will not change from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the culvert or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is agricultural fields and provides wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. There will be no additional impacts.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Tributary to Yahara River	2) Stream Location T6N, R11E, S11, SW1/4
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 1 foot	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present American Eel, Black Bullhead, Black Crappie, Bluegill, Bluntnose Minnow, Bowfin, Brook Silverside, Brook Stickleback, Brown Bullhead, Central Mudminnow, Channel Catfish, Common Carp, Fathead Minnow, Freshwater Drum, Golden Shiner, Green Sunfish, Iowa Darter, Johnny Darter, Largemouth Bass, Log Perch, Northern Pike, Pumpkinseed, Rock Bass, Shorthead Redhorse, Smallmouth Bass, Spotfin Shiner, Tadpole Madtom, Walleye, White Bass, White Crappie, White Sucker, Yellow Bass, Yellow Bullhead, Yellow Perch.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

This land use adjacent to this crossing is primarily wetland D-12 (M and SS) on the west side of IH 39/90, and agricultural on the east side of IH 39/90.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the ROW corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☐ Not Applicable - No fill to be placed in wetlands.

☒ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.05 Acres (<0.02 Hectares)

☐ Individual Section 404 Permit required

☒ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☒ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

This existing box culvert carrying the tributary to the Yahara River across IH 39/90 will be lengthened to accommodate a widening of the Interstate. The stream hydraulics will not be changed by this work.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

No backwater will be created by the proposed action. The hydraulics of the lengthened culvert will not change from existing conditions; therefore the flood elevations will not be increased by the proposed action. These activities are consistent with NR 116, the National Flood insurance Program, and the Governor's Executive Order #73.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the culvert or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is wetland on the west side of IH 39/90, and agricultural fields on the east side. Both provide wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

Plants, animals, and aquatic species that may inhabit the construction area may be directly impacted during construction activities. There will be no additional impact.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

STREAMS AND FLOODPLAINS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2097 2004

Alternative Preferred Build (Reconstruction)	Preferred ☒ Yes ☐ No
Length of Project This Sheet is Evaluating 45.5 miles	
1) Stream Name Door Creek	2) Stream Location T6N, R11E, S6, N1/2
3) Stream Type (Indicate Stream Class, if known) ☒ Unknown ☐ Warm water ☐ Trout-Class ☐ Wild and Scenic River	4) Size of Upstream Watershed Area ☒ Permanent Flow (year-round) ☐ Temporary Flow (dry part of year)
5) Stream Characteristics a) Substrate ☐ Sand ☒ Silt ☐ Clay ☐ Cobbles ☐ Other-describe:	
b) Average Water Depth 3 feet	c) Vegetation in Stream ☒ Absent ☐ Present - If known describe: if present, unknown
d) Identify Fish Species Present Black Bullhead, Brassy Minnow, Brook Stickleback, Common Carp, Creek Chub, Johnny Darter, Northern Pike, White Sucker.	e) If water quality data is available, include this information (e.g., DNR or local discharger might have such records). None. Also, this waterbody is not on the State 303(d) list of impaired waters.

6) Are there any known endangered or threatened species affected by the project?

☒ No

☐ Yes - Identify the species and indicate whether it is on Federal or State lists.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

7) If bridge replacement, are migratory bird nests present?

☒ No

☐ Yes – Identify Bird Species present
Estimated number of nests is:

8) Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable

☐ No - Describe mitigative measures.

☐ Yes

9) Describe land adjacent to stream. If wetland, give type.

The Door Creek crossing is located adjacent to wetland areas D-30 (RPE) and D-33 (RPE). There is also some agricultural land in the vicinity located west of IH 39/90 and north of Door Creek.

10) Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site.

No point-source dischargers or receivers are known to exist. Storm water drainage ditches exist within the ROW corridor and are considered non-point source dischargers to the streams. Agricultural runoff is the primary non-point source in the region.

11) Section 404 Permit

☒ Not Applicable - No fill to be placed in wetlands.

☐ Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. <0.0 Acres (<0.0 Hectares)

☐ Individual Section 404 Permit required

☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404.
Indicate which GP or LOP is required.

☐ Non-Reporting GP ☐ Provisional GP
☐ Provisional LOP ☐ Programmatic GP

12) Section 10 Waters
For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

☐ No

☒ Yes - Describe results of Notification.

In a letter dated December 11, 2007, the USCG determined that the project does not involve bridges over navigable waters of the United States. Therefore, a USCG bridge permit is not required.

Identify which Nationwide Section 10/404 Permit is required.

Indicate whether Pre-Construction Notification (PCN) to the U.S. Corps of Engineers(USACE) is:

☐ Required

☐ Submitted on (Date)

Status of PCN
USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

13) Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment. (Note: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal.)

No work will be conducted on the bridges over Door Creek as part of this project. The current bridges over Door Creek were widened and had deck replacements constructed in 2005, and work done under that project is sufficient for this interstate widening project. The approach roadways will be widened up to the bridge. The current bridge will remain in place. Therefore there will be no direct impacts to the stream and no change in bridge hydraulics from existing conditions.

14) Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

There are no changes to the bridge, therefore no backwater will be created by the proposed action.

15) Describe and provide the results of coordination with any floodplain zoning authority.

No coordination was conducted because there will be no effect on the bridge or stream hydraulics.

16) Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

☒ No impacts would occur.

☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.

☐ Significant flooding with a potential for property loss and a hazard to life.

☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

17) Discuss existing or planned floodplain use and briefly summarize the project's effects on that use.

The existing floodplain is wetland with some agricultural fields. These areas provide wildlife habitat, floodwater storage, storm water attenuation, and aesthetic benefits within this rural setting. There are no known planned uses for the floodplain. The project will not impact the current use of the floodplain.

18) Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream.

No work is anticipated on the bridges over Door Creek as part of this project. There will be no additional impact.

19) Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Standard erosion control practices (see forms DT2080 and DT2076) will be implemented during construction of adjacent approach roadways to minimize short-term adverse effects. Following construction, the adjacent habitats will be reestablished to function similar to preconstruction conditions.

20) Erosion control or storm water management measures which will be used to protect the stream are shown on form DT2080, Erosion Control Impact Evaluation and form DT2076, Stormwater Impact Evaluation.

☒ Yes

☐ No - Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

UPLAND HABITAT IMPACT EVALUATION

Wisconsin Department of Transportation

DT2098 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Center Line and Termini This Sheet is Evaluating
45.5 miles

1) Give a brief description of the upland habitat area. Include prominent plant community(ies) at the project site (list vegetation with a brief description of each community type if more than one present).

Approximately 95 percent of the project area is considered upland habitat and 5 percent is considered wetland habitat. The upland habitat consists of agricultural lands (60 percent), southern hardwood forest (10 percent), red pine plantations (less than 1 percent), and urban open spaces (24 percent). The southern hardwood forest consists primarily of red oak, white oak, and red maple. The agricultural land consists primarily of corn fields and pastures. The urban open spaces consist primarily of lawns, school playgrounds, greenbelts, and drainageways.

2) Identify and describe any observed or expected wildlife associations with the plant community(ies).

Wildlife species observed during the site reconnaissance completed in spring 2003 include various songbird species, crows, turkeys and whitetail deer. Other wildlife species common to southern Wisconsin likely inhabit these habitats. Expected seasonal residents include other waterfowl, songbirds and shorebirds. Expected permanent residents include songbirds, raptors, herpitiles, turkeys, and mammals (small mammals, furbearers, and whitetail deer).

3) Identify the dominant plant community(ies) and estimate existing and proposed area of each dominant plant community to be altered.

Approximately 111 ac (45 ha) of agricultural lands, 22.7 ac (9.2 ha) of upland forest community, and 0.24 ac (0.1 ha) pine plantation will be impacted by this project.

4) Are there any known endangered or threatened species affected by the project?

☐ No

☒ Yes - Identify the species and indicate whether it is on Federal or State lists.

A review was conducted by the WDNR Bureau of Endangered Resources. The Natural Heritage Inventory data files indicated the possibility of rare species and natural communities occurring in or adjacent to the project corridor (within two miles). A letter from the Bureau of Endangered Resources is included in Appendix G. A review of this list was conducted and it was determined that based upon the initial wetlands and natural resources field survey it was unlikely that any of the listed plants exist within the areas that would impacted by this project.

In the Rock River, the redfin shiner (lythrurus umbratilis), a State Threatened species is historically known to occur. It is recommended that during final design, when the design for the extended pier in the Rock River is complete, a field survey should be conducted and sediment sampling be completed to determine if any habitat for this fish will be impacted.

The US Fish and Wildlife Service (FWS) conducted a review of the project area. The eastern massasauga rattlesnake (Sistrurus catenatus catenatus) has been recorded in habitats similar to those that are in or adjacent to areas that could be potentially affected by the project, including the Turtle Creek corridor. FWS notes that there are "also several rare and/or state-listed species found in the Turtle Creek watershed, and recommends that if the project will involve impacts to Turtle or Spring Creeks or their adjacent wetlands or uplands, that those areas be reviewed for their potential to provide habitat for state or federally listed species. Further, they recommend that crossings of those waterways be designed to allow continuity of riparian corridors under the bridges to reduce potential species mortality. An update to the records search is requested for a time lag of more than 12 months between plan completion and execution.

☐ Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

☐ Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

5) Describe the nature of proposed work in the upland habitat area (e.g., grading, clearing, grubbing, etc.).

Clearing and grading is proposed in the southern hardwoods and agricultural land communities during construction.

6) Identify and describe any known wildlife or waterfowl use areas or movement corridors that would be severed or eliminated by the proposed action. Include a discussion of the proposed action's effects upon the areas or corridors.

There are no known wildlife areas in Rock or Dane Counties that are severed or eliminated by the proposed improvements along the IH 39/90 corridor. The existing IH 39/90 corridor has previously fragmented upland habitat. Wildlife or waterfowl movement from one side of the highway to the other generally occurs within stream crossings and bridge openings or by air. Expansion along the existing IH 39/90 corridor will not eliminate any wildlife or waterfowl movement corridors or create additional fragmentation of existing upland or wetland habitat.

7) Discuss other direct impacts on wildlife and estimate significance.

There will not be known significant direct impacts to upland or wetland wildlife species. Species associated with the preferred alternative may be directly impacted during construction. Incidental taking of wildlife species associated with the highway expansion may occur during construction. These species are considered common to southern Wisconsin. Suitable habitat exists adjacent to the preferred alternative to accommodate species that may be displaced during construction. No long-term wildlife impacts are anticipated from this project.

FWS notes that the project area may include habitat suitable for nesting by migratory bird species, including song birds and/or raptors. If migratory birds are known to next on any of the project structures, construction should begin before the initiation of the breeding season for those species or after the breeding season has concluded (alternatively, structures can be tightly screened or gelled prior to the breeding season to prevent nesting).

8) Identify and discuss any probable secondary impacts which may be expected due to the project.

Since a majority of the upland habitat has been previously disturbed by agricultural activities, no significant secondary impacts are expected.

9) Describe measures to minimize adverse effects or enhance beneficial effects.

Minimization measures include implementation of standard erosion control measures in upland areas. Clearing and grubbing activities will be limited to the limits of the proposed project corridor. There are no beneficial effects anticipated from this project. However, constructing the project to the extent possible within the existing right of way (rather than on a new alignment) as proposed minimizes negative impacts such as those that would otherwise occur to habitat connectivity – a potential concern noted by FWS.

TABLE 3
SUMMARY OF POTENTIAL WOODLAND IMPACTS
IH 39/90 CORRIDOR

COUNTY	WOODLAND CODE NO.	STATION		WOODLAND IMPACTED AREA (ACRES)	NATIVE COMMUNITY (ACCORDING TO VEGETATION OF WISCONSIN BY JOHN CURTIS)
Rock	RF-1	K 255 - K 261 (LT)		0.04	Dry Southern Hardwoods
Rock	RF-2	K 200 - K 231 (RT)		1.15	Dry Southern Hardwoods
Rock	RF-3	J 456 - J 511 (LT)		3.42	Dry-Mesic Southern Hardwoods
Rock	RF-4	J 485 - J 503 (MED)		4.02	Dry Southern Hardwoods
Rock	RF-5	J 369 - J 380 (LT)		0.53	Dry Southern Hardwoods
Rock	RF-6	J 373 - J 384 (RT)		1.45	Dry Southern Hardwoods
Rock	RF-8	J 456 - J 460 (RT)		0.20	Dry Southern Hardwoods
Rock	RF-9	J 495 - J 536 (RT)		4.72	Dry Southern Hardwoods
Dane	DF-1	H 432 - H 442 (LT)		0.23	Dry Southern Hardwoods
Dane	DF-4	G 453 - G 463 (RT)		0.11	Dry Southern Hardwoods
Dane	DF-5	G 457 - G 495 (MED)		2.89	Dry Southern Hardwoods
Dane	DF-8	H 259 - H 285 (RT)		2.04	Dry-Mesic Southern Hardwoods
Dane	DF-11	H 182 - H 206 (LT)		0.97	Dry Southern Hardwoods
Dane	DF-12	G 492 - G 490 (LT)		0.86	Dry Southern Hardwoods
Dane	DF-14	G 223 - G 230 (RT)		0.24	Red Pine Plantation
Total Woodland Impact Acreage				**22.9**	

EROSION CONTROL

DT2080 2005

Wisconsin Department of Transportation

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Center Line and Termini This Sheet is Evaluating
45.5 miles

1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.
   Existing side slopes within the existing roadway generally vary from 6:1 to a maximum of 3:1. The proposed side slopes will not vary from from the existing.
   The existing road profile contains slopes varying from 0.3 percent to 3.0 percent. The proposed road profile slopes will not vary from the existing profile slopes. Ramp slopes may be as high as 5 percent.

2. Indicate all natural resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.

   ☐ No - There are no sensitive resources affected by the proposal.

   ☒ Yes - Sensitive resources exist in or adjacent to the area affected by the project.

   ☒ River/stream ☒ Wetland ☐ Lake ☐ Endangered species habitat
   ☐ Other – Describe

3. Are there circumstances requiring additional or special consideration?

   ☐ No additional or special circumstances are present.

   ☒ Yes - Additional or special circumstances exist. Indicate all that are present.

   ☒ Areas of groundwater discharge ☒ Areas of groundwater recharge (fractured bedrock, wetlands, streams)
   ☐ Long or steep cut or fill slopes ☒ Overland flow/runoff
   ☐ Other – Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances.

4. Describe overall Erosion Control strategy to minimize adverse effects and/or enhance beneficial effects.

   The proposed improvement for IH 39/90 involves reconstructing the existing 4-lane divided interstate highway (on the same alignment) and adding an additional lane in each direction to create a 6-lane divided highway. Minor slope grading will be involved to update the clear zone area to current design standards.
   Standard WisDOT erosion control methods will be used during construction per WisDOT Standard Specifications for highway and structure construction. Additionally, soil erosion control requirements enforced by the Dane County Land Conservation Department will be followed.
   Temporary erosion control methods would include, but are not limited to, minimizing the amount of exposed land at one time (staged construction), erosion bales, temporary seeding, silt fencing, erosion mats, riprap (channel stabilization), separating construction from live water, sediment traps, and dust abatement.
   Permanent erosion control methods would include, but are not limited to, riprap (channel stabilization), seeding and mulching, ditch or slope sodding, grass-lined conveyance (parallel to flow), distancing outfalls from waterway edge, vegetated filter strips (perpendicular to flow), and detention/retention basins.
   Construction site erosion and sediment control would be part of the project's design and construction as set forth in TRANS 401 Wis. Adm. Code and the WisDOT/WisDNR Cooperative Agreement. An Erosion Control Implementation Plan (ECIP) will be prepared and reviewed by WisDOT prior to construction. WisDOT will approve the ECIP with concurrence from WDNR. The goal of the construction site erosion control plan will be to implement best management practices (BMPs) using erosion control practices described in the FDM that , by design, meet an 80 percent reduction in the average annual sediment load carried by runoff, as compared with no sediment or erosion controls, until the site has undergone final stabilization. During construction, the Trans 401 process will be followed, maintaining proper erosion control techniques that will minimize offsite sedimentation.

The goal of post-construction soil erosion and sedimentation control plan will be the implementation of BMPs that minimize pollutants in runoff, maintain or lower runoff discharge rates as compared to predevelopment site conditions for the 2-year, 24-hour design storm, create and maintain buffer areas, and control 40 percent of the total suspended solids that would normally run off the site (this is the performance standard for highway reconstruction). To the maximum extent practicable (MEP), WisDOT will attempt to fulfill requirements for peak discharge reduction.

5. Erosion control measures reached consensus with the appropriate authorities as indicated below.

WDNR County Land Conservation Department Native American Tribe
Army Corp of Engineers WisDot will be coordinating with these agencies to develop suitable and acceptable erosion control practices for the project.

(All Erosion Control measures (i.e., the Erosion Control Plan) shall be coordinated through the DOT-DNR liaison process and TRANS 401 except when Tribal lands of Native Americans are involved. DNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WDNR and to WisDOT 14 days prior to the preconstruction conference (Trans 401.08(1)) and must be approved by WisDOT before implementation. On Tribal lands, coordination for 402 (erosion) concerns are either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (EPA). EPA or the Tribes have the 401 water quality responsibility on Trust lands. Describe how the Erosion Control/Storm Water Management plan can be compatible.)

6. Identify the temporary and permanent erosion control measures to be utilized on the project. Consult the FDM Chapter 10 and the Products Acceptability List (PAL).

- ☒ Minimize the amount of land exposed at one time
- ☒ Temporary seeding
- ☒ Silt fence
- ☒ Ditch checks
- ☒ Erosion or turf reinforcement mat
- ☒ Ditch or slope sodding
- ☐ Soil stabilizer
- ☒ Inlet protection
- ☒ Turbidity barriers
- ☐ Temporary settling basin
- ☒ Mulching
- ☒ Detention basin
- ☒ Vegetative swales
- ☒ Pave haul roads
- ☒ Dust abatement
- ☒ Rip rap
- ☒ Buffer strips
- ☒ Dewatering – Describe method Cofferdam
- ☐ Silt screen
- ☐ Temporary diversion channel
- ☒ Permanent seeding
- ☐ Other - Describe

STORMWATER IMPACT EVALUATION

Wisconsin Department of Transportation

DT2076 1/2007

Alternative	Length of Centerline and Termini This Sheet is Evaluating
Preferred Build (Reconstruction)	45.5 Miles

Surrounding land use and a discussion of adopted plans are described on DT2094, Environmental Evaluation of Facilities Development Actions.

1. Indicate whether the affected area may cause a discharge or will discharge to the waters of the state (Trans 401.03). Special consideration should be given to areas that are sensitive to water quality degradation. Provide specific recommendations on the level of protection needed.

   ☐ No water special natural resources are affected by the proposal.

   ☒ Yes – Water special natural resources exist in the project area.

   ☒ River/stream ☒ Wetland ☐ Lake ☐ Endangered species habitat
   ☐ Other - Describe

2. Indicate whether circumstances exist in the project vicinity that require additional or special consideration, such as an increase in peak flow, total suspended solids (TSS), or water volume.

   ☐ No additional or special circumstances are present.

   ☒ Yes - Additional or special circumstances exist. Indicate all that are present.

   ☒ Areas of groundwater discharge ☒ Areas of groundwater recharge ☐ Stream relocations
   ☒ Overland flow/runoff ☐ Long or steep cut or fill slopes ☐ High velocity flows
   ☐ Cold water stream ☒ Impaired waterway ☐ Large quantity flows
   ☐ Exceptional/outstanding resource waters ☐ Increased backwater
   ☒ Other – Describe any unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances. Additng additional impervious surfaces will increase peak flows and TSS. Practices such as soil ripping will be examined to determine if this is suitable to reduce runoff volumes.

3. Describe the overall storm water management strategy to minimize adverse effects and enhance beneficial effects.

   The proposed improvements to IH 39/90 involve reconstructing the existing four-lane divided interstate highway (on the same alignment) and adding an additional lane in each direction to create a six-lane divided highway. Minor slope grading will be involved to update the clear zone area to current design standards.

   The Preferred Build Alternative includes 10 stream crossings and placement of fill in 51 wetland areas. The individual wetland areas and stream crossings are discussed in further detail in the Wetland Impact Evaluation and Stream and Floodplains Impact Evaluation. Protection required for each crossing will be based on agency requirements and will be commensurate with the quality and sensitivity of the wetland and stream resource at each location.

   A set of new bridges (EB & WB) is proposed at the Rock River crossing. No other new bridges or box culverts are proposed for this project. One set of bridges (EB & WB) will be widened and re-decked, and four box culverts will be extended to accommodate the interstate widening. The remaining four stream crossings are bridge crossings where the bridge deck was widened as part of projects conducted in 2003-2005. The hydraulics of the widened bridges and box culvert extensions will not change from existing conditions.

   Stormwater Management will be in accordance with WDNR/WisDOT Cooperative Agreement and Trans 401 post-construction requirements. Impervious road surfaces produce runoff volumes generally proportional to the pavement area. Gravel shoulders, grass medians, and swales tend to slow conveyance of stormwater to discharge points through a combination of friction loss and infiltration into the ground.

Most of the runoff from the Preferred Build Alternative would be buffered by the rural roadway cross section with depressed grass medians in the Rock County segment and with grass swales throughout the corridor.

This project passes through several communities with Phase I and Phase II stormwater management regulations. WisDOT will coordinate with the city of Madison, Dane County, the city of Janesville, and the city of Beloit to ensure that their respective stormwater requirements are met.

Stormwater detention/retention areas will be considered in the loop ramp areas of the interchanges to provide for management of stormwater.

No unique, innovative or atypical stormwater management measures are proposed to be implemented at this time, although soil ripping will be investigated to determine its suitability to the project in reducing additional peak flows and TSS loadings from the additional impervious surfaces. Stormwater will be analyzed in further detail as the proposed action moves into the final design phases to determine the final details of channels, ditches, culverts, and stormwater detention/retention ponds which may be required to control runoff and accommodate existing drainage patterns in accordance with Trans 401 and the WDNR/WisDOT cooperative agreement.

4. Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 requirements.

The stormwater management plan will be developed and incorporated into the project's design to reduce or minimize runoff impacts to surrounding waters in coordination with the WDNR/WisDOT cooperative agreement and Trans 401.

Standard WisDOT guidelines for drainage-related erosion control measures and NR 151 standards for stormwater runoff control will be incorporated into the stormwater management strategy. The stormwater strategy will include vegetated swales and medians. Best management practices will be designed, installed, and maintained to infiltrate runoff and reduce erosion to the maximum extent practicable.

5. Identify the storm water management measures to be utilized on the project.

- ☒ Swale treatment (parallel to flow) Trans 401.106(10)
- ☐ Vegetated filter strips (perpendicular to flow)
- ☒ Distancing outfalls from waterway edge
- ☐ Constructed storm water wetlands
- ☐ In-line storm sewer treatment, such as catch basins, non-mechanical treatment systems
- ☒ Detention/retention basins - Trans 401.106(6)(3)
- ☒ Buffer areas - Trans 401.106(6) - Describe 50 foot area starting at the ordinary high water mark of streams, and 10-50 foot area starting at delineated boundary of wetlands.
- ☐ Infiltration - Trans 401.106(5)
- ☐ Other

6. Indicate whether any Drainage District may be affected by the project.

☐ No – There will be no effects to a recognized drainage district.

☒ Yes - Identify the affected drainage district.

The IH 39/90 right of way is adjacent to or within three active drainage districts in Dane County. The Drainage Districts in the project area are as follows:

District "Blooming Grove" (Adjacent to 3,600' of IH 39/90 right of way near USH 12/18)
District "Door Creek" (Located within 3,700' of IH 39/90 right of way from CTH AB to CTH MN)
District "12" (Located within 1,400' of IH 39/90 right of way near Williams Drive)

Has initial coordination with drainage board been completed?

☐ No

☒ Yes - Discuss results.

The Dane County Drainage Board was contacted May 4, 2007 by letter and informed of the project. Written comments or concerns was requested, but no response was received. See Appendix F, pages 32-33. Additional coordination will take place during final design.

Has initial coordination with Department of Agriculture, Trade and Consumer Protection (DATCP) been completed?

☐ No

☒ Yes - Discuss results.

An Agricultural Impact Statement (AIS) was published by DATCP on February 29, 2008 (DATCP #3413). Concern about drainage impacts was the one most widely expressed by landowners. A copy of the AIS Executive Summary is attached as Appendix G.

7. Indicate whether the project is within DOT's Phase I or Phase II storm water management area. (NOTE: See Procedure 20-30-1, Figure 1, Attachment A4 the Cooperative Agreement between the Wisconsin Departments of Transportation and Natural Resources. Contact Bureau of Equity and Environmental Services Stormwater Engineer or the Regional Environmental Coordinator for more details on the following areas.)

☐ No - The project is outside of WisDOT's stormwater management area.

☒ Yes - The project affects one of the following regulated by a WPDES storm water discharge permit issued by the DNR.

☒ WisDOT storm sewer system located within municipalities with populations > 100,000.

☐ WisDOT storm sewer system located within a notified owner of municipal separate storm sewer systems.

☒ Urbanized areas as defined by the U.S. Census Bureau, NR216.02(3).

☒ Municipal separate storm sewer systems serving > 10,000.

8. Has the affect of downstream properties been considered?

☐ No

☒ Yes – Coordination is in process.

9. Are there any property acquisitions for storm water management purposes?

☒ No - There are no property acquisitions acquired for stormwater management purposes.

☐ Yes - Complete the following.

☐ Safety measures, such as fencing, flooding, are <u>not</u> needed for potential conflicts with existing and expected surrounding land use.

☐ Safety measures are needed for potential conflicts with existing and expected surrounding land use.

Describe proposed safety measures.

AIR QUALITY IMPACT EVALUATION

Wisconsin Department of Transportation

DT2072 2004

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Portion of Project This Sheet is Evaluating if Different From Sheet 1

45.5 miles

Carbon Monoxide

1) Is this project exempt from air quality analysis under Wisconsin Administrative Code – NR 411

☐ No – NR 411 exemptions do not apply

☒ Yes – NR 411 exemption(s) apply – Identify exemption(s) and explain why project is exempt.
All proposed new roadways in the corridor have a peak hour volume (PHV) of less than 1,200 and all modified roadways in the corridor have PHV increase of less than 1,200. The WDNR Bureau of Air Management had determined that a screening review is not necessary at this time as exemption determinations are typically made not more than 3 years before anticipated construction. See Appendix F, page 1.

2) An air quality analysis was required

☒ No

☐ Yes – Identify the air quality modeling technique or program used to perform the analysis. Attach the Maximum Projected Carbon Monoxide (CO) Concentrations worksheet to this evaluation to illustrate the results.

3. If an air quality analysis was performed, will a Construction Permit be required to address air quality before the project may proceed

☐ No

- ☐ Letter of concurrence from DNR Bureau of Air Management requested. (See attached request letter – Exhibit)
- ☐ Letter of concurrence received from DNR Bureau of Air Management. (See attached Exhibit)

☐ Yes – Indicate:

Date Permit Requested	OR Date of Permit

Ozone

4) Is the project located in a county which is designated non-attainment or maintenance for ozone

☒ No

☐ Yes – If Yes, one of the following boxes must be checked

- ☐ This project is included in the approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region's Metropolitan Planning Organization (MPO). The TIP was found to conform by the Federal Highway Administration and the Federal Transit Administration. Provide RTP Name, TIP name, TIP number and conformity finding date(s).

RTP Name	TIP Name
MPO Name	**TIP Number**

Conformity Finding Date(s)

- ☐ This project is located outside of a Metropolitan Planning Organization's boundaries and has received a positive conformity determination per the rural conformity section of the WisDOT/WDNR Memorandum of Agreement regarding determination of conformity. Provide conformity finding date.
- ☐ This project is located outside of a Metropolitan Planning Organization's boundaries, it is a project comparable to one of those described in 40 CFR 93.126 and is included in the State Transportation Improvement Program (STIP).
- ☐ This project is exempt per 40 93.127
- ☐ Other, describe

MAXIMUM PROJECTED CARBON MONOXIDE (CO) CENTRATIONS

Receptor Location or Site Description (See Exhibit)	Carbon Monoxide (ppm) [1]			
	1 – Hour Peak [2]		8 – Hour Average [3]	
	Construction Year	Construction Year Plus Ten Years	Construction Year	Construction Year Plus Ten Years

[1] ppm = parts per million – parts of CO per million parts of gas.

[2] Includes 1-hour ambient background CO concentration of ppm.

[3] Includes 8-hour ambient background CO concentration of ppm.

CONSTRUCTION STAGE SOUND QUALITY IMPACT EVALUATION

Wisconsin Department of Transportation
DT2074 2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No

Length of Center Line and Termini This Sheet is Evaluating
45.5 miles

1) Identify and describe residences, schools, libraries, or other noise sensitive areas near the proposed action and which will be in use during construction of the proposed action. Include the number of persons potentially affected.

   With the exception of the portion of IH 39/90 that travels through the city of Janesville, the interstate corridor is predominantly rural. There is an estimated 118 residences along the rural segments of the interstate that can generally be described as farmhouses or houses in low density rural subdivisions.

   A larger concentration of houses, schools, and churches exist near IH 39/90 in the city of Janesville between STH 26 and STH 11. Within this 4.5 mile segment there is an estimated 1,586 residences, 3 churches, 2 schools, and 1 park. The churches tend to have the majority of their services Saturday evenings or Sunday mornings, both of which are times in which construction noise would be minimal. Some church activities could occur during the weekday, but they would be nominal. The class room portions of the two schools are set back about 500-feet from the southbound lanes of the interstate. Normal school sessions are between the months of September and June. See receptor location map, Exhibit TN-1, attached to Factor Sheet DT2092, Traffic Noise Impact Evaluation.

2) Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels.

   The noise generated by construction equipment will vary greatly, depending on equipment type/model/make, duration of operation and specific type of work effort. However, typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet (15.2 meters).

   Figure 1 shows typical noise levels for a variety of construction equipment. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

   NOTE TO AUTHOR – If a copy of the “Construction Equipment Sound Level” figure is not available from the District Environmental Coordinator, a copy may be obtained from the Central Office Noise Engineer.

3) Describe the construction stage noise abatement measures to minimize identified adverse noise effects.

   To reduce the potential impact of construction noise, the special provisions for this project will require that motorized equipment shall be operated in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. All motorized construction equipment will be required to have mufflers constructed in accordance with the equipment manufacturer’s specifications or a system of equivalent noise reducing capacity. It will also be required that mufflers and exhaust systems be maintained in good working condition, free from leaks and holes.

FIGURE 1

Construction Equipment Sound Levels

	Sound Level (dBA) at 50 Feet					
	60	70	80	90	100	110
Equipment Powered by Internal Combustion Engines						
Earth Moving						
Compactors (Rollers)		------				
Front Loaders		----------				
Backhoes		----------				
Tractors		----------				
Scrapers,Graders			----------			
Pavers			----			
Trucks			----------			
Materials Handling						
Concrete Mixers		----------				
Concrete Pumps			----			
Cranes (Movable)		----------				
Cranes (Derrick)			----			
Stationary						
Pumps	----					
Generators		----------				
Compressors		----------				
Impact Equiptment						
Pneumatic Wrenches			-------			
Jack Hammers & Rock Drills			----------			
Impact Pile Drivers				----------		
Other						
Vibrator	----------					
Saws		----------				

SOURCE: Figure 2-36, Report to the President and Congress on Noise

Prepared by the U.S. EPA, Febuary 1972

TRAFFIC NOISE IMPACT EVALUATION

Wisconsin Department of Transportation

DT2092 2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Portion of Project This Sheet is Evaluating	
45.5 miles	

Need for Noise Analysis

1) Is the proposed action considered a Type I project? (A type I project is defined as a project that involves construction of a roadway on new location or the physical alteration of an existing highway which substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes.)

☐ No – Complete only form DT2074, Construction Stage Sound Quality Impact Evaluation.
☒ Yes – Complete form DT2074, Construction Stage Sound Quality Impact Evaluation and the rest of this sheet.

Traffic Data

2) Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on DT2094, Environmental Evaluation of Facilities Development Action, Traffic Summary Basic Sheet.

☒ No
☐ Yes – Indicate volumes and explain why they were used.

Automobiles Veh/hr
Trucks Veh/hr
Or Percentage (T) %

3) Identify and describe the noise analysis technique or program used to identify existing and future sound levels. (See attached receptor location map as Exhibit TN-1.) A receptor location map shall be included with this document.

The Federal Highway Administration's Traffic Noise Model (TNM) 2.1 was used to predict existing and future noise levels along IH 39/90 between the interchanges of STH 26 and STH 11. Existing noise measurements were taken at various sites along IH 39/90 using a Model Q-300 Noise Dosimeter. These levels were used to calibrate the TNM 2.1 existing noise model. The rural areas were modeled using the Federal Highway Administration's Traffic Noise Model Look-Up Tables.

4) Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic sound. (See attached receptor location map – Exhibit TN-1.)

With the exception of the portion of IH 39/90 that travels through the city of Janesville, the interstate corridor is predominantly rural. There is an estimated 118 residences along the rural segments of the interstate that can generally be described as farmhouses or houses in low density rural subdivisions.

A larger concentration of houses, schools, and churches exist near IH 39/90 in the city of Janesville between STH 26 and STH 11. Within this 4.5 mile segment there is an estimated 1,586 residences, 3 churches, 2 schools, and 1 park. All of these receptors near IH 39/90, from STH 26 to STH 11 interchanges at Janesville, are affected by traffic noise in the existing and the future conditions. The 3 churches are located between USH 14 and Mt. Zion Avenue in the city of Janesville (receptor 32) The two schools are adjacent to each other and are located just south of Milwaukee Street (receptor 34). The park is located between Palmer Drive and STH 11 (receptor 36).

5) If this proposal is implemented will future sound levels produce a noise impact?

☐ No
☒ Yes, the impact will occur because
  ☒ The Noise Abatement Criteria (NAC) is approached (1 dBA less than the NAC) or exceeded.
  ☐ Existing sound levels will increase by 15 dBA or more.

6) Will traffic noise abatement measures be implemented?

☐ Not applicable – Traffic noise impacts will not occur.
☒ No – Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes. **A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THIS DOCUMENT.**
☒ Yes – Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures which are proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented.

Construction of noise barriers was investigated for all noise impacted receptors along the project. Most receptors in the rural areas are single, isolated homes or businesses. In all of these cases, the housing density is too low and the cost for constructing effective noise barriers is cost prohibitive and not reasonable. Implementation of noise abatement measures in rural areas is not recommended because the cost of the barrier exceeds the benefit.

The urban area of Janesville between STH 26 and STH 11 interchanges was analyzed with TNM 2.1 for the reasonableness of noise barriers constructed near the right of way line. This area was the only segment of the project for which noise abatement (walls) were determined to be reasonable and feasible, and likely to be implemented. For this area:

- Analysis determined that there is a noise impact per Wisconsin Administrative Code, Chapter Trans 405 (receptor ID 31 thru 36 below).
- Abatement measures were investigated and found to be reasonable and feasible. The reasonableness of noise barriers depends upon the cost per resident benefited. A cost exceeding $30,000 per residence benefited is not considered reasonable. The height and length of a section of noise wall was adjusted in the model until an 8-decibel noise reduction occurred at the noise receptors. The cost per area of noise wall is $18/sf. The cost of each section of noise wall was compared to the cost of the number of benefited residences to determine reasonableness of a noise wall for that section. The total length of noise wall along both sides of IH 39/90 in the city of Janesville between USH 14 and STH 11/Racine Street is 43,160 feet. Average height is estimated at 10 feet.
- Abatement measures are likely to be implemented. The results of the noise analysis and reasonableness of noise barriers was discussed with City of Janesville administrators and presented at a Public Information Meeting on April 19, 2006 at Marshall Middle School in Janesville. All impacted residents were invited to attend. Written public comments received from the meeting indicated 107 individuals favoring the City of Janesville passing a resolution supporting the construction of noise barriers for the portion of IH 39/90 between USH 14 and STH 11/Racine Street in Janesville as part of the IH 39/90 reconstruction project. There were 2 non supporters and 1 person undecided.

			Sound Level L_{eq}[1] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in meter (m)	Number of Families of People Typical of this Receptor Site	Noise Abatement Criteria [2] (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)	Impact[3] or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	250'	1 residence	66	71	69	2	5	I
2	300'	2 business 4 residence	71 66	70	67	3	-1 4	N I

[1] Use whole numbers only.
[2] Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.
[3] An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is –1 db or greater). I = Impact, N = No Impact.

3	350'	1 residence	66	69	65	3	3	I
4	400'	3 residence	66	67	65	2	1	I
5	450'	1 residence	66	66	64	2	0	I
6	500'	3 residence	66	65	63	2	-1	N
7	550'	4 residence	66	64	62	3	0	N
8	250'	3 business 3 residence	71 66	71	69	2	0 5	I I
9	300'	4 residence	66	70	68	2	4	I
10	350'	1 residence	66	69	67	2	3	I
11	400'	1 business 3 residence	71 66	67	66	1	-4 1	N I
12	350'	1 residence	66	69	67	2	3	I
13	550'	1 residence	66	64	63	1	-2	N
14	150'	2 residence	66	76	72	4	10	I
15	200'	1 business 4 residence	71 66	74	70	4	3 8	I
16	250'	1 business 1 residence	71 66	72	68	4	1 6	I
17	300'	1 business	71	71	67	4	0	I
18	350'	2 residence	66	69	66	4	4	I
19	450'	1 residence	66	67	64	3	1	I
20	500'	1 business	71	66	63	3	-5	N
21	100'	2 residence	66	79	77	2	13	I
22	150'	4 residence	66	76	72	4	10	I
23	200'	10 residence	66	74	70	4	8	I
24	250'	14 residence	66	72	69	3	6	I
25	300'	1 business 6 residence	71 66	71	67	4	0 5	I I
26	350'	6 residence	66	70	66	4	4	I
27	400'	3 business 10 residence	71 66	68	65	3	-3 2	N I
28	450'	1 business 13 residence	71 66	67	64	3	-4 1	N I
29	500'	1 business 13 residence	71 66	66	63	3	-5 0	N I
30	550'	9 residence	66	65	62	3	-1	N
31	525'	11 business	71	74-77	72-76	1-2	3-6	I
32	550'	3 business 3 churches 981 residences	71 66 66	66 and above	65-72	1	-4-3 1-8 1-8	I I I
33	525'	135 residences	66	66 and above	65-76	1	0	I
34	250'-550'	2 business 2 schools 197 residences	71 66 66	66 and above	61-70	5	0	I I I
35	400'	273 residences	66	66 and above	67-72	1	0	I
36	450'	1 park 5 business	66 71	66 and above	59-76	1	0	I I
37	350'	1 business	71	69	67	2	-2	N
38	350'	2 residence	66	69	66	3	3	I

Receptor Location or Site Identi-fication (See attached Map) (a)	Distance from C/L of Near Lane To Receptor in feet (ft (b)	Number of Families or People Typical of this Receptor Site (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (*) (i)
39	400'	2 Residences	66	68	65	3	2	I
40	450'	1 Business	71	67	64	3	-4	N
		4 Residences	66				1	I
41	550'	2 Residences	66	65	62	3	-1	N
	CTH S TO STH 81/IH 43							
42	500'	1 Business	71	66	63	3	-5	N
43	600'	1 Business	71	64	61	3	-7	N
	STH 81/ IH 43 TO ILLINOIS/WISCONSIN STATE LINE							
44	300'	2 Business	71	71	67	4	0	I
45	500'	1 Business	71	66	62	4	-5	N
46	550'	1 Business	71	65	61	4	-6	N
		2 Residence	66				-1	N

ILLINOIS

ROCK COUNTY

DANE COUNTY

Madison

Stoughton

Edgerton

Janesville

Beloit

Milton

CTH N to USH 12/18	
Receptor	Distance (ft)*
1	250
2	300
3	350
4	400
5	450
6	500
7	550

* from centerline of nearest pavement

USH 51/STH 73 to USH 51	
Receptor	Distance (ft)*
12	350
13	550

* from centerline of nearest pavement

STH 26 to STH 59	
Receptor	Distance (ft)*
21	100
22	150
23	200
24	250
25	300
26	350
27	400
28	450
29	500
30	550

* from centerline of nearest pavement

Illinois State Line to I43	
Receptor	Distance (ft)*
44	300
45	500
46	550

* from centerline of nearest pavement

STH 11 Bypass to STH 11	
Receptor	Distance (ft)*
37	350

* from centerline of nearest pavement

USH 51 to CTH N	
Receptor	Distance (ft)*
8	250
9	300
10	350
11	400

* from centerline of nearest pavement

I43 to CTH S	
Receptor	Distance (ft)*
42	500
43	600

* from centerline of nearest pavement

CTH S to STH 11 Bypass	
Receptor	Distance (ft)*
38	350
39	400
40	450
41	550

* from centerline of nearest pavement

STH 59 to USH 51/STH 73	
Receptor	Distance (ft)*
14	150
15	200
16	250
17	300
18	350
19	450
20	500

* from centerline of nearest pavement

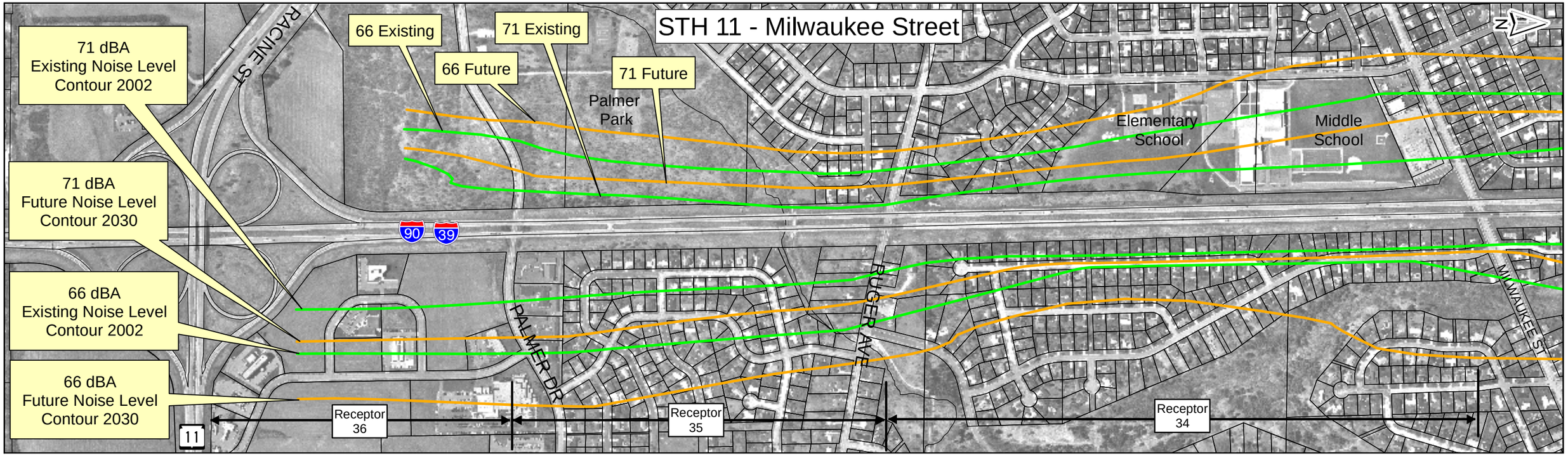
STH 11 to STH 26

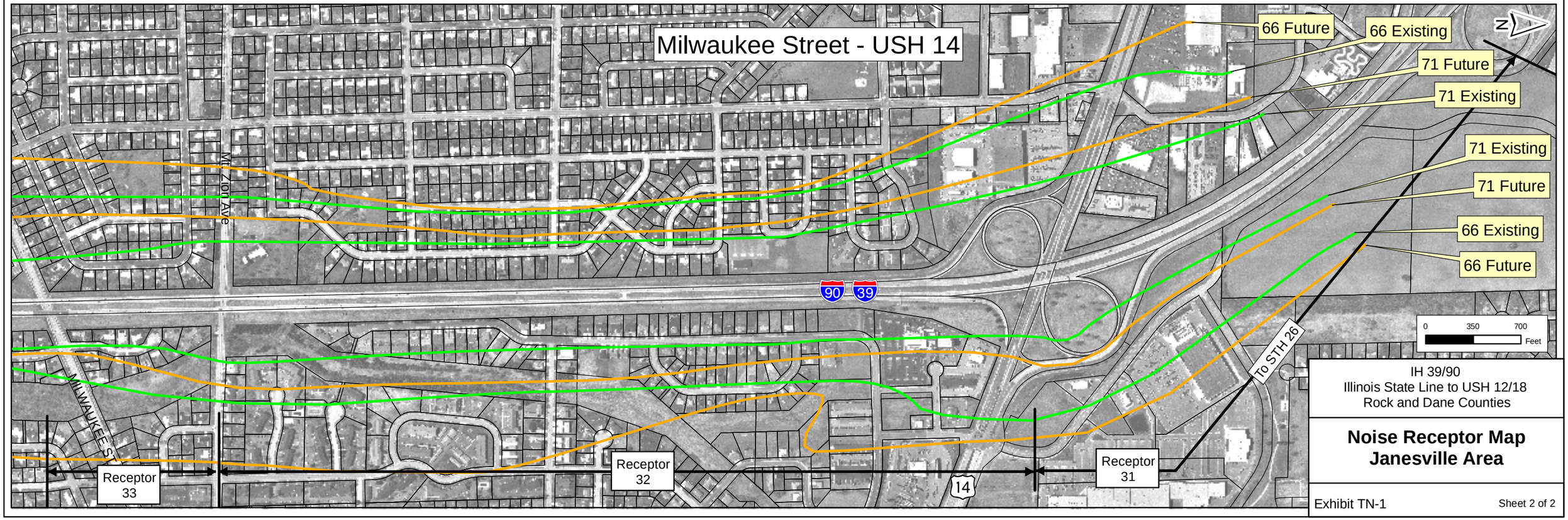
See Janesville Area Map for receptors (Sheet 2)

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Noise Receptor Map

Exhibit TN-1





IH 39/90
Illinois State Line to USH 12/18
Rock and Dane Counties

Noise Receptor Map
Janesville Area

Exhibit TN-1

HAZARDOUS SUBSTANCES OR UNDERGROUND STORAGE TANKS (USTs)

Wisconsin Department of Transportation
DT2079 2005

Alternative	Preferred
Preferred Build (Reconstruction)	☒ Yes ☐ No
Length of Center Line and Termini This Sheet is Evaluating 45.5 Miles	

1) Briefly describe the results of the Phase 1 hazardous materials assessment for this alternative. Do not use property identifiers (owner name, address or business name).

A record search and report was conducted for the project. The study area included all areas within a ¼ mile radius of the 11 interchanges along the project as well as those areas adjacent to the I-39/I-90 mainline in Dane County and Rock County where widening will occur. The record search showed 41 individual listings of sites with potential environmental concerns within the study area.

2) What contaminants are known or suspected to be affecting sites on this alternative?

Petroleum impacted groundwater and/or soil are suspected to be present on 40 sites with potential environmental concerns. Also one landfill is located in the project area and the suspected contaminants are methane gas and polluted groundwater.

3) How many sites require further investigation? 6

Based on the results of the record search and report, it is anticipated additional environmental site investigations are required on four properties where petroleum contaminated soil or groundwater may be present in the existing or proposed right of way near three of the IH 39/90 interchanges.

Also as final design details are developed, follow up with WDNR and DCOMM shall be completed to update the status of ongoing site investigations on two properties at two of the IH 39/90 interchanges. Petroleum contamination is suspected at one of these properties and methane gas/groundwater contamination is suspected at the other site.

Additional information about each of the sites is available in further detail in the Phase I Hazardous Material Assessment completed for the project in July 2004.

Were any sites not included in the Phase 1 assessment?

☐ No
☒ Yes (Estimate +/-125 parcels)

Why were they not reviewed?

In a portion of Rock County, the mainline of IH 39/90 will be widened to the inside median and no right of way acquisition will be required between interchange locations. A record search and report was not completed for the properties adjacent to the mainline of IH 39/90 in Rock County (except at interchange locations) from STH 26 to the Illinois State Line since excavation will be confined to the existing right of way.

4) Describe proposed course of action to avoid hazardous materials contamination for this project. For example, changes in location, changes in design, remediation of contaminated areas, etc.

A “Notice to Contractor” special provision will be included for actions to be taken by the contractor in the event that any hazardous materials are found during construction. Final design details will avoid potential contamination where feasible and excavation in the areas of potential contamination will be controlled during construction. Construction specifications will require remediation where contamination cannot be avoided.

AESTHETICS IMPACT EVALUATION

Wisconsin Department of Transportation

DT2062 2003

Alternative	Length of Center line and termini this sheet is evaluating if different from Sheet 1.
Preferred Build (Reconstruction)	
Preferred	mi.
Yes	

1. Identify the alternative discussed on this sheet if it is different from the proposed action addressed in item 1 of Basic Sheet 1 or is different from the "Preferred Alternative" identified in item 3 of Basic Sheet 2.

2. Identify and briefly describe the visual character of the landscape. Include elements in the viewshed such as landforms, waterbodies, vegetation and human developments.
   The majority of the study corridor passes through rural land used for agricultural purposes or occupied by natural features (woodland, wetlands, steep slopes). In Dane County the land is fairly hilly, with numerous oak and other hardwood woodlands, and is scenic in nature. Views are punctuated by farm residences, barns, and other related structures. As the corridor passes through Madison, Janesville, and Beloit, the views are urban. In Madison, there are several manufacturing businesses and a casino, to the east of the corridor, before it leads into agricultural land. The corridor in Janesville passes through a mix of manufacturing, commercial-retail, and residential areas. The corridor in Beloit is lined with industrial and commercial uses.

3. Indicate the visual quality of the viewshed and identify landscape elements which would be visually sensitive.
   Just south of the weigh station in Dane County, there is a wide median, which is wooded and hilly, for approximately one mile. This area was mentioned by the public and by study committee members as particularly scenic. Another similar area is in Rock County, just north of Janesville. As the corridor travels south into Rock County, the landscape becomes much flatter, and consists mostly of agricultural land.
   The views along the rural portions of the corridor are considered an asset to the state. Visitors from other states using the corridor to travel into Wisconsin enjoy the views, both of the agricultural lands and the rolling, wooded hills further north. The corridor provides a taste of things to come as they travel into the vacationlands of the north. The landscape and the curves in the road are also considered soothing to the eye, providing relief from the straight, unrelenting views of the road that often dominates Interstate travel.

4. Identify the viewers who will have a view of the improved transportation facility and those with a view from the improved transportation facility. Indicate the relative numbers (low, medium, high) of each group.
   Residents along the corridor will continue to have a view of the transportation facility. In the rural areas, that number is relatively low. Janesville has the largest number of residences with a view on the corridor, although the relative number of viewers in proportion to the number of residents in the City is small.
   A large number of drivers using roads that cross the Interstate will have a view of the corridor.
   A relatively high number of drivers will have a view from the improved transportation facility.

5. Indicate the relative time of day (morning, afternoon, evening, night) and the approximate amount of viewing time each viewer group would have each day.
   The amount of viewing time for those who live or work along the corridor would not change from the present.
   The amount of viewing time for those traveling on the facility is dependent on how far the viewer travels on the corridor and the degree of congestion on the facility, which can reduce speeds and increase travel time. Within urban areas, there would be an increase in the number of viewers at morning and evening rush hours (5-8am and 4-8pm). Peak traffic on the Interstate generally occurs on weekends. Southbound traffic is particularly heavy on Sunday afternoons in the summer.
   The Preferred Build Alternative will decrease the amount of viewing time for those traveling on the facility in the short-term by reducing congestion.

6. Describe whether and how the project would affect the visual character of the landscape.
   In a broad sense, the corridor now has a rural character.
   The Preferred Build Alternative would have relatively lesser effect on the viewshed in Dane County. In Rock County, it would contribute to a slightly more urban feel. Where the median is less than 60’ wide, a concrete barrier must be used in between the lanes of travel. Approximately 85% of the length of the corridor in Rock County and 63% of the corridor in Dane County would require this barrier.

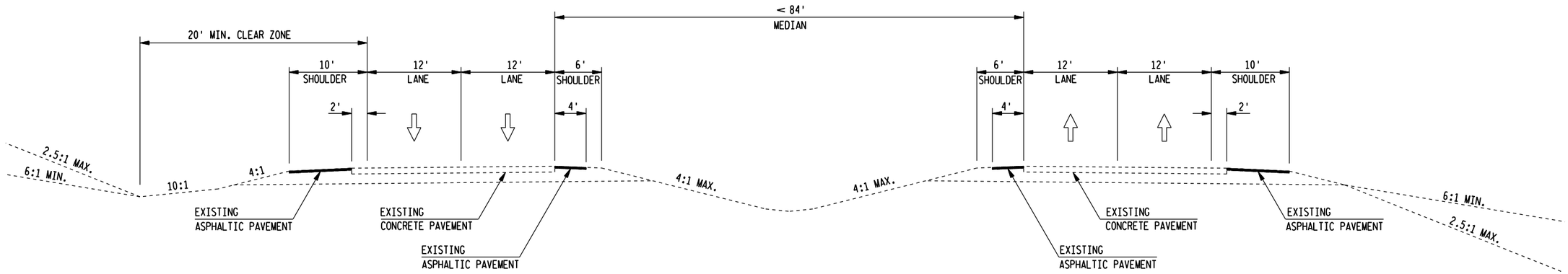
7. Indicate the effects the project would have on the viewer groups.

The Preferred Build Alternative would have a small affect on many viewer groups. The facility will appear very much as it always has, only wider. It will provide viewers who are using the facility the feel of a more urban roadway in areas where a median barrier is required, including the full length of the corridor through Madison, Janesville, and Beloit.

8. Identify and discuss reasonable mitigation measures to avoid or minimize adverse visual effects or enhance positive aesthetic effects of the project.
   In Rock County, the Preferred Build Alternative would keep the additional lanes within the existing right of way and so will minimize the effect on the visual landscape. Where retaining walls are needed in Janesville, WisDOT will work with the city to develop acceptable walls. Where median barriers are needed, WisDOT will examine ways to make them more attractive. In addition, where noise barriers are warranted and desired by the city of Janesville, WisDOT will work with the city to make them as attractive as possible while still retaining their functionality.

APPENDIX A

Roadway Typical Sections



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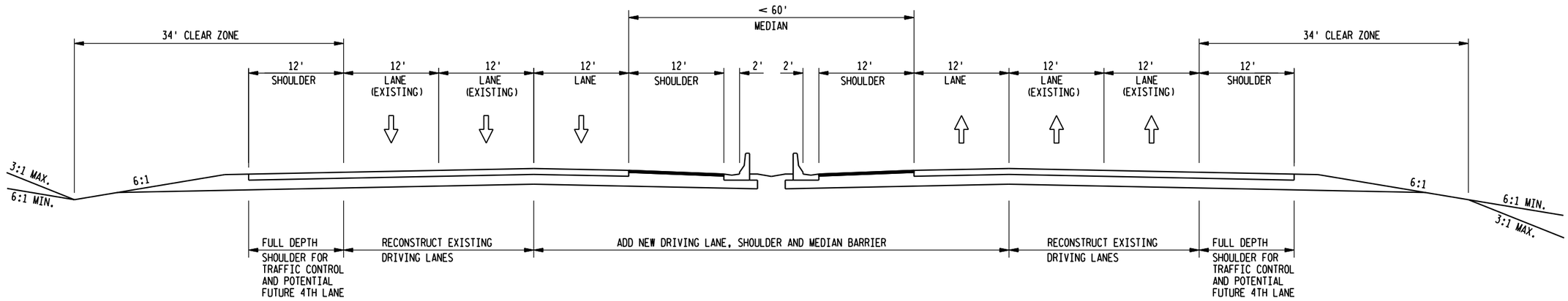

PROPOSED TYPICAL SECTION

ILLINOIS STATE LINE - USH 14
COUNTY LINE - ROCK RIVER
CTH MN - USH 12/18

IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO MADISON
DANE & ROCK COUNTIES, WISCONSIN

PREFERRED ALTERNATIVE

EXHIBIT A SHEET 1 OF 4

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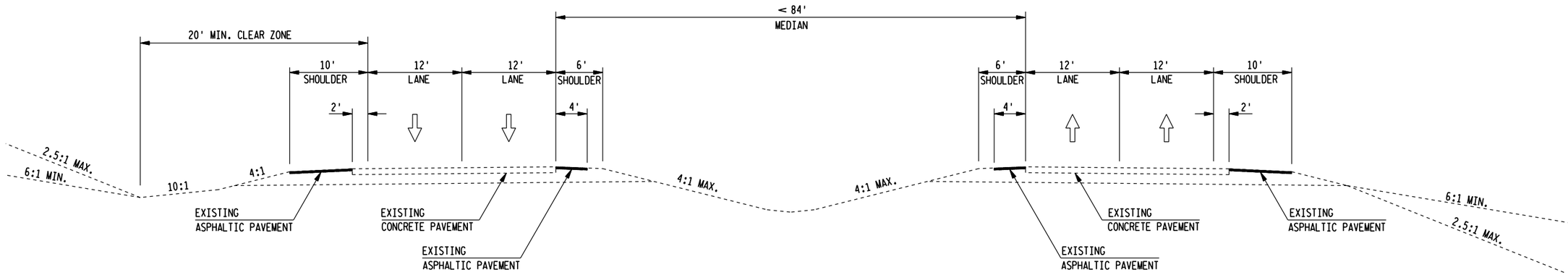

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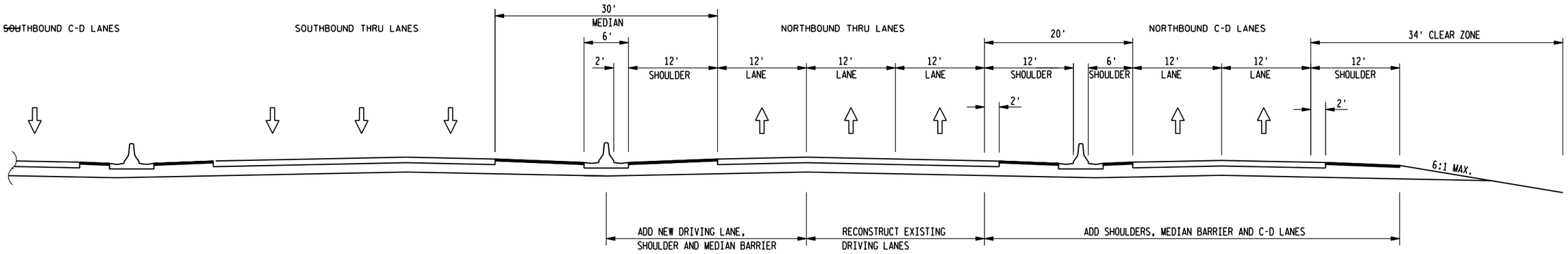

PROPOSED TYPICAL SECTION

(NORTHBOUND LANES SHOWN, SOUTHBOUND LANES SIMILAR)
USH 14 - STH 26

IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO MADISON
DANE & ROCK COUNTIES, WISCONSIN

PREFERRED ALTERNATIVE

EXHIBIT A SHEET 2 OF 4

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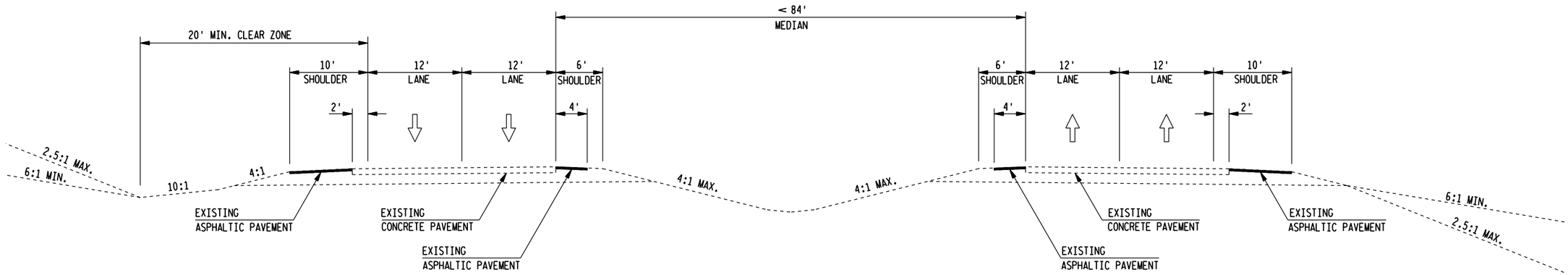

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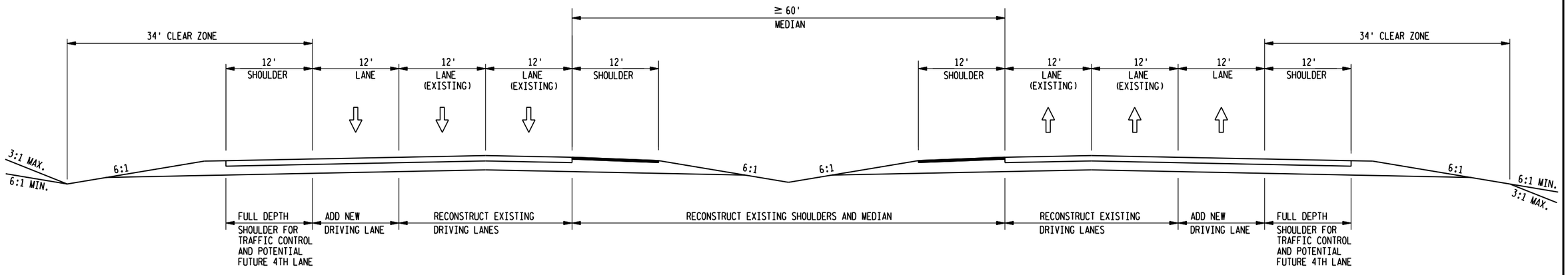

PROPOSED TYPICAL SECTION

STH 26 - ROCK RIVER
COUNTY LINE - CTH MN

IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO MADISON
DANE & ROCK COUNTIES, WISCONSIN

PREFERRED ALTERNATIVE

EXHIBIT A SHEET 3 OF 4

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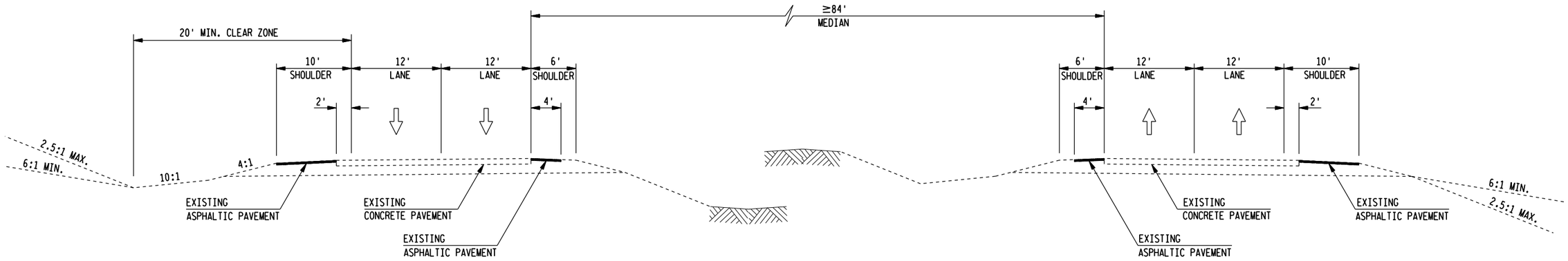

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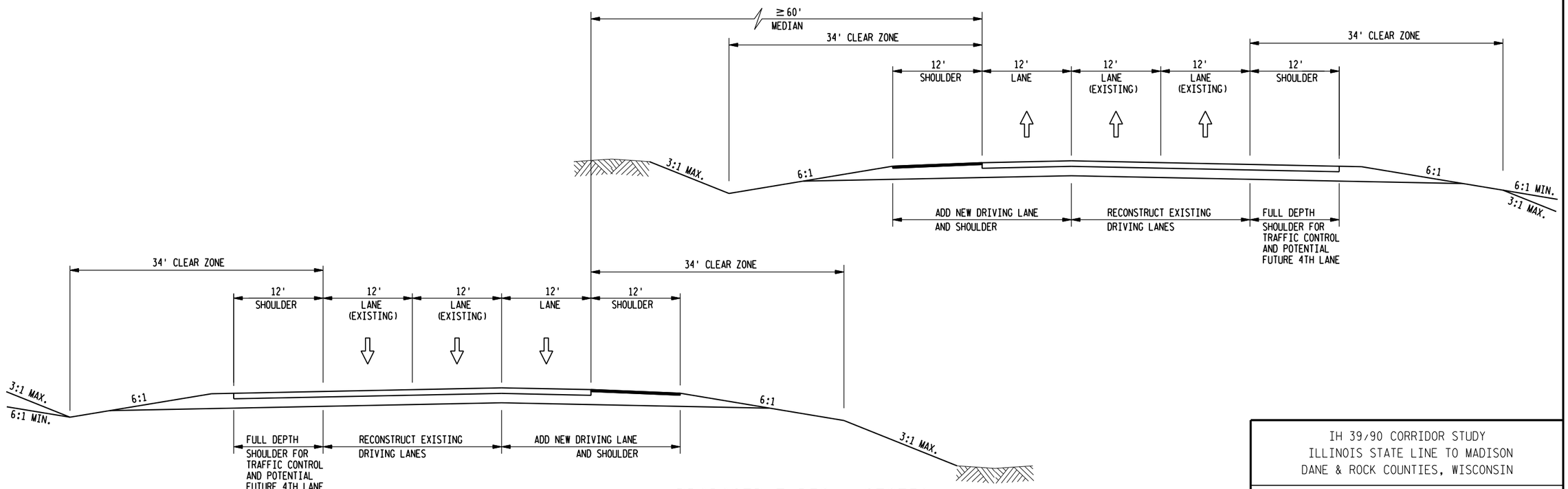

PROPOSED TYPICAL SECTION

STH 26 - ROCK RIVER
COUNTY LINE - CTH MN

IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO MADISON
DANE & ROCK COUNTIES, WISCONSIN

PREFERRED ALTERNATIVE

EXHIBIT A SHEET 4 OF 4

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APPENDIX B

Existing and Projected Traffic

STATE OF ILLINOIS

BELOIT

CLINTON

JANESVILLE

ROCK CO.
DANE CO.

WALWORTH CO.

19700 (2070)
-22200 (2290)-
28600 (2830)

4400 (460)
-5100 (530)-
6800 (720)

4300 (450)
-5000 (520)-
6600 (680)

3400 (355)
-3450 (360)-
3570 (375)

900 (95)
-910 (100)-
945 (100)

4400 (460)
-4900 (530)-
6300 (700)

800 (85)
-810 (90)-
840 (90)

3000 (315)
-3900 (410)-
6300 (650)

2200 (230)
-2230 (235)-
2310 (240)

6500 (690)
-6640 (700)-
7000 (725)

2200 (230)
-2540 (240)-
3400 (260)

1400 (145)
-1460 (150)-
1600 (150)

1900 (200)
-2270 (220)-
3200 (280)

1100 (115)
-1160 (120)-
1300 (120)

2000 (210)
-2230 (215)-
2800 (220)

N/A (N/A)
-8000 (700)-
10000 (860)

2300 (245)
-2390 (250)-
2600 (255)

1800 (190)
-2150 (250)-
3000 (410)

2100 (220)
-2500 (290)-
3500 (460)

2600 (275)
-2830 (280)-
3400 (290)

N/A (N/A)
-14000 (1410)-
17500 (1780)

22700 (2275)
-27500 (2760)-
39600 (3980)

23200 (2330)
-27600 (2780)-
38600 (3900)

25500 (2560)
-28600 (2840)-
36200 (3540)

29900 (3020)
-34300 (3490)-
45200 (4650)

27500 (2760)
-30700 (3090)-
38600 (3900)

25500 (2575)
-29100 (2940)-
38100 (3850)

26300 (2645)
-29700 (2960)-
38200 (3760)

28800 (2925)
-31700 (3210)-
39000 (3920)

25500 (2560)
-28200 (2840)-
34800 (3550)

26300 (2645)
-29500 (2260)-
37600 (3780)

27500 (2760)
-30700 (3090)-
38800 (3910)

28800 (2925)
-31800 (3230)-
39400 (4000)

25500 (2575)
-29200 (2940)-
38300 (3840)

7800 (820)
-8900 (960)-
11700 (1310)

7800 (820)
-9200 (970)-
12700 (1340)

1500 (160)
-1900 (200)-
3000 (300)

1400 (145)
-1900 (190)-
3000 (300)

11200 (1180)
-11925 (1200)-
13700 (1250)

4900 (515)
-5000 (520)-
5300 (530)

4200 (440)
-4800 (490)-
6300 (610)

27750 (2900)
-29800 (3030)-
35000 (3340)

1100 (115)
-1640 (170)-
3000 (290)

1600 (170)
-1620 (175)-
1680 (180)

25700 (2700)
-29900 (3030)-
40300 (3850)

2700 (285)
-3330 (340)-
4900 (490)

6100 (645)
-6500 (670)-
7500 (730)

1200 (160)
-1220 (165)-
1260 (170)

2200 (280)
-2230 (285)-
2310 (295)

2100 (290)
-2210 (310)-
2500 (350)

1800 (245)
-1940 (250)-
2300 (255)

1900 (255)
-1930 (260)-
2000 (270)

1100 (150)
-1120 (155)-
1160 (160)

1800 (245)
-1910 (260)-
2200 (280)

2300 (305)
-2330 (310)-
2420 (320)

10300 (1080)
-11390 (1180)-
14100 (1420)

2800 (295)
-3000 (310)-
3500 (350)

28800 (3000)
-30100 (3030)-
33400 (3090)

6100 (645)
-6190 (650)-
6400 (675)

0000 (000)
-1620 (170)-
1800 (190)

3200 (335)
-3290 (340)-
3500 (340)

2600 (275)
-2640 (280)-
2730 (290)

3900 (410)
-3960 (420)-
4100 (430)

17000 (1790)
-23100 (2270)-
38200 (3460)

12650 (1330)
-14900 (1550)-
20400 (2100)

2100 (225)
-2760 (290)-
4400 (460)

3300 (340)
-3730 (410)-
4800 (600)

2200 (230)
-2540 (260)-
3400 (340)

3400 (350)
-3770 (380)-
4700 (470)

N/A (N/A)
-6000 (580)-
9800 (950)

LEGEND

XXXX (XXX) = EXISTING 2002 ADT (PEAK HOUR VOLUME)
-XXXX (XXX)- = NO-BUILD 2010 ADT (PEAK HOUR VOLUME)
XXXX (XXX) = FUTURE 2030 ADT (PEAK HOUR VOLUME)

N/A = DATA NOT AVAILABLE

IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO DANE COUNTY
ROCK COUNTY, WISCONSIN

FUTURE TRAFFIC PROJECTION NO-BUILD CONDITION

EXHIBIT SHEET OF

EARTH TECH COMPUTER AIDED DESIGN & DRAFTING

TWO-WAY
65500 (8500)
-76000 (9800)-
102100 (12995)

1700 (225)
-2450 (320)-
4300 (570)

300 (40)
-560 (70)-
1200 (160)

8200 (1125)
-9400 (1290)-
12500 (1715)

19400 (2540)
-21400 (2800)-
26300 (3445)

19900 (2625)
-21700 (2870)-
26300 (3470)

8700 (1210)
-9800 (1360)-
12500 (1740)

300 (40)
-560 (70)-
1200 (160)

1700 (225)
-2450 (320)-
4300 (570)

TWO-WAY
13300 (1530)
-19600 (2260)-
35500 (4085)

2000 (210)
-2150 (230)-
2500 (265)

1750 (210)
-2850 (320)-
5600 (610)

8800 (930)
-11500 (1220)-
18400 (1945)

4100 (430)
-5000 (520)-
7200 (755)

1750 (185)
-2110 (220)-
3000 (315)

350 (35)
-420 (40)-
600 (60)

2000 (210)
-3050 (320)-
5600 (610)

300 (30)
-390 (40)-
600 (60)

1700 (180)
-2075 (220)-
3000 (315)

1600 (170)
-1850 (200)-
2500 (265)

3300 (350)
-4000 (430)-
5800 (615)

ROCK CO.
DANE CO.

23100 (2340)
-28700 (2910)-
42700 (4325)

23100 (2340)
-28700 (2910)-
42700 (4325)

22700 (2400)
-27500 (2760)-
39600 (3980)

22700 (2400)
-27500 (2760)-
39600 (3980)

MC FARLAND

23300 (2350)
-28900 (2920)-
42900 (4340)

23300 (2350)
-28900 (2920)-
42900 (4340)

35900 (3950)
-42700 (4670)-
59800 (6480)

35900 (3950)
-42700 (4670)-
59800 (6480)

21700 (2190)
-27000 (2730)-
40200 (4070)

21700 (2190)
-27000 (2730)-
40200 (4070)

2700 (275)
-3200 (330)-
4500 (460)

2600 (265)
-3150 (320)-
4500 (460)

6700 (700)
-8100 (850)-
11700 (1220)

3800 (400)
-4650 (490)-
6700 (705)

1100 (115)
-1300 (140)-
1800 (190)

1000 (105)
-1250 (130)-
1800 (190)

MADISON

38300 (4200)
-46700 (5125)-
67700 (7425)

38300 (4200)
-46700 (5125)-
67700 (7425)

21000 (2205)
-25500 (2670)-
36600 (3845)

21000 (2205)
-25500 (2670)-
36600 (3845)

3800 (525)
-4200 (580)-
5200 (720)

3100 (430)
-3550 (490)-
4600 (640)

2700 (355)
-3475 (460)-
5400 (710)

5600 (770)
-6175 (850)-
7600 (1040)

5500 (760)
-5950 (820)-
7000 (970)

3300 (440)
-3900 (520)-
5400 (720)

8400 (1095)
-10200 (1330)-
14700 (1915)

8400 (1095)
-10200 (1330)-
14700 (1915)

1200 (105)
-1450 (130)-
2100 (185)

8400 (1050)
-10200 (1275)-
14600 (1825)

2800 (320)
-3400 (390)-
4900 (560)

3850 (560)
-4650 (680)-
6700 (975)

16300 (2050)
-19750 (2480)-
28300 (3560)

4000 (420)
-4850 (510)-
7000 (735)

4200 (440)
-5100 (530)-
7300 (765)

LIGHT CROSSING BLVD.

N

LEGEND

XXXX (XXX) = EXISTING 2002 ADT (PEAK HOUR VOLUME)
-XXXX (XXX)- = NO-BUILD 2010 ADT (PEAK HOUR VOLUME)
XXXX (XXX) = FUTURE 2030 ADT (PEAK HOUR VOLUME)

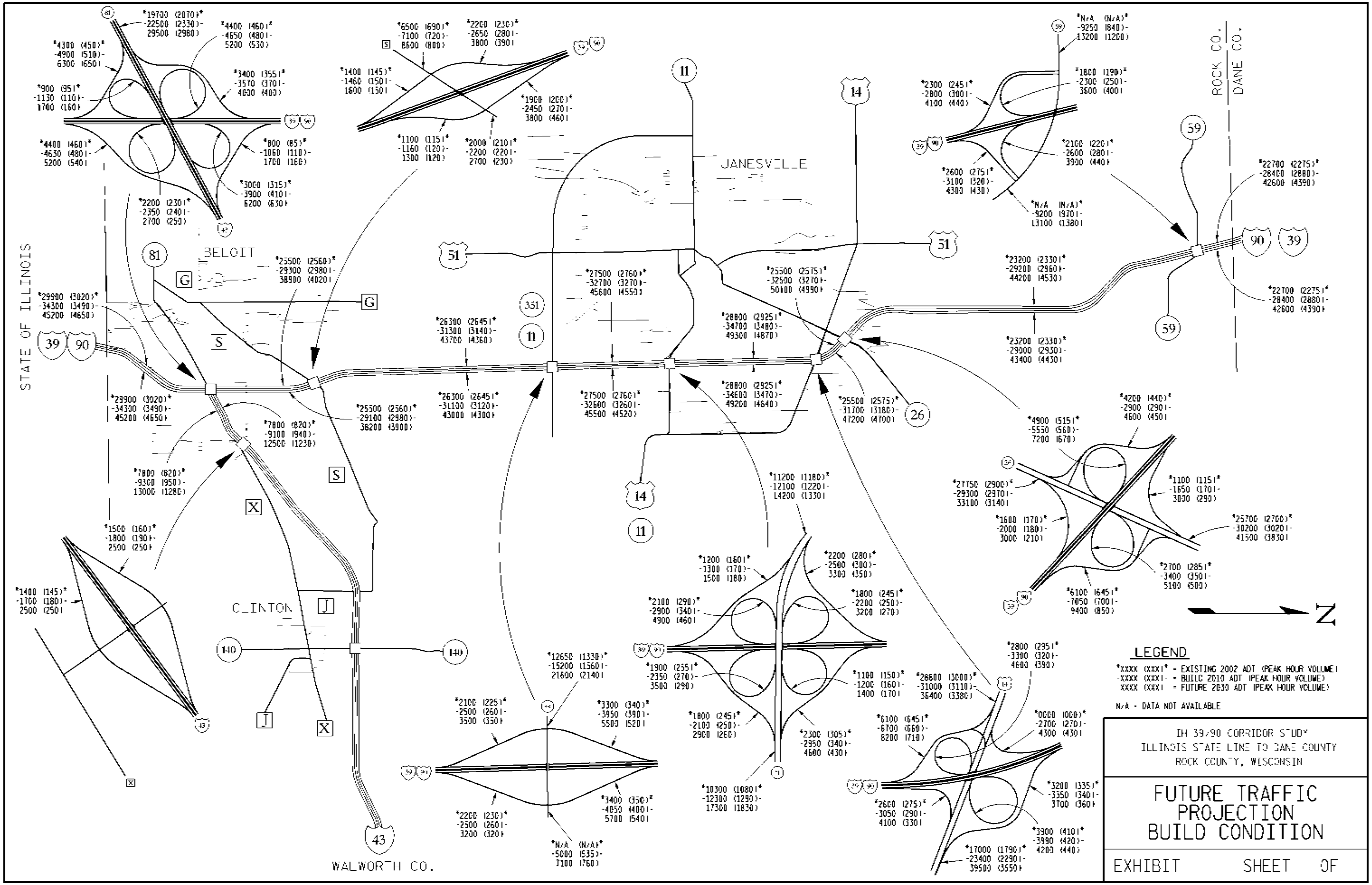
IH 39/90 CORRIDOR STUDY
DANE COUNTY LINE TO MADISON
DANE COUNTY, WISCONSIN

FUTURE TRAFFIC PROJECTION NO-BUILD CONDITION

EXHIBIT SHEET OF

graphics by :

EARTH TECH COMPUTER AIDED DESIGN & DRAFTING


STATE OF ILLINOIS
BELOIT
JANESVILLE
CLINTON
WALWORTH CO.
ROCK CO.
DANE CO.
LEGEND
XXXX (XXX) = EXISTING 2002 ADT (PEAK HOUR VOLUME)
-XXXX (XXX)- = BUILD 2010 ADT (PEAK HOUR VOLUME)
XXXX (XXX) = FUTURE 2030 ADT (PEAK HOUR VOLUME)
N/A = DATA NOT AVAILABLE
IH 39/90 CORRIDOR STUDY
ILLINOIS STATE LINE TO DANE COUNTY
ROCK COUNTY, WISCONSIN
FUTURE TRAFFIC PROJECTION BUILD CONDITION
EXHIBIT SHEET OF

TWO-WAY
65500 (8500)
-76000 (9800)-
102100 (12995)

1700 (225)
-2450 (320)-
4300 (570)

300 (40)
-560 (70)-
1200 (160)

8200 (1125)
-9400 (1290)-
12500 (1715)

19400 (2540)
-21400 (2800)-
26300 (3445)

19900 (2625)
-21700 (2870)-
26300 (3470)

8700 (1210)
-9800 (1360)-
12500 (1740)

300 (40)
-560 (70)-
1200 (160)

1700 (225)
-2450 (320)-
4300 (570)

TWO-WAY
13300 (1530)
-19600 (2260)-
35500 (4085)

2000 (210)
-2300 (260)-
3100 (370)

1750 (210)
-2150 (240)-
3200 (305)

8800 (930)
-10700 (1220)-
15400 (1945)

2000 (210)
-2350 (240)-
3200 (305)

1600 (170)
-2050 (230)-
3100 (370)

3300 (350)
-4000 (430)-
5800 (615)

4100 (430)
-5000 (520)-
7200 (755)

1750 (185)
-2110 (220)-
3000 (315)

350 (35)
-420 (40)-
600 (60)

300 (30)
-390 (40)-
600 (60)

1700 (180)
-2075 (220)-
3000 (315)

ROCK CO.
DANE CO.

23100 (2340)
-28700 (2910)-
42700 (4325)

23100 (2340)
-28700 (2910)-
42700 (4325)

22700 (2400)
-28400 (2880)-
42600 (4390)

22700 (2400)
-28400 (2880)-
42600 (4390)

MC FARLAND

23300 (2350)
-28900 (2920)-
42900 (4340)

23300 (2350)
-28900 (2920)-
42900 (4340)

35900 (3950)
-42700 (4670)-
59800 (6480)

35900 (3950)
-42700 (4670)-
59800 (6480)

21700 (2190)
-27000 (2730)-
40200 (4070)

21700 (2190)
-27000 (2730)-
40200 (4070)

2700 (275)
-3200 (330)-
4500 (460)

2600 (265)
-3150 (320)-
4500 (460)

6700 (700)
-8100 (850)-
11700 (1220)

3800 (400)
-4650 (490)-
6700 (705)

1100 (115)
-1300 (140)-
1800 (190)

1000 (105)
-1250 (130)-
1800 (190)

MADISON

38300 (4200)
-46700 (5125)-
67700 (7425)

38300 (4200)
-46700 (5125)-
67700 (7425)

21000 (2205)
-25500 (2670)-
36600 (3845)

21000 (2205)
-25500 (2670)-
36600 (3845)

3800 (525)
-4200 (580)-
5200 (720)

3100 (430)
-3550 (490)-
4600 (640)

2700 (355)
-3475 (460)-
5400 (710)

5600 (770)
-6175 (850)-
7600 (1040)

5500 (760)
-5950 (820)-
7000 (920)

3300 (440)
-3900 (520)-
5400 (720)

8400 (1095)
-10200 (1330)-
14700 (1915)

8400 (1095)
-10200 (1330)-
14700 (1915)

1200 (105)
-1450 (130)-
2100 (185)

8400 (1050)
-10200 (1275)-
14600 (1825)

2800 (320)
-3400 (390)-
4900 (560)

3850 (560)
-4650 (680)-
6700 (975)

16300 (2050)
-19750 (2480)-
28300 (3560)

4000 (420)
-4850 (510)-
7000 (735)

4200 (440)
-5100 (530)-
7300 (765)

LIGHT CROSSING BLVD.

LEGEND

XXXX (XXX) = EXISTING 2002 ADT (PEAK HOUR VOLUME)
-XXXX (XXX)- = BUILD 2010 ADT (PEAK HOUR VOLUME)
XXXX (XXX) = FUTURE 2030 ADT (PEAK HOUR VOLUME)

IH 39/90 CORRIDOR STUDY
DANE COUNTY LINE TO MADISON
DANE COUNTY, WISCONSIN

FUTURE TRAFFIC PROJECTION BUILD CONDITION

EXHIBIT SHEET OF

PFBB : no ref nametrno ref logicals
PFBS : LEVELS : no ref levels
PFBS : no ref nametrno ref logicals
PFB6 LEVELS : no ref levels
PFB7 : no ref nametrno ref logicals
PFB7 LEVELS : no ref levels
PFB8 : no ref nametrno ref logicals
PFB8 LEVELS : no ref levels

PFBB : no ref nametrno ref logicals
PFBS : LEVELS : no ref levels
PFBS : no ref nametrno ref logicals
PFB6 LEVELS : no ref levels
PFB7 : no ref nametrno ref logicals
PFB7 LEVELS : no ref levels
PFB8 : no ref nametrno ref logicals
PFB8 LEVELS : no ref levels

EARTH TECH COMPUTER AIDED DESIGN & DRAFTING

graphics by :

APPENDIX C

Mainline Preferred Alternative

ILLINOIS

ROCK COUNTY

DANE COUNTY

Madison

McFarland

Stoughton

Edgerton

Janesville

Beloit

Milton

51

11

14

59

73

12

26

43

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

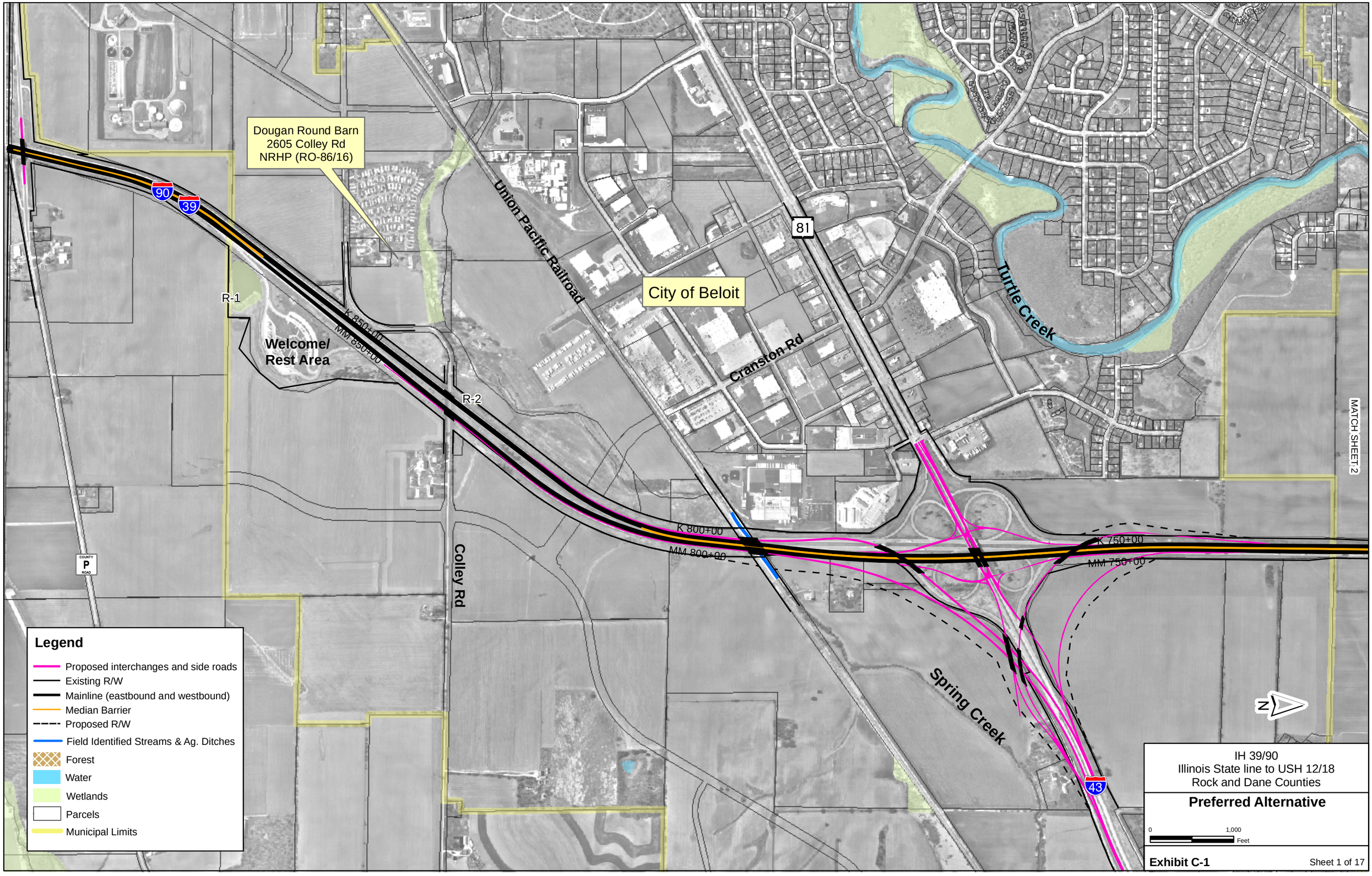
17

N

IH39/90
Illinois State line to Madison
Rock and Dane Counties

Preferred Alternative

Exhibit C-1 Index Sheets


Dougan Round Barn
2605 Colley Rd
NRHP (RO-86/16)
90
39
R-1
K 850+00
MM 850+00
Welcome/
Rest Area
R-2
Union Pacific Railroad
City of Beloit
81
Cranston Rd
Turtle Creek
MATCH SHEET 2
K 800+00
MM 800+00
K 750+00
MM 750+00
COUNTY
P
ROAD
Colley Rd
Spring Creek
43
N
Legend
Proposed interchanges and side roads
Existing R/W
Mainline (eastbound and westbound)
Median Barrier
Proposed R/W
Field Identified Streams & Ag. Ditches
Forest
Water
Wetlands
Parcels
Municipal Limits
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
0
1,000
Feet
Exhibit C-1
Sheet 1 of 17

City of Beloit

Creek Rd

Turtle Creek

MATCH SHEET 1

MATCH SHEET 3

COUNTY S ROAD

K 600+00
KK 600+00

39 90

R-6

R-5

K 650+00
LL 650+00

R-4

R-3

K 700+00
MM 700+00

Hart Rd

Creek Rd

Lathers Rd

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

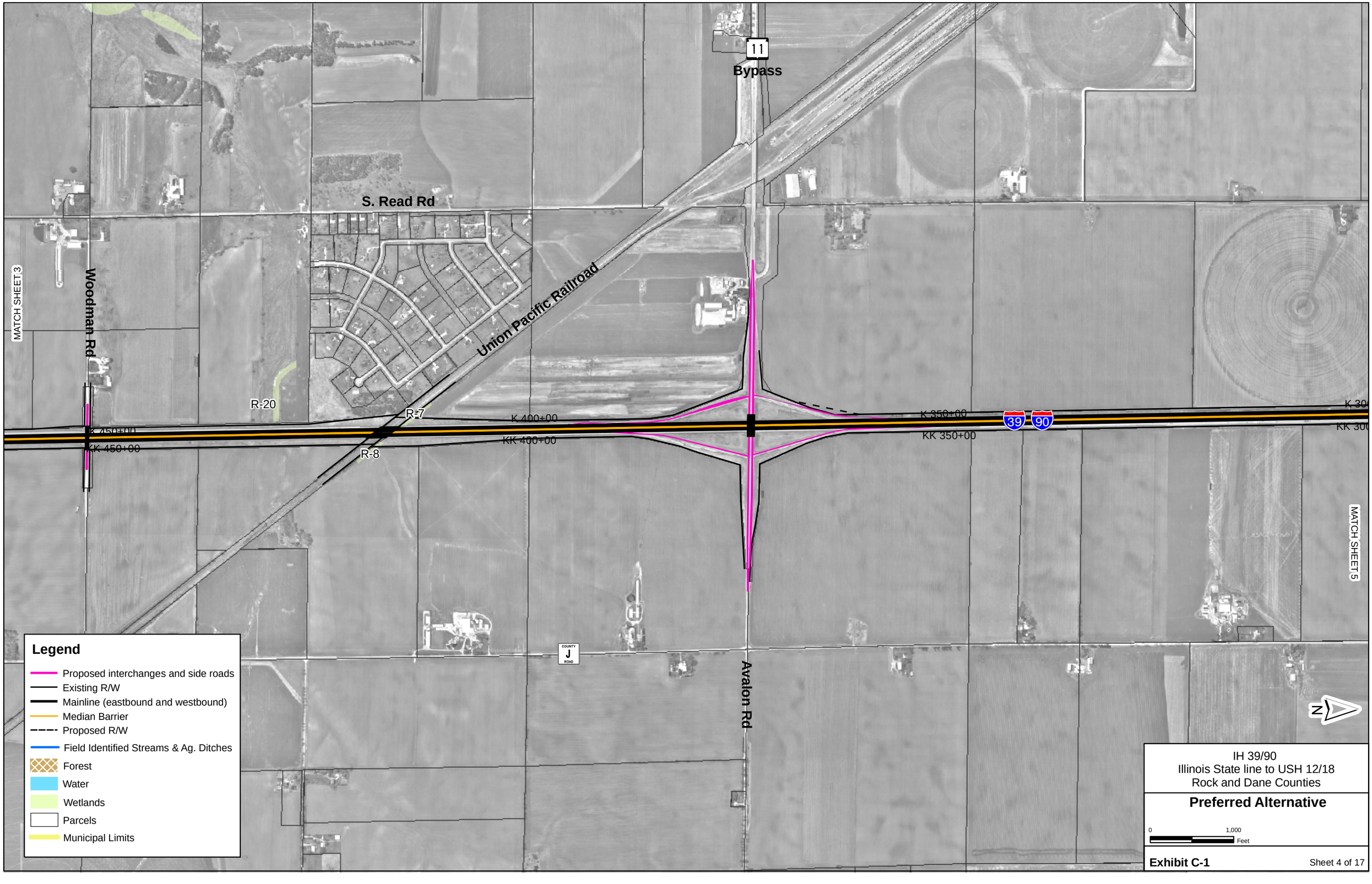
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1 Sheet 2 of 17

MATCH SHEET 2
Philhower Rd
Creek Rd
S. Patrick Rd
Town Line Rd
S. Read Rd
K 600+00
KK 600+00
K 550+00
KK 550+00
K 500+00
KK 500+00
39
90
COUNTY J ROAD
MATCH SHEET 4
N
Legend
Proposed interchanges and side roads
Existing R/W
Mainline (eastbound and westbound)
Median Barrier
Proposed R/W
Field Identified Streams & Ag. Ditches
Forest
Water
Wetlands
Parcels
Municipal Limits
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
0
1,000
Feet
Exhibit C-1
Sheet 3 of 17


11
Bypass
S. Read Rd
Union Pacific Railroad
Woodman Rd
MATCH SHEET 3
R-20
R-7
R-8
K 400+00
KK 400+00
K 350+00
KK 350+00
39
90
K 450+00
KK 450+00
COUNTY J ROAD
Avalon Rd
MATCH SHEET 5
N
Legend
Proposed interchanges and side roads
Existing R/W
Mainline (eastbound and westbound)
Median Barrier
Proposed R/W
Field Identified Streams & Ag. Ditches
Forest
Water
Wetlands
Parcels
Municipal Limits
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
0
1,000
Feet
Exhibit C-1
Sheet 4 of 17

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

MATCH SHEET 4

MATCH SHEET 6

E. Racine St

City of Janesville

E. Milwaukee St

Spring Brook

Palmer Park

Pontiac Dr

Elementary School

Marshall Middle School

K 150+00

JJ 150+00

R-10

R-9

K 200+00

JJ 200+00

RF-2

RF-2

R-18

R-17

K 250+00

JJ 250+00

RF-1

39

90

Midland Rd

Palmer Dr

COUNTY MM ROAD

Wright Rd

COUNTY J ROAD

Wisconsin & Central Railroad

COUNTY Q ROAD

BUS 14

11

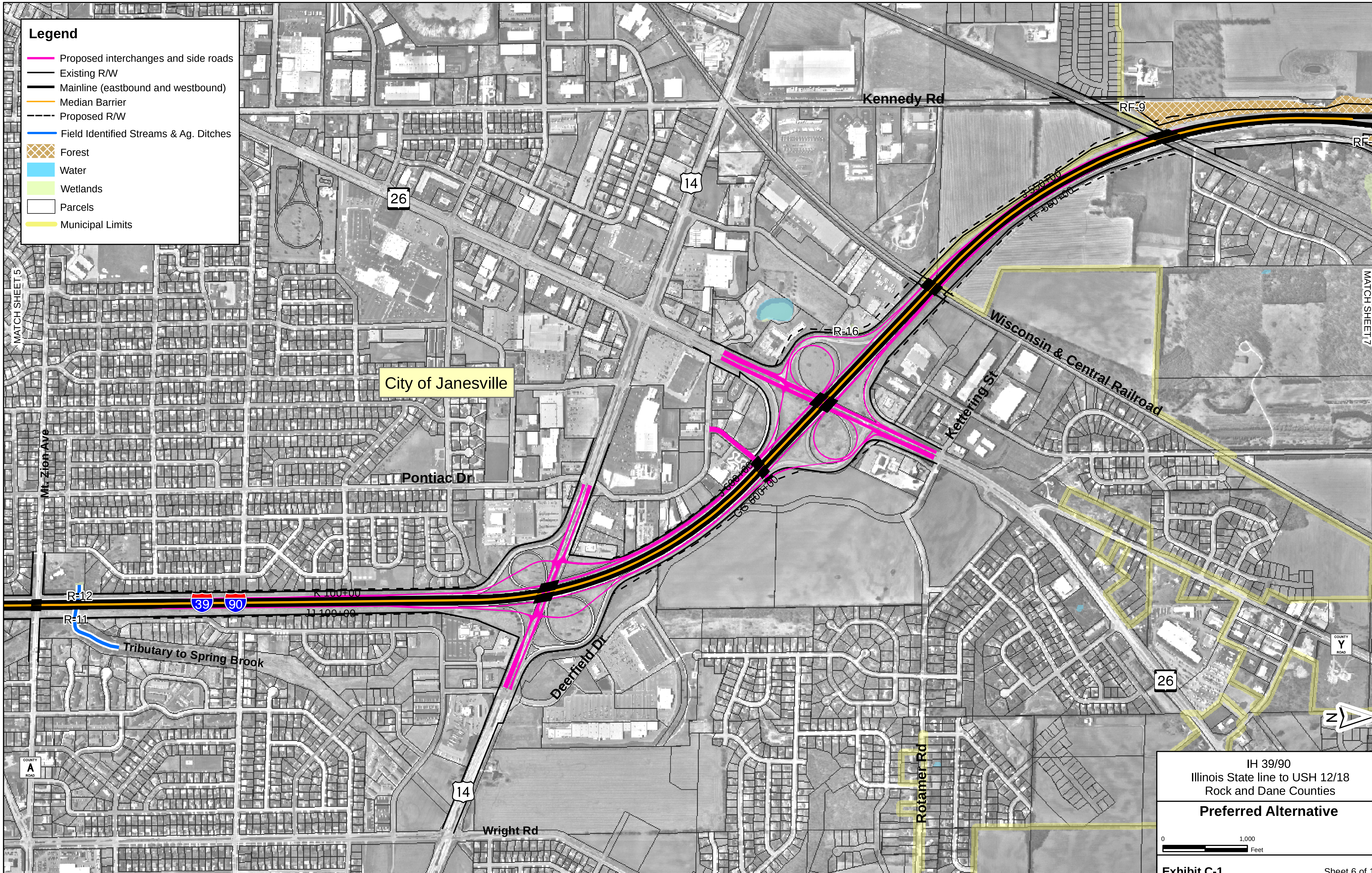
N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1 Sheet 5 of 17



Legend
Proposed interchanges and side roads
Existing R/W
Mainline (eastbound and westbound)
Median Barrier
Proposed R/W
Field Identified Streams & Ag. Ditches
Forest
Water
Wetlands
Parcels
Municipal Limits
Kennedy Rd
RF-9
RF-3
R-16
R-12
R-11
14
26
39
90
City of Janesville
Wisconsin & Central Railroad
Kettering St
Pontiac Dr
Mt. Zion Ave
Tributary to Spring Brook
Deerfield Dr
Wright Rd
Rotamer Rd
MATCH SHEET 5
MATCH SHEET 7
K 100+00
IJ 100+00
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
0
1,000
Feet
Exhibit C-1
Sheet 6 of 17

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

Town Line Rd

Manogue Rd

Wisconsin & Central Railroad

Newville Rd

MATCH SHEET 6

MATCH SHEET 8

R-21

RF-8

Rest Area

RF-7

RF-9

J 500+00

J 450+00

J 400+00

RF-6

R-15

J 350+00

RF-4

FF 500+00

RF-3

FF 450+00

39

90

FF 400+00

R-13

RF-5

FF 350+00

Kennedy Rd

Kennedy Rd

N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

Sheet 7 of 17

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

MATCH SHEET 7

MATCH SHEET 9

Wisconsin & Central Railroad

Merrifield Rd

Newville Rd

Newville Rd

Pine Rd

J 200+00

CC 200+00

R-14

J 250+00

EF 250+00

90

39

J 300+00

EF 300+00

R-15

J 350+00

FF 350+00

RF-5

COUNTY M ROAD

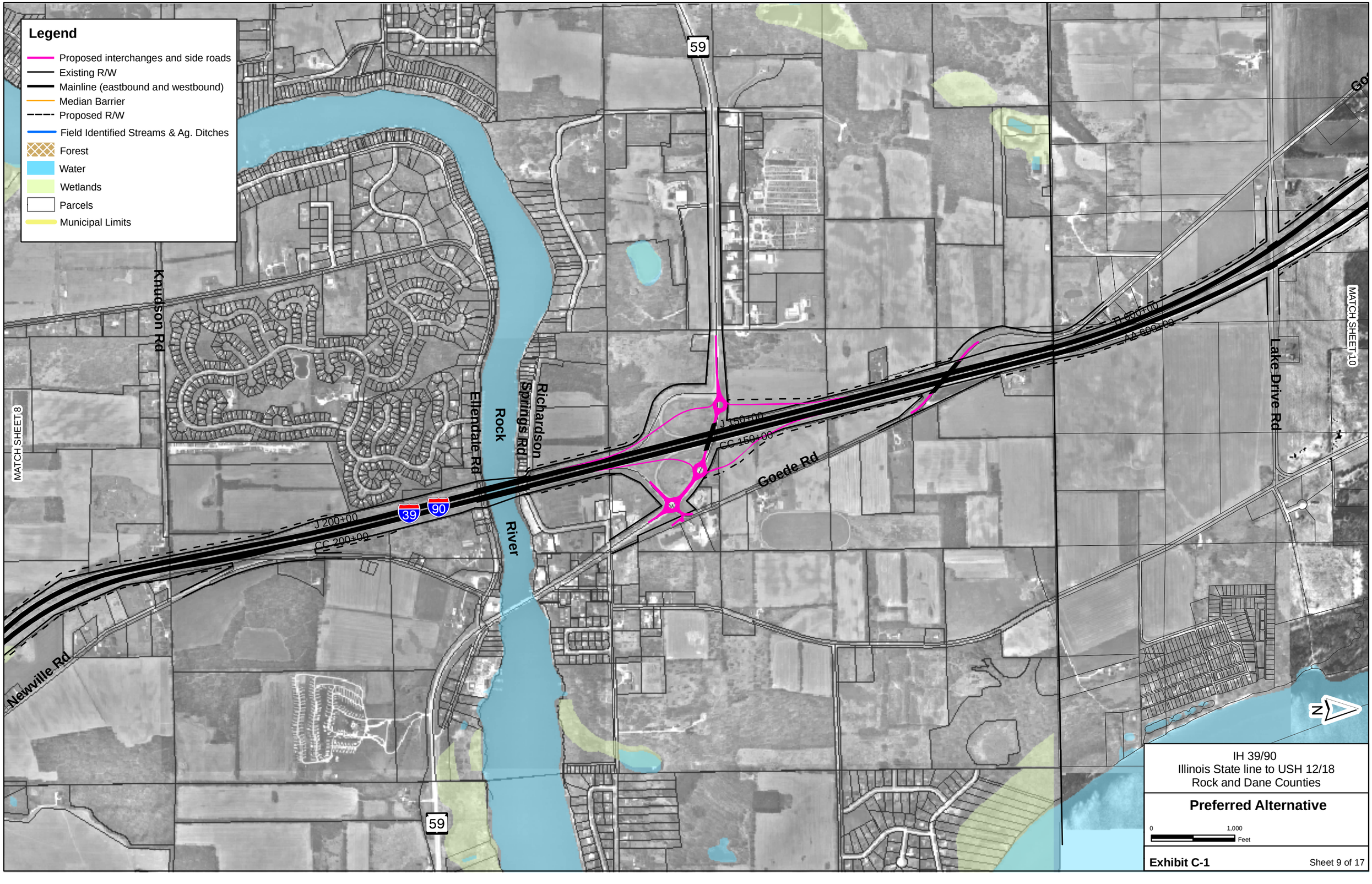
N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1 Sheet 8 of 17

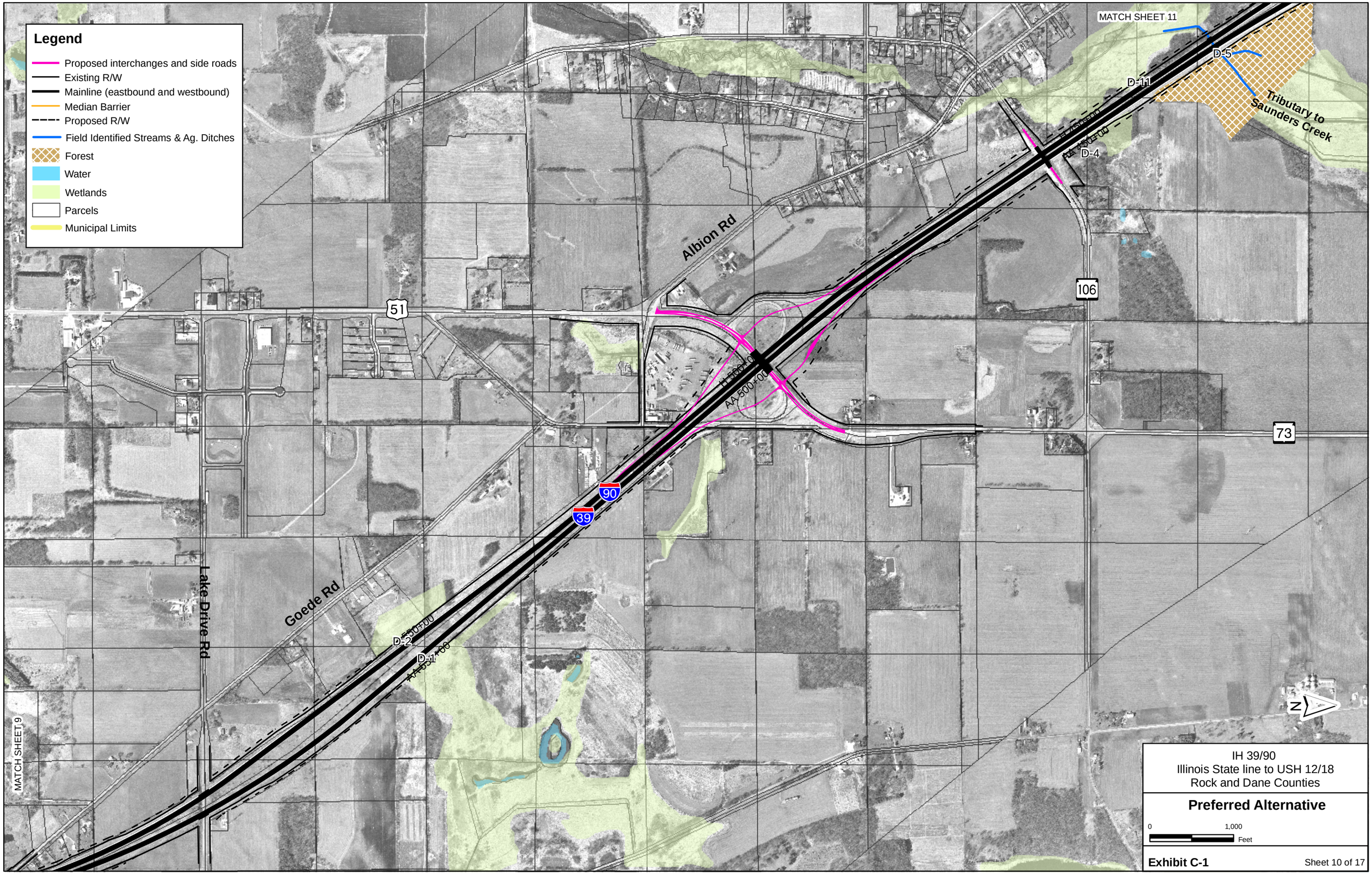


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1 Sheet 9 of 17



IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1 Sheet 10 of 17

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

MATCH SHEET 10

COUNTY A ROAD

COUNTY A ROAD

Saunders Creek

Ag. Ditch #1

D-8

H 350+00

Z 350+00

D-7

Golf Course

51

COUNTY W ROAD

Willow Dr

Maple Grove Rd

DF-8

H 300+00

Z 300+00

DF-9

D-20

D-9

90

39

D-10

D-6

H 400+00

Z 400+00

Tributary to Saunders Creek

D-11

DF-2

DF-3

D-5

DF-1

Tributary to Saunders Creek

Maple Grove Rd

MATCH SHEET 12

N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

COUNTY W ROAD

E. Church Rd

Ag. Ditch #3

Ag. Ditch #2

D-56

D-16

MATCH SHEET 13

H 150+00

Y 150+00

COUNTY B ROAD

H 200+00

Y 200+00

DF-11

DF-11

DF-11

D-18

D-21

D-17

Hammen Rd

MATCH SHEET 11

DF-10

H 250+00

Y 250+00

39

90

DF-8

D-19

COUNTY A ROAD

N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

MATCH SHEET 15

DF-4

DF-5

DF-5

Truck Weigh Station

DF-12

DF-5

D-12

DF-12

G 500+00

U 500+00

Koshkonong Rd

COUNTY BN ROAD

90

39

Tributary to Yahara River

Church St

D-25

G 350+00

U 350+00

DF-6

COUNTY BN ROAD

MATCH SHEET 13

N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

MATCH SHEET 16

G 350+00

T 350+00

DF-15

90

39

COUNTY MN ROAD

D-31

D-32

Williams Dr

Koshkonong Rd

G 400+00

U 400+00

Rinden Rd

COUNTY N ROAD

G 450+00

U 450+00

D-12

DF-4

DF-5

MATCH SHEET 14

N

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

Legend
Proposed interchanges and side roads
Existing R/W
Mainline (eastbound and westbound)
Median Barrier
Proposed R/W
Field Identified Streams & Ag. Ditches
Forest
Water
Wetlands
Parcels
Municipal Limits
MATCH SHEET 17
DF-14
D-27
D-35
Yahara Hills
Golf Course
D-28
D-29
AB
MN
D-34
90
39
Siggelkow Rd
Door Creek
D-33
D-30
Door Creek Rd
12
18
Door Creek School
2934 CTH MN
(DA-33/29)
Vilas Rd
Truck
Weigh
Station
DF-15
MATCH SHEET 15
N
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Preferred Alternative
0
1,000
Feet
Exhibit C-1
Sheet 16 of 17

Legend

- Proposed interchanges and side roads
- Existing R/W
- Mainline (eastbound and westbound)
- Median Barrier
- Proposed R/W
- Field Identified Streams & Ag. Ditches
- Forest
- Water
- Wetlands
- Parcels
- Municipal Limits

Marsh Rd

City of Madison

Femrite Dr

Yahara Hills Golf Course

Ag. Ditch #4

MATCH SHEET 15

D-47
D-41
D-42
D-48
D-44
D-54
D-43
D-26
D-26
G 150+00
D-53
D-52
D-51
P 150+00
D-50
D-49
D-40
D-37
D-46
D-45
D-36
D-39
D-38
G 200+00
P 200+00
DF-13
DF-14
F 250+00
N 250+00
M 200+00

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Preferred Alternative

0 1,000 Feet

Exhibit C-1

APPENDIX D

Interchange Evaluation Matrices

IH 39 / IH 43 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Free Flow)		Preferred Alternative 2 (Diamond Free Flow)	
EVALUATION FACTORS	SCALE VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE
Operational Factors (25%)							
Capacity/Level of Service	**10%**	5	50	10	100	10	100
-- Design year LOS							
-- Improved capacity							
Traffic Flow	**5%**	5	25	8	40	10	50
-- Uninterrupted flow							
-- Reduced congestion							
-- Sufficient left turn storage capacity							
-- Adequate green cycles							
-- Reduced travel time and distances							
-- Improved weave sections							
Design characteristics	**10%**	6	60	8	80	9	90
-- Geometric alignment							
-- Design speed							
-- Total number of structures							
-- Complexity of structures							
-- Total length of ramps							
-- Pedestrian and bicycle accommodation							
Safety (20%)							
Operational	**15%**	5	75	9	135	9	135
Roadside	**5%**	7	35	10	50	10	50
Environmental Impact (15%)							
Additional right of way	**5%**	10	50	7	35	8	40
Wetland Impact	**5%**	10	50	10	50	10	50
Community Impacts	**5%**	10	50	10	50	10	50
Implementation (15%)							
Staging – construction	**10%**	10	100	8	80	8	80
Maintenance of traffic	**5%**	10	50	9	45	8	40
Cost (25%)							
Initial Construction/ROW	**20%**	10	200	7	140	8	160
Maintenance	**5%**	6	30	8	40	9	45
Total Score			775		845		890
Total Interchange Construction Costs (2004 million dollars)			$0		$31,625,000		$27,670,300

IH 39 / CTH S INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Preferred Alternative 1 (Diamond)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)					
Capacity/Level of Service	**10%**	7	70	10	100
-- Design year LOS					
-- Improved capacity					
Traffic Flow	**5%**	6	30	9	45
-- Uninterrupted flow					
-- Reduced congestion					
-- Sufficient left turn storage capacity					
-- Adequate green cycles					
-- Reduced travel time and distances					
-- Improved weave sections					
Design characteristics	**10%**	6	60	10	100
-- Geometric alignment					
-- Design speed					
-- Total number of structures					
-- Complexity of structures					
-- Total length of ramps					
-- Pedestrian and bicycle accommodation					
Safety (20%)					
Operational	**15%**	6	90	9	135
Roadside	**5%**	8	40	10	50
Environmental Impact (15%)					
Additional right of way	**5%**	10	50	9	45
Wetland Impact	**5%**	10	50	10	50
Community Impacts	**5%**	10	50	10	50
Implementation (15%)					
Staging – construction	**10%**	10	100	8	80
Maintenance of traffic	**5%**	10	50	9	45
Cost (25%)					
Initial Construction/ROW	**20%**	10	200	8	160
Maintenance	**5%**	6	30	9	45
Total Score			820		905
Total Interchange Construction Costs (2004 million dollars)			$0		$5,907,200

IH 39 / Avalon Road INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Preferred Alternative 1 (Diamond)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)					
Capacity/Level of Service	**10%**	6	60	9	90
-- Design year LOS					
-- Improved capacity					
Traffic Flow	**5%**	7	35	9	45
-- Uninterrupted flow					
-- Reduced congestion					
-- Sufficient left turn storage capacity					
-- Adequate green cycles					
-- Reduced travel time and distances					
-- Improved weave sections					
Design characteristics	**10%**	9	90	10	100
-- Geometric alignment					
-- Design speed					
-- Total number of structures					
-- Complexity of structures					
-- Total length of ramps					
-- Pedestrian and bicycle accommodation					
Safety (20%)					
Operational	**15%**	8	120	9	135
Roadside	**5%**	8	40	10	50
Environmental Impact (15%)					
Additional right of way	**5%**	10	50	9	45
Wetland Impact	**5%**	10	50	10	50
Community Impacts	**5%**	10	50	10	50
Implementation (15%)					
Staging – construction	**10%**	10	100	8	80
Maintenance of traffic	**5%**	10	50	9	45
Cost (25%)					
Initial Construction/ROW	**20%**	10	200	8	160
Maintenance	**5%**	6	30	9	45
Total Score			875		895
Total Interchange Construction Costs (2004 million dollars)			$0		$5,697,000

IH 39 / STH 11 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Loop)		Preferred Alternative 2 (Diamond)	
EVALUATION FACTORS	SCALE VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE
Operational Factors (25%)							
Capacity/Level of Service	**10%**	6	60	10	100	10	100
-- Design year LOS							
-- Improved capacity							
Traffic Flow	**5%**	5	25	9	45	10	50
-- Uninterrupted flow							
-- Reduced congestion							
-- Sufficient left turn storage capacity							
-- Adequate green cycles							
-- Reduced travel time and distances							
-- Improved weave sections							
Design characteristics	**10%**	5	50	8	80	9	90
-- Geometric alignment							
-- Design speed							
-- Total number of structures							
-- Complexity of structures							
-- Total length of ramps							
-- Pedestrian and bicycle accommodation							
Safety (20%)							
Operational	**15%**	5	75	9	135	9	135
Roadside	**5%**	7	35	10	50	10	50
Environmental Impact (15%)							
Additional right of way	**5%**	10	50	8	40	10	50
Wetland Impact	**5%**	10	50	10	50	10	50
Community Impacts	**5%**	10	50	10	50	10	50
Implementation (15%)							
Staging – construction	**10%**	10	100	7	70	9	90
Maintenance of traffic	**5%**	10	50	8	40	7	35
Cost (25%)							
Initial Construction/ROW	**20%**	10	200	6	120	8	160
Maintenance	**5%**	6	30	8	40	9	45
Total Score			775		820		905
Total Interchange Construction Costs (2004 million dollars)			$0		$12,460,100		$6,154,000

IH 39 / STH 26 / USH 14 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study
Illinois State Line to Madison
August 2007

PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Loops)		Alternative 3 (26Loop & 14Diamond)		Preferred Alternative 4 (26Loop & 14Diamond w/ CD)	
EVALUATION FACTORS	SCALE VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE	RATING	WEIGHTED VALUE
Operational Factors (25%)									
Capacity/Level of Service	**10%**	6	60	10	100	10	100	10	100
-- Design year LOS									
-- Improved capacity									
Traffic Flow	**5%**	6	30	8	40	9	45	10	50
-- Uninterrupted flow									
-- Reduced congestion									
-- Sufficient left turn storage capacity									
-- Adequate green cycles									
-- Reduced travel time and distances									
-- Improved weave sections									
Design characteristics	**10%**	5	50	9	90	9	90	10	100
-- Geometric alignment									
-- Design speed									
-- Total number of structures									
-- Complexity of structures									
-- Total length of ramps									
-- Pedestrian and bicycle accommodation									
Safety (20%)									
Operational	**15%**	5	75	9	135	9	135	10	150
Roadside	**5%**	6	30	10	50	10	50	10	50
Environmental Impact (15%)									
Additional right of way	**5%**	10	50	7	35	10	50	10	50
Wetland Impact	**5%**	10	50	10	50	10	50	10	50
Community Impacts	**5%**	10	50	10	50	10	50	10	50
Implementation (15%)									
Staging – construction	**10%**	10	100	8	80	9	90	9	90
Maintenance of traffic	**5%**	10	50	8	40	8	40	9	45
Cost (25%)									
Initial Construction/ROW	**20%**	10	200	8	160	8	160	7	140
Maintenance	**5%**	6	30	8	40	9	45	9	45
Total Score			775		870		905		920
Total Interchange Construction Costs (2004 million dollars)			$0				$25,750,000		$31,941,500

IH 39 / STH 59 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study
Illinois State Line to Madison
August 2007

PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Loop)		Alternative 4 (Diamond with Flatter Curve)		Alternative 5 (Loop/Diamond)		Preferred Alternative 6 (Diamond with Roundabouts)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)											
Capacity/Level of Service	**10%**	7	70	8	80	10	100	10	100	10	100
-- Design year LOS											
-- Improved capacity											
Traffic Flow	**5%**	6	30	8	40	9	45	9	45	10	50
-- Uninterrupted flow											
-- Reduced congestion											
-- Sufficient left turn storage capacity											
-- Adequate green cycles											
-- Reduced travel time and distances											
-- Improved weave sections											
Design characteristics	**10%**	6	60	8	80	10	100	9	90	10	100
-- Geometric alignment											
-- Design speed											
-- Total number of structures											
-- Complexity of structures											
-- Total length of ramps											
-- Pedestrian and bicycle accommodation											
Safety (20%)											
Operational	**15%**	6	90	9	135	9	135	9	135	9	135
Roadside	**5%**	7	35	10	50	10	50	10	50	10	50
Environmental Impact (15%)											
Additional right of way	**5%**	10	50	8	40	7	35	8	40	7	35
Wetland Impact	**5%**	10	50	10	50	10	50	10	50	10	50
Community Impacts	**5%**	9	45	9	45	9	45	9	45	10	50
Implementation (15%)											
Staging – construction	**10%**	10	100	7	70	9	90	8	80	8	80
Maintenance of traffic	**5%**	10	50	8	40	7	35	8	40	8	40
Cost (25%)											
Initial Construction/ROW	**20%**	10	200	7	140	7	140	8	160	9	180
Maintenance	**5%**	6	30	9	45	9	45	9	45	9	45
Total Score			810		815		870		880		915
Total Interchange Construction Costs (2004 million dollars)			$0		$6,129,500		$6,231,500		$5,731,000		$4,636,931

IH 39 / STH 73 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

Preferred

PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Loop - desirable)		Alternative 1A (Loop -- minimum)		Alternative 2 (Diamond)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)									
Capacity/Level of Service	**10%**	7	70	10	100	10	100	10	100
-- Design year LOS									
-- Improved capacity									
Traffic Flow	**5%**	6	30	9	45	8	40	8	40
-- Uninterrupted flow									
-- Reduced congestion									
-- Sufficient left turn storage capacity									
-- Adequate green cycles									
-- Reduced travel time and distances									
-- Improved weave sections									
Design characteristics	**10%**	6	60	9	90	8	80	9	90
-- Geometric alignment									
-- Design speed									
-- Total number of structures									
-- Complexity of structures									
-- Total length of ramps									
-- Pedestrian and bicycle accommodation									
Safety (20%)									
Operational	**15%**	6	90	9	135	9	135	9	135
Roadside	**5%**	7	35	10	50	10	50	10	50
Environmental Impact (15%)									
Additional right of way	**5%**	10	50	7	35	8	40	8	40
Wetland Impact	**5%**	10	50	8	40	9	45	10	50
Community Impacts	**5%**	10	50	10	50	10	50	10	50
Implementation (15%)									
Staging – construction	**10%**	10	100	8	80	9	90	9	90
Maintenance of traffic	**5%**	10	50	8	40	7	35	7	35
Cost (25%)									
Initial Construction/ROW	**20%**	10	200	7	140	8	160	9	180
Maintenance	**5%**	6	30	9	45	9	45	9	45
Total Score			815		850		870		905
Total Interchange Construction Costs (2004 million dollars)			$0		$5,900,000		$5,350,000		$4,505,800

IH 39 / USH 51 INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Preferred Alternative 1 (Loop)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)					
Capacity/Level of Service	**10%**	9	90	10	100
-- Design year LOS					
-- Improved capacity					
Traffic Flow	**5%**	7	35	10	50
-- Uninterrupted flow					
-- Reduced congestion					
-- Sufficient left turn storage capacity					
-- Adequate green cycles					
-- Reduced travel time and distances					
-- Improved weave sections					
Design characteristics	**10%**	7	70	10	100
-- Geometric alignment					
-- Design speed					
-- Total number of structures					
-- Complexity of structures					
-- Total length of ramps					
-- Pedestrian and bicycle accommodation					
Safety (20%)					
Operational	**15%**	8	120	10	150
Roadside	**5%**	8	40	10	50
Environmental Impact (15%)					
Additional right of way	**5%**	10	50	8	40
Wetland Impact	**5%**	10	50	8	40
Community Impacts	**5%**	10	50	10	50
Implementation (15%)					
Staging – construction	**10%**	10	100	8	80
Maintenance of traffic	**5%**	10	50	9	45
Cost (25%)					
Initial Construction/ROW	**20%**	10	200	8	160
Maintenance	**5%**	6	30	9	45
Total Score			885		910
Total Interchange Construction Costs (2004 million dollars)			$0		$5,517,800

IH 39 / CTH N INTERCHANGE EVALUATION MATRIX

I-39/90 Corridor Study

Illinois State Line to Madison

August 2007

PLAN ALTERNATIVE		NO BUILD		Preferred Alternative 1 (Diamond)	
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)					
Capacity/Level of Service	**10%**	7	70	10	100
-- Design year LOS					
-- Improved capacity					
Traffic Flow	**5%**	6	30	9	45
-- Uninterrupted flow					
-- Reduced congestion					
-- Sufficient left turn storage capacity					
-- Adequate green cycles					
-- Reduced travel time and distances					
-- Improved weave sections					
Design characteristics	**10%**	7	70	10	100
-- Geometric alignment					
-- Design speed					
-- Total number of structures					
-- Complexity of structures					
-- Total length of ramps					
-- Pedestrian and bicycle accommodation					
Safety (20%)					
Operational	**15%**	6	90	9	135
Roadside	**5%**	7	35	10	50
Environmental Impact (15%)					
Additional right of way	**5%**	10	50	9	45
Wetland Impact	**5%**	10	50	10	50
Community Impacts	**5%**	10	50	10	50
Implementation (15%)					
Staging – construction	**10%**	10	100	8	80
Maintenance of traffic	**5%**	10	50	8	40
Cost (25%)					
Initial Construction/ROW	**20%**	10	200	8	160
Maintenance	**5%**	6	30	9	45
Total Score			825		900
Total Interchange Construction Costs (2004 million dollars)			$0		$6,576,400

IH 39 / USH 12 / USH 18 INTERCHANGE EVALUATION MATRIX

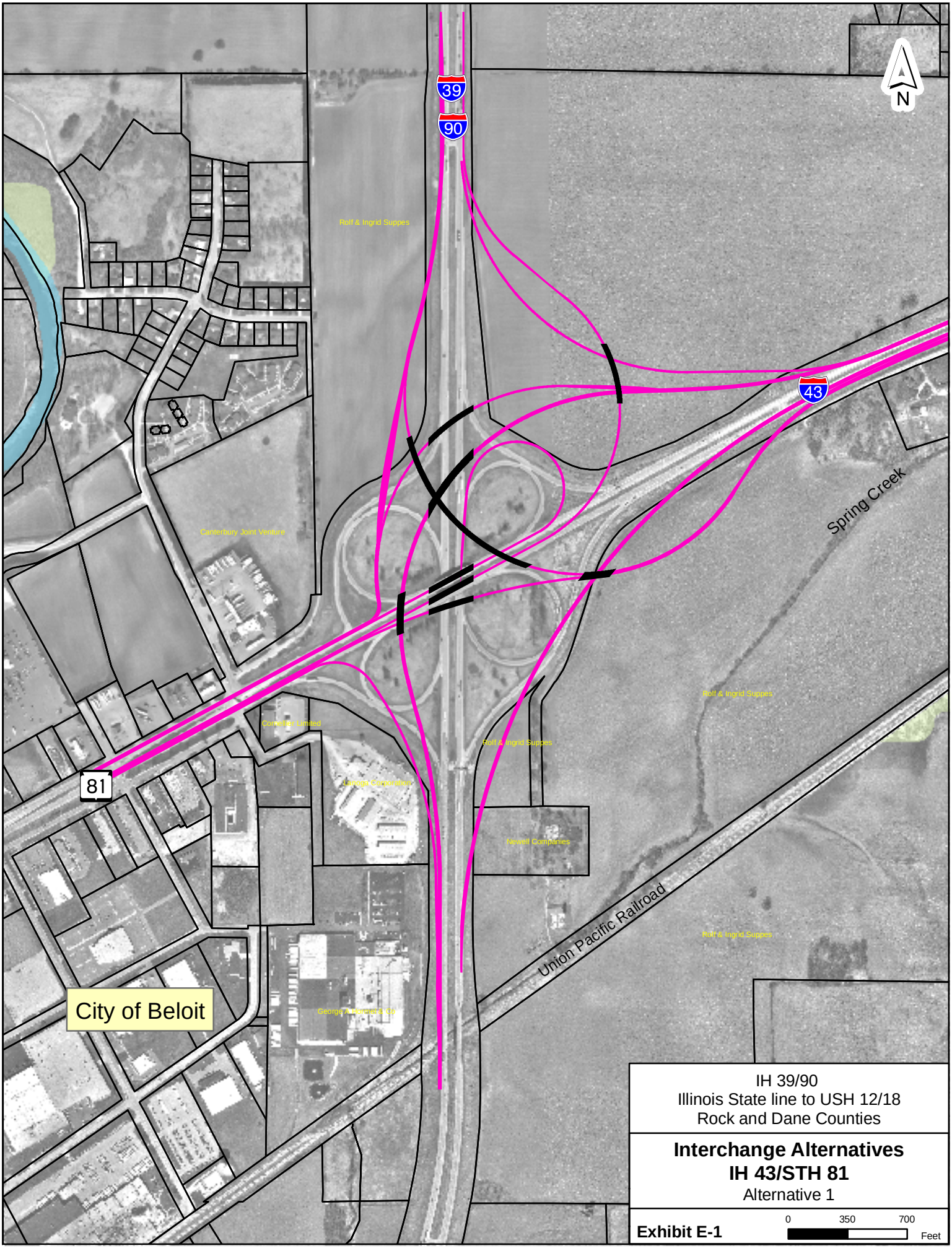
I-39/90 Corridor Study
Illinois State Line to Madison
August 2007

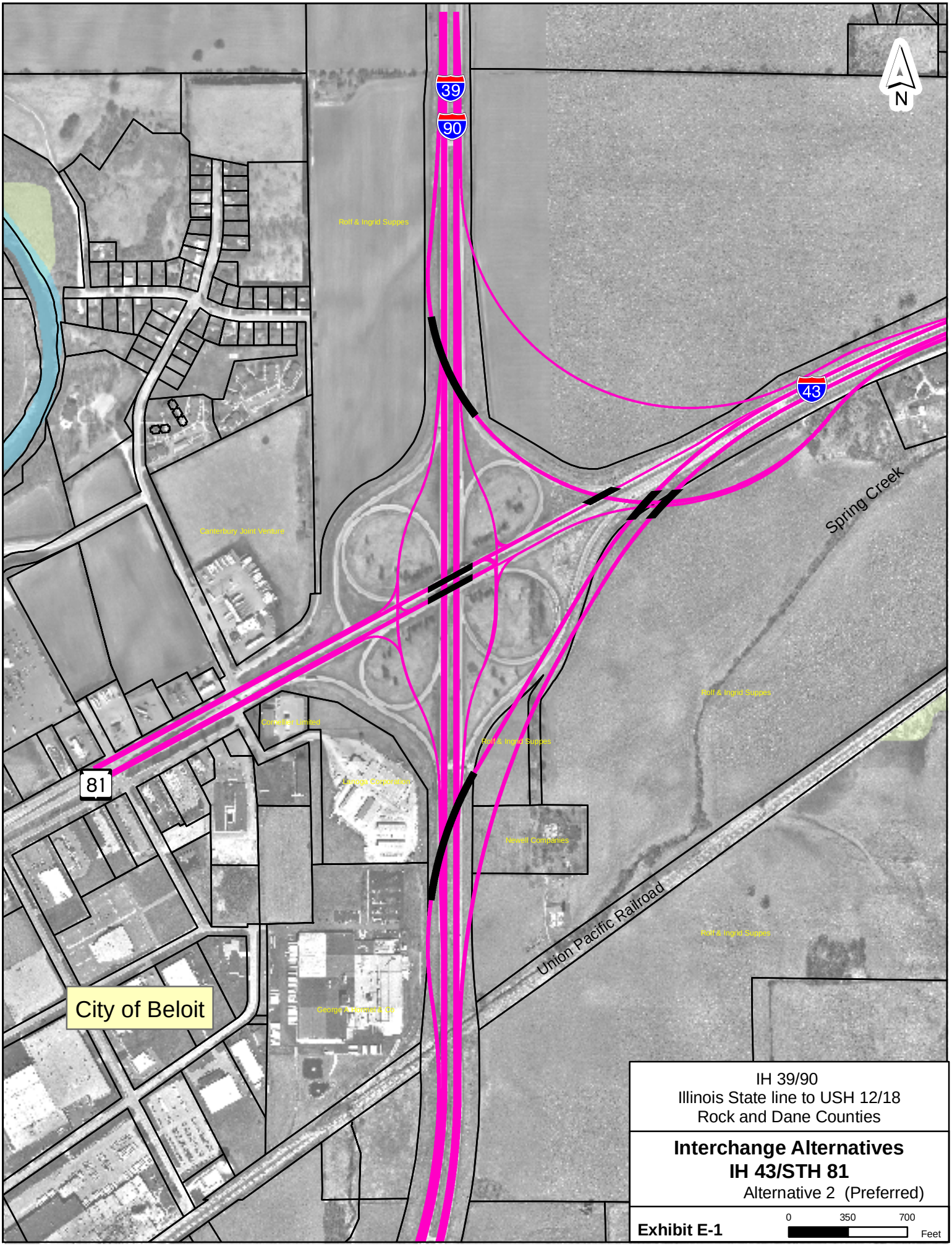
PLAN ALTERNATIVE		NO BUILD		Alternative 1 (Same Footprint)		Alternative 2 (Relocate WB IH 39/90 West - Partial Build)		Alternative 3 (Relocate EB USH 12/18 North)		Alternative 4 (Free Flow)	
							Preferred				
EVALUATION FACTORS	**SCALE VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**	**RATING**	**WEIGHTED VALUE**
Operational Factors (25%)											
Capacity/Level of Service	**10%**	6	60	8	80	9	90	10	100	10	100
-- Design year LOS											
-- Improved capacity											
Traffic Flow	**5%**	6	30	8	40	9	45	9	45	10	50
-- Uninterrupted flow											
-- Reduced congestion											
-- Sufficient left turn storage capacity											
-- Adequate green cycles											
-- Reduced travel time and distances											
-- Improved weave sections											
Design characteristics	**10%**	8	80	8	80	9	90	10	100	9	90
-- Geometric alignment											
-- Design speed											
-- Total number of structures											
-- Complexity of structures											
-- Total length of ramps											
-- Pedestrian and bicycle accommodation											
Safety (20%)											
Operational	**15%**	5	75	7	105	9	135	10	150	10	150
Roadside	**5%**	7	35	8	40	9	45	10	50	10	50
Environmental Impact (15%)											
Additional right of way	**5%**	10	50	9	45	9	45	9	45	7	35
Wetland Impact	**5%**	10	50	10	50	9	45	9	45	7	35
Community Impacts	**5%**	10	50	10	50	10	50	10	50	10	50
Implementation (15%)											
Staging – construction	**10%**	10	100	9	90	8	80	8	80	7	70
Maintenance of traffic	**5%**	10	50	9	45	7	35	7	35	7	35
Cost (25%)											
Initial Construction/ROW	**20%**	10	200	9	180	7	140	7	140	6	120
Maintenance	**5%**	6	30	7	35	9	45	9	45	10	50
Total Score			810		840		845		885		835
Total Interchange Construction Costs (2004 million dollars)							$20,500,000		$25,400,000		

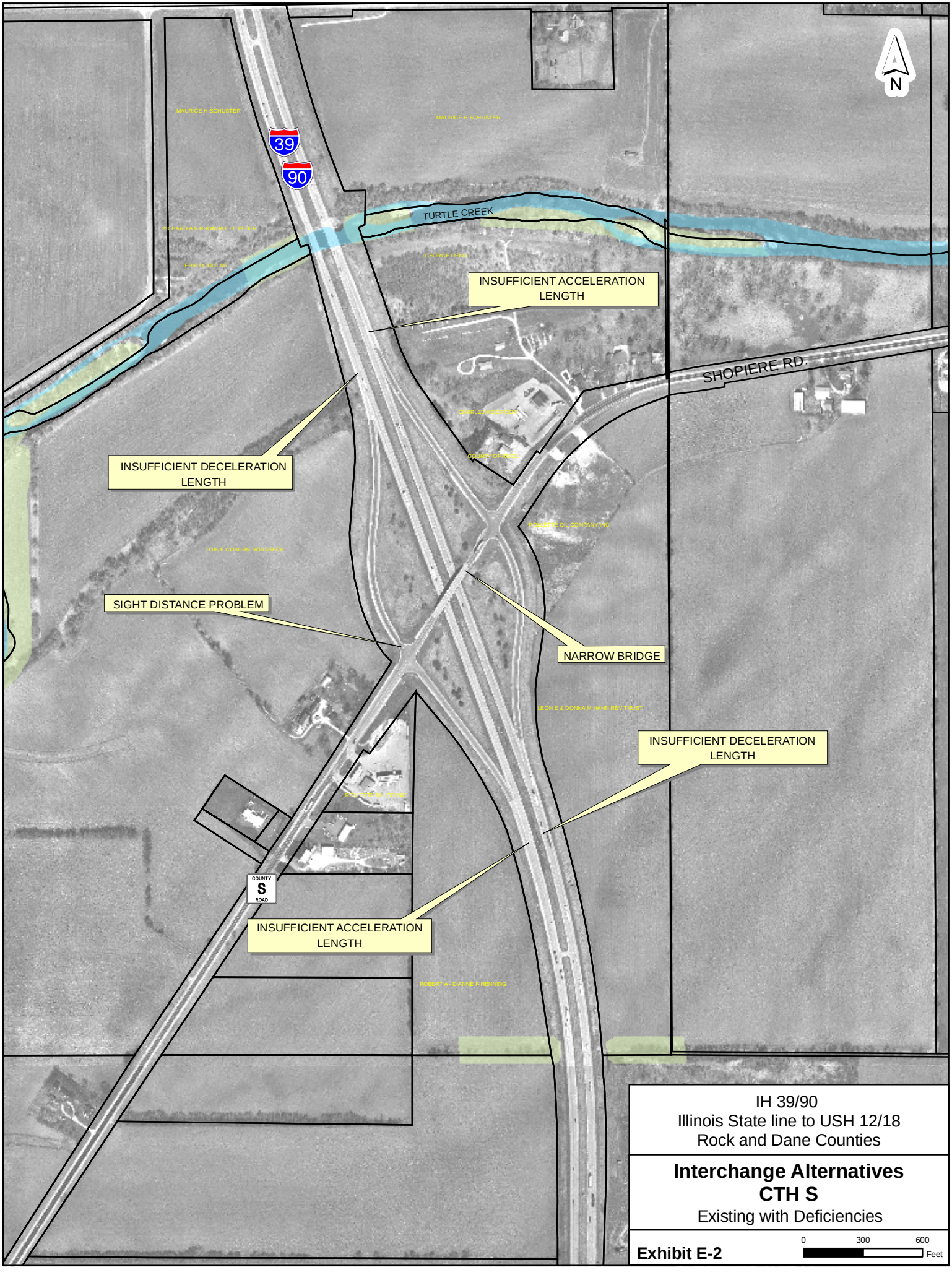
APPENDIX E

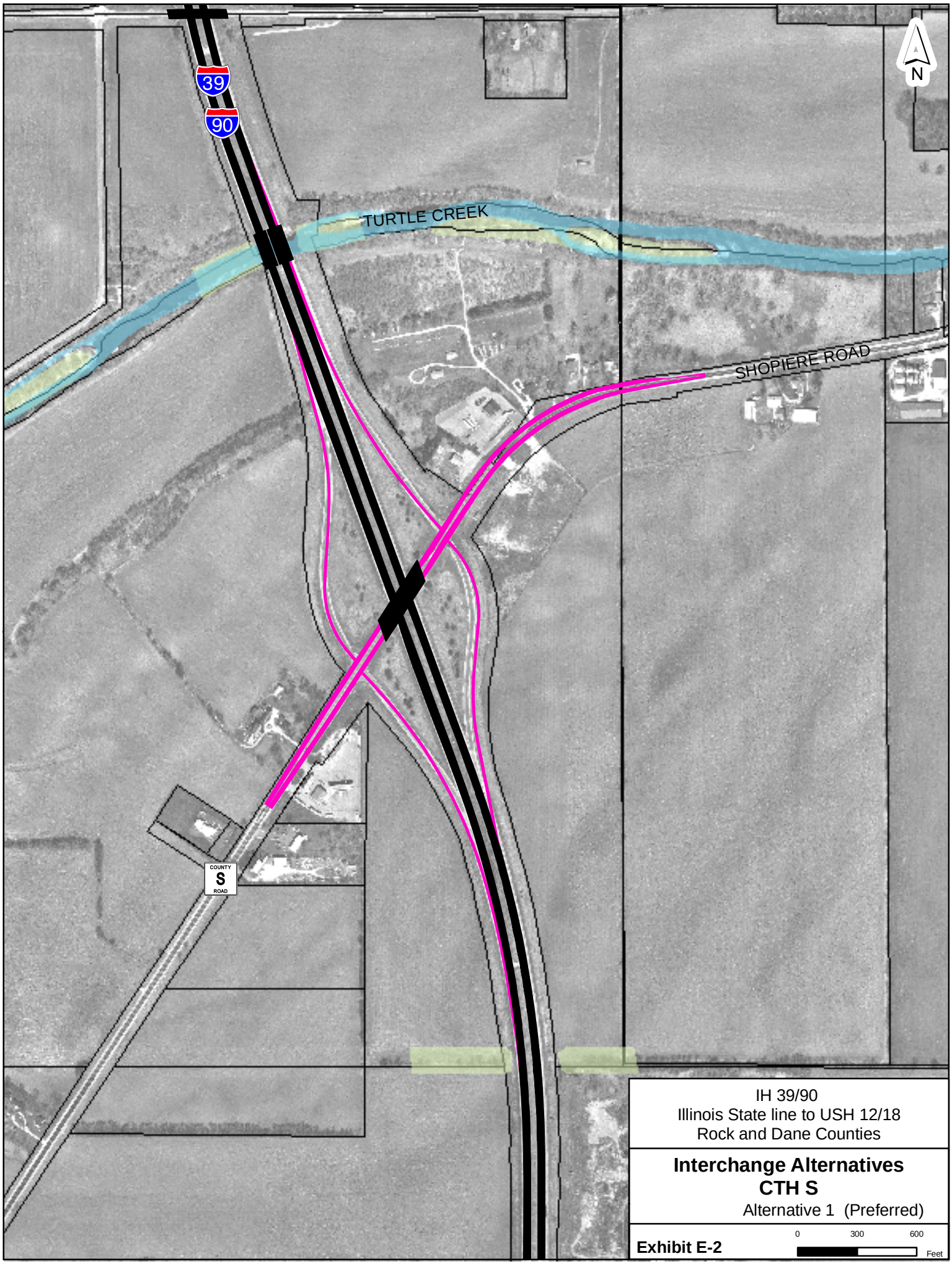
Interchange Alternatives


39
90
43
81
N
INSUFFICIENT ACCELERATION LENGTH
INSUFFICIENT DECELERATION LENGTH
INSUFFICIENT DECELERATION LENGTH
MOVEMENT TO STH 81 LEFT EXIT
INSUFFICIENT WEAVE DISTANCE
SIGNAL AFTER LONG STRETCH OF INTERSTATE
INSUFFICIENT WEAVE DISTANCE
INSUFFICIENT ACCELERATION LENGTH
MOVEMENT FROM STH 81 LEFT ENTRANCE
INSUFFICIENT DECELERATION LENGTH
INSUFFICIENT ACCELERATION LENGTH
Spring Creek
Union Pacific Railroad
City of Beloit
Rolf & Ingrid Suppes
Canterbury Joint Venture
Newell Companies
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
IH 43/STH 81
Existing with Deficiencies
Exhibit E-1
0
350
700
Feet


39
90
43
N
81
Rolf & Ingrid Suppes
Canterbury Joint Venture
Spring Creek
Rolf & Ingrid Suppes
Rolf & Ingrid Suppes
Newell Companies
Rolf & Ingrid Suppes
Union Pacific Railroad
City of Beloit
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
IH 43/STH 81
Alternative 1
Exhibit E-1
0
350
700
Feet


39
90
43
N
81
Rolf & Ingrid Suppes
Canterbury Joint Venture
Spring Creek
Rolf & Ingrid Suppes
Rolf & Ingrid Suppes
Rolf & Ingrid Suppes
Newell Companies
Union Pacific Railroad
City of Beloit
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
IH 43/STH 81
Alternative 2 (Preferred)
Exhibit E-1
0
350
700
Feet


N
39
90
TURTLE CREEK
SHOPIERE RD.
INSUFFICIENT ACCELERATION LENGTH
INSUFFICIENT DECELERATION LENGTH
SIGHT DISTANCE PROBLEM
NARROW BRIDGE
INSUFFICIENT DECELERATION LENGTH
INSUFFICIENT ACCELERATION LENGTH
COUNTY S ROAD
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
CTH S
Existing with Deficiencies
Exhibit E-2
0
300
600
Feet

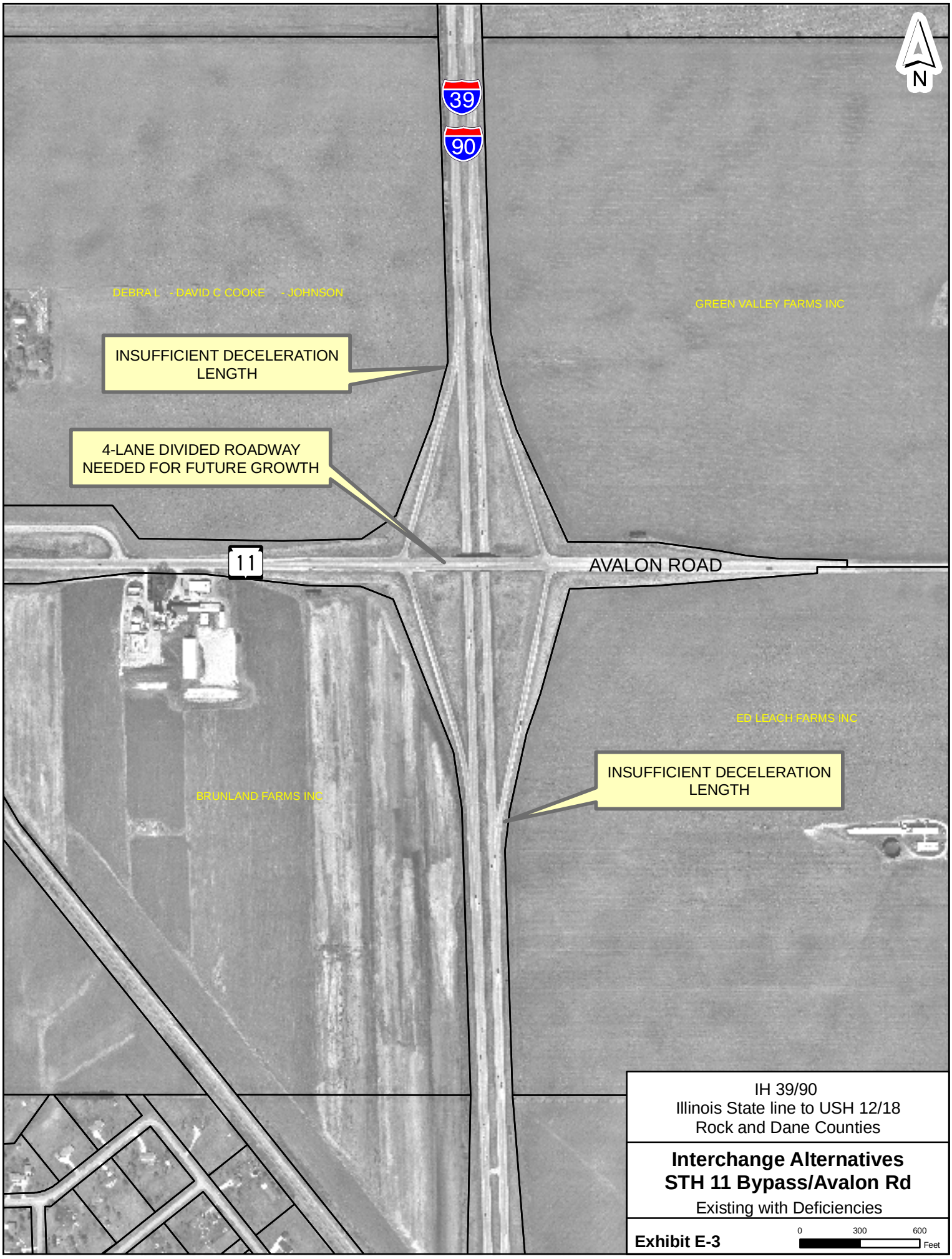


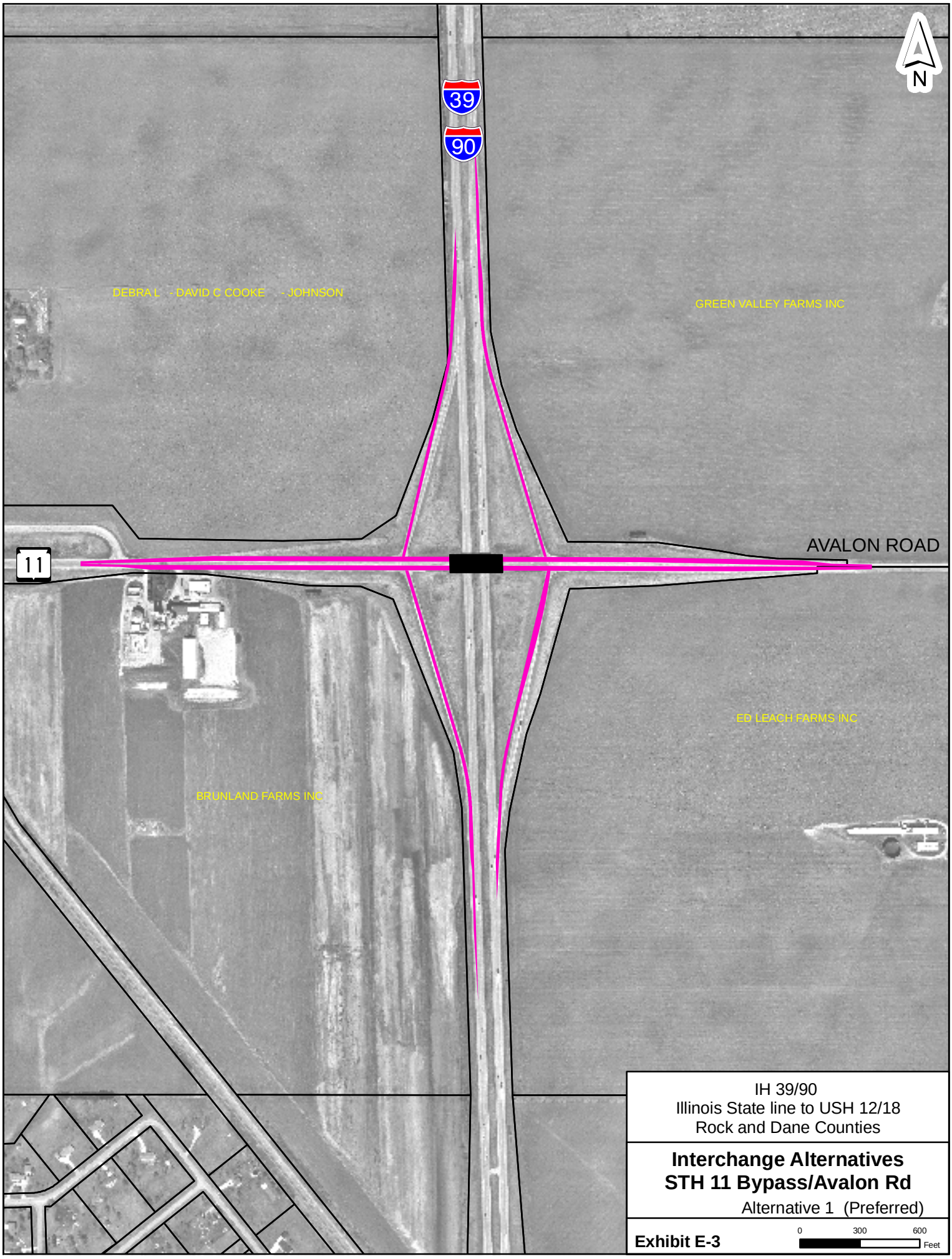
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

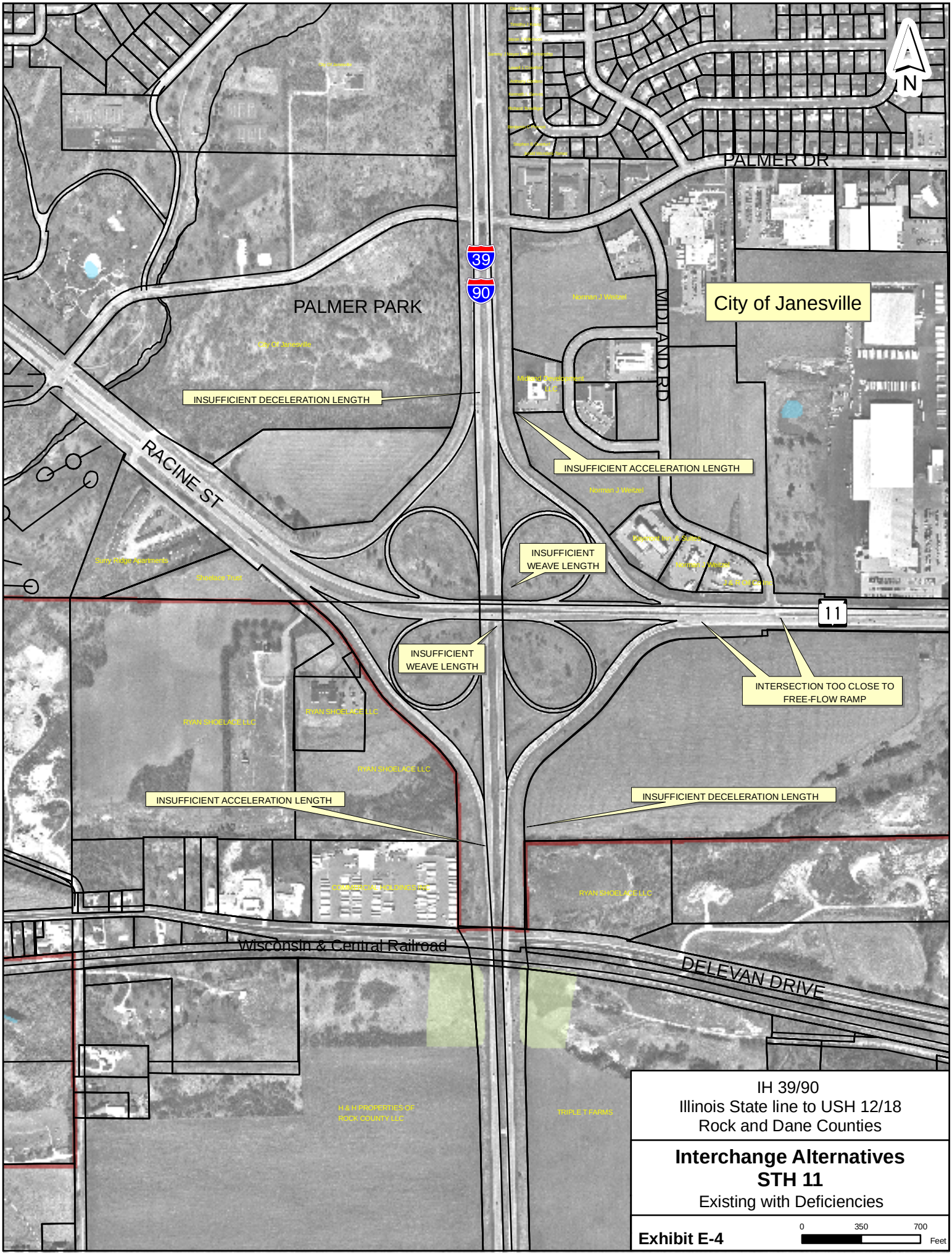
Interchange Alternatives
CTH S
Alternative 1 (Preferred)

Exhibit E-2

0 300 600
Feet


N
39
90
DEBRA L - DAVID C COOKE - JOHNSON
GREEN VALLEY FARMS INC
INSUFFICIENT DECELERATION LENGTH
4-LANE DIVIDED ROADWAY NEEDED FOR FUTURE GROWTH
11
AVALON ROAD
ED LEACH FARMS INC
INSUFFICIENT DECELERATION LENGTH
BRUNLAND FARMS INC
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
STH 11 Bypass/Avalon Rd
Existing with Deficiencies
Exhibit E-3
0
300
600
Feet


N
39
90
DEBRA L - DAVID C COOKE - JOHNSON
GREEN VALLEY FARMS INC
11
AVALON ROAD
ED LEACH FARMS INC
BRUNLAND FARMS INC
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
STH 11 Bypass/Avalon Rd
Alternative 1 (Preferred)
Exhibit E-3
0
300
600
Feet

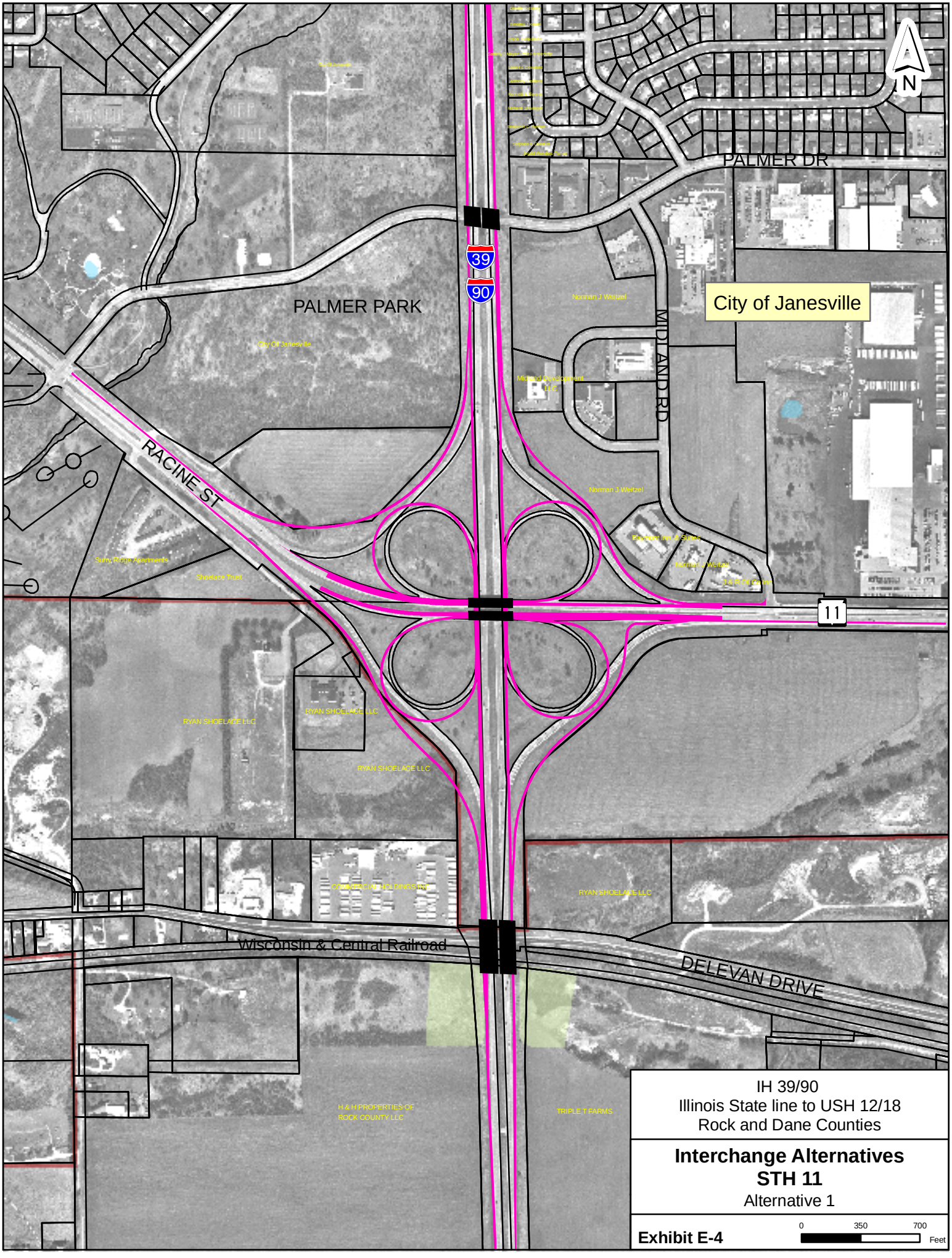


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 11
Existing with Deficiencies

Exhibit E-4

0 350 700 Feet

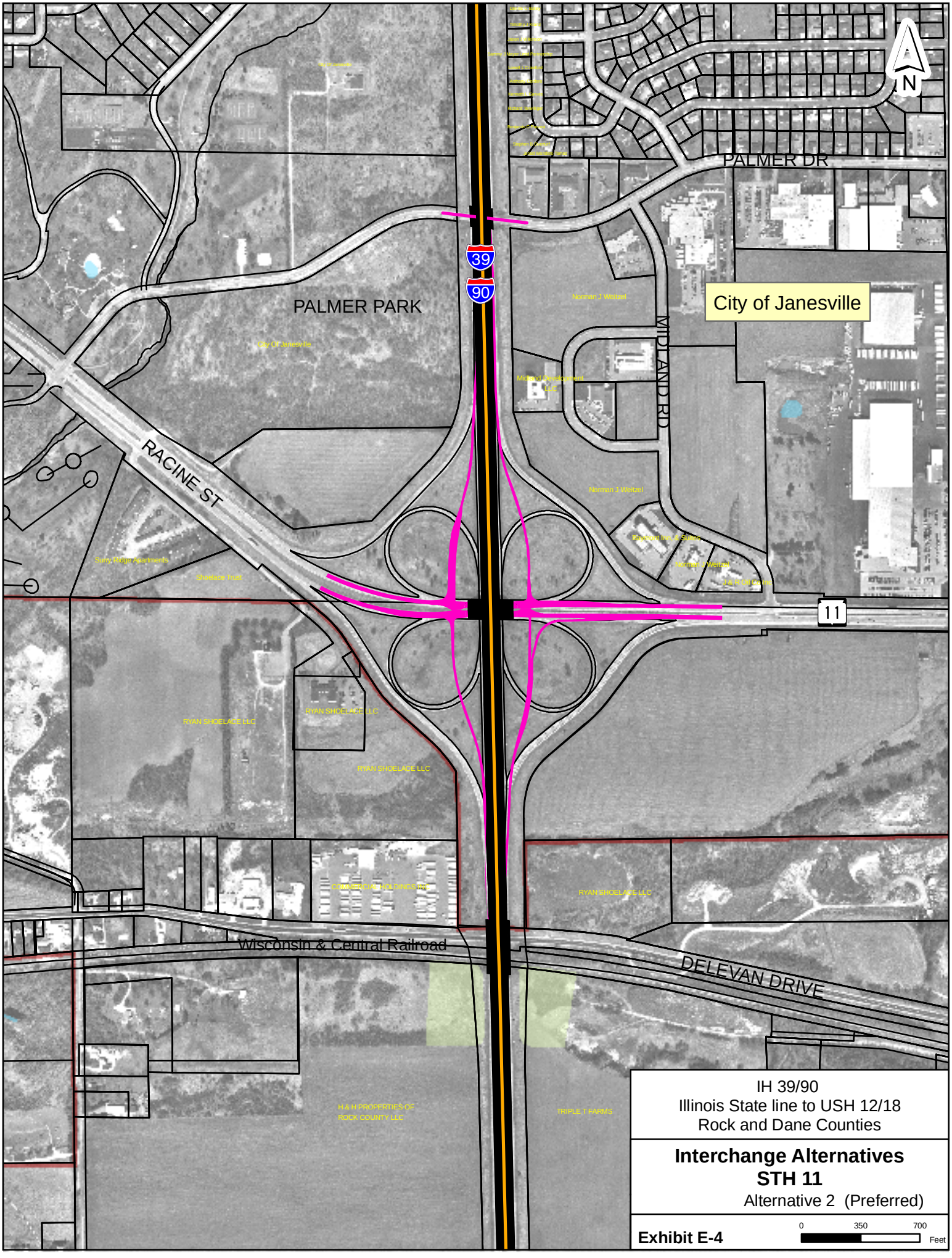


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 11
Alternative 1

Exhibit E-4

0 350 700 Feet

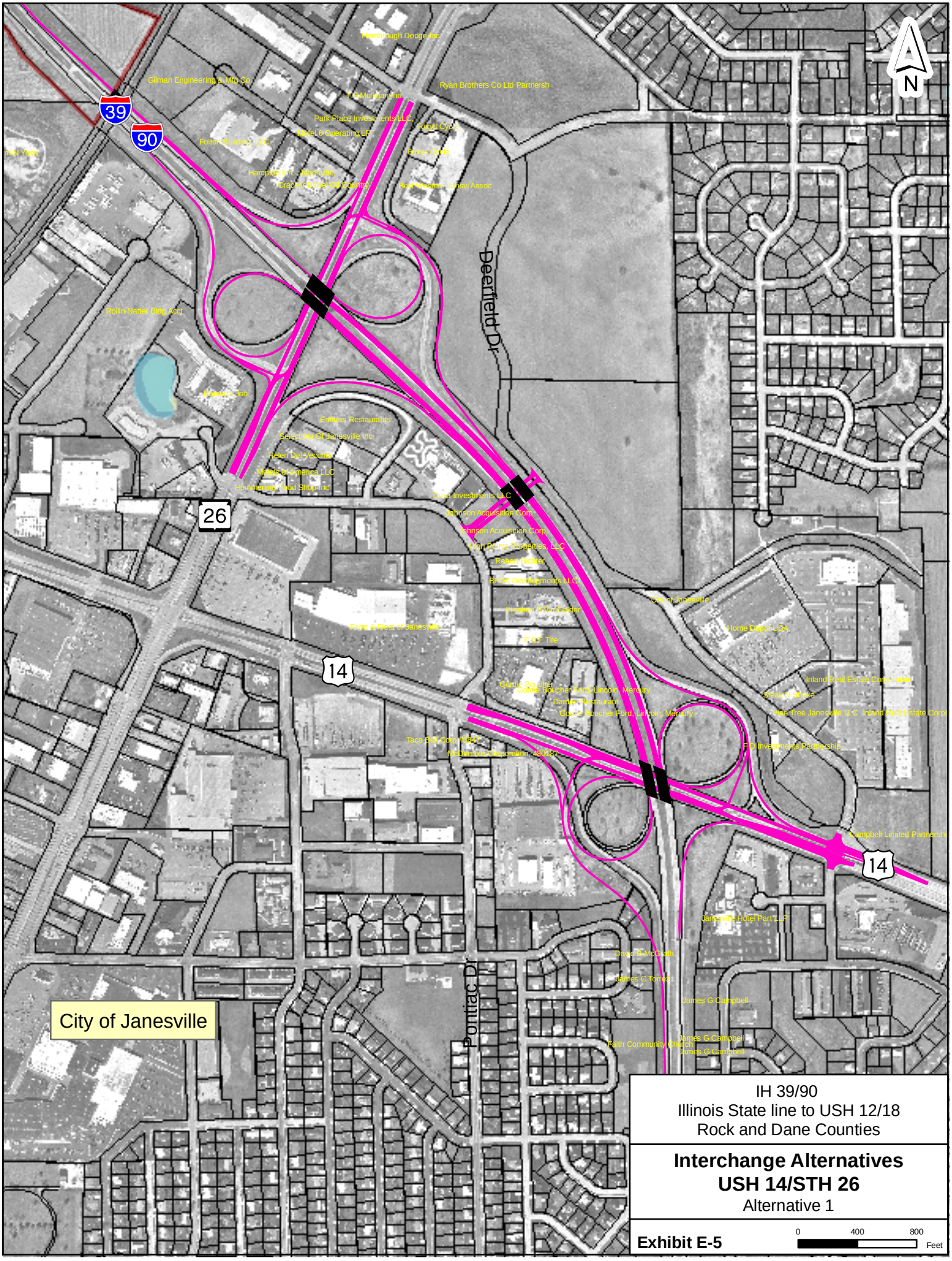

N
PALMER DR
39
90
PALMER PARK
City of Janesville
MIDLAND RD
RACINE ST
11
Wisconsin & Central Railroad
DELEVAN DRIVE
RYAN SHOELACE LLC
TRIPLE T FARMS
H & H PROPERTIES OF ROCK COUNTY LLC
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
STH 11
Alternative 2 (Preferred)
Exhibit E-4
0
350
700
Feet

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 14/STH 26
Existing with Deficiencies

Exhibit E-5

0 400 800 Feet

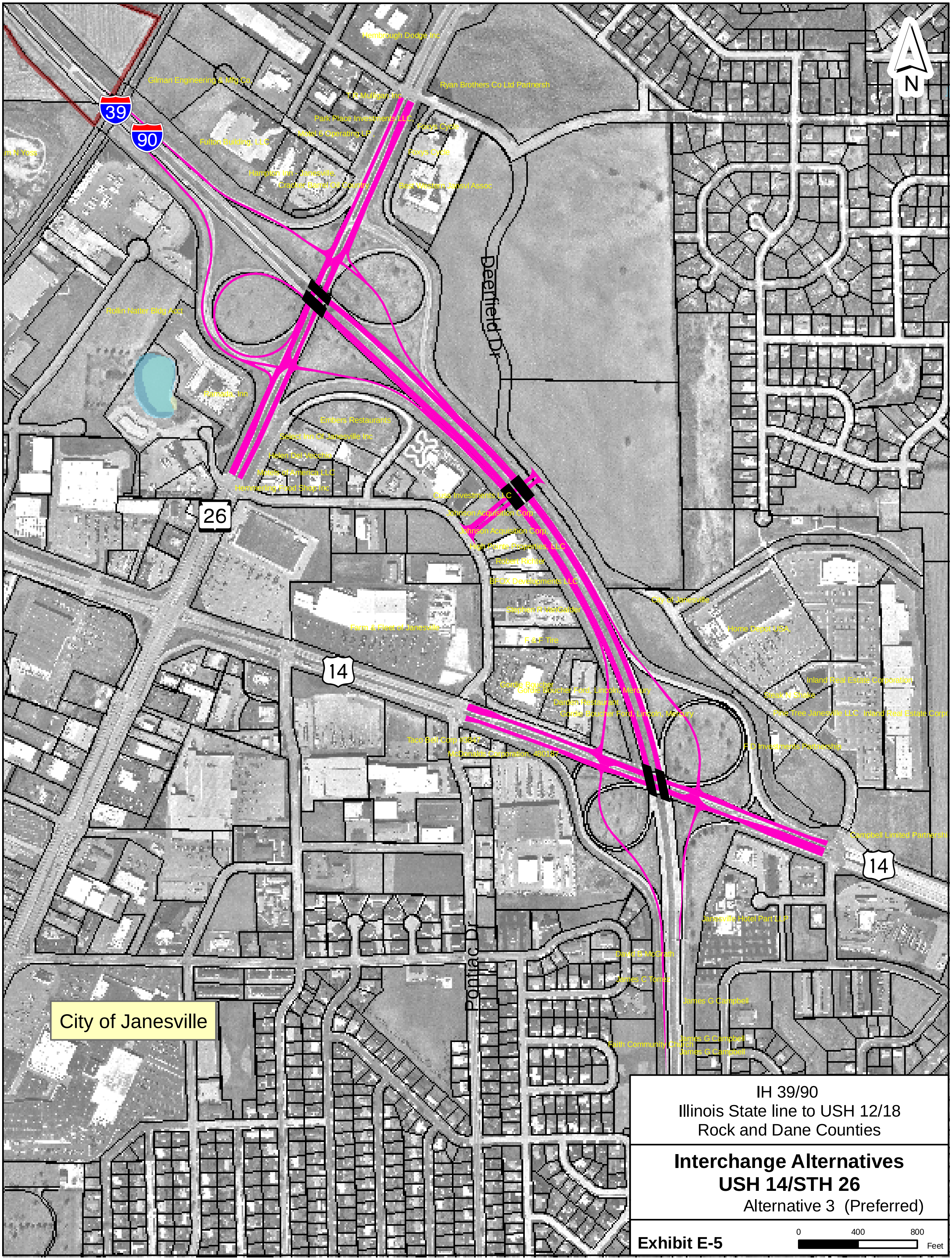

N
39
90
26
14
Deerfield Dr
Pontiac Dr
City of Janesville
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 14/STH 26
Alternative 1
Exhibit E-5
0
400
800
Feet

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 14/STH 26
Alternative 2

Exhibit E-5

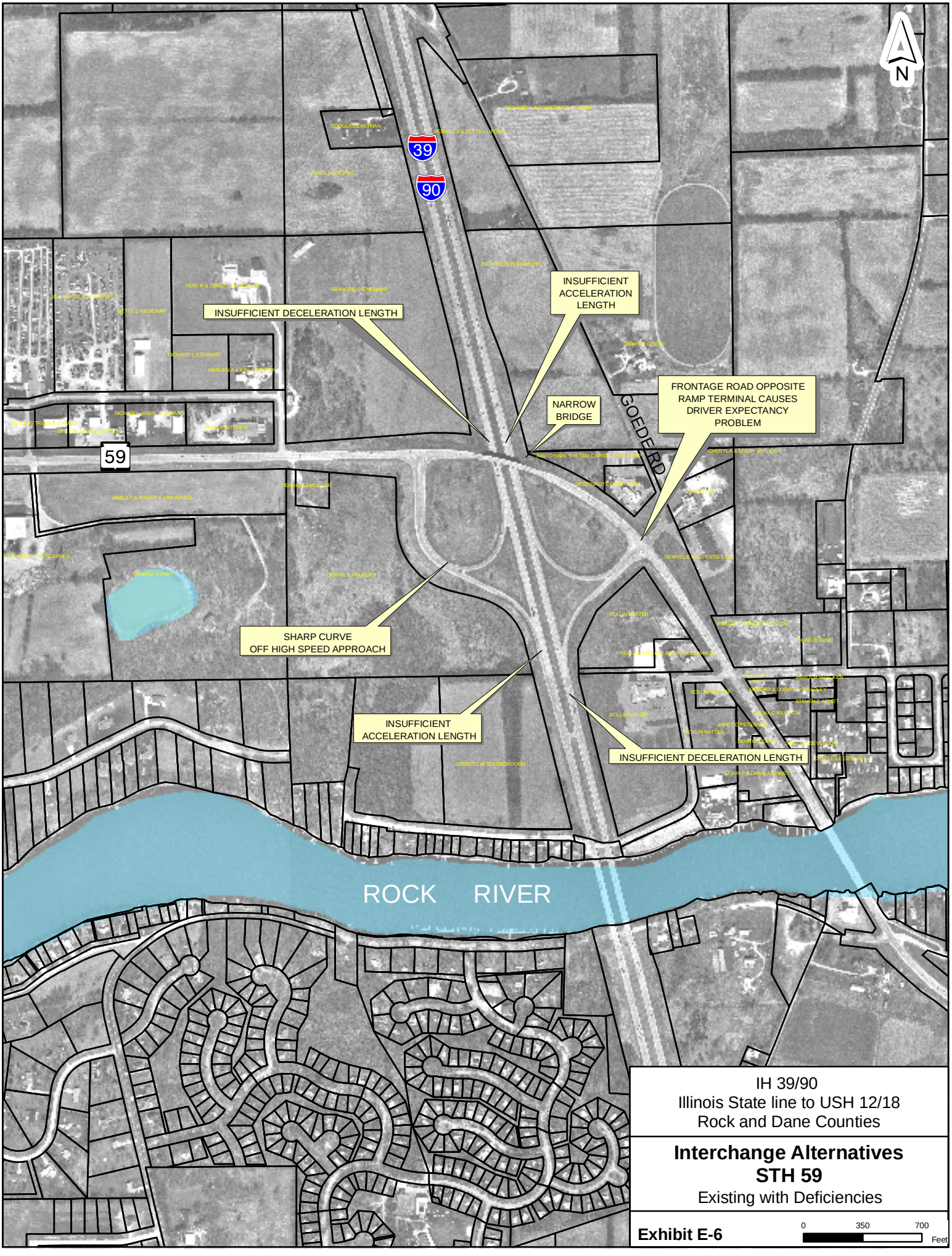
0 400 800 Feet


39
90
26
14
14
N
Deerfield Dr
Pontiac Dr
City of Janesville
Gilman Engineering & Mfg Co
Ryan Brothers Co Ltd Partnersh
Park Place Investments LLC
Fulton Building, LLC
Hampton Inn - Janesville
Best Western Jansvl Assoc
Rollin Natter Bldg Acct
Embers Restaurants
Select Inn Of Janesville Inc
Johnson Acquisition Corp
High Prairie Properties, LLC
City of Janesville
Home Depot USA
Farm & Fleet of Janesville
Gordie Boucher Ford, Lincoln, Mercury
Darden Restaurant
Taco Bell Corp
McDonalds Corporation
Inland Real Estate Corporation
Steak N Shake
Pine Tree Janesville LLC
Campbell Limited Partnersh
Janesville Hotel Part LLP
James G Campbell
Faith Community Church
0
400
800
Feet

IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 14/STH 26
Alternative 3 (Preferred)

Exhibit E-5

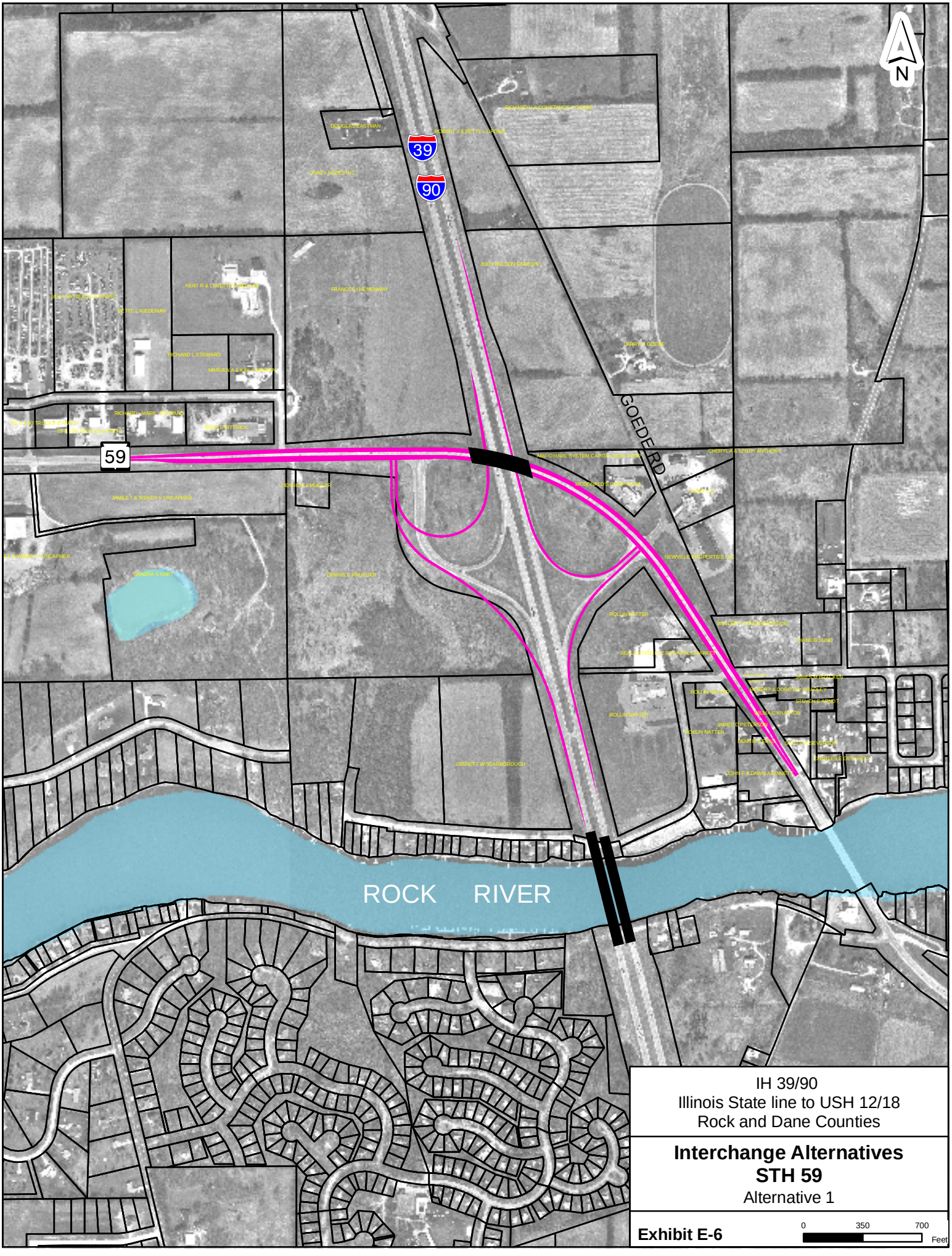


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 59
Existing with Deficiencies

Exhibit E-6

0 350 700 Feet

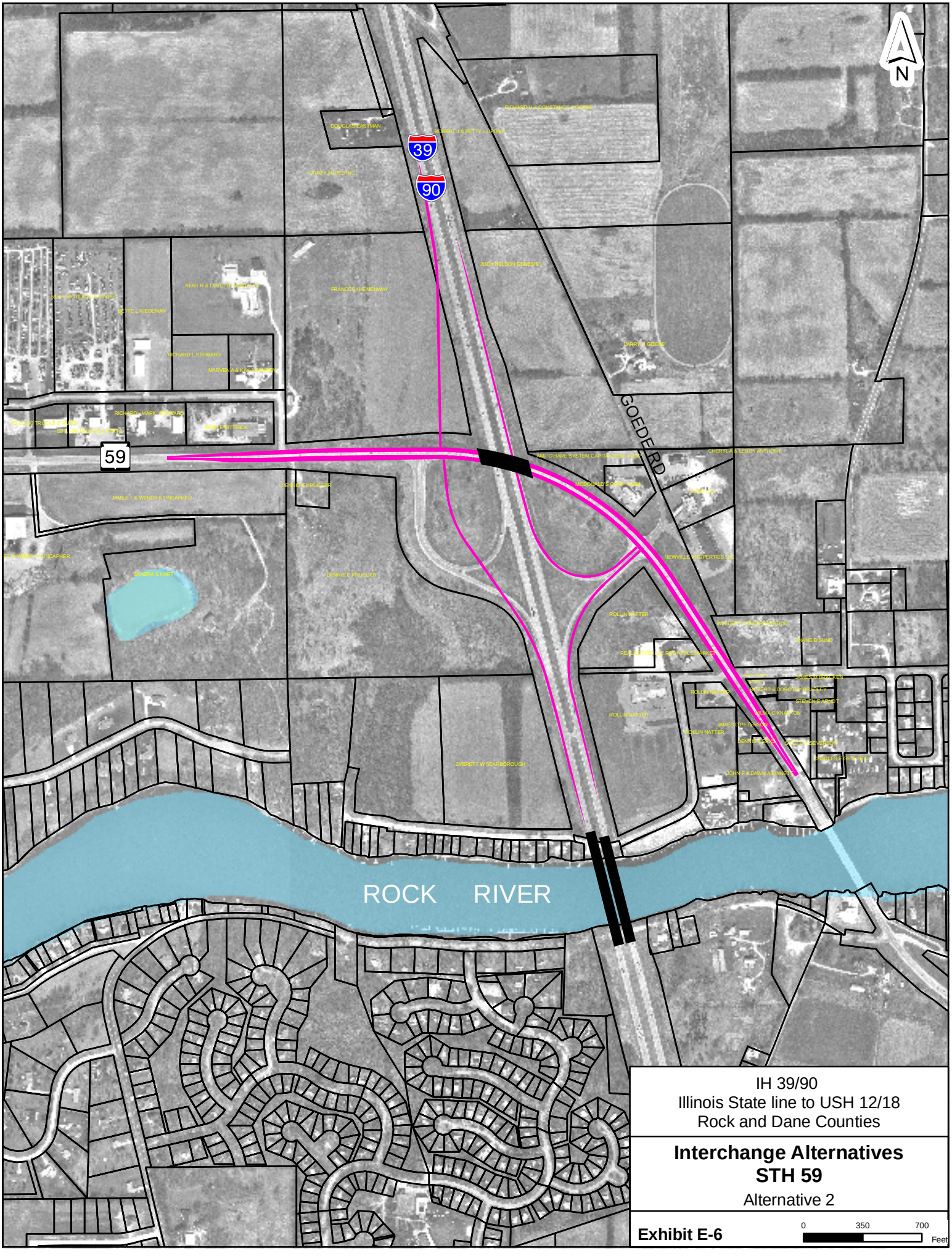


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 59
Alternative 1

Exhibit E-6

0 350 700 Feet

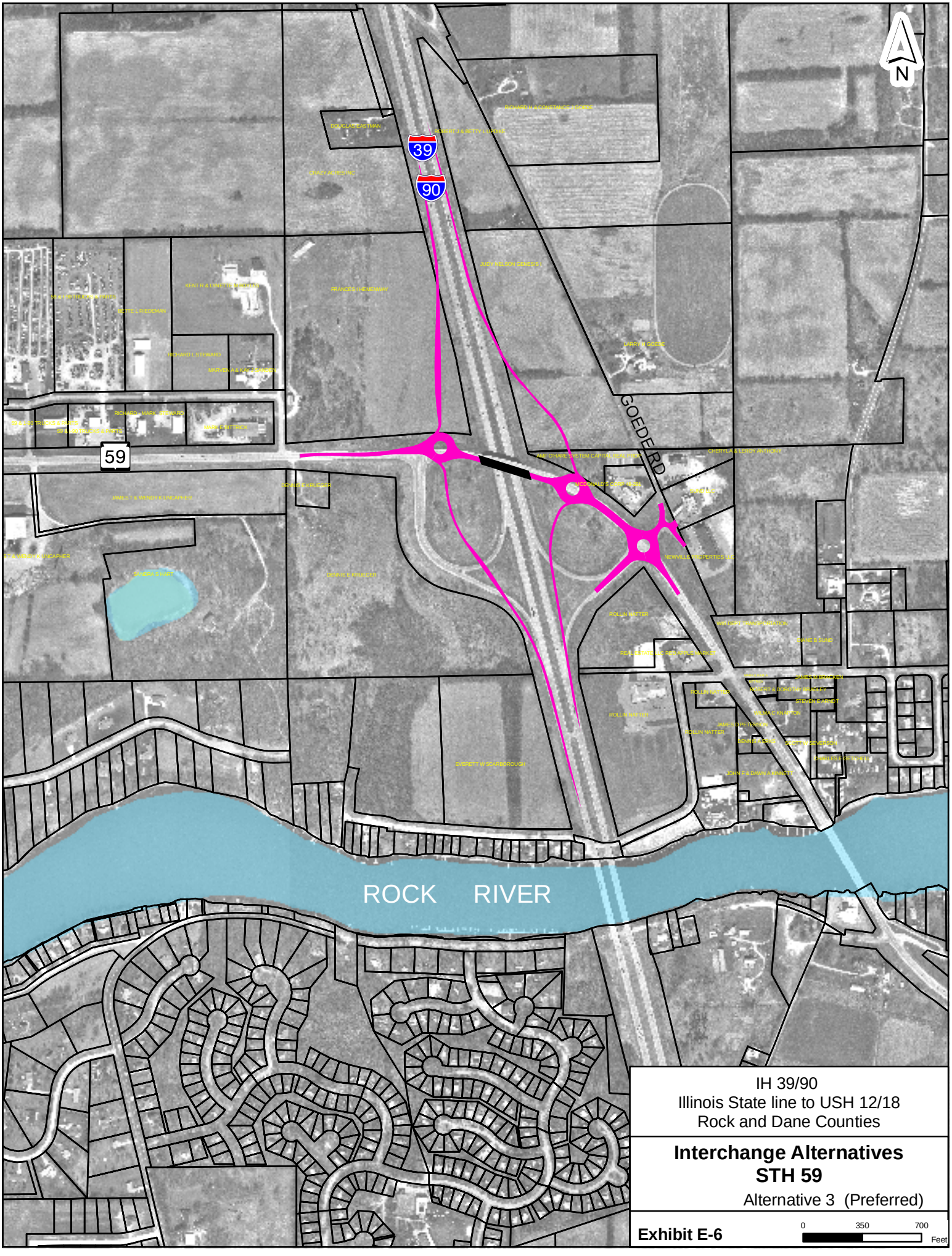


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 59
Alternative 2

Exhibit E-6

0 350 700 Feet

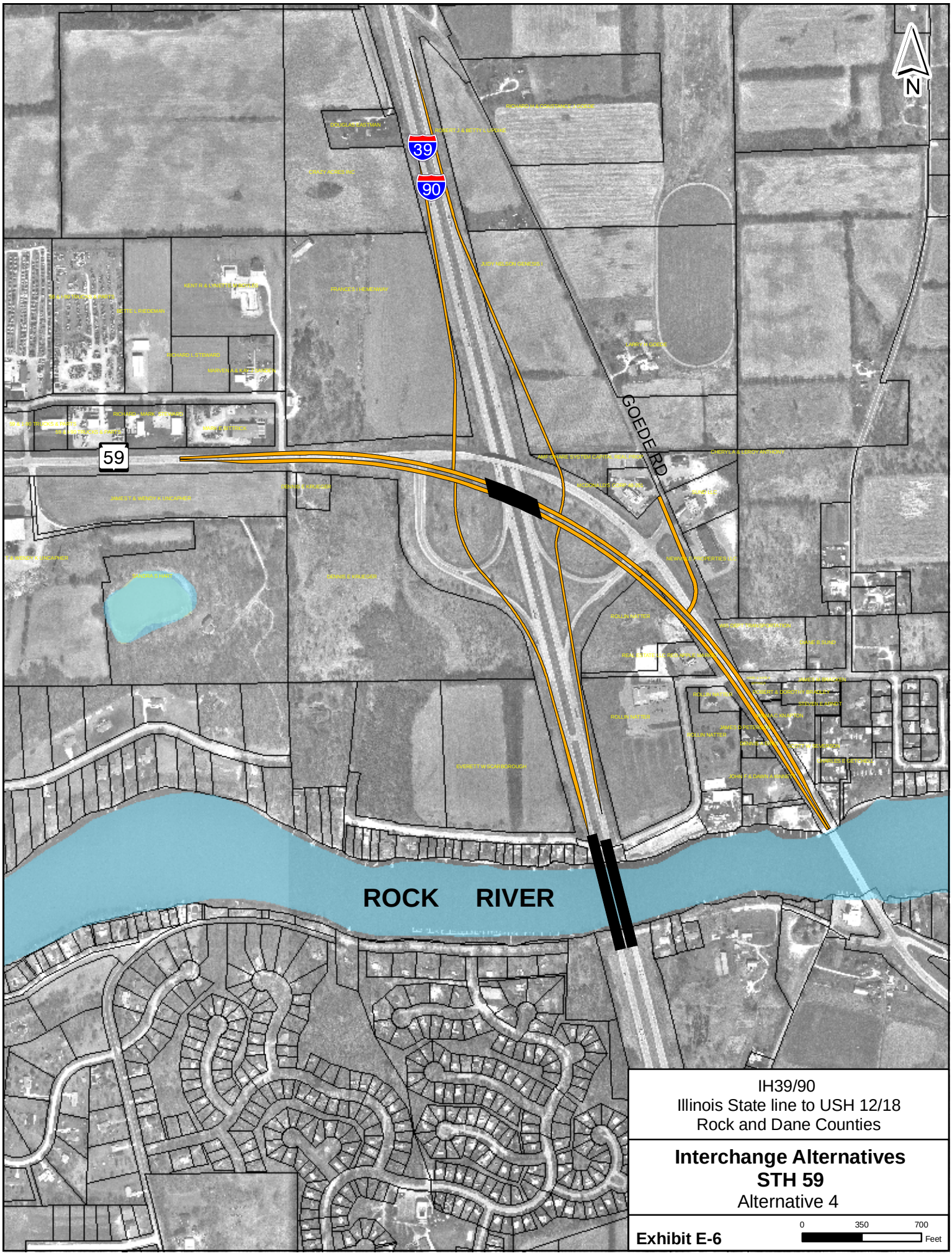


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 59
Alternative 3 (Preferred)

Exhibit E-6

0 350 700 Feet

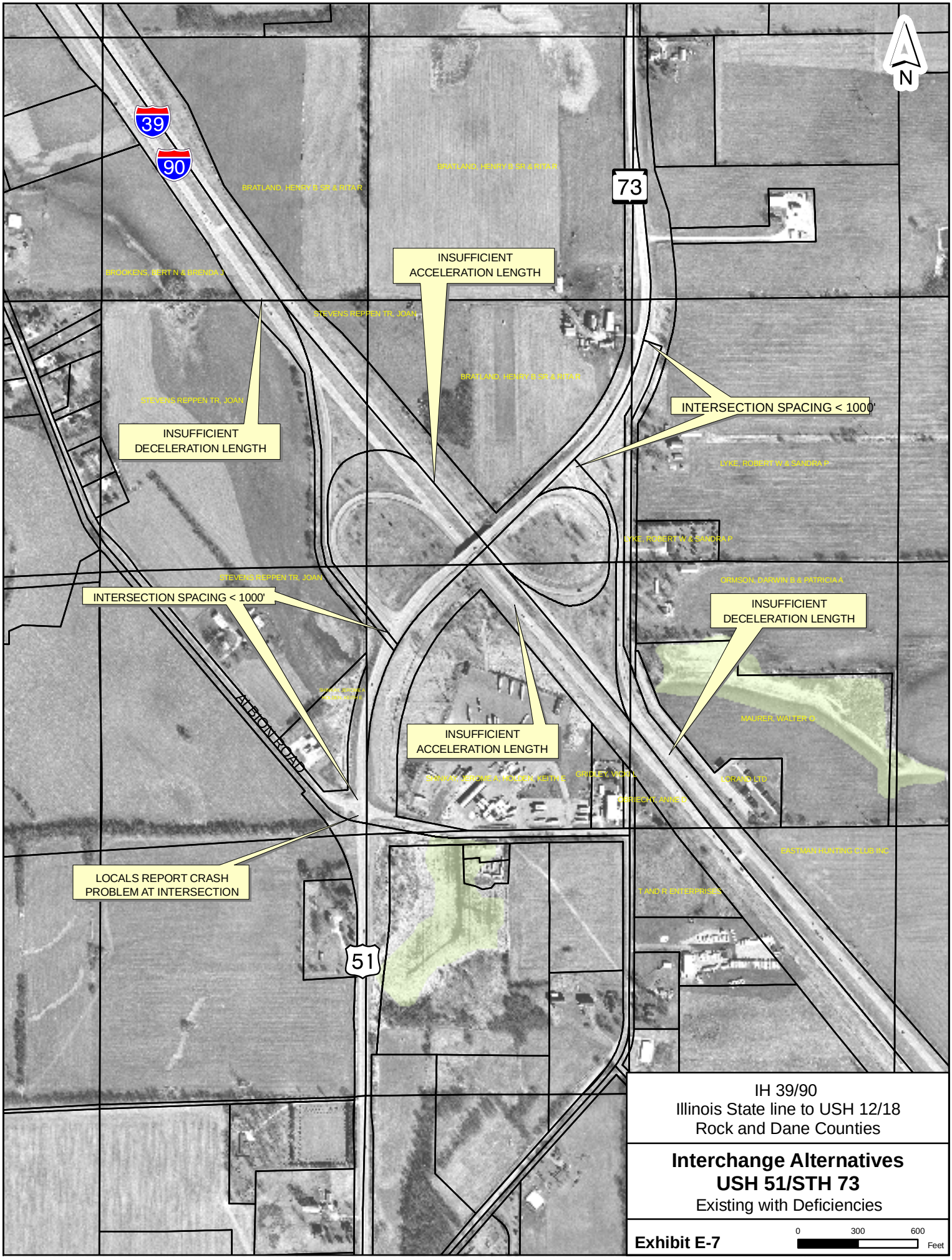


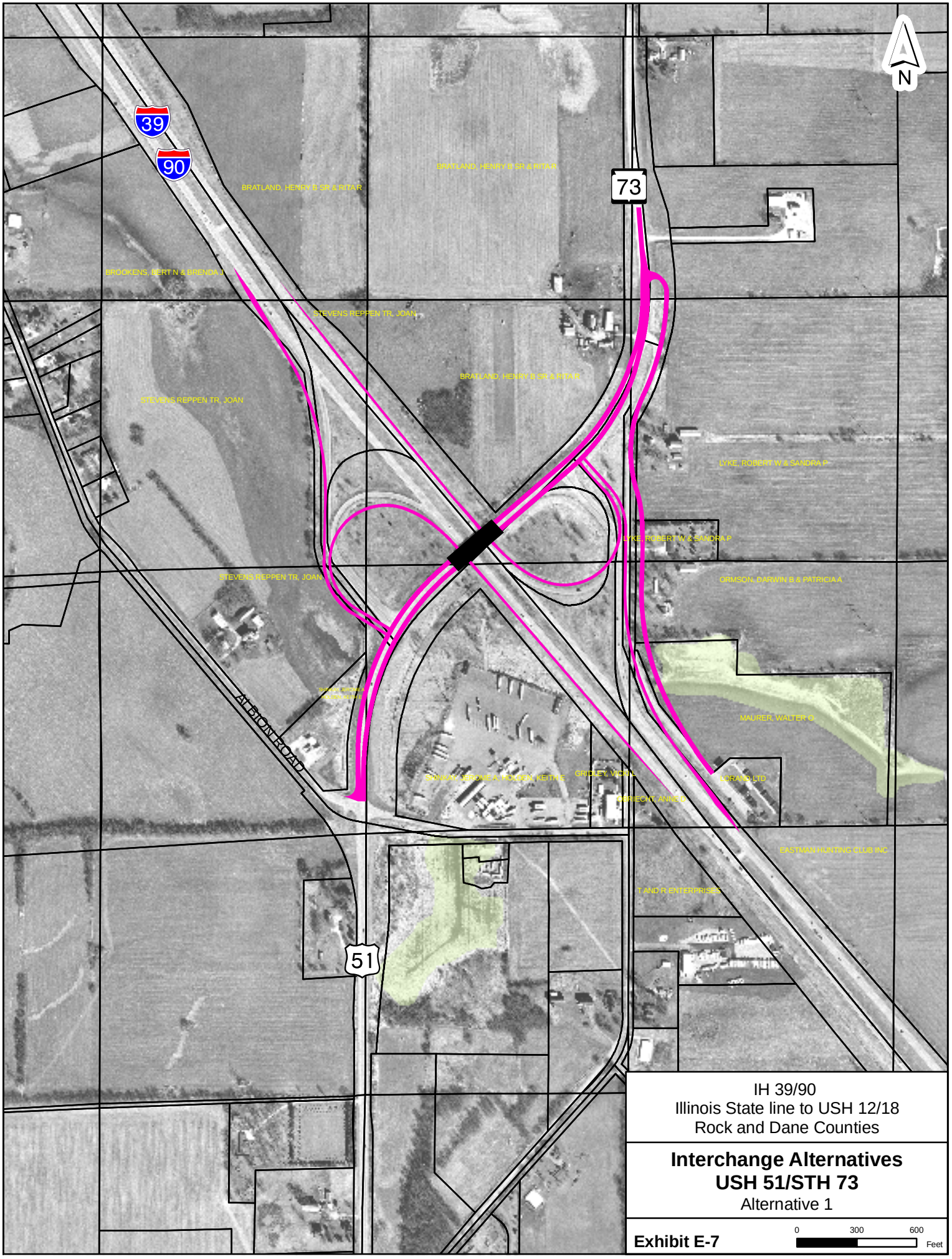
IH39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
STH 59
Alternative 4

Exhibit E-6

0 350 700
Feet


39
90
73
51
N
BRATLAND, HENRY B SR & RITA R
BROOKENS, BERT N & BRENDA T
STEVENS REPPEN TR, JOAN
INSUFFICIENT ACCELERATION LENGTH
INSUFFICIENT DECELERATION LENGTH
INTERSECTION SPACING < 1000'
LYKE, ROBERT W & SANDRA P
ORMSON, DARWIN B & PATRICIA A
INSUFFICIENT DECELERATION LENGTH
INTERSECTION SPACING < 1000'
ALBION ROAD
INSUFFICIENT ACCELERATION LENGTH
MAURER, WALTER O
LORAND LTD
EASTMAN HUNTING CLUB INC
T AND R ENTERPRISES
LOCALS REPORT CRASH PROBLEM AT INTERSECTION
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 51/STH 73
Existing with Deficiencies
Exhibit E-7
0
300
600
Feet


39
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73
51
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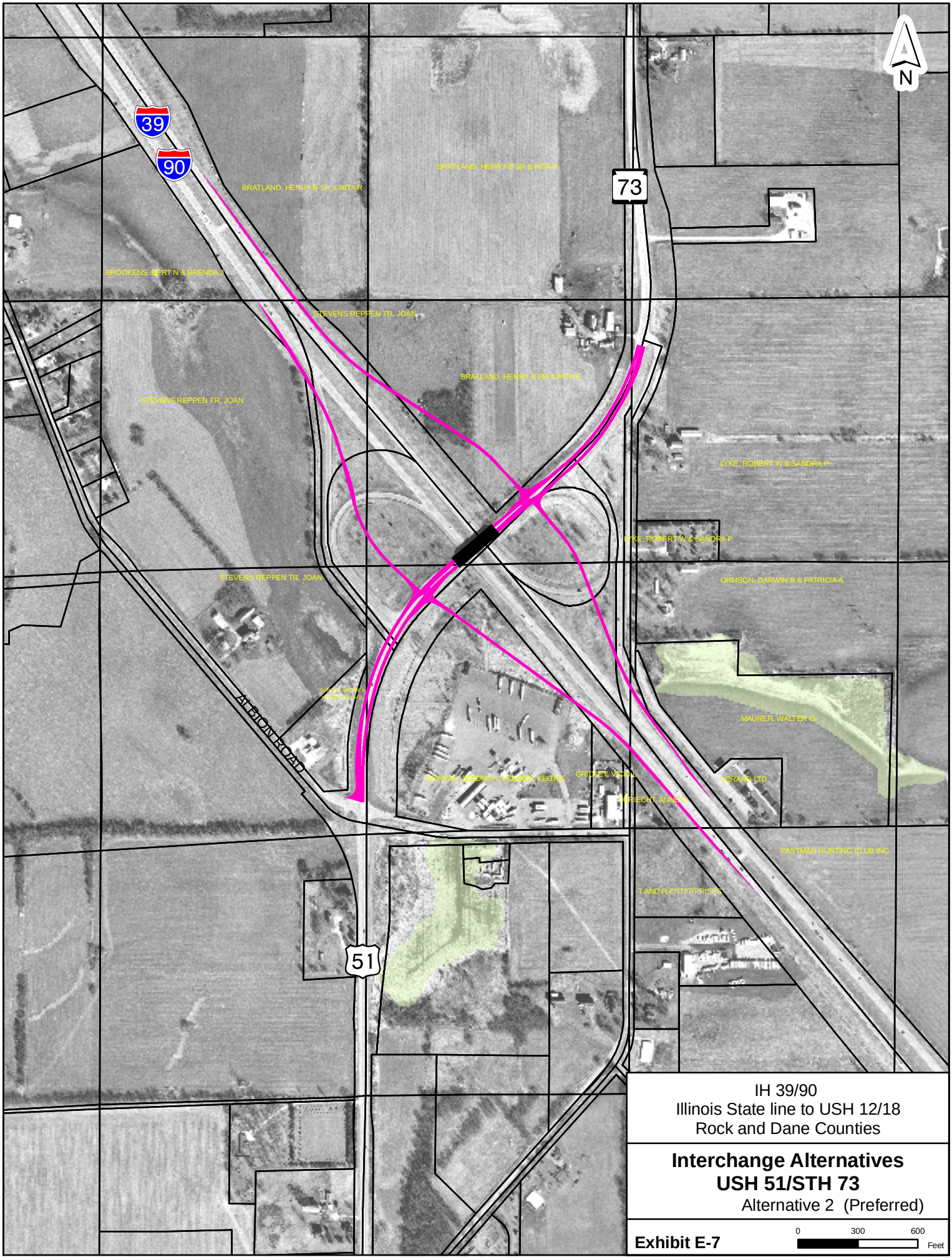
ALBION ROAD
BRATLAND, HENRY B SR & RITA R
BROOKENS, BERT N & BRENDA T
STEVENS REPPEN TR, JOAN
LYKE, ROBERT W & SANDRA P
ORMSON, DARWIN B & PATRICIA A
MAURER, WALTER O
LORAND LTD
EASTMAN HUNTING CLUB INC
T AND R ENTERPRISES
GRIPLEY, VICTOR
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 51/STH 73
Alternative 1
Exhibit E-7
0
300
600
Feet



IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 51/STH 73
Alternative 2 (Preferred)

Exhibit E-7

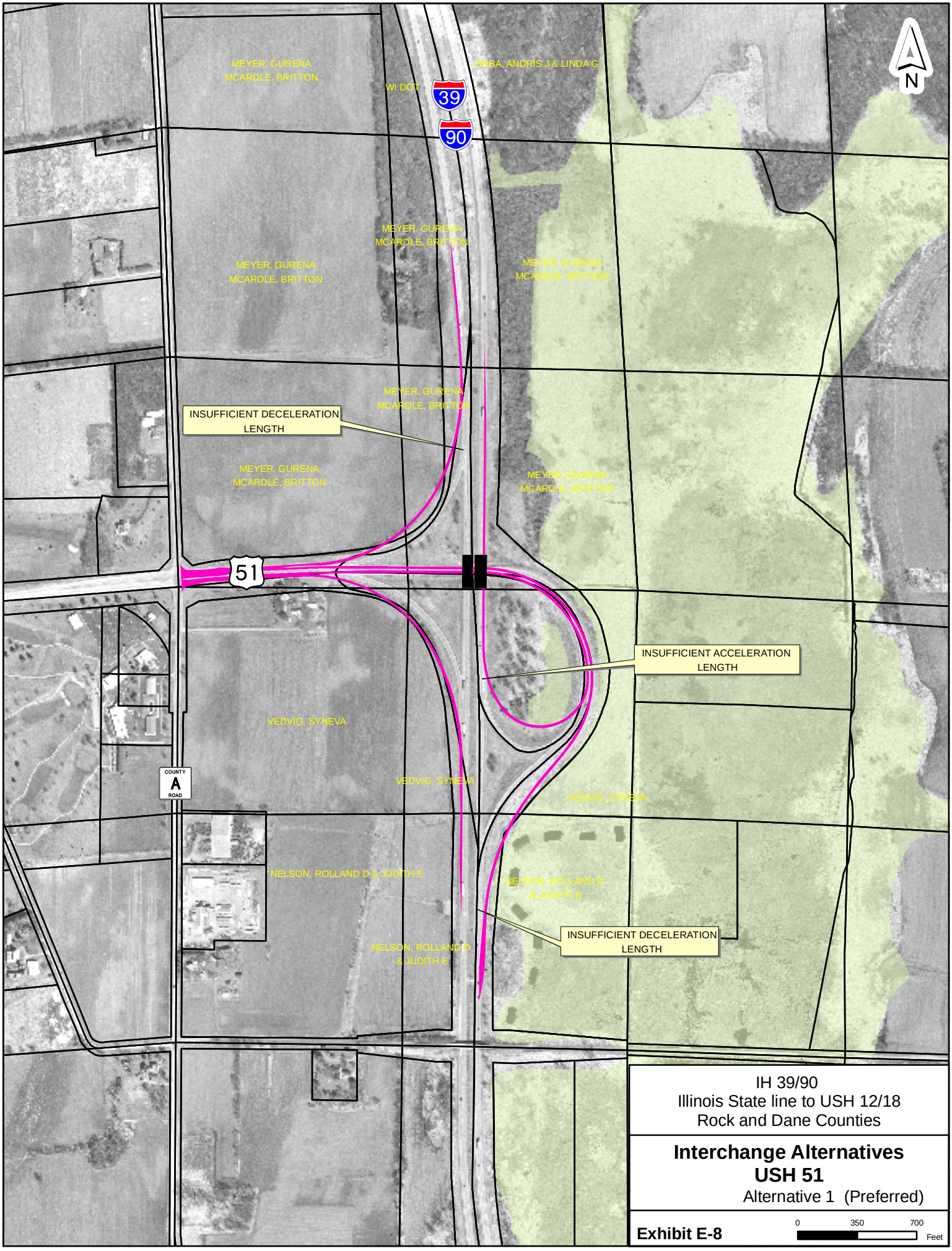
0 300 600 Feet

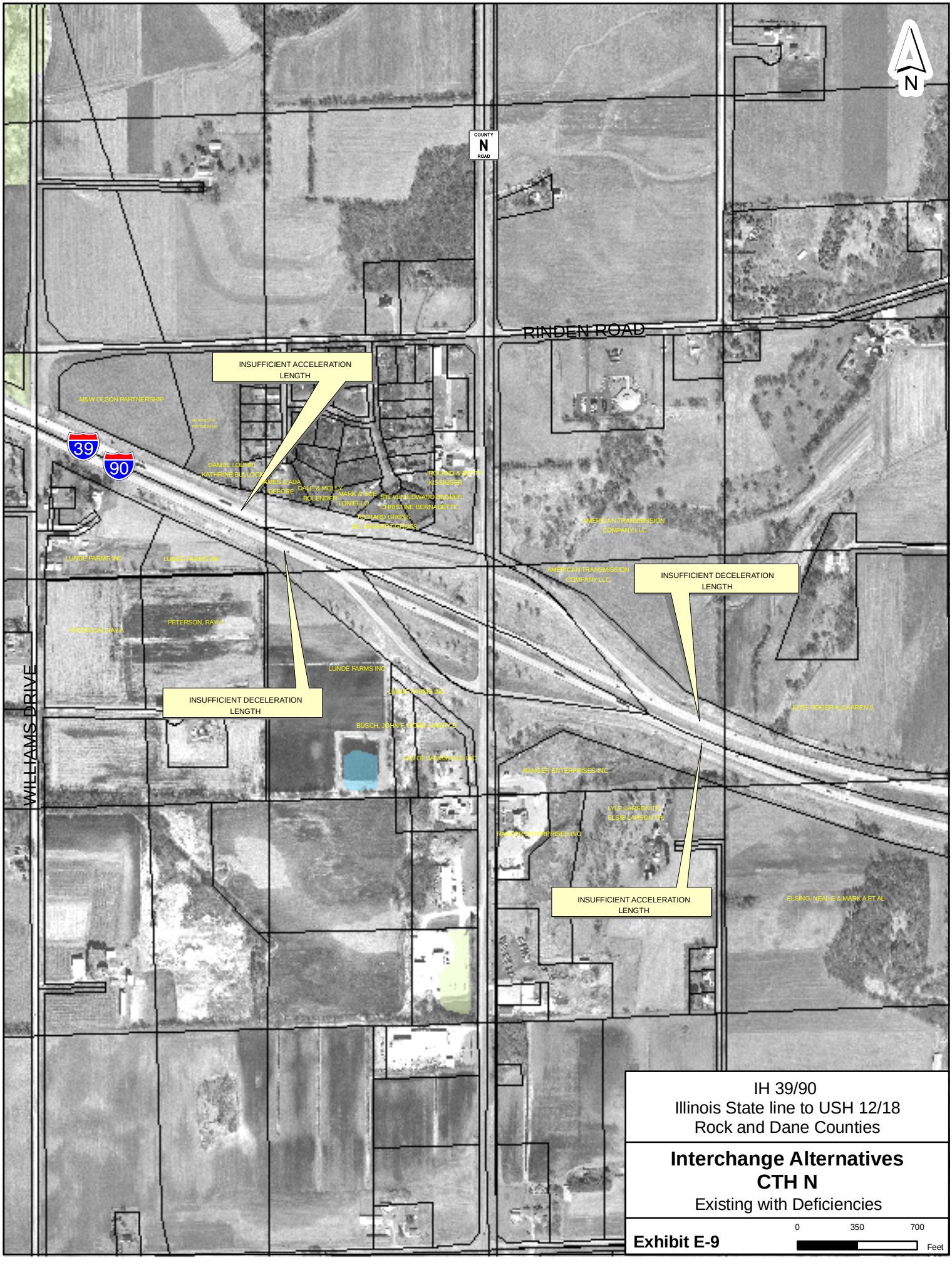
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 51
Existing with Deficiencies

Exhibit E-8

0 350 700 Feet


MEYER, GURENA
MCARDLE, BRITTON
WI DOT
ZRIBA, ANDRIS J & LINDA G
39
90
N
MEYER, GURENA
MCARDLE, BRITTON
MEYER, GURENA
MCARDLE, BRITTON
MEYER, GURENA
MCARDLE, BRITTON
MEYER, GURENA
MCARDLE, BRITTON
INSUFFICIENT DECELERATION
LENGTH
MEYER, GURENA
MCARDLE, BRITTON
MEYER, GURENA
MCARDLE, BRITTON
51
INSUFFICIENT ACCELERATION
LENGTH
VEDVIG, SYNEVA
COUNTY
A
ROAD
VEDVIG, SYNEVA
VEDVIG, SYNEVA
NELSON, ROLLAND D & JUDITH E
NELSON, ROLLAND D
& JUDITH E
INSUFFICIENT DECELERATION
LENGTH
NELSON, ROLLAND D
& JUDITH E
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 51
Alternative 1 (Preferred)
Exhibit E-8
0
350
700
Feet

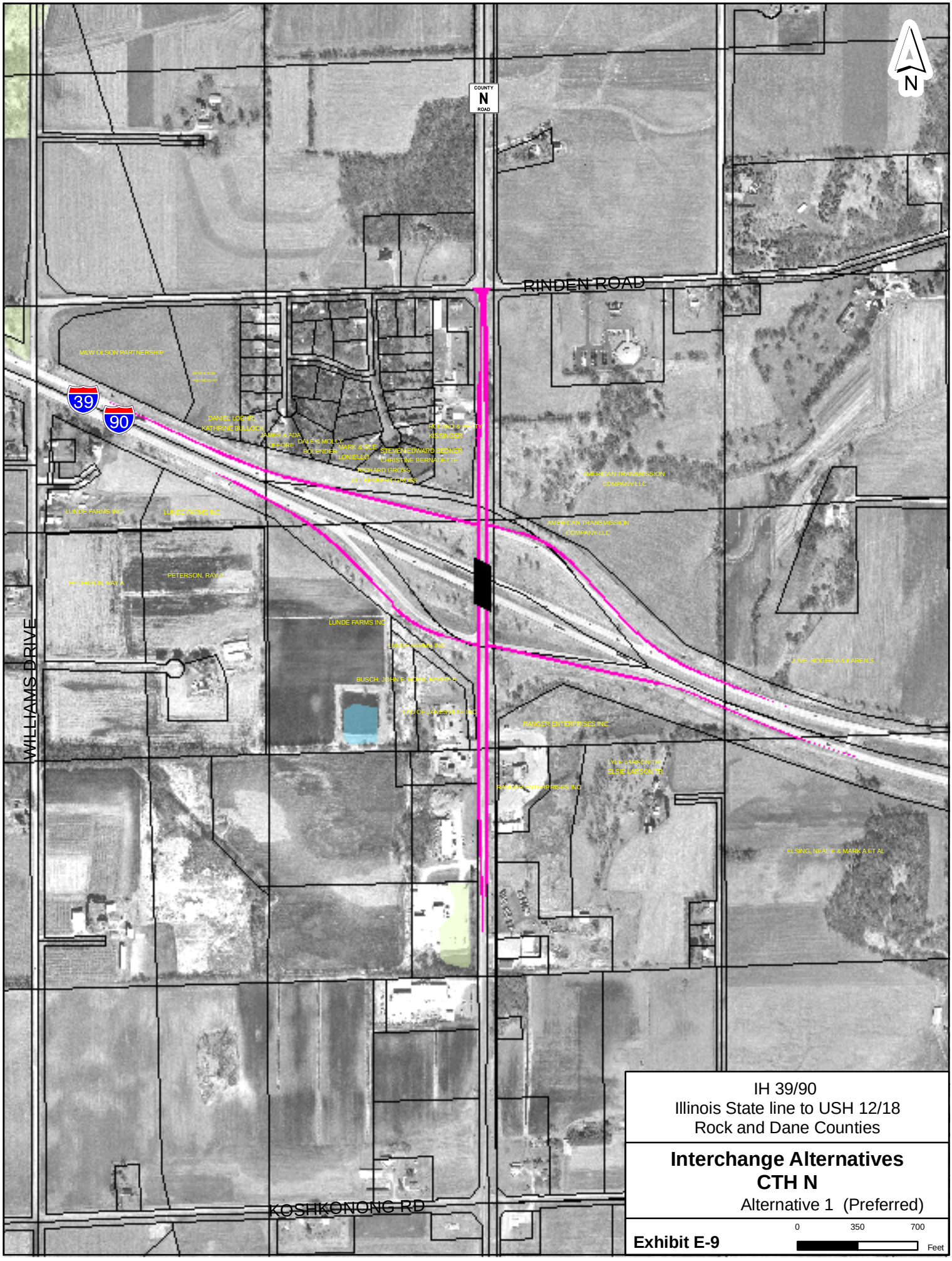


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
CTH N
Existing with Deficiencies

Exhibit E-9

0 350 700
Feet

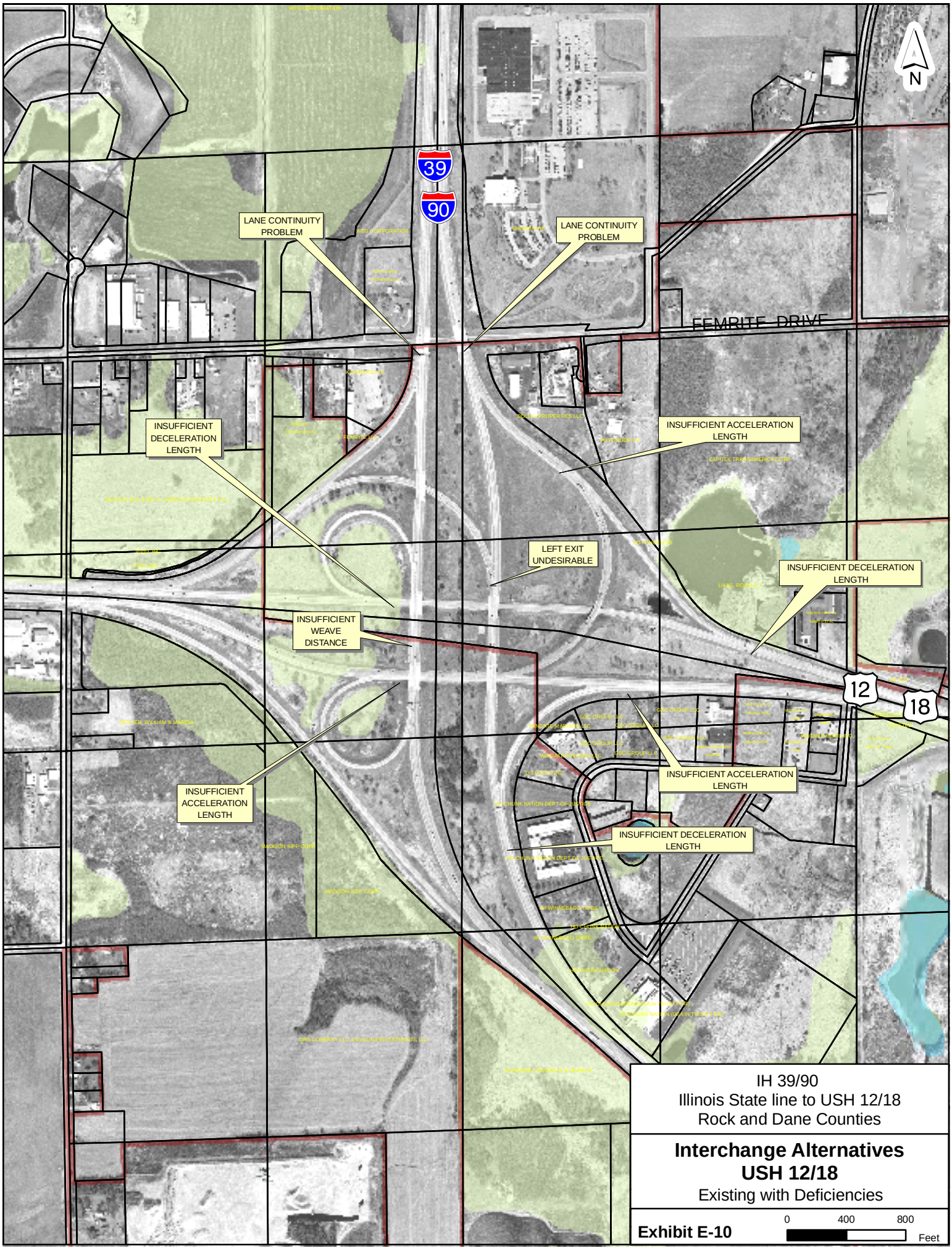


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
CTH N
Alternative 1 (Preferred)

Exhibit E-9

0 350 700
Feet

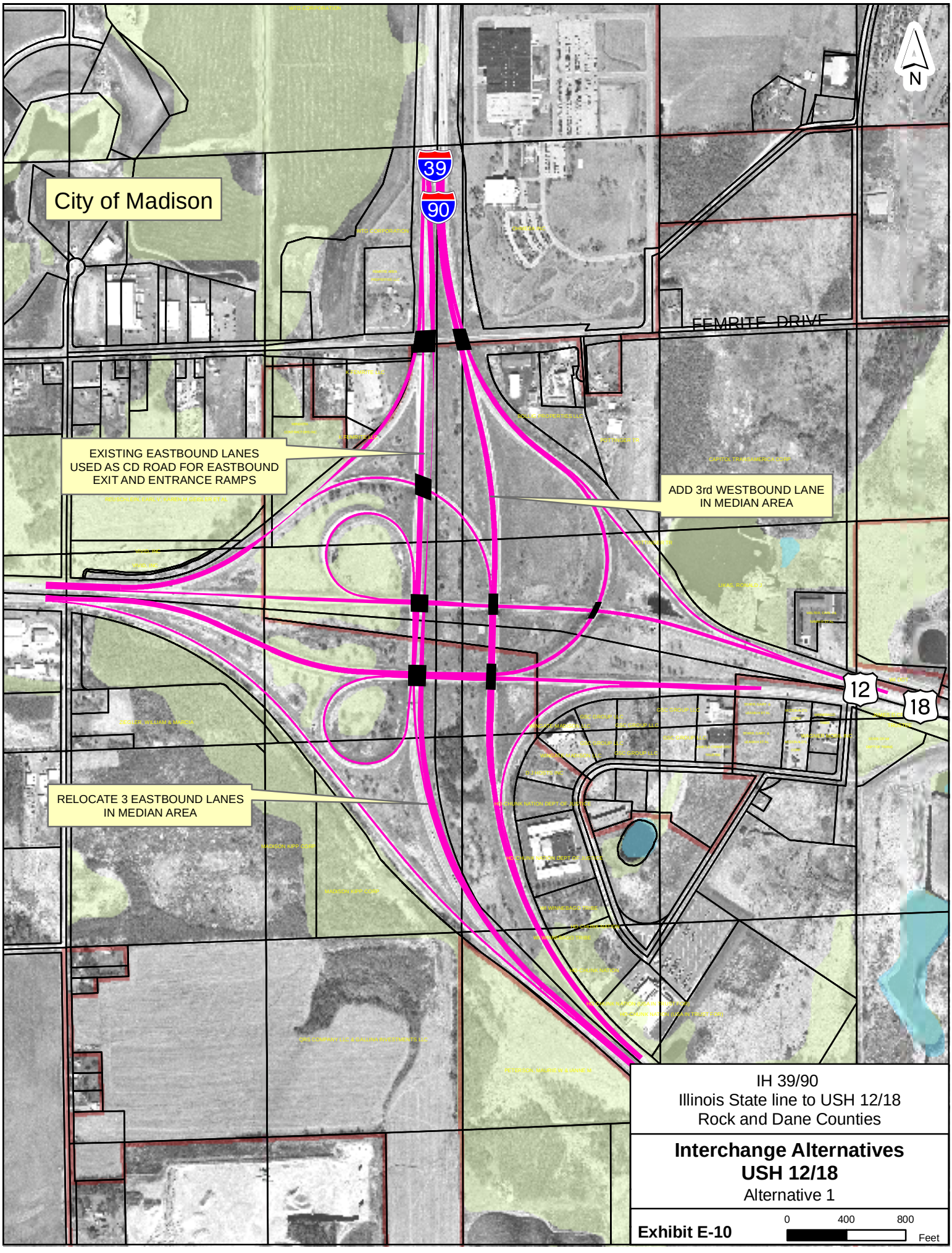


IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 12/18
Existing with Deficiencies

Exhibit E-10

0 400 800
Feet

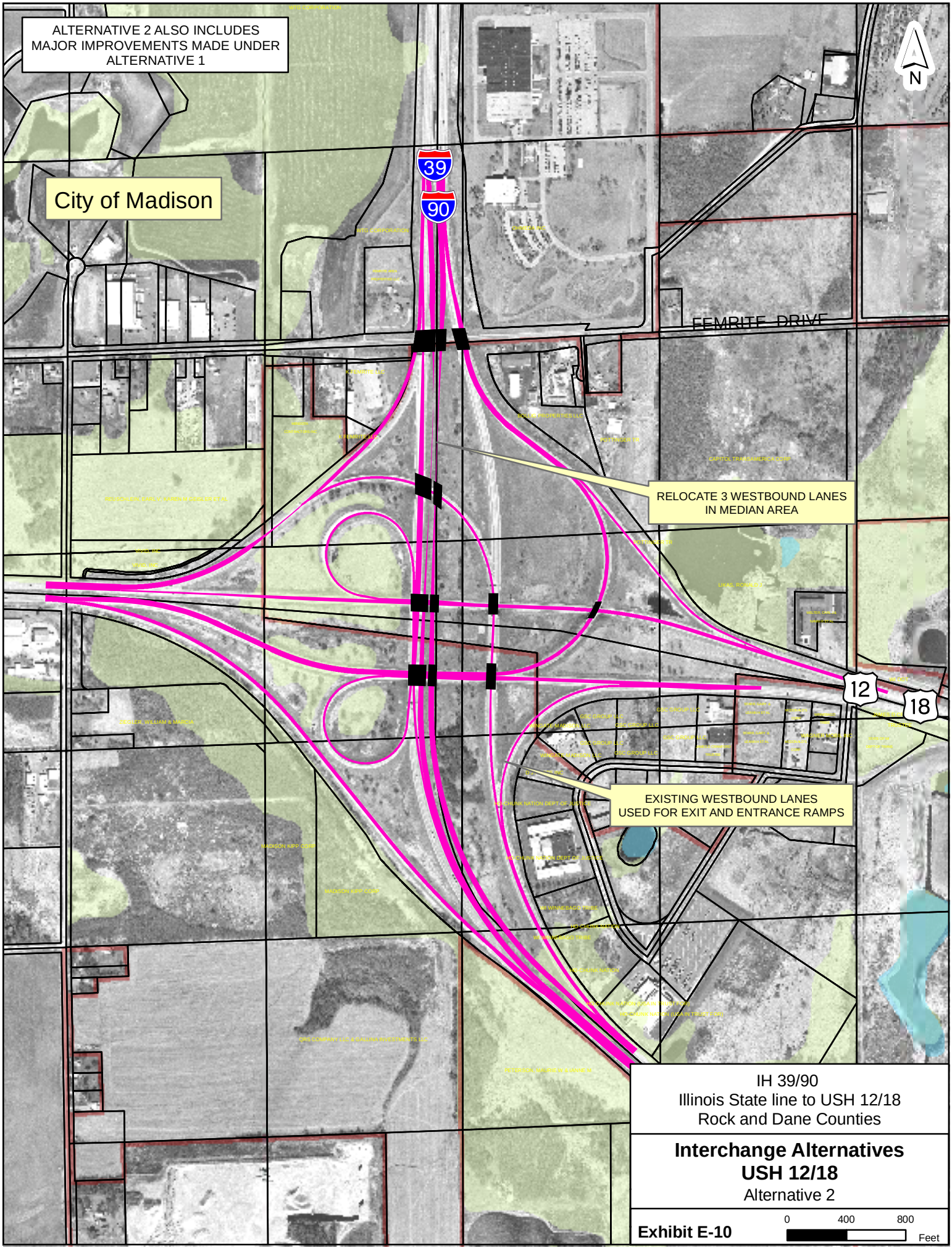


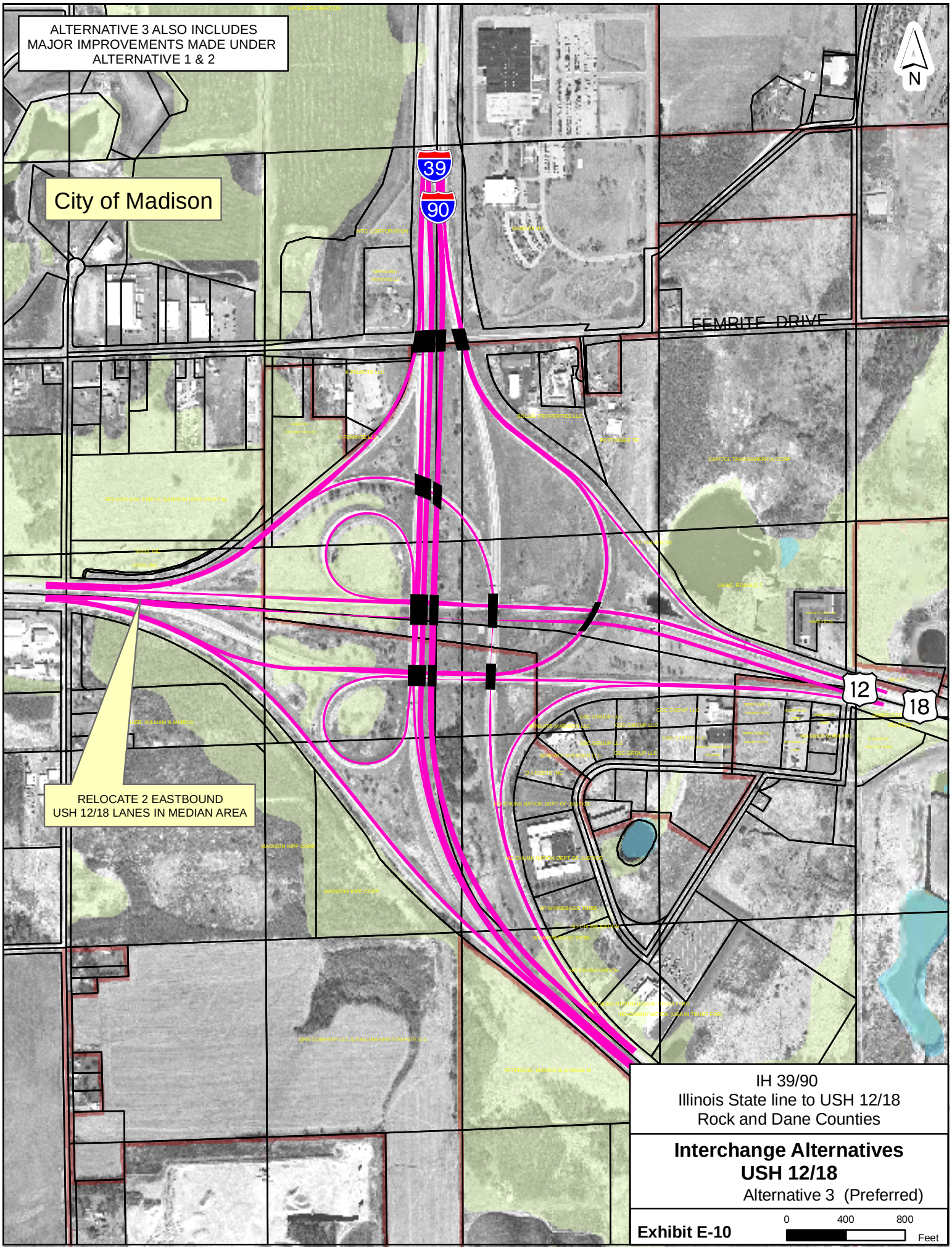
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

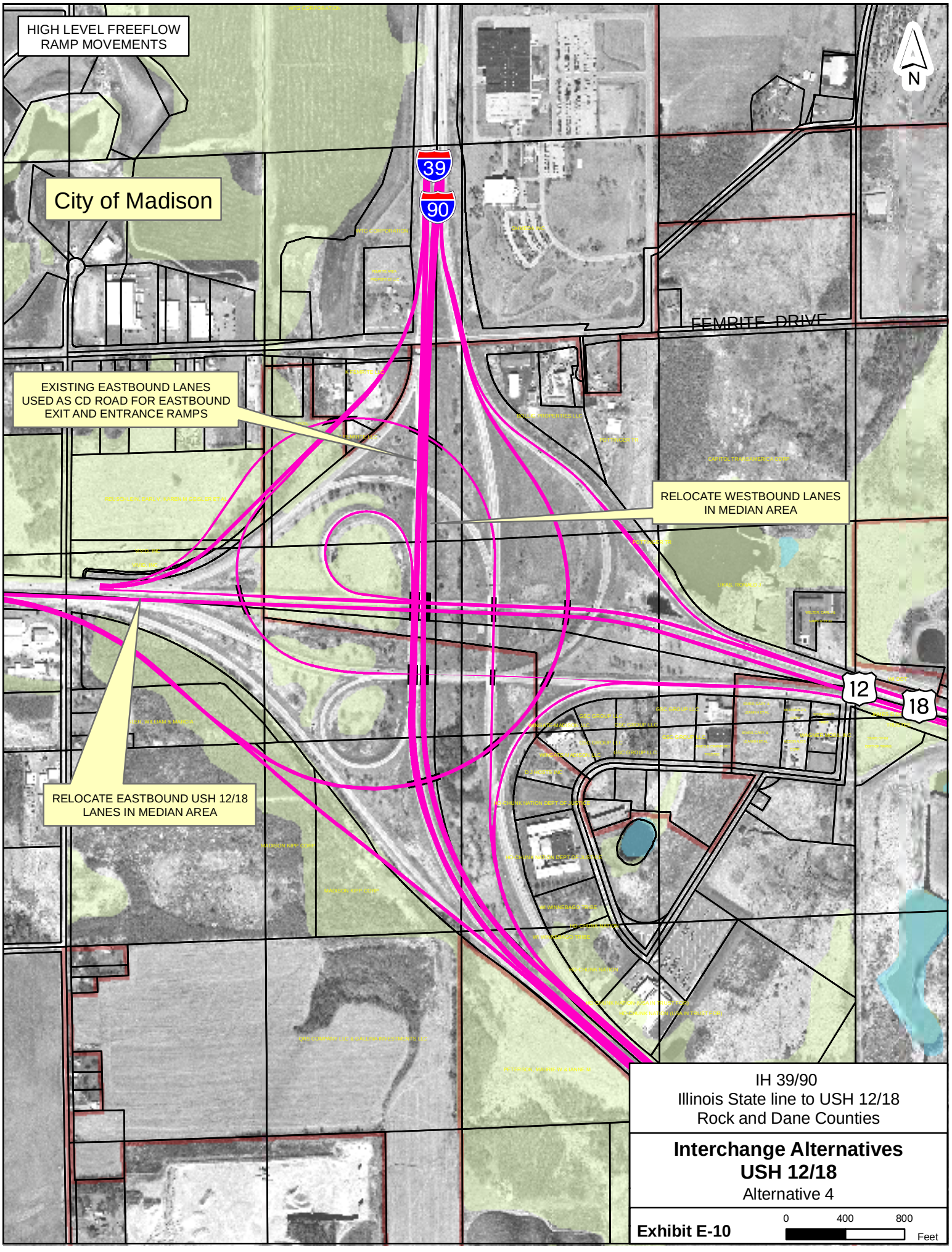
Interchange Alternatives
USH 12/18
Alternative 1

Exhibit E-10

0 400 800
Feet


ALTERNATIVE 2 ALSO INCLUDES MAJOR IMPROVEMENTS MADE UNDER ALTERNATIVE 1
City of Madison
39
90
FEMRITE DRIVE
RELOCATE 3 WESTBOUND LANES IN MEDIAN AREA
12
18
EXISTING WESTBOUND LANES USED FOR EXIT AND ENTRANCE RAMPS
N
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 12/18
Alternative 2
Exhibit E-10
0
400
800
Feet


ALTERNATIVE 3 ALSO INCLUDES MAJOR IMPROVEMENTS MADE UNDER ALTERNATIVE 1 & 2
City of Madison
39
90
FEMRITE DRIVE
12
18
RELOCATE 2 EASTBOUND USH 12/18 LANES IN MEDIAN AREA
N
IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties
Interchange Alternatives
USH 12/18
Alternative 3 (Preferred)
Exhibit E-10
0
400
800
Feet



IH 39/90
Illinois State line to USH 12/18
Rock and Dane Counties

Interchange Alternatives
USH 12/18
Alternative 4

Exhibit E-10

0 400 800
Feet

APPENDIX F

Correspondence

APPENDIX F

CORRESPONDENCE

Project I.D. 1001-07-00
IH 39/90
Illinois State Line – USH 12/18
Rock & Dane Counties

4.2.1

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
TTY 608-267-6897

FILE REF: 4509

December 23, 2004

Debbie Howard
Project Engineer
Earth Tech
1210 Fourier Drive, Suite 100
Madison, WI 53717

Subject: Project I.D. 1001-07099 IH 39/90 Corridor Study - Indirect Source Permit Exemption

Dear Ms. Howard:

The Bureau of Air Management has determined that a screening review of Interstate 39/90 between the Illinois state line to US 12/18 is not necessary at this time. Indirect Source Permits and exemption determinations are typically made not more than 3 years before anticipated construction. The Indirect Source Permit is a construction permit that is valid for only 18 months, with some extensions of another 18 months allowed. We review and process applications and exemption requests with the intent of having the most updated model and traffic information as possible.

However, at a later time we believe that at a later time it will be helpful to discuss the proposed project and the need for analysis and additional modeling. If you have any comments or questions about this project, or about Wisconsin's indirect source permit program, please contact me at (608) 267-0806 or via e-mail: (friedm@dnr.state.wi.us).

Sincerely,

Mike Friedlander

Mike Friedlander, Transportation and Air Quality Planner
Regional Pollutants and Mobile Sources Section
Bureau of Air Management

Cc: Cathy Bleser – SCR-DNR
Michael Scott – DNR –LS/5

Oeth, Jim

From: Gerbitz, Johnny [Johnny.Gerbitz@fhwa.dot.gov]

Sent: Monday, February 13, 2006 1:46 PM

To: Gruber, Rebecca M MVP

Cc: Tamara.E.Cameron@usace.army.mil; John Steiner; Jim Oeth (E-mail); Chandler, Mark; Lawton, Jaclyn; McKenney, Tracey

Subject: RE: IH 39/90-90, Madison - IL State Line, Dane & Rock Cos; Project Status

Hello Rebecca;

Please accept my apologies for not replying to your request sooner.

I've enjoyed working with Daryle Wierzbinski and Tamara Cameron on proposed Federal-aid highways in the past. If you are taking over some of Daryle's projects, I look forward to meeting and working with you also.

With respect to your questions on the proposed IH 39/90 project from Madison to the IL State Line:

* The concept currently being considered by WisDOT is to 1) add one lane in each direction to the outside between Madison & Janesville, and 2) to add one lane in each direction to the inside median area (and possibly an additional lane or auxiliary lanes between interchanges on the outside) from Janesville to the IL State Line; and 3) to up-grade the existing interchanges in order to meet design standards and future traffic needs.

* Although the cost of the project is anticipated to be over $300M for this 45 mile long project; the major impacts appear to be limited to approx 155 acres of new R/W, 23 acres of woodlands, and 12 acres of wetland. Based on preliminary discussions with the EPA, the WisDNR, and I think your office, we have agreed with WisDOT to initiate the environmental process as an EA. However, due to the size of this project, copies of the EA would be provided to the EPA/USACE/USF&WL/WisDNR for your information and comments; and any concerns addressed before the FONSI is processed. The draft EA is currently being prepared, and I believe it will be submitted for review within the next two/three months

* The only other major issue we are aware of, is the strong desire by the farming community to minimize the taking of prime farmland in the Rock County area between Janesville and Beloit.

If you have any other questions, or wish to discuss the proposed project in more detail, please contact us.

Or, if you need more detailed information, please contact the WisDOT Project Manager (John Steiner), or their design consultant engineer for the project (Jim Oeth). John & Jim's e-mail addresses are included above.

There is also another major capacity expansion project on USH 14 & STH 11 currently being initiated between Janesville and Darian. An EIS is currently planned for this project. Daryle did participate in some of the Technical Advisory meetings for this project, including the inter-agency 404/NEPA Merging Process meeting on Purpose & Need for the project.. The project was expanded to include studying possible improvements to USH 14 & STH 11 through the City of Janesville about a year ago. WisDOT is currently collecting date to update the project Purpose & Need statement. A follow-up Interagency meeting to discuss the revised Purpose & Need is anticipated to also be held in two or three months.

Best regards

/s/ Johnny M Gerbitz

Field Operations Engineer
(Coordinator for WisDOT's SW & NE Regions)
Fed Hwy Admin, Wis Div, HAT-WI
567 D'Onofrio Dr, Madison, WI 53719-2844
Tel 608-829-7500, FAX 829-7526
johnny.gerbitz@fhwa.dot.gov
*****

From: Gruber, Rebecca M MVP [mailto:Rebecca.M.Gruber@mvp02.usace.army.mil]
Sent: Thursday, February 02, 2006 2:35 PM
To: Gerbitz, Johnny
Subject: I-90 from Madison to State Line

Hello Mr. Gerbitz:

I received your name as a contact to find some information requested by my District office regarding this proposed project.
It is my understanding that this project was previously considered for NEPA process as an EA, but may be elevated to EIS review.
The project manager previously covering this area of Wisconsin has been transferred, and thus far I have not been able to locate a Corps file for this proposal. Should there be a Corps file for this project, I would greatly appreciate it if you would be able to let me know.
Otherwise, I have a few questions I'd like to have you provide information on please:

1. Please indicate the level of environmental review this project is proposed to require (EA vs. EIS);
2. Please indicate how far into this process this proposal has gone;
3. Is there a range of wetland/waterway impacts you can offer based on the alternatives indicated?
4. Lastly, what do you think the major issues are regarding this project?

I do understand that this is quite a bit to ask for on short notice, but if you could provide this information to me, that would be great. Our District is looking for this information by 2/6 (I do apologize for the short notice, but I was alerted to this information request this morning!). However, after today I will be out of the office until 2/13. Should I be away from my desk (i.e. if you require more time than today), please forward this information to our NEPA coordinator, Ms. Cameron at Tamara.E.Cameron@usace.army.mil.
I do sincerely appreciate any information you can provide. Further, please let me know should you have any questions.
Thank you,
Rebecca Gruber
USACOE, Project Manager
1617 E. Racine Avenue
Waukesha, WI. 53186

(262) 547-4171
(262) 547-7869 (fax)
Rebecca.M.Gruber@usace.army.mil

3

Sac and Fox Nation of Missouri in Kansas and Nebraska

305 North Main St., Reserve, KS 66434
Phone: (785) 742-7471 Fax: (785) 742-3785

March 17, 2006

James Oeth, P.E.
Earth Tech
1210 Fourier Drive
Suite 100
Madison WI 53717

Dear Mr. Oeth:

Thank you for your letter, which is in compliance with Section 106 of the National Historic Preservation Act, and Section 110.

Project: 1001-07-00

The Sac and Fox Nation of Missouri in Kansas and Nebraska NAGPRA department have determined the above project as:

No objections. However, if human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, please stop immediately and notify NAGPRA representative, Deanne Bahr, at the address above.

There are two other bands of Sac and Fox that also need to be contacted, the Sac and Fox Nation of Oklahoma and the Sac and Fox of the Mississippi in Iowa.

Johnathan Buffalo, NAGPRA Representative
Sac and Fox of the Mississippi in Iowa
349 Meskwaki Rd.
Tama, IA 52339-9629

Sandra Massey, NAGPRA Representative
Sac and Fox Nation of Oklahoma
Rt. 2, Box 246
Stroud, OK 74079

If you have any questions, please contact me at the number or address above.

Sincerely,

Deanne Bahr

Deanne Bahr
Sac and Fox Nation of Missouri in Kansas and Nebraska
NAGPRA Contact Representative

HO-CHUNK DEPARTMENT OF HERITAGE PRESERVATION

RESEARCH, ARCHIVE, PROTECT, CONSERVE, PERPETUATE

P.O. Box 667 Black River Falls, WI 54615
Phone (715) 284-7181 - FAX (715) 284-7449

March 27, 2006

James F. Oeth, P.E., Project Manager
1210 Fourier Drive
Suite 100
Madison, WI 53707
(608) 836-9800

Re: Project I.D. 1001-07-00

Dear Mr. Oeth;

The Ho-Chunk Nation (HCN) has begun reviewing the above-referenced project, Described as Project I.D. 1001-07-00. At this time we would like to request a copy of any/all archeological surveys and historical reviews falling within the Area of Potential Effects (APE) of this proposed project that you will be using for documentation with this project.

The project you propose runs through an area that was intensely populated throughout both pre-historic and historic times and falls well within the aboriginal homelands of our people. Several significant areas along this highway corridor are highly significant to our people both culturally and spiritually. It suffices to say, we need to assure all parties involved, consultation regarding the proposed undertaking will be conducted in a professional manner mandated by Federal and State law.

If this project proceeds to the point were project improvement begins, we would like to remind you that if any inadvertent finds concerning cultural resources such as pottery, shards, historic/pre-historic artifacts or bone fragments/human remains occur during the process involved with this project, please contact the Ho-Chunk Nation Heritage Preservation Department immediately.

If there are any questions or concerns, please contact us at (715) 284-7181.

Respectfully,

William Quackenbush
HCN Tribal Historic Preservation Officer

Cc Larry Garvin, HCN Heritage Preservation Director
Jay Toth, HCN Archeologist
James Becker, DOT Archaeology Program Coordinator

April 5, 2006

Mr. Jim Oeth
1210 Fourier Drive
Suite 100
Madison, WI 53717

Dear Mr. Oeth

Thank you for your letter concerning the project:

Project ID 1001-07-00

At this time, the Historical Preservation Department of the Sac and Fox of the Mississippi in Iowa has determined the above listed has:

- ☐ No interest in the area geographically
- ☐ No comment on the proposed undertaking
- ☑ No objections. However, if human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, please stop immediately and notify the NAGPRA Representative, Johnathan L Buffalo.
- ☐ Have an objection or require additional project information. Please send the following:

Sincerely,

"MESKWAKI NATION"

Johnathan L. Buffalo
Historical Preservation Coordinator
Sac and Fox of the Mississippi in Iowa

Cc: File

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
TTY 608-267-6897

May 31, 2006

Jim Oeth
Earth Tech, Inc.
1210 Fourier Dr. Suite 100
Madison, WI 53717

SUBJECT: Endangered Resources Information Review (Log Number 06-086)
EA for I-39/90 Corridor from Illinois State Line to Madison
Earth Tech Project No.: 63141

Dear Mr. Oeth:

The Bureau of Endangered Resources has reviewed the project area described in your letter for the development of an Environmental Assessment for the I-39/90 corridor from the Illinois state line to the USH 12/18 interchange in Madison, Wisconsin. The project consists of reconstructing the existing freeway, adding a third lane in both directions, and reconstruction of interchanges.

Our Natural Heritage Inventory data files contain the following information on rare species and natural communities occurring in or adjacent to the project corridor located in sections of T1-7N R10-13E in Rock and Dane Counties. In addition to the actual project corridor, I am providing endangered resource information for an area within two miles of the project's location. This information is provided so impacts to nearby endangered resources can be assessed and to assist in determining if rare species occur in the project's impact area if appropriate habitat exists. If the described habitat types occur in the project's impact area, then species that occur nearby may be present. A summary sheet of information on the habitat in which these species occur is attached. Rare resources occurring within or near the project corridor include:

Turtle Creek - A dam was recently removed from Turtle Creek and the fish fauna are still responding to the stream recovery, the following species are known to occur in Turtle Creek, but additional rare species may be found to occur over time;

Gravel Chub	*Erimystax x-punctatus*	State Endangered
Ozark Minnow	*Notropis nubilus*	State Threatened
Greater Redhorse	*Moxostoma valenciennesi*	State Threatened

Spring Brook - A number of plant species are known to occur along Spring Brook, they include:

Wooly Milkweed	*Asclepias lanuginosa*	State Threatened
Wafer-ash	*Ptelea trifoliate*	State Special Concern
Glade Mallow	*Napaea dioica*	State Special Concern

Rock River - The fish records for the Rock River in the project corridor are from historic records of a single species;

Redfin Shiner	*Lythrurus umbratilis*	State Threatened

Plant Species with recent records reported to occur within or along the project corridor, they are noted by town range, adjacent sections may be included;

T1N R13E

Sections 8, 9, 18;

Glade Mallow	*Napaea dioica*	State Special Concern

Section 29;

Hairy Wild-petunia	*Ruellia humilis*	State Endangered
Prairie Indian plantain	*Cacalia tuberosa*	State Threatened
Pale-purple coneflower	*Echinacea pallida*	State Threatened
Glade Mallow	*Napaea dioica*	State Special Concern

Section 31;

Hairy Wild-petunia	*Ruellia humilis*	State Endangered
Wooly Milkweed	*Asclepias lanuginosa*	State Threatened
Pale-purple coneflower	*Echinacea pallida*	State Threatened
Glade Mallow	*Napaea dioica*	State Special Concern

T3N R13E

Section 29;

Prairie Bush Clover	*Lespedeza leptostachya*	Federally Threatened/State Endangered
Rough rattlesnake-root	*Prenanthes aspera*	State Endangered
Hill's Thistle	*Cirsium hillii*	State Threatened
Pale-purple coneflower	*Echinacea pallida*	State Threatened
Prairie False-dandelion	*Nothocalais cuspidate*	State Special Concern

Sections 31 and 32;

Rough rattlesnake-root	*Prenanthes aspera*	State Endangered
Pale-purple coneflower	*Echinacea pallida*	State Threatened
Prairie parsley	*Polytaenia nuttalli*	State Threatened
Marbleseed	*Onosmodium molle*	State Special Concern

Special Concern species are species about which some problem of abundance or distribution is suspected but not yet proved. The main purpose of this category is to focus attention on certain species before they become endangered or threatened.

Natural Communities - In addition to the plant species, a number of unique and sensitive natural communities occur within the project corridor, many contain rare species;

Frito Lay Prairie is located in Section 29 of T1N R13E, it is a floristically rich prairie on gently rolling terrain near the railroad tracks, located on the outskirts of Beloit. This mesic prairie is noted for its diversity and contains a number of rare species.

Green Belt Prairie is located in Section 29 of T3N R13E, it is comprised of a three-acre hillside dry-mesic prairie on an east facing slope and contains a number of rare species.

Morningside Prairie is located in Section 29 of T3N R13E, it is a dry-mesic prairie consisting of several acres of remnant prairie on a west facing slope located east of Janesville.

Sussex Road Prairie is located in Section 29 or R3N R13E, it is a small, but high quality dry-mesic prairie remnant on an east facing slope. It is part of the City of Janesville's Park system.

Harmony Hill Prairie is located in Section 32 of T3N R13E, has never been plowed or grazed due to is location on a north facing slope of a steep gravel hill, it contains populations of rare species.

In addition to the above information, our data files also contain ***historical records*** of rare species within the project corridor. The Bureau does not have more current survey information documenting the continued existence of these species in this area. These older records are included as an indication of *species which may occur in the project area if appropriate habitat still exists*:

T1N R13E;

Prairie parsley	*Polytaenia nuttalli*	State Threatened

T2N R13E;

Pale-purple coneflower	*Echinacea pallida*	State Threatened
Great Indian-plantain	*Cacalia muehlenbergii*	State Special Concern

T3N R13E;

Pink milkwort	*Polygala incarnata*	State Endangered
Purple milkweed	*Asclepias purpurascens*	State Endangered
Snowy campion	*Silene nivea*	State Threatened
Dragon Wormwood	*Artemisia dracunculus*	State Special Concern
Prairie False-dandelion	*Nothocalais cuspidata*	State Special Concern

T4N R12E;

Kitten Tails	*Bessie bullii*	State Threatened
Purple Meadow-parsnip	*Thaspium trifoliatum var.*	State Special Concern
Swamp-pink	Arethusa bulbosa	State Special Concern
Cross leaf milkwort	Polygala curiosa	State Special Concern

T5N R12E;

Small White Lady's slipper	*Cypripedium candidum*	State Threatened
Sweet-scented Indian-plantain	*Cacalia suaveolens*	State Special Concern
Cross leaf milkwort	*Polygala curiosa*	State Special Concern

T6N R11E, R12E;

Yellow Giant Hyssop	*Agastache nepetoides*	State Threatened
Cuckooflower	*Cardamine pratensis*	State Special Concern

T7N R10E, R11E;

Yellow Giant Hyssop	*Agastache nepetoides*	State Threatened
Snowy campion	*Silene nivea*	State Threatened
Prairie False-dandelion	*Nothocalais cuspidate*	State Special Concern
Slim-stem small reedgrass	*Calamagrostis scripta*	State Special Concern
Adder's-tongue	*Ophioglossum pusillum*	State Special Concern

Comprehensive endangered resource surveys have not been completed for the project area. As a result, our data files may be incomplete. The lack of additional known occurrences does not preclude the possibility that other endangered resources may be present.

If any of the habitats or natural communities mentioned above occur within the project impact area, please contact the Bureau of Endangered Resources for additional guidance on ways to avoid or minimize impacts to the species or natural communities within the project area. The Turtle Creek crossing will

This letter is for informational purposes and only addresses endangered resource issues. This letter does not constitute Department of Natural Resources authorization of the project and does not exempt the project from securing necessary permits and approvals from the Department.

Please give me a call at (608) 266-5248 if you have any questions about this information.

Sincerely,

Helen Elise Kitchel
Environmental Review Specialist

cc: Cathy Bleser - SCR/Fitchburg

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Oeth, Jim

From: Kamke.Sherry@epamail.epa.gov
Sent: Friday, June 30, 2006 2:25 PM
To: jim.oeth@earthtech.com; john.steiner@dot.state.wi.us
Subject: I-90/I-39 project - wetlands, woodland and streams

Jim and John,

Thanks for sending me the information regarding the I-90 project. I received this information in my office on June 19th but I didn't return to the office until June 22nd. I have quickly reviewed the wetland and stream information but I would like to have more time to prepare any comments. Specifically, I want to give the information to Cathy Garra of EPA's wetlands program. Cathy said she can take a look at this next week.

We don't anticipate any problems with an EA being prepared for this project but I want to give both Cathy and I a chance to take a hard look at the wetlands, especially those associated with Turtle Creek, the tributary to Saunders Creek, the tributary to Yahard River, and Door Creek. We will probably be looking at what, if any, impacts will be occurring to impaired waterbodies from the project as well.

I hope you have/had a good holiday weekend.

Sherry A. Kamke
Environmental Scientist
NEPA Implementation Section
Office of Science, Ecosystems, and Communities U.S. EPA Region 5
77 W. Jackson Blvd.
Mailcode: B-19J
Chicago, Illinois 60604-3590
Phone: 312-353-5794
Fax: 312-353-5374

Oeth, Jim

From: Kamke.Sherry@epamail.epa.gov
Sent: Wednesday, July 12, 2006 3:05 PM
To: Oeth, Jim
Cc: Steiner, John
Subject: RE: I-90/I-39 project - wetlands, woodland and streams

Jim,

I heard back from Cathy Garra, EPA's wetland person and she provided the comments below. I have no other comments to add at this point. Please let me know if you want us to look at anything else or if you have questions. Also, if you can let us know when the EA will be coming out that will help us plan. Thanks.

Sherry

Message from Cathy Garra below:

Hi Sherry--

Thanks for passing this along. It looks like they have a lot of opportunities within their existing alignment, and will be staying close to home when they have to expand their right of way.

Some tips for their EA:

- Please indicate the method used for the wetland assessment and date(s) of the assessments

- Please indicate if any of the water body segments have been included in the current Wisconsin 303(d) list of impaired waters. If applicable, indicate the listed impairments. Assess the direct and indirect potential for the project to make "bad waters worse" for relevant factors, such as nutrients, habitat or sediment, and mitigation measures, such as control of runoff from bridges. Factors entirely unrelated to road construction, such as mercury, are beyond the likely effects of the proposed project, and don't need to be analyzed.

- Are the stated impacts to wetlands and forests the permanent impacts only, or are there additional temporary construction impacts?

- Please indicate what efforts have/can be made to avoid or reduce impacts to wetlands, especially those of stronger quality, such as D33 or D26.

- What special measures will be taken in construction to protect the wetlands that abut the project? What opportunities are there to provide vegetated buffers to more effectively protect the wetlands/streams long term? How will these differ/exceed the performance of a standard mown grass right of way?

Let me know how this progresses.

Cathy

"Oeth, Jim" <Jim.Oeth@eartht ech.com>		To
07/06/2006 04:03 PM	Sherry Kamke/R5/USEPA/US@EPA	cc
	"Steiner, John" <john.steiner@dot.state.wi.us>	

12

U.S. DEPARTMENT OF AGRICULTURE — Form AD-1006

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	1. Date of Land Evaluation Request: 10/04/2006	2. Sheet 1 of 1
3. Name of Project: WisDOT Project ID 1100-07-70, IH 39/90	4. Federal Agency Involved: FHWA	
5. Proposed Land Use: Interstate Highway	6. County and State: Rock and Dane Counties, Wisconsin	7. Type of Project: Corridor ☒ Other ☐
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing the NRCS parts of this form
3. Does the site or corridor contain prime, unique ,statewide or local important farmland? Yes ☐ No ☐ (If no, the FPPA does not apply - Do not complete additional parts of this form)		4. Acres Irrigated / 5. Average Farm Size
6. Major Crop(s)	7. Farmable Land in Government Jurisdiction Acres: %	8. Amount of Farmland As Defined in FPPA Acres: %
9. Name of Land Evaluation System Used	10. Name of Local Site Assessment System	11. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Site Rating: Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	162			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres in Site	162			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime and Unique Farmland				
B. Total Acres Statewide and Local Important Farmland				
C. Percentage of Farmland in County or Local Govt. Unit to be Converted				
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in* 7 CFR 658.5(b & c)) — Max. Points Corridor / Other				
1. Area in Nonurban Use — 15 / 15	12			
2. Perimeter in Nonurban Use — 10 / 10	7			
3. Percent of Site Being Farmed — 20 / 20	14			
4. Protection Provided by State and Local Government — 20 / 20	10			
5. Distance from Urban Built-up area — 0 / 15	0			
6. Distance to Urban Support Services — 0 / 15	0			
7. Size of Present Farm Unit Compared to Average — 10 / 10	7			
8. Creation of Non-Farmable Farmland — 25 / 10	0			
9. Availability of Farm Support Services — 5 / 5	5			
10. On-Farm Investments — 20 / 20	10			
11. Effects of Conversion on Farm Support Services — 25 / 10	0			
12. Compatibility with Existing Agricultural Use — 10 / 10	0			
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS — 160	65			
PART VII *(To be completed by Federal Agency)*				
Relative Value of Farmland (from Part V above) — 100				
Total Corridor or Site Assessment (From Part VI above or a local site assessment) — 160	65			
TOTAL POINTS *(Total of above 2 lines)* — 260				

PART VIII *(To be completed by Federal Agency after final alternative is chosen)*

1. Corridor or Site Selected:	2. Date of Selection:	3. Was A Local Site Assessment Used?
See attached description	6/06	Yes ☐ No ☐

4. Reason For Selection: The preferred alternative has increased pavement service life, and decreased need for frequent traffic control along the interstate to maintain various segments of pavement. This alternative also allows for less ROW acquisition and less environmental impacts than widening on the outside. The selected alternative improves the ability of the roadway to meet traffic demands safely and efficiently by preserving and improving the existing roadway. It addresses capacity and level of service, problems associated with safety, and will provide system continuity and roadway function consistent with a backbone route of national, regional, state, and local importance.

Signature of person completing the Federal Agency parts of this form: James T. Dahl — DATE: 10/5/06

Wisconsin substitute form AD-1006 6-9-97 Completion instructions: http://www.wi.nrcs.usda.gov/soil/prime/prinotes.html

State of Wisconsin
Jim Doyle, Governor

Department of Agriculture, Trade and Consumer Protection
Rod Nilsestuen, Secretary

December 19, 2006

Mr. James F. Oeth P.E.
Earth Tech
1210 Fourier Dr., Ste 100
Madison, WI 53717-1927

Dear Mr. Oeth:

Re: Your letter received 12-4-06
Wis DOT Project ID#: 1001-07-00
IH 39/90: Illinois State Line – USH 12/18
Dane & Rock Counties

The Department has received the notification you submitted concerning the potential need for an agricultural impact statement (AIS) for the above project. Based upon the information received, it appears that an AIS is required for this project.

The Department is reviewing the project to determine what, if any, additional information is needed to prepare the AIS. If no additional information is necessary, you will receive written notification that the AIS is being prepared. The AIS will be completed within **60 days of the date of that notification.**

Upon completion of the AIS, the Department will charge a fee to cover preparation costs as stipulated in §32.035, *Wisconsin Statutes*. The potential condemnor may not negotiate with or make a jurisdictional offer to any landowner until 30 days after the AIS has been published. Please contact me if you have questions concerning the AIS.

Sincerely,

Peter Nauth
Agricultural Impact Program
608/224-4650

cc: James Becker

PN/dlk

EarthTech
A tyco International Ltd. Company

1210 Fourier Drive
Suite 100
Madison, WI 53717

P 608.836.9800
F 608.836.9767
www.earthtech.com

March 30, 2007

Bradley Cantrell
Community Development Director
Municipal Building
18 N. Jackson St., Third Floor
Janesville, WI 53548

+ local agencies within I 39/90 Corridor.

Subject: **IH 39/90 Traffic Noise**
Project ID 1001-07-00
IH 39/90 Corridor Study
Illinois State Line to USH 12/18
Rock & Dane Counties
Earth Tech Project No. 63141

Dear Mr. Cantrell:

Earth Tech has been assisting the Wisconsin Department of Transportation (WisDOT) in the study of improvement needs for the IH 39/90 corridor between the Illinois State line and USH 12/18 near Madison. During the study, we evaluated traffic-related sound levels on developed lands in order to minimized noise impacts as much as practical.

We believe it is vitally important to do all we can to ensure that the future sound levels we foresee along this corridor are compatible with future development on presently undeveloped lands. Accordingly, we are providing you with information which will help us to achieve this goal.

Local governments have traditionally been responsible for exercising land development controls and zoning within their jurisdictions. Through its authority in these areas, local governments can do much to ensure that future land uses and developments are compatible with the noise environment of a major arterial highway.

Wisconsin DOT has adopted a sound level of 67 dBa Leq for residential areas (Land Use Category B) and 72 dBa Leq for commercial/industrial areas (Land Use Category C) as the noise abatement criteria. Any location along a highway capacity improvement project which approaches or exceeds this threshold must be investigated for feasible and reasonable noise abatement measures in the development of the project. On undeveloped land, they recommend that no future noise sensitive development be constructed within the areas which will approach or exceed the criteria. The Wisconsin Department of Transportation and Federal Highway Administration will not fund any future noise abatement measures for developments which are created in currently undeveloped areas along this corridor.

We have included with this letter a graph which shows the future sound levels at varying distances from the highway. To predict these sound levels, we used peak traffic volumes to

determine the worst case condition. The graph indicates that future residential buildings should not be located any closer than 445 feet from IH 39/90. Commercial buildings should not be constructed any closer than 250 feet from IH 39/90.

You can use this sound level information to ensure that the desired compatibility between future development and anticipated highway sound levels is achieved. There are several types of administrative controls available, including the use of exclusive zoning, public ownership, and various forms of legal controls such as building codes, subdivision, regulations, health codes, etc. A good source of information is the U.S. Department of Transportation (DOT), Federal Highway Administration's website: http://www.fhwa.dot.gov/environment/ab_noise.htm which contains numerous online traffic noise articles and links for ordering information.

If you have any further questions in regard to this subject or regarding this project in general, please feel free to contact me at Earth Tech, phone#: 608-836-9800.

Sincerely,

Earth Tech, Inc.

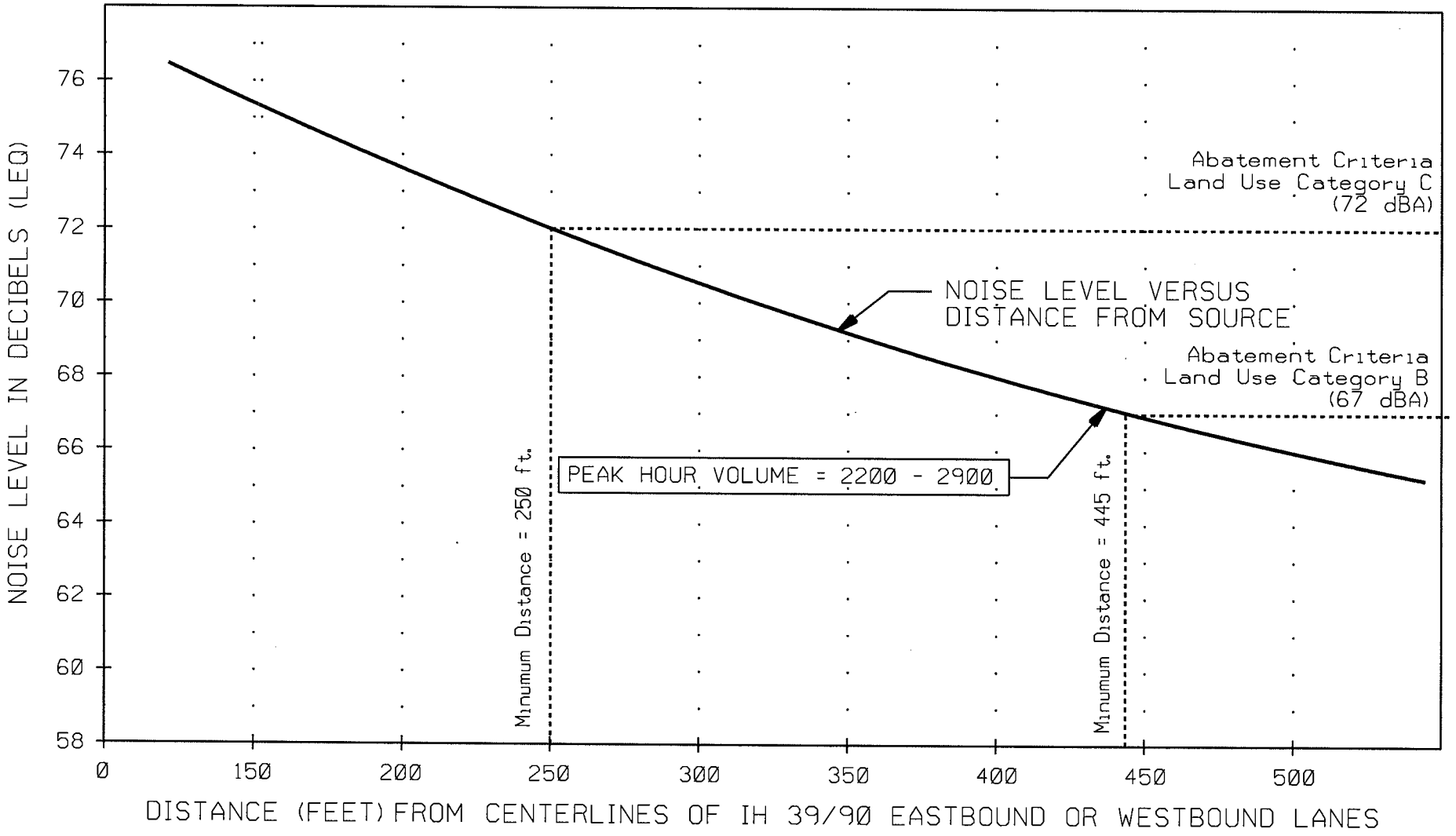
James F. Oeth, P.E.
Project Manager

Enc: As Noted

Cc: John Steiner, Wisconsin DOT Southwest Region

Year 2030 Projected Noise Levels at 65 MPH

Illinois State Line - USH 12/18



PROJECT I.D. 1001-07-00
IH 39/90
ILLINOIS STATE LINE - USH 12/18
ROCK AND DANE COUNTIES

Oeth, Jim

From: Halsted, Michael S - DNR [Michael.Halsted@wisconsin.gov]
Sent: Friday, August 10, 2007 12:55 PM
To: Oeth, Jim; Barta, Larry - DOT
Subject: RE: Project ID#1001-07-00, I-90 widening

Jim - due to the span of time - I did not recollect this message before I threw together my latest response. We can use what I put together as a method to compare notes when the time comes.

Thanks!

Mike Halsted
Environmental Analysis & Review Specialist
Green, Rock, Jefferson & Dodge Counties
Wisconsin Department of Natural Resources
(☎) phone: (608) 275-3301
(☎) fax: (608) 275-3338
(✉) e-mail: michael.halsted@wisconsin.gov

From: Oeth, Jim [mailto:Jim.Oeth@earthtech.com]
Sent: Tuesday, March 06, 2007 11:03 AM
To: Halsted, Michael S - DNR
Cc: Barta, Larry - DOT
Subject: RE: Project ID#1001-07-00, I-90 widening

Mike,

Thanks for the quick turnaround on providing us with comments/concerns on the IH 39/90 project since I when talked with you last week. In response to your questions below:

- I have not had any formal contact with Cathy Bleser for the Dane County portion of the project although I'm fairly certain she is aware of this project. We sent an initial coordination letter to Russ Anderson on June 9, 2006 with the assumption he would assign the project to the individual he wanted to take the lead on it from WDNR end.
- I discussed your wetland comments with our (Earth Tech) biologist who worked on this project. The methodology for accounting for wetland areas first involved plotting wetland areas as obtained from DNR electronic wetland inventory maps on a current aerial map of the corridor. A field review was then conducted by the staff biologist with the wetland inventory on the aerial mapping in hand. The entire IH 39/90 corridor was walked along the right of way of the project to identify potential wetland, waterway, and woodland impacts. For wetlands, delineations were not completed, but an approximate boundary was estimated based on hydophytic vegetation and any visible signs of wetland hydrology. An approximate boundary for each existing and newly found wetland was placed on the maps based on the field review, and photographs were taken of the areas. Steams were identified similarly, by visually assessing the character and quality of the stream. Woodlands were assessed by identifying the dominant tree species and drawing a boundary on the aerial maps. The wetland, waterway, and woodland impacts listed in the EA were derived from these assessments. NRCS wetland determination maps, along with county soils maps, WWI maps and UGS maps were reviewed during the field assessments to evaluate potential wetland and waterway impacts. The original plotted wetland areas were adjusted (made larger or smaller, or new areas identified) based on the field review with the NRCS and other available mapping. In some cases, areas of potential wetland may show on NRCS mapping, but were no longer in existence because they may have been drained (farmed wetland).
- Actual field delineations were not done at this time, and normally are not done at this stage of the project development. Funding for construction of this project is not expected until around 2014. Because wetland delineations are usually only good for a 5 year window, it would be premature to conduct the delineations at this time only to have to do them again at a late date.

- Earth Tech is the author of the EA. We have had various experts in their respective fields complete their assessments of impacts for their associated portion of the EA, but I am taking responsibility to pull it all together into one document and make sure everything is where it needs to be.
- I discussed your waterway hydraulic comment with our structures people. They have indicated that lengthening existing culverts by 12-15 feet is rather insignificant in regards to hydraulic capacity. WisDOT would normally only re-do culvert hydraulics if a culvert was lengthened by 50 percent or more.
- A NHI survey was completed for this project by Elise Kitchel, WDNR Environmental Review Specialist. I note that a cc of her review was sent to Cathy Bleser. Her review letter will be included in the EA.
- We will continue to complete the EA document for agency review, and you will have an opportunity to provide more detailed comments when the document is distributed. In the meantime, we welcome any additional comments you might have regarding the project, and we would be willing to work with you regarding a tour along the right of way this spring.

Jim

From: Halsted, Michael S - DNR [mailto:Michael.Halsted@Wisconsin.gov]
Sent: Friday, March 02, 2007 4:22 PM
To: Oeth, Jim
Subject: Project ID#1001-07-00, I-90 widening

Jim,

Have you had any contact with Cathy Bleser for the Dane County portion of the project?

I looked over the Summary of Wetland, Woodland & Stream Impacts for the I-39/90 widening project and am concerned that certain wetland areas have not been accounted for. Based on the report it appears quite a bit of wetland work has been conducted and I am interested in reviewing the raw wetland data either now or when the submittal is put together. Are you working on and the sole author of the EA? If I had more time I might identify other areas that might potentially have wetlands present. A good desktop method to identify potential areas of wetland is to evaluate the local of hydric soils using the NRCS list. I also like to use their wetland determination maps for NEW ROW's.

While I don't profess to be any type of expert on waterway hydraulics, intuitively it would seem lengthening a culvert would change it's hydraulic capacity - can you address that in the EA or prior to? I haven't conducted an NHI survey - were you hoping I could complete that at this stage?

I appreciate the opportunity to be involved at this early stage. If you want me to provide additional input or conduct a more detailed review - I will need a little more time to become more familiar with the landscape and resources that will be impacted by the proposal. For that reason, I am suggesting a tour along the right-of-way this spring.

Let me know if this meets your expectations or if you were hoping I could provide more or a different type of input.

Mike Halsted
Environmental Analysis & Review Specialist
Green, Rock, Jefferson & Dodge Counties
Wisconsin Department of Natural Resources
(☎) phone: (608) 275-3301
(☎) fax: (608) 275-3338
(✉) e-mail: michael.halsted@wisconsin.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Green Bay ES Field Office
2661 Scott Tower Drive
New Franken, Wisconsin 54229-9565
Telephone 920/866-1717
FAX 920/866-1710

June 28, 2007

Mr. James F. Oeth
Earth Tech
1210 Fourier Drive, Suite 100
Madison, Wisconsin 53717

re: Proposed Highway Expansion
Project ID 1001-07-00
IH 39/90
Rock and Dane Counties, Wisconsin

Dear Mr. Oeth:

The U.S. Fish and Wildlife Service (Service) has received your letter dated May 25, 2007, requesting comments on the subject project. The project entails expansion of Interstate Highway 39/90 from Madison to the Illinois border from 4 to 6 lanes, and reconstruction of interchanges along that route. The project is located in Dane and Rock Counties, Wisconsin. We have reviewed the information provided in your letter and our comments follow.

Federally-Listed Species, Candidate Species, and Critical Habitat

The following species have been recorded within Rock County in habitats similar to those that arc in or adjaccnt to areas that could be affected by the proposed project:

Classification	Common Name	Scientific Name	Habitat
candidate	eastern massasauga rattlesnake	Sistrurus catenatus catenatus	open to forested wetlands and adjacent upland areas

The eastern massasauga rattlesnake has been recorded in the Turtle Creek corridor. Although there are no recent records in adjacent waterways and tributaries, there is a possibility that the rattlesnake could be found in other nearby wetlands, stream corridors, and adjacent areas. There are also several rare and/or state-listed species found in the Turtle Creek watershed. If the project will involve impacts to Turtle or Spring Creeks, or adjacent wetlands or uplands, we recommend that those areas be reviewed for their potential to provided habitat for state or federally listed species. We recommend that the crossings for those waterways be designed to allow continuity of the riparian corridors under the bridges thereby reducing mortality of species attempting to traverse the road corridor.

In addition to the snake, please be aware that over time, habitats near the project site may be utilized by listed or proposed species not present at this time. It is also possible that critical

habitat could be proposed or designated for a species. Therefore, if there is a time lag of more than 12 months between plan completion and execution, it is important to reassess the impact of the project on federally-listed or proposed species or designated critical habitat prior to start of construction activities.

As this project involves a Federal action (i.e., authorization, funding, or is carried out in whole or in part by a Federal agency), the Federal Highway Administration (FHWA) or its designated agent is responsible for making a determination under Section 7 of the Endangered Species Act of 1973, as amended (ESA), as to whether the selected project alternative may affect federally-listed threatened or endangered species or designated critical habitat. If the proposed project may affect, but is unlikely to adversely affect federally-listed threatened or endangered species or designated critical habitat, FHWA or its agent must obtain written concurrence from our office. If the project may affect, and is likely to adversely affect federally-listed species or adversely modify designated critical habitat, FHWA must initiate formal consultation with the Service in accordance with section 7 of the ESA. Further information on the section 7 consultation process can be obtained by contacting the staff person identified at the end of this letter.

Migratory Birds

Under the Migratory Bird Treaty Act of 1918, as amended, it is unlawful to take, capture, kill, or possess migratory birds, their nests, eggs, and young. It appears that the project area may include habitat suitable for nesting by migratory bird species, including song birds and/or raptors. If migratory birds are known to nest on any of the project structures, construction should begin before the initiation of the breeding season for those species or after breeding has concluded. Alternatively, the structures can be tightly screened or gelled before the breeding season to prevent nesting. Generally, we recommend that screening or any other habitat disturbance occur before May 1 or after August 30 to minimize potential impacts to migratory birds, but please be aware that some species may initiate nesting before May 1.

Wetland Mitigation

We note that the project area includes a number of wetlands and at least two possible waterways. In refining and selecting project alternatives, efforts should be made to select an alternative that does not adversely impact wetlands. If no other alternative is feasible and it is clearly demonstrated that project construction resulting in wetland disturbance or loss cannot be avoided, a wetland mitigation plan should be developed that identifies measures proposed to minimize adverse impacts and replace lost wetland habitat values and other wetland functions and values. Any project that impacts wetlands or waterways, including seasonally ephemeral and intermittent streams, should include design features such as culverts to retain hydrological connection between areas fragmented by the project.

Other Fish, Wildlife, and Habitats

The Service supports and encourages the maintenance or creation of habitat connectivity wherever possible. As such, we recommend that any replacement bridges and abutments and culverts be designed and constructed in such a way as to allow terrestrial wildlife to pass under

the road corridor during normal flow conditions. In bridges this may require limitations on the use of exposed riprap, and modifications in the substrate and/or slope at the base of the abutments, as some wildlife species cannot or prefer not to traverse areas of riprap. Culverts may be designed without bottoms, or set below the substrate, to maintain continuity of stream or wetland substrates. To allow passage of wildlife in wetter areas (i.e. those with persistent standing water), culverts may be designed or constructed with a narrow shelf to allow movement of amphibious or terrestrial wildlife. Culverts should be wide and high enough to allow daylight to penetrate the lengths of the structures.

We appreciate the opportunity to respond. Questions pertaining to these comments can be directed to Ms. Leakhena Au at 920-866-1734.

Sincerely,

Louise Clemency

Louise Clemency
Field Supervisor

cc: Wisconsin DNR, Southcentral Region, Fitchburg, WI Attn: Russ Anderson

United States Department of Agriculture
NRCS Natural Resources Conservation Service

Southeast Area Office
451 West North Street
Juneau, WI 53039-1120
Phone: 920.386.9999
Fax: 920.386.2507

August 7, 2007

James F. Oeth, P.E.
Earth Tech
1210 Fourier Drive
Madison, WI 53717

RE: Farmland Protection Policy Act
IH 39/90, Illinois State Line – USH 12/18
WisDOT Project ID 1001-07-00
Earth Tech Project No. 63141

Dear Mr. Oeth:

I have reviewed the maps, the background of the project, and the completed Farmland Conversion Impact Rating for the above mentioned project, with regard to requirements of the Farmland Protection Policy Act (FPPA). The purpose of the Farmland Conversion Impact Rating Form is to evaluate farmland impacts for various alternatives to proposed projects.

Because there are no viable alternatives to consider for this project, provisions of the FPPA do not apply and no further action is needed on your part to comply with its requirements.

Thank you for the opportunity to comment on this proposed project.

Sincerely,

Kevin Traastad

Kevin Traastad
Resource Soil Scientist

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Lloyd L. Eagan, Regional Director

South Central Region Headquarters
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711-5397
Telephone 608-275-3266
FAX 608-275-3338
TTY Access via relay - 711

August 7, 2007

File Ref: 1001-07-00

Larry Barta
WisDOT
2101 Wright Street
Madison, WI 53704

SUBJECT: **Initial Comment Letter:** Project ID#1001-07-00, IH 39/90, Illinois State Line to USH 12/18, Rock & Dane Counties.

Dear Mr. Barta;

We have reviewed the Summary of Wetland, Woodland and Stream Impacts Report as prepared by EarthTech, Ltd. According to your proposal, improvements made to I39/90 between the Illinois Stateline and USH 12/18 include expanding the existing four-lane freeway to six lanes. The project spans 45 miles and includes improvements and modification to eleven interchanges. The submitted document identifies ten waterway crossings of which four won't be modified and six will require extension and/or widening. No bridges and culverts or bridges will be removed as a result of this project.

Comments

Our initial comments on the project as proposed are as follows:

- A review of the Natural Heritage Inventory Database indicates no known endangered, threatened, or special concern species, nor natural areas within the project limits. 1

- A review of the submitted report shows that wetlands are present along various stretches of the project. Current wetland impacts are estimated to be 13.9 acres. During my review I have identified areas where wetland conditions may exist and am recommending that these areas be re-evaluated accordingly OR existing wetland delineation or assessment data be submitted to illustrate whether or not wetland conditions exist. I have prepared a series of drawings that depict areas that potentially contain wetlands. I understand some of these questionable areas won't be filled as the road widening is to occur within the existing median. Nonetheless, wetlands within the project boundaries need to be identified if for no other reason than to evaluate secondary impacts and to notify contractors etc...where equipment and temporary fill piles should and should not be placed. Please use the information in the attached Power Point program and address these concerns. 2

  We will able to issue water quality certification for this project after agreement on the necessary measures to protect and/or mitigate the wetland losses.

- If a temporary channel is needed for culvert extension or widening construction, the channel should be lined with plastic or other non-erodible material and weighted down with washed stone. It must be capable of carrying anticipated stream flows during the construction period. The coffer dams used to 3

divert the flow through the temporary channel should be nylon bags filled with stone. Fish that become stranded in dewatered channels should be captured and returned to the active channel immediately.

- I have not had the opportunity to evaluate the sites for the presence of swallows or other migratory song bird nesting. Please identify whether or not any work will be needed on the undersides of the (4) previously widened bridges. I will use this information to determine whether or not inspections of these bridges are warranted. Migratory bird protection will be required on all widened or extended structures where nesting has occurred. Under the U.S. Migratory Bird Treaty Act, destruction of swallows and other migratory birds, or their nests, is unlawful unless a permit is obtained from the U.S. Fish & Wildlife Service. Therefore, the project should either utilize measures to prevent nesting (e.g., remove unoccupied nests during the non-nesting season and install barrier netting prior to May 15), or should occur only between August 20 and May 15 (non-nesting season). (Be sure netting is removed as soon as nesting period is over.) If neither of these options is possible, then the U.S. Fish & Wildlife Service must be contacted to apply for a depredation permit. 4

- **While it would not seem that any of the work planned will impede the ability for people to navigate the waterways within the boundaries of this project, it is our policy to contact the local Conservation Warden if this project will potentially impact navigation.** The warden will have knowledge of existing local conditions (type of boats navigating said stream, height clearances necessary, speed of boats, frequency or time of year of most use, etc.), and will determine whether hazard buoys or possibly the complete or partial closure of the waterway is needed to insure safety for boaters and workers alike during the construction process. If the warden indicates that navigational aids (buoys) are needed, you will be required to submit a plan for placement of the buoys, a draft plan for dates and times of closure if that is determined to be necessary, and obtain approval from the local unit of government for alterations to navigation. Purchase of the buoys is the responsibility of the contractor. The local warden to contact is Mike Dieckhoff at (608) 743-4850. If navigational aids are to be placed, please contact this office again so that we can provide you with additional information on the process, and the forms that must be filed prior to installation of these buoys. Allow 2 months prior to commencement of construction to complete the process. 5

- Plans for the modified structures must comply with the provisions of the local community's floodplain zoning ordinance. If the new bridge will cause the backwater to increase 0.01 feet or more, "appropriate legal arrangements" must be completed with the affected landowners, and the local floodplain ordinance must be amended. 6

- All contracts should include language to address any wells present in areas of highway construction. NR 812.26 requires that all unused wells shall be properly abandoned. The contractual language should clearly state that wells in the construction area shall be identified prior to the start of construction. All wells in the construction area must be properly abandoned before any grading work is started, and wells discovered during grading work must also be properly abandoned in accordance with NR 812.26. If the contractor fails to properly abandon a well, and the well is graded over, the remedy will include excavating the casing, drilling out the well, and properly abandoning the well. The DNR strongly recommends hiring a licensed well-driller or pump-installer to assess wells in the construction area and to conduct the well-abandonments prior to grading. The cost of correction of an improperly abandoned well or retrieving dropped pumping hardware from a well can far exceed the cost of a professional well abandonment. Recent legislation will require all abandonments to be conducted by a licensed well-driller or pump-installer beginning June 1, 2008. 7

- If an asphalt plant is to be utilized, it must be able to meet the air quality standards of the State of Wisconsin. If a portable facility is to be installed, the contractor must first submit a "Notice of Intent" to relocate the portable source. The site that is utilized for the asphalt plant must be properly treated to prevent erosion. Appropriately sized stilling basins should be provided that will intercept runoff and allow ample time for the suspended material to settle out before any water is discharged. If any gravel washing is to be completed on-site, we will want to see a plan for erosion control for this site before the project is started.

  If the portable plant is located in an area that is currently undisturbed or not part of an existing quarry, an air management permit may be required from this Department. Also, we will want to see a restoration plan for this site.

  If a portable concrete "batch plant" is utilized, a high capacity well will probably be required. The contractor should be aware that plan approval for the high capacity well will be required from this Department. Furthermore, following completion of the project, the well must be properly abandoned pursuant to NR 141.25, Wis. Adm. Code.

  The site that is utilized for the concrete "batch plant" must be properly treated to prevent erosion. Appropriately sized stilling basins should be provided that will intercept runoff and allow ample time for the suspended material to settle out before any water is discharged. If any gravel washing is to occur on-site, we will want to see a plan for erosion control for this site before the project is initiated. 8

- If dewatering is required, the dirty water removed should be pumped into a stilling basin before it is allowed to enter the stream. 9

- If burning of brush will occur as part of this project, the contractor should be informed that it is illegal to burn tires. In addition, a permit may be required to burn any material. The contractor should contact: 10

  Tom Roushar; Air Management Section, South Central Region, Fitchburg, WI 53711, and (608) 273-5603

- Spoil material should be stockpiled on **uplands an adequate distance from the stream** and any open water created by excavation. Filter fabric silt fence should be installed between spoil material and the stream and between the entire disturbed area and the waterway. 11

- If any borrow areas are necessary for this project, we will expect appropriate erosion control measures be applied to the borrow areas during and following construction. Following completion of the project the borrow areas should be restored, properly seeded, mulched, and protected from the effects of erosion. 12

- Properly installed temporary and/or permanent ditch checks should be installed in areas of moderate velocity runoff. Clean aggregate dikes should be installed in ditch lines of moderate to high velocity runoff during and after construction. Ditch lines should also be protected with <u>erosion bales, stone, or comparable materials,</u> (not silt fence), and erosion mat (according to DOT specifications) in conjunction with seeding. If erosion mat is used along stream banks, it should be biodegradable and non-netted, or if netted, constructed more loosely so that small animals are able to work their way through (e.g., Class I Urban Type A, or if necessary for shear stress, Class II Type C). Long-term netted mats cause animals to become entrapped while moving in and out of the stream. 13

- Seed mixtures and seeding practices must conform to the standards in the section on seeding in the manual entitled, "Standard Specifications for Highway and Structure Construction" (WISDOT Publication).

  Do not use #30 DOT mix because it contains birdsfoot trefoil, which can be invasive in native vegetation. We also recommend the development and implementation of a post-construction vegetative monitoring plan to identify and destroy any invasive plants that may colonize the disturbed areas.

14

- During my review I identified eight waterways (tributaries, grass lined ditches, and ag drainage ditches that were not acknowledged in the EarthTech report. All waterways within the project boundaries are considered a warmwater systems. For this project, all instream work and work that has the potential to adversely affect the water quality of the stream should be completed between **June 15 and September 15.** This would include activities such as culvert modifications and bridge widening. Work in other areas may continue beyond **September 15** provided appropriate measures are taken to control erosion.

15

- As long as these and other appropriate measures are taken to control erosion during and immediately following construction, this Department will certify that this project is following appropriate erosion control measures.

Please address the concerns outlined in the attached power point program (electronic). Thank you for the opportunity to review and comment on this project in its planning stages.

Sincerely,

Mike Halsted
Environmental Analysis & Review Specialist
Telephone: (608) 275-3301

Cc: Jennifer Grimes – WisDOT
John Vesperman – WisDOT
Jim Oeth – EarthTech
John Steiner – WisDOT
Russ Anderson - WDNR

EarthTech
A tyco International Ltd. Company

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www.earthtech.com

November 19, 2007

AUTHOR COPY

Mr. Michael Halsted
Wisconsin Department of Natural Resources
Southern District
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711

Subject: **Agency Coordination - WDNR**
Project I.D. 1001-07-00
IH 39/90
Illinois State Line – USH 12/18
Rock and Dane Counties
Earth Tech Project No. 63141

Dear Mr. Halsted:

We have reviewed your Initial Comment Letter dated August 7, 2007, on the above subject project, and are providing you with responses to your comments. To facilitate your review, we are attaching your original comment letter in which we numbered each of your fifteen comments, along with a detailed response sheet to each of these referenced comments.

As part of your letter dated August 7, 2007, you also provided us with 20 drawings in a PowerPoint program that depicted areas of potential wetlands or waterway crossings (Ag Ditches) and asked us to confirm their existence. On September 26, 2007, our staff biologist conducted a field review of each of the depicted areas to determine their existence, and if so, add them to our summary tables of wetlands and waterway crossings for the Environmental Assessment (EA) for this project.

The recent field survey utilized the same methodology as the initial wetland and natural resource survey that was conducted in April/May 2003 to identify potential wetlands and waterways. NRCS wetland determination maps, along with County soils maps, WWI maps, USGS maps, and your PowerPoint program maps were reviewed during the field assessment to evaluate potential wetland and waterway impacts. Formal wetland delineations were not completed as permit application for this project is more than 5 years in the future. The formal delineations will be completed as permit application time becomes closer to reality. An approximate wetland boundary was estimated on hydrophytic vegetation and any visible signs of wetland hydrology. Waterways were identified by visually assessing the location of each potential location.

Attached for your review are the following:

1. A copy of your Initial Comment Letter dated August 7, 2007, with each comment numbered.
2. Detailed response sheet to each numbered comment.

3. A copy of your PowerPoint program with summary responses indicating presence of wetland and waterway (Ag. Ditch) crossings based on the September 26, 2007, field survey.
4. Detailed response sheet of field review for each potential wetland or Ag Ditch identified in your PowerPoint program.
5. Updated Table 1 - Stream/Waterway/Ag Ditch Crossings Table 1 from the EA.
6. Updated Table 2 – Summary of Potential Wetland Impacts from the EA.
7. Aerial maps (17 sheets) showing the location of the Preferred Alternative for IH 39/90 with the locations of the streams and wetlands,

If you have any questions or additional concerns, please call me at 608-828-8151;email, jim.oeth@earthtech.com or Larry Barta, WisDOT Project manager, SW Region, 2101 Wright Street, Madison, WI 53704, 608-246-3862; larry.barta@DOT.state.wi.us.

Sincerely,

James F. Oeth, PE
Project Manager

CC: Larry Barta, WisDOT SW Region

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Agency: **Wisconsin Department of Natural Resources**
August 17, 2007

Comment	**Response**
1	On May 31, 2006, the Wisconsin Department of Natural Resources, Bureau of Endangered Resources, provided a review of the Natural Heritage Inventory Database files listing the possibility of some rare species and natural communities within two miles of the project corridor. A review of this list was conducted, and it was determined that based upon an initial wetland and natural habitat field survey done within the project limits, it was unlikely that any of the listed plants exist within the areas that would be impacted by this project. In the Rock River, the Redfin Shiner, a State Threatened species, is historically known to occur. An environmental commitment will be provided in the project EA that during final design, when the design for pier extensions in the Rock River is complete, a field survey will be conducted and sediment sampling be completed to determine if habitat is suitable for the existence of this species.
2	After receiving your letter regarding the possibility of additional wetland areas or modifications to a wetland, our staff biologist conducted a field survey on September 26, 2007, to explore these areas. The field review indicated that while some of the potential sites were outside the project limits and were not being impacted, there were sites that either involved modification of already identified sites, or were complete newly identified sites. Previous wetland impacts were evaluated at 13.9 acres. The revised wetland areas based on the recent field survey increases the impact to 14.2 acres. See attachment for a detailed description of the wetland and waterway reevaluation.
3	We agree with your comments regarding temporary channels. WisDOT will consider various types of water management measures in the final design phase of the project. Impacts will be minimized by strict adherence to WisDOT's *Specifications for Road and Bridge Construction.*
4	Our initial wetland and natural resource field review did not find the presence of swallows or other migratory song birds. During the final design phase we will recommend a follow up review of the undersides of the bridges to reconfirm migratory birds are not present. If migratory birds are found, construction will not be allowed to occur during nesting season as outlined in your letter. There will not be any additional work on the decks or undersides of the 4 previously widened bridges as a result of this project.
5	We do not believe that this project will impede the ability to navigate the waterways within the boundaries of this project. During the design phase,

the local Conservation Warden will be contacted to coordinate project actions and discuss potential navigation impacts, if any.

6 We agree with your comment regarding complying with the local community's floodplain zoning ordinance. Because this project will involve deck replacements and not complete bridge design, it is assumed the 0.01 backwater requirement is met. This was the case in the four previously deck replacements on the iH 39/90 corridor.

7 There are no wells identified that will be in areas of highway construction. If, during the design phase, wells are identified and if abandonment is required, they will be properly abandoned in accordance with NR 812.26.

8 We agree with your comment regarding asphalt plant and concrete batch plants. Your comments will be addressed by adherence to WisDOT's *Specifications for Road and Bridge Construction.*

9 We agree with your comments regarding dewatering. Your comment will be addressed by adherence to WisDOT's *Specifications for Road and Bridge Construction.*

10 We agree with your comments regarding burning of material, including the legality of burning tires. We will incorporate your comments and contact person into the environmental commitments for this project.

11 We agree with your comments regarding spoil materials. Your comments will be addressed by adherence to WisDOT's *Specifications for Road and Bridge Construction.*

12 WisDOT will consider various types of erosion control measures in the final design phase of the project. Impacts will be minimized by strict adherence to WisDOT's *Specifications for Road and Bridge Construction.*

13 We agree with your comments regarding proper ditch erosion prevention. Your comments will be addressed by adherence to WisDOT's *Specifications for Road and Bridge Construction.*

14 We agree with your comments regarding proper seed mixtures and will comply with standard specifications. The environmental commitment will specify not to use #30 DOT mix.

15 After receiving your letter regarding the possibility of additional waterways (ag ditches), our staff biologist conducted a field survey on September 26, 2007, to explore the existence of these areas. The results of the field investigation indicated that was no channel or waterway present in four of the eight potential locations. The remaining four newly identified waterways have been added to the EA in Table 1-Stream/waterway/Ag Ditch Crossings (copy attached), and have been identified on map exhibits for the EA. To prevent the potential to adversely affect the water quality of the streams, any project work beyond September 15th will have

provisions for adhering to strict erosion control measures as required by WisDOT's *Specifications for Road and Bridge Construction.*

Detailed Responses to Identification of Potential Wetland or Ag Ditches
IH 39/90
Illinois State Line to USH 12/18
Rock & Dane Counties
(Based on September 26, 2007 Field Review)

The following contains a list of WDNR, August 7, 2007, Power Point slides with the title of the slide and our response:

Slide 1 – Section 32, Town of Turtle Creek, Stateline to Colley Road
While wetland conditions may exist in this area, the area is outside the project limits and will not be impacted by the project. No work along Colley Road is anticipated as a result of this project.

Slide 2 – Section 29, Town of Turtle Creek, Colley Road to I-43 Interchange
The area on the east side of IH 39/90 has recently been re-graded, and there is no longer a channel located there. There is no channel on the west side.

Slide 3 – Section 20/21, Town of Turtle Creek, I 43 Interchange to Beloit City Limits
The west side of the interstate along this stretch consisted of corn fields with no signs of stressed vegetation as might be present in farmed wetlands. Fields may be tiled, but would likely be classified as PC.

Slide 4 – Section 8/9, Town of Turtle Creek, Lathers Sand & Gravel to Creek Road
The west side of the interstate consists of corn fields with no evidence of stress. The east side consists of planted red pines outside of the ROW and outside the project limits. Wetlands may be present farther than 50 feet from the ROW because of the presence of boxelder trees, but they would be outside the project limits and would not be impacted by the project.

Slide 5 – Section 20, Town of La Prairie, Woodman Road to Section Line 20/17
There is no channel present in the field on the west side. I would classify it as a grassy swale. There is no channel on the east side. It is corn field.

Slide 6 - Section 20, Town of La Prairie, Woodman Road to Section Line 20/17
The west side does have standing water in the lowest area of the field. Grass is mowed or in pasture so it is difficult to ID. It likely has wetlands up to the toe of slope of the interstate, and it has been identified as R-20 on the maps. The east side is corn field with no stressed vegetation.

Slide 7 – Section 5, Town of La Prairie
No channel is present. The area between CTH O and railroad tracks has been re-graded.

Slide 8 – Section 5, Town of La Prairie
No wetlands are present within 100 feet of the interstate bridge. The area between CTH O and railroad tracks has been re-graded.

Slide 9 – Section 32, Town of Harmony
Area consists of river channel. Bike trail is located on the north bank and the south bank is incised, so no wetlands are present at this location.

Slide 10 – Section 20, Town of Harmony
Area has a sign location on the east side of the interstate that calls the area "Green Belt" and describes the area as an established stormwater control area and a place for natural plants and wildlife.

Slide 11 - Section 6, Town of Harmony
The west side of the interstate is a low area dominated by boxelder. Cannot tell if there is a channel or not, but wetland extends approximately 10 feet onto ROW. This wetland has been identified as R-21 on the maps. The east side consists of a low swale, but the swale is south of the location of hydric soils shown on the map. Wetland is present in the swale, but it is outside of the ROW and outside the project limits.

Slide 12 – Section 1, Town of Fulton
The area on the west side of the interstate is currently in soybean crop, with no signs of stressed vegetation. The east side is in corn crop, with no signs of stressed vegetation. If the area is drain tiled, it may be PC.

Slide 13 – Section 35, Town of Albion
This wetland area was previously defined as D-2. Wetland extends to the toe-of-slope of interstate. Boundaries for this wetland have been adjusted and placed on the map.

Slide 14 – Section 26, Town of Albion
South area - Wetlands on the southeast side of the interstate extend to the same area that hydric soils are shown on the map. This wetland area was previously defined as D-1. Boundaries have been adjusted and shown on the map.
Middle area – This area is in corn and is topographically high. Not a wetland.
North area – This area is developed and not wetland.

Slide 15 – Section 16, Town of Albion
This wetland area was previously defined as D-6. The area north of identified D-6 wetland is also wetland, with its boundaries extending to toe-of-slope of interstate. Boundaries of D-6 have bee adjusted to include area to the north and shown on the map.

Slide 16 – Section 9, Town of Albion
Channel is present. Approximately 2 feet wide with 1-foot high banks. Channel is shown on map as Ag Ditch #1.

Slide 17 – Section 33/32, Town of Christiana
East and west sides of interstate both have a channel that is constricted by dense vegetation, so width and depth could not be identified. Shown and identified on map as Ag Ditch #2.
Area east of interstate has Hydric soil area and is a wetland dominated by reed canary grass. This wetland has previously been identified as D-21.

Slide 18 – Section 29, Town of Christiana
A wetland is present on the west side of the interstate that extends to the toe-of-slope. It has been identified as D-56 on maps. This area also has a channel running along the toe-of-slope prior to going into culvert. Channel is also present on east side, but is constricted with dense vegetation. The channel is identified as Ag Ditch #3 on the maps.

Slide 19 – Section 18, Town of Christiana and Section 13, Town of Pleasant Springs
South – area is a wetland, but it is located outside of ROW. It may be slightly impacted by the project grading. It is identified as D-57 on the maps.
Middle - area is a wetland located up to the toe-of-slope of interstate. It has been identified as D-58 on the maps.
North - area is a wetland extending to the toe-of-slope to the west. It has been identified as D-59 on the maps.
Area of hydric soils on the west side of interstate is a drained corn field. Field is drained by ditches, so it may be considered PC. Area is outside of the ROW and outside the project limits, so it will not be impacted.

Slide 20 – Section 5, Town of Pleasant Springs
No evidence of a channel with bed and banks. Culvert is present, but not in same location as channel is shown on the map.

Slide 21 – Section 26, Town of Blooming Grove
Channel is present. It is approximately 5 feet wide and 3 feet deep. It is identified as Ag Ditch #4 on the maps.

State of Wisconsin
Jim Doyle, Governor

Department of Agriculture, Trade and Consumer Protection
Rod Nilsestuen, Secretary

August 10, 2007

Mr. Jim Oeth
Earthtech
1210 Fourier Drive, Suite 100
Madison, WI 53717

Dear Mr. Oeth:

Re: Draft Agricultural Impact Statement
I-39/90: Illinois State Line to USH 12 & 18
Project ID#: 1001-07-00
Dane and Rock Counties

We have completed a draft Agricultural Impact Statement for this proposed project. Please review the enclosed draft and return it to us with your comments. If you only have a few comments, you don't need to return the AIS, just give me a call at (608)224-4646 or e-mail me at alice.halpin@datcp.state.wi.us .

Sincerely,

Alice Halpin

Alice Halpin
Agricultural Impact Analyst

Enc.

WISCONSIN HISTORICAL SOCIETY

Headquarters Building
816 State Street
Madison, WI 53706-1482
608-264-6400

December 3, 2007

Mr. Robert Newbery
Wisconsin Dept. of Transportation
Bureau of Equity & Environmental Services
4802 Sheboygan Ave., Rm. 451
Madison, WI 53707-7965

SHSW#: 07-0240/DA/RO
RE: I 39/90 Corridor Illinois State Line to USH 12/18
WisDOT I.D.#: 1001-07-00

Dear Mr. Newbery:

We have received your submittal of November 20, 2007 regarding the above referenced project. Based on the additional information provided, we concur with your assessment that the former Phillips 66 service station at 414 Albion Road is not eligible for inclusion in the National Register of Historic Places due to a loss of integrity.

We believe that the proposed undertaking will result in no historic properties affected pursuant to 36 CFR 800.4(d)(1). Please call me at (608) 264-6507 if you have any questions concerning these matters.

Sincerely,

Sherman Banker
Wisconsin State Historic Preservation Office

U.S. Department of Homeland Security

United States Coast Guard

Commander
Eighth Coast Guard District

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: dwb
Phone: (314)269-2378
Fax: (314)269-2737
Email:

16591.1/I-39/90
December 11, 2007

Mr. Larry Barta
Wisconsin Department of Transportation
Southwest Region, Madison Office
2101 Wright Street
Madison, WI 53704

Subj: I-39/90 IMPROVEMENT PROJECT, DANE AND ROCK COUNTIES

Dear Mr. Barta:

Please refer to the enclosed letter from Earth Tech of November 27, 2007. We have determined that pursuant to the Coast Guard Authorization Act of 1982, the subject project does not involve bridges over navigable waters of the United States. Therefore, a Coast Guard bridge permit is not required for this project.

We appreciate the opportunity to comment on the project.

Sincerely,

ROGER K. WIEBUSCH
Bridge Administrator
By direction of the District Commander

Enclosure: Earth Tech ltr dtd 11/27/07

Copy: Mr. James Oeth (Earth Tech)

Oeth, Jim

From: Halsted, Michael S - DNR [Michael.Halsted@wisconsin.gov]
Sent: Thursday, January 03, 2008 12:42 PM
To: Grimes, Jennifer - DOT; Oeth, Jim; Barta, Larry - DOT
Subject: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

I have completed my review of the November 19, 2007 response to my initial contact letter dated August 7, 2007. Additional wetlands and waterways have been incorporated and I will be conducting field visits late spring/early summer 2008. I understand and agree with your position to hold off on conducting full wetland delineations at this stage in the process. However, I would like the information in the EA to reflect the draft nature of the wetland impact information provided in the report. The EA should explain that full delineations may identify additional acreage or areas previously not characterized.

I have asked Dave Genson to provide the source (or lack) of the 50% rule for culvert lengthening. I believe the EA should also explain why a hydraulic analysis is not being conducted on extensions and include information we have regarding animal passage and lengthy culverts.

May I please have a copy of the May 31, 2006 letter from BER on the NHI species in the corridor? I searched my file records here and looks like the letter did not make the file.

Four additional waterways have been identified and are being labeled ag-ditches. Be aware that while there is no special legal designation for ag-ditches that directly relate to the purpose of improving our highway systems. Exemptions for work on ag-ditches are limited to farming practices and in some cases wetland restoration. Also note that many ag ditches are navigable waterways and have stream history dating to pre-development. For example - Ag Ditch #2 & #3, while these might be appear to be functioning and have characteristics of ag-ditches they also have extensive history as natural tributaries to Saunders Creek as shown in the 1833 Original Public Survey Plat Maps.

Also note that many waterways across the State have been enclosed and will not appear on air photos or visible during field visit. The best way to identify such waterways is to consult with landowners and the NRCS. Other waterways have been converted from navigable waters to grass lined swales as appears is the case with a few of the waterways identified in the November 19, 2007 correspondence.

I will have more information regarding my environmental review when I complete my field work this spring/summer. Please forward a draft copy of the EA at your earliest convenience.

Sincerely,

Mike Halsted
Environmental Analysis & Review Specialist
Green, Rock, Jefferson & Dodge Counties
Wisconsin Department of Natural Resources
(☎) phone: (608) 275-3301
(☎) fax: (608) 275-3338
(✉) e-mail: michael.halsted@wisconsin.gov

Oeth, Jim

From: Halsted, Michael S - DNR [Michael.Halsted@wisconsin.gov]
Sent: Tuesday, March 04, 2008 3:41 PM
To: Oeth, Jim; Grimes, Jennifer - DOT; Barta, Larry - DOT
Subject: RE: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

Thanks Jim! I will field review the project-scape this spring.

Animal Passage: On the animal crossing issue - we (meaning both agencies) should make attempts to first identify if there is a need for aquatic fish or other fauna through existing culverts by evaluating the habitat along the interstate. It may very well be that the existing culverts are already too long for fish (or other fauna) to comfortably pass. This brings us back to the original issue...is there a need for such passage along the highway? Regardless of what we find in the field, will this issue be addressed in the EA without me taking the lead in providing information (including background/generic info)?

Hydraulics: I asked our engineers to weigh-in on the lengthening issue (for reasons that transcend this project). A sidebar concern is whether or not **existing** crossings are sized adequately (I believe there is a potential that changes in basin landuse may render existing culverts inadequate).

Enclosures: Is it standard operating procedures to evaluate landscape hydrology (surface/sub-surface) by contacting each affected property owner or the NRCS? Do you obtain field tile/drainage system schematics during the EA stage?

Thanks again - I appreciate your responses!

Mike Halsted
Environmental Analysis & Review Specialist
Green, Rock, Jefferson & Dodge Counties
Wisconsin Department of Natural Resources
(☎) phone: (608) 275-3301
(☎) fax: (608) 275-3338
(✉) e-mail: michael.halsted@wisconsin.gov

From: Oeth, Jim [mailto:Jim.Oeth@earthtech.com]
Sent: Tuesday, March 04, 2008 2:37 PM
To: Halsted, Michael S - DNR; Grimes, Jennifer - DOT; Barta, Larry - DOT
Subject: RE: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

Mike,

I am providing responses to your inquiries below regarding your review of IH 39/90, Illinois State line to USH 12/18 (Beltline), Rock & Dane Counties.

Jim

From: Halsted, Michael S - DNR [mailto:Michael.Halsted@wisconsin.gov]
Sent: Thursday, January 03, 2008 12:42 PM
To: Grimes, Jennifer - DOT; Oeth, Jim; Barta, Larry - DOT
Subject: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

(responses on next page)

I have completed my review of the November 19, 2007 response to my initial contact letter dated August 7, 2007. Additional wetlands and waterways have been incorporated and I will be conducting field visits late spring/early summer 2008. I understand and agree with your position to hold off on conducting full wetland delineations at this stage in the process. However, I would like the information in the EA to reflect the draft nature of the wetland impact information provided in the report. The EA should explain that full delineations may identify additional acreage or areas previously not characterized. Response: The sentence, "Full delineation, which may identify additional acreages or areas previously not characterized, will occur prior to construction" was inserted in the first paragraph of question #1 on the Wetlands Impact Evaluation Factor Sheet of the IH 39/90 EA.

I have asked Dave Genson to provide the source (or lack) of the 50% rule for culvert lengthening. I believe the EA should also explain why a hydraulic analysis is not being conducted on extensions and include information we have regarding animal passage and lengthy culverts. Response: Culvert length has little impact on outcome of hydraulic analysis, and would be considered a lot of additional effort/cost for little benefit or change in backwater computation. Making a culvert larger to accommodate animal passage would not be a result/justification that would come from a hydraulic analysis. Because a larger culvert for animal passage would result in a higher cost, this discussion should occur with WisDOT staff. If you would like to provide your information regarding animal passage and lengthy culverts, we would be glad to consider adding it to the EA discussion.

May I please have a copy of the May 31, 2006 letter from BER on the NHI species in the corridor? I searched my file records here and looks like the letter did not make the file. Response: a copy is attached as a pdf file above.

Four additional waterways have been identified and are being labeled ag-ditches. Be aware that while there is no special legal designation for ag-ditches that directly relate to the purpose of improving our highway systems. Exemptions for work on ag-ditches are limited to farming practices and in some cases wetland restoration. Also note that many ag ditches are navigable waterways and have stream history dating to pre-development. For example - Ag Ditch #2 & #3, while these might be appear to be functioning and have characteristics of ag-ditches they also have extensive history as natural tributaries to Saunders Creek as shown in the 1833 Original Public Survey Plat Maps. Response: We agree with your discussion and comments. The Ag Ditches have been labeled on the aerial map display of the IH 39/90 Preferred Alternative exhibit contained in Appendix C of the EA. The Ag Ditches have also been included on Table SF-1 which immediately precedes the Stream & Floodplain Impact Evaluation Factor Sheet of the IH 39/90 EA.

Also note that many waterways across the State have been enclosed and will not appear on air photos or visible during field visit. The best way to identify such waterways is to consult with landowners and the NRCS. Other waterways have been converted from navigable waters to grass lined swales as appears is the case with a few of the waterways identified in the November 19, 2007 correspondence. Response: We agree with your comment.

I will have more information regarding my environmental review when I complete my field work this spring/summer. Please forward a draft copy of the EA at your earliest convenience. Response: When the EA is available for distribution, it is the intent of WisDOT and FHWA to conduct an agency meeting to discuss issues/concerns. EPA, US COE, and WDNR will be invited to this meeting.

Sincerely,

Mike Halsted

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Oeth, Jim

From: Halsted, Michael S - DNR [Michael.Halsted@wisconsin.gov]
Sent: Monday, March 10, 2008 1:31 PM
To: Barta, Larry - DOT
Cc: Oeth, Jim; Grimes, Jennifer - DOT; Hoelker, Michael - DOT; Marcos, Franklin - DOT
Subject: RE: Final DNR Comments and WiDOT responses: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

Larry - thanks for summarizing our conversation - the explanation is helpful. Just wanted to make sure it was understood that not having seen the EA or completed my field review AND while it is impossible for me to predict what additional environmental issues may arise as the process continues AND in the interest of full environmental protection; I can't certify that all environmental issues have been addressed/identified. However, I believe we have enough quality information and data to continue with the EA documentation and process....to that end our input and comments are complete.

I am looking forward to the opportunity to review the DRAFT EA before it becomes final and/or before the agency meeting is held.

Thanks again!

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From: Barta, Larry [mailto:larry.barta@dot.state.wi.us]
Sent: Wednesday, March 05, 2008 8:59 AM
To: Halsted, Michael S - DNR
Cc: Oeth, Jim; Grimes, Jennifer - DOT; Hoelker, Michael - DOT; Marcos, Franklin - DOT
Subject: Final DNR Comments and WiDOT responses: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

Hi, Mike: Thanks for the discussion yesterday that we both agree cleared up the few remaining environmental questions regarding the I-39 study and EA documentation. As we finished the conversation, you agreed DNR's input and comments should now be completed. So please review my summary of what we discussed and if accurate, please respond back that the WDNR review for purposes of completing the EA and that WisDOT can finalize it and proceed to the public review/comment period. Ad Jim Oeth noted below in his responses to your 1/03/08 e-mail below, when the EA is available for distribution, and prior to the public review period, WisDOT and FHWA will hold an agency meeting to both provide an overview and update and to discuss issues/concerns that may remain.

Animal Passage: No facilities that would be specifically for animal crossing is included in the project as of completion of the EA. However, if subsequent field review by WDNR reveals a possible need for such a feature, WisDOT will work with WDNR to determine if such crossings can be included in the project, and if so, how. Jenny - Please give some thought to whether a suitable statement to this affect can be added to the EA as a WisDOT committment.

Hydraulics: You now know that WisDOT has several procedures in place that in general mean reanalysis of the capacity of existing cross drainage pipes is not necessary for pipes that are not being moved, even

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those being replaced because they are in poor condition. Our Maintenance people inspect pipes and provide feedback that tells us if backups regularly occur at any specific pipes. Abutting property owners and municipalilties are another valuable source of this information. The DATCP interviews of agricultural property owners is yet another point where this kind of problem comes up.

And I also explained that we don't want to upsize by much, some times even at all, when back-ups regularly occur. This is largely because if we significantly increase the capacity for runoff to cross under the road, the affect on downstream properties can be substantial and WisDOT would be the first place owners would come to with damage claims. If the backups are more recent occurrances, we would see if development upstream, larger than normal rain evenets or a partially plugged pipe is the reason, and react accordingly. But increasing the size would usually be our least favored option.

Jim - Please include a statement that briefly explains our information sources regarding adequacy of the size of existing pipes, and that the capacity of boxes and bridges are routinely analyzed if extended or replaced.

Enclosures: Our information regarding existing drain tile, and whether or not we expect to encounter them during grading, generally comes from owners. If encounterd then, whether we know in advance where they are or not, WisDOT's sandard practice is to pay the owner to repair the system, or have the contractor do so, as appropriate to each cirmcumstance.

I believe this covers what we discussed and addresses your 3 remaining points below. Please respond back agreeing and noting WDNR has no further EA comments, or with any remaining comments and an indicatation as to whether they need a final reply or not. Thanks again for the comments, and look for an invitation to the agency review meeting within a month.

-----Original Message-----
From: Halsted, Michael S - DNR [mailto:Michael.Halsted@wisconsin.gov]
Sent: Tuesday, March 04, 2008 3:41 PM
To: Oeth, Jim; Grimes, Jennifer - DOT; Barta, Larry - DOT
Subject: RE: Project ID#1001-07-00 - IH39/909 - State Line to Beltline, Rock & Dane Counties

Thanks Jim! I will field review the project-scape this spring.

Animal Passage: On the animal crossing issue - we (meaning both agencies) should make attempts to first identify if there is a need for aquatic fish or other fauna through existing culverts by evaluating the habitat along the interstate. It may very well be that the existing culverts are already too long for fish (or other fauna) to comfortably pass. This brings us back to the original issue...is there a need for such passage along the highway? Regardless of what we find in the field, will this issue be addressed in the EA without me taking the lead in providing information (including background/generic info)?

Hydraulics: I asked our engineers to weigh-in on the lengthening issue (for reasons that transcend this project). A sidebar concern is whether or not **existing** crossings are sized adequately (I believe there is a potential that changes in basin landuse may render existing culverts inadequate).

Enclosures: Is it standard operating procedures to evaluate landscape hydrology (surface/sub-surface) by contacting each affected property owner or the NRCS? Do you obtain field tile/drainage system schematics during the EA stage?

Thanks again - I appreciate your responses!

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APPENDIX G

Agricultural Impact Statement
Executive Summary

AGRICULTURAL IMPACT STATEMENT

I 39/90: Illinois State Line to USH 12/18
Rock and Dane Counties

Published February 29, 2008

Wisconsin Department of Agriculture,
Trade and Consumer Protection
DATCP #3413

Agricultural Impact Statement

Wisconsin Department of Agriculture, Trade and Consumer Protection

Rod Nilsestuen, Secretary

Kathy F. Pielsticker, Administrator
Division of Agricultural Resource Management

David Jelinski, Director
Bureau of Land and Water Resources

Keith Foye, Chief
Land Management Section

Mike Wyatt and Alice Halpin, Authors

Executive Summary
I39/90: Illinois State Line to USH 12/18
Rock and Dane Counties

Direct Impacts of the Project

The Wisconsin Department of Transportation (WisDOT) proposes to reconstruct a 45-mile segment of Integrate Highways 39 and 90 (I 39/90) from the Illinois state line to U.S. Highways (USH) 12 and 18. The highway's capacity would be expanded from four lanes to six lanes. One shoulder in each direction will be constructed similar in depth to a traffic lane to assist with traffic control during construction and during future maintenance operations. This would also reduce the cost of an additional capacity expansion along any portion of this corridor if and when traffic volumes should warrant an increase to eight lanes. From the Illinois state line to the STH 26 interchange, the new lanes would be added in the existing median area. Between Janesville and Madison the lanes would be added either in the existing median area or the outside of the existing highway in order to preclude the use of median barriers. In addition, the eleven interchanges within the project corridor would be reconfigured to match the widened freeway.

The project is located in the towns of Turtle, La Prairie, Harmony, Milton and Fulton in Rock County, and the towns of Albion, Christiana, Pleasant Springs and Blooming Grove in Dane County. It would require fee-simple acquisition of 132.6 acres of land from 123 farmland owners, most of it associated with the redesigned interchanges. WisDOT has indicated that the existing right-of-way is adequate to accommodate the additional driving lanes, and that most additional purchases would be needed for grading of slopes to mitigate drainage impacts. Acquisitions of the needed land are expected to begin in 2012. Construction of the project is expected in 2014 or 2015.

WisDOT has indicated that the project is needed to maintain an adequate level of service and to preserve the route as an interstate corridor serving national travel needs as well as adjacent communities. They report that back-ups, delays and crashes on the highway will only get worse if the capacity is not expanded. Much of the roadway is over 40 years old and in need of rehabilitation.

In addition to the loss of farmland due to the acquisition of land for highway construction, farmland owners may face additional impacts from this project including: surface and subsurface drainage; fencing; road access, wildlife ponds and wetlands; and ability to find replacement farmland. Concern about drainage impacts was the one most widely expressed by landowners. The project passes through land with drain tiles, grassed waterways and culverts.

Potential Secondary Impacts of the Project

Introduction

Direct impacts on individual farm operations are relatively immediate and measurable.
But expanded highways can also have secondary impacts which are more difficult to predict and cannot be readily determined on the individual farm level. However, these impacts do affect

individual farm operators because they affect the environment within which farm operators make decisions. **Secondary or induced (or indirect) impacts**, - whether they concern land use, physical environment, economy, social relations and community character, etc. - are by definition a result of dynamic interaction over time with other variables. Indirect effects, by nature, cannot be estimated with certainty at the individual parcel level. They generally depend for their magnitude and character on the presence or absence of a variety of other contextual, mediating factors, which may vary greatly from case to case. The degree of accuracy of the quantitative and qualitative secondary land use impact estimates depend on the extent to which such contextual factors are incorporated as fully as possible, and precisely applied in their full historic and geographic specificity.

Access to IH 39/90 is currently restricted to interchanges. The location and frequency of the interchanges will remain the same after the proposed highway expansion is completed. WisDOT has indicated that this is expected to reduce the potential secondary impacts of the highway expansion.

The I 39/90 expansion project between US 12/18 in Dane County near the village of McFarland and the Illinois State Line in Rock County near Beloit will add 50 percent to the capacity of this 45-mile interstate arterial segment, shifting it from four lanes to six lanes. There is the potential for secondary land use effects from the changes in access and mobility derived from this radial capacity expansion. The realization of this potential depends on a variety of mediating factors including regional trends and growth rates in employment, housing and commuting; land use regulations and plans; and relative attractiveness of various locations within the region in terms of factors such as land prices, housing prices and local-purpose property tax rates.

Potential Effects of Highway-Induced Development on Farming in Urban Fringe Areas

The main secondary impacts considered here are possible induced land use changes that result from a highway capacity expansion. However, highway expansion may be associated with a variety of indirect effects on farm operations.

Increased highway-induced pressure to develop nearby farmland for nonfarm use may change the expectations of area farmers about the long-term viability of farming as a business and a way of life in their areas. Farmers may reduce or stop investing in farm improvements, since these investments cannot be recaptured when farmland is valued for urban use, and may even decrease the urban value of the land at the time of sale. As development pressure intensifies, the willingness of landowners to sell farmland increases. Farmland may be idled prematurely in expectation of eventual urban development. The tenure of farm operators may shift more from owners to renters who have less stake in the long-term integrity of the farmland. Land use conflicts with relocated urban dwellers can result in complaints about farm noise, odors, pesticide use, runoff problems and farm machinery traffic on local roads.[i] Changes in farm operations to accommodate these complaints, or in expectation of future urban development, may lower farm productivity and reduce farm income. As urban uses impinge on farms, the productivity of the land for farm purposes declines. In part this may reflect the shift from full commercial utilization of farmland to part-time and hobby farm uses of land.

These farmland disinvestment and idling effects are commonly referred to as reflecting an "impermanence syndrome," because rational economic expectations may lead more local people to leave farming and keep fewer acres of prime farmland in use. This could then have a negative multiplier effect on agribusiness in the area. Expected effects involve decreased farm capital investment, increased idling of farmland, and lower farm productivity. Such effects may begin before highway construction begins. Farmers may anticipate increasing difficulty in obtaining land for expansion to grow feed or to spread manure due to expected outward urban growth. They will find increasing costs for such land even if it is available. As highway-related residential development makes incursions into agricultural areas, prices of land sought for farm expansion rise. The type of farming conducted has been shown to shift over time as urban development pressure increases in a region. Over a period of decades, the distribution of dairy, crop, vegetable and specialty crop groups in an urbanizing region shifts along this spectrum.

With fewer full-time, commercial farms in the area, the market for farm input suppliers may decline forcing closure or relocation of such businesses. As the number of farms declines, there may be a shift in other community institutions as well. The local government and other institutions may become less responsive to local farm needs as farmers constitute a smaller share of voters and residents. Relocated urban residents may not understand the concerns and needs of farmers.

Factors Mediating Potential Secondary Effects of I-39/90 Expansion

The probability of secondary highway-induced impacts to farmland is a function of the decreased travel times between various destinations afforded by the increased road capacity. This includes but is not limited to radial expansion outward of the commutershed boundaries from major urban centers along the project route, in this case the cities of Madison, Janesville and Beloit. It also includes effects on the perception and travel times for other trip purposes. However, potential impacts also depend on a host of other non-highway factors known to affect the labor, business and housing submarkets within the project area. The geographically specific effects of a highway depend not only on proximity to the highway corridor and nearby urban areas, but also on the relative attractiveness of other attributes of various sites within the corridor area for residential, commercial and industrial development.

The following table summarizes some project-specific data on major variables that are known to affect the extent and timing of highway-related land use changes along the current I-39/90 project corridor.

Summary of Likely Effects of Factors Mediating Secondary Impacts for I-39/90 Project

Factors That Affect Extent of Secondary Impacts	Short-Term Impacts (0-10 yrs)	Medium-Term Impacts (5-15 yrs.)	Long-Term Impacts (10-25 years)
Baseline Intercommuting between Janesville, Madison & Beloit commutersheds, 2000	-Pull of Janesville commutershed on Beloit area adds to greater effect on towns of Turtle & La Prairie, other factors being equal. - Pull of Madison commutershed on area north of Janesville adds to greater potential effect on towns of Milton and Fulton		
Alignment of I-39 with Dominant County-to-County Commuting Flows for Project Counties, 2000	Increases likelihood of induced effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor	Increases likelihood of induced effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor	Increases likelihood of induced effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor
Baseline Madison commuting trend, 2000	Increased effect in towns of Pleasant Springs, Christiana, Albion, and Milton adjacent to Madison and I-39/90		
Baseline Janesville commuting trend, 2000	Increased effect in towns of Fulton, Milton, Harmony, and La Prairie adjacent to Janesville and I-39/90		
Baseline Beloit commuting trend, 2000	Increased effect in towns of Turtle and La Prairie, adjacent to Beloit and I-39/90		
Alignment of I-39/90 with Baseline Dominant In-Migration Rates to and Between Project Counties, 2000	Increases likelihood of induced growth effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor	Increases likelihood of induced growth effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor	Increases likelihood of induced growth effects all through the Dane Co. – Rock Co. – Winnebago Co. Ill. corridor
Average Price of Farm Diversion Sales, 1990-1997	Relatively high land prices in Rock Co. towns of Fulton, Milton and Harmony compared to other Rock Co. towns accelerates highway impacts on growth in short term.	Relatively low land prices in Dane Co. towns of Pleasant Springs, Christiana and Albion compared to other Dane Co. towns, leads to expansion of growth to these newer target towns but only in medium term mediated by highway expansion	
Rate of Housing Growth,	Fulton and Milton show	Low current absolute	

Summary of Likely Effects of Factors Mediating Secondary Impacts for I-39/90 Project

Factors That Affect Extent of Secondary Impacts	Short-Term Impacts (0-10 yrs)	Medium-Term Impacts (5-15 yrs.)	Long-Term Impacts (10-25 years)
1990-2000	relatively high baseline housing growth rate, which make it more likely the highway would accelerate growth	housing growth as well as low rate of growth, may shift due to highway expansion in medium term as a result of other mediating factors (see baseline lower land and housing prices here, and baseline lower local tax rates as well	
Proportion of Farm Acreage Sold that is Diverted to Nonfarm Use, 1990-1997	Relatively high proportion of farm acres sold that are converted to nonfarm use is indicator of relative attractiveness for development; hence other things being equal, such an area reflect accelerated impact of highway on growth here in short term. Applies to towns of Fulton, Milton, Harmony and Turtle.	Relatively small proportion of farm acreage sold that is converted to nonfarm use in towns of Pleasant Springs, Christiana and Albion compared to rest of Dane Co. towns suggests spread of growth to these towns only in medium term, mediated by highway expansion, given current low housing growth	
Ratio of Average Price of Farmland per Acre Sold for Development to Farmland Sold for Farm Use, 1990-1997	Highest rank for Fulton, Milton and Harmony among county towns is and indicator that highway will likely accelerate development pressure selectively in these towns in the short term		
Absolute Growth in # of Housing Units, 1990-2000	High rate in Milton and Fulton means acceleration by highway expansion is likely in these towns in short term	Low rate in Albion, Christiana and Pleasant Springs means highway expansion effect is delayed, but emerges over time as lower housing and land costs there become more attractive due to shorter travel times from the expanded highway	
Rate of Growth of # of Housing Units, 1990-2000	High rate in Milton and Fulton means acceleration by highway expansion is likely in short term	Low rate in Albion, Christiana and Pleasant Springs means highway expansion effect is delayed, but emerges	

Summary of Likely Effects of Factors Mediating Secondary Impacts for I-39/90 Project

Factors That Affect Extent of Secondary Impacts	Short-Term Impacts (0-10 yrs)	Medium-Term Impacts (5-15 yrs.)	Long-Term Impacts (10-25 years)
		over time as lower housing and land costs there become more attractive given shorter travel times from the expanded highway	
Median Single-Family Home Price, 2000	The current relative desirability, of residential housing, reflected in high housing prices in Harmony, and to some extent Milton and Fulton, reinforces likelihood of acceleration by the highway of residential development in these areas in the short term	Low home prices, reflecting relatively little current residential demand, in Albion, Christiana and Pleasant Springs means expansion effect of highway is delayed, but emerges over time as lower housing and land costs there appear more attractive given shorter travel times from the expanded highway	
Change in Equalized Value of New Construction, 2005-2006	Low value in Dane Co. corridor towns indicates little short term effect; High relative values in Fulton Milton and Harmony suggest acceleration of growth in short term		
Age Distribution of Existing Housing in Year 2000	Low relative % of existing housing built since 1990 in Dane Co. corridor towns suggests little short term effect; High relative % of existing housing built since 1990 in Harmony & Milton suggests high baseline development development trend subject to acceleration of growth in short term		
Local Purpose Property Tax Rates in 2005	Relatively low tax rates of Harmony and Milton compared to other Rock Co. towns adds to their relative attractiveness for residents and businesses; hence the greater likelihood of selective	Relatively lowest tax rates in county are in Dane Co. corridor towns – This will interact with shorter travel times due to highway expansion to foster growth in these places in the medium	

Summary of Likely Effects of Factors Mediating Secondary Impacts for I-39/90 Project

Factors That Affect Extent of Secondary Impacts	Short-Term Impacts (0-10 yrs)	Medium-Term Impacts (5-15 yrs.)	Long-Term Impacts (10-25 years)
	acceleration of growth in these places from the highway expansion	term	
Relative Wage Rates in 2005-2006	Greatest effect on towns between Madison-Janesville, due to comparatively greater draw of higher wages and greater # of jobs in Madison area		
Trend in and Context for I-39/90 National Logistics Corridor Development and Promotion		Accelerated growth in towns of Turtle and La Prairie	Accelerated growth through entire project corridor, but particularly in Rock Co.
Dominant Expansion in Janesville metro area is to northeast, near I-39/90.	Adds to baseline potential for accelerated in towns of Milton and Fulton from highway expansion		
Outward Expansion of city of Madison commutershed, particularly in east sector; City of Stoughton growth expected beyond that planned	Add to selective favoring of accelerated growth potential from highway expansion in towns of Albion, Pleasant Springs, and Christiana		

Conclusion and Recommendations

The 50 percent expansion of highway capacity on the 45-mile I-39 corridor between USH 12/18 in southeast Dane Co. and the southern border of Rock County with Winnebago County, Illinois is likely to generate significant induced land use impacts which can adversely affect farmland and farm operations in the region. Increased highway capacity along this corridor could accelerate development pressure over portions of the corridor, but would be mitigated to some extent by limiting highway access to existing interchange locations. Development pressure from highway improvements could result in increased loss of farmland; decreased productivity and increased underutilization of remaining farmland; decreased investment in farm improvements due to the "impermanence syndrome"; shifts in the dominant scale and type of farming remaining; and greater conflicts between farm operations and non-farm land uses.

Analysis of comparative data on inter-county commuting flows reinforces the dominant role of the I-39 north/south corridor in Rock County in terms of inter-county commuting as well as in-migration flow rates for all three project counties: Dane and Rock Counties in Wisconsin, and

Winnebago County in Illinois. This will contribute to strengthening the magnitude of the overall regional highway-induced effects on agriculture that can be expected from the I-39 expansion.

Within the overall study area of the I-39 Expansion Project, we can distinguish three levels of factors contributing to potential highway-induced land use impacts on the farming sector based on: a) baseline commutershed trends; b) local factors mediating the relative attractiveness of communities for residential choices; c) supra-regional impact of the I-39 Corridor in terms of national logistics and distribution infrastructure networks. In terms of baseline commuting trends, the greatest magnitude of induced effects would be concentrated in the Madison-Janesville portion of the project corridor. In terms of existing indices of development pressure, the greatest acceleration in the short run could be expected in the corridor towns of Fulton, Milton and Harmony in Rock Co, and also the town of Turtle in southern Rock Co.

In terms of land and housing costs in Dane County, the towns of Albion and Christiana were most attractive among I-39 project corridor towns (and towns in general in the two counties) while the towns of Christiana and Pleasant Springs were most attractive in terms of local-purpose tax rate. The town of Harmony and Milton in Rock County were most attractive, making them special targets of accelerated development pressure in the medium term.

Given the strong national role of the I-39 corridor as a site of accelerated logistics and distribution sector growth, the catalytic role of I-39 expansion would be expected to concentrate within the southern portion of the project corridor between Beloit and Janesville. However, this employment-led induced growth through plant, warehouse and office relocations and expansions would be expected to occur over a longer-term time horizon (ten to twenty-five years), and would not necessarily manifest in the short-term.

In order to minimize or mitigate the impacts on farms from the proposed project, DATCP recommends the following:

- WisDOT should allow current farm operators to continue farming land to be acquired until it is actually needed for road construction
- To adequately address potential drainage problems, WisDOT should discuss construction plans with representatives of the Dane and Rock County Land Conservation Departments during the design phase of the project. WisDOT should also work with the Dane County Drainage Board to prevent problems from developing.
- Affected farm landowners should stay involved in the project design process and provide WisDOT with maps or sketches identifying location of drain tiles on their land.
- County conservationists should be consulted to ensure that construction proceeds in such a way as to minimized crop damages, soil compaction and erosion on affected farmland.
- All farmland owners and operators affected by the project should be given advance notice of acquisition and construction schedules, so farm activities can be adjusted accordingly. Where feasible, timing of construction should be coordinated with these owners/operators.
- Cooperative inter-municipal agreements on boundaries, planning, land use regulations and service delivery should be considered for the project area. This would help ensure a level playing field for development. Inter-municipal regulations to control the rate, type,

and location of development could reduce the adverse impacts to agriculture from highway-related development. This is particularly true given the broad marketing of the corridor between Janesville and Bloomington, Illinois as unified national I-39 logistics corridor.

- Affected municipalities are encouraged to take advantage of financial aid available through the Wisconsin Department of Administration for comprehensive planning. A new state requirement mandates local governments to develop comprehensive plans by 2010. If local governments inform residents of the potential long-term effects of the I-39/90 capacity increases, then affected communities can make better decisions to mitigate potential agricultural impacts.
- Proactive, joint intermunicipal planning for land use and farmland preservation along the I-39/90 corridor is encouraged to help manage highway-induced growth and minimize undesirable land use impacts.
- Investments in local roads, sewer capacity, and other public infrastructure in the project area need to be considered in terms of their potential adverse secondary effects on the agricultural sector. Such capital improvements planning needs to be better linked to comprehensive plans, including a strong farmland preservation component.
- The agricultural component of any comprehensive plans and any revision of agricultural plans for the area certified by DATCP should be strictly enforced through zoning and subdivision ordinances. (See the publication titled, *Planning for Agriculture in Wisconsin: A Guide for Communities,* Nov. 2002, available from UW Cooperative Extension) In addition, communities should consider the use of purchase of development rights programs in tandem with planning and zoning to proactively aid in farmland preservation. It is important for these programs to be undertaken well before highway construction, or before development pressure becomes extremely high, in order to take advantage of the lower easement purchase prices available then.
- Local governments and community residents should consider other potential ways to support area agriculture through direct marketing, town road policies, etc. Economic development plans need to specifically document the economic contribution of the regional agricultural sector to the total economy, and encourage expansion and retention of agriculture-related businesses and infrastructure near the I-39/90 corridor. Efforts by local planners and economic development professionals to target location of agricultural-related businesses and infrastructure near I-39/90 may help reduce or partially substitute for the usual agriculture-displacing, highway-induced commercial, industrial and residential development that would otherwise be attracted to the corridor and the areas adjacent to it.