Illinois Department of Transportation

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

U.S. 30 (FAP 309)

From IL 136 to IL 40

Whiteside County, Illinois

FINAL

August 2014

U.S. 30 from Illinois 136 to Illinois 40
Whiteside County, Illinois

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

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U.S. Department of Transportation, Federal Highway Administration
and the
Illinois Department of Transportation

Cooperating Agencies
U.S. Army Corps of Engineers

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Abstract: The Illinois Department of Transportation (IDOT), in consultation with the Federal Highway Administration (FHWA), is studying alternatives to improve traffic capacity, reduce traffic congestion, improve safety, provide for an anticipated increase in transportation demand, and to establish roadway system continuity on U.S. 30 from IL 136 to IL 40 in Whiteside County. Alternatives under consideration include: (1) the No-Build Alternative, (2) Build Alternative primarily along the existing highway and north of the city of Morrison, and (3) Build Alternative primarily along the existing highway and south of the city of Morrison.

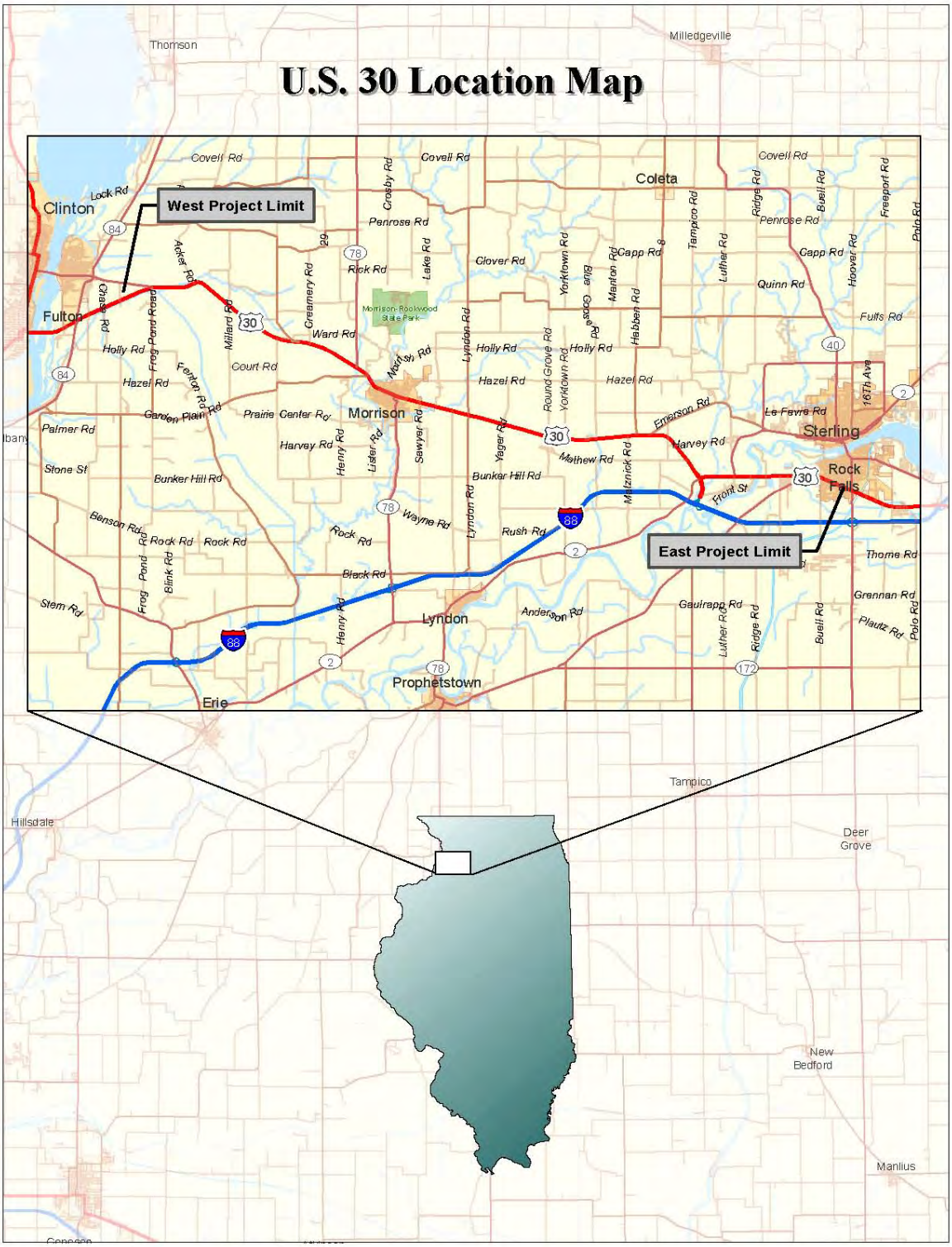
The Supplement to the Draft Environmental Impact Statement discloses the alignment shifts of Build Alternative 4 (northern) and Build Alternative 5 (southern) just east of the city of Morrison and their associated impacts. The Build Alternatives were realigned because of the revised mapping of the 100-year floodplains within Whiteside County and the increase in floodplain impacts. With either Build Alternative, the proposed project would affect 0.24 acre of wetlands and approximately 600 acres of cropland. Build Alternative 4 and 5 have 13,375 linear feet of 100-year floodplain encroachment in common; however, Build Alternative 4 will encroach upon an additional 983 linear feet for a total of 14,358 linear feet and Build Alternative 5 will encroach upon an additional 1,863 linear feet for a total of 15,238 linear feet. Build Alternative 4 would displace 39 residences and farmsteads and the Build Alternative 5 would displace 34 residences and farmsteads. Both Build Alternatives would displace the same four (4) businesses with Build Alternative 5 displacing one (1) additional business for a total of five (5). Comments on this document are due by November 10, 2014 and should be sent to Mr. Paul Loete, P.E., IDOT Region 2 Engineer, Illinois Department of Transportation, 819 Depot Avenue, Dixon, Illinois, 61021.

Preface

The Supplement to the Draft Environmental Impact Statement (SDEIS) document has simply incorporated the project changes into the Draft Environmental Impact Statement (DEIS). These changes are identified throughout the document with **bold** text and a vertical line placed along the right border.

In February of 2011, the Federal Emergency Management Agency (FEMA) completed its Floodplain Insurance Study of Whiteside County. The results of this study included revised mapping of the 100-year floodplains within the U.S. 30 project study area. The most considerable revision was the expansion of the floodplain associated with French Creek, which is located just outside of Morrison's eastern city limits. As a result of the expansion of the French Creek floodplain, an increase in floodplain impacts became evident within the limits of the Build Alternatives.

Build Alternatives 4 and 5 and the No-Build Alternative were evaluated in the DEIS, which was signed by the Federal Highway Administration (FHWA) on April 27, 2011. Build Alternatives 4 and 5 were developed in an effort to minimize potential impacts to the extent practicable based on known environmental concerns. The Build Alternatives were developed prior to FEMA's issuance of the revised floodplain mapping within the project study area. Subsequent to the approval of the DEIS, it was determined that the Build Alternatives would have longitudinal encroachments on the revised floodplains within the project study area and also could indirectly promote future development within the 100-year floodplain. Alternatives with longitudinal impacts cannot be approved if a reasonable alternative with more limited floodplain impacts is available. Consequently, the Illinois Department of Transportation (IDOT) directed efforts toward partial realignment of Build Alternatives 4 and 5 outside of the French Creek floodplain while retaining the basic nature of the original alignments. As a result, it was determined that a SDEIS was necessary to document these changes and the associated impacts.


U.S. 30 Location Map
West Project Limit
East Project Limit
Clinton
Fulton
Morrison
Sterling
Rock Falls
Coleta
Lyndon
Prophetstown
Erie
Thomson
Milledgeville
Tampico
Hillsdale
Deer Grove
New Bedford
Manlius

Executive Summary

The Supplement to the Draft Environmental Impact Statement (SDEIS) that follows is an extension of the Draft Environmental Impact Statement (DEIS) signed by FHWA on April 27, 2011. The SDEIS was determined necessary in order to discuss the following changes to the project that have resulted from the realignment of the Build Alternatives (Exhibit 2-10b).

The results of the 2011 Federal Emergency Management Agency (FEMA) Floodplain Insurance Study of Whiteside County included a considerable expansion of the floodplain associated with French Creek. The Build Alternatives were developed prior to FEMA's issuance of the revised floodplain mapping within the project study area. Subsequent to the approval of the DEIS, it was determined that the Build Alternatives would have longitudinal encroachments on the revised floodplains within the project study area and also could indirectly promote future development within the 100-year floodplain. Alternatives with longitudinal impacts cannot be approved if a reasonable alternative with more limited floodplain impacts is available. Consequently, IDOT directed efforts toward partial realignment of Build Alternatives 4 and 5 outside of the French Creek floodplain while retaining the basic nature of the original alignments.

The section of Build Alternative 5 that was realigned consists of the section from Sawyer Road heading east to just east of Lyndon Road. The revised Build Alternative 5 is now approximately a mile southeast from the original Build Alternative 5 alignment. This allows for complete avoidance of the French Creek floodplain (Exhibit 2-10b). The modification begins just west of IL 78 to allow the alternative to avoid the southern tip of the French Creek floodplain. The revised alignment now extends further east before swinging to the north to cross the railroad. Once across the railroad, the revised Build Alternative 5 will have a shape similar to the original alignment. It will cross over existing U.S. 30 to the north, then follow a gradual "S" curve which crosses existing U.S. 30 again before swinging back to the north to rejoin the existing U.S. 30.

The "T" intersection with existing U.S. 30 leading into Morrison would be 1.7 miles east of Sawyer Road versus 0.9 mile under the original Build Alternative 5. The revised Build Alternative 5 proposes to provide access to existing U.S. 30 in the vicinity of the Prairie Hill Landfill through a new connector from Round Grove Road (Exhibit 3-10, p.12). The remaining section of existing U.S. 30 roadway between the "T" intersection eastward to Round Grove Road will have cul-de-sacs on each end and access to Build Alternative 5 will be provided at Yager Road (Exhibit 3-10, p.11).

In addition to the changes to Build Alternative 5, a small section of Build Alternative 4 (northern) was moved slightly east to also avoid the revised French Creek floodplain in the area just west of Lyndon Road (Exhibit 2-10b). This effort served to also follow the Floodplain Management Executive Order by minimizing the floodplain impact for Build Alternative 4.

Proposed Action

The Illinois Department of Transportation (IDOT) in consultation with the Federal Highway Administration (FHWA) is studying alternatives to improve U.S. 30 from IL 136/Frog Pond Road to IL 40 in Whiteside County. The purpose of the proposed project is to improve traffic capacity, reduce traffic congestion, improve safety, provide for an anticipated increase in transportation demand, and to establish roadway system continuity.

The project length is approximately 24 miles with a ten (10) mile wide study area. The communities that comprise the project study area include the cities of Fulton, Morrison, Rock Falls, and Sterling. The city of Fulton resides just west of the project's western terminus of IL 136/Frog Pond Road. Traveling east, the existing U.S. 30 bisects the city of Morrison, which resides in the center of the project study area. Continuing east, the proposed project limits extend to IL 40 in the city of Rock Falls and provides the eastern terminus for the project.

From IL 136/Frog Pond Road to just west of the city of Morrison and from just east of the city of Morrison to IL 40, generally the improvements stay on the existing U.S. 30 roadway. The new U.S. 30 alignment is being proposed to be constructed either to the north or the south of the city of Morrison, thus creating a bypass of the city.

Alternatives Considered

Alternatives considered to achieve the goals of the project's Purpose and Need include: transportation demand management and transportation system management measures, the No-Build Alternative, and two (2) Build Alternatives.

Transportation demand management measures attempt to reduce the number of vehicle trips through increased transit ridership and carpooling. No public transportation system exists within the project study area to provide an alternate mode of transportation. The rural environment that comprises the project study area makes it unlikely that there will be sufficient ridership to warrant a transit service, or support enough carpool numbers to consider transportation demand management a feasible stand-alone alternative because it does not meet the objectives of the Purpose and Need.

Transportation system management measures maximize the efficiency and use of the existing highway system to help alleviate or postpone the need to expand capacity. Such measures include: intersection capacity improvements, adding traffic signals, and access management. Although the transportation system management alternative could partially address some transportation deficiencies in the project study area, it is not considered a feasible stand-alone alternative because it does not meet the objectives of the Purpose and Need.

The No-Build Alternative consists of providing continued routine maintenance and safety improvement projects which could include minor reconstruction and the addition of turn lanes.

These improvements would be limited to short-term maintenance improvements needed to ensure continued use of U.S. 30 between IL 136/Frog Pond Road and IL 40. The No-Build Alternative would not address the existing deficiencies along U.S. 30 and therefore, would not meet the project's Purpose and Need.

The objective of the project was to develop alternatives that minimized and/or avoided any impact to the human and natural environment while addressing the transportation deficiencies identified within the project study area. This objective was achieved by the evaluation of various 1,400 foot wide corridors with IDOT, FHWA, the public (through the Context Sensitive Solutions (CSS) process), and the environmental regulatory agencies. The result was two (2) Build Alternatives.

The two (2) Build Alternatives, referred to as Build Alternative 4 (north of Morrison) and Build Alternative 5 (south of Morrison), are being planned and designed as a four-lane expressway. Four lanes are warranted throughout the majority of the project study area based on design year traffic volume projections. The sections where two lanes meet the projected volumes would be incompatible with the adjacent multi-lane facility and would not provide system continuity. In addition, Illinois policies require a divided highway cross section for its high-speed multi-lane facilities which would help improve safety. This would also be possible with a freeway; however, the resulting impacts to adjacent properties would be significantly greater. In addition, the level of access control associated with a freeway would be more restrictive than the U.S. 30 highway facility located to the west in Iowa, which could be considered inconsistent with the need to provide system continuity. In order to provide a facility that addresses the safety, capacity, and continuity elements of the Purpose and Need while providing the lowest level of impacts, it was deemed most appropriate to improve U.S. 30 as an expressway.

Summary of Environmental Impacts

The No-Build Alternative could have minor impacts on the human or natural environment. If the proposed improvements do not take place, congestion will continue to grow and have an impact on the travel times of those located within the project study area and those traveling through the project study area. A summary of the estimated environmental impacts for Build Alternatives 4 and 5 are listed in the following table.

Summary of Estimated Environmental Impacts for Build Alternatives 4 & 5						
The data reflects ROW necessary for access and intersection improvements.						
Evaluation Factors	**Unit of Measure**	**Alternatives**				
		Common Impacts to Build Alternatives 4 & 5	**4 North Bypass Only**	**4 TOTAL**	**5 South Bypass Only**	**5 TOTAL**
AGRICULTURAL						
Number of Farms Affected*	Number	**69**	**36**	**105**	**37**	**106**
Farmsteads Displaced	Number	**6**	**5**	11	**4**	**10**
Centennial Farms Affected	Number	2	0	2	1	3
Farmland Area Converted	Acres	365	**235**	**600**	**257**	**622**
ENVIRONMENTAL						
Wetland Sites Impacted	Number	1	0	1	0	1
	Acres	0.24	0	0.24	0	0.24
Threatened & Endangered Species**	Number	2	0	2	0	2
Streams Crossings	Number	8	1	9	0	8
Floodplain Encroachments***	Linear Feet	**13,375**	**983**	**14,358**	**1,863**	**15,238**
Forest Areas Affected	Number	0	2	2	1	1
REC Sites**	Number	**38**	**10**	**48**	**4**	**42**
Reptile & Amphibian Important Use Area	**Number**	**0**	**0**	**0**	**1**	**1**
LAND USE/SOCIOECONOMIC						
Relocations (Business)	Number	4	0	4	**1**	**5**
Relocations (Residential)*****	Number	**27**	**12**	**39**	**7**	**34**
OTHER FACTORS						
Total Length	Miles	12	13	25	14	26
Total Area Converted to ROW	Acres	409	**267**	**676**	**269**	**678**
Preliminary Costs (2020 Dollars)	Million $	N/A	**437**		**405**	

*Property Impacts
**Black sandshell mussel in Elkhorn Creek & Rock River
***100-year floodplain
******Sites with Recognized Environmental Conditions**
*****Includes farmstead displacements

The table illustrates Build Alternatives 4 and 5 have numerous common impacts on the natural, agricultural, and human environment. The impacts to the wetlands for both Build Alternatives are approximately 0.25 acre. As described in Chapter 3, the wetlands within the project study area are of low quality. In addition, both Build Alternatives include several stream crossings, most are generally of low habitat quality. The Rock River is classified as a Moderate Aquatic Resource, while the Elkhorn Creek is rated as Highly Valued Aquatic Resource. These streams are impacted equally by either Build Alternative under consideration. Also, the two (2) Build Alternatives will have an impact on the black sandshell (*Ligumia recta*), an Illinois State Listed Threatened mussel. They are found in both the Rock River and the Elkhorn Creek. Build Alternatives **4 and 5** have **13,375** linear feet of 100-year floodplain **encroachment in common; however,** Build Alternative 4 **will encroach upon** an additional **983** linear feet for a total of **14,358** linear feet. For Build Alternative 5, an additional **1,863** linear feet will be encroached upon south of Morrison for a total of **15,238** linear feet. In regard to forested areas, Build Alternatives 4 and 5 do not share any common impacts. Build Alternative 4 would impact a total of two (2) forested areas and Build Alternative 5 would impact one (1). **In addition, Build Alternative 5 will impact an Important Use Area for amphibians and reptiles.**

The data in the table illustrates that Build Alternative 4 would require a total of 676 acres and Build Alternative 5 would require a total of 678 acres of land to be converted to new right-of-way for highway use. In regard to the agricultural setting, Build Alternative 4 would require 600 acres of farmland and Build Alternative 5 would require 622 acres; approximately 90 percent of the land to be converted to right-of-way is farmland.

While both Build Alternatives 4 and 5 have four (4) business displacements in common, Build Alternative 5 displaces one (1) additional business. Regarding residential displacements, Build Alternatives 4 and 5 would displace the same 27 residences. Build Alternative 4 would displace an additional **12** residents north of the city of Morrison for a total of **39** residential displacements. Build Alternative 5 would displace an additional **seven (7)** residents south of Morrison for a total of **34** displacements.

Permits

Implementation of the proposed project would require the following regulatory permits:

- Section 404 of the Clean Water Act from the **U.S. Army Corps of Engineers (**USACE**)**
- Section 401 of the Clean Water Act Water Certification from **the Illinois Environmental Protection Agency (**IEPA**)**
- Section 402 National Pollutant Discharge Elimination System (NPDES) Construction Permit from IEPA
- Construction in Floodways of Rivers, Lakes, and Streams from **the Illinois Department of Natural Resources (**IDNR**)**, Office of Water Resources
- **Incidental Take Authorization (ITA) permit from IDNR**

Local Concerns and Unresolved Issues

There are no known unresolved issues with respect to the range of alternatives and impacts considered in the **Supplemental** Draft EIS. Known issues have been developed and evaluated to the extent practicable based on the level of engineering detail and environmental information available at this stage of project development.

ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
ADM	Archer Daniels Midland
ADT	Average Daily Traffic
ANSI	American National Standard Institute
AST	Aboveground Storage Tank
ASTM	**American Society for Testing and Materials**
BDE	Bureau of Design and Environment
BEA	Bureau of Economic Analysis
BNSF RR	Burlington Northern Santa Fe Railroad
BOL	Bureau of Land
BSRS	Biological Stream Rating System
CA	Cooperating Agency
CAA	Clean Air Act
CAG	Community Advisory Group
CBD	Central Business District
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CIA	Community Impact Assessment
CNE	Common Noise Environments
CO	Carbon Monoxide
COSIM	Carbon Monoxide Screen for Intersection Modeling
CRP	Conservation Reserve Program
CSS	Context Sensitive Solutions
dB	Decibel
dBA	A-weighted decibel unit
DE	Diesel Exhaust
DEIS	Draft Environmental Impact Statement
DHV	Design Hourly Volume
DOE	Determination of Eligibility
EAV	Equalized Assess Valuation
EcoCAT	Ecological Compliance Assessment Tool
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPT	Ephemeroptera, Plecoptera, Trichoptera
ETJ	Extraterritorial Jurisdiction
FAQ	Frequently Asked Questions
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map

ACRONYMS AND ABBREVIATIONS
Continued

FMV	**Fair Market Value**
FQA	Floristic Quality Assessment
FQI	Floristic Quality Index
GE	General Electric
GHG	**Greenhouse Gas**
GIS	Geographic Information System
HBI	Hilsenhoff's Biotic Index
HCS	Highway Capacity Software
HEI	**Health Effects Institute**
HSIS	Highway Safety Information System
HUC	Hydraulic Unit Code
IDES	Illinois Department of Employment Security
IDNR	Illinois Department of Natural Resources
IDOA	Illinois Department of Agriculture
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
IGPA	**Illinois Groundwater Protection Act**
IHPA	Illinois Historic Preservation Agency
ILCS	Illinois Complied Statutes
INHS	Illinois Natural History Survey
IRIS	Integrated Risk Information System
ISAS	Illinois State Archaeological Survey
ISGS	Illinois State Geological Survey
ISWS	**Illinois State Water Survey**
ITA	Incidental Take Authorization
LAWCON	Land and Water Conservation Fund
Leq	Equivalent Sound Level
LESA	Land Evaluation and Site Assessment
LOS	Level of Service
LUST	Leaking Underground Storage Tank
MAPPING	Management and Planning Programs Involving Nonmetropolitan Group
MBAG	**Morrison Business Advisory Group**
MIT	Morrison Institute of Technology
MOA	**Memorandum of Agreement**
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NASS	National Agricultural Statistics Service
NATA	National Air Toxics Assessment

ACRONYMS AND ABBREVIATIONS
continued

NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NHS	National Highway System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	**National Park Service**
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NRI	**National Rivers Inventory**
NSA	Noise Sensitive Area
NWP	Nationwide Permit
O-D	Origin Destination
OSLAD	Open Space Land Acquisition and Development
PA	Participating Agency
PESA	Preliminary Environmental Site Assessment
PM	Particulate Matter
ppm	Parts per million
PSG	Project Study Group
PSI	**Preliminary Site Investigation**
RCRA - CORRACTS	**Resource Conservation and Recovery Act Corrective Action Sites**
REC	**Recognized Environmental Condition**
RFG	Reformulated Gasoline
ROW	Right-Of-Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SDEIS	**Supplemental Draft Environmental Impact Statement**
SHPO	State Historic Preservation Officer
SIP	Stakeholder Involvement Plan
SRP	Site Remediation Program
SWPPP	Stormwater Pollution Prevention Plan
TAG	Technical Advisory Group
TDML	Total Maximum Daily Load
TNM	Traffic Noise Model
TSM	Transportation System Management
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency

ACRONYMS AND ABBREVIATIONS

continued

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VMT	Vehicle Miles Traveled
VPD	Vehicles Per Day
W	Coefficient of Wetness

TABLE OF CONTENTS

Signature Sheet i
Preface ii
Location Map iii
Executive Summary iv
Acronyms and Abbreviations x

1.0 Purpose and Need for Action ..... - 1 -
1.1 Purpose of Project ..... - 1 -
1.1.1 Existing Roadway Description ..... - 1 -
1.1.2 History of Project ..... - 2 -
1.2 Need for Proposed Action ..... - 3 -
1.2.1 Existing Traffic Conditions & Capacity Deficiencies ..... - 3 -
1.2.2 Roadway Deficiencies ..... - 6 -
1.2.3 Accommodate Freight ..... - 8 -
1.2.4 System Linkage ..... - 8 -
1.2.4.1 Local Transportation Network ..... - 8 -
1.2.5 Safety ..... - 9 -
1.2.5.1 Crash Information ..... - 9 -
2.0 Alternatives ..... - 1 -
2.1 No-Build Alternative ..... - 1 -
2.2 Widening Existing U.S. 30 Through the City of Morrison ..... - 1 -
2.3 Project Corridor and Alternative Screening Process ..... - 1 -
2.4 Corridor Study and Origin Destination Study (2002 to 2006) ..... - 2 -
2.5 Context Sensitive Solutions ..... - 2 -
2.6 Corridor Development by CAG (October 17, 2007) ..... - 3 -
2.6.1 Corridor Screening Process ..... - 3 -
2.6.1.1 Corridor Section Alternatives Eliminated – Did Not Fulfill the Purpose and Need ..... - 4 -
2.6.1.2 Corridor Section Alternatives Carried Forward for Further Study ..... - 5 -
2.6.1.3 Final Corridors ..... - 10 -
2.6.1.4 Public Informational Open House (January 2009) ..... - 11 -
2.6.1.5 NEPA 404/Merger Meeting (February 2009): Final Corridors Established- 11 -
2.7 Development of Alternatives ..... - 11 -
2.7.1 Initial Alternatives ..... - 11 -
2.7.2 Western Terminus at IL 136/Frog Pond Road to just East of the BNSF RR .. - 12 -
2.7.3 Reasonable Alternatives ..... - 13 -
2.7.3.1 Alternative Screening Process ..... - 14 -
2.7.3.1.1 Environmental Factors ..... - 14 -
2.7.3.1.2 Engineering Factors ..... - 17 -
2.7.4 PSG and CAG Input: Alternatives Selected for Detailed Study ..... - 21 -
2.8 Detailed Descriptions of the Alternatives Selected for Detailed Study ..... - 23 -
2.8.1 Public Hearing Comments on Build Alternatives (June 2011) ..... - 23 -
2.8.2 Realignment of Build Alternatives 4 and 5 (2012) ..... - 23 -

2.8.3 Basic Features of Build Alternatives ..... - 25 -
2.8.4 Detailed Description of Build Alternative 4 ..... - 25 -
2.8.5 Detailed Description of Build Alternative 5 ..... - 29 -
2.9 Comparison of Build Alternatives 4 and 5 ..... - 32 -
2.10 Other Alternatives Considered ..... - 35 -
2.10.1 Transportation Control Measures ..... - 35 -
2.10.2 Transportation System Management (TSM) Alternative ..... - 36 -
2.11 Selection of Preferred Alternative ..... - 36 -
3.0 Affected Environment, Environmental Consequences, and Measures to Minimize Harm - 1 -
3.1 Geographic Setting ..... - 1 -
3.2 Social/Economic ..... - 2 -
3.2.1 Affected Environment ..... - 2 -
3.2.1.1 Communities ..... - 2 -
3.2.1.2 Demographics ..... - 3 -
3.2.1.3 Economics ..... - 9 -
3.2.1.4 Neighborhoods ..... - 14 -
3.2.1.5 Public Facilities/Services ..... - 14 -
3.2.1.6 Land Use and Zoning ..... - 16 -
3.2.2 Environmental Consequences ..... - 18 -
3.2.2.1 Environmental Justice ..... - 18 -
3.2.2.2 Title VI ..... - 20 -
3.2.2.3 Community Changes ..... - 20 -
3.2.2.4 Bypass of the City of Morrison ..... - 20 -
3.2.2.5 Alternative through the City of Morrison ..... - 20 -
3.2.2.6 Comparison of a North and South Bypass on the City of Morrison ..... - 21 -
3.2.2.6.1 Community Cohesion (Morrison) ..... - 21 -
3.2.2.6.2 Changes in Travel Patterns (Morrison) ..... - 22 -
3.2.2.6.3 Traffic (Morrison) ..... - 22 -
3.2.2.6.4 Access (Morrison) ..... - 23 -
3.2.2.6.5 Residential Displacements (Morrison) ..... - 23 -
3.2.2.6.6 Businesses Impacts (Morrison) ..... - 24 -
3.2.2.6.7 Land Use Impacts (Morrison) ..... - 25 -
3.2.2.6.8 Economic and Tax Revenue Impacts (Morrison) ..... - 26 -
3.2.2.6.9 Summary and Mitigation Measures of the Bypass of Morrison ..... - 27 -
3.2.2.7 Community Cohesion (Fulton, Rock Falls, and Sterling) ..... - 27 -
3.2.2.8 Change in Travel Patterns ..... - 28 -
3.2.2.9 Residential and Business Relocations ..... - 28 -
3.2.2.10 Community Services/Facilities ..... - 29 -
3.2.2.11 Land Use Changes ..... - 30 -
3.2.2.12 Property Values ..... - 31 -
3.2.2.13 Employment ..... - 31 -
3.2.2.14 Tax Revenues Impacts ..... - 33 -
3.3 Agriculture ..... - 35 -
3.3.1 Affected Environment ..... - 35 -
3.3.1.1 Agricultural Land Protection ..... - 36 -
3.3.1.2 Soils ..... - 37 -

3.3.2 Environmental Consequences - 38 -
3.3.2.1 Agricultural Acres Required - 39 -
3.3.2.2 Land Capability Groupings - 39 -
3.3.2.3 Income - 41 -
3.3.2.4 Irrigation and Subsurface Drainage Maintenance - 42 -
3.3.2.5 Farmland Conversion Rating - 42 -
3.3.3 Measures to Minimize Harm - 43 -
3.3.4 Indirect Impacts - 43 -
3.3.4.1 Background Information - 43 -
3.3.4.2 Agricultural Indirect Impacts - 44 -
3.3.5 Cumulative Impacts - 44 -
3.4 Cultural Resources - 44 -
3.4.1 Affected Environment - 44 -
3.4.2 Environmental Consequences - 46 -
3.5 Air Quality - 47 -
3.5.1 Affected Environment - 47 -
3.5.2 Environmental Consequences - 47 -
3.5.2.1 Microscale Analysis - 47 -
3.5.2.2 Conformity Statement - 47 -
3.5.2.3 Mobile Source Air Toxics (MSAT) - 47 -
3.5.2.4 Construction Related Particulate Matter - 51 -
3.5.2.5: Greenhouse Gas Emissions (Climate Change) - 51 -
3.5.2.5.1 Mitigation for Global GHG Emissions - 53 -
3.6 Noise - 54 -
3.6.1 Environmental Consequences - 54 -
3.6.1.1 Noise Abatement Criteria - 55 -
3.6.1.2 Methodology - 56 -
3.6.1.3 Ambient Measurements - 56 -
3.6.1.4 Existing Noise Levels - 57 -
3.6.1.5 Design Year Noise Levels - 57 -
3.6.1.6 Evaluation of Abatement Measures - 64 -
3.6.1.7 Noise Barrier Analysis - 65 -
3.6.1.8: Coordination with Local Government Officials - 69 -
3.6.1.9 Construction Noise - 69 -
3.6.2 Measures to Minimize Harm - 69 -
3.7 Energy - 69 -
3.8 Groundwater Resources - 70 -
3.8.1 Affected Environment - 70 -
3.8.1.1 Surface Geology and Topography - 70 -
3.8.1.2 Karst Topography - 71 -
3.8.1.3 Seeps and Springs - 71 -
3.8.1.4 Groundwater Resources - 71 -
3.8.2 Environmental Consequences - 73 -
3.8.3 Measures to Minimize Harm and Mitigation - 74 -
3.9 Surface Waters and Aquatic Resources - 74 -
3.9.1 Affected Environment - 74 -

3.9.1.1 Physical and Biological Description of Surface Water Bodies ..... - 75 -
3.9.1.2 Water Quality..... - 79 -
3.9.2 Environmental Consequences..... - 86 -
3.9.2.1 Construction Impacts to Surface Water ..... - 86 -
3.9.2.2 Operational Impacts to Surface Water ..... - 91 -
3.9.2.3 Maintenance Impacts to Surface Water ..... - 92 -
3.9.3 Indirect Impacts..... - 93 -
3.9.4 Cumulative Impacts..... - 93 -
3.9.5 Measures to Minimize Harm and Mitigation ..... - 93 -
3.10 Wetlands..... - 94 -
3.10.1 Affected Environment ..... - 94 -
3.10.1.1 Wetland Plant Community..... - 95 -
3.10.1.2 Wetland Functions ..... - 103 -
3.10.2 Environmental Consequences..... - 105 -
3.10.3 Acreage Impacts ..... - 105 -
3.10.4 Indirect Impacts..... - 105 -
3.10.5 Cumulative Impacts..... - 105 -
3.10.6 Measures to Minimize Harm and Mitigation ..... - 105 -
3.10.6.1 Wetland Avoidance and Minimization ..... - 105 -
3.10.6.2 Wetland Compensation..... - 106 -
3.10.6.3 Commitments..... - 106 -
3.11 Floodplains..... - 106 -
3.11.1 Affected Environment ..... - 106 -
3.11.1.1 100-year Floodplains ..... - 107 -
3.11.1.2 Natural and Beneficial Floodplain Values..... - 107 -
3.11.1.3 Floodways ..... - 108 -
3.11.2 Environmental Consequences..... - 109 -
3.11.2.1 Floodplains Encroachments ..... - 109 -
3.11.2.2 Natural and Beneficial Floodplain Values..... - 110 -
3.11.2.3 Floodways ..... - 110 -
3.11.3 Measures to Minimize Harm and Mitigation ..... - 111 -
3.11.3.1 Floodplain Minimization ..... - 111 -
3.11.3.2 Floodplain Development ..... - 111 -
3.11.3.3 Floodplain Mitigation..... - 112 -
3.12 Upland Plant Communities..... - 112 -
3.12.1 Affected Environment ..... - 112 -
3.12.1.1 Illinois Natural Divisions ..... - 112 -
3.12.1.2 Cover Types ..... - 113 -
3.12.2 Environmental Consequences..... - 117 -
3.12.2.1 Construction Impacts ..... - 117 -
3.12.2.2 Maintenance Impacts..... - 118 -
3.12.3 Indirect Impacts..... - 118 -
3.12.4 Cumulative Impacts..... - 119 -
3.12.5 Measures to Minimize Harm and Mitigation ..... - 119 -
3.13 Wildlife Resources..... - 119 -
3.13.1 Affected Environment ..... - 120 -

3.13.1.1 Wildlife Habitat ..... - 120 -
3.13.1.2 Important Wildlife Species ..... - 121 -
3.13.2 Environmental Consequences ..... - 123 -
3.13.2.1 Wildlife Habitat Loss ..... - 123 -
3.13.2.2 Wildlife Impacts ..... - 123 -
3.13.2.3 Construction Mortality ..... - 124 -
3.13.2.4 Operational Mortality ..... - 124 -
3.13.3 Indirect Impacts ..... - 125 -
3.13.4 Cumulative Impacts ..... - 126 -
3.13.5 Measures to Minimize Harm and Mitigation ..... - 126 -
3.14 Threatened and Endangered Species ..... - 126 -
3.14.1 Affected Environment ..... - 126 -
3.14.1.1 Federally Listed Species ..... - 126 -
3.14.1.2 State Listed Species ..... - 128 -
3.14.1.3 Hybrid Plant Species ..... - 129 -
3.14.2 Environmental Consequences ..... - 129 -
3.14.2.1 Federally Listed Species ..... - 129 -
3.14.2.2 State Listed Species ..... - 130 -
3.14.2.3 Hybrid Plant Species ..... - 130 -
3.15 Special Lands ..... - 131 -
3.15.1 Affected Environment ..... - 131 -
3.15.1.1 Section 4(f) Lands ..... - 131 -
3.15.1.2 Section 6(f) Lands ..... - 132 -
3.15.1.3 Open Space Land Acquisition and Development Act Lands (OSLAD) - 132 -
3.15.2 Environmental Consequences ..... - 132 -
3.16 Special Waste ..... - 132 -
3.16.1 Affected Environment ..... - 132 -
3.16.2 Environmental Consequences ..... - 133 -
3.17 Permits/Certifications ..... - 135 -
3.18 Visual Resources ..... - 136 -
3.18.1 Affected Environment ..... - 137 -
3.18.1.1 Existing U.S. 30 Corridor ..... - 137 -
3.18.2 Environmental Consequences ..... - 138 -
3.18.2.1 Visually Sensitive Locations ..... - 138 -
3.18.2.2 Visual Character of the Proposed Improvements ..... - 138 -
3.18.2.3 Visual Effects ..... - 138 -
3.18.3 Measures to Minimize Harm and Mitigation ..... - 139 -
3.19 Irreversible and Irretrievable Commitment of Resources ..... - 140 -
3.20 Summary of Measures to Minimize Harm and Mitigation ..... - 140 -
3.21 Additional Commitments ..... - 144 -
3.22 Biological Commitments ..... - 145 -
4.0 Agency Coordination and Public Involvement ..... - 1 -
4.1 Compliance with Federal Coordination Legislation ..... - 1 -
4.1.1 Cooperating/Participating Agencies ..... - 2 -
4.2 State and Federal Agency Coordination ..... - 3 -
4.2.1 NEPA/404 Process ..... - 3 -

4.3 Public Involvement/Context Sensitive Solutions ..... - 4 -
4.3.1 Stakeholder Involvement Plan (SIP) ..... - 5 -
4.3.1.1 Illinois Lincoln Highway Coalition ..... - 5 -
4.3.2 Project Study Group (PSG) ..... - 6 -
4.3.3 Community Advisory Group (CAG) ..... - 9 -
4.3.4 Stakeholder Meetings ..... - 14 -
4.3.5 Public Informational Open Houses ..... - 15 -
4.3.5.1 Comments Received on DEIS From State and Federal Agencies ... - 19 -
4.3.6 Project Newsletters ..... - 20 -
4.3.7 Website ..... - 21 -
4.3.8 Project Hotline ..... - 22 -
4.3.9 Letters and Emails ..... - 22 -
4.4 Summary ..... - 22 -
5.0 References ..... - 1 -
6.0 List of Preparers ..... - 1 -

APPENDICES

Appendix A: Quantitative Data Spreadsheets & Opinion of Probable Cost
Appendix B: Project Initiation Letter & Notice of Intent
Appendix C: Cooperating & Participating Agency Invitation, Acceptance and Decline Letters
Appendix D: Agency Environmental Responses
Appendix E: AD-1006 Forms
Public Involvement Document

TABLE OF CONTENTS
continued...

Table 1-1: Existing and Projected ADT Volumes ..... - 4 -
Table 1-2: Level of Service Descriptions..... - 5 -
Table 1-3: Level of Service (LOS) for the No-Build Scenario ..... - 6 -
Table 1-4: Angle of Intersections with U.S. 30..... - 7 -
Table 1-5: Crashes 2007 to 2011 ..... - 10 -
Table 1-6: Crash Severity Description..... - 11 -

Table 2-1: Corridor Section Alternatives Retained or Eliminated from Further Study..... - 7 -
Table 2-2: Description of Reasonable Alternatives..... - 14 -
Table 2-3: Summary of Estimated Environmental Impacts for Reasonable Alternatives ..... - 15 -
Table 2-4: Traffic on the Alternatives (Based on numbers from the O-D Study) ..... - 19 -
Table 2-5: Traffic to Remain on Existing U.S. 30 ..... - 19 -
Table 2-6: LOS on Existing U.S. 30 Route as a Result of the New U.S. 30 Roadway ..... - 20 -
Table 2-7: Estimated Crash Reduction Rates ..... - 21 -
Table 2-8: Summary of Estimated Environmental Impacts for Build Alternatives 4 & 5- 33 -
Table 3-1: Population Trends ..... - 3 -
Table 3-2: Projected Population for Whiteside County and the State of Illinois (2010-2030). - 3 -
Table 3-3: Population Trends for Project Area Townships, Cities, County, and State.. - 4 -
Table 3-4: Household Trends for Project Area Cities, Whiteside County, and State..... - 5 -
Table 3-5: Percentage of Homes Built Before 1960 ..... - 5 -
Table 3-6: Housing Characteristics and Trends ..... - 6 -
Table 3-7: Age Distribution..... - 7 -
Table 3-8: Population by Race ..... - 7 -
Table 3-9: Income Characteristics by Township, City, County, and State ..... - 8 -
Table 3-10: Income Characteristics by Census Tract for Whiteside County ..... - 9 -
Table 3-11: Employment Status Whiteside County and Illinois ..... - 10 -
Table 3-12: Employment by Industry for Whiteside County 1980-2010..... - 11 -
Table 3-13: Employee Travel Characteristics for 2000 and 2010 ..... - 12 -
Table 3-14: Major Employers in the U.S. 30 Study Area ..... - 12 -
Table 3-15: Traffic-Dependent Businesses within the City of Morrison..... - 25 -
Table 3-16: Comparison of Area Converted to ROW for the North and South Bypass - 26 -
Table 3-17: Revenue Generators City of Morrison (FY 2012)..... - 26 -
Table 3-18: Business Displacements..... - 29 -
Table 3-19: Land to be Converted to ROW..... - 31 -
Table 3-20: Construction-Related Employment and Generated Income for Build Alternatives 4 and 5..... - 32 -
Table 3-21: Tax Revenue Loss Analysis..... - 33 -
Table 3-22: Agricultural Lands ..... - 35 -
Table 3-23: Trends in Agricultural Resources..... - 36 -
Table 3-24: Cash Crop Receipts, 2008 (thousand dollars) ..... - 36 -
Table 3-25: Summary of Agricultural Impacts for Build Alternatives ..... - 39 -

Table 3-26: Conversion of Prime Farmland Soils ..... - 40 -
Table 3-27: Farmland Soils by Capability Class within Proposed ROW ..... - 40 -
Table 3-28: Global and Illinois GHC Emissions in Million Metric Tons CO2 Equivalent Per Year ..... - 53 -
Table 3-29: FHWA Noise Abatement Criteria (NAC) Hourly "A-Weighted" Sound Level; Decibels (dBA) ..... - 55 -
Table 3-30: TNM 2.5 Model Parameters ..... - 56 -
Table 3-31: U.S. 30 Noise Impact Summary for the Combined Alternatives 4 and 5 with 2009 & 2038……..- 58 -
Table 3-32: U.S. 30 Noise Impact Summary for New Location Bypass Alternative 4 with 2009 & 2038 DHV..... - 61 -
Table 3-33: US 30 Noise Impact Summary for New Location Bypass Alternative 5 2009 & 2038 DHV ..... - 63 -
Table 3-34: Absolute Noise Level Consideration..... - 66 -
Table 3-35: Increase in Noise Level Consideration ..... - 66 -
Table 3-36: New Alignment/ Construction Date Consideration ..... - 66 -
Table 3-37: Barrier 1 At R 57 ..... - 67 -
Table 3-38: Representative Barrier 2 At CNE 22 ..... - 67 -
Table 3-39: Barrier 3 At R 47 and R 48..... - 68 -
Table 3-40: Barrier4 At R 22 and R 22A ..... - 68 -
Table 3-41: Summary of Private Water Wells within 200 Feet of the Build Alternatives Right-of Way……...- 75 -
Table 3-42: Summary of Private Wells Potentially Impacted by the Build Alternatives.- 76 -
Table 3-43: Extent of Surface Water Resources within Project Corridor Watersheds..... - 74 -
Table 3-44: Physical and Biological Characteristics of Streams in the Project Study Area - 75 -
Table 3-45: Water Quality of Streams in Project Study Area ..... - 85 -
Table 3-46: Aquatic Resources in Project Area Streams..... - 87 -
Table 3-47: Construction Impacts to Perennial Streams..... - 88 -
Table 3-48: Summary of Wetland Land Cover in Whiteside County ..... - 95 -
Table 3-49: Summary of Wetland Cover Types and Acreages Identified for the U.S. 30 Project .....- 95 -
Table 3-50: Wetland Sites Identified for the U.S. 30 Project..... - 96 -
Table 3-51: Cover Types within the Designated 100-year Floodplains or Streams in the Project Study Area..... - 107 -
Table 3-52: Summary of Floodplain Encroachments of Build Alternatives 4 and 5... - 109 -
Table 3-53: Ranked Summary of Cover Types in Project Area ..... - 113 -
Table 3-54: Characteristics of Selected Forest Stands in the Project Study Area..... - 115 -
Table 3-55: Acres of Cover Types Converted to Highway Use ..... - 117 -
Table 3-56: Forest Impacts ..... - 118 -
Table 3-57: Sites that contain RECs in the U.S. 30 Project Area ..... - 133 -

Table 4-1: Section 6002..... - 1 -
Table 4-2: Participating Agencies..... - 3 -
Table 4-3: CAG Representation ..... - 10 -

TABLE OF CONTENTS

continued...EXHIBITS

Chapter 1

1-1: Location Map
1-2: Existing (2011) & Projected (2038) ADT Volumes
1-3: Existing (2011) Truck ADT Volumes
1-4: Existing (2011) & Projected (2038) LOS
1-5A: 2007 Crash Type
1-5B: 2008 Crash Type
1-5C: 2009 Crash Type
1-5D: 2010 Crash Type
1-5E: 2011 Crash Type
1-6A: 2007 Crash Severity
1-6B: 2008 Crash Severity
1-6C: 2009 Crash Severity
1-6D: 2010 Crash Severity
1-6E: 2011 Crash Severity

Chapter 2

2-1: Corridors Created by the CAG (October 17, 2007)
2-2: Corridor Sections & Corridor Section Alternatives (Early 2008)
2-3: Corridor Section Alternatives Eliminated for Not Fulfilling the Purpose & Need (September 18, 2008)
2-4: Corridor Section Alternatives Carried Forward for Further Study
2-5: January 2009 Corridors: Corridors 1 & 2
2-6: February 2009 Final Corridors: Corridors 1, 2, and 3
2-7: Initial Alignments (Mid 2009)
2-8: West End Options (Mid 2009)
2-9: Reasonable Alternatives (November 2009)
2-10a: 2011 Build Alternatives 4 and 5
2-10b: 2012 Revised Build Alternatives 4 & 5
2-11: FEMA 100-Year Floodplains: Pre-2011 and Post-2011
2-12a: Typical Cross Section (Rural)
2-12b: Typical Cross Section (Urban)

Chapter 3

3-1: Build Alternatives 4 and 5
3-2: Townships and Census Tracts
3-3: Major Employers
3-4: Schools and Churches
3-5: Parcel Severance Details
3-6a-d: Noise Barrier Analysis (Barriers 1-4)

TABLE OF CONTENTS

continued...

3-7: Project Area Streams & Aquatic Sampling Sites
3-8: Illinois Natural Divisions
3-9a-b: Whiteside County Greenway and Trails Plan
Index Sheet of Exhibit 3-10 (Aerials)
3-10: Pages 1-16 (Aerials)
3-11: Water Wells

Chapter 1

Purpose and Need for Action

1.0 Purpose and Need for Action

1.1 Purpose of Project

The purpose of the proposed project is to improve traffic capacity, safety, reduce traffic congestion, provide for an anticipated increase in transportation demand, and to establish a roadway system continuity from the IL 136/Frog Pond Road intersection east of the city of Fulton to IL 40 in the city of Rock Falls (**Exhibit 1-1**).

The project study area is approximately 24 miles long and ten (10) miles wide. The project study area was created to allow for consideration of the broadest range of alternatives. This section of U.S. 30 has independent utility because of its connection with IL 136 to the west and IL 40 to the east. Vehicles traveling northwest from the Rock Falls area and vehicles traveling southeast from the Fulton and Clinton areas utilize this corridor. IL 136 terminates at U.S. 30 at the west termini of this project study area; where the traffic is primarily served by U.S. 30. The traffic traveling west from the intersection at IL 136 and U.S. 30 is split with 45 percent turning onto IL 136 and 55 percent continuing on U.S. 30. At the east end of the project study area, IL 40 and U.S. 30 intersect in the city of Rock Falls just north of I-88 at a signalized intersection. From this intersection, local truck and through traffic can travel west via U.S. 30. This traffic information demonstrates that this section of U.S. 30 has independent utility and therefore this project is usable and is a reasonable expenditure even if no additional transportation improvements in the area are made.

The U.S. 30 project has been identified as a High Priority project in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1.1.1 Existing Roadway Description

The existing roadway within the limits of this study area exhibits variable rural and urban typical sections. U.S. 30 is a National Highway System (NHS) Route and is designated as a Major Arterial and Class II Truck Route. Several signalized intersections and two (2) four-way stops exist along U.S. 30 in the project study area.

U.S. 30 from IL 136 east of Fulton to the city of Morrison

The roadway consists primarily of two 12-foot lanes with variable width paved shoulder, additional aggregate shoulder, and open graded ditches from the intersection of U.S. 30 with IL 136 east of Fulton to the western limits of the city of Morrison. Within this section, U.S. 30 intersects with two (2) other State highways, IL 136 and IL 78 North. IL 136 intersects just east of Fulton and IL 78 North joins U.S 30 west of Morrison and utilizes the U.S. 30 roadway with dual route markings into town.

U.S. 30 in the city of Morrison

The roadway varies from two (2) to four (4) lanes (including right-turn lanes) with a narrow cross section due to the building constraints of the downtown. The roadway then transitions to a newly

constructed three-lane section between Jackson Street and Sawyer Road on the east side of Morrison. This three-lane section was constructed in 2008. Within the city limits, U.S. 30 has a speed limit between 30 and 45 mph. There are four (4) signalized intersections in the city of Morrison. Three (3) of these signals are located at adjacent intersections of U.S. 30 in the middle of the city: Genesee Street, IL 78 South (Cherry Street), and Madison Street. The fourth signalized intersection is located at the intersection of U.S. 30 and Jackson Street toward the east end of the city.

U.S. 30 from the city of Morrison to Prophetstown Road

East of the three-lane section, which ends at French Creek, the roadway transitions back to a two-lane rural cross section for approximately seven (7) miles to the intersection of U.S. 30 and Emerson Road where it transitions to include a left turn lane for eastbound traffic onto Emerson Road. From Emerson Road, U.S. 30 continues southeast as a two-lane section to south of Mathew Road where it transitions to a four-lane section with left turn lanes that are separated from the through traffic lanes at the four-way stop intersection of Moline Road and the I-88 connector. Here, U.S. 30 turns east and transitions back from a four-lane to a two-lane rural section to Prophetstown Road. Another four-way stop is within the two-lane section at the intersection of Como Road.

Prophetstown Road to the city of Rock Falls

West of Prophetstown Road heading east on U.S. 30, the rural two-lane section transitions from two-lanes to a five-lane urban section that carries two (2) lanes in each direction along with a bi-directional lane through the city of Rock Falls. This section of U.S. 30 was constructed with a four-lane section in 1964 and reconstructed to a five-lane section in 2002.

Several signalized intersections and two (2) four-way stops exist along U.S. 30 in the project study area. There are four (4) signalized intersections in the city of Morrison and two (2) in the city of Rock Falls. All four (4) of the signalized intersections in Morrison have one (1) through lane in each direction with additional turn lanes on the east and west legs of U.S. 30. As previously mentioned, the signalized intersections in Morrison are at Genesee Street, IL 78 South (Cherry Street), Madison Street, and Jackson Street. The four-way stops are at the Moline Road/I-88 connector to U.S. 30 and at the Como Road intersection. Within the five-lane section in Rock Falls, both the 12th Avenue and IL 40 intersections are also signalized.

1.1.2 History of Project

U.S. 30 was America's first coast to coast highway. It was originally constructed in Illinois between 1919 and 1921 as a 16-foot to 18-foot wide highway. Between 1939 and 1940, a ten-mile section of U.S. 30 in Whiteside County was relocated south of Sterling and Rock Falls, with the original route becoming part of IL 2. A 3.5-mile section, built between 1956 and 1957, linked the Gateway Bridge across the Mississippi River to the original roadway two (2) miles east of the city of Fulton. In 2000, the U.S. Department of Transportation announced that the Lincoln Highway route in Illinois, which includes U.S. 30 in Whiteside County, had been selected to be a part of the Lincoln Highway National Scenic Byway. This designation was because of the wide

variety of history, heritage, and tourist attractions across this portion of Illinois which provides for a destination for travelers and as an alternative "scenic" route for crossing the State.

The need to upgrade U.S. 30 in Whiteside County to an expressway was identified decades ago. A 1967 study, *Illinois Highway Needs and Fiscal Study*, conducted by theIDOT, identified the need for improving and upgrading U.S. 30. A 1973 Corridor Environmental Study evaluated several alternative corridors for a four-lane, fully access controlled freeway from the east banks of the Mississippi River near Fulton to FA Route 403 (now I-88) near the village of Como.

The continuing need for improvement to the Whiteside County transportation system along U.S. 30 from Fulton to Rock Falls was confirmed through a Corridor Study that was completed in August 2006. According to the 2006 Corridor Study, the purpose of the study was to determine a transportation system improvement that would enhance east-west mobility while accommodating future travel demands within the study area. This corridor study reviewed existing and planned land uses, existing and projected traffic volumes, and the network transportation system as a whole. The study acknowledged that "there is a need for a more detailed analysis to assess the potential benefits and effects of alignment alternatives within the preferred corridor alternatives."

Following the 2006 Corridor Study, an Environmental Impact Statement (EIS) was initiated by the FHWA and IDOT in order to determine the transportation system improvement best suited for this region and to assess the potential impacts to the human and natural environment.

1.2 Need for Proposed Action

This proposed project is needed to address existing capacity deficiencies and traffic congestion, increasing transportation demand, lack of roadway continuity, and the overall safety of the roadway within the U.S. 30 project study area in Whiteside County.

1.2.1 Existing Traffic Conditions & Capacity Deficiencies

The existing traffic conditions and capacity deficiencies along U.S. 30 from IL 136 to IL 40 in Whiteside County reflect the insufficiency of the roadway to provide for the variety of vehicle and pedestrian types that utilize U.S. 30 within the project study area. The various types include: farm equipment, large trucks, school buses, pedestrians, and bicyclists. In addition, businesses, farms, and residences within the project study area currently have unrestricted access to the roadway for automobiles, trucks, and farm equipment. The following section outlines the existing and projected traffic volumes and capacity levels that reflect these deficiencies.

Existing Traffic Volumes and Level of Service

Existing Average Daily Traffic (ADT) counts along U.S. 30 range from 4,400 to 15,600 vehicles per day. Traffic volumes of 7,200 vehicles per day were found at the west end of the project study area and increased to 11,500 vehicles per day in the city of Morrison, decreased to 4,400 vehicles per day east of Emerson Road and increased again to 15,600 vehicles per day on the east end of the project study area. **Table 1-1** shows the ADT volumes for all the sections within the study area under the No-Build Scenario as counted in **2011** and the projected years 2018,

2028, and 2038. **Exhibit 1-2** illustrates the ADT volumes for the existing year (**2011**) and for the year 2038. **Table 1-1** also shows that a substantial portion of the traffic volume is heavy trucks. **Exhibit 1-3** illustrates the existing truck ADT volumes.

Table 1-1: Existing and Projected ADT Volumes

Section Location	# of Lanes	ADT Volumes				
		Existing 2011	Con-struction Year 2018	10 Year 2028	Design Year 2038	Exist-ing Truck %
IL 136 to Millard Rd.	2	7,200	7,900	8,700	9,600	16
Millard Rd. to IL 78 North	2	6,800	7,400	8,200	9,100	18
IL 78 North to Heaton Rd.	2	8,300	9,100	10,000	11,100	15
Heaton Rd. to IL 78 South (Cherry St.)	2	11,500	12,600	13,900	15,300	12
IL 78 South (Cherry St.) to Jackson St.	2	10,200	11,200	12,300	13,600	13
Jackson St. to Sawyer Rd.	3	10,000	10,900	12,100	13,300	13
Sawyer Rd. to Lyndon Rd.	2	8,200	9,000	9,900	10,900	15
Lyndon Rd. to Round Grove Rd.	2	7,600	8,300	9,200	10,100	18
Round Grove Rd. to Emerson Rd.	2	7,600	8,300	9,200	10,100	19
Emerson Rd. to Mathew Rd.	2	4,400	4,800	5,300	5,900	27
Mathew Rd. to Moline Rd.	4	6,200	6,800	7,500	8,300	30
Moline Rd. to Como Rd.	2	6,600	7,200	8,000	8,800	13
Como Rd. to Riverdale Rd.	2	6,800	7,400	8,200	9,100	13
Riverdale Rd. to Prophetstown Rd.	2	7,000	7,700	8,500	9,300	11
Prophetstown Rd. to IL 40*	5	15,600	17,000	18,800	20,800	7

Source: Illinois Department of Transportation
*Existing five-lane section

Traffic capacity and the associated traffic congestion are defined in terms of levels of service (LOS). As defined in the Transportation Research Board Highway Capacity Manual (2000), LOS is expressed by a scale ranging from "A" to "F". "A" represents the best traffic condition with no backups or obstacles to traffic flow. "F" represents a total breakdown in traffic operations accompanied by extensive delays and traffic volumes that approach capacity. Definitions for LOS categories are included in **Table 1-2**.

Table 1-2: Level of Service Descriptions		
Level of Service	**Flow Condition Illustration**	**Description**
A		Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences.
B		Indicative of free flow, although the presence of other vehicles begins to be noticeable. Average travel speeds are the same as in LOS A, but drivers have less freedom to maneuver.
C		Range in which the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is now clearly affected by the presence of other vehicles.
D		Range in which ability to maneuver is severely restricted because of traffic congestion. Travel speed begins to be reduced by increasing volumes.
E		Operation at or near capacity and is quite unstable. Vehicles are operating with the minimum spacing at which uniform flow can be maintained.
F		Breakdown condition where maneuverability and speeds may drop to zero.

Level of service is based on definitions set forth in the Transportation Research Board Highway Capacity Manual, 2000.

According to the FHWA publication, "Flexibility in Highway Design," the relationship between highway type and location and the LOS appropriate for design should take into consideration specific traffic and environmental conditions. A guide for selecting a design LOS within the "Flexibility in Highway Design" publication suggests a LOS B for a rural arterial facility and LOS C for a suburban arterial facility. U.S. 30 primarily functions as a rural facility, but has sections within the cities of Morrison and Rock Falls that function as a suburban facility; therefore, the minimum LOS for the design year for this project is either LOS B or C depending on location. Traffic volume, percentage of truck traffic, speed, and frequency of access points were all key issues in determining LOS for this project.

Projected Traffic Volumes and LOS

Traffic is predicted to increase by an average of one (1) percent per year, or approximately 27 percent along U.S. 30 within the project study area by the year 2038, in the No-Build Scenario. As shown in **Table 1-3** and **Exhibit 1-4**, both existing and projected LOS are below the suggested design LOS for many of the sections within the project study area. The substantial proportion of heavy truck traffic and frequent access points are key issues adding to this lower LOS. Demands exceed the suggested design LOS in sections west of Moline Road. Increased traffic will result in deteriorating levels of service for most of U.S. 30 between its intersection with IL 136 and its intersection with Prophetstown Road by the year 2038.

Table 1-3: Level of Service (LOS) for the No-Build Scenario

Section Location	2011 (Existing)	2018 (Construction Year)	2028 (10 Year Volume)	2038 (Design Year)
IL 136 to Millard Rd.*	C	C	D	D
Millard Rd. to IL 78 North*	C	C	D	D
IL 78 North to Heaton Rd.**	E	E	E	E
Heaton Rd. to IL 78 South (Cherry St.)**	E	E	E	E
IL 78 South (Cherry St.) to Jackson St.**	E	E	E	E
Jackson St. to Sawyer Rd.**	E	E	E	E
Sawyer Rd. to Lyndon Rd.*	C	D	D	D
Lyndon Rd. to Round Grove Rd.*	C	C	C	C
Round Grove Rd. to Emerson Rd.*	D	D	D	D
Emerson Rd. to Mathew Rd.*	C	C	C	C
Mathew Rd. to Moline Rd.*	C	C	C	C
Moline Rd. to Como Rd.*	B	C	C	C
Como Rd. to Riverdale Rd.*	B	C	C	C
Riverdale Rd. to Prophetstown Rd.*	C	C	C	C
Prophetstown Rd. to IL 40**	B	B	B	B

Source: Illinois Department of Transportation
* Suggested Design LOS B for a rural arterial facility
** Suggested Design LOS C for a suburban arterial facility

1.2.2 Roadway Deficiencies

Geometric deficiencies are present along the current alignment of U.S. 30. The two (2) primary types of geometric deficiencies on the existing U.S. 30 within the project study area are cross-section deficiencies and alignment deficiencies.

Three (3) primary cross-section deficiencies on U.S. 30 include substandard shoulder widths (narrow shoulders), taper lengths (turn lane tapers are shorter than standard length), and turn lanes (lengths are shorter than standard lengths). Several other cross-section deficiencies along the corridor include lateral obstructions, insufficient turning radii, lack of shoulders (curb section contiguous with the traveled lane), and inadequate lane widths in the urban sections within the city of Morrison.

The partially paved primarily aggregate or earth shoulders vary in width throughout the project study area. Many of the turn lane and taper length deficiencies are within the limits of Morrison's Central Business District. These deficiencies are due to the lack of spacing between intersections and the roadway and structures on adjacent properties.

There are two (2) alignment deficiency types: side-road intersecting angle and a horizontal curve sight distance. In order to have the greatest overall level of sight distance and subsequent safety at an intersection, it is ideal for the two (2) roadways to intersect at a perpendicular angle. The preferred angle of an intersection is 90 degrees. A desirable angle of an intersection is between 75 and 90 degrees and in very restricted conditions the angle of an intersection can be as low as 60 degrees. Four (4) side-roads within the study area were found to have a substandard angle of intersection with U.S. 30 as shown in **Table 1-4**. The four (4) side-roads with substandard intersecting angles are Millard Road, Liberty Street and Harmony Street (both of which intersect U.S. 30 at the same location), and Agnew Road. A separate project has been designed to correct the Liberty Street and Harmony Street intersections. The intersections at Millard Road and Agnew Road will need to be addressed with a proposed improvement. The remaining four (4) intersections identified in **Table 1-4**, Union Street, Olive Street, Emerson Road, and Prophetstown Road, have an angle of intersection less than that desired by IDOT and will be further studied for geometric improvements to improve safety.

Table 1-4: Angle of Intersections with U.S. 30

Intersecting Side Road	Intersecting Angle (degrees)
Millard Road	50
Liberty Street	54
Harmony Street	48
Union Street	60
Olive Street	60
Emerson Road	65
Agnew Road	56
Prophetstown Road	60

A horizontal curve sight distance deficiency was identified on U.S. 30 on the west side of Morrison near Garden Plain Road. At this location, those traveling in the westbound direction have limited sight distance from a combination of a retaining wall on the right side of the roadway and the roadway curving to the right.

There are intersection sight distance deficiencies in the city of Morrison that are caused by the close proximity (zero set-back) of commercial businesses in the downtown area.

1.2.3 Accommodate Freight

The section of U.S. 30 within the city of Morrison has a high number of intersecting city streets and numerous businesses and residences directly accessing a confined roadway area through the city. The geometric deficiencies at intersections, limited sight distance due to business and residential proximities, and the required reduction of speed for traffic, create both time and safety concerns for truck traffic.

The project study area includes large truck-dependent facilities such as the Wal-Mart Distribution Center, the Prairie Hill Landfill**,** and other industrial developments that make it necessary to accommodate its current and future transportation demands. The following is a discussion of the Prairie Hill Landfill that is located within the project study area and the Archer Daniels Midland (ADM) plant expansion just west of the project study area.

Prairie Hill Landfill (Morrison, IL) - This landfill facility, operated by Waste Management Services, located east of Morrison has doubled the volume of truck traffic since 2009 from approximately 45 to 50 trucks to approximately 90 to 100 trucks per day that travel U.S. 30 to this location from the Chicago area. This change has caused truck volume increases on U.S. 30 of one (1) to three (3) percent.

ADM Plant Expansion (Clinton, IA) – This corn processing plant underwent a major expansion to its existing facility adjacent to the U.S. 30 corridor in Clinton, Iowa. This expansion was completed in 2010 and created approximately 120 new jobs. The additional employment and use of trucks to service this facility illustrates a growth in the area that will affect traffic volumes.

1.2.4 System Linkage

1.2.4.1 Local Transportation Network

The lack of roadway continuity, as shown in **Table 1-1/Number of Lanes**, throughout the project study area causes safety concerns as related to driver expectations. Varying cross-section elements, shoulder widths, intersection stop conditions, side-road intersecting angles, truck volumes accessing the roadway at frequent commercial and private entrances, changing geometric features and speed limits, the frequency of intersecting side-roads, and various other features within the project study area are causes for concerns. These elements cause delays in transition sections into and out of higher volume areas leading to poor operation of the roadway. In addition, the intermittent disbursement of signalized, two-way stop and four-way stop controlled intersections throughout the project limits adds to lack of continuity and more importantly the concern for safety as it relates to driver expectation.

Major intersecting side-roads along the subject section of U.S. 30 include:

IL 136 carries approximately 45 percent of the traffic from east of its intersection with U.S. 30. In 2010, IDOT completed a safety project at this intersection to correct the insufficient turn lane

length, which was causing traffic to back up in the through lanes while waiting to turn. This was affecting the continuity of flow by restricting maneuverability and subsequently reducing travel speeds creating both LOS and safety issues.

IL 78 South of U.S. 30 has an existing ADT volume of 5,200 with nine (9) percent truck volume in town. South of Morrison the ADT volume drops to 2,150 with nine (9) percent trucks.

IL 78 North of U.S. 30 has an ADT of 1,400 with 13 percent trucks. When considering the traffic utilizing IL 78 through travel, the traffic volumes of IL 78 North and IL 78 South indicates that approximately 70 trucks per day must navigate on the State highway through the city of Morrison. This requires two (2) 90-degree turns at geometrically deficient intersections in the residential area, as well as traversing an at-grade railroad crossing, and another turn at both southbound and northbound intersections of U.S. 30 and IL 78.

Emerson Road carries approximately 3,250 ADT from U.S. 30 acting as a main route to and from the city of Sterling. This county highway has a less than desirable angle of intersection at 65 degrees and further changes the continuity of flow for U.S. 30 traffic.

I-88 has a four-lane connector to U.S. 30. This connector meets at a four-way stop intersection at Moline Road. At this intersection, Moline Road, U.S. 30, and the I-88 connector, are all four-lane legs with left-turn lanes in each direction. Here, U.S. 30 turns 90 degrees and acts as a primary access to the west side of the city of Rock Falls. Between this intersection and Rock Falls, the roadway transitions from four-lanes to two-lanes and then back to four (4) again before reaching the city of Rock Falls. West of this intersection the four lanes quickly transition down to a two-lane rural cross section on Moline Road.

The present need is to provide roadway continuity along U.S. 30 within the project study area in order to decrease congestion and travel time for the residents, farmers, commuters, and businesses; but more importantly, to provide an improvement to the safety of the overall local roadways.

1.2.5 Safety

Traffic volumes are projected to increase by an average of one (1) percent per year through the design year 2038 along U.S. 30. It is anticipated that without improvements both the rate and severity of crashes will continue to increase as traffic levels climb.

1.2.5.1 Crash Information

A total of **556** crashes were reported along the U.S. 30 route within the project study area during the years 2007 to **2011**. A total of **146** rear end crashes occurred during the **five-**year study period representing **26.3** percent of the total crashes. Fixed object crashes were the second highest type, with **87** occurrences representing **15.6** percent of the total crashes. **Table 1-5** provides an overview of the types and corresponding number of crashes along U.S. 30 during

the **five-**year study period. **Exhibits 1-5A** through **1-5E** illustrate the locations of these crashes for the years 2007 to **2011**.

Table 1-5: Crashes 2007 to 2011

Type of Crash	2007	2008	2009	2010	2011	Total # of Crashes	% of Total Number of Crashes
Rear End	27	39	23	**37**	**20**	**146**	**26.26%**
Fixed Object	30	19	11	**14**	**13**	**87**	**15.65%**
Turning	22	21	8	**20**	**14**	**85**	**15.29%**
Angle	11	25	13	**10**	**19**	**78**	**14.02%**
Animal	18	20	10	**14**	**10**	**72**	**12.95%**
Sideswipe Opposite Direction	6	4	1	**3**	**4**	**18**	**3.24%**
Head On	1	5	4	**3**	**4**	**17**	**3.06%**
Sideswipe Same Direction	3	3	3	**2**	**3**	**14**	**2.52%**
Other Object	2	6	2	**1**	**1**	**12**	**2.16%**
Overturned	1	3	3	**1**	**0**	**8**	**1.44%**
Other Non-Collision	4	2	1	**2**	**2**	**11**	**1.98%**
Pedestrian	1	3	1	**0**	**1**	**6**	**1.08%**
Parked Vehicle	0	0	0	**0**	**1**	**1**	**0.18%**
Pedecyclist	0	0	0	**0**	**1**	**1**	**0.18%**
TOTAL	**126**	**150**	**80**	**107**	**93**	**556**	**100%**

Source: Illinois Department of Transportation

5% Selected Locations

There were three (3) 5% Selected Locations identified within the project study area between 2007 and 2011; two (2) of which were sections and one (1) a location. 5% Selected Locations are defined under the SAFETEA-LU Act as the top 5% of public roadways with the most severe safety needs in the State. According to the "IDOT Five Percent Report Summary Document on the FHWA Safety Improvement Program" (August 2007), the purpose of identifying the top 5% of the highway locations exhibiting the State's most pressing safety needs is to gain an understanding of the nature and extent of the safety problem and identify solutions.

The 5% Selected Locations were identified at the intersection of U.S. 30 with IL 136/Frog Pond Road, the section of U.S. 30 from Habben Road to 0.3 mile west of Moline Road, and the section of U.S. 30 from Acker Road to Millard Road. The intersection of U.S. 30 and IL 136/Frog Pond Road had a total of nine (9) crashes over the **five**-year period, with 14 injuries and one (1) fatality. In 2010, IDOT completed a safety project at this intersection and corrected the east-bound turn lane deficiencies, which now allows for better movement through

this intersection. **The section of U.S. 30 between Habben Road and 0.3 mile west of Moline Road had a total of 33 crashes over the five-year period with 14 injuries and no fatalities. The section of U.S. 30 between Acker Road and Millard Road had a total of 26 crashes over the five-year period with 10 injuries and no fatalities. These 5% Selected Locations and the severity of the crashes involved between 2007 and 2011 can be found on Exhibits 1-6A through 1-6E.**

Crash Severity

Crash Severity refers to the severity of the injuries resulting from a crash. The severity for each crash is assigned a letter K, A, B, C or O. This designation is consistent with the KABCO severity scale (National Safety Council, 1990) typically used by the investigating police officer on the scene to classify injury severity for occupants with five (5) categories as shown in **Table 1-6**.

Table 1-6: Crash Severity Description

Injury Type	Description
K	Crash in which a fatality occurs.
A	Crash involving one or more disabling injury. This is the most severe injury classification where there has not been a fatality.
B	Indicates a crash involving one or more people with evident injuries.
C	Indicates crash with possible injuries.
O	No Injury

Source: National Safety Council, 1990.

Of the **556** crashes analyzed during the 2007 to **2011** study period, **151** crashes (**27.2**%) resulted in injuries or fatalities. A total of **226** injuries and eight (8) fatalities were reported as a result of these crashes. A total of **104** crashes with reported injuries were "B" and "C" severity crashes, resulting in a total of **147** injuries. A total of **40** (**7.2**%) "A" severity crashes occurred during the study period, resulting in **79** injuries. Seven (7) "K" severity crashes occurred during this period, resulting in eight (8) fatalities. The other **405** non-injury crashes involved property damage only. **Exhibits 1-6A** through **1-6E** illustrate the crash types as related to the severity for the years 2007 to **2011**.

The predominant crash types that caused "K" & "A" injuries and/or fatalities within this project study area were angle accidents, which accounted for two (2) of the fatalities and **24 (30.4%)** of the type "A" injuries. **The other type "A" injuries resulted from the following type crashes: turning (22.8%), rear end (19.0%), fixed object (8.9%), head on (7.6%), other non-collision (5.1%), sideswipe in opposite direction (3.8%), one (1) pedestrian, one (1) overturned vehicle, and one (1) injury from sideswipe crash in same direction.**

The project study area includes more than 70 intersecting side roads. Congestion, substandard design, and fixed objects within the clear zone at these intersections are the principal factors

contributing to the crashes within the project study area. This is demonstrated by the dominant crash types identified in **Table 1-5** which are rear end, turning, animal, angle, and fixed object.

Among the intersections within the project study area along U.S. 30, six (6) are signalized, two (2) have a four-way stop condition, and the remainders have either a two-way stop condition for the cross road or are a three-legged intersection with a one-way stop condition on the intersecting side road. Of the **556** crashes reported within the project limits during the study period, **416 (74.8%)** occurred at or near an intersection, which is alarmingly high due to the fact the State and national averages track this percentage to be approximately 25 percent. **Thirty-seven of the 47 "K" & "A" crashes (78.7%) were at an intersection and intersection crashes accounted for seven (7) (87.5%) of the fatalities and 60 (75.9%) of the type "A" crash injuries. Fourteen crashes occurred at the 5% Selected Location. These crashes accounted for one (1) fatality and seven (7) (8.8%) of the type "A" crash injuries.**

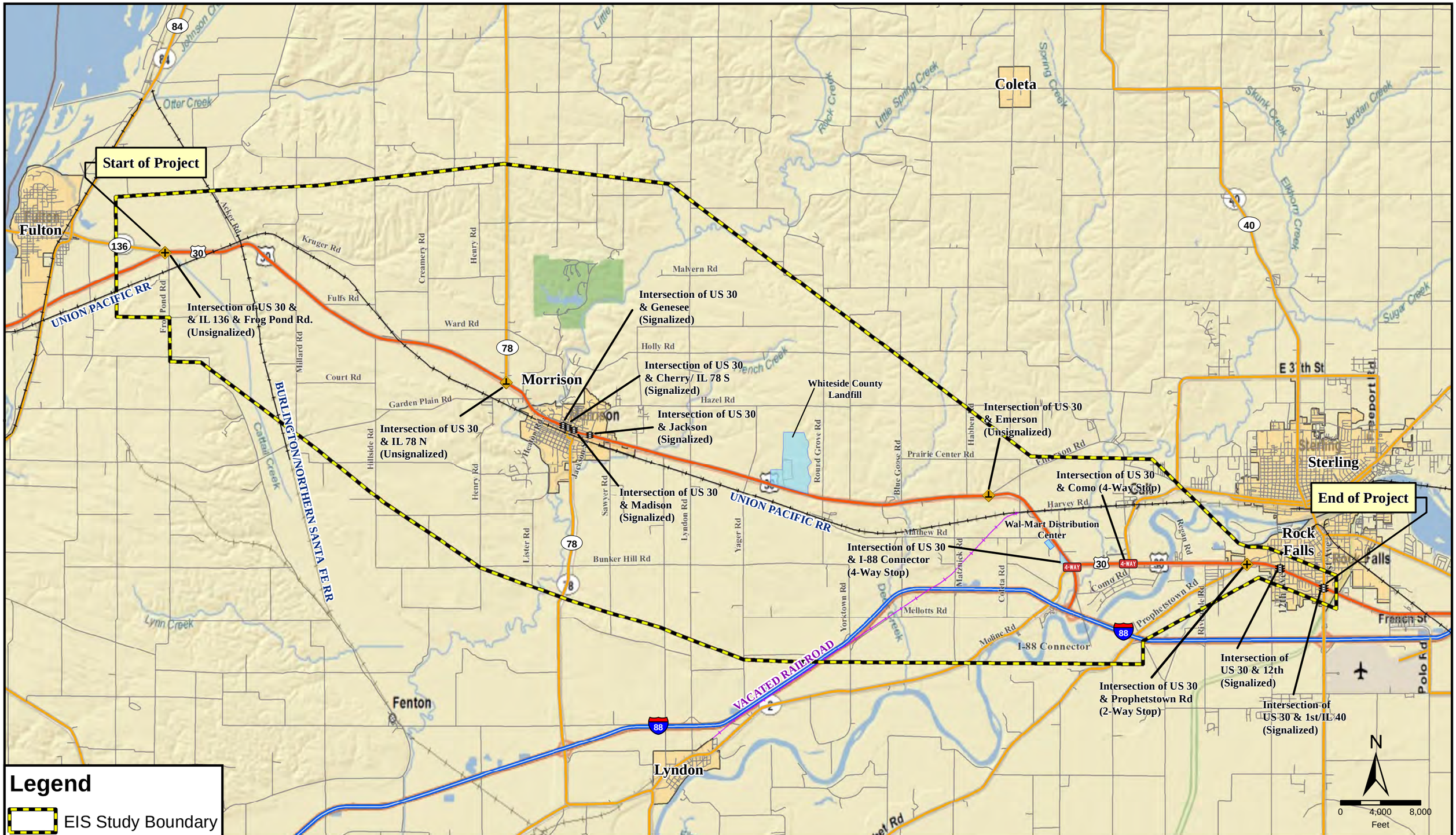


Exhibit 1-1
Location Map
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

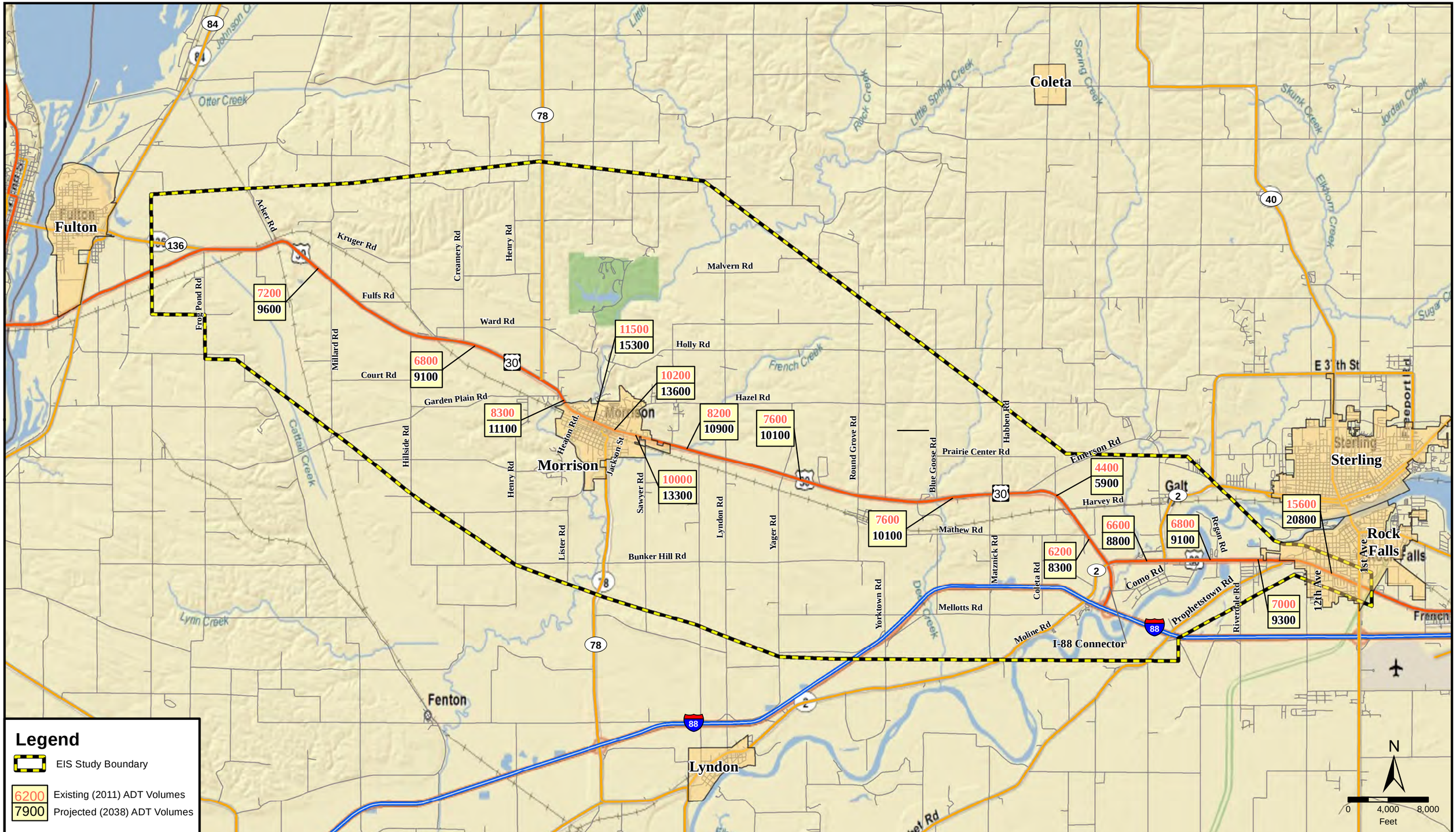


Exhibit 1-2
Existing (2011) & Projected (2038) - ADT Volumes
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

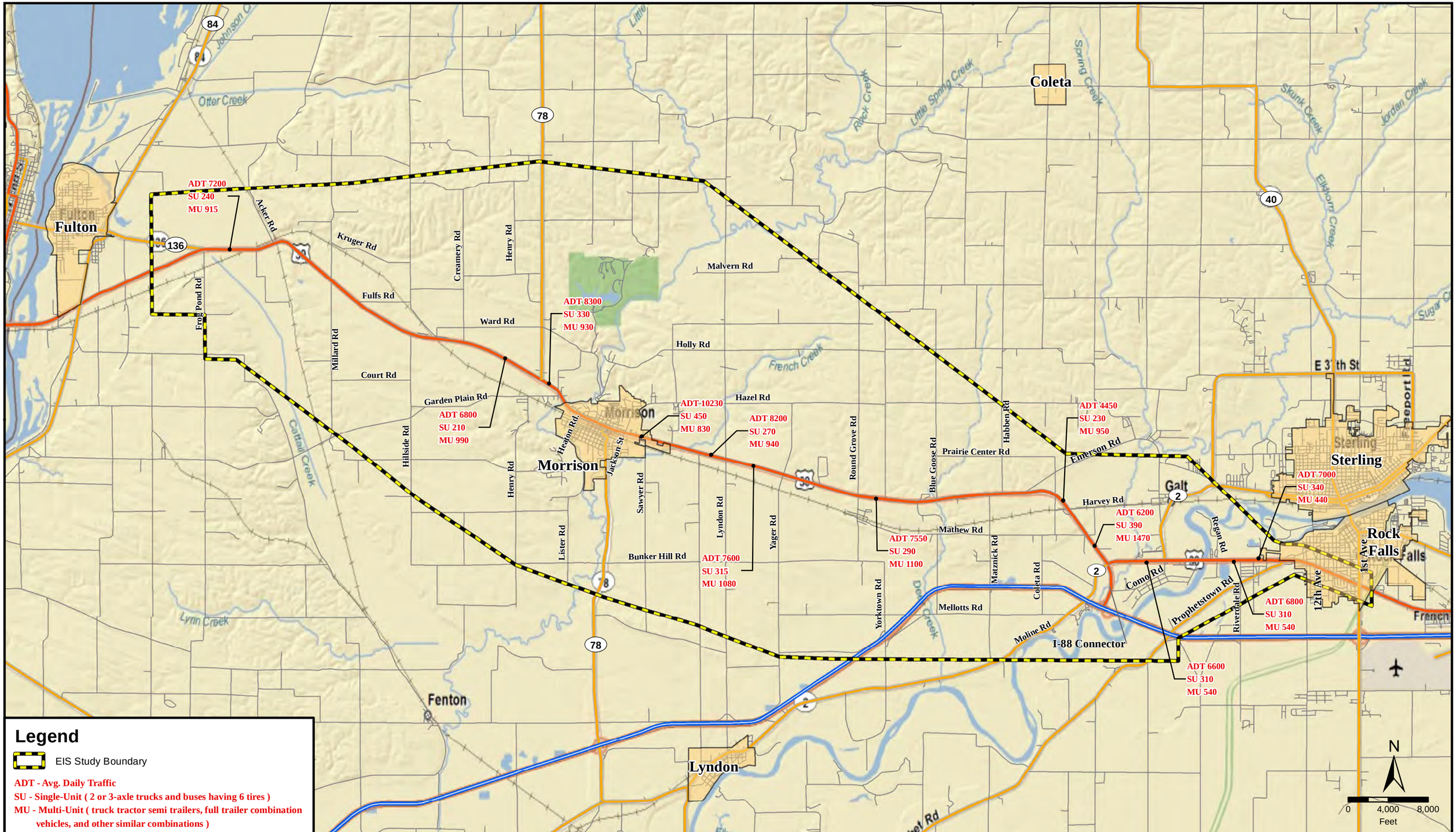


Exhibit 1-3
Existing (2011) Truck ADT Volumes
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

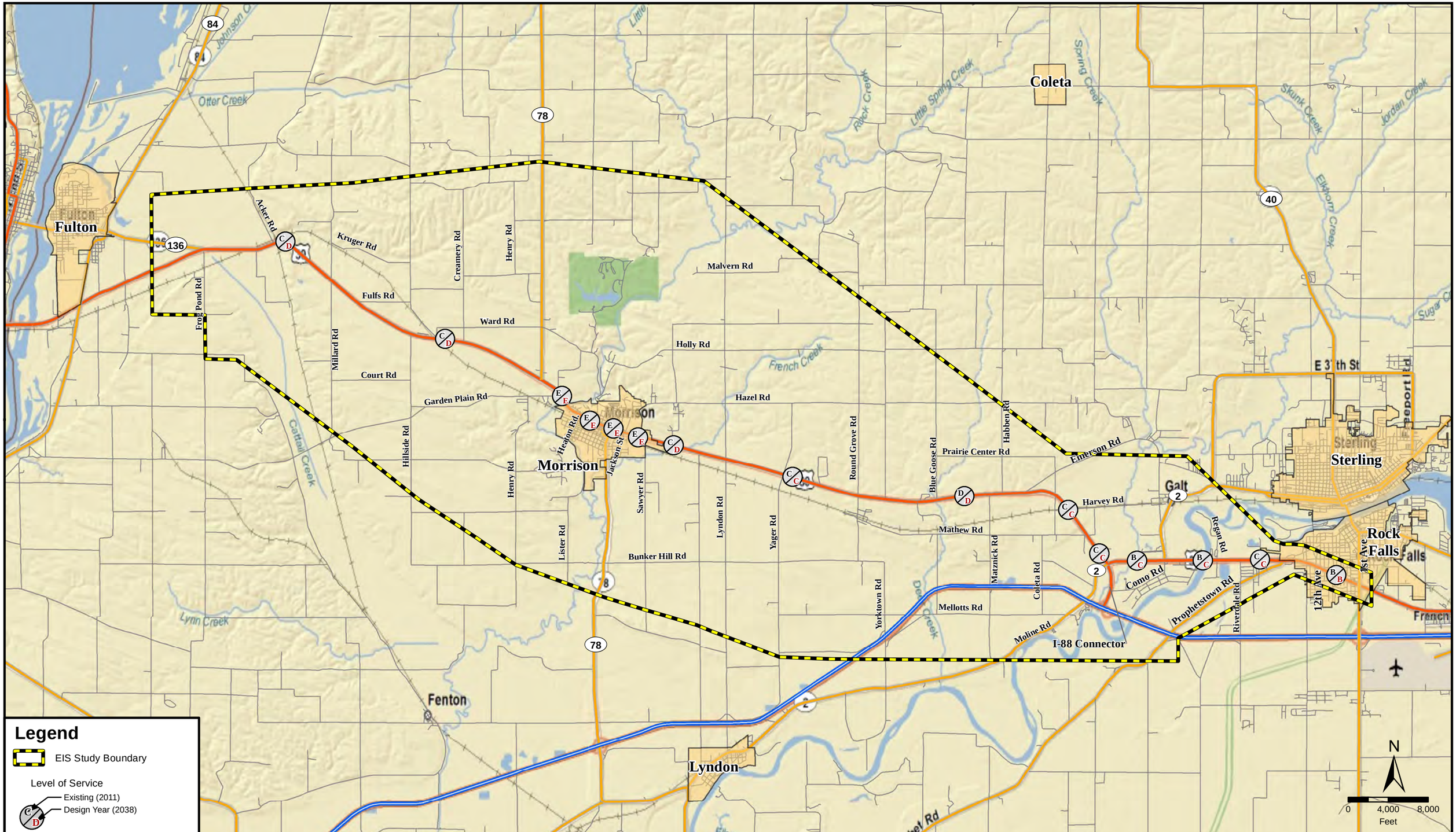


Exhibit 1-4
Existing (2011) & Projected (2038) LOS
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

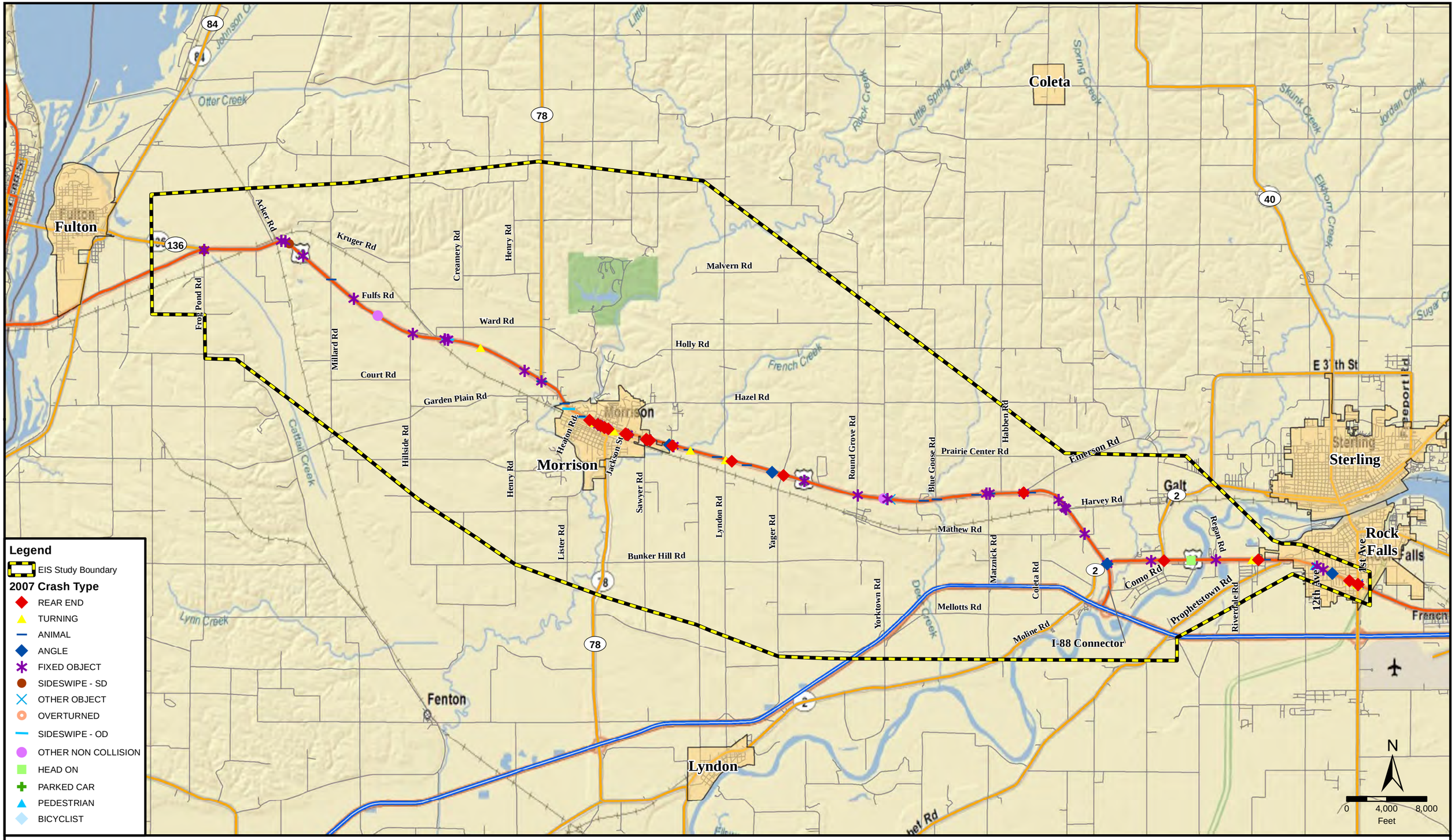


Exhibit 1-5A
2007 Crash Type
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

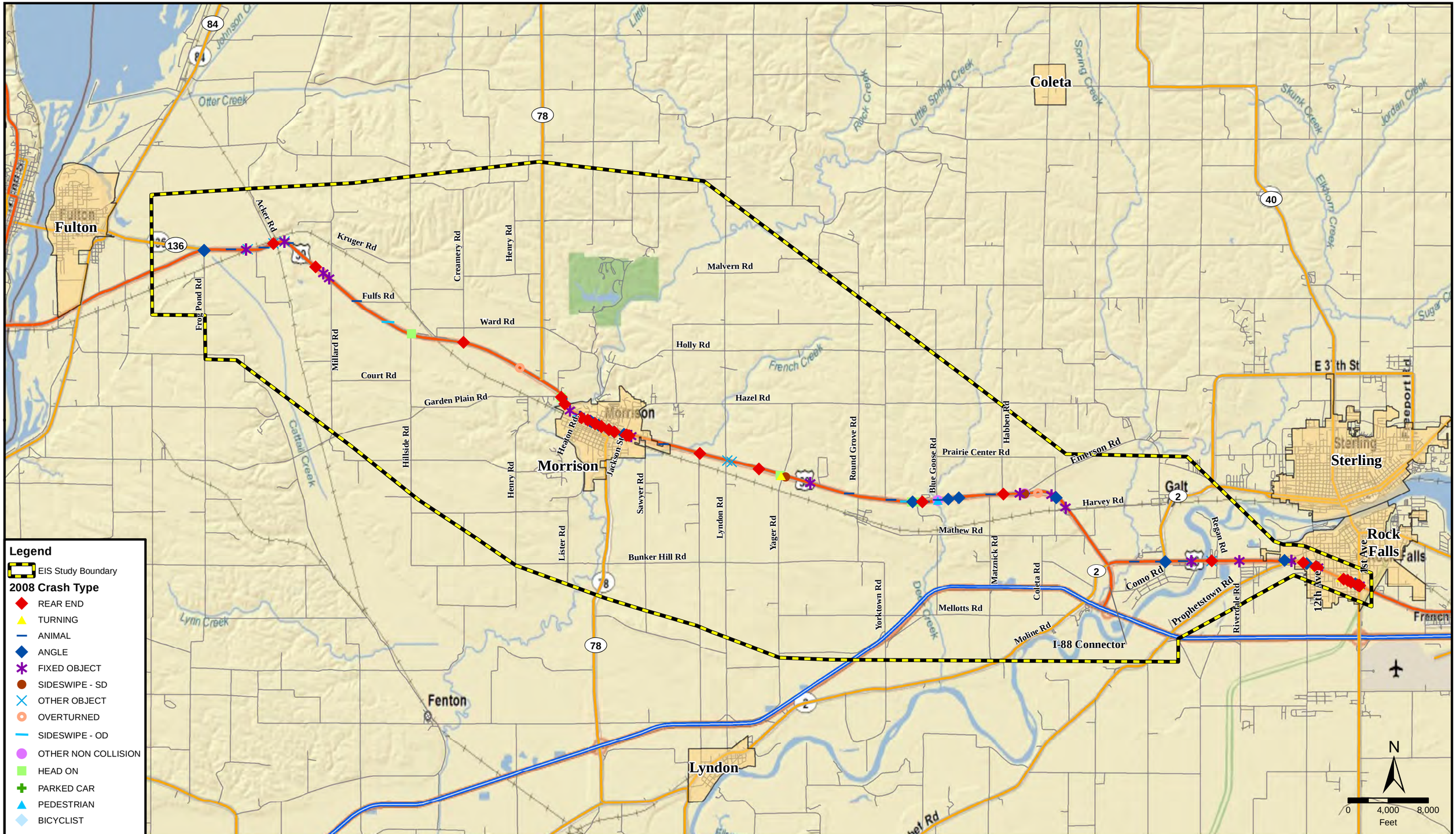


Exhibit 1-5B
2008 Crash Type
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

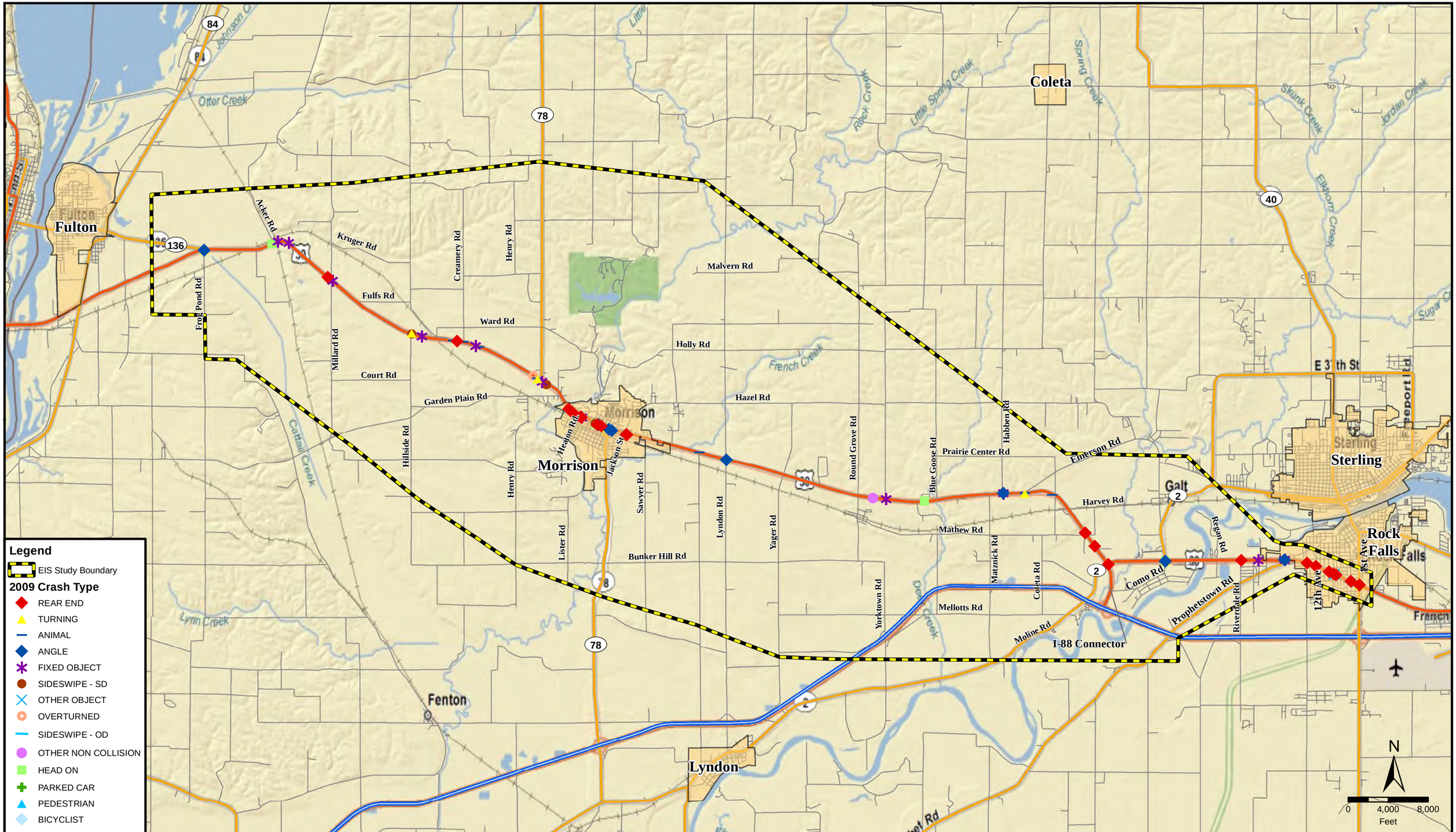


Exhibit 1-5C
2009 Crash Type
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

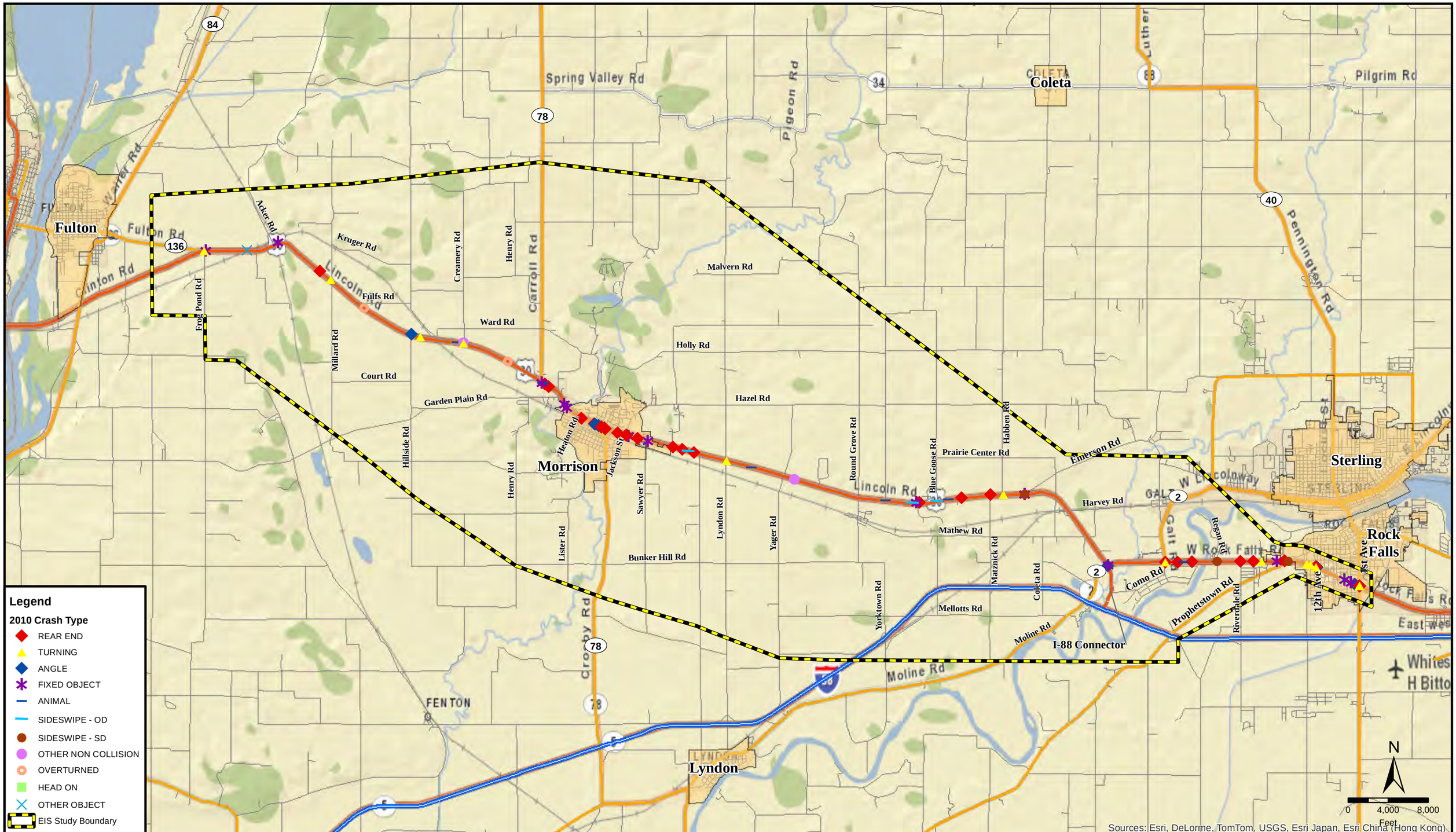


Exhibit 1-5D
2010 Crash Type
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

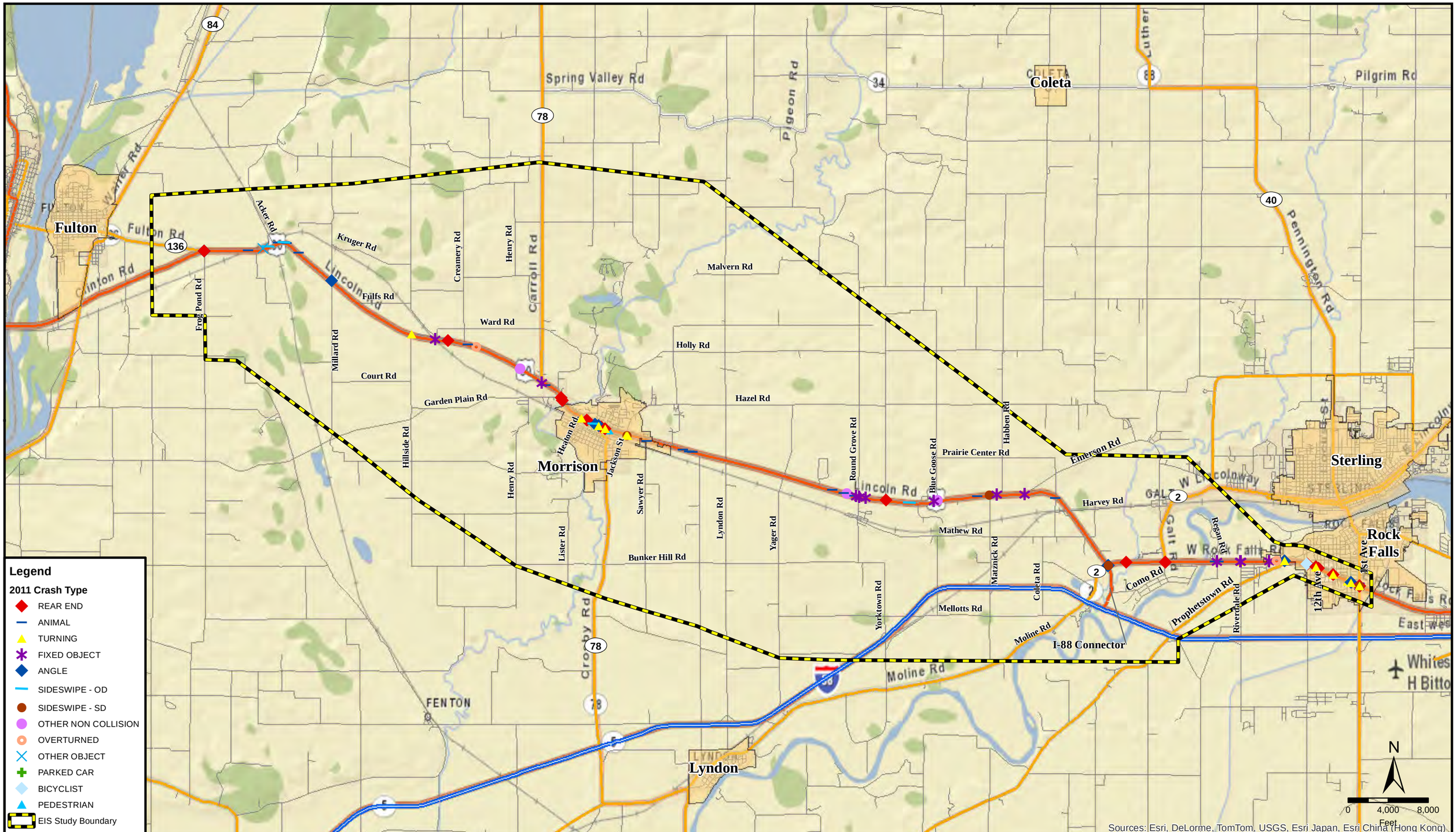


Exhibit 1-5E
2011 Crash Type
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

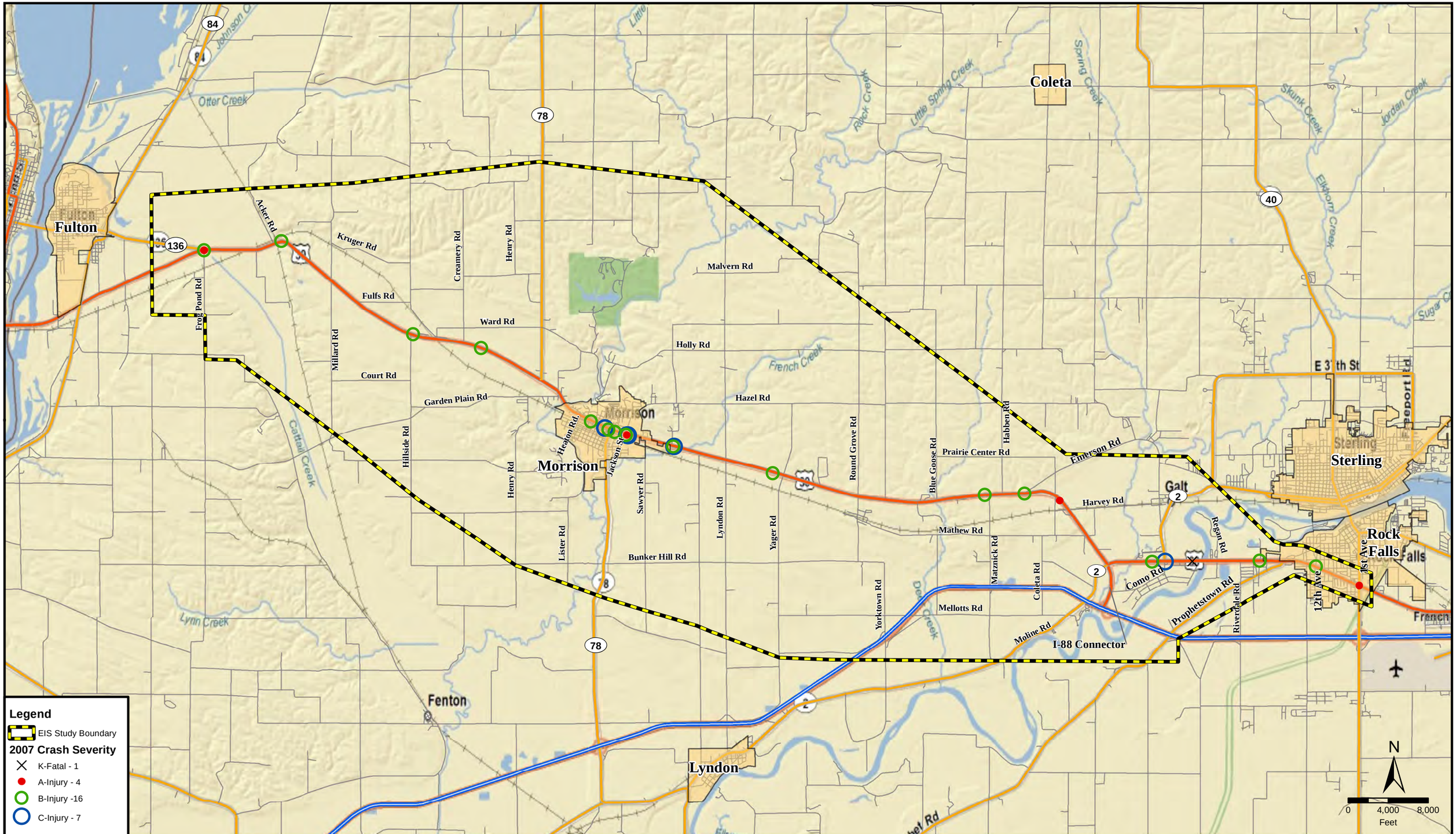


Exhibit 1-6A
2007 Crash Severity
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

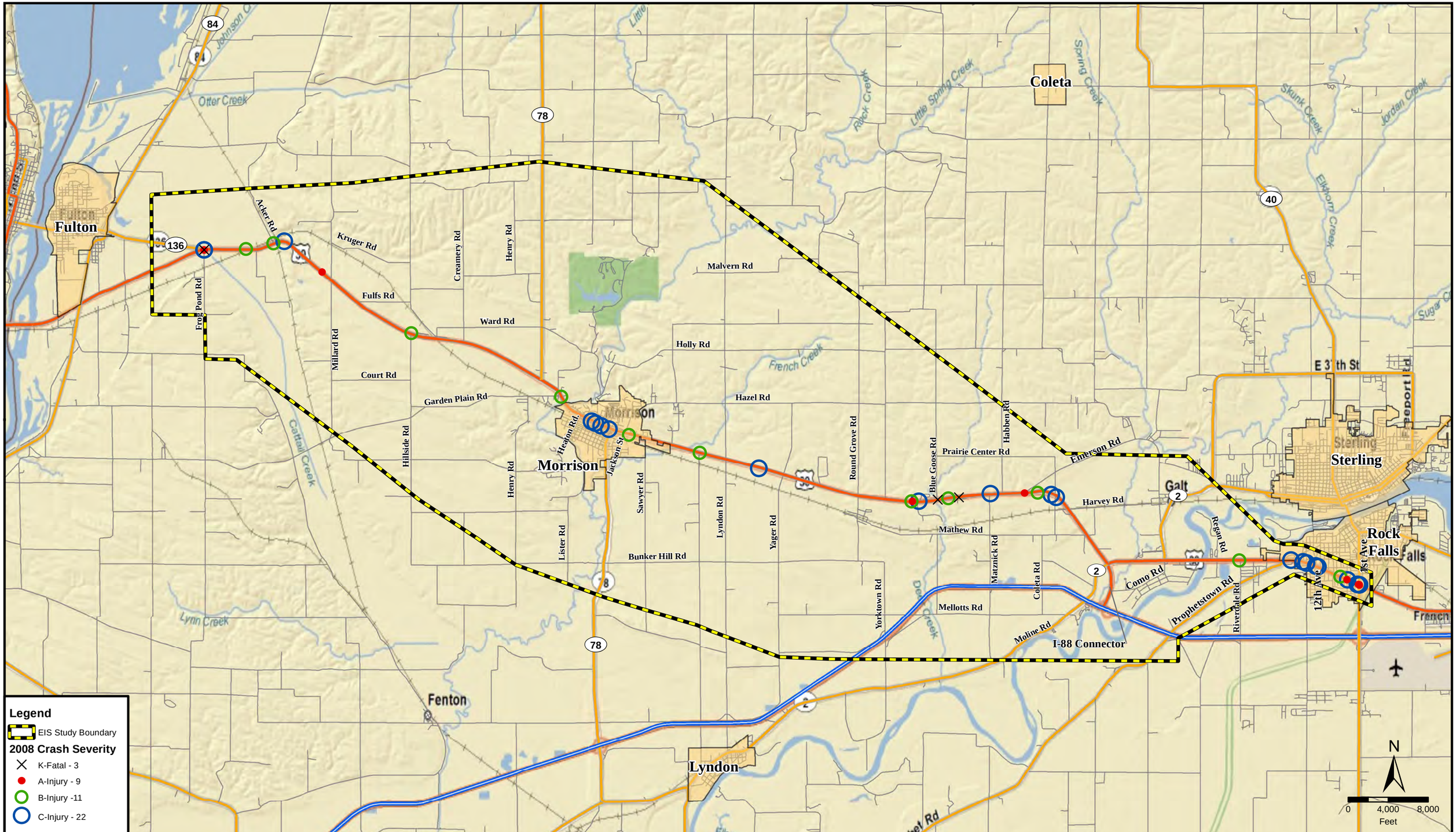


Exhibit 1-6B
2008 Crash Severity
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

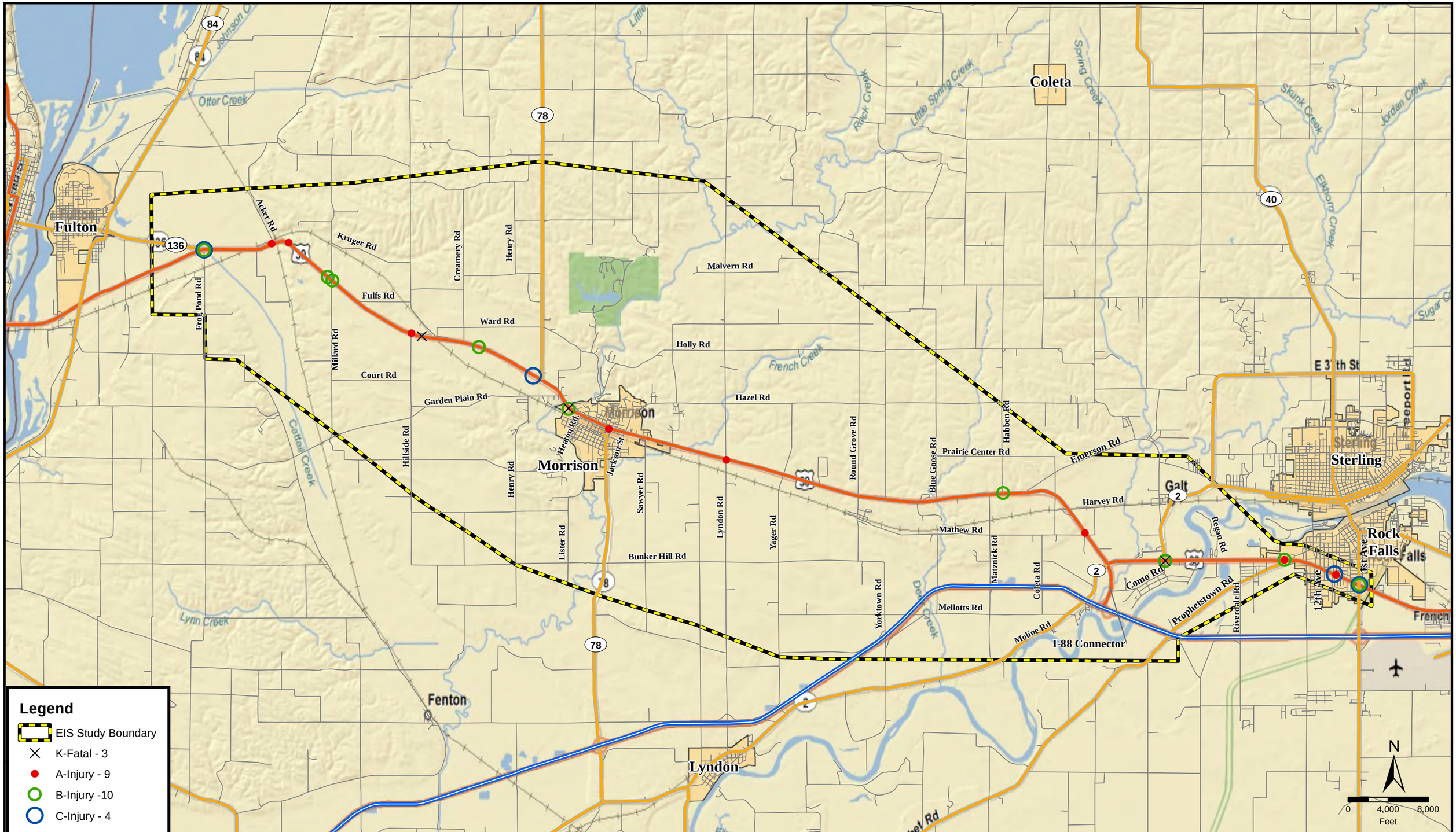


Exhibit 1-6C
2009 Crash Severity
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Exhibit 1-6D
2010 Crash Severity
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

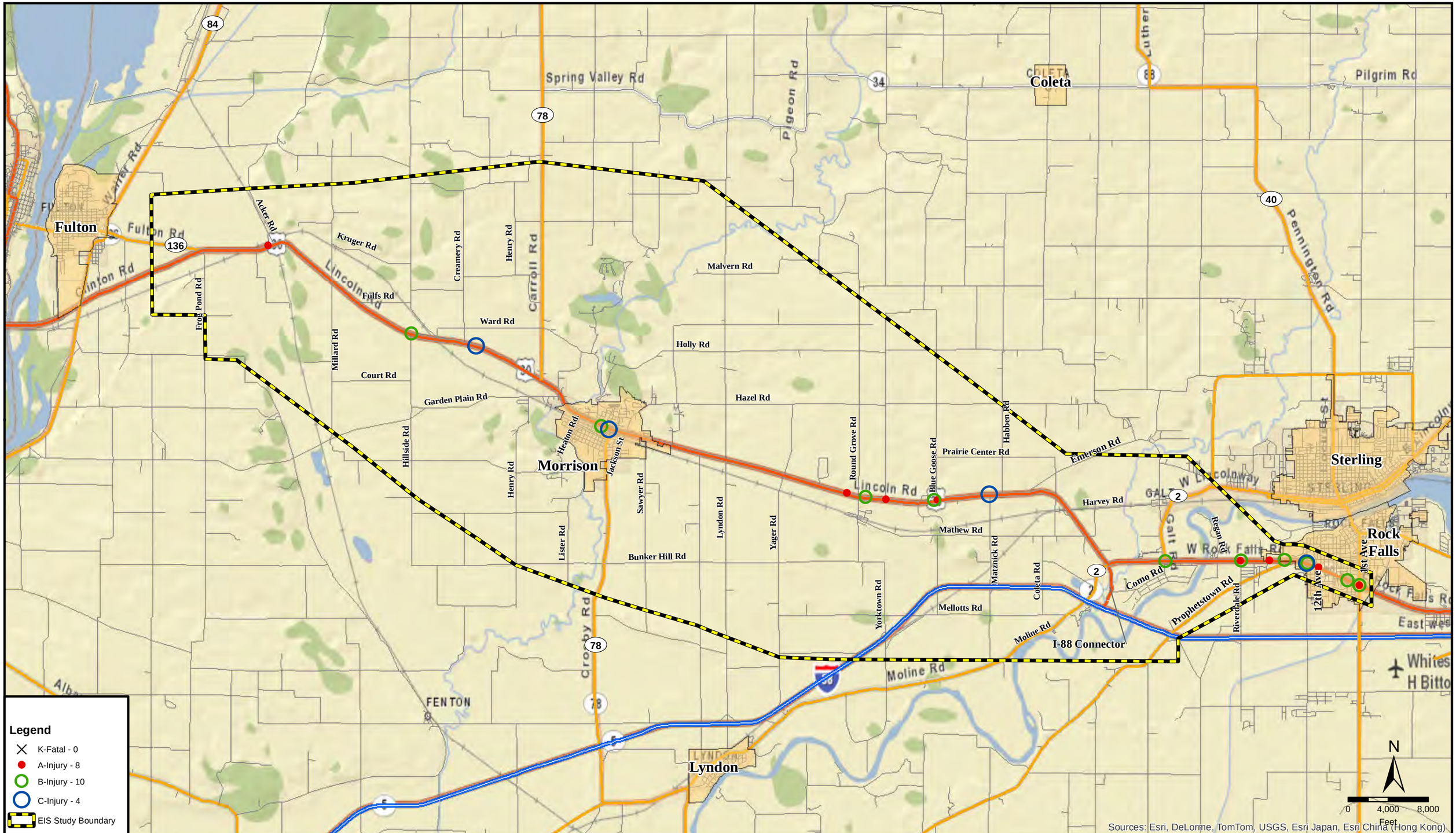


Exhibit 1-6E
2011 Crash Severity
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Chapter 2
Alternatives

2.0 Alternatives

This chapter describes the range of alternatives developed to address the project's Purpose and Need identified in Chapter 1.0. Also presented within this chapter are the initial corridors that were considered, the screening process for reducing the number of corridors, the corridors that were retained for further study, the development of the alternatives within the corridors, a discussion of reasonable alternatives retained for detailed study, the reasons for eliminating alternatives from further study, and the Build Alternatives.

2.1 No-Build Alternative

The No-Build Alternative consists of leaving existing U.S. 30 in place. With this alternative, work on the roadway would be limited to short-term maintenance activities, resurfacing improvements, and minor changes to improve safety at high volume intersections between IL 136 east of Fulton and IL 40 in Rock Falls. In general, the No-Build Alternative may require small amounts of right-of-way for routine maintenance of the existing roadway. Efforts would be made to avoid additional impacts to the natural environment, agricultural, residential, and commercial properties. The No-Build Alternative would not address the project's Purpose and Need goals of improving traffic capacity, reducing traffic congestion, improving safety, providing for an increase in transportation demand, and establishing roadway continuity. The No-Build Alternative is not considered a viable alternative because only minor improvements would be made to existing U.S. 30. This Alternative has been retained for study to comply with the requirements of the National Environmental Policy Act (NEPA) and as a basis of comparison to the Build Alternatives.

2.2 Widening Existing U.S. 30 Through the City of Morrison

The range of alternatives discussed in this chapter does not include an alternative that proposes to widen existing U.S. 30 through the city of Morrison. There are two (2) key reasons this is not an alternative. First, in 2004, IDOT completed a study that proposed to widen U.S. 30 to a three-lane section through town from IL 78 North to French Creek in Morrison. As a direct result of public comments and concerns, the project length was reduced from Jackson Street to French Creek on the east side of Morrison. Second, the construction of a three-lane roadway would not eliminate the safety and operational concerns associated with the non-compatible uses of the corridor with large truck traffic, increasing volumes of traffic, narrow lanes, sidewalks adjacent to the roadway, school crossings, and farm equipment use. As a result, construction of a three-lane roadway through the downtown area would not eliminate the need for a four-lane expressway routed outside of town to accommodate future traffic demands. For these reasons, a three-lane roadway would not meet the objectives of the Purpose and Need.

2.3 Project Corridor and Alternative Screening Process

The project employed a logical, phased approach to identify potential alignments for U.S. 30 within the project study area. The project began by identifying corridors for consideration.

Specific alternatives were developed within the selected corridors, a process that at first addressed the corridor-wide transportation system issues while leaving location-specific decisions for the subsequent alternative alignment study. The corridor selection framed and narrowed the boundaries for the alternative alignment selections.

The screening process that was followed for the corridors and alternatives focused on ways to address the project's Purpose and Need while minimizing impacts to the human and natural environment.

The Build Alternatives described in this Chapter are the result of an extensive process that began in 2002 with a Corridor Study of the U.S. 30 roadway in Whiteside County. In conjunction with the Corridor Study, a supplemental Traffic Origin Destination (O-D) Study was completed in 2006. The O-D Study provided information on the types of vehicles and nature of trips of those using U.S. 30. Both studies provided the basis for initiating the EIS process in 2007.

2.4 Corridor Study and Origin Destination Study (2002 to 2006)

From 2002 to 2006 a Corridor Study was conducted on the section of U.S. 30 from IL 136 near Fulton to Moline Road and the I-88 Spur, located approximately one (1) mile north of I-88. The results of the Corridor Study confirmed: 1) there was enough interest in the project for it to be recommended for a Phase I study, 2) there was a need to enhance the transportation system within Whiteside County between the cities of Fulton and Rock Falls, and 3) that the Phase I study needed to address safety, mobility, and environmental issues. Also in an effort to better understand the traffic patterns and evaluate the potential for vehicles to use a U.S. 30 expressway, an O-D Study was completed in 2006. From these studies a basis of information and public sentiment was gained for use in the EIS. These studies helped establish the logical termini for the proposed improvement as IL 136 for the western terminus and IL 40 for the eastern terminus. The Corridor Study also recommended opportunities and suggested alternatives to be considered. Traffic information gained from the O-D Study was then utilized in the traffic analysis for the EIS.

2.5 Context Sensitive Solutions

The CSS process was created to assure that the communities served by transportation projects are informed, able to provide input and suggestions, and made a part of the overall planning and design process as decisions are made throughout the project. Stakeholders were identified within the project study area as a part of the U.S. 30 CSS process in the creation of the Stakeholder Involvement Plan (SIP). From the stakeholder list, a Community Advisory Group (CAG) was created to represent various groups, governments, and municipalities. The composition of the CAG was evaluated throughout the project study area to ensure that all stakeholders were adequately represented by the CAG. As the project progressed, CAG members were asked for their recommendations or input as representatives of the community.

Those ideas and recommendations were presented to the Project Study Group (PSG) for further consideration.

The PSG consists of representatives from IDOT, FHWA, other State and Federal agencies, and the consultant team. The PSG is responsible for evaluating data, recommendations and input, and making decisions related to U.S. 30 project alternatives throughout the planning and design process.

2.6 Corridor Development by CAG (October 17, 2007)

After initiating the EIS, key elements of design and environmental issues were identified within the project study area. One of the first steps was to have the CAG determine the key issues for U.S. 30 in order to create a Problem Statement. The Problem Statement was then utilized to develop the project's Purpose and Need Statement.

The CAG was then asked to identify corridors based on environmental factors, design criteria, and the Purpose and Need. The corridors created by the CAG are shown in **Exhibit 2-1**. As seen on **Exhibit 2-1**, the nomenclature is illustrated as such (1A to 5D) because there were five (5) groups of CAG members with approximately seven (7) members in each group. The number represents the group number and the letter represents the corridor created. For example, group one (1) created three (3) corridors, 1A, 1B, and 1C.

2.6.1 Corridor Screening Process

A corridor screening process tool was developed to aid in the corridor selection process. This process was a multiple level screening assessment of the engineering features and environmental impacts of 1,400-foot wide corridors that were developed by the CAG and PSG. The corridors were then reviewed to assure that other reasonable corridors were considered or included. One (1) additional corridor was identified on the west end of the project north of the Union Pacific Railroad between IL 136 and the city of Morrison.

After approval of the corridors by the PSG, the project study area was divided into four (4) sections within which various corridor alternatives were identified as illustrated in **Exhibit 2-2**. This was done to simplify the corridor selection process and allow the project study team, which consists of IDOT and the consultant team, to take a viable section of one (1) corridor and combine it with a viable section of another corridor.

As shown in **Exhibit 2-2**, the four (4) sections, starting at the western terminus of IL 136 and extending east to the eastern terminus of IL 40, were as follows:

- Section 1: IL 136 to west of Hillside Road
- Section 2: West of Hillside Road to Lyndon Road (includes the city of Morrison)
- Section 3: Lyndon Road to west of I-88 Connector
- Section 4: I-88 Connector to IL 40 in Rock Falls

Each of the four (4) sections involved several corridors (**Exhibit 2-2**), which resulted in a total of 28 corridor section alternatives. The number of corridors within each section varied. The corridor section alternatives were then given the following nomenclature:

- Section 1: *1A through 1C*: Three (3) corridor section alternatives
- Section 2: *2A through 2N*: Fourteen (14) corridor section alternatives
- Section 3: *3A through 3H*: Eight (8) corridor section alternatives
- Section 4: *4A through 4C*: Three (3) corridor section alternatives

2.6.1.1 Corridor Section Alternatives Eliminated - Did Not Fulfill the Purpose and Need

Each corridor section alternative (e.g. 1A, 2B, etc.) was first screened to determine if it met the requirements of the Purpose and Need Statement, which includes improving traffic capacity, reducing traffic congestion, improving safety, providing for an increase in transportation demand, and establishing roadway continuity. It was determined at the PSG meeting on September 18, 2008 that corridor section alternatives 2I, 3A, 3F, 3H, 4A, and 4C did not fulfill the Purpose and Need and were therefore eliminated from further study. **Exhibit 2-3** illustrates these corridor section alternatives and the following discussion provides the reasons for eliminating these corridor section alternatives.

All corridor section alternatives within Section 1 met the goals of the Purpose and Need Statement and therefore, all Section 1 corridor section alternatives were retained for further study.

Corridor Section Alternative 2I – This corridor section alternative does not provide a roadway that serves the majority of those travelling on U.S. 30 and does not establish roadway continuity. It does not provide a direct and logical connection nor does it maintain continuity between the communities of Fulton, Morrison, Rock Falls, and Sterling. As evidenced by the existing lower volume of traffic on IL 78, this corridor would not provide the direct access needed by and between these communities. Second, the corridor section alternative departs from the intended east-west path and travels south to I-88. This path is 5.9 miles more than the existing route. Given this significant departure from the existing U.S. 30, a large portion of the U.S. 30 through traffic could reasonably be expected to remain on the existing roadway rather than reroute along Corridor Section Alternative 2I and continue east to I-88. It is anticipated that Corridor Section Alternative 2I would not facilitate existing traffic needs and therefore, would neither sufficiently improve capacity nor reduce congestion, thus not meeting these particular objectives of the Purpose and Need.

Corridor Section Alternative 3A – Similar to Corridor Section Alternative 2I, this corridor section alternative does not fulfill some of the Purpose and Need objectives. Given the significant volume of traffic that currently leaves U.S. 30 to follow Emerson Road, a large portion of the U.S. 30 through traffic could reasonably be expected to remain on the existing corridor

rather than reroute along Corridor Section Alternative 3A and continue east to I-88. Therefore, it does not provide a roadway that serves the majority of those travelling on U.S. 30 and does not maintain roadway continuity between the communities of Fulton, Morrison, Rock Falls, and Sterling.

Corridor Section Alternative 3F – For the reasons described in Corridor Section Alternative 3A, this corridor section alternative does not facilitate existing traffic needs and therefore, will not adequately improve capacity nor reduce congestion, thus not meeting these particular objectives of the Purpose and Need.

Corridor Section Alternative 3H – For the reasons described in Corridor Section Alternatives 3A and 3F, this corridor section alternative does not facilitate existing traffic needs and therefore, will neither adequately improve capacity nor reduce congestion, thus not meeting these particular objectives of the Purpose and Need.

Corridor Section Alternative 4A – This corridor section alternative runs along I-88 beginning at the interchange with the spur that connects I-88 to U.S. 30 at its intersection with Moline Road where it then heads east to IL 40 just south of Rock Falls. I-88 is an existing four-lane freeway. Roadway improvements will not be necessary along this section of the corridor to fulfill the Purpose and Need because the existing facility provides a high level of safety and addresses capacity. However, it does not meet the Purpose and Need for the significant amount of traffic that is not diverted to I-88. Without improvements to the existing U.S. 30 facility east of Moline Road, a significant portion of traffic that continues to utilize that route would be left with a facility that has not been improved in terms of safety or capacity. In addition, the existing two-lane facility would be incompatible with the remainder of the corridor.

Corridor Section Alternative 4C – This corridor section alternative runs along the existing U.S. 30 spur which connects U.S. 30 at Moline Road to I-88. It is 0.85 mile in length and consists of an existing four-lane expressway cross section. This roadway segment has an existing LOS A and would not require geometric improvements to fulfill the requirements of the Purpose and Need. For the reasons described above for Corridor Section Alternative 4A, this section corridor alternative does not facilitate existing traffic needs and therefore, will not adequately improve capacity nor reduce congestion, thus not meeting these particular objectives of the Purpose and Need.

2.6.1.2 Corridor Section Alternatives Carried Forward for Further Study

The remaining corridor section alternatives were as follows (see **Exhibit 2-2** Corridor Sections & Corridor Section Alternatives Early 2008 for location):

- Section 1: *1A through 1C:* Three (3) corridor section alternatives
- Section 2: *2A through 2H and 2-J through 2-N:* Thirteen (13) corridor section alternatives
- Section 3: *3B through 3E and 3-G*: Five (5) corridor section alternatives
- Section 4: *4B*: One (1) corridor section alternative

These corridor section alternatives (**Exhibit 2-2**) were then screened against each other within each individual section. For example, corridor section alternatives 1A, 1B, and 1C were only screened against each other and not against those corridor section alternatives in Section 2, 3, or 4. The reason for screening within each individual section was because with such a large project study area along with the large number of corridor section alternatives, issues that were prominent within one (1) section of the project study area, may not be so in another, or may not even exist. Eventually, it allowed for one (1) viable section of one (1) corridor to be combined with a viable section of another corridor with the anticipation of creating one corridor with the least cumulative impacts.

Forty-eight (48) engineering, environmental, and socio-economic indicators as depicted in **Appendix A** were used in the corridor section alternative screening process. In late 2008, based on the results of this screening process and direction from the PSG and recommendations from the CAG (see **Public Involvement Document** for meeting minutes), corridor section alternatives 1B, 2A, 2B, 2C, 2D, 2F, 2G, 2H, 2J, 2K, 2M, 2N, 3D, 3E, and 3G were recommended to be eliminated. These eliminated corridor section alternatives are depicted in **Table 2-1** in green. Corridor section alternatives 1A, 1C, 2E, 2L, 3B, 3C, and 4B were recommended to be carried forward for further study. These retained corridors are depicted in **Table 2-1** in blue.

Although there were 48 indicators with which the corridor section alternatives were screened against, there were seven (7) indicators that became evident as the primary reasons for eliminating or retaining a corridor section alternative: length, agricultural ground impacts, farm severances, farmsteads displacements, residential displacements, floodplain encroachments, wetland impacts, and forest impacts. These are the indicators identified in **Table 2-1**.

Table 2-1: Corridor Section Alternatives Retained or Eliminated from Further Study							Retained	
Impacts are based on a 1,400 foot wide footprint							Eliminated	
Corridor Section Alternative	Length (miles)	Agricul-tural (acres)	Farm Sever-ance (#)	Farm-stead Displace-ments (#)	Residential Displace-ments (#)	Flood-plain Encroach-ments (acres)	Wetland Impacts (acres)	Forest Impacts (acres)
SECTION 1								
1A	4.26	987	7	3	3	141	0.2	51
1B	6.38	1,007	0	32	10	345	0.7	70
1C	6.05	727	7	19	15	193	0.1	120
SECTION 2								
2A	11.39	2,743	11	22	28	89	18	1
2B	10.85	2,086	10	22	100	61	27	117
2C	11.41	2,909	7	24	30	88	10	0
2D	11.75	2,832	12	51	32	107	11	1
2E	9.26	1,436	22	21	51	26	10	87
2F	12.17	2,941	12	41	49	73	11	4
2G	12.83	2,306	37	31	53	65	3	6
2H	11.11	2,562	9	16	32	89	23	96
2J	11.10	2,714	5	15	32	89	20	21
2K	10.69	2,276	7	17	46	155	20	64
2L	11.21	2,905	4	38	32	89	10	1
2M	11.48	2,874	7	45	33	89	6	25
2N	10.62	2,715	2	26	34	100	9	11
SECTION 3								
3B	8.41	1,420	8	12	12	6	2	4
3C	7.31	1,273	11	10	3	6	2	64
3D	10.38	1,560	47	60	22	0	0	0
3E	10.58	1,600	37	27	11	0	0	36
3G	10.54	1,489	19	37	68	0	0	93

The project study area consists mainly of a rural agricultural community, therefore, indicators such as the number of acres of farmland impacted, the number of longitudinal farm severances, and farmstead displacements emerged as principal factors when screening the corridor section alternatives. Likewise, the numbers of residential displacements were considered as a key issue and corridor section alternatives with high residential displacements were eliminated from further study. Two (2) resources, floodplains and wetlands, have regulations that require consideration of avoidance alternatives. Corridor section alternatives that had considerable floodplain and wetland impacts were eliminated. Impacts to forested areas also emerged as a principal factor because of their habitat value for wildlife and corridor section alternatives containing considerable forest area impacts were eliminated from further study. Various combinations of these factors plus others in **Appendix A** were sufficient for the CAG and PSG to eliminate those marked in green in **Table 2-1** from further study.

The following is a discussion of reasons for eliminating the corridor section alternatives highlighted green in **Table 2-1**. Please see **Exhibit 2-2** for location. It should be noted that if a reason is given, it is because the corridor section alternative had a greater impact than that of the corridor alternative(s) carried forward for that section.

Corridor section alternative 4B was not evaluated in **Table 2-1** as it occurs on the existing U.S. 30 roadway. As was discussed previously, corridor section alternatives 4A and 4C did not meet the project's Purpose and Need Statement.

Section 1:

Corridors Section Alternative 1B – This corridor section alternative does not utilize existing U.S. 30 and extends south of the existing U.S. 30 roadway on new alignment creating the longest route (6.38 miles) within Section 1. In addition, this corridor section alternative has the greatest agricultural ground impact in Section 1 by requiring 1,007 acres. Lastly, 1B displaces 32 farmsteads and encroaches upon 345 acres of floodplain.

Section 2:

All corridor section alternatives within Section 2 begin at or near Hillside Road and extend south of U.S. 30 and the city of Morrison. Only one (1) corridor section alternative within Section 2 goes north of the city of Morrison. This is corridor section alternative 2E, which was one (1) of the two (2) corridor section alternatives (the other is 2L) carried forward for further study.

Corridor Section Alternative 2A - This corridor section alternative is similar to the alignment of corridor section alternative 2L, which was recommended to be carried forward, but impacts eight (8) additional acres of wetlands for a total of 18 acres.

Corridor Section Alternative 2B – This corridor section alternative had 100 residential displacements, the most in Section 2. In addition, this corridor section alternative had the greatest wetland impact (27 acres) and forest area impact (117 acres) within Section 2.

Corridor Section Alternative 2C – This corridor section alternative is similar to the alignment of corridor section alternative 2L, which was recommended to be carried forward, but is a slightly longer route, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost.

Corridor Section Alternative 2D – This corridor section alternative has the greatest number of farmstead displacements (51) within Section 2 and has a floodplain encroachment of 107 acres. Lastly, it has a slightly higher impact to wetlands (11 acres), than the corridor section alternatives carried forward.

Corridor Section Alternative 2F – This corridor section alternative is almost a mile longer (12.17 miles) than corridor section alternative 2L, which was carried forward for further study, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. In addition, this corridor section alternative has the greatest agricultural ground impact in Section 2 by requiring 2,941 acres. Lastly, it displaces 41 farmsteads and has a slightly higher impact to wetlands (11 acres) than the corridor section alternatives carried forward.

Corridor Section Alternative 2G – This corridor section alternative is the longest route in Section 2 at 12.83 miles, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. In addition, it severs 37 farms and displaces 53 residents.

Corridor Section Alternative 2H – This corridor section alternative impacts 13 more acres of wetlands (23 acres total), than either of the corridor section alternatives carried forward for further study. In addition, this corridor section alternative impacts 96 acres of forested area.

Corridor Section Alternative 2J – This corridor section alternative impacts 20 acres of wetlands; 10 acres more than the corridor alternatives carried forward in Section 2.

Corridor Section Alternative 2K – This corridor section alternative has the largest floodplain encroachment in Section 2 with 155 acres and also impacts 20 acres of wetlands.

Corridor Section Alternative 2M – This corridor section alternative is slightly longer (11.48 miles) than corridor section alternative 2L, which was carried forward for further study, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. Lastly, this corridor section alternative displaces 45 farmsteads.

Corridor Section Alternative 2N – This corridor section alternative encroaches upon 100 acres of floodplain.

Section 3:

Corridor Section Alternative 3D - This corridor section alternative does not utilize existing U.S. 30 therefore creating a longer route (10.38 miles) than those carried forward for further study in Section 3, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. In addition, this corridor section alternative had considerable impacts on the agricultural and residential community including the use of 1,560 acres of agricultural ground, 47 farm severances, 60 farmstead displacements, and 22 residential displacements.

Corridor Section Alternative 3E - This corridor section alternative does not utilize existing U.S. 30 and is the longest route (10.58 miles) in Section 3, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. In addition, this corridor section alternative had considerable impacts on the agricultural community including the use of 1,600 acres of agricultural ground, 37 farm severances, and 27 farmstead displacements.

Corridor Section Alternative 3G - This corridor section alternative does not utilize existing U.S. 30 therefore creating a longer route (10.54 miles) than those carried forward for further study in Section 3, thus creating an increased travel time for the users of the road and an increased maintenance and operational cost. In addition, this corridor section alternative had considerable impacts on the agricultural and residential community including the use of 1,489 acres of agricultural ground, 19 farm severances, 37 farmstead displacements, and 68 residential displacements. Lastly, this corridor section alternative had the largest impact to forested areas (93 acres) within Section 3.

2.6.1.3 Final Corridors

With the determination to carry the corridor section alternatives 1A, 1C, 2E, 2L, 3B, 3C, and 4B (**Exhibit 2-4**) forward for further study, the next step was to connect corridor alternatives from each section and create a 1,400-foot wide corridor in which reasonable alternatives could be developed.

The combination of these corridor section alternatives resulted in two (2) 1,400-foot wide corridors that extend the length of the project from IL 136 east of Fulton to IL 40 in Rock Falls (**Exhibit 2-5**). The following describes the two (2) corridors, starting on the west end of the project study area:

- Corridor 1 goes north of the existing U.S. 30 roadway, stayed north of the city of Morrison, tied back into the existing U.S. 30 roadway on the east side of Morrison, and followed the existing roadway to IL 40.
- Corridor 2 started on the existing U.S. 30 roadway, heads south of the city of Morrison, tied back into the existing U.S. 30 roadway on the east side of Morrison, and followed the existing roadway to IL 40.

2.6.1.4 Public Informational Open House (January 2009)

On January 29, 2009, the two (2) corridors identified as the areas of focus for the development of alternatives (**Exhibit 2-5**) were displayed to the public at an open house held at the United Methodist Church, located along U.S. 30 in Morrison. The purpose of this meeting was to garner public input on these corridors. Two-hundred and thirty-seven people attended the open house. The top three (3) issues/concerns expressed in comment forms were:

- Concerns regarding farmland/environmental impacts
- Prefer a southern corridor
- Northern corridor is not preferred

2.6.1.5 NEPA 404/Merger Meeting (February 2009): Final Corridors Established

In February 2009, Corridor 1 and 2 (**Exhibit 2-5**) were presented to FHWA and the environmental resource agencies at the NEPA 404/Merger Meeting. As a result of the presentation, a corridor that had been eliminated by the PSG was added back into the corridors for development of alternative alignments. The corridor was originally eliminated because it did not utilize much of the existing U.S. 30 route, which is a desire of the PSG and CAG. This additional corridor follows the same proposed path as Corridor 2, but stays south of existing U.S. 30 along Bunker Hill Road until it reaches the I-88 and U.S. 30 intersection. The agencies stated that they wanted this third corridor to be carried forward so that alternative alignments would not be limited to widening the existing U.S. 30 route. Therefore, three (3) corridors moved forward in the development of alternatives (**Exhibit 2-6**).

2.7 Development of Alternatives

This section describes the development of alternatives within the three (3) corridors identified in **Exhibit 2-6**.

2.7.1 Initial Alternatives

Six (6) alignments (**Exhibit 2-7**) were developed within the three (3) corridors. The six (6) alignments utilized some sections of the existing U.S. 30 roadway and were approximately 200 feet wide. In those areas where the alignment and profile accommodate the proposed cross section, the center of the proposed median was located 37 feet offset from the existing U.S. 30 centerline. This allows the existing alignment to be used as one (1) of the sets of lanes. These alignments were labeled “Alternative _-CL.” The next step was to create two (2) additional alternatives based on each initial alternative; one (1) using the existing pavement for westbound and the other using existing pavement for eastbound. Where the proposed centerline was offset to the north, the existing pavement was used for the eastbound lanes. Options with this offset were labeled “Alternative __-EB.” Similarly, a “mirrored” option was created by offsetting

to the south and utilizing the existing pavement for the westbound lanes. These options were labeled "Alternative __-WB."". This process resulted in 18 initial alignments.

Although Corridor 3 did not follow existing U.S. 30, a portion of the Bunker Hill Road right-of-way could be used. Similar to the process described in the preceding paragraph, two (2) alternatives were added. The first labeled Alternative 3-EB, offset the alignment 100 feet north to minimize impacts to the properties along the south side of Bunker Hill Road. The other, labeled Alternatives 3-WB, offset the alignment 100 feet south to minimize impacts to the properties along the north side of Bunker Hill Road.

Next, the impacts of the 18 initial alignments were evaluated based on the 48 indicators as previously discussed in this Chapter. Each alternative was screened in sections. Therefore, Alternative 1 that used the centerline of U.S. 30 was screened against Alternative 1 using the westbound lane and Alternative 1 using the eastbound lane. The alternative within its section that resulted in the least amount of impact to the human and natural environment was the one that was carried forward for further adjustment and study. These included Alternatives 1-EB, 2-WB, 3-WB, 4-EB, 5-WB, and 6-WB. The quantitative data can be found in the spreadsheet in **Appendix A**.

The nomenclatures for these alternatives were then changed to simply Alternatives 1, 2, 3, 4, 5, and 6 as shown in **Exhibit 2-7**.

2.7.2 Western Terminus at IL 136/Frog Pond Road to just East of the BNSF RR

A further review of the topography at the western terminus of IL 136 to a point east of the Burlington Northern Santa Fe Railroad (BNSF RR) identified the presence of two (2) railroad crossings within 0.6 mile of each other. This yielded concerns regarding the footprint of the alternatives as well as costs and difficulties regarding the staging of construction. The first of these crossings involved the Union Pacific Railroad (UPRR) and the second involved the BNSF RR. In an effort to address these concerns, the "West End" options (**Exhibit 2-8**) were developed.

West End Option 1

The alignment begins approximately 0.25 mile west of the intersection with IL 136, leaves existing U.S. 30 and continues along a path north of existing U.S. 30 and the UPRR. It begins curving south 0.15 mile west of the BNSF RR and crosses the railroad at a 30 degree skew approximately 0.3 mile north of the UPRR. It then crosses the UPRR at a 40 degree skew approximately 0.3 mile east of the BNSF RR. At this point it veers back to the southeast and ties into the existing U.S. 30 roadway.

West End Option 2

The alignment begins approximately 0.25 mile west of the intersection with IL 136, then leaves existing U.S. 30 and continues along a path north of existing U.S. 30 and the UPRR. It begins

curving south approximately 0.6 mile west of the BNSF RR and crosses the railroad at a 50 degree skew 0.1 mile north of the UPRR. It then crosses the UPRR at a 35 degree skew approximately 0.1 mile east of the BNSF RR. Within 0.25 mile the curve ends and the alignment ties into the existing U.S. 30 roadway.

West End Option 3

The alignment begins approximately 0.25 mile west of the intersection with IL 136, then leaves existing U.S. 30 and continues along a path north of existing U.S. 30 and the UPRR. Approximately 0.4 mile east of IL 136 the alignment begins curving southeast. Within 0.2 mile of the end of the curve it crosses the UPRR at a 40 degree skew. Almost immediately it begins curving back to the east into a tangent that crosses the BNSF RR at a 15 degree skew. It then veers back to the southeast and ties into the existing U.S. 30 roadway.

West End Option 4

The alignment begins approximately 0.25 mile west of the intersection with IL 136. Immediately east of the IL 136 intersection the alignment begins curving southeast and crosses Spring Brook Creek. In less than 0.1 mile it begins curving back to the northeast and crosses the UPRR at a 40 degree skew. It then begins a curve to the southeast approximately 0.2 mile west of the BNSF RR and follows a path similar to that of the existing roadway. It crosses under the BNSF RR utilizing the existing railroad bridge. The proposed curve ends and the alignment ultimately ties into the existing U.S. 30.

2.7.3 Reasonable Alternatives

A review of the six (6) initial alternative alignments combined with the west end options, showed opportunities for adjustments that would reduce impacts to natural resources, agriculture, cultural resources, and residences. The adjustments were developed and analyzed to determine if the changes would in fact provide for improvement on an overall basis; where possible, these adjustments were made. **Table 2-2** provides a general description of the alternative locations within the project study area. In addition, these six (6) reasonable alternatives are shown in **Exhibit 2-9**. Each of these adjustments involved realignment to avoid or minimize impacts to resources. They included:

- Alternatives 1 and 4: Southerly shift to minimize encroachment into a special waste property.
- Alternatives 1, 2, 4 and 5: Southerly realignment to the south of the cemetery in the vicinity of the landfill to avoid impacts to the cemetery and/or landfill.
- Alternatives 1, 2, 4 and 5: Northerly shift east of Round Grove Road to preclude acquisition from a property with potentially historic structures.
- Alternatives 1, 2, 4 and 5: Northerly shift through the White Oaks subdivision area west of Blue Goose Road to minimize impacts to the Forest Inn Restaurant.
- Alternatives 3 and 6: Southerly shift west of Matznik Road to minimize impacts to a forest area.
- Alternatives 4, 5, and 6: Southerly shift to avoid impacts to the Abbott Thinshell Pecan Tree.

Table 2-2: Description of Reasonable Alternatives
(Starting at the Western Terminus of IL 136/Frog Pond Road heading east to the Eastern Terminus of IL 40)

Portion	Location	Description	Alternative					
			1	2	3	4	5	6
Western	IL 136 to west of Morrison	North of U.S. 30	X	X	X			
		Stays on U.S. 30				X	X	X
Central	Bypass around Morrison	North of Morrison	X			X		
		South of Morrison		X	X		X	X
Eastern	East of Morrison to Moline Road	South of U.S. 30			X			X
		Stays on U.S. 30	X	X		X	X	
Moline Road to IL 40	Moline Road to IL 40	Stays on Existing U.S. 30	X	X	X	X	X	X

2.7.3.1 Alternative Screening Process

By November 2009, six (6) reasonable alternatives had been established as described in **Table 2-2**. In order to determine which alternatives were to be carried forward as the Build Alternatives in the DEIS, the six (6) reasonable alternatives were evaluated based on environmental and engineering factors. A footprint of 200 feet wide, which is the width of the construction limits for the preliminary design of the proposed project as an expressway, was utilized to evaluate the impacts of the six (6) reasonable alternatives. The next two (2) sections provide an overview of the environmental and engineering factors utilized for the evaluation.

2.7.3.1.1 Environmental Factors

The environmental factors that the six (6) reasonable alternatives were screened against include agricultural and environmental impacts, land use changes, relocations, and cost. A summary of the estimated impacts for the reasonable alternatives are illustrated in **Table 2-3**.

Table 2-3: Summary of Estimated Environmental Impacts for Reasonable Alternatives							
These numbers are based on approximately 200 foot wide construction limits.							
The numbers in this table were derived from information available at the time of the reasonable alternative screening.							
Evaluation Factors	**Unit of Measures**	**Alternatives**					
		1	**2**	**3**	**4**	**5**	**6**
AGRICULTURAL							
Number of Farms Affected*	Number	140	149	136	147	151	138
Farmsteads Displaced	Number	8	5	4	9	6	5
Centennial Farms Affected	Number	1	2	2	2	3	3
Farmland Area Converted	Acres	479	519	535	397	453	470
ENVIRONMENTAL							
Wetland Sites Impacted	Number	1	2	2	2	2	2
	Acres	0.24	0.36	0.36	0.79	0.36	0.36
Threatened & Endangered Species**	Number	2	2	2	2	2	2
Streams Crossings	Number	8	7	7	9	8	8
Floodplain Encroachments***	Number	12	11	11	12	11	11
Forest Areas Affected	Number	6	5	4	4	3	2
Special Waste Sites	Number	2	0	0	3	1	1
LAND USE/SOCIOECONOMIC							
Relocations (Business)	Number	2	2	2	2	2	2
Relocations (Residential)****	Number	28	21	13	35	24	16
OTHER FACTORS							
Total Length	Miles	27	27	30	25	26	25
Total Area Converted to ROW	Acres	530	557	567	450	495	505
Preliminary Costs (2020 Dollars)	Million $	411	407	354	414	383	331

*Property Impacts
**Black sandshell mussel in Elkhorn Creek & Rock River
***100-year floodplain
****Includes farmstead displacements

In regard to the agricultural setting, the data in **Table 2-3** illustrates that with a construction limit footprint of 200 feet wide, at a minimum, 397 acres of agricultural land will be acquired for

Alternative 4 and 535 acres of agricultural land will be acquired for Alternative 3. **Table 2-3** depicts that Alternative 3 causes property impacts to 136 farms while Alternative 5 will affect 151 farms. This includes the displacement of four (4) farmsteads with Alternative 3 and nine (9) farmsteads with Alternative 4.

Table 2-3 also illustrates the impacts of the six (6) reasonable alternatives on the natural and cultural environment. The impacts to the wetlands range from 0.24 acre of impact (Alternate 1) to 0.79 acre (Alternate 4). There are nine (9) streams in the project study area that may be affected by the proposed project. At the eastern end of the project, Alternates 1, 2, 4, and 5 use the existing alignment to cross five (5) of these streams (Unnamed Tributary of the Rock River, Deer Creek, Elkhorn Creek, Rock River, and Union Drainage Ditch), whereas Alternates 3 and 6 cross two (2) of these streams on new alignment (Unnamed Tributary of the Rock River and Deer Creek). Though all alignments cross Rock Creek, Alternates 2, 3, 5, and 6 cross the stream south of Morrison while Alternates 1 and 4 cross the stream north of Morrison. There are seven (7) floodplains in the project study area. Most of the floodplain impacts are common to all alignments. At the western terminus of IL 136, all alignments are associated with the Mississippi River/Cattail Creek floodplain. At the eastern end of the project all alignments are associated with the Elkhorn Creek, Rock River, and Union Drainage Ditch floodplains. Four (4) of the floodplain encroachments depicted on **Table 2-3** occur on Elkhorn Creek. This multiple encroachment occurs because of the geometry between the Elkhorn Creek floodplain and the U.S. 30, Como Road, and Lincoln Road intersection. Lastly, all six (6) reasonable alternatives will impact the State Threatened mussel, the black sandshell (*Ligumia recta*). This mussel is associated with the existing bridges on the Rock River and Elkhorn Creek and impacts to this species cannot be avoided. Potential habitat for the Federally Endangered Species, the Indiana bat (*Myotis sodalis)*, occurs along the Rock River and Elkhorn Creek. At this time, consultation with the U.S. Fish and Wildlife Service has not been completed.

Table 2-3 shows a range of 13 residential displacements (Alternative 3) to 35 residential displacements (Alternative 4) are possible. In regard to displacements in the areas where the alternative's design involves widening the existing U.S. 30 roadway to 200 feet, there is a range of seven (7) displacements (Alternative 3) to 23 displacements (Alternative 4). In regard to displacements that would occur as a result of new alignment, there is a range of three (3) displacements (Alternative 6) to 14 displacements (Alternative 1). It should be noted that no churches, schools, or public facilities would be displaced by any of the six (6) alternatives.

Table 2-3 provides an overview of the total length of the proposed alternatives, with Alternative 4 and 6 being the shortest (25 miles), with Alternative 4 requiring the least amount of new right-of-way (450 acres) and Alternative 3 being the longest (30 miles) and requiring the greatest amount of new right-of-way (567 acres).

Lastly, the table provides an estimated construction cost for the proposed alternatives with the highest for Alternative 4 ($414 million). Alternative 4 has the highest cost despite the fact that it and Alternative 6 are the shortest in terms of proposed alignment. In comparing these two (2) alternatives, the largest difference in cost is with respect to that of proposed structures. In terms of number of bridges, Alternative 4 includes eight (8) sets of bridges in the section west of

Moline Road whereas Alternative 6 includes only five (5) sets. The difference in structure costs is attributable also to the estimated bridge lengths. Most notably, Alternative 4 includes two (2) lengthy sets of bridges in area north of Morrison. The first set spans Crosby Road, Rock Creek and Browns Road as well as a deep ravine leading up to Norrish Road. The second set is located just east of Norrish Road and spans an extremely deep ravine. None of the Alternative 6 structures are of notable length.

Another significant difference between Alternatives 4 and 6 involves earth excavation related items. The large difference in cost for these items is due to the fact that Alternative 4 traverses much more diverse terrain than does Alternative 6. The resulting difference in earthwork quantities is significant.

The other significant contributor to cost differences between Alternatives 4 and 6 involves pavement construction. Despite the fact that the overall mainline lengths of Alternatives 4 and 6 are very close, the amount of pavement required for side road and frontage road construction is significantly higher for Alternative 4. The mainline associated with Alternative 4 intersects with 23 side roads whereas that of Alternative 6 intersects with only 20. More importantly, however, the alignment lengths associated with side road reconstruction is in general significantly higher for Alternative 4 than it is for Alternative 6. This is in part due to the skew with which the mainline intersects the side roads and the need to provide a reasonable alignment to tie side roads into existing. In addition, the geometry for reconnecting side roads is more complex in several situations for Alternative 4. Finally, Alternative 4 includes construction of lengthy frontage roads at White Oaks Road, Blue Goose Road, and Mathew Road to provide access to the adjacent properties without compromising access control requirements. Alternative 6 would not require construction of frontage roads. An opinion of probable cost for the six (6) reasonable alternatives can be found in **Appendix A**.

The No-Build Alternative would not require new right-of-way and would avoid additional impacts to the natural environment, agricultural, residential, and commercial properties.

2.7.3.1.2 Engineering Factors

The traffic evaluation used for the six (6) reasonable alternatives was based upon the analysis of two (2) of the project's key issues, traffic operations and congestion. Therefore, the evaluation analyzed the traffic operations of the proposed alternatives and the existing roadway utilization.

Traffic Operations: The traffic operations for the proposed alternatives were evaluated on the basis of traffic flow and congestion relief. The LOS is the measure of traffic efficiency. All of the reasonable alternatives are being proposed as a four-lane expressway; therefore, the LOS for each alternative was based on a four-lane uninterrupted flow design and was evaluated utilizing the projected design year traffic. HCS+ traffic capacity software, made by McTrans Traffic Software, based on the Highway Capacity Manual, was used to determine the LOS on the proposed alternatives. As a result of the capacity modeling, it has been determined that an expressway design produces a LOS of A for the projected design year traffic volumes on the

new route within the limits of this project. Traffic on the existing route, including that through the city of Morrison, will also have an improved LOS. In Morrison, the design level of service will be between a LOS B and LOS C for these alternatives, with the majority of the through traffic utilizing the new route. Since the existing route will serve as a local collector once the new roadway is constructed this is an acceptable level of efficiency.

Existing Roadway Utilization: In order to determine an alternative's effect on the existing roadway utilization, an evaluation of their reduction in traffic along the existing U.S. 30 roadway in the design year was conducted. The traffic volume improvements on the existing route are based on information gained in the license plate survey conducted for the 2006 Origin-Destination (O-D) Study as part of the Corridor Study. The O-D Study was used in the Corridor Study to gather information on U.S. 30 about trip characteristics for those using the roadway. The information collected was used to determine travel for both local and through traffic volume on the roadway, as well as the combined trips within the project study area. The study determined:

- Approximately 42 percent of the traffic was found to be through trips, 10 percent was local trips, and the remaining 48 percent was combined local and through trips.
- An assumption was made that all of the through traffic will utilize the new U.S. 30 expressway regardless of the roadway location.
- All of the local traffic would follow the existing roadway.
- Because of the location of the businesses and residences visited, it was determined that approximately 25 percent of the combined traffic would use an alternative north of Morrison and 75 percent of combined traffic would use an alternative south of Morrison.

Additional traffic information related to traffic volumes on the side-road connections was also used in the evaluation of the existing roadways usage. Vital traffic considerations include:

- The through traffic on IL 78 could be reduced through town if an alternative connecting both the north and south legs of IL 78 was included. At this time, no alternative is currently proposed to connect the two (2) legs of IL 78 around Morrison.
- The distance the new alternative is from the existing roadway and Morrison will adversely affect the local and combined traffic use. The further the new alternative is, the less local and combined traffic will utilize the corridor.
- Similarly, consideration was given to the alternative connection to the existing roadway on both the east and west side of Morrison. The connection on each side of Morrison will result in more local and combined traffic use.

Based on the O-D Study, **Table 2-4** shows the traffic estimated to utilize the various alternatives thus reducing the use of the existing roadway through town.

Table 2-4: Traffic on the Alternatives (*Based on numbers from the O-D Study*)								
The numbers in this table were derived from information available at the time of the reasonable alternative screening.								
Portion	**Location**	**Description**	***Traffic Use on New Route***					
			1	**2**	**3**	**4**	**5**	**6**
Western Portion	**IL 136 to west of Morrison**	**New Alignment North of U.S. 30**	78%	78%	78%	-	-	-
		Stays on Existing U.S. 30	-	-	-	100%	100%	100%
Central Portion	**Bypass around Morrison**	**New Alignment North of Morrison**	56.2%	-	-	58%	-	-
		New Alignment South of Morrison	-	78.7%	60%	-	78.7%	60.7%
Eastern Portion	**East of Morrison to Moline Road**	**New Alignment South of U.S. 30**	-	-	60.7%	-	-	60.7%
		Stays on Existing U.S. 30	95%	95%	-	95%	95%	-

Table 2-5: Traffic to Remain on Existing U.S. 30*								
The numbers in this table were derived from information available at the time of the reasonable alternative screening.								
Portion	**Location**	**Alternative**						
		No-Build	**1**	**2**	**3**	**4**	**5**	**6**
Western Portion	**IL 136 to west of Morrison**	7,900 to 8,400	1,700 to 1,800	1,700 to 1,800	1,700 to 1,800	0	0	0
Central Portion	**Bypass around Morrison**	8,400 to 12,200	3,500 to 7,300	1,600 to 5,400	3,200 to 7,000	3,400 to 7,200	1,600 to 5,400	3,100 to 6,900
Eastern Portion	**East of Morrison to Moline Road**	6,000 to 8,300	300 to 400	300 to 400	2,400 to 3,300	300 to 400	300 to 400	2,400 to 3,300

*The traffic volumes in Morrison increased due to both local (around town) traffic and various side road connections including IL 78. Therefore, the volume that was considered as reasonably diverted to U.S. 30 were those through, local, and combined traffic volumes found on either side of town – for this the projected average of 8,650 was used as a basis.

As a result of the traffic drawn onto the new U.S. 30 roadway as illustrated by **Table 2-4**, the following **Table 2-5** shows the traffic projected to remain on the existing roadway sections.

When the traffic volumes were analyzed on the existing U.S. 30 roadway utilizing Highway Capacity Software (HCS+ two-lane highway release 5.21), the LOS values were determined based on the premise of the new alternatives (**Table 2-6**).

Table 2-6: LOS on Existing U.S. 30 Route as a Result of the New U.S. 30 Roadway								
Portion	**Location**	***Alternative***						
		No-Build	**1**	**2**	**3**	**4**	**5**	**6**
Western Portion	**IL 136 to west of Morrison**	D	B	B	B	A	A	A
Central Portion	**Bypass around Morrison**	D to E	C	B to C	C	C	B to C	B to C
Eastern Portion	**East of Morrison to Moline Road**	C to E	A	A	C	A	A	C

Crash Reduction rates were projected for the six (6) reasonable alternatives. These rates are a result of design improvement expectations and the traffic flow resulting from the alternative proposals. The rates are given as percentage reduction in crashes projected as a result of each proposal. The given reduction rate for each alternative was based on the total number of crashes on both new and existing roadway.

According to a study on the "Safety Effects of the Conversion of Rural Two-Lane Roadways to Four Lane Roadways" published by the FHWA in November 1999, a conversion of a two-lane roadway to a typical four-lane divided highway resulted in a crash reduction rate of between 40 percent and 60 percent. Therefore, a reduction rate of 50 percent was projected where the existing is replaced by a new roadway on or along the existing.

Additionally the following assumptions were made:

- The percentage of through traffic on new alternatives is 100 percent for U.S. 30.
- The percentage of local traffic on proposed alternatives is based on percentage of corridor on existing roadway.
- The percentage of combined traffic on proposed alternatives was estimated based on information taken from the O-D Study, existing and projected traffic volumes, and connectivity to existing roadways. The study showed 42 percent of total traffic is through traffic, 10 percent is local traffic, and 48 percent is combined local and through traffic.
- Crashes on the existing route will be eliminated if the existing route is replaced by the subject corridor within a segment or at the side-road.

When evaluating the crash reduction rate for the alternatives, each was evaluated within the section to determine its crash reduction factor. These rates were used for the alternatives but since the alternatives extend through each of the sections, it was also important to determine the percent of the overall crashes within each of the sections in order to determine the overall value of the alternative's ability to reduce crashes.

In November of 2009, at the time the six (6) reasonable alternatives were screened, a total of 356 crashes were reported within the three-year period from 2007 through 2009 on U.S. 30 between IL 136 and IL 40. Of these 356 crashes, 86 were reported within the previously improved five-lane section on the east end of the study area between Prophetstown Road and IL 40. No improvements are proposed on this portion of the roadway. Of the remaining 270 crashes, 39 (14.44%) occurred in western portion of the project study area (between IL 136 to west of Morrison), 114 (42.22%) occurred in the central portion (bypass around Morrison), and 79 (29.26%) occurred in the eastern portion of the project study area (East of Morrison and Moline Road).

Combining the crash information along with the traffic volume data in **Table 2-4** and the safety rates suggested in the FHWA report, the Crash Reduction rates for each of the alternatives were determined and shown in **Table 2-7**.

Table 2-7: Estimated Crash Reduction Rates

The numbers in this table were derived from information available at the time of the reasonable alternative screening.

Description	*Alternative % Reduction/# Reduction Crash*						
	No-Build	**1**	**2**	**3**	**4**	**5**	**6**
Western Portion (***IL 136 to west of Morrison***)	0	39%	39%	39%	50%	50%	50%
		15	15	15	20	20	20
Central Portion (***Bypass around Morrison***)	0	23.8%	33%	25.2%	24.2%	33%	25.7%
		27	38	29	28	38	29
Eastern Portion (***East of Morrison to Moline Road***)	0	47.5%	47.5%	30.3%	47.5%	47.5%	30.3%
		38	38	24	38	38	24
TOTAL	0	34%	39%	29%	37%	41%	31%
		80	91	68	86	96	73

2.7.4 PSG and CAG Input: Alternatives Selected for Detailed Study

On April 27, 2010, the PSG discussed the six (6) reasonable alternatives and determined that Alternatives 4 and 5 should be carried forward for further study. The following are reasons for eliminating Alternatives 1, 2, 3, and 6:

Alternative 1 - This alternate does not utilize the existing U.S. 30 roadway in the western portion of the project study area. Because of this alternative's lack of use of the existing U.S. 30 roadway, the proposed alignment requires greater amounts of right-of-way to be purchased and creates a longer route before it reaches the existing U.S. 30. The lack of use of the existing U.S. 30 roadway also creates additional environmental impacts to forested areas and agricultural ground. Please refer to **Table 2-3,** which provides a summary of the environmental impacts of this alternative for comparison purposes.

Alternative 2 - This alternate does not utilize existing U.S. 30 roadway in the western portion of the project area and continues south of Morrison until its first utilization of existing U.S. 30 east of Morrison. Although Alternate 2 bypasses Morrison to the south instead of the north as does Alternate 1, Alternate 2 was also eliminated because of its lack of use of the existing U.S. 30 roadway within the western portion of the project and its additional environmental impacts to forested areas and agricultural ground. Please refer to **Table 2-3,** which provides a summary of the environmental impacts of this alternative for comparison purposes.

Alternative 3 - This alternate does not utilize any portion of the existing U.S. 30 roadway except the portion common to all six (6) alternatives. The use of agricultural land is a key issue for this project. Constructing a new roadway without using any portion of existing U.S. 30 would require the acquisition of approximately 535 acres of agricultural land which is the largest amount required by any of the alternatives. Lastly, the portion of U.S. 30 east of the city of Morrison receives a significant amount of traffic traveling from the city of Sterling (which is north of U.S. 30) via Emerson Road. A corridor to the south of existing U.S. 30 east of Morrison would not minimize the traffic congestion caused by the Emerson Road traffic. Please refer to **Table 2-3,** which provides a summary of the environmental impacts of this alternative for comparison purposes.

Alternative 6 - This alternate utilizes existing U.S. 30 in the western portion of the project area and continues south of Morrison, but similar to Alternate 3, it stays south of existing U.S. 30 east of Morrison. This alternate was eliminated from further study for the same reasons stated for Alternate 3. These reasons include the acquisition of approximately 470 acres of agricultural land. In addition, the portion of U.S. 30 east of the city of Morrison receives a significant amount of traffic traveling from the city of Sterling (which is north of U.S. 30) via Emerson Road. A corridor to the south of existing U.S. 30 east of Morrison would not minimize the traffic congestion caused by the Emerson Road traffic. Please refer to **Table 2-3,** which provides a summary of the environmental impacts of this alternative for comparison purposes.

The PSG was in agreement with this decision, but also agreed this information should be presented to and discussed with the CAG.

The six (6) reasonable alternatives were then presented to the CAG on June 2, 2010. The purpose of the CAG meeting was to gain input on alternatives and gather consensus from the CAG in regard to carrying only Alternatives 4 and 5 forward for further study. The overall concerns and/or comments expressed by the CAG at this meeting were as follows:

- No-Build is not an option
- Preserve farmland – stay on existing U.S. 30 as much as possible
- Concerns regarding sustainability and visibility of Morrison businesses
- Proximity to the industrial park would allow for better economic development growth opportunities
- Quality of life in the area should be a concern

- Concern about the north alignment restricting development and compatibility with surroundings
- Environmental sensitivity/prudence

2.8 Detailed Descriptions of the Alternatives Selected for Detailed Study

It was determined and recommended to carry Alternatives 4 and 5 (**Exhibit 2-10a**) forward for further study in the DEIS as the Build Alternatives for the following reasons: (Please refer to **Tables 2-3** through **2-7** for statistics)

- Maximize the utilization of the existing U.S. 30 roadway
- Location aids in relieving traffic congestion from Emerson Road
- Provides a reduction in crashes and increases the LOS
- Establish roadway continuity
- Requires the minimum amount of farmland area to be converted to right-of-way
- Shortest routes
- Requires the minimum amount of total area to be converted to right-of-way

2.8.1 Public Hearing Comments on Build Alternatives (June 2011)

On June 15, 2011, IDOT hosted an open house public hearing. The purpose of the hearing was to afford the public with an opportunity to review the proposed 2011 alternatives (see Exhibit 2-10a) and the DEIS document, discuss their concerns regarding the project with the project team, and provide comments on 2011 Alternatives 4 and 5, and the No-Build Alternative. Build Alternatives 4 and 5 primarily follow the existing U.S. 30 roadway east and west of the city of Morrison. The existing U.S. 30 roadway bisects Morrison; however, the proposed U.S. 30 alternatives would bypass Morrison. Alternative 4's alignment would bypass the city to the north and Alternative 5's alignment would bypass the city to the south. The No-Build Alternative would consist of leaving U.S. 30 in place and work on the roadway would be limited to short-term maintenance activities, resurfacing improvements and minor changes to improve safety at high volume intersections. Eighty-eight comments were received as a result of the hearing, 63 of which the respondent identified a singular alternative preference. The remaining 25 comments did not provide an individual preference on the build alternatives or the no-build alternative. Of the 63, approximately 59 percent of the respondents preferred Build Alternative 5 (37) followed by the No-Build Alternative (23), and Build Alternative 4 (3).

2.8.2 Realignment of Build Alternatives 4 and 5 (2012)

The Federal Emergency Management Agency (FEMA) completed its Floodplain Insurance Study of Whiteside County in 2011. The results of this study included revised mapping of the 100-year floodplains within the U.S. 30 project study area (Exhibit 2-11). Within the study area, the most considerable revision was the expansion of the floodplain

associated with French Creek, which is located just outside of Morrison's eastern city limits.

With the expansion of the French Creek floodplain, Build Alternative 5 (southern) and to a lesser extent Build Alternative 4 (northern) now had an increase in impacts to the floodplain. The Build Alternatives would have longitudinal encroachments on the floodplains within the project study area and also could indirectly promote future development within the 100-year floodplain. As such, IDOT directed efforts toward practicable solutions for minimization of these floodplain impacts by a partial realignment of Build Alternatives 4 and 5 outside of the French Creek floodplain while retaining the basic nature of the original alignments.

The section of Build Alternative 5 that was realigned consists of the section from Sawyer Road heading east to just east of Lyndon Road. The revised Build Alternative 5 is now about a mile southeast from the original Build Alternative 5 alignment. This allows for complete avoidance of the French Creek floodplain. The modification begins just west of IL 78 to allow the alternative to avoid the southern tip of the French Creek floodplain. The revised alignment now extends further east before swinging to the north to cross the railroad. Once across the railroad, the revised Build Alternative 5 will have a shape similar to the original alignment. It will cross over existing U.S. 30 to the north, then follow a gradual "S" curve, which crosses existing U.S. 30 again before swinging back to the north to rejoin the existing U.S. 30.

The "T" intersection with existing U.S. 30 leading into Morrison would be 1.7 miles east of Sawyer Road versus 0.9 mile under the original Build Alternative 5. The revised Build Alternative 5 proposes to provide access to existing U.S. 30 in the vicinity of the Prairie Hill Landfill through a new connector from Round Grove Road (Exhibit 3-10, p.12). The remaining section of existing U.S. 30 roadway between the "T" intersection eastward to Round Grove Road will have cul-de-sacs on each end and access to Build Alternative 5 will be provided at Yager Road (Exhibit 3-10, p.11).

In addition to the changes to Build Alternative 5, a small section of Build Alternative 4 (northern) was moved slightly east to also avoid the revised French Creek floodplain in the area just west of Lyndon Road. This effort also served to follow the Floodplain Management Executive Order by minimizing the floodplain impacts for Build Alternative 4.

The remainder of Build Alternative 4 and Build Alternative 5 are unchanged from the alignments presented at the June 2011 Public Hearing.

2.8.3 Basic Features of Build Alternatives

This project is being planned and preliminarily designed as a four-lane expressway. The proposed divided four-lane **rural and urban** typical **sections** can be found in **Exhibits 2-12a and b.** An example of a divided four-lane expressway is illustrated in **Figure 2-1**.

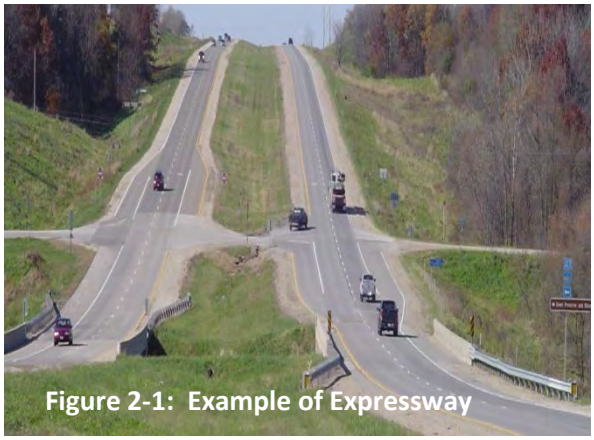


Figure 2-1: Example of Expressway

An expressway is a highway that provides a higher level of mobility and safety than a typical highway. It does this with higher design standards, fewer access points, and more lanes of traffic. It typically has two (2) or more lanes in each direction with ample paved shoulders and a median separating the two (2) directions of travel. The median is most often a ditch with relatively gentle slopes and measures approximately 50 feet between opposing lanes of travel. Expressways strive to limit access, but not to the extent of an interstate highway. For instance, where a side road meets an interstate, the side road is either provided with access to the interstate through one (1) of three (3) options: via an interchange, it is carried over (overpass) or under (underpass) the interstate with no access to the interstate highway, or dead ends at the interstate highway. A fourth option typically available for expressways is at-grade intersections. As long as projected traffic volumes on the side road are under a certain level, the fourth option can be implemented. Another important distinction for expressways is that private access points such as agricultural field entrances and driveways for single-family homes are allowed when other options for access are not available. However, direct commercial access to an expressway is prohibited.

Four (4) lanes are warranted throughout the majority of the project study area based on design year traffic volume projections. The sections where two (2) lanes meet the projected volumes would be incompatible with the adjacent multi-lane facility and would not provide system continuity. In addition, Illinois policies require a divided highway cross section for its high-speed multi-lane facilities, which would help improve safety. This would also be possible with a freeway; however, the resulting impacts to adjacent properties would be significantly greater. In addition, the level of access control associated with a freeway would be more restrictive than the highway facility located to the west in Iowa, which could be considered inconsistent with the need to provide system continuity. In order to provide a facility that addresses the safety, capacity, and continuity elements of the Purpose and Need while providing the lowest level of impacts, it was deemed most appropriate to improve U.S. 30 as an expressway.

2.8.4 Detailed Description of Build Alternative 4

The following is a detailed description of Build Alternative 4 as illustrated in **Exhibit 2-10b**.

The proposed Alternative 4 begins approximately 0.45 mile west of the existing U.S. 30 intersection with IL 136. It remains on the existing alignment for approximately 0.2 mile then begins curving gently to the right for approximately 0.55 mile. In this initial area, the project transitions from the existing two-lane to a four-lane divided cross section in advance of the proposed intersection with IL 136/Frog Pond Road. The proposed intersection is approximately 250 feet west of the existing location. The north and south legs of this intersection are to be reconstructed to provide appropriate intersecting angles and smooth alignments. The existing U.S. 30 highway will be realigned from the east to tie into the south leg, Frog Pond Road, approximately 440 feet south of the mainline.

The mainline continues on tangent for 0.72 mile beyond the end of the initial curve. At this point it begins another curve to the right and bridges over Acker Road, two (2) railroads (the Burlington Northern Santa Fe and Union Pacific) and a creek (Spring Brook Creek). The mainline then utilizes a short curve to allow it to begin roughly paralleling the existing alignment approximately 49 feet to the south. Acker Road will not be afforded direct access to the mainline but will continue to intersect with existing U.S. 30. A cul-de-sac will be constructed for existing U.S. 30 immediately to the east of Acker Road. Existing U.S. 30 will remain intact as a frontage road from this point back to the west to Frog Pond Road.

The proposed mainline parallels the existing roadway as described above. This continues for approximately 0.86 mile at which point reverse curves to the right are introduced to preclude impacts to a recognized biological resource (the Abbott Thinshell Pecan Tree). Approximately 0.31 mile prior to the curves, the mainline intersects with Millard Road which will be realigned to provide appropriate intersecting angles and smooth alignments. Fulfs Road intersects with existing U.S. 30 approximately 0.32 mile to the east of the start of the reverse curves. In order to provide appropriate spacing, Fulfs Road will not be afforded direct access to the mainline. Rather, it will continue to intersect with existing U.S. 30 which will be terminated with a cul-de-sac immediately to the west.

Following the reverse curves described above, the mainline roughly parallels existing U.S. 30 approximately 380 feet to the south. This continues for approximately 0.54 mile at which point the alignment has been changed from continuing on the U.S. 30 roadway until it reaches IL 78 North to now curving to the right to take a southeasterly course. Within 0.1 mile at the end of this curve an intersection with Hillside Road is introduced. Both legs of Hillside Road will be realigned to provide appropriate intersecting angles and smooth alignments.

Approximately 0.22 mile east of Hillside Road the mainline curves to the left to take an easterly course. It crosses a small stream and bridges over the Union Pacific Railroad. It then curves slightly to the right and crosses existing U.S. 30 which will be terminated with cul-de-sacs on either side of the mainline. Within 0.1 mile it crosses a stream and intersects with IL 78 at nearly a right angle. The north leg of IL 78 will be retained. The south leg will be realigned to tie into existing U.S. 30 to the east.

The mainline continues to the east and crosses Norton Road approximately 0.25 mile east of IL 78. Cul-de-sacs will be constructed on both legs of Norton Road to help provide adequate spacing along the mainline. At this location the mainline begins a gentle curve to the right. In the midst of this curve an intersection will be provided for Norton Road to the north. Approximately 0.3 mile to the east begins a bridge carrying the mainline over Crosby Road, Rock Creek, and Browns Road. Shortly beyond the end of the bridge the mainline intersects with Norrish Road which retains its existing alignment.

The mainline begins to curve to the right approximately **0.96** mile east of **Norrish Road** and crosses Bishop Road within 0.33 mile. Cul-de-sacs will be constructed for Bishop Road on either side of the mainline. The mainline then intersects with Hazel Road near the end of the curve. Hazel Road will be realigned to provide appropriate intersecting angles and smooth alignments.

Approximately 0.1 mile beyond Hazel Road the mainline begins curving to the left. Within a few hundred feet beyond the end of the curve it crosses French Creek. The alignment then crosses Lyndon Road approximately **0.26** mile beyond the creek and existing U.S. 30 which is another **0.60** mile to the east. Lyndon Road will bridge over the mainline and will be realigned horizontally to minimize impacts to adjacent properties. An at-grade intersection will be created at existing U.S. 30 which will be realigned to provide appropriate intersecting angles and smooth alignments.

The mainline begins curving to the left approximately **0.18** mile east of existing U.S. 30. In the midst of this curve it **crosses** Yager Road for which **cul-de-sacs will be constructed on either side of the mainline**. Approximately 0.24 mile to the east the curve ends and the mainline roughly parallels the Union Pacific Railroad for a distance of approximately 0.29 mile. It then curves to the left back toward existing U.S. 30. In the midst of the curve the mainline crosses a perennial stream. **In addition, within a few hundred feet of the curve's beginning, a new roadway will be built to the north to connect the mainline with existing U.S. 30. The new roadway will intersect with the existing U.S. 30 across from the driveway serving the Prairie Hill Landfill. Shortly after the end of the aforementioned curve, the mainline** intersects with Round Grove Road which retains its existing alignment for both legs. Existing U.S. 30 is to be terminated with a cul-de-sac to the west of Round Grove Road. The mainline crosses existing U.S. 30 to the east of Round Grove Road and curves to the right to roughly parallel the existing highway. This continues for the remainder of the alternate with slight offset variations introduced to preclude various impacts.

Approximately 0.50 mile east of Round Grove Road, the mainline intersects with Yorktown Road. The north leg of this "tee" intersection will be realigned to provide the appropriate intersecting angle and a smooth alignment. Within 0.22 mile beyond the intersection the mainline begins curving back to the left. In the midst of this curve an intersection is created with White Oaks Road which is to be shifted approximately 0.1 mile to the west to provide better spacing from Blue Goose Road which intersects another 0.46 mile to the east. The mainline crosses Deer Creek between these intersections. The south leg of both intersections will

consist of a service drive providing access to various properties in the area. A service drive that intersects with Blue Goose Road will also be provided along the north side of the mainline to the east. The service drive extends approximately 0.5 mile east of Blue Goose Road.

Between Blue Goose Road and Habben Road, a series of three (3) curves is introduced to the mainline to allow it to continue roughly tracking the existing alignment. In the midst of the third curve, the mainline intersects with Matznik Road which will retain its existing alignment. Approximately 0.25 mile beyond this, Habben Road will be terminated with a cul-de-sac.

The mainline intersects with Emerson Road approximately 0.44 mile to the east. It is to be realigned to provide an appropriate intersecting angle and smooth alignment. The mainline then begins curving to the right approximately 0.25 mile to the east. In the midst of this curve it crosses Agnew Road which shall be terminated with cul-de-sacs on either side of the mainline. Within 0.1 mile beyond the end of the curve the mainline bridges over the Union Pacific Railroad and Harvey Road. An existing access point that currently connects existing U.S. 30 and Harvey Road a few hundred feet to the south will be removed. After another 0.57 mile the mainline intersects with Mathew Road which shall be shifted approximately 300 feet to the north. Although currently a “tee” intersection, an east leg will be created to provide access to various properties via a service drive. Slightly to the south of this intersection the mainline begins curving to the east. This curve sweeps from a southeasterly direction to an easterly one ending in an alignment parallel and just south of existing U.S. 30. The curve bridges over Elkhorn Creek and ends just east of the creek. This realignment provides an uninterrupted flow for motorists remaining on U.S. 30. This is in contrast to the existing condition in which eastbound motorists approaching from the north must first stop at the intersection with Moline Road then turn left to travel east into Rock Falls.

To further supplement the free flow of traffic, entrance and exit ramps will be constructed for the northbound and southbound movements, correspondingly. The entrance ramp will cross over the mainline. Both ramps will meet at an intersection with Moline Road located approximately 400 feet southeast of the existing intersection. The west leg of this intersection will be realigned to tie into the existing roadway approximately 600 feet from the existing intersection. The east leg will extend east to join with the mainline approximately 1,200 feet east of the entrance ramp overpass. Finally, the south leg of the intersection will be realigned to provide a straight path for traffic utilizing the I-88 spur. Only the west and east legs of this intersection will be stop sign controlled.

East of Elkhorn Creek the mainline continues paralleling the existing alignment and retains an expressway cross section to its intersection with Como Road (south leg) and Galt Road (north leg). In this area, the existing driveway for Ruffit Park and the westernmost driveway for the quarry along the north side of U.S. 30 will be consolidated into a single public road located at the shared line of the two (2) properties. A south leg of this intersection will be built to allow for future access.

At the Como/Galt Road intersection it is anticipated a roundabout will be built. The roundabout will serve as a transition from the expressway cross section to an urban four-lane cross section with raised median. The purchase of access control will end at this intersection. The urban cross section with raised median will be retained to the easternmost construction terminus located approximately 800 feet east of Prophetstown Road. Throughout this area the mainline will parallel existing U.S. 30 and be shifted slightly to the north. The transition back to the existing U.S. 30 alignment occurs just east of Hickory Hills Road. Throughout the area east of Como/Galt Road, side roads will remain on existing alignment and will be standard intersections with median breaks along the mainline. The exception is that a second roundabout is proposed for the Prophetstown Road intersection. This area also includes a crossing of the Rock River located approximately 0.75 mile east of Como/Galt Road.

East of Prophetstown Road the proposed facility transitions into an urban four-lane roadway with a bi-directional left-turn lane. From this point to the intersection with IL 40 construction improvements are not required to meet the Purpose and Need.

2.8.5 Detailed Description of Build Alternative 5

The following is a detailed description of Build Alternative 5 as illustrated in **Exhibit 2-10b**. The proposed project begins approximately 0.45 mile west of the existing U.S. 30 intersection with IL 136. It remains on the existing alignment for approximately 0.2 mile then begins curving gently to the right for approximately 0.55 mile. In this initial area, the project transitions from the existing two-lane to a four-lane divided cross section in advance of the proposed intersection with IL 136/Frog Pond Road. The proposed intersection is approximately 250 feet west of the existing location. The north and south legs of this intersection are to be reconstructed to provide appropriate intersecting angles and smooth alignments. The existing U.S. 30 highway will be realigned from the east to tie into the south leg, Frog Pond Road, approximately 440 feet south of the mainline.

The mainline continues on tangent for 0.72 mile beyond the end of the initial curve. At this point it begins another curve to the right and bridges over Acker Road, two (2) railroads (the Burlington Northern Santa Fe and Union Pacific), and a creek (Spring Brook Creek). The mainline then utilizes a short curve to allow it to begin roughly paralleling the existing alignment approximately 49 feet to the south. Acker Road will not be afforded direct access to the mainline but will continue to intersect with existing U.S. 30. A cul-de-sac will be constructed for existing U.S. 30 immediately to the east of Acker Road. Existing U.S. 30 will remain intact from this point back to the west to Frog Pond Road.

The proposed mainline parallels the existing roadway as described above. This continues for approximately 0.86 mile at which point reverse curves to the right are introduced to preclude impacts to a recognized biological resource (the Abbott Thinshell Pecan Tree). Approximately 0.31 mile prior to the curves the mainline intersects with Millard Road which will be realigned to provide appropriate intersecting angles and smooth alignments. Fulfs Road intersects with existing U.S. 30 approximately 0.32 mile to the east of the start of the reverse curves. In order

to provide appropriate spacing, Fulfs Road will not be afforded direct access to the mainline. Rather, it will continue to intersect with existing U.S. 30 which will be terminated with a cul-de-sac immediately to the west.

Following the reverse curves described above, the mainline roughly parallels existing U.S. 30 approximately 380 feet to the south. This continues for approximately 0.54 mile at which point the mainline curves to the right to take a southeasterly course. Within 0.1 mile of the end of this curve an intersection with Hillside Road is introduced. Both legs of Hillside Road will be realigned to provide appropriate intersecting angles and smooth alignments.

Approximately 0.87 mile southeast of Hillside Road the mainline curves to the right to take a south-by-southeasterly course. Shortly beyond the end of that curve the mainline intersects with Garden Plain Road which retains its current alignment. Approximately 0.22 mile beyond Garden Plain Road the mainline curves back to the left into a southeasterly course. A connection from Prairie Center Road will be provided in the form of a "T" intersection located 0.25 mile beyond the end of the curve. The connection will also tee into Prairie Center Road which is terminated with a cul-de-sac within a few hundred feet to the east.

In this area the mainline roughly parallels existing Prairie Center Road for approximately 0.3 mile before Prairie Center Road curves away from the north side of the mainline. At this location Prairie Center Road is terminated with another cul-de-sac. The mainline intersects with Henry Road approximately 0.3 mile to the east. Both legs of Henry Road will be realigned to provide appropriate intersecting angles and smooth alignments.

At a point approximately 0.56 mile beyond Henry Road, the mainline begins curving to the left into roughly an easterly course. In the midst of this curve it crosses Lister Road which will be terminated on **the south leg with a cul-de-sac. Right-in-right-out access will be provided for the north leg.** Just beyond the end of the curve the mainline crosses Rock Creek as well as an unnamed stream. Within **0.36 mile of Rock Creek, the mainline intersects with IL 78 and IL 78 will be realigned to provide an appropriate intersecting angle and smooth alignment.**

Approximately 0.73 mile east of IL 78, the mainline crosses Sawyer Road, which will be terminated on both legs with cul-de-sacs. The mainline then begins curving to the left approximately 0.54 mile east of Sawyer Road. Near the end of this curve, it crosses Lyndon Road, which will be relocated several hundred feet to the northeast and realigned to tie in appropriately. Approximately 0.26 mile northeast of this intersection the mainline bridges over the Union Pacific Railroad. Approximately 0.25 mile beyond this bridge, a connection to existing U.S. 30 is provided to the west and involves a realignment to provide the appropriate intersecting angle. To the east, existing U.S. 30 is terminated with a cul-de-sac. The mainline then begins curving to the right approximately 0.16 mile beyond this intersection. Just beyond the curve, it crosses Yager Road and existing U.S. 30. Existing U.S. 30 will be terminated with cul-de-sacs on both legs. At a point approximately **0.17** mile beyond existing U.S. 30, the mainline begins to curve back to the left. In the midst of the curve, mainline crosses an unnamed tributary of Rock River. Shortly after the end of the curve it intersects with Round Grove Road which retains its existing

alignment for both legs. Existing U.S. 30 is to be terminated with a cul-de-sac to the west of Round Grove Road. **Access to existing U.S. 30 to the west will be achieved by relocating it to intersect with Round Grove Road approximately 0.18 mile to the north of the mainline.** The mainline then crosses existing U.S. 30 to the east of Round Grove Road and curves to the right to roughly parallel the existing highway. This continues for the remainder of the alternate with slight offset variations introduced to preclude various impacts.

Approximately 0.50 mile east of Round Grove Road the mainline intersects with Yorktown Road. The north leg of this "T" intersection will be realigned to provide the appropriate intersecting angle and a smooth alignment. Within 0.22 mile beyond the intersection the mainline begins curving back to the left. In the midst of this curve an intersection is created with White Oaks Road which is to be shifted approximately 0.1 mile to the west. This will provide better spacing from Blue Goose Road which intersects another 0.46 mile to the east. The mainline crosses Deer Creek between these intersections. The south leg of both intersections will consist of a service drive providing access to various properties in the area. A service drive that intersects with Blue Goose Road will also be provided along the north side of the mainline to the east. The service drive extends approximately 0.5 mile east of Blue Goose Road.

Between Blue Goose Road and Habben Road, a series of three (3) curves is introduced to the mainline to allow it to continue roughly tracking the existing alignment. In the midst of the third curve the mainline intersects with Matznik Road which will retain its existing alignment. Approximately 0.25 mile beyond this, Habben Road will be terminated with a cul-de-sac.

The mainline intersects with Emerson Road approximately 0.44 mile to the east. It is to be realigned to provide an appropriate intersecting angle and smooth alignment. The mainline then begins curving to the right approximately 0.25 mile to the east. In the midst of this curve it crosses Agnew Road which shall be terminated with cul-de-sacs on either side of the mainline. Within 0.1 mile beyond the end of the curve the mainline bridges over the Union Pacific Railroad and Harvey Road. An existing access point that currently connects existing U.S. 30 and Harvey Road a few hundred feet to the south will be removed. After another 0.57 mile the mainline intersects with Mathew Road which shall be shifted approximately 300 feet to the north. Although currently a "T" intersection, an east leg will be created to provide access to various properties via a service drive. Slightly to the south of this intersection the mainline begins curving to the east. This curve sweeps from a southeasterly direction to an easterly one ending in an alignment parallel and just south of existing U.S. 30. It reaches this point just east of Elkhorn Creek. This realignment provides an uninterrupted flow for motorists remaining on U.S. 30. This is in contrast to the existing condition in which eastbound motorists approaching from the north must first stop at the intersection with Moline Road then turn left to travel east into Rock Falls.

To further supplement the free flow of traffic, entrance and exit ramps will be constructed for the northbound and southbound movements, correspondingly. The entrance ramp will cross over the mainline. Both ramps will meet at an intersection with Moline Road located approximately 400 feet southeast of the existing intersection. The west leg of this intersection will be realigned to tie into the existing roadway approximately 600 feet from the existing intersection. The east

leg will extend east to join with the mainline approximately 1,200 feet east of the entrance ramp overpass. Finally, the south leg of the intersection will be realigned to provide a straight path for traffic utilizing the I-88 spur. Only the west and east legs of this intersection will be stop sign controlled.

East of Elkhorn Creek the mainline continues paralleling the existing alignment and retains an expressway cross section to its intersection with Como Road (south leg) and Galt Road (north leg). In this area, the existing driveway for Ruffit Park and the westernmost driveway for the quarry along the north side of U.S. 30 will be consolidated into a single public road located at the shared line of the two (2) properties. A south leg of this intersection will be built to allow for future access.

At the Como/Galt Road intersection it is anticipated a roundabout will be built. The roundabout will serve as a transition from the expressway cross section to an urban four-lane cross section with raised median. The purchase of access control will end at this intersection. The urban cross section with raised median will be retained to the easternmost construction terminus located approximately 800 feet east of Prophetstown Road. Throughout this area the mainline will parallel existing U.S. 30 and be shifted slightly to the north. The transition back to the existing U.S. 30 alignment occurs just east of Hickory Hills Road. Throughout the area east of Como/Galt Road, side roads will remain on existing alignment and will be standard intersections with median breaks along the mainline. The exception is that a second roundabout is proposed for the Prophetstown Road intersection. This area also includes a crossing of the Rock River located approximately 0.75 mile east of Como/Galt Road.

East of Prophetstown Road the proposed facility transitions into an urban four-lane roadway with a bi-directional left-turn lane. From this point to the intersection with IL 40 construction improvements are not required to meet the Purpose and Need.

2.9 Comparison of Build Alternatives 4 and 5

Table 2-8 provides a summary of the estimated environmental impacts associated with the two (2) Build Alternatives, 4 and 5. The impacts and avoidance measures for the criteria listed in the **Table 2-8** are described in detail in Chapter 3.

When comparing **Table 2-8** to **Table 2-3,** which provides a summary of estimated environmental impacts for the six (6) reasonable alternatives, some of the evaluation factors in **Table 2-8** have experienced no change in impacts or a decrease in impacts due to the refinement of Build Alternatives 4 and 5 in an effort to minimize impacts on the environment.

There has been an increase in impacts associated with some of the evaluation factors listed in

Table 2-8: Summary of Estimated Environmental Impacts for Build Alternatives 4 & 5						
The data reflects ROW necessary for access and intersection improvements.						
Evaluation Factors	**Unit of Measure**	**Alternatives**				
		Common Impacts to Build Alternatives 4 & 5	**4 North Bypass Only**	**4 TOTAL**	**5 South Bypass Only**	**5 TOTAL**
AGRICULTURAL						
Number of Farms Affected*	Number	**69**	**36**	**105**	**37**	**106**
Farmsteads Displaced	Number	**6**	**5**	11	**4**	**10**
Centennial Farms Affected	Number	2	0	2	1	3
Farmland Area Converted	Acres	365	**235**	**600**	**257**	**622**
ENVIRONMENTAL						
Wetland Sites Impacted	Number	1	0	1	0	1
	Acres	0.24	0	0.24	0	0.24
Threatened & Endangered Species**	Number	2	0	2	0	2
Streams Crossings	Number	8	1	9	0	8
Floodplain Encroachments***	Linear Feet	**13,375**	**983**	**14,358**	**1,863**	**15,238**
Forest Areas Affected	Number	0	2	2	1	1
REC Sites****	Number	**38**	**10**	**48**	**4**	**42**
Reptile & Amphibian Important Use Area	**Number**	**0**	**0**	**0**	**1**	**1**
LAND USE/SOCIOECONOMIC						
Relocations (Business)	Number	4	0	4	**1**	**5**
Relocations (Residential)*****	Number	27	**12**	**39**	**7**	**34**
OTHER FACTORS						
Total Length	Miles	12	13	25	14	26
Total Area Converted to ROW	Acres	409	**267**	**676**	**269**	**678**
Preliminary Costs (2020 Dollars)	Million $	N/A	**437**		**405**	

*Property Impacts
**Black sandshell mussel in Elkhorn Creek & Rock River
***100-year floodplain
****Sites with Recognized Environmental Conditions
*****Includes farmstead displacements

Table 2-8 versus **Table 2-3** because as the project progressed, it became more evident where right-of-way would be required. Because there is a potential for disturbance to human biological, and agricultural features associated with acquiring right-of-way, the decision was made to evaluate the impacts based on the footprint of the right-of-way limits, which varies throughout the project study area.

As illustrated in **Table 2-8**, both Build Alternatives have numerous common impacts on the biological, agricultural, and human environment because of the common alignment Build Alternative 4 and 5 share the same alignment to the east and west of the city of Morrison. The difference in impacts is a result of the Build Alternative 4 bypassing the city of Morrison to the north and Build Alternative 5 bypassing Morrison to the south.

The impacts are as follows in regard to agricultural impacts. For Build Alternatives 4 and 5, the same **69** farms will be affected by having a portion of the property displaced. Build Alternative 4 will affect an additional **36** farms to the north of Morrison for a total of **105** farms affected, and Build Alternative 5 will affect an additional **37** farms to the south of Morrison for a total of **106** farms affected. Build Alternative 4 and 5 will displace the same **six (6)** farmsteads. Build Alternative 4 will displace an additional **five (5)** farmsteads north of Morrison for a total of 11 farmsteads displaced, and Build Alternative 5 will displace **four (4)** additional farmsteads for a total of **10** (see **Exhibit 3-10** for location of displacements). Two (2) centennial farms, one (1) of which is a sesquicentennial farm, (see **Exhibit 3-10, p. 3 & 12**), will be affected by Build Alternatives 4 and 5. Build Alternative 4 will not affect any additional centennial farms north of Morrison. Build Alternative 5 will affect one (1) additional centennial farm south of Morrison (see **Exhibit 3-10, p. 6**), for a total of three (3) centennial farms affected. Lastly, the total farmland area that will be converted to public right-of-way for both Build Alternatives 4 and 5 will be 365 acres. Build Alternative 4 will require an additional **235** acres of farmland north of Morrison for a total of **600** acres, and for Build Alternative 5 an additional **257** acres will be required south of Morrison for a total of **622** acres.

In regard to the biological resources, both Build Alternative 4 and 5 will impact wetland site 78 and create 0.24 acre of impact (see **Exhibit 3-10, p.14**). Both Build Alternatives will have an impact on the State Threatened black sandshell mussel found in Elkhorn Creek and the Rock River because of the proposed project's construction in or adjacent to these waterways. Both Build Alternatives will cross the Spring Brook Creek, the Unnamed Tributary to Rock Creek, the Unnamed Tributary of Rock River, Deer Creek, Elkhorn Creek, Rock River, and the Union Drainage Ditch. These crossings could require various permits and/or certifications (see Section 3.17). Both Build Alternatives will require **13,375** linear feet of encroachment into the 100-year floodplain. For Build Alternative 4, an additional **983** linear feet of 100-year floodplain will be encroached upon north of Morrison for a total of **14,358** linear feet. For Build Alternative 5, an additional **1,863** linear feet will be encroached upon south of Morrison for a total of **15,238** linear feet. In regard to forested areas, Build Alternatives 4 and 5 do not share any common impacts. Build Alternative 4 would impact a total of two (2) forested areas and Build Alternative 5 would impact one (1). **Build Alternative 5 will also impact an Important Use Area for reptiles and amphibians (see Exhibit 3-10, p. 12).**

For **sites with Recognized Environmental Conditions (RECs)**, Build Alternatives 4 and 5 would impact **38** sites. Build Alternative 4 would impact an additional **10** sites **with RECs** north of Morrison for a total of **48. Build Alternative 5 would impact an additional four (4) sites with RECs south of Morrison for a total of 42.**

Build Alternatives 4 and 5 will both displace the same four (4) businesses (see **Exhibit 3-10, p. 1, 2, 12, & 15**). **Build Alternative 5 would displace an additional business for a total of five (5) (see Exhibit 3-10 p. 12).** Regarding residential displacements, it is anticipated that Build Alternatives 4 and 5 would displace the same 27 residences, which includes **six (6)** farmsteads. Build Alternative 4 would displace an additional **12** residents, including **five (5)** farmsteads, for a total of **39** residential displacements. Build Alternative 5 would displace an additional **seven (7)** residents, including **four (4)** farmsteads, for a total of **34** residential displacements (see **Exhibit 3-10** for displacements).

In comparison of the length, both Build Alternatives share 12 miles in common. Build Alternative 4 requires an additional 13 miles for a total of length of 25 miles, and Build Alternative 5 requires an additional 14 miles for a total length of 26 miles. In regard to area that will be required to be converted to public right-of-way, both Build Alternatives will require the same 409 acres. Build Alternative 4 will require an additional **267** acres north of Morrison for a total of **676** acres, and Build Alternative 5 will be require an additional **269** acres south of Morrison for a total of **678** acres. Lastly, for preliminary cost, Build Alternative 4 will cost approximately $**437 million** dollars in 2020 dollars and Build Alternative 5 will cost approximately $**405** million dollars in 2020 dollars.

These Build Alternatives will continue to be refined in order to avoid and minimize impacts to the extent possible while continuing to fulfill the Purpose and Need of the project.

2.10 Other Alternatives Considered

2.10.1 Transportation Control Measures

Transportation control measures attempt to reduce the number of auto trips and to increase transit use (primarily bus ridership) or carpooling. Transit service is not available in the project study area and there is no documentation that states there are plans to begin this service. The project study area is comprised of a rural environment and it makes it unlikely that there would be sufficient ridership to warrant or support a transit service. Therefore, transportation control measures are not considered reasonable or feasible for reducing traffic congestion, improving traffic capacity, improving safety, providing for an increase in transportation demand, or establishing roadway continuity, thus not meeting these particular objectives of the Purpose and Need.

2.10.2 Transportation System Management (TSM) Alternative

Transportation system management (TSM) utilizes measures to maximize the efficiency and use of the highway to help alleviate or postpone the need to increase capacity. Such measures include engineering design features to improve traffic flow and safety, such as intersection and traffic signal improvements, eliminating or consolidating driveways, adding passing lanes at critical locations, widening shoulders, and flattening slopes, among others. Although the transportation system management alternative might partially address some transportation deficiencies in the project study area, a TSM stand-alone alternative will not meet the Purpose and Need.

2.11 Selection of Preferred Alternative

Alternatives 4 and 5 are under consideration to be selected as a preferred alternative. A preferred alternative will be selected after the environmental regulatory agencies and the public provide comment on the **Supplement** Draft EIS via the public hearing process. All comments will be fully evaluated before a preferred alternative is selected and discussed in the Final EIS.

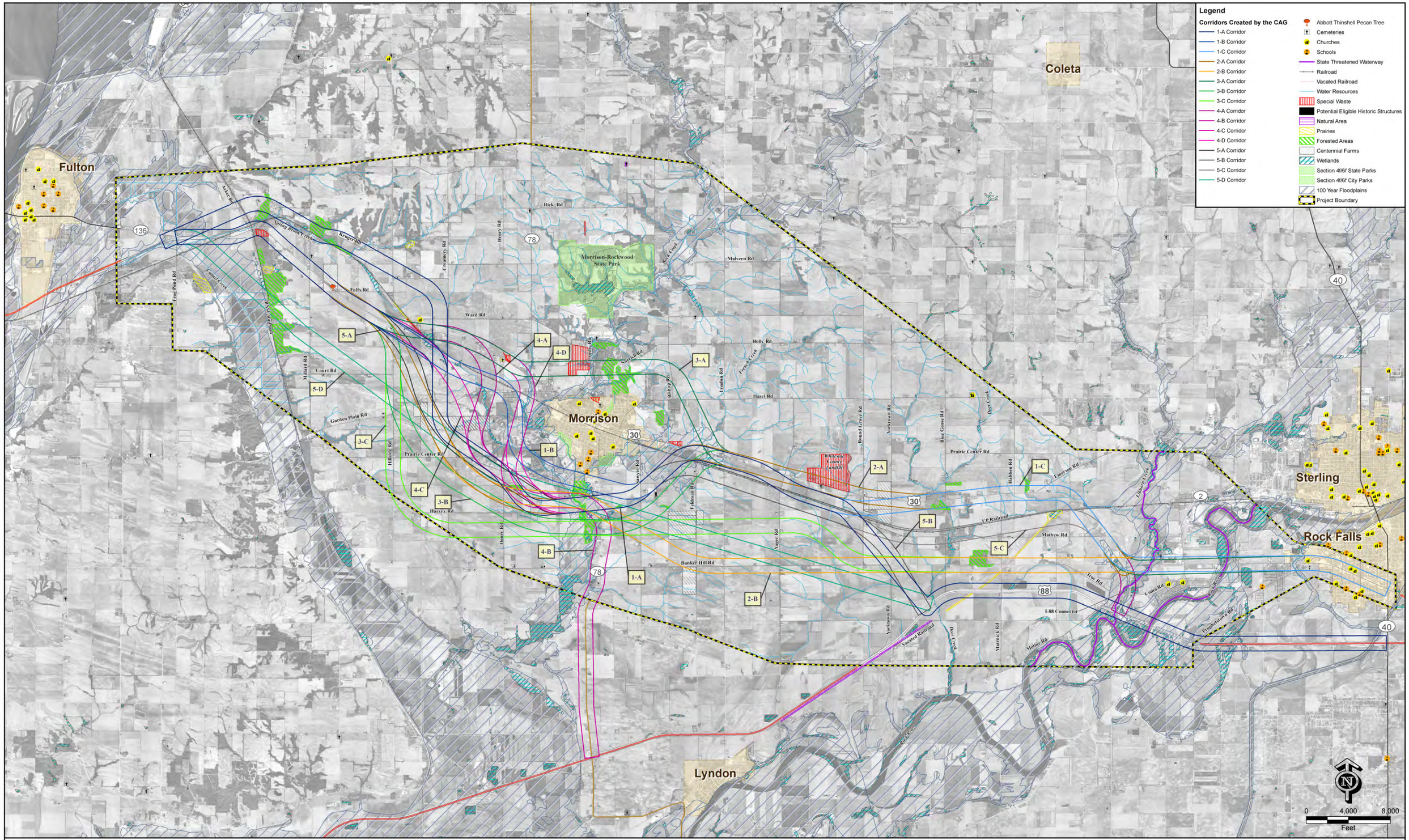


Exhibit 2-1
Corridors Created by the CAG (October 17, 2007)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

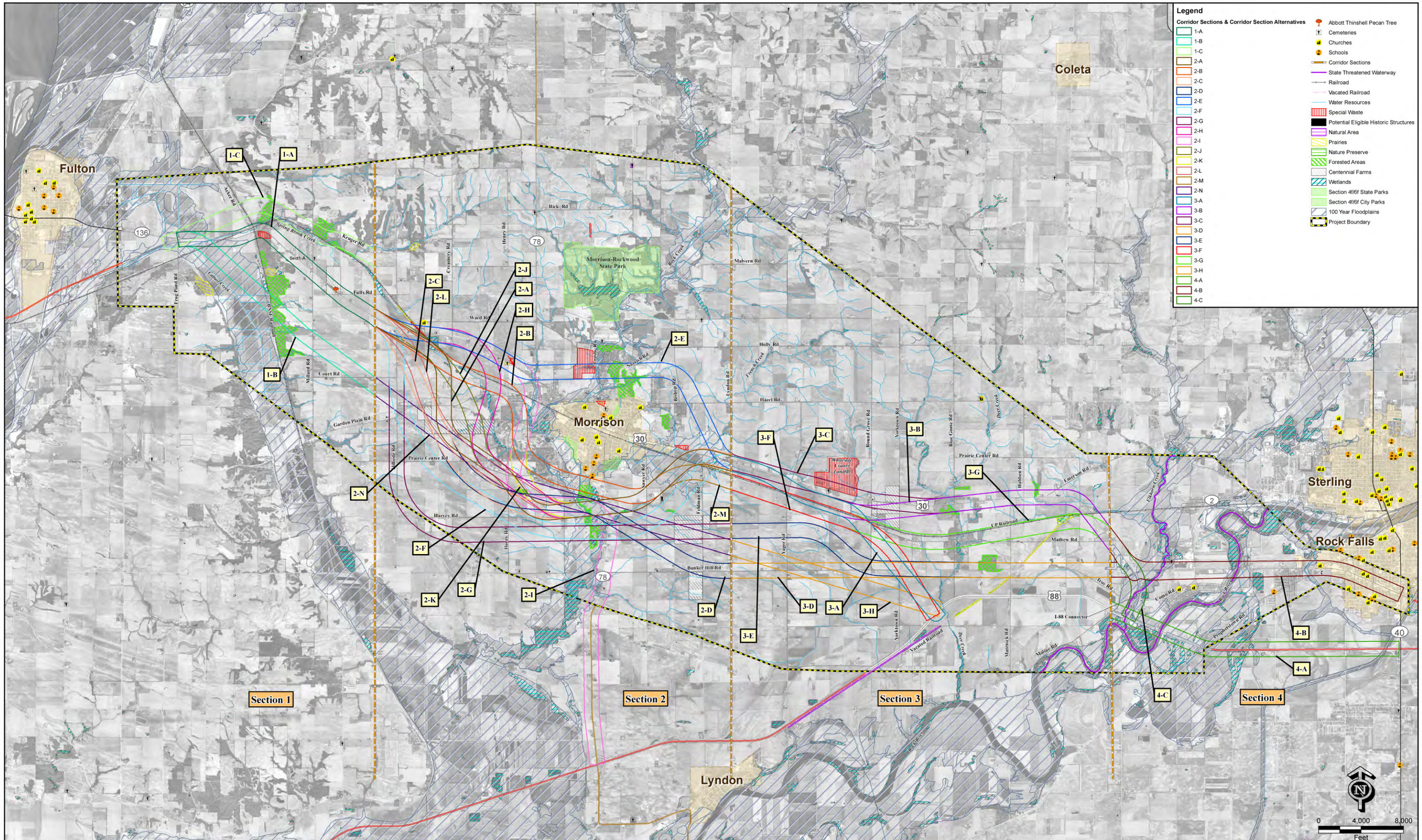


Exhibit 2-2
Corridor Sections & Corridor Section Alternatives (Early 2008)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

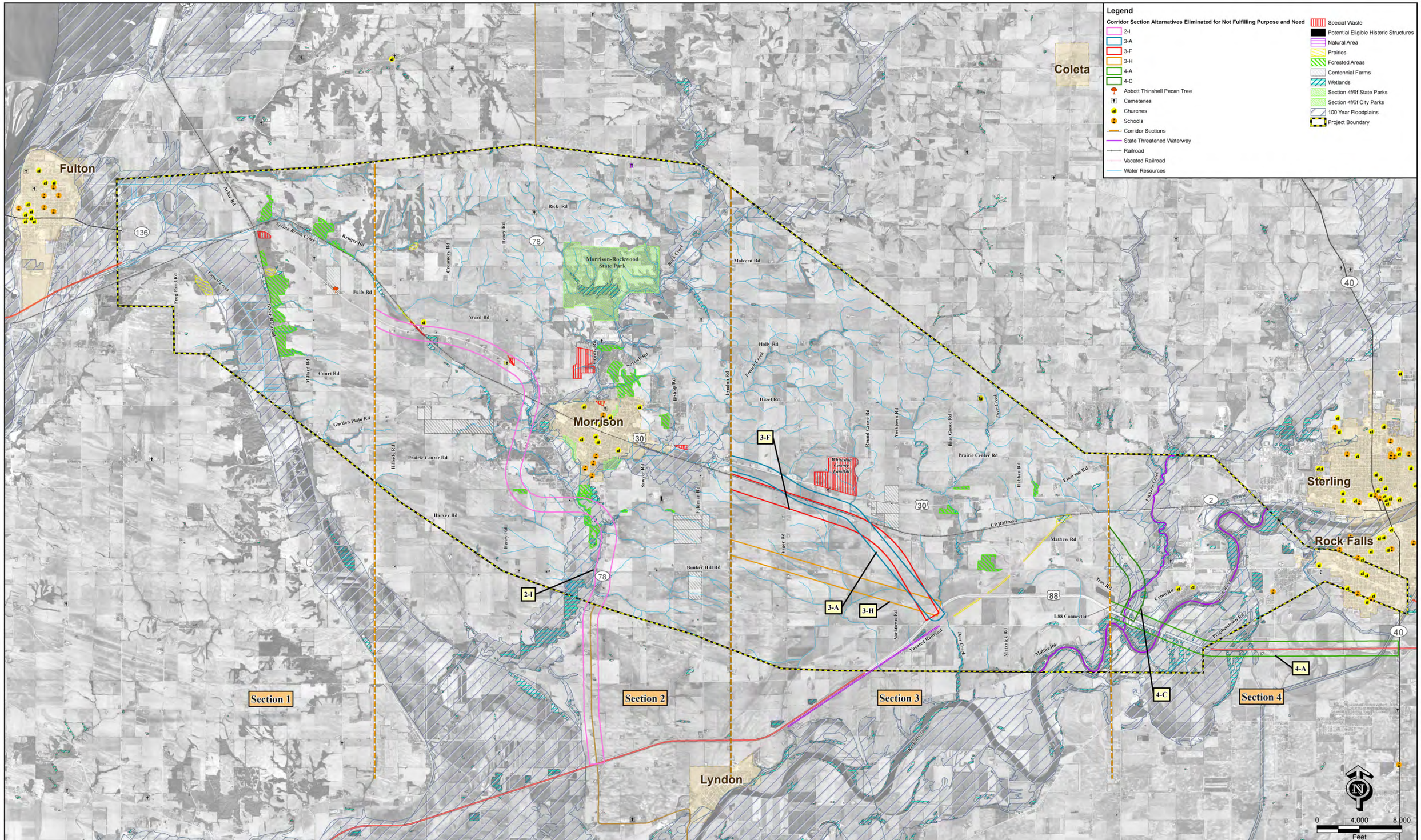


Exhibit 2-3
Corridor Section Alternatives Eliminated for Not Fulfilling Purpose and Need
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

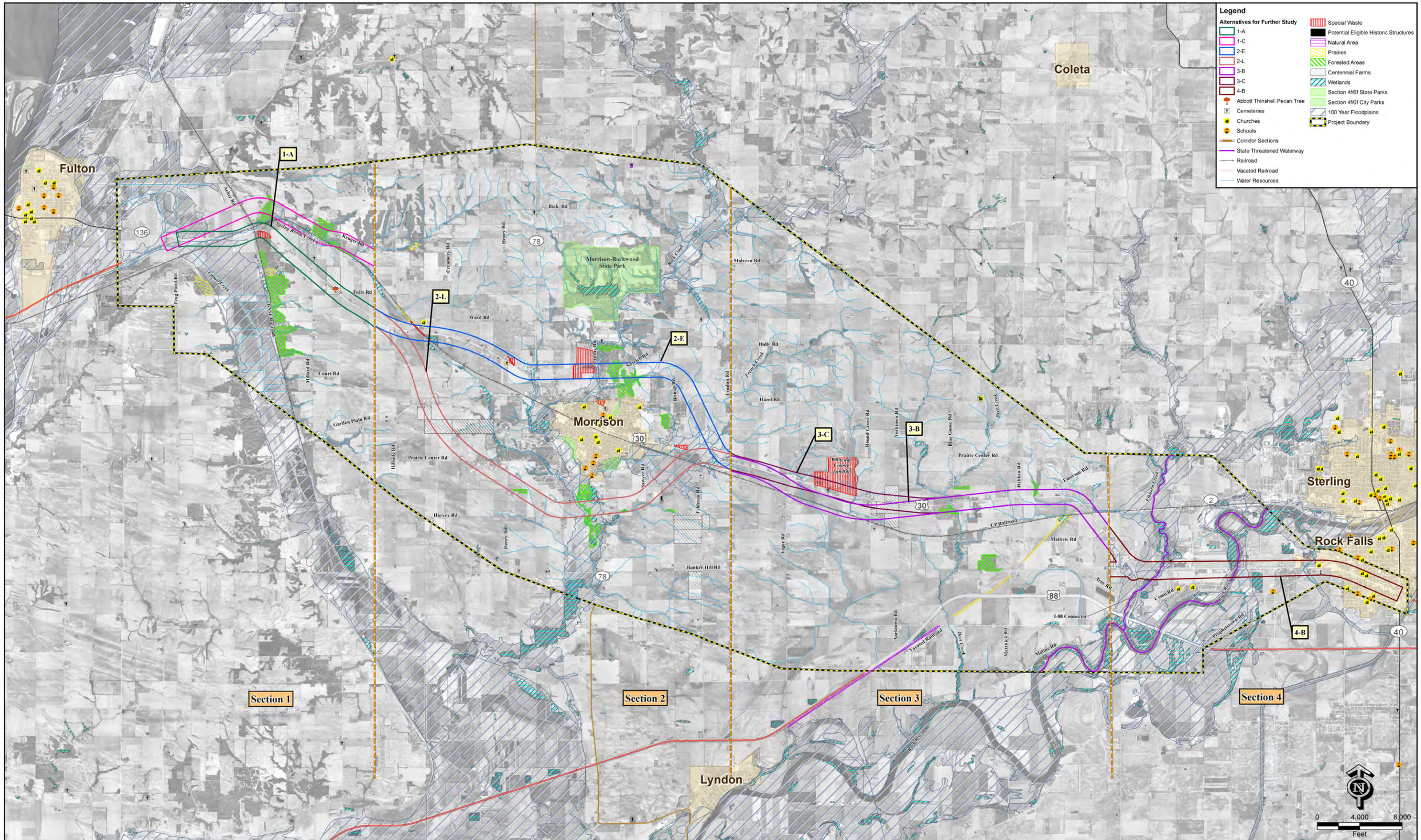


Exhibit 2-4
Corridor Section Alternatives Carried Forward for Further Study
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

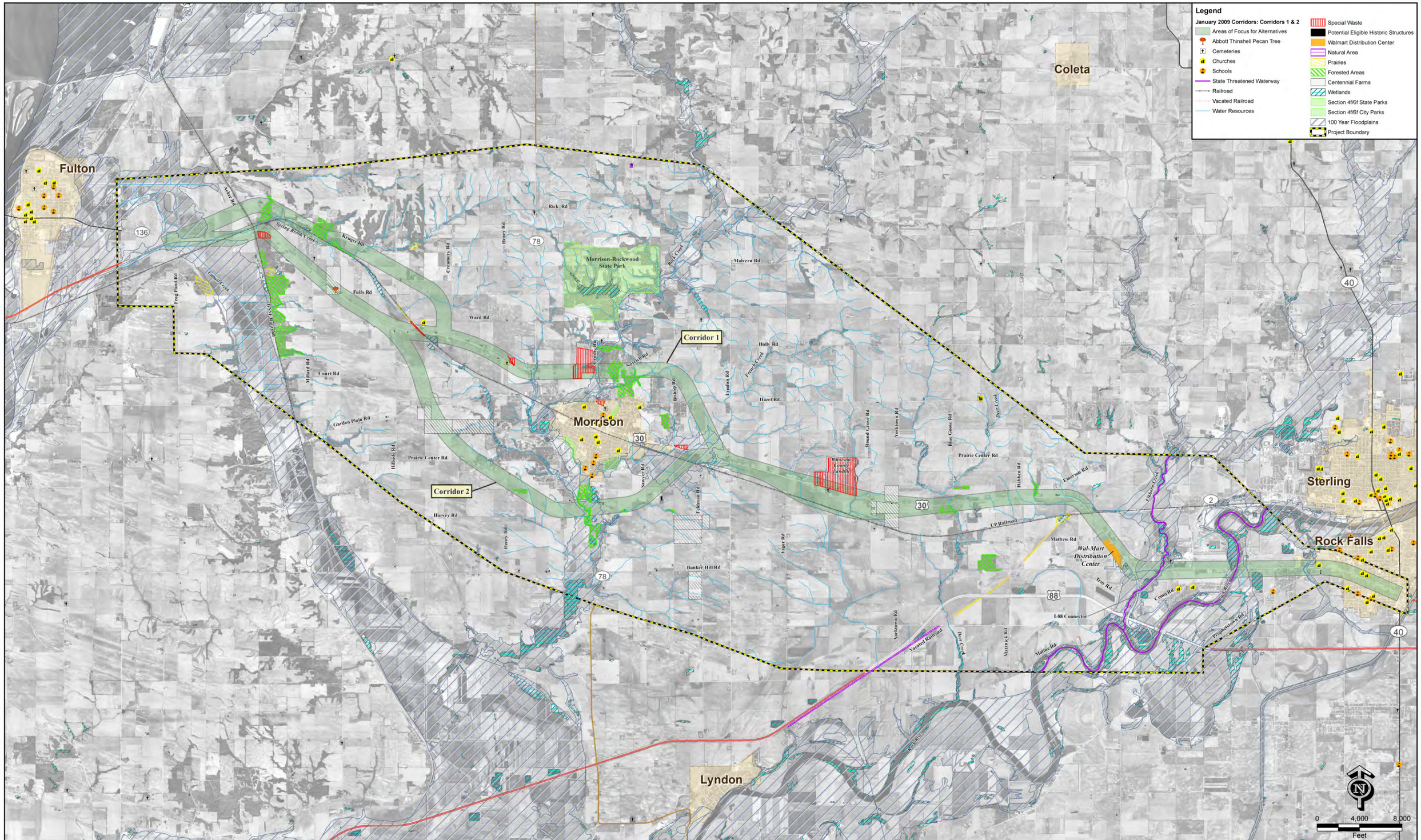


Exhibit 2-5
January 2009 Corridors: Corridors 1 & 2
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

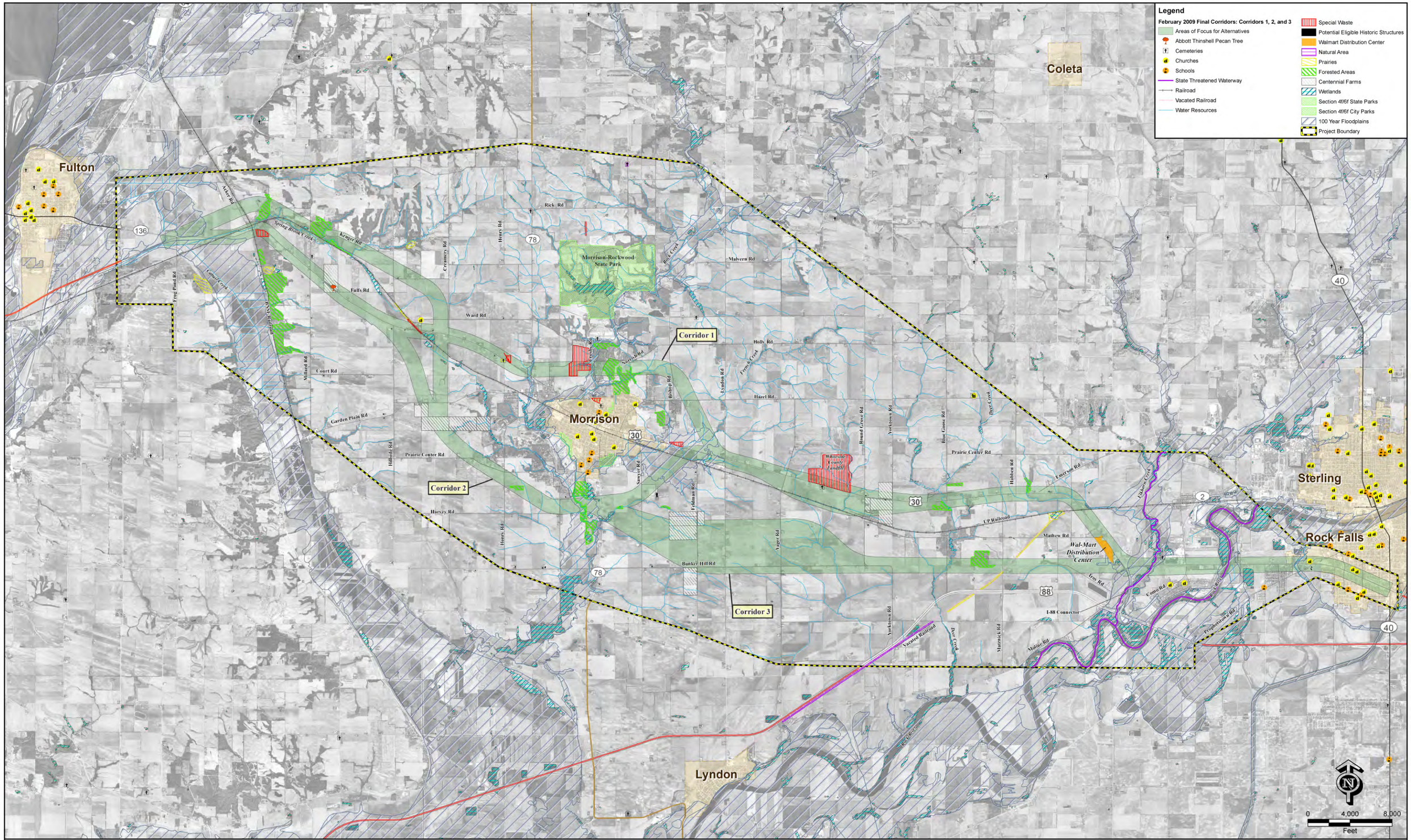


Exhibit 2-6
February 2009 Final Corridors: Corridors 1, 2, and 3
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

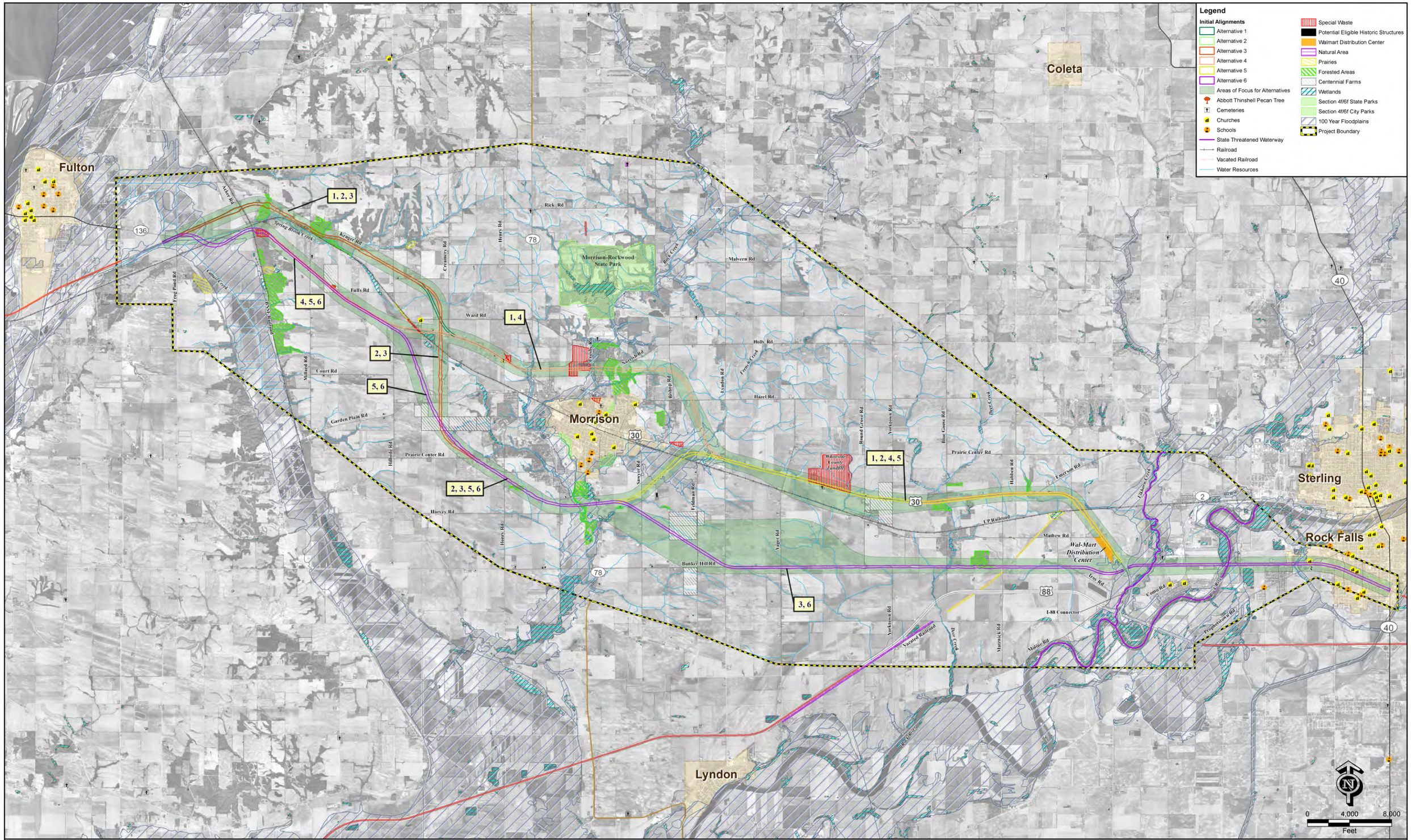


Exhibit 2-7
Initial Alignments (Mid 2009)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

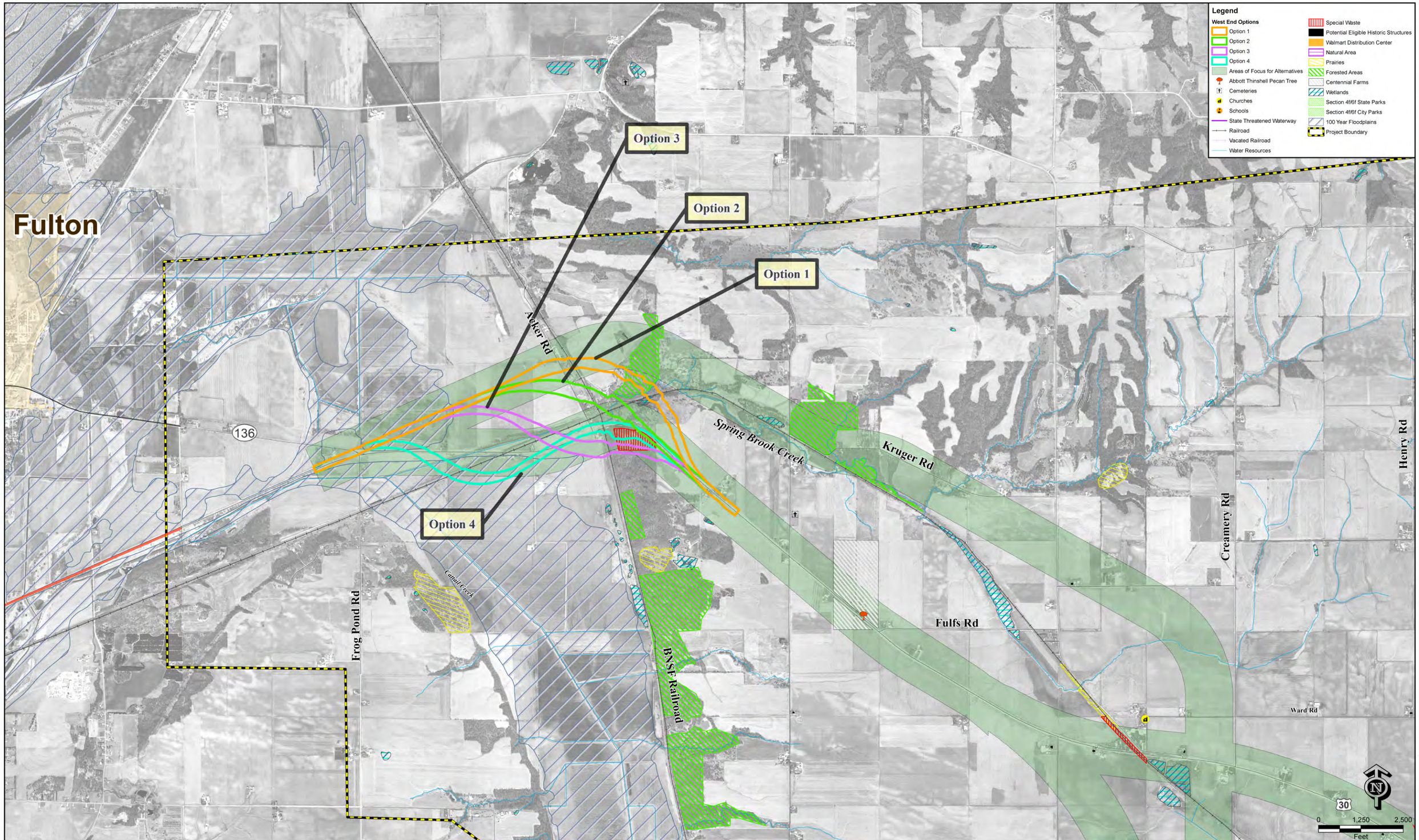


Exhibit 2-8
West End Options (Mid 2009)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

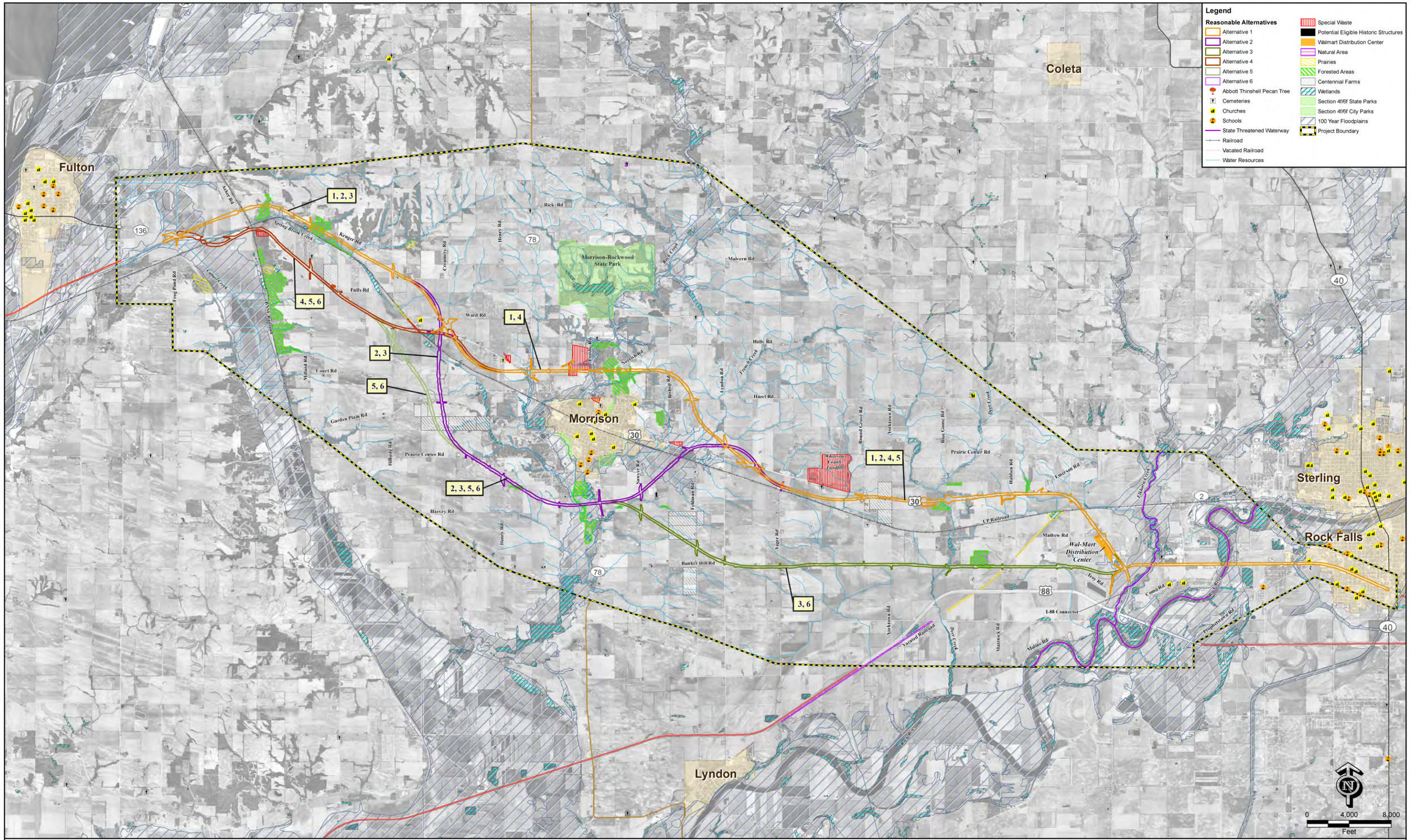


Exhibit 2-9
Reasonable Alternatives (November 2009)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

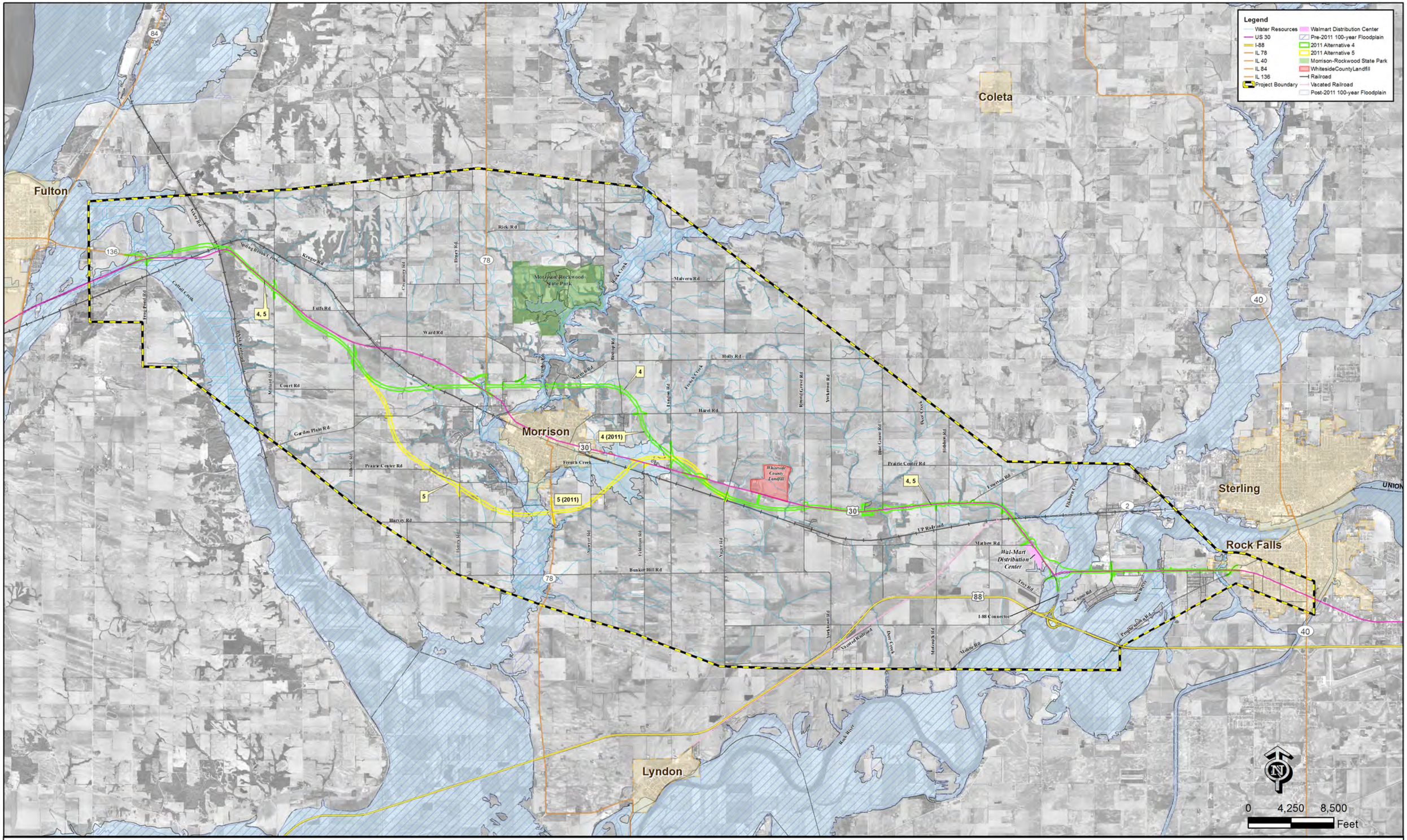


Exhibit 2-10a
2011 Build Alternatives 4 and 5
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

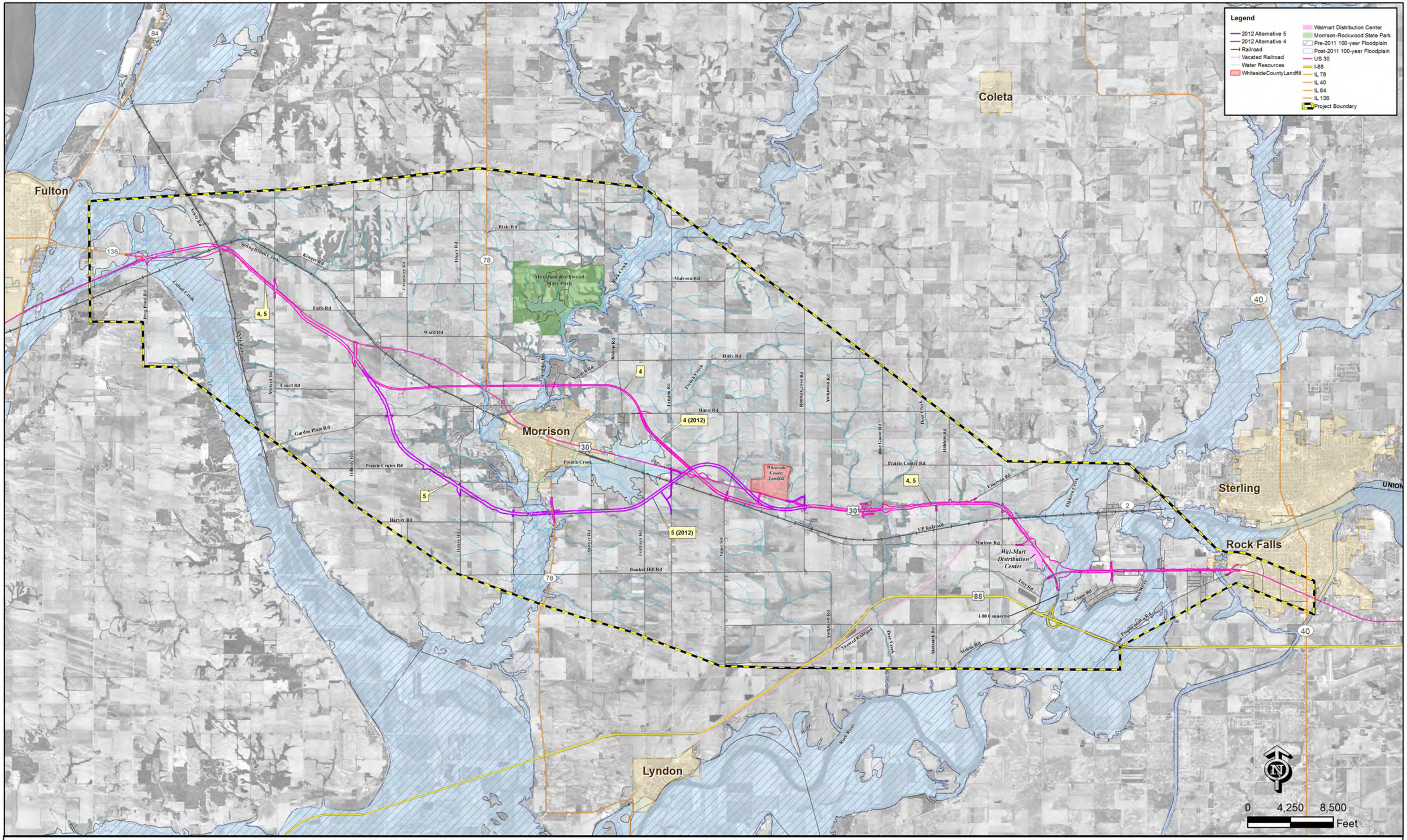


Exhibit 2-10b
2012 Revised Build Alternatives 4 and 5
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

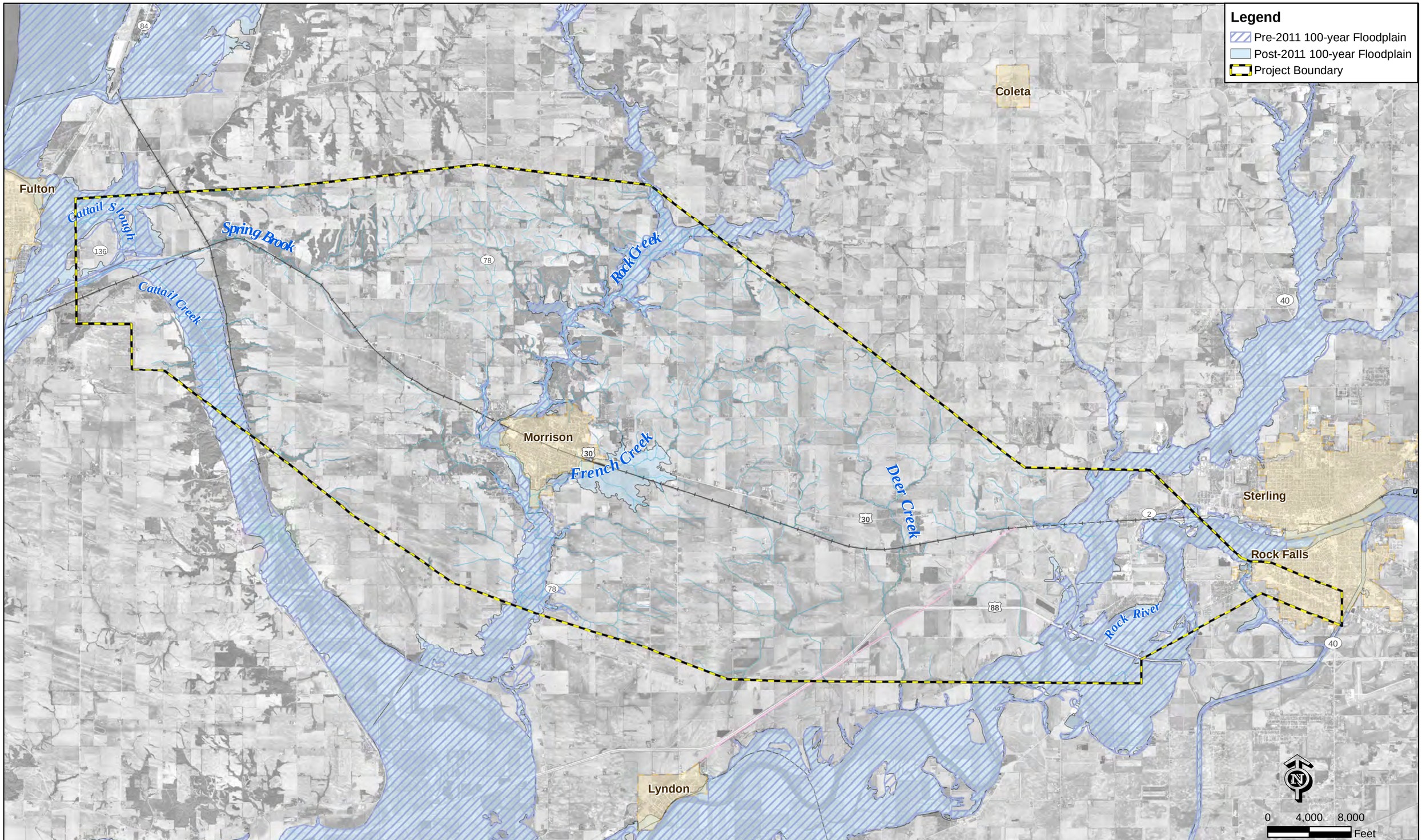
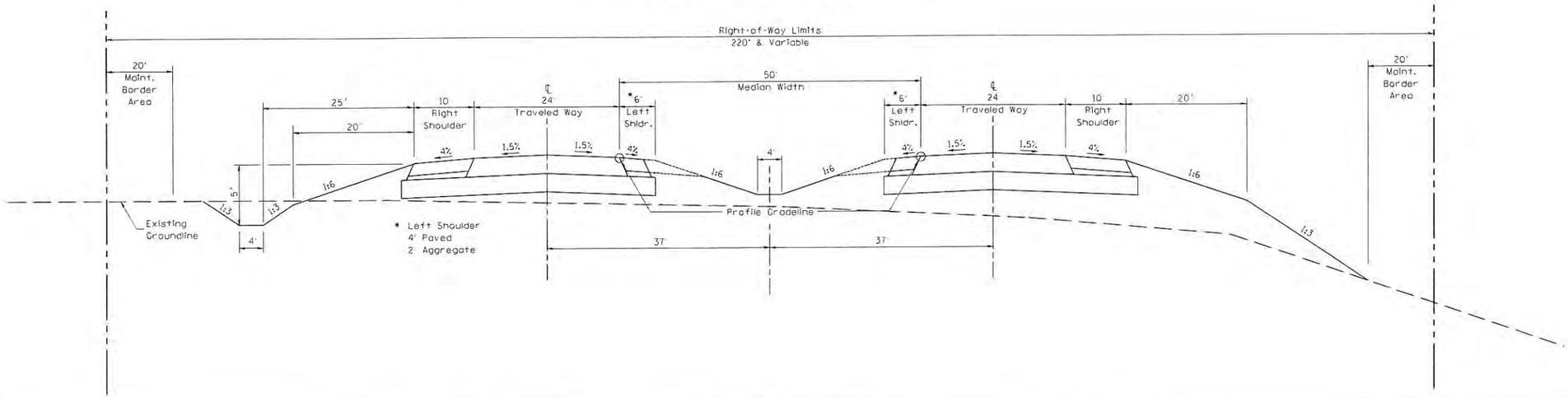
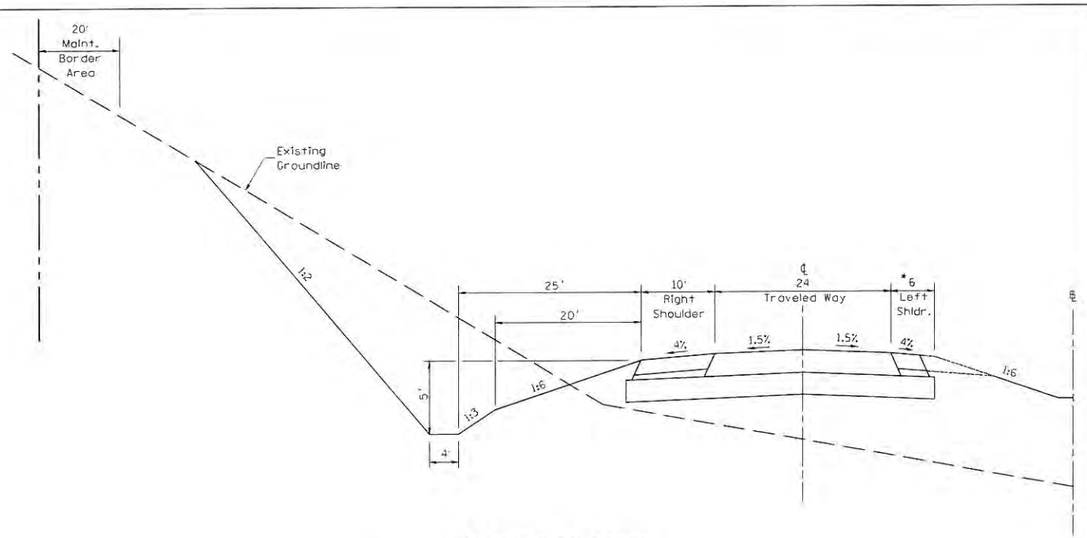


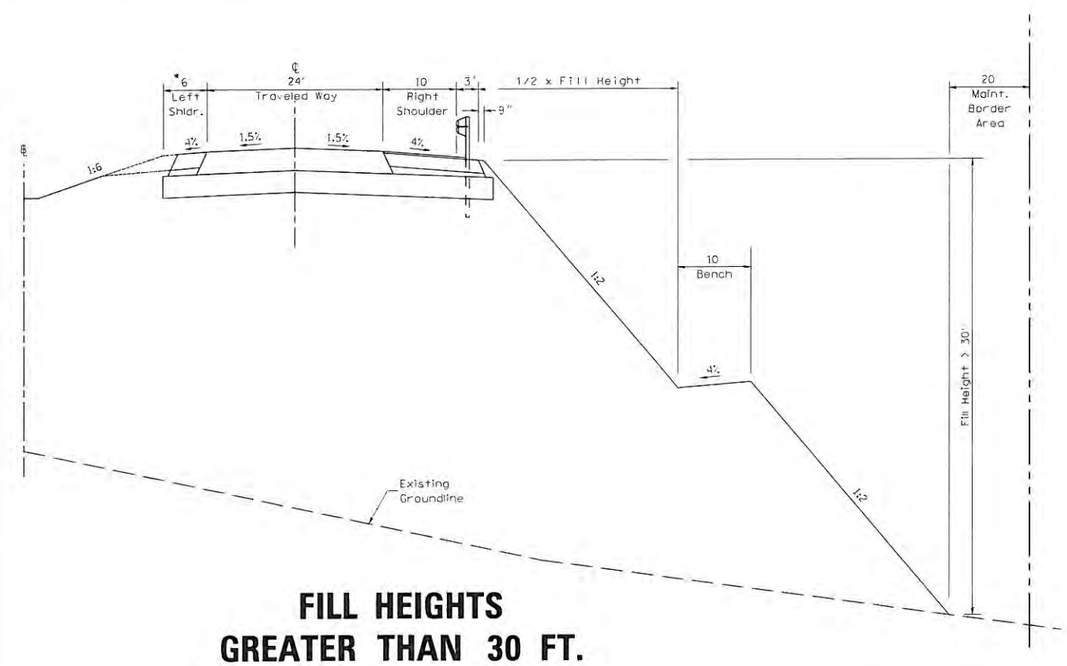
Exhibit 2-11
FEMA 100-Year Floodplains: Pre-2011 and Post-2011
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

US 30
TYPICAL SECTION





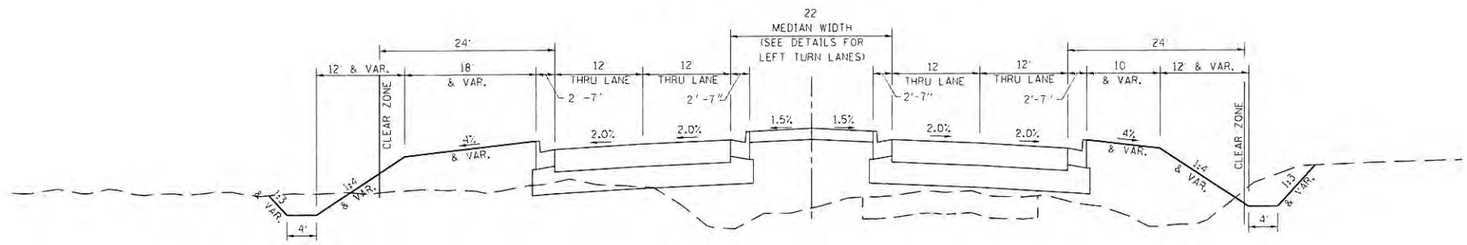
CUT HEIGHT
GREATER THAN 10 FT.



FILL HEIGHTS
GREATER THAN 30 FT.

Exhibit 2-12a
Typical Cross Section (Rural)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

US 30
TYPICAL SECTION



LEFT TURN LANE DETAIL (URBAN)

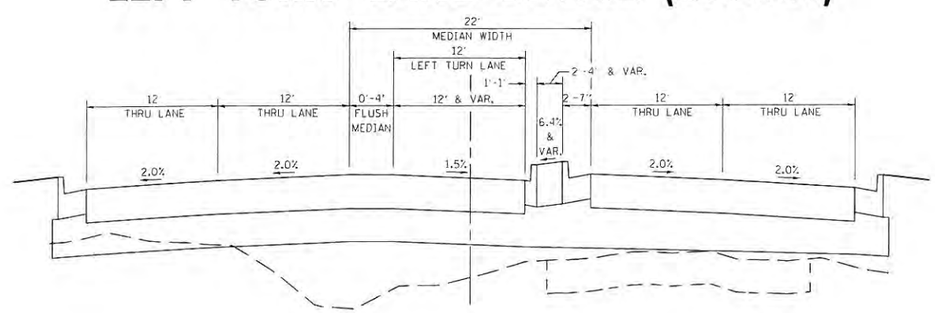


Exhibit 2-12b
Typical Cross Section (Urban)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Chapter 3

Affected Environment, Environmental Consequences, and Measures to Minimize Harm

3.0 Affected Environment, Environmental Consequences, and Measures to Minimize Harm

This chapter is divided into in three (3) sections: Affected Environment, Environmental Consequences, and Measures to Minimize Harm. These sections will provide the following for the socioeconomic, natural, and cultural resources within the project study area:

- Identify and describe the environmental resources
- Identify and describe the potential effects of the proposed project on these resources
- Describe what measures were taken to minimize the potential effects on these resources

This chapter provides information about each of the following resources:

- Social/Economic
- Agriculture
- Culture
- Air Quality
- Noise
- Energy
- Groundwater Resources
- Surface Waters and Aquatic Resources
- Wetlands
- Floodplains
- Upland Plant Communities
- Wildlife Resources
- Threatened and Endangered Species
- Special Lands
- Special Waste
- Permits/Certifications
- Visual Resources

The Build Alternatives discussed in this chapter, Alternatives 4 and 5, are illustrated on **Exhibit 3-1**.

3.1 Geographic Setting

The U.S. 30 project study area spans Whiteside County, which is in northwestern Illinois and has an area of 697 square miles [Natural Resources Conservation Service (NRCS) Soil Survey of Whiteside County, IL]. It is bounded by Carroll and Ogle Counties on the north, Lee and Ogle Counties on the east, the Mississippi River and Rock Island County on the west, and Bureau and Henry Counties on the south.

The U.S. 30 project study area passes through six (6) townships including Fulton, Ustick, Union Grove, Mount Pleasant, Hopkins, and Coloma, and the communities of Fulton (at the western terminus), Morrison (located in the central portion of the project study area), and Rock Falls and Sterling (at the eastern terminus). Therefore, when "communities within the project study area" is stated in the following sections of this chapter, this includes Fulton, Morrison, Rock Falls, and Sterling.

The project study area, which is approximately 24 miles from IL 136 just east of Fulton to IL 40 in Rock Falls and approximately ten (10) miles wide, is generally bounded by farmland and bluffs on the west end and an urbanized area on the east end. The landscape of the project study area is generally characterized by four (4) major landforms: uplands, outwash plains, stream terraces, and flood plains. These landforms are the products of continental glaciations and more recent stream erosion. The deposition of till and postglacial stream erosion has modified the original bedrock topography to create the present rolling terrain. The outwash plain consists of materials deposited by meltwater from the receding glacier. The flood plains and stream terraces are the result of the ongoing process of stream erosion. Stream courses have changed in the geologic past, resulting in several abandoned channels in the survey area (NRCS Soil Survey of Whiteside County, IL). The elevation range does not differ greatly from the west terminus at IL 136 with an elevation of 586 feet to 643 feet at the eastern terminus at IL 40.

3.2 Social/Economic

Per the IDOT Community Impact Assessment (CIA) Manual, "socio-economic analysis of a transportation project begins with a thorough understanding of the local concerns." The following subsections include discussions about the communities and their demographics, land use, and employment characteristics. The purpose of these subsections is to provide an understanding of the human environment within the project study area.

3.2.1 Affected Environment

3.2.1.1 Communities

The IDOT CIA Manual defines a community as "a body or group of individuals living in residences within the same locality, having common ties or interests, and a common character identity." Community characteristics, as described in the following subsections, include demographic profiles such as population size, density, average age, and average household income. These characteristics will be described for the communities of Fulton, Morrison, Rock Falls, and Sterling in addition to the townships within the project study area, Whiteside County, and the State of Illinois.

3.2.1.2 Demographics

Population. Table 3-1 summarizes the population trends within the project study area. The population of Whiteside County **decreased by 7.0 percent** between **1970** and **2010**. On the contrary, the State of Illinois experienced a **15.4** percent increase in population during the same time period. The communities within the project study area all experienced an increase in population from **1970** to 1980. From 1980 to 1990, Whiteside County experienced an 8.8 percent decrease in population. This coincides with the decrease in population in all of the communities within the project study area during this same time period. The population did increase from 1990 to 2000 in Whiteside County and in the cities of Fulton, Morrison, and Sterling. In contrast, the city of Rock Falls experienced a decrease in population during this same time period. **From 2000 to 2010, the population decreased in all of the communities within the project study area as well as in Whiteside County.** The table also illustrates that the city of Sterling has had the largest population within the project study area over the past **Table 3-2** summarizes the projected population for Whiteside County and the State of Illinois.

Table 3-1: Population Trends

	Year					Percent Population Change				
Location	**1970**	**1980**	**1990**	**2000**	**2010**	**1970-1980**	**1980-1990**	**1990-2000**	**2000-2010**	**1970-2010**
City of Fulton	3,630	3,936	3,698	3,881	**3,481**	8.4%	-6.0%	4.9%	**-10.3%**	**-4.1%**
City of Morrison	4,387	4,605	4,363	4,447	**4,188**	5.0%	-5.3%	1.9%	**-5.8%**	**-4.5%**
City of Rock Falls	10,287	10,633	9,654	9,580	**9,266**	3.4%	-9.2%	-0.8%	**-3.3%**	**-9.9%**
City of Sterling	16,113	16,281	15,132	15,451	**15,370**	1.0%	-7.0%	2.1%	**-0.5%**	**-4.6%**
Whiteside County	62,877	65,970	60,186	60,653	**58,498**	4.9%	-8.8%	0.8%	**-3.6%**	**-7.0%**
Illinois	11,110,285	11,426,518	11,430,602	12,419,293	**12,830,632**	2.8%	0.0%	8.6%	**3.3%**	**15.4%**

Source: U.S. Bureau of Census, Census of Population and Housing, 1970, 1980, 1990, 2000, **2010**

The population of Whiteside County is forecasted to increase significantly by the year 2030 with a 12.1 percent increase**; this identifies a different trend as Whiteside County has seen a 7.0 percent decrease in population from 1970 to 2010 (as shown in Table 3-1).**

Table 3-2: Projected Population for Whiteside County and the State of Illinois (2010-2030)

State/ County	2000 Population	2005 Population	2010 Population	2015 Projection	2020 Projection	2030 Projection	% Change 2000-2030
Whiteside	60,755	61,448	62,431	63,927	65,565	68,134	12.1%
Illinois	12,440,846	12,875,035	13,279,091	13,748,695	14,316,487	15,138,849	21.7%

Source: Illinois Department of Commerce and Economic Opportunity

As seen in **Exhibit 3-2**, the cities and associated township areas are as follows: the city limits of Fulton lie mostly in Fulton Township with a minimal portion of the southern limits residing in the Garden Plain Township, the majority of the city of Morrison lies within the Mount Pleasant Township with a minimal portion of the southwestern city limits in the Union Grove Township, the city of Rock Falls lies mainly within the Coloma Township with a minimal southern portion in Montmorency Township and a minimal western portion in the Hume Township, and Sterling resides in Sterling Township and Hopkins Township. Population trends for the townships from **2000** to **2010** within the project study area are shown in **Table 3-3**.

Table 3-3: Population Trends for Project Area Townships, Cities, County, and State

Location	2000	2010	Percent Population Change 2000-2010
City of Fulton	3,881	**3,481**	**-10.3%**
City of Morrison	4,447	**4,188**	**-5.8%**
City of Rock Falls	9,580	**9,266**	**-3.3%**
City of Sterling	15,451	**15,370**	**-0.5%**
Coloma Township	11,844	**11,371**	**-4.0%**
Fulton Township	4,602	**4,251**	**-7.6%**
Hopkins Township	2,381	**2,156**	**-9.4%**
Mount Pleasant Township	5,291	**4,939**	**-6.7%**
Union Grove Township	1,247	**1,244**	**-0.2%**
Ustick Township	624	**613**	**-1.7%**
Whiteside County	60,653	**58,498**	**-3.6**
Illinois	12,419,293	**12,830,632**	**3.3%**

Source: U.S. Census Bureau, Census 2000 Summary File 1, **U.S. Bureau of Census 2010 American Fact Finder**

Fulton Township, which a majority of the city of Fulton resides, experienced a **7.6** percent **decrease from 2000 to 2010**. This coincides with the **10.3 percent decrease** the city of Fulton experienced during the same time period. Mount Pleasant Township, which a majority of the city of Morrison resides, experienced a **6.7** percent decrease in population and the city of Morrison experienced a **5.8 percent decrease** in population along with a **0.2 percent decrease** in the Union Grove Township, which the remaining portion of city of Morrison resides. Coloma Township, which a majority of the city of Rock Falls resides, experienced a **4.0** percent decrease in population. This coincides with the **3.3** percent decrease experienced in the city of Rock Falls during the same time period. Hopkins Township, which a small portion of the city of Sterling resides, had **a decrease of 9.4** percent in population. The city of Sterling also experienced a slight **decrease of 0.5 percent** in population from **2000 to 2010**. Lastly, Ustick Township experienced a **1.7** percent decrease in population from 2000 **to 2010**.

Households. Table 3-4 illustrates the household trends within the project study area. A household, as defined by the U.S. Census Bureau, consists of all people who occupy a housing unit. A person living alone in a housing unit is also counted as a household. Household size, as defined by the U.S. Census Bureau, includes all the people occupying the housing unit. The

number of households **decreased** for the cities of Fulton, Morrison, and Rock Falls **while it increased for the city of Sterling, Whiteside County, and the** State of Illinois from 2000 **to 2010**. The average household size decreased for **the** cities **of Fulton, Rock Falls, and Sterling** along with Whiteside County and the State of Illinois from 2000 **to 2010**.

Table 3-4: Household Trends for Project Area Cities, Whiteside County, and State

Location	Number of Households		% Change	Average Household Size		% Change
	2000	2010		2000	2010	
City of Fulton	**1,582**	**1,553**	**-1.8%**	2.37	**2.21**	**-6.8%**
City of Morrison	**1,787**	**1,713**	**-4.1%**	2.28	**2.29**	**0.4%**
City of Rock Falls	**3,895**	**3,809**	**-2.2%**	2.43	**2.41**	**-0.8%**
City of Sterling	6,234	**6,303**	**1.2%**	2.41	**2.38**	**-1.2%**
Whiteside County	**23,684**	**23,740**	**0.2%**	2.51	**2.42**	**-3.5%**
Illinois	**4,591,779**	**4,836,972**	**5.3%**	2.63	**2.59**	**-1.5%**

Source: U.S. Census Bureau, Census 2000 Summary File 1, **U.S. Bureau of Census 2010 American Fact Finder**

As shown in **Table 3-5**, over 60 percent of the homes with the cities of Fulton, Morrison, Rock Falls, and Sterling are over 50 years old, with the city of Morrison having almost three-quarters (72.1 percent) of the city's homes built before 1960. The city of Morrison does have new residential developments within the southwestern part of the city near the Morrison Institute of Technology, Morrison High School, Southside Elementary School, and Morrison Junior High**.**

Table 3-5: Percentage of Homes Built Before 1960

Location	% of Homes Built Before 1960
City of Fulton	64.6%
City of Morrison	72.1%
City of Rock Falls	60.4%
City of Sterling	61.9%
Whiteside County	55.7%
State of Illinois	47.0%

Source: U.S. Census Bureau, Census 2000 Summary File 1

Housing Units. A housing unit, as defined by the U.S. Census Bureau, is a house, apartment, mobile home, a group of rooms, or a single room that is occupied (or if vacancy, is intended for occupancy) as separate living quarters. Within the project study area, residential areas are concentrated primarily in the communities; and the rural residences, mainly farmsteads, are scattered throughout the project study area.

Table 3-6 illustrates housing characteristics and trends for the cities and townships within the project study area along with those for Whiteside County and the State of Illinois. The table

shows that the home ownership rates **from 2000 to 2010 varied throughout Whiteside County. Table 3-6 also illustrates that among the communities within the project study area; only the city of Fulton experienced an increase in home ownership. Ustick Township experienced the greatest increase amongst the townships with a 6.0 percent increase in homeownership. Overall, Table 3-6 illustrates that homeownership for the most part increased in the unincorporated areas within the project study area whereas homeownership within the cities mainly experienced a decrease.**

Table 3-6: Housing Characteristics and Trends

Location	2000 Housing Units	2000 Home Ownership Rate	2010 Housing Units	2010 Home Ownership Rate	% Change in Home Ownership 2000 - 2010
City of Fulton	1,672	76.5%	**1,700**	**78.9%**	**2.4%**
City of Morrison	1,898	76.9%	**1,870**	**76.7%**	**-0.2%**
City of Rock Falls	4,089	64.1%	**4,123**	**61.7%**	**-2.4%**
City of Sterling	6,596	62.9%	**6,947**	**61.6%**	**-1.3%**
Coloma Township	5,131	68.9%	**5,162**	**67.2%**	**-1.7%**
Fulton Township	1,958	78.4%	**2,032**	**79.1%**	**0.7%**
Hopkins Township	886	90.1%	**904**	**91.6%**	**1.5%**
Mount Pleasant Township	2,216	77.2%	**2,176**	**78.1%**	**0.9%**
Union Grove Township	486	93.9%	**519**	**91.2%**	**-2.7%**
Ustick Township	241	81.5%	**250**	**87.5%**	**6.0%**
Whiteside County	25,025	74.5%	**25,770**	**74.5%**	**0.0%**
Illinois	4,885,615	67.3%	**5,296,715**	**67.5%**	**0.2%**

Source: U.S. Census Bureau, Census 2000 Summary File 1, **U.S. Bureau of Census 2010 American Fact Finder**

Age Distribution. Table 3-7, illustrates the age distribution of the cities within the project study area, Whiteside County, and the State of Illinois. **In 2010, 23.5 percent of Whiteside County's population was under 18 years of age; 30.4 percent were between the ages of 18 to 44 years; 28.6 percent were between the ages of 45 to 65 years; and 17.5 percent were over 65 years of age. In addition, the median age for Whiteside County in 2010 was 41.8 years. The percentages per age group and the median age in Whiteside County correspond with the percentages and median ages for the State of Illinois.**

As seen in **Table 3-7**, the majority of the residents within Morrison, Rock Falls, Sterling, Whiteside County, and the State are in the age group of 18 to 44 years old. **The minority for all of these locations is the population of residents in the 65 years and older age group. In the city of Fulton, Table 3-7 shows a different trend with the majority of residents being in the age group of 45 to 64 years old. This corresponds with the median age of the residents of Fulton being 46.1 years, the highest of any of the project study area**

communities. The minority for the city of Fulton is the population of residents under 18 years of age.

Table 3-7: Age Distribution

Location	Under 18 years	18 to 44 years	45 to 64 years	65 years and older	Total Population / Median Age
City of Fulton	740	960	992	789	3,481
	21.5%	27.6%	28.5%	22.7%	46.1
City of Morrison	906	1,315	1,070	897	4,188
	21.6%	32.2%	25.5%	21.4%	41.9
City of Rock Falls	2,339	3,047	2,423	1,457	9,266
	25.2%	32.9%	26.1%	15.7%	38.8
City of Sterling	3,898	5,202	3,740	2,530	15,370
	25.4%	33.8%	24.3%	16.5%	37.3
Whiteside County	13,740	17,790	16,721	10,247	58,498
	23.5%	30.4%	28.6%	17.5%	41.8
State of Illinois	3,129,179	4,748,154	3,344,086	1,609,213	12,830,632
	24.4%	37.0%	26.1%	12.5%	36.6

Source: U.S. Census Bureau, Census **2010** Summary File 1

Racial and Ethnic Characteristics. As shown in **Table 3-8**, the cities of Fulton, Morrison, and Rock Falls in addition to all of the townships within the project study area consist of populations of white residents of **91.5** percent and above. This coincides with the approximate **92** percent of white residents within Whiteside County. In comparison to the other cities within the project study area, the city of Sterling has a high percentage (**24.2 percent**) of Hispanic or Latino origin residents. This coincides with the fact that those residents of Hispanic or Latino origin are the next highest ethnic group consisting of **11.0** percent of Whiteside County's population.

Amongst the cities and townships, **Fulton** has the highest percentage of white residents at **97.3** percent with the highest for the townships being Union Grove Township with **98.1** percent.

Table 3-8: Population by Race

Location	Total Population	White*		Black or African American		American Indian and Alaska Native Persons		Asian or Pacific Islander*		Some Other Race		Hispanic or Latino**	
		#	%	#	%	#	%	#	%	#	%	#	%
City of Fulton	3,481	3,388	97.3	13	0.4	4	0.1	27	0.8	12	0.3	58	1.7
City of Morrison	4,188	4,055	96.8	33	0.8	25	0.6	7	0.1	28	0.7	110	2.6
City of Rock Falls	9,266	8,475	91.5	138	1.5	39	0.4	33	0.4	302	3.3	1,395	15.1
City of Sterling	15,370	12,678	82.5	464	3.0	68	0.4	108	0.7	1,424	9.3	3,715	24.2

Table 3-8: Population by Race

Location	Total Population	White*		Black or African American		American Indian and Alaska Native Persons		Asian or Pacific Islander*		Some Other Race		Hispanic or Latino**	
		#	%	#	%	#	%	#	%	#	%	#	%
Coloma Township	11,371	10,513	92.5	148	1.3	41	0.4	44	0.3	331	2.9	1,545	13.6
Fulton Township	4,251	4,139	97.4	17	0.4	4	0.1	33	0.8	14	0.3	65	1.5
Hopkins Township	2,156	2,073	96.2	8	0.4	6	0.3	3	0.1	40	1.9	180	8.3
Mount Pleasant Township	4,939	4,794	97.1	34	0.7	24	0.5	7	0.1	32	0.6	113	2.3
Union Grove Township	1,244	1,220	98.1	2	0.2	2	0.2	2	0.2	10	0.8	21	1.7
Ustick Township	613	589	96.1	1	0.2	0	0.0	7	1.1	10	1.6	20	3.3
Whiteside County	58,498	53,923	92.2	781	1.3	170	0.3	285	0.5	2,044	3.5	6,455	11.0
Illinois	12,830,632	9,177,877	71.5	1,866,414	14.5	43,963	0.3	590,984	4.6	861,412	6.7	2,027,578	15.8

Source: U.S. Census Bureau, Census **2010** Summary File 1
*Includes persons reporting only one race.
**Hispanics may be of any race and are included in applicable race categories.

Income Characteristics. Tables 3-9 and **3-10** summarize the median family incomes in the project study area. **Whiteside County, nor any of the cities within the project study area, exceed the State median family income of $55,735. The only location to exceed the State median family income is Hopkins Township.** Rock Falls has the lowest median family income at $**36,553** and **Fulton** has the highest of the cities with $**48,333**. This correlates with the lowest median family income of the townships is within Coloma Township at $**37,454**, where Rock Falls resides. Also, **Table 3-9** illustrates a direct link between median family income and the percentage of families living below poverty level with approximately **14.8** percent of families living below poverty level in Rock Falls and **12.9** percent in Coloma Township; both which exceed the Whiteside County percentage of **8.2** percent and the State at **9.2** percent. All other cities and townships, **with the exception of the city of Sterling,** are below the County and State percentages.

Table 3-9: Income Characteristics by Township, City, County, and State

Location	Median Family Income	% Families Below Poverty Level
City of Fulton	**$48,333**	**2.8%**
City of Morrison	**$43,886**	**6.3%**
City of Rock Falls	**$36,553**	**14.8%**
City of Sterling	**$39,184**	**12.2%**
Coloma Township	**$37,454**	**12.9%**

Table 3-9: Income Characteristics by Township, City, County, and State		
Location	**Median Family Income**	**% Families Below Poverty Level**
Fulton Township	**$48,889**	**3.9%**
Hopkins Township	**$57,644**	**1.8%**
Mount Pleasant Township	**$47,872**	**6.6%**
Union Grove Township	**$55,132**	**0.0%**
Ustick Township	**$46,000**	**0.0%**
Whiteside County	**$45,266**	**8.2%**
Illinois	**$55,735**	**9.2%**

Source: U.S. Census Bureau 2010 American Fact Finder

As shown in **Table 3-10**, the median family income does not exceed the State median family income of $55,735 within any of the census tracts (see **Exhibit 3-2**) within the project study area. In two (2) of the census tracts, the percentage of families living below poverty level exceeds the State percentage of **9.2** percent with the census tract 10 at 13 percent and census tract 17 at 16.5 percent; both census tracts include the city of Rock Falls. This correlates with the earlier discussion that acknowledged the city of Rock Falls exceeds the State percentage of families living below poverty level.

Table 3-10: Income Characteristics by Census Tract for Whiteside County		
Census Tract	**Median Family Income**	**% Families Below Poverty level**
1	$52,049	4.4
2	$54,028	1.9
3	$50,217	2.7
4	$45,865	5.7
5	$45,134	3.5
10	$30,694	13.0
14	$51,184	5.4
15	$45,106	7.3
16	$41,275	7.7
17	$34,643	16.5

Source: U.S. Census Bureau/Department of Health & Human Services 2009 Poverty Guideline for a family of four is $22,050. Source: *Federal Register, Vol. 74, No. 14 (January 23, 2009)*

3.2.1.3 Economics

Employment. Table 3-11 summarizes the employment status and trends within Whiteside County and the State of Illinois from **1990 to 2010. As the table illustrates, there was approximately 1,000 less people in the labor force in Whiteside County in 2010 than in 2000**. The Illinois Department of Employment Security (IDES) defines "labor force" as consisting of people 16 years of age or older who are employed and unemployed. The U.S. government defines the "employed" as those who are currently working or are temporarily away from work. Those who are not currently working but available to work and looking for jobs are considered "unemployed." Those who do not fit either of the above categories are considered to be "not in the labor force." These include students, retirees, and those whose family responsibilities kept them from employment.

Table 3-11: Employment Status Whiteside County and Illinois												
Location	1990			2000			2010			% Change in Labor Force		
	Labor Force	# Em-ploy-ed	Un-em-ploy-ment Rate	Labor Force	# Em-ploy-ed	Un-em-ploy-ment Rate	Labor Force	# Em-ploy-ed	Un-em-ploy-ment Rate	1990 - 2000	2000 - 2010	1990 - 2010
Whiteside County	30,879	29,184	5.5	30,884	29,561	4.3	**29,862**	**26,589**	**11.0%**	0.0	**-3.3**	**-3.3**
Illinois	5,916,000	5,547,000	6.2	6,419,300	6,139,900	4.4	**6,602,700**	**5,910,700**	**10.5%**	8.5	**2.9**	**11.6**

Source: Illinois Department of Employment Security (IDES)

The Whiteside County labor force data **for 2010 showed 26,589 persons** were employed, translating to an **11.0** percent unemployment rate. This coincides with the State's average unemployment rate of **10.5** percent.

Also, **Table 3-11** illustrates that the unemployment rate for Whiteside County **increased** from **2000** to **2010**, from **4.3** percent in **2000** to **11.0** percent in **2010**. Again, this coincides with the State's **unemployment rate increase** during the same time period.

Employment by Industry. As shown in **Table 3-12**, in **2010**, the total employment, as measured by the Bureau of Economic Analysis (BEA), was at **27,065** for Whiteside County. This was **an 11.9 percent decrease from 2000 and a 3.5 percent decrease over the last 30 years.**

In regard to the percentage of the workforce within the industries listed in **Table 3-12**, the majority of the workforce does work in the **service** industry. The service industry, as defined by the BEA, includes such services as hotel services; personal, business, repair, and amusement services; health, legal, engineering, and educational institutions. **Although the service industry has the highest percentage of those in the workforce in Whiteside County, this industry sharply declined from 2000 to 2010 by 21.8 percent**.

Following the service industry, government has the next highest amount of workers with 16.4 percent of the workforce in Whiteside County.

Table 3-12: Employment by Industry for Whiteside County 1980-2010								
Industry	1980	1990	2000	2010	Percent Change			
					1980-1990	1990-2000	2000-2010	1980-2010
Farm Employment*	2,078	1,626	1,370	**1,125**	-21.8%	-15.7%	**-17.9%**	**-45.6%**
	7.4%	5.8%	4.5%	**4.2%**				
Agricultural services,**forestry, fishing	322	311	***	***	-3.4%	***	***	***
	1.1%	1.1%	***	***				
Mining	22	83	***	***	277.3%	***	***	***
	0.08%	0.30%	***	***				
Construction	1,018	1,306	1,534	**1,028**	28.3%	17.5%	**-33.0**	**1.0%**
	3.6%	4.6%	5.0%	**3.8%**				
Manufacturing	9,395	7,678	7,367	**3,840**	-18.3%	-4.1%	**-47.9%**	**-59.1%**
	33.5%	27.2%	24.0%	**14.2%**				
Transportation & Public Utilities	900	730	895	***	-18.9%	22.6%	***	***
	3.2%	2.6%	3.0%	***				
Wholesale Trade	1,061	1,048	993	**870**	-1.2%	-5.2%	**-12.4%**	**-18.0%**
	3.8%	3.7%	3.2%	**3.2%**				
Retail Trade	4,362	4,685	5,298	**3,913**	7.4%	13.1%	**-26.1%**	**-10.3%**
	15.6%	16.6%	17.2%	**14.5%**				
Finance, Insurance, Real Estate	1,675	1,480	1,785	**1,585**	-11.6%	20.6%	**-11.2%**	**-5.4%**
	6.0%	5.3%	5.9%	**5.9%**				
Services	3,751	5,441	6,990	**5,467**	45.1%	28.5%	**-21.8%**	**45.7%**
	13.4%	19.3%	22.8%	**20.2%**				
Government, Government Enterprises	3,444	3,782	4,099	**4,430**	9.8%	8.4%	**8.1%**	**28.7%**
	12.2%	13.4%	13.3%	**16.4%**				
Total Employment******	28,028	28,170	30,714	**27,065**	0.5%	9.0%	**-11.9%**	**-3.5%**

Source: U.S. Department of Commerce: Bureau of Economic Analysis
*Workers engaged in direct production of agricultural commodities; livestock or crops.
**Supply soil services, crop services, veterinary services, farm labor/management, landscape/horticultural services for other on a contract of fee basis.
***Per Bureau of Economic Analysis (BEA), this information is not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.
****BEA employment estimates measure the number of jobs in a county, instead of the number of workers who perform the jobs. County employment estimates are estimated on a full-time and part-time basis because of the limitations of the available source data. Therefore, BEA employment data differ from IDES employment data.

Although farm employment is not the largest employer, farming has been a major enterprise in Whiteside County since the area was settled (NRCS Soil Survey of Whiteside County, IL). As

seen in **Table 3-12**, the farming industry has experienced a **continual** decline in the number of workers from 1980 to **2010 with an overall decrease of 45.6** percent.

Location of Employment. Table 3-13 shows between 2000 **and 2010** the number of workers **decreased** in Whiteside County from 27,986 **to 27,127**. According to the IDES, the number of workers working outside Whiteside County increased during the same time period **by approximately 10 percent.**

Table 3-13: Employee Travel Characteristics for 2000 and 2010

Location	Number of Workers		Worked Outside County		Percent of Total Workers	
	2000	2010	2000	2010	2000	2010
Whiteside County	27,986	**27,127**	5,499	**8,189**	19.6	**30.0**

Source: Illinois Department of Employment Security

Employers. Table 3-14 lists the major employers, their product/service, and their number of employees for the cities of Fulton, Morrison, Rock Falls, and Sterling. The locations of these employers can be found on **Exhibit 3-3**. The employment concentrations occur mainly along the U.S. 30 route within each of these communities, with numerous farm producers occurring between the communities.

Table 3-14: Major Employers in the U.S. 30 Study Area

Location	Employer	Product/Service	Number of Employees
City of Fulton	Drives, Inc.	Link Chain	425
	J.T. Cullen	Metal Fabricators	100
	Agri- King, Inc.	Animal Feed Supply	75
	Fulton Corp.	Metal Stamping	43
	AGRI-BUNGE	Grain Handling	27
City of Morrison	Whiteside County	County Government	300
	CLIMCO	Ignition Coils	195
	Morrison Community Hospital	Health Care	**176**
	Morrison Community School District	Education	**158**
	Vegter Steel Fabrication	**Steel Fabrication**	**46**
	Super Wash, Inc.	Carwash/Corp. Office	**30**
	The City Rebar	**Steel Construction**	22
	Vendo Mack	Vending Machines	**10**
	R.C. Smith	Transportation	**3**
City of Rock Falls	Rock Falls School Districts	Public (K-12) School	**155**
	IFH Group, Inc.	Fluid Power Pumps/Mt	**150**
	Wal-Mart	Department Store	120

Table 3-14: Major Employers in the U.S. 30 Study Area			
Location	**Employer**	**Product/Service**	**Number of Employees**
	Tri-County Opportunities Council	Individual/Family Services	97
	Dohrn Transfer Company	Trucking, Except Loc	95
	City of Rock Falls	Local Government Offices	86
City of Sterling	CGH Medical Center	Hospital	**1,291**
	Wal-Mart Distribution Center	Distribution	1000
	Wahl Clipper	Hair Clippers, Etc.	**850**
	Self Help Enterprises	Sheltered Workshop	384
	Sterling Steel Corp.	Steel	**300**
	Halo Corp/Lee Wayne	Marketing Products	**200**
	ASTEC Mobile Screens	Screening	**100**
	Mircon Industries	**Switches**	**100**
	Anchor Coupling	**Hydraulic Hoses**	**100**

Source: Illinois Department of Commerce and Economic Opportunity **2012**

As shown in **Table 3-14**, the major employers in the city of Fulton are comprised of a variety of commercial businesses. The city of Fulton's largest employer is Drives, Inc., which manufactures link chain and their markets include North and South America, Europe, Asia, Africa, and Australia. Today, Drives, Inc. employs approximately 425 people. In addition to Drives, Inc., there are four (4) other major employers within the city of Fulton, but Drives, Inc. employs approximately 63 percent of those who are considered to be employed by "major employers."

Table 3-14 illustrates that the largest employer in the city of Morrison is the Whiteside County Government which employs approximately 300 people. The remaining major employers consist of commercial manufacturers, the Morrison Community Hospital, and the Morrison Community School District.

As shown in **Table 3-14**, the largest employer in the city of Rock Falls is **the Rock Falls School Districts, which employ 155 people.** The remaining major employers consist of a variety of industries including Wal-Mart **and trucking,** manufacturing, and government services.

Table 3-14 illustrates that the city of Sterling has the three (3) largest employers within the project study area: the CGH Medical Center which employs approximately **1,291** people; the Wal-Mart Distribution Center which employs approximately 1,000 people; and Wahl Clipper, which employs approximately **850** employees. The fact that the city of Sterling houses the three (3) largest employers coincides with the fact that the city of Sterling has the largest population in Whiteside County.

In summary, the opening of the Wal-Mart Distribution Center has brought much needed employment to the project study area, but the recent closings of the GE plant in Morrison and

the Stanley/National plant in Rock Falls **was a loss of approximately 400 jobs within Whiteside County.**

3.2.1.4 Neighborhoods

The IDOT CIA Manual defines neighborhoods as urban areas in most cases that are composed of a mosaic of smaller neighborhood areas, each with a character of its own. As a general rule, the following factors guide the identification/designation of an area as a neighborhood: the area is an immediate residential locale (in many cases, a block); the relationship of area residents is based on location (proximity); and certain activities are characteristic to the area, specifically activities which can be termed "neighboring" activities including borrowing, doing favors, mutual aid, and sidewalk socializing. Although these factors also apply to the definition of a "community," a neighborhood is different in the fact that the residences are within close proximity to each other. Because of the rural environment with a scattered farmstead community, there are few areas that can be considered "neighborhoods" within the project study area as follows:

- Riverside Estates Manufactured Home Community (**Exhibit 3-10, p.15**): This neighborhood is located outside of the city of Rock Falls. Approximately 50 manufactured homes are located within this community, which is bounded by the Rock River on the west, the existing U.S. 30 roadway on the south, Regan Road on the east, and agricultural land to the north.
- White Oaks Subdivision (**Exhibit 3-10, p.12**): This neighborhood is located in rural Whiteside County, with approximately 25 homes located within this neighborhood. The subdivision is bound by agricultural ground on the west, existing U.S. 30 roadway on the south, Blue Goose Road on the east, and agricultural area to the north.
- Norrish Road Neighborhood (**Exhibit 3-10, p. 7**): This neighborhood is located just north of the city limits of Morrison and has approximately 30 homes located along the main road in this area, Norrish Road; and along the side roads which are Browns Road and Tanglewild Drive. According to the city of Morrison Administrator, this area does not have a neighborhood or subdivision "name" but it does have neighborhood type characteristics such as housing types, location in regard to Morrison, the rolling terrain, and forested area features.

3.2.1.5 Public Facilities/Services

This subsection identifies the public facilities and services that serve the residents of the project study area. Services include health care facilities, fire and police departments, ambulance services, churches, cemeteries, and other public facilities.

Healthcare. There are two (2) hospitals located within the project study area: the Morrison Community Hospital located in the northeastern portion of Morrison, north of U.S. 30, and the

CGH Medical Center located in the city of Sterling. In addition, there are Whiteside County Health Departments and Community Health Clinics located in Rock Falls and Morrison. Lastly, the Sterling-Rock Falls Clinic is located in Sterling.

Emergency Services. The law enforcement agencies located within the project study area include each city's police department, one (1) Whiteside County Sheriff's Department located in Morrison, and the District 1 State Police Department located in Sterling, which service area includes Whiteside County.

Each city has a fire department including that of the unincorporated community of Galt located three (3) miles west of Sterling and services portions of the project study area. In addition, each city's fire department provides ambulance service.

Schools. There are eight (8) school districts located within the project study area: River Bend Community Unit District #2 in Fulton, Morrison Community Unit School District #6, Community Unit School District #5 in Sterling, and **four (4)** school districts in Rock Falls. The city of Rock Falls school districts are: Rock Falls Elementary School District #13, East Coloma School District #12, Montmorency Community Consolidated School District #145, and Rock Falls Township High School District #301. **It should be noted that the city of Rock Falls has reduced its number of school districts from five (5) to four (4) with the annexation of the Riverdale School District by the Rock Falls Elementary School District #13.**

The city of Fulton's public school system has one (1) elementary school, one (1) middle school, and one (1) high school. There is one (1) parochial school in Fulton providing education for pre-kindergarten through 12th grade (**Exhibit 3-4**).

The city of Morrison's public school system has two (2) elementary schools (one within the north portion of city and one within the south), one (1) junior high school, and one (1) high school. In addition, the Morrison Institute of Technology is located within the city (**Exhibit 3-4**).

The city of Rock Falls' public school system has **two (2)** elementary schools, one (1) middle school, **two (2)** schools kindergarten through 8th grade, and one (1) high school. There is one (1) parochial school in Rock Falls providing education for pre-kindergarten through 8th grade (**Exhibit 3-4**).

The city of Sterling's public school system has four (4) elementary schools, one (1) middle school, and one (1) high school. In regard to parochial schools, there are two (2) that offer education in pre-kindergarten through 8th and one (1) high school (**Exhibit 3-4**). In addition, the city of Sterling houses a vocational school, the Whiteside Area Career Center. Lastly, the Sauk Valley Community College is located east of Sterling and offers numerous two (2) year specialty and associate degrees.

Churches. Exhibit 3-4 illustrates the locations of the 84 churches located within the communities of Fulton, Morrison, Rock Falls, and Sterling.

Cemeteries. There are ten (10) cemeteries within the project study area's communities: Fulton Township Cemetery, Cottonwood Cemetery (Ustick Township), Union Grove Cemetery (Union Grove Township), Morrison City Cemetery, Grove Hill Cemetery (Morrison), Round Grove Cemetery (Morrison), Como Cemetery (Hopkins Township), Coloma Township Cemetery (Rock Falls), Riverside Cemetery (Sterling), and Oak Knoll Memorial Park (Sterling) (**Exhibit 3-10**).

Other Public Facilities. Government facilities within the project study area include U.S. Post Offices in Fulton, Morrison, Rock Falls, and Sterling; City Halls in the cities of Fulton, Morrison, Rock Falls, and Sterling and the Whiteside County Courthouse in Morrison. Public facilities include libraries in all four (4) communities in addition to the Whiteside County Fairgrounds located in Morrison.

3.2.1.6 Land Use and Zoning

Existing Land Use. The land use in the project study area is dominated by agricultural ground and influenced by the Rock River. Other land uses include concentrations of residential areas, scattered farmsteads throughout the project study area, commercial/industrial, and environmentally sensitive areas.

The community of Fulton sits on the banks of the Mississippi River, which provides the city's western border. Fulton is mainly residential with one (1) large industrial land use, Drives Inc., located in the southern portion of the city.

The community of Morrison is surrounded by agricultural ground and scattered farmsteads. Within the city limits, the main residential areas exist to the north and south of the existing U.S. 30, which extends through the center of town. Commercial land use is found mainly along the U.S. 30 route in town and industrial land uses are located on the west side of town. Land use at the southeastern edge of the city has been converted into an industrial park. The park areas, schools, and the Whiteside County Fairgrounds are located in the southern portion of city. North of the city's residential area, the land use consists of open space which easily transitions into the Morrison Rockwood State Park (**Exhibit 3-10, p. 5**).

The community of Rock Falls consists of a mix of residential and commercial uses. The commercial uses are found mainly along U.S. 30, which extends east-west through town, and IL 40, which extends north-south through town. The northern border of the city is the Rock River, which is the divide between Rock Falls and Sterling. Along IL 40 proceeding south, there are numerous hotels, a Wal-Mart store, and access to the Hennepin Feeder Canal Trail. The Hennepin Feeder Canal Trail is a bike and hiking path which extends for approximately a hundred miles within five (5) counties.

The community of Sterling is a mix of residential, commercial, and industrial use. The CGH Medical Center and Sterling-Rock Falls Clinic reside in the center of town surrounded by

residential and commercial uses. A large portion of Sterling's commercial land use is located along the city's western edge where ASTEC Mobile Screens, Self Help Enterprises, and Halo Corp/Lee Wayne reside. The southern border of Sterling is bounded by the Rock River and industrial land use.

Zoning. The cities of Fulton and Morrison have zoning administrators and the cities of Rock Falls and Sterling have zoning boards that provide the authority for the land use within the project study area.

The cities of Sterling and Rock Falls have Comprehensive Land Use Plans. **The city of Sterling adopted their plan on April 20, 2006 and Rock Falls adopted a revised plan on July 19, 2011.** Whiteside County does not have a Comprehensive Land Use Plan but the county is zoned and has a zoning board that reviews and issues zoning permits.

County Level Planning Documents. Whiteside County has developed a plan in conjunction with the Illinois Department of Natural Resources (IDNR) called the "Whiteside County Greenways and Trails Plan." The plan identifies the bike/pedestrian trails along with natural and man-made resources that link the parks, nature preserves, cultural sites, and historic sites to each other throughout the county. In addition, the plan indicates whether trails are either paved or are gravel, are currently a dedicated trail, or proposed to be a dedicated trail. Please see **Exhibit 3-9** for the Greenways and Trails map.

Municipal Planning Documents.

Sterling. Sterling's Comprehensive Strategic Plan was adopted in 2006. The purpose of the plan is to direct community development and land use decisions, consolidate and direct redevelopment efforts, and focus and stimulate private housing, business, and industrial investment in the community.

The planning area for the Strategic Plan includes all lands currently within the City's corporate limits and land within five (5) miles of the City, but generally excluding Rock Falls and its 1 ½ mile Extraterritorial Jurisdiction (ETJ). The Plan provides information on how to accommodate and facilitate planned municipal expansion over a twenty-year period. The Plan also functions as a strategic plan by clarifying the City's objectives, being aware of the City's resources, and being responsive to a dynamic environment. According to the City of Sterling Comprehensive Strategic Plan, the plan is to provide clear, concise direction to policy-makers and the community over a three (3) to five (5) year timeframe.

The Strategic Plan recommends the preparation for more detailed plans over the next several years to provide more specific guidance in key areas. These plans are as follows: a Downtown Master Plan including riverfront development, design guidelines for downtown, streetscape plan, and redevelopment plans for the former Northwestern Steel and Wire, Lawrence Hardware, and National Hardware properties.

Rock Falls. **Rock Falls' Comprehensive Plan was adopted in 2011. The purpose of the plan is to promote orderly and beneficial development, helping to create a community that offers residents an attractive, efficient, and "resident-friendly" environment in which to live. According to the comprehensive plan, the city of Rock Falls has experienced slow and manageable growth until recording a recent stagnation and even a decrease in population based upon population estimates from the U.S. Bureau of the Census. Future growth should be anticipated, foresight provided to anticipate the challenges associated with growth, and appropriate policies and planning process should be in place to address growth when it occurs (City of Rock Falls 2011). The comprehensive plan addresses these issues and provides a basis for the policies which will shape the city of Rock Falls in the future.**

The comprehensive plan identified goals and objectives and also how to implement policies to accomplish these goals and objectives. Some of the key goals for Rock Falls include:

- **Promote the maintenance and improvement of existing development and promote new development at the City's edge or on re-development sites.**
- **Protect existing residential neighborhoods from intrusion by non-compatible land use activities.**
- **Develop an area-wide transportation planning and funding approach that maximizes efficiency and minimizes conflicts between modes of transportation.**
- **Promote the expansion, maintenance, and rehabilitation of utilities.**
- **Preserve and protect those features that reflect the unique history, natural resources and character of the city of Rock Falls.**
- **Enhance the appearance and quality of existing commercial businesses and industry (City of Rock Falls 2011).**

3.2.2 Environmental Consequences

The No-Build Alternative would have no additional impacts to socioeconomic resources in the project study area.

3.2.2.1 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order (EO) 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. According to IDOT's CIA Manual, under this order, Federal agencies are directed to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. In addition to this E.O., FHWA has Order 6640.23 that establishes policies and procedures for FHWA to use in complying with E.O. 12898. In general, the FHWA must ensure greater public participation, improve research and data collection relating to the health and environment of

minority and low income populations, determine whether an adverse effect has a "disproportionately high" impact on minority or low income populations, and identify minimization or mitigation strategies to reduce impacts on minority and/or low income communities.

Identify Study Area and Compile Characteristics. As stated earlier in this chapter, the composition of the population within the project study area is predominantly white residents; with a range of **82.5** percent of the residents in Sterling to **97.3** percent in **Fulton**. A reconnaissance of the area does suggest that the minority populations are predominately located within the cities of Rock Falls and Sterling. In addition, a review of the median family income and percentage of families living below the poverty level was also reviewed. The focus became on the census tract, township, and city with the lowest median family income and highest percentage of families living below poverty level. The information presented previously in this chapter revealed those living within Census Tract 17, Coloma Township, and in the city of Rock Falls, has the lowest median family income and highest percentage of families living below poverty level.

Identify Locations of Minority and Low-Income Persons. A review of neighborhoods within the combination of Census Tract 17, Coloma Township, and the city of Rock Falls, revealed the Riverside Estates Manufactured Home Community as an area of Environmental Justice concern. This neighborhood is located outside of the city of Rock Falls. Approximately 50 manufactured homes are located within this community which is bounded by the Rock River on the west, the existing U.S. 30 roadway on the south, Regan Road on the east, and agricultural land to the north (**Exhibit 3-10, p.15**).

Determine Disproportionately High and Adverse Effects on Populations of Concern.
Build Alternatives 4 and 5 will both impact the Riverside Estates Manufactured Home Community (Exhibit 3-10, p. 5). Of the 50 manufactured homes within the community, six (6) residential homes along with one (1) home that serves as the sales office will be displaced by the proposed project.

Three (3) alignment options were investigated for the portion of the project from Moline Road to the eastern terminus of IL 40. The first alignment involved centering the proposed roadway on the existing alignment. The second alignment involved shifting the alignment 19 feet to the north so that the proposed eastbound lanes are in the same general area as the existing pavement. The third alignment was essentially the same as the second except that it involved a 19 foot shift to the south rather than the north. Each of the three (3) alignments necessitates the relocation of the six (6) residential mobile homes. Given that the resulting impacts along the north side of the highway are essentially of the same extent for all three (3) alignments, it was deemed appropriate to pursue the second alignment (northerly shift) in order to minimize additional impacts to properties along the south side of the highway. In this way, it was possible to minimize impacts to some properties within this portion of the project study area.

Although residents are being displaced in what may be a low-income residential area, the level of impact would not be disproportionately high as compared to the number of displacements. In a review of the area and the project roadway design as described above and because of the

community's location constraints and problematic terrain, it is not feasible from an engineering and safety position to avoid the displacements. Residential displacements will take place throughout the project area. This impact will be borne by residents of various income levels. In each instance, acquisition, relocation activities, and benefits will comply with provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the IDOT Land Acquisition Procedures Manual.

3.2.2.2 Title VI

There have been two (2) Public Informational Open houses **and a Public Hearing** for the proposed project. Groups of ethnic, racial or religious minorities or elderly or handicapped people are not present within the project study area. No groups or individuals have been or will be excluded from participation in public involvement activities, denied the benefit of the project or subjected to discrimination in any way on the basis of race, color, age, sex, national origin, disability, or religion.

3.2.2.3 Community Changes

Because the two (2) Build Alternatives being proposed both bypass the city of Morrison, the social and economic impacts on the community need to be assessed, therefore, the following subsections will focus on the effects of the proposed U.S. 30 bypass on the city of Morrison.

3.2.2.4 Bypass of the City of Morrison

In general, by rerouting traffic around small towns, highway bypasses can provide a number of direct transportation benefits if planned properly, such as diverting unwanted truck traffic, increasing roadway safety, reducing travel delays, improving local access for people and goods, and potentially make the community more attractive for economic development. In contrast, bypasses also have the potential to impact the local economies. Area business owners fear potential reductions in sales while civic leaders may look forward to redeveloping downtown or promoting development along the new bypass (City of Morrison 2009). These characteristics are comparable to the circumstances within the city of Morrison and will be discussed in the following subsections.

3.2.2.5 Alternative through the City of Morrison

In 2004, IDOT completed a study that proposed to widen U.S. 30 to a three-lane section through the city of Morrison from IL 78 North to French Creek. The public voiced strong opposition to the project and therefore the project limits were reduced to the section from Jackson Street to French Creek. The U.S. 30 improvements that are currently being proposed are for the construction of a four-lane transportation corridor. A four-lane section through town would cause more extensive impacts than those identified in the three-lane section 2004 study, which include:

- Displacements of churches, gas stations, historic properties, businesses, and residences,
- A reduction in sales and property tax receipts would result from any such displacements, and
- High truck traffic volumes would continue to cause noise and safety concerns within the business and residential areas through town.

In addition to the reasons listed above for not proposing to widen U.S. 30 through Morrison to a three-lane as part of the project, the following applied:

- Because existing U.S. 30 does bisect the city as a two-lane highway, the expansion of the roadway to four (4) lanes would have an impact on community cohesion. Mainly because the safety of pedestrians crossing U.S. 30 would decline and therefore decrease the desire of pedestrians to cross U.S. 30.
- A widening to three (3) lanes would not meet the IDOT engineering policy for the current study. A widening to three (3) lanes would not meet the project's Purpose and Need because three (3) lanes would fail to provide for an increase in transportation demand and provide roadway system continuity.

Because an alternative through the city of Morrison was not an alternative proposed by the CAG or studied as part of this Draft Environmental Impact Statement (DEIS), the following subsections will focus on the impacts associated with a North and South Bypass of the city of Morrison.

3.2.2.6 Comparison of a North and South Bypass on the city of Morrison

The existing U.S. 30 in the city of Morrison is a two-lane highway, with a three-lane portion that has recently been constructed on the east end of the city. The U.S. 30 route bisects the community by running east-west through the city. The substantial portions of the population reside on either side of the highway, either to the north or south of U.S. 30. A majority of the local businesses are located along both sides of U.S. 30 and along Main Street, which is one (1) block south of U.S. 30.

The low population combined with the surrounding agricultural land use, access to I-88 being approximately five (5) miles away, and no large cities within close proximity, makes the city of Morrison a rural community.

3.2.2.6.1 Community Cohesion (Morrison)

The two (2) Build Alternatives being proposed both bypass the city of Morrison, either to the north or to the south. To the extent that the existing through-town traffic on U.S. 30 would be diverted to a bypass, the ease of the movement of the residents across U.S. 30 would be enhanced. In addition, a substantial portion of the truck volume within the city of Morrison is

heavy trucks traveling through the area. A bypass would likely divert these trucks around the community, thereby reducing or eliminating difficulties they cause within the community of Morrison.

North Bypass (Build Alternative 4). Within the area (**Exhibit 3-10, Page 7**) just north of the Morrison city limits there are approximately 30 homes. These homes are located along the main road known as Norrish Road, and along the side roads, which are Browns Road and Tanglewild Drive. In a conversation with Morrison's City Administrator, it was stated that the area does not have a neighborhood or subdivision "name" but it does have neighborhood type characteristics such as housing types and location in regard to Morrison. The area has rolling terrain and forested area features. As shown on **Exhibit 3-10, p. 7**, the north bypass would bisect this "neighborhood" causing four (4) residential displacements, including one (1) farmstead, and thus creating an impact in the community cohesion.

South Bypass (Build Alternative 5). The south bypass does not separate residents from the community facilities or services, impose barriers among existing neighborhoods, or adversely affect vehicular or pedestrian patterns within the community, therefore, does not have an effect on community cohesion.

3.2.2.6.2 Changes in Travel Patterns (Morrison)

The change in travel patterns for the residents living within the city of Morrison most likely will not be altered with how they access their homes, businesses, and schools. The following subsections discuss how the traffic volumes will be impacted within Morrison in addition to how those traveling along U.S. 30 will access Morrison if a north or south bypass is constructed.

3.2.2.6.3 Traffic (Morrison)

Existing ADT on U.S. 30 within the city of Morrison varies. In Morrison, traffic volumes increase from 7,800 vehicles per day (vpd) on the west end of town at the junction of IL 78 North to 11,000 vpd downtown west of the IL 78 South intersection and decreases back to 9,600 vpd east to the intersection of Sawyer Road.

North Bypass (Build Alternative 4): Based on the O-DStudy that was conducted for the project study area, design year traffic projected for the year 2038, on a North Bypass is between 6,100 and 8,950 vpd. The traffic to remain on U.S. 30 through the city of Morrison would be up to 8,600 vpd.

South Bypass (Build Alternative 5): Based on the O-DStudy that was conducted for the project study area, design year traffic projected for the year 2038, on a South Bypass is between 7,400 and 9,000 vpd. The traffic to remain on U.S. 30 through the city of Morrison would be up to 7,100 vpd.

3.2.2.6.4 Access (Morrison)

The existing U.S. 30 route goes in an east-west direction bisecting the city. The roadway through town is primarily two-lane but varies from a rural cross section west of town with aggregate shoulders to a narrow two-lane urban section in town with curb and gutter and then to a three-lane section with a bi-directional turn lane on the east end of Morrison. In Morrison, the roadway has numerous direct access points to side-roads, commercial businesses and residences, and there are four (4) signalized intersections with a combination of left and right turn lanes.

Upon completion of a U.S. 30 improvement, whether with a north or south bypass, the existing U.S. 30 roadway through Morrison will likely remain the same. With the exception of the connection of the existing U.S. 30 roadway to a four-lane improvement on both sides of town, the route will not be rebuilt or reconstructed. In addition, with either a north or south bypass, **four (4)** access points will be provided for those traveling along the bypass to access Morrison.

North Bypass (Build Alternative 4): The existing U.S. 30 route would tie into the new four-lane improvement just north of the existing IL 78 North intersection on the west end of town. This alternative would have **four (4)** access points to local roads north and east of Morrison. At Norton Road, an access point would be needed on the north side of the new route and a cross-road intersection would be constructed at Norrish Road (**Exhibit 3-10, p. 7**). A cross-road intersection would be constructed to access at Hazel Road (**Exhibit 3-10, p. 8**). Lyndon Road would have an overpass and the new route would then tie into the existing U.S. 30 roadway east of Morrison between Lyndon Road and Yager Road (**Exhibit 3-10, p. 11**). **The first point of access into the city of Morrison while traveling on the northern bypass from the west is 3.27 miles; traveling from the east, it is 0.79 mile.**

South Bypass (Build Alternative 5): The existing U.S. 30 route would tie into the new four-lane improvement via Hillside Road (**Exhibit 3-10, p. 3**) and Garden Plain Road west of Morrison (**Exhibit 3-10, p. 6**). Besides these two (2) access points, this alternative would have **six (6)** more access points to local roads south of Morrison at Prairie Center Road **(south leg only)**, Henry Road, **Lister Road (north leg only),** IL 78 South, and **Lyndon Road (south leg only)** (**Exhibit 3-10, p. 9, 10 & 11**) before tying back into the existing U.S. 30 roadway east of Morrison between **Lyndon Road and Yager Road** (**Exhibit 3-10, p. 11**). **The first point of access into the city of Morrison while traveling on the southern bypass from the west is 3.50 miles; traveling from the east, it is 0.93 mile.**

3.2.2.6.5 Residential Displacements (Morrison)

There will be seven (7) residential displacements with a city of Morrison mailing address with either the north or south bypass (see **Exhibit 3-10**). No residential displacements will occur within the city limits of Morrison.

North Bypass. In addition to the seven (7) residential displacements discussed, there will be **12** displacements created by the north bypass, for a total of **19** residential displacements (including farmsteads) with a Morrison mailing address. Of the **12** displacements caused directly by the north bypass, **five (5)** are farmsteads.

South Bypass. In addition to the seven (7) residential displacements discussed, there will be **seven (7)** residential displacements (including **4** farmsteads) caused directly by the construction of a south bypass, for a total of **14** residential displacements with a Morrison mailing address.

With all residential relocations, provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended, and the IDOT Land Acquisition Procedures Manual, will be utilized to provide for payment of just compensation of private property acquired for the project.

3.2.2.6.6 Businesses Impacts (Morrison)

According to the IDOT CIA Manual, when assessing a bypass of a community, there are three (3) types of categories for businesses: traffic-dependent, traffic-dependency uncertain, and typically not traffic-dependent. For this project, the businesses located along U.S. 30 (locally referred to as Lincolnway) and Main Street in Morrison were examined to determine their business category. **Table 3-15** identifies the **19** businesses within Morrison that could be in the traffic-dependent category, which include restaurants/lounges, convenience stores, confectionery/ice cream, gas stations, hotels/motel, and vegetable stands. After a review of traffic dependent businesses, it was determined that those most at risk for a decrease in business include the one (1) motel: the Parkview Motel; the four (4) gas stations: Fast Stop, Casey's General Store, Shop N' Go, and Shell; and the **four (4)** fast food restaurants: **McDonald's,** Dairy Queen, Subway, and Hardee's. The remaining traffic dependent businesses, although restaurants and lounges appear to be patronized by the local residents of Morrison, since a majority are located on Main Street and not U.S. 30.

There are approximately 52 businesses along U.S. 30 and Main Street that are either not at all or minimally dependent on traffic. These include: banks, car dealerships, law offices, insurance agents, car repair shops, retail stores, and a grocery store. These types of businesses are considered "destination" businesses, meaning a person intends to drive to this business to purchase a specific service and/or product.

With either the north bypass (Build Alternative 4) or the south bypass (Build Alternative 5), **one (1)** business, the Kreative Machining, with a Morrison address will be displaced. **Build Alternative 5 would displace an additional business with a Morrison address, the Diesel Depot**. Neither of these businesses is located within the "downtown" area of Morrison along U.S. 30 or Main Street; therefore, no businesses will be displaced by the proposed north or south bypass within the downtown area of Morrison.

Table 3-15: Traffic-Dependent Businesses within the City of Morrison

Business	Location
McDonald's	**U.S. 30 (E. Lincolnway)**
Dairy Queen	U.S. 30 (E. Lincolnway)
Mary's Restaurant	**U.S. 30 (E. Lincolnway)**
Parkview Motel	U.S. 30 (E. Lincolnway)
Fast Stop	U.S. 30 (E. Lincolnway)
Fat Boy's Bar & Grill	East Main Street
Casey's General Store	U.S. 30 (E. Lincolnway)
Subway	U.S. 30 (E. Lincolnway)
Original Taco	**East Main Street**
Main Street Coffee Shop	East Main Street
Da-Bar	East Main Street
Happy Joe's Pizza	West Main Street
KJ's Bar & Grill	West Main Street
Isle of Rhodes Restaurant	West Main Street
Hardee's Restaurant	West Main Street
China House	West Main Street
Shell Gas Station	U.S. 30 (W. Lincolnway)
Shop N Go Gas Station	U.S. 30 (W. Lincolnway)
The Family Chef Restaurant	U.S. 30 (W. Lincolnway)

Although there are no "direct" business impacts with the construction of a bypass, the motel, gas stations, and fast food restaurant businesses could experience a reduction in business. Studies **of bypasses on rural communities** indicate that if businesses work with the State to properly plan for the bypass, these businesses could minimize the impacts of a bypass by adding signs along the new U.S. 30 route directing travelers to their businesses. In addition, if business does decrease for a long period of time, the business owner could evaluate the potential of relocating along the bypass.

3.2.2.6.7 Land Use Impacts (Morrison)

Table 3-16 identifies the amount of **privately held** acres to be converted to **public** right-of-way for the portions of the project where Build Alternatives 4 and 5 do not share the same proposed alignment. Therefore, the acreage listed below is what will be required for the construction of only a north bypass alignment and only for the construction of a south bypass alignment.

North Bypass would require a total of **267** acres of land to be converted to right-of-way, 92 percent of which is agricultural land.

South Bypass would require a total of **269** acres of land to be converted to right-of-way, 97 percent of which is agricultural land.

In addition, it is anticipated that both bypass alternatives would spur development adjacent to the bypass, therefore, creating some secondary conversion land use impacts.

Table 3-16: Comparison of Area Converted to ROW for the North and South Bypass		
Land Use	**North Bypass (*Alternative 4*) (acres)**	**South Bypass (*Alternative 5*) (acres)**
Residential	**19.8**	**5.7**
Commercial	**0.6**	**0.3**
Agriculture*	**246**	**261**
No Parcel Class**	**0.8**	**1.5**
TOTAL	**267**	**269**

*** Includes forest/woodland acreage**
**** No primary use**

3.2.2.6.8 Economic and Tax Revenue Impacts (Morrison)

The local economic base largely consists of revenue from Whiteside County government services, property taxes, and sales tax. Please see **Table 3-17** for the revenue generators for the city of Morrison. The table illustrates that the Whiteside County government generates the largest revenue for the city with **$1,676,000** revenue generated in **2012**. The next highest revenue generator for the city is **property** tax with a total of **$507,000** generated in **2012**. The third highest revenue generator for the city is **sales** taxes, generating **$495,000** in **2012**. This type of sales tax revenue indicates there are most likely two (2) to three (3) car dealerships within the city of Morrison, which usually are considerable revenue generators for rural communities. In addition, according to the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), in **2010**, Whiteside County ranked **sixth** in the State for livestock cash receipts totaling approximately **$45** million and also has crop cash receipts totaling approximately **$193** million.

Table 3-17: Revenue Generators City of Morrison (FY 2012)	
Revenues	**Amount ($)**
Government: Charges for Services	**$1,676,000**
Property Taxes	**$507,000**
Sales Tax	**$495,000**
Other Taxes	**$438,000**
State Income Tax	**$334,000**
Capital Grants/contributions	**$271,000**
Miscellaneous	**$64,000**
Unrestricted Investment Earnings	**$11,000**
Total Revenues	**$3,796,000**

Source: City of Morrison, Illinois: Annual Financial Report for Fiscal Year ended **April 30, 2012**

Both the north and south bypass could impact the businesses and thus the sales tax generated within the city of Morrison. This is because the construction of a bypass could cause a decrease in business revenue. But as stated in the previous paragraph, if businesses work with the State to properly plan for the bypass, these businesses could minimize these impacts.

There will be no displacements of Whiteside County Government buildings or any businesses within the city of Morrison; therefore, there will be no direct impact on the employment and/or services of the largest revenue generator, the Whiteside County Government, for the city of Morrison.

There will be a minimum of **235** acres of **privately owned** agricultural land converted to public land for the construction of a north or south bypass. This will have an impact on the amount of lands to be taxed by Whiteside County. But, with the construction of a bypass, it is typical for new businesses and/or residential areas to develop along a new roadway. Therefore, Morrison may be able to regain some of this loss in property tax generated from agricultural ground through new businesses and/or residential developments.

3.2.2.6.9 Summary and Mitigation Measures of the Bypass of Morrison

There are several options for mitigating impacts of a bypass on a business community. Mitigation in which IDOT can work with Morrison includes new or additional signage, business-route designations, and access improvements. Mitigation measures that can be carried out by the city of Morrison include an advertising and logo identification for the city, a zoning plan, and an economic development plan.

Lastly, U.S. 30 will remain open as a business route within the city of Morrison and access to the city of Morrison and its businesses will not be eliminated as a result of a north or south bypass. The access that is being proposed with either the north or south bypass will allow the local traffic along with the through traffic to continue visiting the city of Morrison and its businesses. According to the IDOT CIA Manual, studies have shown that traffic dependent businesses could decline and eventually close after a bypass has been constructed. However, in combination with mitigation measures such as signing along the new U.S. 30 route in addition to other city sponsored mitigation measures such as an economic development plan, the impacts to the businesses of Morrison can be minimized.

It should be noted that because the existing U.S. 30 in Whiteside County is part of the Lincoln Highway National Scenic Byway, placement of outdoor advertisement signs, which are signs that advertise a commercial activity that does not take place on the property that the sign is located on, are restricted from being placed on the byway. However, if new signs are “directional or other official” signs, then they are allowed with approval by the Department.

3.2.2.7 Community Cohesion (Fulton, Rock Falls, and Sterling)

The proposed Build Alternatives would be located approximately 1.5 miles away from Fulton and 1.5 miles away from Sterling. Neither of the Build Alternatives would separate residents from the community facilities or services, impose barriers among existing neighborhoods, or adversely affect vehicular or pedestrian patterns within the community.

In regard to the city of Rock Falls, improvements are being proposed for portions of the city outside of the concentrations of the residential area, and as for the same reasons listed above for Fulton and Sterling, there will be no effect on community cohesion.

3.2.2.8 Change in Travel Patterns

The local travel patterns within the communities of Fulton, Rock Falls, and Sterling will not be altered by either Build Alternative 4 or 5.

The area-wide travel (or through traffic) patterns for the traveling public would change with Build Alternative 4 and 5 by decreasing the time for travel. Per the project's Origin Destination Study, the through traffic would not show a preference of utilizing Build Alternative 4 or Build Alternative 5.

In regard to the combined traffic, which is the local traffic combined with through traffic, Build Alternative 5 would lure 7,400 to 9,000 vpd while traveling around the city of Morrison as compared to Build Alternative 4 which would lure 6,100 to 8,950 vpd.

3.2.2.9 Residential and Business Relocations

Transportation projects can result in the acquisition of property and displacement of residents and businesses when new right-of-way is required. The acquisition of these properties will be accomplished in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act (Uniform Act). The Uniform Act provides for uniform, fair, and equitable treatment of persons whose real property is acquired or who are displaced in connection with federally funded projects. As required by the United States and Illinois Constitutions, just compensation must be provided for property to be acquired. Fair Market Value (FMV) is accepted as the standard for determining just compensation.

Under the Uniform Act, in addition to just compensation, displaced residents are entitled to benefits to minimize hardships of relocation such as acquisition and relocation assistance designed to help residents and businesses with reimbursement claims and the lease or purchase of new locations. Relocation advisory assistance would be provided to owners and renters of displaced properties. Relocation advisory benefits include but not limited to determining the needs and preferences of displaced persons, providing current and ongoing listings of comparable descent safe and sanitary dwellings for residential displacements, providing transportation to search for replacement housing, as well as financial referrals and housing inspection. Displaced residents would also be entitled to counseling and other assistance to minimize hardship in adjusting to the relocation. The Uniform Act would allow for reimbursement for

moving expenses and payment for the added cost of renting or purchasing comparable replacement housing.

Comparable business locations and residential housing are generally characterized as housing that would meet the needs of displacees in terms of price, size, location, and market availability. Market data from multi-listing services were reviewed to determine the availability of similar replacement properties. The market data shows that a sufficient number of comparable replacement homes at similar values and in the same general areas are available.

The No-Build Alternative would not displace any residences or businesses.

In the portions of the proposed project where Build Alternatives 4 and 5 share the same proposed alignment, 27 displacements would be required. Overall, Build Alternative 4 would require a total of **39** residential displacements, **11** of which are farmsteads. Build Alternative 5 would require a total of **34** residential displacements, **10** of which are farmsteads. **Exhibit 3-10** illustrates these displacements.

The four (4) same businesses would be displaced by Build Alternatives 4 and 5. **Build Alternative 5 will displace an additional business for a total of five (5) displacements. Table 3-18** lists the businesses to be displaced.

Table 3-18: Business Displacements

Business	Location	# of Employees	# of Years in Business	Type of Company
Maple Lane Motel	Fulton: Frog Pond Road	1	19	Private
Kreative Machining	Morrison: Round Grove Road	1	13	Private
Riverside Mobile Estates (Sales Office)	Rock Falls: Regan Road	1	Not Found	Private
The Diesel Depot	**Morrison: U.S. 30**	**2**	**17**	**Private**
Double G Arena & WAHL Equestrian Center	**Sterling: U.S. 30**	**10**	**17**	**Private**

Source: Manta

3.2.2.10 Community Services/Facilities

Neither Build Alternative 4 nor 5 would displace any public facility or service.

Right-of-way will be required by both Build Alternatives from **one (1)** church property located in Rock Falls. Approximately **0.34** acre will be acquired from the Rock River First Church of God, which is adjacent to U.S. 30 just west of the Rock River. No structures on these properties will be impacted and access will remain the same.

Both Build Alternatives would acquire **7.3** acres of undeveloped public land from Whiteside County. The property to be purchased is located on the south side of U.S. 30 behind the Whiteside County Highway Department and Public Works Department building across from the Whiteside County Landfill just east of Morrison. **In addition, Build Alternative 4 requires 0.8 acre of undeveloped public land from Whiteside County. This property is located on the south side of existing U.S. 30 to the west of the Whiteside County Highway Department building. This acquisition would involve the purchase of a small shed. The public property is required in order to avoid impacts to the Prairie Hill Landfill.**

Access to all public services and facilities will remain unchanged for the residents of Fulton, Rock Falls, and Sterling. For the residents of Morrison, emergency service routes may need to be adjusted because both Build Alternatives bypass the city and provide limited access points from the proposed U.S. 30 route. It is possible that with the construction of the proposed project, emergency vehicles could benefit as a result of the increase in travel speeds, additional capacity, and improved safety conditions. In general, provisions of emergency services will remain the same and emergency services to the residents of Morrison and the surrounding service areas would not be affected adversely by the proposed project.

A majority of those attending the public schools within Morrison ride the bus. There is some concern that a bypass created by either Build Alternative 4 or 5 would prevent the school buses from accessing residents within this area. School bus routes may need to be altered during and after the construction of the project.

Lastly, during the preferred alternative selection process, IDOT will assess the needs of the bicyclists within the project study area. This assessment will determine if bicycle travel within the project study area and from the outlying areas justifies including bicycle accommodations as part of the proposed project.

3.2.2.11 Land Use Changes

Build Alternative 4 will require a total of approximately **676** acres **of privately owned land** to be converted to **public** right-of-way for the proposed project. As shown in **Table 3-19**, **approximately 89** percent of the land to be converted is agricultural land.

Build Alternative 5 will require a total of approximately **678** acres **of privately owned land** to be converted to **public** right-of-way for the proposed project. As shown in **Table 3-19**, approximately 92 percent of the land to be converted to right-of-way is agricultural land.

Table 3-19: Land to be Converted to ROW				
Land Use	Acreage Converted		% of Total Land Use Converted	
	Alternative 4	Alternative 5	Alternative 4	Alternative 5
Residential	**53**	**33.1**	**7.8%**	**4.9%**
Commercial	**12.3**	**12.0**	**1.8%**	**1.8%**
Agriculture	**600**	**622**	**88.8%**	**91.7%**
Railroad	**3.3**	**3.3**	**0.5%**	**0.5%**
Public Facilities	7.4	7.4	**1.1%**	**1.1%**
TOTAL	**676**	**678**	---	---

3.2.2.12 Property Values

When roads are expanded or new roads constructed, the market value of adjacent properties may be affected. Local units of government base their residential property assessments (property value) on sale prices (market prices). With this approach, it is difficult to speculate on property value impacts, since property must be sold to determine its market value and then a comparison made to recent sales prices for similar properties.

Proximity of a road to a residence is a factor buyers would consider in purchasing a residence, but the importance of "road setback" varies considerably among study area residents and prospective home buyers. There are examples of newer and older residences throughout the project study area with a wide range of setbacks from U.S. 30.

Improvements to U.S. 30 may be expected to have a positive effect on property values over the long term in areas where the improvements stimulate new development. **Proximity studies that will be done during the appraisal process will determine how much property value is diminished by the improvement.**

3.2.2.13 Employment

As previously stated in this chapter, the Whiteside County region has been battling steadily increasing unemployment rates. The closing of the GE plant in Morrison and the Stanley/National plant in the city of Rock Falls eliminated approximately 377 jobs from the project study area. Construction of either Build Alternative 4 or 5 would create temporary construction-related jobs. **Table 3-20** shows the potential temporary labor force increases that could result from the creation of construction jobs related to the proposed U.S. 30 project.

Table 3-20: Construction-Related Employment and Generated Income for Build Alternatives 4 and 5						
Employment Type	**Cost of Construction (Millions)**		**Multiplier**		**Total Jobs**	
	Alt 4	**Alt 5**	**Alt 4**	**Alt 5**	**Alt 4**	**Alt 5**
Direct Employment	**$437**	**$405**	7.1 (Low)	7.1 (Low)	**310**	**288**
			9.75 (High)	9.75 (High)	**426**	**395**
Indirect Employment	**$437**	**$405**	9.25 (Low)	9.25 (Low)	**404**	**375**
			12.7 (High)	12.7 (High)	**555**	**514**
Induced Employment	**$437**	**$405**	10.5	10.5	**459**	**425**
TOTAL JOBS	---	---	---	---	**1,173-1,440**	**1,088-1,334**
	$437	**$405**	1.94	1.94	**$84,778,000**	**$78,570,000**

Source: The multipliers were provided in the IDOT CIA Manual via Robert Gorman, FHWA. 1985. *Analysis of Employment Statistics: Field Survey to Determine Employment Impacts of the Surface Transportation Act of 1982.*

Build Alternative 4. Construction of Build Alternative 4 is estimated to cost approximately $**437** million. In turn, Build Alternative 4 has the potential to create between **310** and **426** direct on-site construction jobs, between **404** and **555** offsite manufacture and preparation of supplies and equipment jobs (indirect employment), and **459** induced jobs, which is employment generated to fulfill demand for goods and services to newly employed households. In total, the proposed construction of Build Alternative 4 could result in an estimated total employment of **1,173** to **1,440** people. Income generated by the Build Alternative 4 is estimated at $**84.8** million.

Build Alternative 5. Construction of Build Alternative 5 is estimated to cost approximately $**405** million. In turn, Build Alternative 5 has the potential to create between **288** and **395** direct on-site construction jobs, between **375** and **514** offsite manufacture and preparation of supplies and equipment jobs (indirect employment), and **425** induced jobs. In total, the proposed construction of Build Alternative 5 could result in an estimated total employment of **1,088** to **1,334** people. Income generated by the Build Alternative 5 is estimated at $**78.6** million.

Economic impacts would not be experienced solely in the project study area. The impact would depend on availability of local labor and materials. Also, some of the jobs "created" represent existing jobs that would remain filled because of the road construction project rather than new jobs. Jobs created include both temporary and full-time jobs. The methodology does not distinguish between such jobs, nor can it determine the duration of a worker's employment. Not all job creation would occur in the project study area. **Table 3-20** reflects the potential temporary labor force increases that could result from the creation of construction jobs related to the proposed project.

3.2.2.14 Tax Revenues Impacts

A short-term tax revenue loss in the region will result from converting taxable land into a nontaxable transportation use. To evaluate the tax losses, information was obtained from the Whiteside County Tax Assessors' Office. All taxing districts, including schools, fire protection, sanitary districts, and individual communities were delineated. The results of this analysis are summarized in **Table 3-21**, with detail of impact to each taxing body. The tax loss analysis shows that total annual property tax losses are estimated to be **$168,878, or 4.4 percent** of the total annual taxes collected by the taxing entities for Build Alternative 4. For Build Alternative 5, the estimate is **$144,749, or 3.8 percent**.

Table 3-21: Tax Revenue Loss Analysis

Taxing Unit	Additional ROW (acres)[1]	EAV of Land[2] ($)	Market Value of Structures[3]($)	Tax Rates for 2011[4]	Revenue Loss in 2011 Dollars[5]	2011Total Assessed Taxes[6]($)	Percent Tax Loss[7]
BUILD ALTERNATIVE 4							
Whiteside County	**676**	**131,820**	**8,312,692**	**1.0863**	**31,502**	**8,374,903**	0.38
Special Service Area #1	156	**30,030**	1,533,769	**0.1577**	**852**	**644,493**	**0.13**
Fulton School Unit 2	83	**16,185**	747,355	**4.6149**	**12,231**	**4,822,279**	**0.25**
Morrison School Unit 6	**422**	**82,290**	**3,051,149**	**5.0495**	**55,459**	**5,156,677**	**1.10**
Sterling School Unit 5	168	**32,760**	2,176,965	**4.5733**	**34,651**	**12,803,136**	**0.27**
Sauk Valley Unit 506	**676**	**131,820**	**8,312,692**	**0.4422**	**12,243**	**3,205,914**	**0.38**
Morrison Fire District	**468**	**91,200**	**4,562,841**	Self Collected	---	---	---
Sterling Fire District	140	**27,300**	986,838	**0.1813**	**645**	**206,402**	0.31
Rock Falls Fire District	15	**2,925**	716,791	**0.1753**	**423**	**108,972**	0.38
Fulton Fire District	64	**12,480**	428,597	**0.4110**	**637**	**295,377**	**0.21**
Fulton Flood District	64	**12,480**	243,455	**0.1608**	**150**	**100,068**	**0.15**
Rock Falls Library District	**15**	**2,925**	716,791	**0.8113**	**1,960**	**223,076**	**0.88**
Morrison Hospital District	**500**	**97,500**	**4,990,329**	**0.6013**	**10,578**	**853,215**	**1.20**
Coloma Park District	15	**2,925**	716,791	**0.6053**	**1,462**	**642,950**	**0.23**

Table 3-21: Tax Revenue Loss Analysis							
Taxing Unit	**Additional ROW (acres)[1]**	**EAV of Land[2] ($)**	**Market Value of Structures[3]($)**	**Tax Rates for 2011[4]**	**Revenue Loss in 2011 Dollars[5]**	**2011Total Assessed Taxes[6]($)**	**Percent Tax Loss[7]**
Fulton Township	43	**8,385**	243,455	**0.1947**	**174**	**123,411**	**0.14**
Ustick Township	48	**9,360**	858,902	**0.5597**	**1,653**	**59,139**	**2.80**
Union Grove Township	163	**31,785**	303,476	**0.2894**	**404**	**80,910**	**0.50**
Mount Pleasant Township	**232**	**45,240**	**2,665,573**	**0.1544**	**1,440**	**99,475**	**1.44**
Hopkins Township	175	**34,125**	1,964,074	**0.2820**	**1,940**	**98,860**	**2.00**
Coloma Township	15	**2,925**	835,125	**0.1688**	**474**	**172,190**	0.28
TOTAL/AVERAGE					**$168,878**		**4.4%**
BUILD ALTERNATIVE 5							
Whiteside County	**678**	**132,210**	**7,533,065**	**1.0863**	**28,686**	**8,374,903**	**0.34**
Special Service Area #1	156	**32,760**	1,533,769	**0.1577**	**857**	**644,493**	**0.13**
Fulton School Unit 2	83	**16,185**	747,355	**4.6149**	**12,231**	**4,822,279**	**0.25**
Morrison School Unit 6	**419**	**81,705**	**2,050,136**	**5.0495**	**38,598**	**5,156,677**	**0.75**
Sterling School Unit 5	168	**32,760**	**2,176,965**	**4.5733**	**34,651**	**12,803,136**	**0.27**
Sauk Valley Unit 506	**678**	**132,210**	**7,533,065**	**0.4422**	**11,677**	**3,205,914**	**0.36**
Morrison Fire District	**465**	**90,675**	**2,538,754**	Self Collected	---	---	---
Sterling Fire District	140	**27,300**	**986,838**	0.1813	**645**	**206,402**	0.31
Rock Falls Fire District	15	2,370	716,791	**0.1753**	**423**	**108,972**	0.38
Fulton Fire District	64	**12,480**	428,597	**0.4110**	**637**	**295,377**	**0.22**
Fulton Flood District	54	**10,530**	243,455	**0.1608**	**147**	**100,068**	**0.15**
Rock Falls Library District	15	**2,925**	716,791	**0.8113**	**1,960**	**223,076**	**0.88**
Morrison Hospital District	**497**	**96,915**	**3,422,900**	**0.6013**	**7,436**	**853,215**	**0.87**
Coloma Park District	15	**2,925**	716,791	**0.6053**	**1,462**	**642,950**	**0.23**
Fulton Township	43	**8,385**	243,455	**0.1947**	**174**	**123,411**	**0.14**
Ustick Township	48	**9,360**	858,902	**0.5597**	**1,653**	**59,139**	**2.80**
Union Grove Township	198	**38,610**	303,476	**0.2894**	**404**	**80,910**	**0.50**

Table 3-21: Tax Revenue Loss Analysis							
Taxing Unit	**Additional ROW (acres)[1]**	**EAV of Land[2] ($)**	**Market Value of Structures[3]($)**	**Tax Rates for 2011[4]**	**Revenue Loss in 2011 Dollars[5]**	**2011Total Assessed Taxes[6]($)**	**Percent Tax Loss[7]**
Mount Pleasant Township	**199**	**38,805**	**1,227,478**	**0.1544**	**691**	**99,475**	**0.70**
Hopkins Township	175	**34,125**	1,964,074	**0.2820**	**1,940**	**98,860**	**1.96**
Coloma Township	15	**2,925**	835,125	**0.1688**	**474**	**172,190**	0.28
TOTAL/AVERAGE					**$144,749**		**3.8%**

[1]New right-of-way (ROW) required for construction
[2]Equalized Assess Valuation (EAV) = Additional right-of-way (ROW) multiplied by **$195**/acre
[3]Structures within ROW to be acquired: $118,334 per residence; $243,455 per commercial; $66,808 per farm building (Note: these values reflect estimates made by the consultant team and in no way predict the actual purchase price to be offered to individual owners of properties and/or structures. The fair market value of any portion of a land owner's property needed for a proposed highway improvement will be determined by qualified real estate appraiser)
[4]Dollars per $100 of assessed valuation
[5][(EAV of land) + (market value of structures x 0.333)/100] x tax rate
[6]Total assessed property tax for **2011** (Source: Whiteside County Tax Assessor's Office)
[7]Percent of revenue lost from highway construction

3.3 Agriculture

3.3.1 Affected Environment

Agriculture is a major land use in Whiteside County. According to the 2007 Census of Agriculture, the combined agricultural lands account for 92.5 percent of land in the county. As shown in **Table 3-22**, in total, Whiteside County has 405,333 acres of land in agricultural production.

Table 3-22: Agricultural Lands		
	Whiteside County	**Illinois**
Total Land Areas (Acres)	438,137	36,058,700
Total Land in Farms (Acres)	405,333	26,775,100
Percent of Total Land in Farms	92.5	75.4
Number of Farms	1,132	76,860
Average Farm Size (Acres)	358	348
Average Farm Value ($)	1,367,865	1,321,080

Source: USDA-NASS, 2007 Census of Agriculture

Table 3-23 shows farm data trends between 2002 and 2007. Over this period, the average farm size (in acres) in Whiteside County decreased, but the number of farms and total farmland acreage increased substantially. Average farm value has increased by more than 43 percent.

Table 3-23: Trends in Agricultural Resources			
Whiteside County	**2002**	**2007**	**Percent Change**
Farmland (acres)	379,366	405,333	+6.8
Number of Farms	1,001	1,132	+13.1
Average Farm Size (acres)	379	358	-5.5
Average Farm Value	955,300	1,367,865	+43.2

Source: USDA-NASS, 2007 Census of Agriculture

The three (3) main crops in Whiteside County are corn, soybeans, and wheat. Illinois ranks 2nd in the U.S. in both corn and soybean production. Whiteside County is ranked 10th in the State in corn production and 57th in soybean production. Livestock production is also economically important, with Whiteside County ranking 10th in the State in number of head of cattle and 7th in total receipts for livestock. **Table 3-24** summarizes cash receipts by agricultural product generated in Whiteside County in 2008.

Table 3-24: Cash Crop Receipts, 2008 (thousand dollars)		
Crop	**Whiteside County**	**Illinois**
Corn	177,211	8,878,418
Soybeans	39,849	4,163,157
Wheat	1,512	44,929
Other Crops	7,302	741,155
Total Crop	*225,874*	*14,232,028*
Livestock	51,723	2,125,189
Total Receipts	*277,597*	*16,357,217*

Source: USDA-NASS, 2009 Illinois Annual Statistics Bulletin

3.3.1.1 Agricultural Land Protection

Conservation Reserve Program. The Conservation Reserve Program (CRP) is available to agricultural producers to take highly erodible or environmentally sensitive lands out of agricultural production for contract periods of 10 to 15 years. Contracted farmers plant permanent areas of vegetative cover such as native grasses, wildlife plantings, trees, filter strips, or riparian buffers, which reduce erosion, improve surface water quality, and provide habitat for wildlife. In return, contracted farmers receive annual rental payments, incentive payments for certain activities, and cost-share assistance to establish protective vegetation.

Agricultural Areas Conservation and Protection Act. The Agricultural Areas Conservation and Protection Act (P.A. 81-1173) provides protection and enhancement of agricultural land as a viable segment of the State's economy and as an economic and environmental resource of major importance. These areas, also known as "ag areas," consist of 350 or more contiguous acres of land. They are organized among local landowners and county governments, then registered as an Agricultural Protection Area with the Illinois Department of Agriculture (IDOA) for the purpose of designating blocks of land that are committed to the production of agricultural

commodities. As of the most recent Agricultural Areas Annual Report (IDOA, 2009), Whiteside County did not contain any Agricultural Protection Areas.

Centennial Farms. Centennial farms are farms that have been owned by a straight or collateral line of descendants of the original owner for more than 100 years. The Centennial Farms program honors generations of farmers who have worked to maintain family farms in Illinois. There are 93 centennial farms currently registered for Whiteside County, 18 of which fall within the project study area (see **Exhibit 3-10**).

Sesquicentennial Farms. Sesquicentennial farms are farms that have been owned by a straight or collateral line of descendants of the original owner for more than 150 years. The Sesquicentennial Farms program honors generations of farmers who have worked to maintain family farms in Illinois. There are six (6) sesquicentennial farms in Whiteside County, one (1) of which is within the project study area (see **Exhibit 3-10, p. 3**; listed as Sesquicentennial Farm Parcel ID: 0232400003).

3.3.1.2 Soils

The soils throughout Whiteside County and the project study area range from good to ideal for agricultural use. The soils are generally well-drained to excessively well-drained, experience no flooding (except immediately adjacent to Rock Creek and the Rock River), and are generally flat (0-5% slopes).

As defined by the USDA Natural Resource Conservation Service (NRCS), agricultural lands are divided into two (2) principal categories: prime farmland and additional farmland of statewide importance (or “important farmland”). Prime farmland is defined as land with the best combination of physical and chemical properties for producing food, feed, forage, fiber, and oilseed crops. Prime farmlands must have the soil quality, growing season, and moisture supply needed to produce economically sustained high yields when treated and managed according to acceptable farming methods. Prime farmland is generally used in Whiteside County, and statewide, for the production of corn and soybeans, which account for most of the local agricultural income each year. Whiteside County contains nearly 300,000 acres of prime farmland, more than 66 percent of all soils in the county. Important farmland is defined as land of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Important farmlands include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Whiteside County contains more than 80,000 acres of important farmlands, or approximately 18 percent of all soils in the county. Nearly 85 percent of all soils in Whiteside County are prime or important farmlands.

3.3.2 Environmental Consequences

This section describes the Build Alternatives' impacts to farm operations. A farm operation is defined as one (1) or more parcels of land farmed as a single unit. Although farmed under single management, a farm operation may be under multiple ownerships. The Whiteside County USDA/Farm Service Agency provided information on farm boundaries and owners/operators of individual farm units in the project study area.

The Federal Farmland Protection Policy Act, enacted by Congress in 1984, established criteria for identifying and considering the effects of Federal programs on the conversion of farmland to nonagricultural uses. The fundamental purpose of the Act is to minimize the extent of farmland conversion and impacts and to "assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland." The Build Alternatives described in Chapter 2 were developed to limit severances and overall agricultural impacts to the extent practicable.

The agricultural impacts discussed in this section belong to two (2) primary categories: impacts to existing farm operations and impacts to soils that do or potentially could support agricultural production. Impacts to farm operations include loss of farmland, farmland severances with the associated changes in cropping patterns, irrigation practices and field access, and displacement of farm residences and outbuildings. For the purpose of this discussion, farmland is defined as cropland and other cover types found on farms. Cropland includes cropped fields, pasture and hay land, vineyards, orchards, and the maintained grounds that support farm operations (areas that surround farm outbuildings). Impacts to agricultural soils are quantified based on the soil characteristics determined by the NRCS. Each soil map unit has been categorized by the NRCS based on its ability to support agricultural production. These impacts are represented primarily as acres of Prime and/or Important Soils, as discussed previously, and are a main component of the Land Evaluation and Site Assessment (LESA) system that is discussed in Section 3.3.2.5. Because the assessment of soil qualities is independent of existing land uses at any given time, measures of impacts to soils classified as Prime and/or Important Farmland captures the areas suitable for agricultural production, whether or not those soils are currently in agricultural production. Therefore, measures of impacts to farmland soils will differ from the values assessed for impacts to existing agricultural land uses. Both soil capability and land use are incorporated in the LESA system to assign the scores that appear on the AD-1006 Form (see Section 3.3.2.5).

The No-Build Alternative would not acquire land from farm operations in the project study area. However, as traffic volumes increase, travel efficiency and possibly safety for farm vehicles using U.S. 30 would be expected to decline.

3.3.2.1 Agricultural Acres Required

Total Farmland Converted. Table 3-25 shows a summary of the key agricultural impacts of Build Alternatives 4 and 5. Build Alternatives 4 and 5 would convert **600** acres or **622** acres of agricultural land, respectively. Build Alternative 4 would impact **105** farm operations and displace **11** farmsteads, while Build Alternative 5 would impact **106** farms and displace **10** farmsteads. These impacts would constitute approximately one-tenth of one percent of the total farmland acres in the Whiteside County.

Table 3-25: Summary of Agricultural Impacts for Build Alternatives

Agricultural Impact Type	Alternative 4	Alternative 5
Number of Farms Affected	**105**	**106**
Farmsteads Displaced (#)	**11**	**10**
Centennial Farms Affected (#)	2*	3*
Farmland Area Converted (acres)	**600**	**622**
Severed Farm Parcels (#)	**36**	**40**

*Includes one (1) Sesquicentennial Farm

Conservation Reserve Program. Conversion of CRP lands to highway right-of-way will violate the terms of the 10 to 15 year contracts between the NRCS and the farm operator, which will require IDOT to coordinate with NRCS to determine if there will be financial consequences of acquiring CRP lands. A full assessment of impacts to CRP lands will be completed for the preferred alternative.

Centennial Farms. Build Alternative 4 would affect land from one (1) centennial farm and one (1) sesquicentennial farm while Alternative 5 would affect the same two (2) plus one (1) additional centennial farm property. Alternatives 4 and 5 would each convert 5.2 acres and 6.19 acres of the Abbott and Mathew farms to new right-of-way. The Abbott Sesquicentennial Farm is located west of Morrison along the existing U.S. 30/Lincoln Road and the Mathew Centennial Farm operation is located east of Morrison along the existing U.S.30/Lincoln Road. Impacts to both of these properties will result from widening of existing right-of-way. Build Alternative 5 bypasses Morrison to the south along new alignment and would require 8.3 acres from the Anderson Centennial Farm located south of Garden Plain Road. Build Alternative 5 would sever the property diagonally into two (2) approximately equal halves.

3.3.2.2 Land Capability Groupings

Prime and Important Soils. Approximately **75** percent of the land within the proposed right-of-way (ROW) for both Build Alternatives 4 and 5 is classified as prime farmland soil. An additional **20** percent is classified as farmland of statewide importance**.** Therefore, approximately **501** acres of the total area converted to right-of-way for Build Alternative 4 and **509** acres of the total area converted to right-of-way for Build Alternative 5 would be prime farmland. An additional **140** acres and **148** acres of the total area converted to right-of-way for Build Alternative 4 and 5,

respectively, would be farmland of statewide importance. As shown in **Table 3-26**, the composition of soils within the two (2) alternatives is broadly similar.

Table 3-26: Conversion of Prime Farmland Soils

Farmland Soil Category	Build Alternative 4	Build Alternative 5
Prime Farmland Soils (acres)	**501**	**509**
Important Farmland Soils (acres)	**140**	**148**
Not Prime Farmland Soils (acres)	**35**	**21**

Source: USDA-NRCS Whiteside County Soil Survey

Land Capability Classes. There are 73 soil types within the proposed right-of-way for Build Alternatives 4 and 5. The soils represented on the Whiteside County soil maps that fall within the right-of-way for the two (2) Build Alternatives were identified and classified by soil capability. Generally, Class I and II are considered prime farmland soils. See **Table 3-27** for a summary of the acreages of soils in the proposed right-of-way by capability class. The NRCS soil maps do not accurately reflect current land use, as some of these soils may have already been converted to non-agricultural uses. The numbers are provided as a general characterization of the agricultural value of soils in the respective proposed right-of-ways.

Table 3-27: Farmland Soils by Capability Class within Proposed ROW

Capability Class	Build Alternative 4	Build Alternative 5
Class I	90	85
Class II	**400**	**406**
Class III	**131**	123
Class IV	10	19
Class V	1	1
Class VI	30	35
Class VII	14	9

Source: USDA-NRCS Whiteside County Soil Survey

Displacements of Farm Residences and Outbuildings. "The Uniform Relocation Assistance and Real Property Acquisition Act of 1970", as amended, applies to all Federal or Federally assisted activities that involve the acquisition of real property or the displacement of residences or businesses. IDOT would provide just compensation for each property acquired for new right-of-way and easements. Just compensation is a monetary payment equivalent to the fair market value of the property. Fair market value is the highest estimated price the property would bring if sold on the open market, with a reasonable time allowed to find a buyer, and buying with the knowledge of all the uses to which it is adapted, and for which it is capable of being used. Mitigation of relocation impacts or displaced structures would be in the form of financial remuneration or compensation for property loss and relocation expenses, as outlined in the Uniform Relocation and Real Property Acquisition Act of 1970, as amended. **Table 3-25** identifies displaced agricultural residences and outbuildings as well as other impacts to farm operations. Build Alternative 4 would displace **11** farmsteads, while Build Alternative 5 would displace **10** farmsteads.

Severances. Severances occur when a contiguously farmed parcel is divided either laterally or diagonally by the proposed improvements (See **Exhibit 3-5** Severance Parcel Details). The effects of property severances include changes in cropping patterns and field access because of parcel splits. **Thirty-six or forty** farms would be severed by Build Alternative 4 or 5, respectively. As would be expected, severances are found only on new alignment. As a result of farm severances, some project-area farmers would experience changes in the way they work, irrigate, and move between their fields. A severed farm may require farmers to travel on local roads with farm machinery to reach the nearest access to the severed parcel. Not only does the increased travel time for farmers reduce profits, it also increases the potential for conflicts on local roads between farm machinery and other vehicles.

Remnant Parcels. During the land acquisition process, IDOT would determine if any affected properties are uneconomic remnants (i.e., of little value or use to the land owner). The Department will then offer owners the option of selling those remnants to IDOT.

Landlocked Parcels. A landlocked parcel is defined as that portion of the land isolated by the right-of-way of the preferred alternatives, thereby rendering it inaccessible by public road, existing easement, or proposed access roads. The design of the proposed alternatives has attempted to minimize the number of severed parcels and thereby the number of potentially landlocked parcels. In addition, field access will be provided wherever possible, but access cannot be provided where it would create unsafe conditions. In all cases, IDOT will either provide access or purchase the inaccessible property. A full access assessment will be completed for the preferred alternative. The landlocked agricultural parcels that are purchased by IDOT may be used for mitigation or borrow purposes, thereby eliminating or reducing the need to remove additional agricultural lands from production for these uses.

Environmental Mitigation Areas. Environmental mitigation areas are properties that IDOT will purchase and may turn over to IDNR for future management. These properties will be used to mitigate the project's environmental impacts. Mitigation requirements and proposed mitigation areas will be determined for the preferred alternative.

Adverse Travel. Adverse travel is a measure of the additional miles travelled by a farmer to reach a severed or otherwise affected parcel of land created by the construction of the proposed highway. The increase in travel required to reach these parcels impose additional costs on the farm owner/operator in terms of time lost, machine wear, and fuel costs. These additional costs can be substantial relative to the profit margin of commodity prices over production costs. Adverse travel is calculated by subtracting the existing travel mileage from the mileage of the shortest route available to reach the parcels that would be severed under a proposed alternative. Landlocked parcels are excluded from this analysis since they will be inaccessible to current farm operators. As discussed previously in the Landlocked Parcels subsection, a full access assessment will be completed following the selection of a preferred alternative.

3.3.2.3 Income

To determine the annual income loss due to removing agricultural land from crop production, an average annual per acre market value was determined for Whiteside County. According to the 2007 Census of Agriculture (USDA-NASS), the market value of all crop products in Whiteside County was $280,778,000 in 2007. Those sales were generated on 405,333 acres of agricultural land, providing an average value of $692.71 per acre. Therefore, Build Alternative 4 would reduce annual agricultural incomes in Whiteside County by $**415,626**. Build Alternative 5 would reduce agricultural incomes in Whiteside County by $**430,866**.

Offsetting the lost income, to some degree, would be the possible savings in transportation costs associated with the proposed improvements. The costs associated with trips to grain elevators or beyond could be reduced by the increased safety and efficiency of the improved roadway.

3.3.2.4 Irrigation and Subsurface Drainage Maintenance

Existing drainage patterns and ditch flowline elevations have been taken into consideration when selecting proposed vertical alignment. Drainage structures will be designed so that existing drainage patterns will be maintained with minimal efforts.

Subsurface drainage tiles are located throughout the project area. IDOT will meet with farmers along the chosen alternative to determine tile locations. Mapping of field tile placement was not a common practice until recently. Identified farm field tiles that intersect the roadway alignment will either be relocated, outletted into side ditches along the roadway, or replaced with higher strength pipe below the facility. During construction, exploratory trenching will be done (where needed) along the alignment to locate field tiles identified during preparation of construction plans and to locate other tiles not identified before construction. No adverse effects to the existing subsurface drainage system are anticipated due to the construction of the proposed alignments.

3.3.2.5 Farmland Conversion Rating

The NRCS developed the Illinois Land Evaluation and Site Assessment (LESA) system to comply with State and Federal agriculture protection regulations (the Farmland Preservation Act and Farmland Protection Policy Act, respectively). LESA is a tool for evaluating the relative effect development projects would have on farmland. NRCS uses it to evaluate the productivity of the soils affected by a project (the Land Evaluation Section). The IDOA also uses it to assess the impact a project may have on the viability of farmed land in that project's corridor (the Site Assessment Section). The following are examples of the factors that contribute to a Preferred Alternative's Site Assessment Rating:

- amount of agricultural land required,
- creation of severed farm parcels, uneconomical remnants, landlocked parcels, and adverse travel,
- relocations of rural residences and farm buildings, and

- use of minimum design standards

Each factor is given points, which are tallied to reach an overall rating and included on Farmland Conversion Impact Rating Form AD-1006. When using the Illinois LESA Site Assessment corridor factors, the Land Evaluation Section can receive as high as 150 points, and the Site Assessment Section can receive 150 points. Site or Corridor alternatives receiving 175 or fewer points have a low rating for protection and alternatives receiving 176 to 225 points are in the moderate range for protection. In most cases, alternatives exceeding the 225 point level should be retained for agricultural use. Selecting the alternative with the lowest total points will usually protect the best farmland located in the most agriculturally viable areas. The LESA score for Build Alternative 4 is **241** and for Build 5, the score is **242** (see **Appendix E** for the completed AD-1006 form).

3.3.3 Measures to Minimize Harm

The following management and design practices were and will continue to be incorporated into the proposed project to help minimize disruptions to agricultural activities and limit adverse impacts to designated soils:

- design alignment to parallel property lines, where feasible, to keep farm severances, severance management zones, and uneconomical remnants to a minimum,
- where practical, construct field access roads to maintain access to farm fields,
- maintain existing surface and subsurface drainage,
- locate field tiles draining to, or intersected by, the proposed highway's right-of-way by trenching to ensure that proper field drainage is maintained during construction,
- investigate areas of cropland and non-native grasses on landlocked parcels for use as borrow areas. If suitable, they would be given priority as sources of borrow, thereby reducing additional impacts to agricultural lands,
- implement sedimentation and erosion control measures to minimize loss of topsoil into streams and roadside ditches (see subsection 3.9 Surface Waters and Aquatic Resources for more information), and
- lessen agricultural impacts by using landlocked parcels for mitigation purposes

3.3.4 Indirect Impacts

3.3.4.1 Background Information

The text below describes the indirect development potential in the project area based, in part, on the information local governments provided to the project team about reasonably foreseeable indirect development. The concept of "reasonably foreseeable development" used in this document follows the guidance in *Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process*. Reasonably foreseeable actions are those "likely to occur or probable rather than those that are merely possible." For the purpose of

this document, reasonably foreseeable actions were generally limited to developments identified by local officials.

The analysis of indirect impacts began by examining the project area's potential for growth beyond the proposed right-of-way. The general contention is that an area that is not already developing (or showing evidence of a development trend) is unlikely to experience indirect development simply because an existing highway is improved. Residential and commercial development decisions generally are based on such factors as labor force quality, housing prices, tax structure, quality of schools, proximity to employment, and others largely unrelated to proposed highway improvements. Efficient transportation facilities are a factor in development decisions, but without most or all the other factors mentioned, transportation improvements alone are not enough to change an area's attractiveness for development.

Thus, it seems very unlikely that reasonably foreseeable development attributable to the proposed improvements will occur outside project communities and intersections adjacent to them. There is no current evidence in the project area of widespread development (or a movement in that direction) that would be stimulated by the proposed improvements.

3.3.4.2 Agricultural Indirect Impacts

The focus of the indirect agricultural impacts discussion is on land removed from agricultural use. Local officials identified no reasonably foreseeable indirect development that would affect agriculture.

3.3.5 Cumulative Impacts

This section evaluates potential cumulative impacts on agriculture in the study area. As noted, cumulative impacts "result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such other actions" (Title 40, *Code of Federal Regulations*, 1508.7). They can result from individually minor but collectively significant actions taking place over a period of time. The project is expected to enhance economic development within the area. This development is expected to occur in accordance with the Whiteside County Zoning Ordinance. Industrial development is expected to be contained within the enterprise zones designated by Morrison, Sterling, and Rock Falls. Based on these considerations, cumulative adverse impacts to agriculture are not anticipated.

3.4 Cultural Resources

3.4.1 Affected Environment

Pursuant to the National Historic Preservation Act of 1966, as amended, cultural resources studies have been conducted in the U.S. 30 corridor. These studies, carried out with the cooperation of the Illinois State Historic Preservation Officer (SHPO), have been designed to identify the types of cultural resources present in the study area and to produce data that will allow a determination of eligibility in terms of National Register of Historic Places criteria and to aid in the formulation of mitigation measures if, and when, appropriate. Pedestrian archaeological and architectural surveys have been undertaken by professional personnel from the Illinois State Archaeological Survey (ISAS) – Urbana/Champaign under contract to the IDOT in the project study area. Results of these studies have been reviewed by Illinois SHPO staff and their recommendations have been applied to the findings outlined below.

Consultation has been initiated with the three (3) federally recognized Indian tribes that have previously expressed an interest in the Whiteside County area. These tribes are the Potawatomi, the Sac-Fox, and the Ho Chunk / Winnebago.

The Illinois SHPO, in cooperation with the Illinois State Museum, has established criteria for the recognition of high probability zones for archaeological sites based upon such variables as distance from streams, stream size, and the association of particular soil types (this system has been codified in 20 ILCS 3420/4j and is applied to all cultural resources surveys statewide). These data have been digitized in a geographical information system (GIS) format and served as the basis for on-ground survey. Over 6,000 acres within the study area have been surveyed (this excludes areas which were disturbed, wetlands, and properties where access was denied). Survey has been conducted in all high probability areas. The initial survey for the project was designed to locate cemeteries, burial mounds, and any large and complex village site localities in the high probability areas within these moderately dissected uplands between the Rock River and the Mississippi Valley.

Of the 103 archaeological sites which have been recorded in the U.S. 30 study area, 70 percent are isolated finds of prehistoric stone tools and prehistoric lithic scatters. Many of these components are confined to the disturbed plow zone. Historic period archaeological sites recorded are the remains of 19th century farmsteads.

Historic period standing structures in the project area have been photographed, and initial determinations concerning National Register eligibility have been made by professional architectural historians so that properties which are potentially significant can be avoided during project planning. No historic buildings or bridges listed on the National Register are located in the proposed project area. One (1) National Register of Historic Places (NRHP) property, the Odell Public Library, is located in Morrison but is situated outside of the potential impact zone.

U.S. 30 in Whiteside County is a portion of the historic, trans-continental Lincoln Highway. A professional Historic Preservation Consultant conducted archival and field research to assess the potential significance of this segment of the Lincoln Highway and to evaluate all standing structures that may be eligible for inclusion in the NRHPas contributing elements of the Lincoln Highway cultural landscape. The consultant performed on-site surveys of potentially affected

historic properties as well as compiled information from local sources through archival data and informant interviews.

The survey in Whiteside County includes several road related resources such as sections of original pavement, historic road markers and bridges. One gas/service station and four (4) possible garages/dealerships were identified. Two (2) sets of tourist cabins and four (4) motels were also surveyed. A brief assessment of hundreds of historic structures not directly related to the Lincoln Highway/U.S. 30 was completed.

3.4.2 Environmental Consequences

As indicated in Section 3.4.1, cultural resources surveys within the corridor of the proposed U.S. 30 improvements have recorded numerous prehistoric and historic sites. Of over 300 historic period standing structures recorded in the study area, no buildings that are potentially eligible for listing on the NRHP will be impacted by the proposed alignments. It was determined that although there are a number of historic resources within the Lincoln Highway and U.S. 30 corridor, the historic integrity is low. The Whiteside County resources do not tie well together temporally and have limited value in projecting a sense of an earlier time and place. The integrity of the primary highway is also low. No areas of historic pavement remain extant. There are no National Register eligible road-related resources such as motels or gas stations (Report on file, IDOT District 2 Office, Dixon and at the Illinois Historic Preservation Agency in Springfield).

The Lincoln Highway/U.S. 30 corridor is not eligible as an historic highway since it does not contain the required diversity and integrity of resources. No individual structures have sufficient architectural or historic interest to be individually eligible for the NRHP for their role in the evolution of the highway (see concurrence letter from the Illinois SHPO dated December 13, 2010 in **Appendix D**).

No mounds or cemeteries will be impacted by proposed construction. No archaeological sites historically associated with federally recognized Indian tribes have been found in the project area. Archaeological survey in the corridor identified 43 sites. All of these sites represent former living places (habitation sites) of prehistoric Indians or 19th century Euro-Americans. A determination of eligibility (DOE) for the NRHP for these sites has received concurrence by the Illinois SHPO (see concurrence letter dated August 24, 2010). Should any of these archaeological sites be impacted by the project, a data recovery plan will be carried out under the stipulations of a Section 106 Memorandum of Agreement (MOA) that will be ratified by the Illinois SHPO and the FHWA, and if deemed appropriate, the Advisory Council on Historic Preservation.

All of the prehistoric and historic period archaeological sites identified thus far that are within the proposed right-of-way are the remains of former habitation sites. The potential significance of these archaeological sites rests upon the scientific data that they may contain (NHRP Criterion

D). None of these sites requires preservation in place, none are cemeteries, and none are subject to Section 4(f) of the Department of Transportation Act of 1966.

3.5 Air Quality

3.5.1 Affected Environment

No part of the project lies within a designated nonattainment or maintenance area.

3.5.2 Environmental Consequences

3.5.2.1 Microscale Analysis

In accordance with the IDOT-Illinois Environmental Protection Agency (IEPA) "Agreement on Microscale Air Quality Assessments for the Illinois Department of Transportation Sponsored Transportation Projects," this project required a carbon monoxide Pre-Screen analysis to determine whether further air quality modeling is needed. A Pre-Screen carbon monoxide analysis was completed for the proposed project. The results (see Appendix D) from this proposed roadway improvement indicate that a Carbon Monoxide Screen for Intersection Modeling (COSIM) air quality analysis is not required, as the results for the worst-case receptor are below the 8-hour average National Ambient Air Quality Standard (NAAQS) for CO of 9.0 ppm which is necessary to protect the public health and welfare.

3.5.2.2 Conformity Statement

No portion of this project is within a designated nonattainment area for any of the air pollutants for which the US Environmental Protection Agency (USEPA) has established standards. Accordingly, a conformity determination under Code of Federal Regulations (CFR) Part 93 ("Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 USC or the Federal Transit Act") is not required.

3.5.2.3 Mobile Source Air Toxics (MSAT)

On December 6, 2012, the US Department of Transportation and FHWA issued an updated interim guidance on when and how to analyze Mobile Source Air Toxics (MSAT) in the NEPA process for highway projects. See the "Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents."

The Clean Air Act identified 188 air toxics, also known as hazardous air pollutants. USEPA has assessed this expansive list of toxics and identified a group of 93 compounds emitted from mobile sources, listed in the USEPA Integrated Risk Information System (IRIS). USEPA also identified a subset of this list of 93 that are considered the seven priority MSATs. These are acrolein, benzene, 1,3-butidiene, diesel particular matter plus diesel exhaust organic gases

(diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considered these to be the priority MSATs, USEPA stresses that the list is subject to change and may be revised in future rules.

FHWA developed a tiered approach for analyzing MSATs in NEPA documents, depending on the specific project circumstances. FHWA has indentified three levels of analysis:

- no analysis for projects with No Potential for Meaningful MSAT Effects,
- qualitative analysis for projects with Low Potential for MSAT Effects, or
- quantitative analysis to differentiate alternatives for projects with Higher Potential MSAT Effects.

FHWA's interim guidance provides examples of "Projects with Low Potential for MSAT Effects." The types of projects included in this category are those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. The Build Alternatives for the U.S. 30 project were categorized as a project with "Low Potential for MSAT Effects," because the project serves to improve operations of a highway without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. The design year traffic is also projected to be less than 140,000 to 150,000 AADT.

For each Build Alternative carried forward in thiSDEIS, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables (e.g., fleet mix) are the same for each alternative. The VMT estimated for each of the Build Alternatives carried forward is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the preferred action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to USEPA's MOBILE6.2 model, emissions of all of the priority MSAT except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emission decreases will offset VMT-related emission increases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated VMT under each of the Build Alternatives carried forward are nearly the same, varying by less than four (4) percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of USEPA's national control programs that are projected to reduce annual MSAT emissions by 72 percent between 1999 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great, even after

accounting for VMT growth, that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, under each Build Alternative carried forward there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No-Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the new roadway sections that would be built north of the city of Morrison (Build Alternative 4) or south of the city of Morrison (Build Alternatives 5). However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

USEPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the IRIS, which is “a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects.” The IRIS can be accessed through the USEPA website. Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA’s “Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents.” Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations or in the future as vehicle emissions substantially decrease. See research reports available through the HEI website.

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling, and then final determination of health impacts; each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the

MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology, which affects emissions rates over that time frame, because such information is unavailable. **It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.**

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. USEPA and the HEI have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the USEPA, as provided by the Clean Air Act, to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards (e.g., benzene emissions from refineries). The decision framework is a two-step process. The first step requires USEPA to determine a “safe” or “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the US Court of Appeals for the District of Columbia Circuit upheld USEPA’s approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits (e.g., reducing traffic congestion, crash rates, and fatalities plus improved access for emergency response) that are better suited for quantitative analysis.

In summary, where a highway is widened, the localized level of MSAT emissions for the Build Alternative carried forward could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion, which are associated with lower

MSAT emissions. Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

3.5.2.4 Construction Related Particulate Matter

Demolition and construction activities can result in short-term increases in fugitive dust and equipment-related particulate emissions in and around the project area. (Equipment-related particulate emissions are usually insignificant when equipment is well maintained). The potential air quality impacts will be short-term, occurring only while demolition and construction work is in progress and local conditions are appropriate.

The potential for fugitive dust emissions typically is associated with building demolition, ground clearing, site preparation, grading, stockpiling of materials, on-site movement of equipment, and transportation of materials. The potential is greatest during dry periods, periods of intense construction activity, and during high wind conditions.

The Department's Standard Specifications for Road and Bridge Construction include provisions on dust control. Under these provisions, dust and airborne dirt generated by construction activities will be controlled through dust control procedures or a specific dust control plan, when warranted. The contractor and the Department will meet to review the nature and extent of dust-generating activities and will cooperatively develop specific types of control techniques appropriate to the specific situation. Techniques that may warrant consideration include measures such as minimizing track-out of soil onto nearby publicly-traveled roads, reducing speed on unpaved roads, covering haul vehicles, and applying chemical dust suppressants or water to exposed surfaces, particularly those on which construction vehicles travel. With the application of appropriate measures to limit dust emissions during construction, this project will not cause any significant, short-term particulate matter air quality impacts.

3.5.2.5 Greenhouse Gas Emissions (Climate Change)

Climate change is an important national and global concern. While the earth has gone through many natural changes in climate in its history, there is general agreement that the earth's climate is currently changing at an accelerated rate and will continue to do so for the foreseeable future. Anthropogenic (human-caused) greenhouse gas (GHG) emissions contribute to this change. Carbon dioxide (CO_2) makes up the largest component of these GHG emissions. Other prominent transportation GHGs include methane (CH_4) and nitrous oxide (N_2O).

Many GHGs occur naturally. Water vapor is the most abundant GHG and makes up approximately two thirds of the natural greenhouse effect. However, the burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for time periods ranging from

decades to centuries. GHGs trap heat in the earth's atmosphere. Because atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels.

The transportation sector is the second largest source of total GHG emissions in the U.S., behind electricity generation. In 2009, it was responsible for approximately 27 percent of all anthropogenic (human caused) GHG emissions in the U.S. The majority of transportation GHG emissions are the result of fossil fuel combustion. CO_2 makes up the largest component of these GHG emissions. U.S. CO_2 emissions from the consumption of energy accounted for about 18 percent of worldwide energy consumption CO_2 emissions in 2009. U.S. transportation CO_2 emissions accounted for about 6 percent of worldwide CO_2 emissions.

To date, no national standards have been established regarding GHGs, nor has USEPA established criteria or thresholds for ambient GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO_2 under the Clean Air Act. However, there is a considerable body of scientific literature addressing the sources of GHG emissions and their adverse effects on climate, including reports from the Intergovernmental Panel on Climate Change, the US National Academy of Sciences, and USEPA and other Federal agencies. GHGs are different from other air pollutants evaluated in Federal environmental reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The *affected environment* for CO_2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad scale actions such as those involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project. Furthermore, presently there is no scientific methodology for attributing specific climatological changes to a particular transportation project's emissions.

While the contribution of GHGs from transportation in the United States, as a whole, is a large component of U.S. GHG emissions, as the scale of analysis is reduced the GHG contributions become quite small. Table 3-28 presents the relationship between existing and projected Illinois' highway GHG emissions and total global GHG emissions. The emissions in Table 3-28 are presented as carbon dioxide equivalent (CO_2e) emissions, which take into account the global warming potential of chemical emissions from a source. The combustion of fossil fuels emits small amounts of N_2O and CH_4. The global warming potential of N_2O and CH_4 are 310 times and 21 times that of CO_2, respectively.

Table 3-28: Global and Illinois GHC Emissions in Million Metric Tons CO_2 Equivalent Per Year			
Pollutant	**Global CO_2e[a]**	**Illinois CO_2e[b]**	**Illinois % of Global Total**
Existing Conditions (2010)	**31,305**	**60.8**	**0.19%**
Future Projects (2040)	**46,103**	**84.0**	**0.18%**

[a] Global emissions from EIA's International Energy Outlook 2011. The 2040 emissions were estimated by applying a 1.3 percent growth rate to 2035 emissions.
[b] Illinois emissions from MOVES using Illinois defaults.

Based on Illinois' emissions estimates, and global CO_2e estimates and projections from the Energy Information Administration, CO_2e emissions from motor vehicles in the entire State of Illinois contributed less than one percent of global emissions in 2010 (0.19 percent), and are projected to contribute an even smaller fraction (0.18) in 2040. Illinois emissions represent a smaller share of global emissions in 2040 because global emissions increase at a faster rate.

Under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decision-making. FHWA has concluded, based on the nature of GHG emissions and the exceedingly small potential GHG impacts of transportation projects, more detailed information on GHG emissions "is not essential to a reasoned choice among reasonable alternatives" (40 CFR 1502.22(a)) or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts (23 CFR 771.105(b)). For these reasons, no project-level GHG analysis has been performed for this project.

3.5.2.5.1 Mitigation for Global GHG Emissions

Consistent with its view that broad-scale efforts hold the greatest promise for addressing the global climate change problem, FHWA is engaged in developing strategies to reduce transportation's contribution to GHGs—particularly CO_2 emissions—and to assess the risks to transportation systems and services from climate change. FHWA's efforts include research, education, outreach and technical assistance. Additional information on FHWA's climate change activities is available at: www.fhwa.dot.gov/hep/climate.

The IDOT is also committed to reducing GHG emissions and has implemented various statewide roadwork and construction strategies, promoting the use of improved vehicle fuels to reduce overall GHG emissions and encouraging employees to reduce their travel. These strategies include:

1) Improving system and operational efficiencies - The Department implements statewide traffic flow improvements on their road network through intelligent transportation systems, route optimization, traffic signal optimization, and improved intermodal links and system continuity;

2) Reducing growth of vehicle miles traveled - The Department implements pedestrian and bicycle facilities and promotes travel demand management programs;

3) Encouraging lower GHG fuels - The Department uses biodiesel in diesel trucks. In addition, the Department utilizes flexible fueled vehicles in its fleet that run on E-85;

4) Requiring emission reductions from construction activities - The Department implemented a statewide idling Special Provision for construction contracts;

5) Improved operations at truck weight stations - The Department implemented a PrePass program at various weight stations on Illinois' Interstates; and,

6) Reducing Travel - The Department encourages conference calls and videoconferencing whenever possible to reduce travel and greenhouse gas emissions.

3.6 Noise

3.6.1 Environmental Consequences

The following provides a summary of the Noise Assessment Report completed for the U.S. 30 project.

Noise is composed of different frequencies, each of which is perceived differently by the human ear. Human hearing is not sensitive to low and very high frequencies. To compensate for low and very high frequencies, insensitivity, and to render noise levels readings more meaningful, an "A-weighting" scale is used to approximate the response of the human ear. The A-weighted decibel (dBA) unit measures perceptible sound energy and factors out the fringe frequencies.

One (1) dBA is the smallest change in sound level that an average person can detect under ideal conditions. Usually, an observer cannot detect an increase of sound level of three (3) to four (4) dBA if the increase takes place at a uniform rate over several years. Research has indicated that a difference of 10 dBA is perceived half as loud or twice as loud to an average listener. In addition, the listener typically has difficulty determining if the sound changed at all when the difference was only one (1) dBA and the two observations were separated by an interlude of a few seconds of quiet.

The FHWA Traffic Noise Model (TNM 2.5) represents noise levels as equivalent sound levels (Leq)(h). Leq is defined as the equivalent steady-state sound level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level during the same period. Leq(h) is the hourly value of Leq. Leq(h) is based on the more commonly known decibel (dB) and dBA units. Decibels are logarithmic units as opposed to the more common linear units. Consequently, a one (1) dB increase in sound energy results in a much larger

increase in magnitude than normally expected. For instance, an increase in three (3) dB from a noise source results in a doubling of sound energy.

The Noise Assessment for this project was conducted in accordance with 23 CFR 772, USDOT, FHWA, entitled *Procedures for Abatement of Highway Traffic Noise and Construction Noise* and the IDOT Highway Traffic Noise Assessment Manual. TNM 2.5 was used to assess the existing noise levels and to predict the noise levels for the 2038 No-Build and 2038 Build Alternative conditions. Detailed TNM 2.5 model input information and results are presented in the following sections.

3.6.1.1 Noise Abatement Criteria

The FHWA policies and procedures, as promulgated in the 23 CFR 772, served as the procedural guidelines for this analysis. 23 CFR 772 designates Noise Abatement Criteria (NAC) based on the type of land use and activities performed at the respective sites (**Table 3-29**). For example, at residences, churches, and schools, noise abatement measures must be examined and evaluated if an equivalent steady state sound level for an hourly period ($Leq_{(h)}$) is approached (66 dBA) or exceeded. Traffic noise impacts occur when traffic noise levels approach or exceed the NAC, or if there are substantial increases (14 dBA or greater) in noise over existing conditions independent of the NAC.

The FHWA defines **seven (7)** noise activity categories based on land use and existing sound levels. Each land use has its own NAC, except Categories F and G. If the project would result in Leq(h) levels that approach or exceed the NAC or if the project would result in substantial increases, abatement measures must be evaluated.

Table 3-29: FHWA Noise Abatement Criteria (NAC) Hourly "A-Weighted"Sound Level; Decibels(dBA)

Activity Category	$Leq_{(h)}$	Description of Activity
A	57 dBA (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of these qualities is essential if the area is to continue to serve its intended purpose.
B(1)	67 dBA (Exterior)	Residential.
C(1)	72 dBA (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 dBA (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E(1)	52 dBA (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	-	Agriculture, airports, bus yards, emergency services, industrial,

Table 3-29: FHWA Noise Abatement Criteria (NAC) Hourly "A-Weighted"Sound Level; Decibels(dBA)		
Activity Category	**$Leq_{(h)}$**	**Description of Activity**
		logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	-	Undeveloped lands that are not permitted.

(1) Includes undeveloped lands permitted for this activity category
Source: FHWA, 23 CFR, Part 772 [2]

3.6.1.2 Methodology

Existing noise levels along U.S. 30 were determined using 2009 traffic data and TNM 2.5 modeling analysis for the areas near the existing U.S. 30 roadway. For **Common Noise Environments (CNEs)** and individual noise sensitive receptors that are located on new alignment sections of the project, noise readings taken in the field were used for existing noise levels. For the Design Year 2038 noise analysis, levels at nearby **CNEs** were predicted for the No-Build, Build Alternative 4, and Build Alternative 5 scenarios using TNM 2.5.

The Annual Average Daily Traffic (AADT), cars, medium and heavy truck factors, were provided by IDOT for the Existing, No-Build, and Build Alternative conditions. For the Design Year 2038, Design Hourly Volume (DHV) was used as input data in the noise prediction model. **Table 3-30** summarizes TNM 2.5 parameters used to predict traffic noise conditions.

Table 3-30: TNM 2.5 Model Parameters		
Parameter	Value	Comments
Temperature	68°F	Default value in TNM 2.5
Relative Humidity	50%	Default value in TNM 2.5
Pavement Type	Average	FHWA recommends using the "average" pavement type for predicting traffic noise levels
Ground Type	Lawn	The default lawn ground type was used

3.6.1.3 Ambient Measurements

Field measurements are required along a new alignment where traffic noise does not exist or is only a minor element in the overall noise environment. Field measurements were collected at 12 locations within the study and the U.S. 30 study corridor. The measurements were collected in accordance with procedures outlined in IDOT's Highway Traffic Noise Assessment Manual and the FHWA's *Measurement of Highway Related Noise* document. Meteorological data, such as wind, temperature, and general weather conditions were recorded during each field sampling event at each measurement location. Winds were observed to be zero to ten miles per hour, and no precipitation occurred during the noise level monitoring periods. Three 15-minute noise

level measurements were made at each of the 12 noise monitoring sites using a Rion NL-21 Integrated Sound Level Meter.

The sound meter was placed on a tripod five (5) feet above ground level at locations of varying distances from existing U.S. 30 and at several new location ambient sites. A calibration check was performed using a Rion acoustical calibrator before and after noise level monitoring at each site. Both the noise meter and acoustical calibrators were factory calibrated and found to meet or exceed American National Standard Institute (ANSI) specifications. The meter was programmed to compute the hourly equivalent sound level (L_{Aeqlh}). L_{Aeqlh} is an expression of the constant sound level, which over a given period of time would produce an amount of acoustic energy equivalent to the variable sound levels produced over the same time period. After each sampling event, the noise data was downloaded from the meter to a laptop computer for analysis.

3.6.1.4 Existing Noise Levels

The existing 2009 TNM 2.5 noise model results for each CNE and individual noise sensitive receptors were compared to the NAC. The areas where Alternatives 4 and 5 are combined have **one (1) CNE representing five (5) noise sensitive receptors and 16 individual noise sensitive** receptors that are currently experiencing noise levels that exceed the NAC. The area where Alternative 4 bypasses Morrison has four (4) individual noise sensitive receptors that exceed the IDOT NAC and the Alternative 5 bypass has **one (1) individual noise sensitive receptor that is currently experiencing noise levels that exceed the IDOT NAC**. Existing noise levels are shown in **Table 3-31**, **Table 3-32**, and **Table 3-33**.

3.6.1.5 Design Year Noise Levels

The No-Build 2038 TNM 2.5 noise model for each **CNE** and individual noise sensitive receptors were compared to the NAC. The areas where Alternatives 4 and 5 are combined have **one (1) CNE** representing **five** (**5)** noise sensitive receptors and **32** individual noise sensitive receptors that are currently experiencing noise levels that exceed the IDOT NAC. In addition, the Alternative 4 bypass has four (4) individual noise sensitive receptors that are **predicted to experience noise levels that exceed the NAC and the Alternative 5 bypass has one (1) individual noise sensitive receptor that is predicted to experience noise levels that exceed the NAC. No-Build 2038 noise levels are shown in Table 3-31, Table 3-32, and Table 3-33.**

The Build 2038 TNM 2.5 noise model for each **CNE** and individual noise sensitive receptors were compared to the NAC. The areas where Alternatives 4 and 5 are combined have **one (1) CNE** representing **five** (**5)** noise sensitive receptors and **10** individual noise sensitive receptors that are noise impacts. The **15** noise sensitive receptors exceed the NAC. In addition, the Alternative 4 bypass has **one (1) CNE** representing **two (2)** noise sensitive receptors and **three (3)** individual noise sensitive receptors that are noise impacts**. The five (5) noise sensitive receptors exceed the NAC.** The Alternative 5 bypass has one (1) individual noise sensitive receptor that is a noise impact. This one (1) individual noise sensitive receptor is a substantial

increase of **greater than** 14 dBA. Build 2038 noise levels are shown in **Table 3-31, Table 3-32,** and **Table 3-33**.

Table 3-31: U.S. 30 Noise Impact Summary for the Combined Alternatives 4 and 5 with 2009 & 2038 DHV *(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Common Noise Environment ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Combined Alternatives 4 and 5		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alternative (ft)	Noise Level (dBA)	Noise Impact ?
	R 1 (Residence)	B	1	262	60	62	203	65	No
	R 2 (Motel)	E	1	376	56	57	410	ACQUIRED*	No
	R 3 (Residence)	B	1	156	63	64	349	63	No
	R 4 (Residence)	B	1	297	58	59	170	60	No
	R 5 (Residence)	B	1	129	66	67	70	70	Yes
CNE 1	R 6 (Residence)	B	2	225	60	62	171	61	No
	R 7 (Residence)	B	1	99	67	69	86	69	Yes
	R 8 (Residence)	B	1	63	69	70	0	ACQUIRED*	No
	R 9 (Residence)	B	1	40	71	73	29	ACQUIRED*	No
	R 10 (Residence)	B	1	87	68	69	77	ACQUIRED*	No
	R 11 (Residence)	B	1	82	68	70	0	ACQUIRED*	No
	R 12 (Residence)	B	1	95	67	69	16	ACQUIRED*	No
	R 13 (Residence)	B	1	69	69	70	118	69	Yes
	R 14 (Residence)	B	1	208	61	62	423	61	No
	R 15 (Residence)	B	1	69	69	70	394	67	Yes
	R 16 (Residence)	B	1	> 500	48	49	389	59	No

Table 3-31: U.S. 30 Noise Impact Summary for the Combined Alternatives 4 and 5 with 2009 & 2038 DHV *(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Common Noise Environment ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Combined Alternatives 4 and 5		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alternative (ft)	Noise Level (dBA)	Noise Impact ?
	R 17 (Residence)	B	1	367	55	56	451	58	No
	R 38 (Residence)	B	1	288	58	60	23	ACQUIRED*	No
	R 39 (Residence)	B	1	115	66	67	207	63	No
	R 40 (Residence)	B	1	140	64	66	3	ACQUIRED*	No
	R 41 (Residence)	B	1	229	60	61	385	59	No
	R 42 (Residence)	B	1	249	59	60	5	ACQUIRED*	No
	R 43 (Residence)	B	1	> 500	51	52	372	59	No
	R 44 (Residence)	B	1	54	70	72	87	70	Yes
	R 45 (Residence)	B	1	80	69	70	0	ACQUIRED*	No
	R 46 (Residence)	B	1	80	69	70	0	ACQUIRED*	No
	R 47 (Residence)	B	1	133	64	66	120	68	Yes
	R 48 (Restaurant)	E	1	63	69	71	51	71	Yes
CNE 10	R 49 (Residence)	B	9	222	60	61	137	64	No
CNE 11	R 50 (Residence)	B	2	211	61	62	201	65	No
	R 51 (Residence)	B	1	210	61	63	123	ACQUIRED*	No
CNE 12	R 52 (Residence)	B	2	299	58	59	258	62	No
	R 53 (Residence)	B	1	119	66	67	105	ACQUIRED*	No
	R 54 (Residence)	B	1	141	65	66	130	ACQUIRED*	No
	R 55 (Residence)	B	1	> 500	53	55	447	58	No
	R 56 (Residence)	B	1	133	65	66	123	68	Yes

Table 3-31: U.S. 30 Noise Impact Summary for the Combined Alternatives 4 and 5 with 2009 & 2038 DHV *(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Common Noise Environment ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Combined Alternatives 4 and 5		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alternative (ft)	Noise Level (dBA)	Noise Impact ?
	R 57 (Residence)	B	1	131	65	66	122	69	Yes
	R 58 (Residence)	B	1	89	68	69	4	ACQUIRED*	No
	R 59 (Residence)	B	1	64	64	66	126	69	Yes
	R 60 (Residence)	B	1	> 500	46	47	> 500	56	No
CNE 13	R 61 (Residence)	B	19	327	55	56	317	60	No
CNE 14	R 62 (Residence)	B	2	189	60	61	182	63	No
	R 63 (Church)	C	1	129	57	59	70	58	No
CNE 15	R 64 (Residence)	B	2	498	51	52	493	53	No
CNE 16	R 65 (Residence)	B	31	172	61	62	128	61	No
	R 66 (Residence)	B	9	70	64	66	25	ACQUIRED*	No
CNE 17	R 67 (Residence)	B	5	185	61	62	129	63	No
CNE 18	R 68 (Residence)	B	4	148	62	63	143	62	No
	R 69 (Residence)	B	1	280	55	57	270	57	No
	R 70 (Restaurant)	E	1	82	67	68	75	67	No
CNE 19	R 71 (Residence)	B	20	127	63	65	122	64	No
	R 72 (Residence)	B	1	85	67	68	42	ACQUIRED*	No
CNE 21	R 73 (Residence)	B	4	180	60	61	175	60	No
	R 74 (Residence)	B	1	487	50	52	481	53	No
	R 75 (Residence)	B	1	212	58	59	204	58	No
CNE 22	R 76 (Residence)	B	5	65	68	69	55	67	Yes

Table 3-31: U.S. 30 Noise Impact Summary for the Combined Alternatives 4 and 5 with 2009 & 2038 DHV *(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Common Noise Environment ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Combined Alternatives 4 and 5		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alternative (ft)	Noise Level (dBA)	Noise Impact ?
CNE 24	R 77 (Residence)	B	2	271	56	57	242	57	No
CNE 25	R 78 (Residence)	B	4	205	57	59	200	59	No
	R 79 (Residence)	B	1	229	57	59	229	58	No
	R 94 (Residence)	B	1	> 500	47	47	198	59	No
	R 95 (Residence)	B	1	> 500	47	47	422	56	No
	R 96 (Residence)	B	1	> 500	47	47	307	58	No
	R 100 (Residence)	B	1	341	57	58	227	61	No
CNE 20	R 101 (Residence)	B	5	208	58	59	192	59	No
CNE 23	R 102 (Residence)	B	3	274	56	57	245	57	No

Noise results that approach or exceed the NAC or are a substantial increase of greater than 14 dBA.

*** Acquired by the Proposed Right-of-Way**
**** Interior noise projection, see section 3.6.1.6**

Table 3-32: U.S. 30 Noise Impact Summary for New Location Bypass Alternative 4 with 2009 & 2038 DHV*(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Noise Sensitive Area ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Build Alternative 4		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alterna-tive (ft)	Noise Level (dBA)	Noise Impact ?
	R 18 (Residence)	B	1	71	69	70	148	68	Yes
	R 19 (Residence)	B	1	285	49	50	270	57	No
	R 20 (Residence)	B	1	97	67	68	0	ACQU IRED*	No

Table 3-32: U.S. 30 Noise Impact Summary for New Location Bypass Alternative 4 with 2009 & 2038 DHV*(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Noise Sensitive Area ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Build Alternative 4		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alterna-tive (ft)	Noise Level (dBA)	Noise Impact ?
	R 21 (Residence)	B	1	88	68	69	175	66	Yes
CNE 2	R 22 (Residence)	B	2	101	55	56	97	67	Yes
	R 23 (Residence)	B	1	437	55	56	190	65	No
	R 24 (Residence)	B	1	263	59	59	359	59	No
	R 25 (Residence)	B	1	> 500	51	51	325	60	No
CNE 3	R 26 (Residence)	B	2	> 500	51	51	359	58	No
CNE 4	R 27 (Residence)	B	3	> 500	51	51	138	63	No
	R 28 (Residence)	B	1	> 500	51	51	121	65	No
CNE 5	R 29 (Residence)	B	2	> 500	51	51	342	57	No
CNE 7	R 30 (Residence)	B	6	> 500	51	51	234	61	No
CNE 8	R 31 (Residence)	B	2	> 500	51	51	179	63	No
	R 32 (Residence)	B	1	> 500	51	51	400	58	No
	R 33 (Residence)	B	1	188	67	68	406	67	Yes
	R 34 (Residence)	B	1	197	61	63	16	ACQU IRED*	No
	R 35 (Residence)	B	1	285	58	59	73	61	No
	R 97 (Residence)	B	1	> 500	51	51	477	57	No
CNE 6	R 98 (Residence	B	2	> 500	51	51	312	60	No

Noise results that approach or exceed the NAC or are a substantial increase of greater than 14 dBA.

*** Acquired by the Proposed Right-of-Way**

Table 3-33: US 30 Noise Impact Summary for New Location Bypass Alternative 5 2009 & 2038 DHV *(Refer to Exhibit 3-10 for locations of noise sensitive receptors)*

Noise Sensitive Area ID & Land Use		Activity Category	Number of Receptors Represented	2009 Existing		2038 No Build Alter-native	2038 Build Alternative 5		
				Dist. To Nearest Edge of Pavement (ft)	Existing Noise Level (dBA)	Noise Level (dBA)	Dist. To Selected Alternative (ft)	Noise Level (dBA)	Noise Impact ?
	R 33 (Residence)	B	1	118	67	68	193	65	No
	R 34 (Residence)	B	1	197	61	63	203	65	No
CNE 9	R 36 (Residence)	B	2	> 500	51	51	358	59	No
	R 37 (Residence)	B	1	182	61	63	368	59	No
	R 80 (Residence)	B	1	> 500	52	52	431	58	No
CNE 26	R 81 (Residence)	B	3	> 500	52	52	247	63	No
	R 82 (Residence)	B	1	> 500	52	52	495	57	No
	R 83 (Residence)	B	1	> 500	52	52	268	62	No
	R 84 (Residence)	B	1	> 500	52	52	340	60	No
	R 85 (Residence)	B	1	> 500	52	52	169	67	Yes
	R 86 (Residence)	B	1	> 500	52	52	231	64	No
	R 87 (Residence)	B	1	> 500	52	52	427	58	No
	R 88 (Residence)	B	1	> 500	52	52	417	58	No
	R 89 (Residence)	B	1	> 500	52	52	303	61	No
	R 90 (Residence)	B	1	> 500	52	52	234	64	No
	R 91 (Residence)	B	1	> 500	48	48	383	59	No
	R 92 (Residence)	B	1	> 500	48	48	490	57	No
	R 93 (Residence)	B	1	> 500	48	48	292	58	No
	R 99 (Residence)	B	1	> 500	48	48	377	58	No

Noise results that approach or exceed the NAC or are a substantial increase of greater than 14 dBA.

*** Acquired by the Proposed Right-of-Way**

3.6.1.6 Evaluation of Abatement Measures

The U.S. 30 project is classified by 23 CFR 772 as a Type 1 Project. Type 1 projects are proposed Federal or Federally-Aided projects that entail the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through traffic lanes.

The proposed areas where Alternatives 4 and 5 are combined for the U.S. 30 project would result in noise impacts at one (1) **CNE** representing five (5) noise sensitive receptors and **10** individual noise sensitive receptors. In addition, the proposed Alternative 4 bypass for the U.S. 30 project would result in noise impacts at one (1) CNE representing 2 noise sensitive receptors and **five (5)** individual noise sensitive receptors. Also, the proposed Alternative 5 bypass for the U.S. 30 project would result in a noise impact at one (1) individual noise sensitive receptor. The noise abatement measures considered at these sites include traffic management measures, alteration of horizontal and vertical alignments, acquisition of property rights for construction of noise barriers, construction of noise barriers, and the acquisition of undeveloped land for buffer zones.

The implementation of traffic management measures for the purpose of noise abatement is not deemed reasonable or likely for this project. Traffic management measures that limit motor vehicle types, travel speed, traffic volume, and/or time of operation are often used as noise abatement measures. A reduction in speed would affect the roadway's ability to accommodate anticipated traffic volumes, thus not fulfilling a purpose of this project which is to increase traffic capacity. Furthermore, limiting truck volumes or their time of operation would be restrictive to the existing industrial and commercial businesses within the project area and impede the potential economic opportunities associated with the upgrade of U.S. 30.

The rural nature of the study and intermittent spacing of potential noise receptors presents opportunities to alter horizontal and vertical alignments along the Build Alternatives that will only serve to impact residences outside of the current study area. As such, alterations of the horizontal and vertical alignment are not likely to reduce the overall possibility of NAC exceedances or substantial increases. Alterations of horizontal and vertical alignments are not deemed reasonable or likely noise abatement measures for this project.

The acquisition of property rights for the construction of noise barriers would be an effective noise abatement measure only if noise barriers were actually constructed on the acquired property. For the U.S. 30 project, there appears to be adequate land available for the construction of noise barriers within the proposed right-of-way for the Build Alternatives. Therefore, it is not anticipated that additional right-of-way beyond what is necessary for the proposed roadway will be necessary for the construction of noise barriers. However, as described below, the construction of noise barriers is not considered reasonable or feasible for this project.

Acquisition of real property and land use controls for buffer zones may be considered feasible or reasonable for the U.S. 30 project. These types of abatement measures are useful in reducing noise impacts along undeveloped or new location roadways by prohibiting noise sensitive development from building too close to transportation corridors. The existing U.S. 30 corridor is characterized by large areas of undeveloped land in close proximity to the existing roadway. Local city and county officials were contacted, and currently no large-scale development projects are planned within the U.S. 30 corridor. A copy of the final Noise Assessment Report will be provided to the appropriate local planning/zoning officials for their use.

One (1) non-profit organization (NPO) is located within the U.S. 30 noise study corridor. The NPO is represented by Receptor "R 63" – Rock River First Church of God. The existing exterior noise level at this receptor is 57 dBA. The No-Build Alternative exterior noise level is **59** dBA. The Build 2038 noise level for the combined portion of Alternatives 4 and 5 is **58** dBA. The Rock River First Church of God was observed to be of masonry construction with storm windows. The IDOT Highway Traffic Noise Assessment Manual states that masonry building structures with single glazed windows provide a 25 dB noise reduction factor from exterior noise levels. To predict the interior noise levels, 25 dBA was subtracted from the exterior TNM 2.5 model results at Rock River First Church of God. As a result, the predicted interior noise levels for the 2038 Build Alternatives for **receptor R 63 was found to be 33 dBA.** This is well below the IDOT interior NAC of 51 dBA **for NPO** sites. Abatement is not required.

3.6.1.7 Noise Barrier Analysis

Noise barriers can reduce noise levels by blocking the sound propagation path between a roadway and a noise sensitive site. The IDOT Highway Traffic Noise Assessment Manual requires that the noise barriers be both feasible and reasonable. Feasibility deals with the practicality of building a barrier, with regard to specific site characteristics, safety and maintenance requirements, and the ability of the barrier to provide a noise reduction. **In order to be considered a feasible, a barrier must achieve at least a five (5) dBA reduction at one (1) impacted receptor.**

The reasonableness evaluation for noise barriers consists of three parts: the noise reduction goal, economic reasonability, and the viewpoints of the benefitted receptors. The noise reduction goal requires that at least one (1) benefitted receptor behind the noise wall receive at least eight (8) dBA in traffic noise reduction.

Economic reasonability is the cost-effective evaluation of the noise barrier. This considers the overall cost of the noise barrier, the number of benefited receptors, and the cost per benefited receptor. According to the IDOT Highway Traffic Noise Assessment Manual, benefited properties are those properties that would receive at least a five (5) dBA reduction regardless of whether or not they are identified as impacted. **The base value for the allowable cost is $24,000 per benefitted receptor. Three (3) other reasonableness factors are considered to potentially adjust the allowable noise abatement value per benefitted receptor. Please see Tables 3-34, 3-35, and 3-36.**

Table 3-34: Absolute Noise Level Consideration	
Predicted Build Noise Level before Noise Abatement	**Dollars Added to Base Value Cost per Benefitted Receptor**
Less than 70 dBA	**$0**
70 to 74 dBA	**$1,000**
75 to 79 dBA	**$2,000**
80 dBA or greater	**$4,000**

Table 3-35: Increase in Noise Level Consideration	
Incremental Increase in Noise Level Between the Existing Noise Level and the Predicted Noise Level Before Abatement	**Dollars Added to Base Value Cost per Benefitted Receptor**
Less than 5 DBA	**$0**
5 to 9 dBA	**$1,000**
10 to 14 dBA	**$2,000**
15 dBA or greater	**$4,000**

Table 3-36: New Alignment/ Construction Date Consideration	
Project is on new alignment OR the receptor existed prior to the original construction of the highway	**Dollars Added to Base Value Cost per Benefitted Receptor**
No for both	**$0**
Yes for either	**$5,000**

Only one value from each of the three factors may be used for each receptor, resulting in a maximum allowable cost of $37,000 per benefitted receptor.

The third component of reasonableness is obtaining the viewpoints of benefitted receptors. The viewpoints will be sought for noise abatement measures determined to be feasible, cost effective and achieving the noise reduction design goal. In order for a proposed noise abatement measure to be implemented, greater than 50 percent of the benefitted receptors responding must be in favor of the proposed abatement measures.

For a barrier to effectively shield receptors, the design should be continuous, without large gaps, and must be tall enough to block the line-of-sight between the roadway and the receptor. Gaps

incorporated into a barrier design to accommodate access roads, sidewalks, or driveways lessen the effectiveness of the barrier to block noise. Numerous driveways and cross streets intersect U.S. 30 along the study corridor. Access roads and driveways would require breaks or gaps in a proposed barrier design.

The following impacted receptors would require breaks in a proposed barrier to accommodate driveways: Receptors R 7, R 13, R 15, R 18 R 21, R 28, R 33, R 44, R 56, R 59, R 85 and CNE 22. The breaks in the barrier designs would occur in close proximity to the noise sensitive use at each site. The reduced effectiveness of noise barriers under these circumstances was demonstrated at the locations of R 57 and CNE 22. Representative TNM 2.5 barrier analyses "Barrier 1" for R 57 and "Barrier 2" for CNE 22 are shown on Exhibit 3-6a and Exhibit 3-6b and are included in Table 3-37 and Table 3-38. These representative barrier analyses show that the feasibility goal of five (5) dBA insertion loss at one (1) impacted receptor can be met. However, the reasonability design goal of eight (8) dBA insertion loss at one (1) benefitted receptor cannot be achieved. As a result, barriers were determined to be not reasonable along U.S. 30 where multiple access roads or cross streets prohibit the construction of a continuous barrier design.

Table 3-37: Barrier 1 At R 57

Receptor (s)	Barrier Height	Barrier Length	Cost	Modeled Reduction	Feasibility Goal Achieved? (5 dBA Reduction at one impacted receptor)	Reasonability Goal Achieved? (8 dBA Reduction at one benefitted receptor)	Likely to be Implemented
R 57	24 ft	613 ft	$367,503	6 dBA	Yes	No	No
If No, Reasons Why							
The max height barrier does not achieve the reasonability design goal of 8 dBA insertion loss because of a driveway break.							

Table 3-38: Barrier 2 At CNE 22

Receptor (s)	Barrier Height	Barrier Length	Cost	Modeled Reduction	Feasibility Goal Achieved? (5 dBA Reduction at one impacted receptor)	Reasonability Goal Achieved? (8 dBA Reduction at one benefitted receptor)	Likely to be Implemented
R 76 R 76 A R 76 B R 76 C R 76 D	24 ft	430 ft	$258,376	6 dBA 5 dBA 3 dBA 3 dBA 2 dBA	Yes	No	No
If No, Reasons Why							
The max height barrier does not achieve the reasonability design goal of 8 dBA insertion loss because of a multiple breaks to accommodate driveways.							

The barrier analysis "Barrier 3" was performed on the impacted noise sensitive receptors R 47 and R 48. Barrier 3 is shown on Exhibit 3-6c and is included in Table 3-39. This barrier analysis shows that the barrier height required to achieve a five (5) dBA insertion loss at R 47 will result in R 48 receiving a 14 dBA insertion loss. Barrier 3 was determined to be feasible because it achieves the feasibility goal of five (5) dBA insertion loss at one impacted receptor. Barrier 3 was determined to be not reasonable at this location because it would exceed the acceptable cost per benefitted receptor.

Table 3-39: Barrier 3 At R 47 and R 48

Receptor (s)	Barrier Height	Barrier Length	Cost	Modeled Reduction	Feasibility Goal Achieved? (5 dBA Reduction at one impacted receptor)	Reasonability Goal Achieved? (8 dBA Reduction at one benefitted receptor)	Likely to be Implemented
R 47, R 48	18 ft - 24 ft	576 ft	$331,633	5 dBA, 14 dBA	Yes	Yes	No
If No, Reasons Why							
The cost per benefitted receptor is $165,817. The barrier cost exceeds the max $37,000 per benefitted receptor.							

Two (2) noise impacts are predicted to occur at CNE 3. The barrier analysis "Barrier 4" was performed at two (2) noise sensitive receptors (R 22 and R 22A). Barrier 4 is shown on Exhibit 3-6d and is included in Table 3-40. The barrier was determined to be not feasible at this location because it would not achieve the five (5) dBA insertion loss goal at one (1) impacted receptor. The inability of the barrier to achieve the desired insertion loss is likely attributable to the traffic noise from a secondary source (IL 78).

Table 3-40: Barrier 4 At R 22 and R22A

Receptor (s)	Barrier Height	Barrier Length	Cost	Modeled Reduction	Feasibility Goal Achieved? (5 dBA Reduction at one impacted receptor)	Reasonability Goal Achieved? (8 dBA Reduction at one benefitted receptor)	Likely to be Implemented
R 22, R 22A	24 ft	687 ft	$412,025	4 dBA, 2 dBA	No	No	No
If No, Reasons Why							
The max height barrier does not achieve the feasibility design goal of 5 dBA insertion loss.							

3.6.1.8 Coordination with Local Government Officials

The purpose of coordinating with local officials is to provide information and promote compatible land development and land use planning adjacent to proposed highway projects. Compatible land use is an important tool for preventing future noise impacts. The project study area communities and Whiteside County were contacted and all stated they have no planned development within the U.S. 30 project study area. The following lists the communities, contact person, and dates for the coordination:

- **Whiteside County, Zoning Secretary, January 7, 2013**
- **City of Fulton, City Administrator, January 7, 2013**
- **City of Morrison, City Administrator, January 10, 2013**
- **City of Rock Falls, Mayor, January 7, 2013**
- **City of Sterling, Departmental Secretary for the Code Enforcement Department, January 7, 2013**

3.6.1.9 Construction Noise

Trucks and machinery used for construction produce noise which may affect some land uses and activities during the construction period. Residents along the alignment will at some time experience perceptible construction noise from implementation of the project. To minimize or eliminate the effect of construction noise on these receptors, mitigation measures have been incorporated into the Illinois Department of Transportations' Standard Specifications for Road and Bridge Construction as Article 107.35.

3.6.2 Measures to Minimize Harm

The abatement measures considered for reducing the noise levels at the impacted locations are not reasonable or feasible because they do not reduce traffic noise levels by eight (8) dBA or fall within the **max $37,000** per benefited Receptor criteria. Local government and planning agencies may consider land use controls to minimize future noise impacts.

3.7 Energy

Construction of the proposed U.S. 30 improvement will require indirect consumption of energy for processing materials, construction activities, and maintenance for the lane miles to be added within the project limits. Energy consumption by vehicles in the area may increase during construction due to possible traffic delays.

Construction of the proposed improvement will reduce traffic congestion and turning conflicts along the route and thereby reduce vehicular stopping and slowing conditions. Additional benefits would be realized from increased capacity and smoother riding surfaces. This will result in less direct and indirect vehicular operational energy consumption for the Build Alternatives than for the No-Build Alternative. Thus, in the long term, post-construction operational energy requirements should offset construction and maintenance energy requirements and result in a net savings in energy use.

3.8 Groundwater Resources

The proposed project has the potential to impact geological and groundwater resources. Groundwater provides drinking water for communities and individual homeowners. The Illinois Groundwater Protection Act regulates the protection of groundwater and established factors that affect drinking water quality. Roadway projects must comply with both state and federal regulations protecting groundwater. In addition, surface and bedrock geology along the project alignments can place constraints on construction practices and project design.

Groundwater resources of Whiteside County have been described by Hackett and Bergstrom (1956) and include both sand and gravel and bedrock aquifers. Shallow sand and gravel deposits cover most of southern Whiteside County in the low sand plain south of a line from Morrison to Sterling-Rock Falls. Locally, where those deposits lie directly on the permeable deposits in the buried valleys, there may be more than 275 feet of continuous permeable sand and gravel from ground surface to bedrock. Outside of the buried valleys, the more extensive shallow deposits are generally less than 75 feet thick and are suitable for drilled and driven wells.

Sand and gravel aquifers in northern Whiteside County (north of Morrison) are thinner and less numerous, except in the Mississippi Valley in northwestern Whiteside County, west of the project study area. Shallow sand and gravel is encountered at depths of 20 to 50 feet throughout most of the project area, except in the valleys of rivers and large streams, where aquifer material may be present within five feet of the ground surface (Larson et al. 1993).

Most of the groundwater supplies in northern Whiteside County are obtained from bedrock aquifers. The major bedrock aquifer is the Silurian dolomite, which is used primarily for domestic supplies. This shallow aquifer system can be highly susceptible to contamination where it occurs close to the ground surface or is overlain by coarse grained material because it is composed of fractured and relatively soluble carbonate rocks (Larson et al. 1993). Use of the deeper St. Peter and Galesville sandstones is generally necessary only for large municipal and industrial supplies.

3.8.1 Affected Environment

3.8.1.1 Surface Geology and Topography

The drainage direction in the study area is generally to the south and southwest, in the direction of French Creek, Rock Creek, and other numerous tributaries that lead directly to the Mississippi River. The shallow groundwater flow direction was not specifically

determined for the project but it is assumed that it generally follows the local topography.

3.8.1.2 Karst Topography

Karst topography is a feature characterized by sinkholes, depressions, caves, and underground drainage, generally underlain by soluble rocks (e.g. limestone, dolomite). Karst topography is highly vulnerable to groundwater contamination. According to the Illinois State Geological Survey (ISGS) portions of northwestern and northeastern Whiteside County contain karst formations; however, there are no karst formations in the project study area.

3.8.1.3 Seeps and Springs

No seeps or springs were identified in the study area as part of the wetland assessment completed for the project; therefore the project would not impact seeps or springs.

3.8.1.4 Groundwater Resources

Groundwater occurs in both shallow and deep aquifers in Illinois. The shallow and deep aquifers in Illinois were mapped and classified into seven zones by Keefer and Berg (1990). Zone 1 indicates the highest potential for groundwater recharge and the highest potential for groundwater contamination, and Zone 7 indicates the lowest potential. The areas from the western project terminus to Morrison and in the northern part of the project study area along U.S. 30 between Morrison and Agnew fall into Zone 3. In the valleys of Cattail Creek and other project area streams and south of U.S. 30 between Morrison and Agnew, groundwater recharge is mapped as Zone 1. The project study area is not within a regulated recharge area as established by the Illinois Pollution Control Board and no community wellhead protection areas are crossed by the project.

According to the U.S. EPA's list of designated sole-source aquifers, there are no sole-source aquifers in Illinois as defined by Section 1424(E) of the Safe Drinking Water Act. Therefore, the proposed project would not impact any sole-source aquifers.

According to the Illinois State Water Survey (ISWS) groundwater is used to provide drinking water and irrigation to the residents of the study area. The following information is provided as documentation of consideration of water well setback requirements established under Section 14.3 of the Illinois Groundwater Protection Act (IGPA). The IGPA establishes the minimum setback zones of 200 feet for private water wells or 400 feet for community water wells. The setback zones protect groundwater by limiting the location of pollution sources close to the water wells. Examples of potential pollution sources frequently associated with transportation corridors include underground storage tanks, aboveground storage tanks, or bulk storage areas of deicing chemicals.

Both Morrison and Sterling-Rock Falls have community water wells finished in the sandstone aquifers (Hanson 1955). The city of Morrison has two community water wells within the city limits at depths of 1,600 and 1,700 feet. Sterling-Rock Falls is served by seven community water wells finished in the sandstone aquifers (Illinois American Water 2009). None of these community water wells are located within the project study area.

The residents within the study area are served by individual private water wells. The Illinois EPA and the ISGS well records indicate 44 private water wells occur within 200 feet of the right-of-way of Build Alternative 4 and 36 private water wells occur within 200 feet of the right-of-way of Build Alternative 5. The majority of the private water wells obtain water from depths ranging from 20 to over 100 feet below the surface. Table 3-41 shows the number of private water wells within 200 feet of the build alternatives right-of-way and the general depths of the wells. Figure 3-11 illustrates the locations of private water wells within 200 feet of the right-of-way of the build alternatives. Other private water wells not in the Illinois EPA or ISGS databases may be present near the study area.

Table 3-41: Summary of Private Water Wells within 200 Feet of the Build Alternatives Right-of-Way

Private Water Well Depth (feet)	Build Alternative 4	Build Alternative 5
0 to 20	1	2
21 to 40	4	4
41 to 60	2	1
61 to 80	8	6
81 to 100	4	3
> 100	25	20
Total Number of Wells within 200 feet of Alterative*	44	36

Source: Illinois EPA Drinking Water Watch database (http://water.epa.state.il.us/dww/index.jsp) and the ISGS Illinois Water & Related Wells database (http://maps.isgs.illinois.edu/ilwater/).
* = Includes wells within the Build Alternatives right-of-way and within 200 feet of the right-of-way.

The potential for the contamination of shallow aquifers from land burial of municipal wastes has been mapped by Berg et al. (1984). The potential for contamination ranges from Zone A (the highest) to Zone G (the lowest). Zone A is comprised of six (6) divisions. The project area ranges from Zone A2 between Morrison and Elkhorn Creek to Zone E west of Morrison. Both the groundwater discharge and potential contamination are provided for a general regional perspective only, as these maps were prepared at

scales of 1:1,000,000 (recharge) and1:150,000 (contamination) and are not applicable on a site-specific basis. (ISGS 2008)

3.8.2 Environmental Consequences

This analysis focuses on the potential effects of the build alternatives may have on community and private water supplies. No measureable change to the available groundwater supply is expected due to the build alternatives; the additional impervious area associated with the build alternatives would represent a small reduction in potential recharge area that would likely be mitigated by construction of the stormwater management basins.

The project would not create any new potential "routes" for groundwater pollution or any new potential "sources" of groundwater pollution as defined in the Illinois Environmental Protection Act. Setback zones around water wells would be considered for any maintenance facilities for the alternatives; however, no maintenance facilities are planned for the project. As such, the project is not subject to compliance with the minimum setback requirements for community or private water wells.

Neither build alternative has the potential to impact community water supply wells. Table 3-42 shows the private water wells that were identified within the right-of-way and within 200 feet of the right-of-way proposed build alternatives. Water wells that could potentially be adversely affected by the project would be those that are shallow, improperly cased, or directly hydraulically connected to the highway runoff. Deep wells can also be adversely affected if the wells are improperly constructed. As previously discussed, the majority of the private water wells obtain water from depths ranging from 20 to over 100 feet below the surface.

Table 3-42: Summary of Private Wells Potentially Impacted by the Build Alternatives

Build Alternative	Number of Private Water Wells within Proposed Right-of-Way	Number of Private Water Wells outside of the Right-of-Way but within 200 feet	Total Private Water Wells Within the Proposed Right-of-Way and within 200 feet
Build Alternative 4	19	25	44
Build Alternative 5	12	24	36

Source: Illinois EPA Drinking Water Watch database (http://water.epa.state.il.us/dww/index.jsp) and the ISGS Illinois Water & Related Wells database (http://maps.isgs.illinois.edu/ilwater/).

3.8.3 Measures to Minimize Harm and Mitigation

All wells within the right-of-way would be properly abandoned in accordance with Illinois Department of Public Health requirements. Project construction specifications will include measures to prevent erosion and sedimentation adjacent to the facility. In addition, IDOT guidelines require that application of deicing salts be minimized to the extent practicable consistent with safe maintenance practices. These requirements will limit the potential for contamination of shallow water wells near the facility during construction or from routine highway maintenance.

Accidental spills of hazardous materials and wastes during construction or operation of the transportation system require special response measures. Occurrences would be handled in accordance with local government response procedures. Refueling, storage of fuels, or maintenance of construction equipment would not be allowed within 100 feet of wetlands or water bodies to avoid accidental spills impacting these resources.

3.9 Surface Waters and Aquatic Resources

3.9.1 Affected Environment

This section describes the physical, biological, and chemical characteristics of the larger surface water bodies within the project study area developed by IDOT. Analysis of such characteristics provides evidence relevant to water quality and provides a baseline from which to assess water quality impacts related to the Preferred Alternative. The streams described in this section are ordered east to west and are shown on **Exhibit 3-7**.

The project study area lies within the Lower Rock River and Copperas-Duck Watersheds (Hydrologic Unit Codes [HUC] 07090005 and 07080101, respectively). **Table 3-43** summarizes the types of water resources within the two (2) watersheds. Fourteen (14) stream segments were assessed within the project study area: 13 from the Rock River Watershed and one (1) from the Copperas-Duck Watershed. **Table 3-44** describes the physical and biological characteristics of the 14 stream segments based on field data collected by the Illinois Natural History Survey (INHS) in 2007. Ponds in the project study area are discussed in the wetlands section of this report.

Table 3-43: Extent of Surface Water Resources within Project Corridor Watersheds (acres)

Surface Water Resource Type	Lower Rock River HUC 07090005	Copperas-Duck HUC 07080101
Rivers and Streams	10,123	1,146
Lakes and Ponds	7,325	18,175
Total	**17,448**	**19,321**

Source: Suloway and Hubbell 1994

3.9.1.1 Physical and Biological Description of Surface Water Bodies

This subsection describes physical and biological characteristics of streams in the project study area and the corresponding biotic assemblages of these streams. Key characteristics of the streams are discussed below and some of these are listed in **Table 3-44**.

Table 3-44: Physical and Biological Characteristics of Streams in the Project Study Area

Site No. (Exhibit 3-7)	Stream Name	Surrounding Land Use	Stream Sub-strate	Stream Width (ft)	Habitat Assess-ment Score (mean)*	Dom-inant Fish Species (%)	Percentage Intolerant/ Tolerant Fish	EPT** Rich-ness	HBI***
1	Union Drainage Ditch	homestead, agriculture, pasture	sand, gravel, silt, cobble	9.8	95.5	Spotfin shiner (34%)	none/33%	5	6.47
2	Rock River	homestead, agriculture, light woods	gravel, cobble, silt, sand	492.1	55.5	Spotfin shiner (>18%)	15%/11%	3	6.77
3	Elkhorn Creek	agriculture, light woods, campground	sand, gravel	59.1	69.5	Spotfin shiner (21%) Sand shiner (21%)	19%/11%	9	6.32
6	Deer Creek	light woods, homestead, pasture	cobble, hard-packed sand & gravel	16.1	91.0	Johnny darter (29%)	23%/31%	4	6.01
7	Deer Creek	agriculture, fallow field, light woods	some cobble over sand & gravel	26.2	83.5	Blunt nose minnow (18%) Fantail Darter (17%)	13%/34%	5	5.15
9	Unnamed Trib. Rock River	agriculture, pasture, homestead	mud/silt	3.9	70.5	Fathead minnow (57%)	25%/75%	2	6.33
10	Unnamed Trib. Rock River	agriculture	coarse sand & gravel over hardpan clay; silt, mud	6.2	47.0	Creek chub (19%) Big Mouth shiner (18%)	12%/35%	3	5.16
12	French Creek	agriculture	mud, gravel hardpan	8.2	71.5	Fantail darter	8%/42%	3	5.22

Table 3-44: Physical and Biological Characteristics of Streams in the Project Study Area

Site No. (Exhibit 3-7)	Stream Name	Surrounding Land Use	Stream Sub-strate	Stream Width (ft)	Habitat Assess-ment Score (mean)*	Dom-inant Fish Species (%)	Percentage Intolerant/ Tolerant Fish	EPT** Rich-ness	HBI***
			clay, a few trees			(>33%)			
13	Rock Creek	livestock, pasture, homestead	mud, sand	39.4	50.0	Johnny darter (32%)	13%/13%	6	6.34
14	Unnamed Trib. Rock Creek	pasture, light woods, agriculture	mud/silt, some detritus	6.9	65.0	Johnny darter (42%)	none/42%	3	6.02
15	Unnamed Trib. Rock Creek	pasture, light woods, homestead	mud/ sand mix with some gravel, detritus	6.9	72.5	Creek chub (49%)	none/50%	1	5.65
16	Unnamed Trib. Rock Creek	homesteads, fallow field, pasture, agriculture	mud, clay, silt over hardpan clay	4.3	68.5	Brook stickle-back (56%)	none/43%	3	5.75
18	Spring Brook Creek	agriculture, homestead, pasture	sand, gravel, silt, cobble, hardpan clay	9.8	71.0	Black-nose dace (>37%)	22%/44%	5	5.71
22	Rock Creek	livestock, pasture, agriculture	silt, mud, sand	44.3	31.5	Sand shiner (37%)	13%/13%	4	6.42

Notes:
*Habitat assessment score labels: "Excellent" is ≥ 130, "Good" is 110-129.9, "Fair" is 80-109.9, "Poor" is < 80
**EPT = Ephemeroptera, Plecoptera, Trichoptera
***Hilsenhoff's family level biotic index (HBI) for macroinvertebrates. The HBI is reported on a 1-10 scale. A low family level biotic index is associated with good water quality.

Surrounding Land Use. Surrounding land uses can influence many characteristics of streams including temperature, amount of suspended solids in the water column, and the overall water quality, which in turn influence the floral and faunal assemblages of the stream. Land use surrounding the project study area streams is predominantly agricultural with occasional forested areas and residences.

Flow Regime. Streams have either a perennial (permanent) or intermittent flow regime. A perennial flow regime is required to support fish and mussels. An intermittent flow regime may support a limited assemblage of fish species during seasonal high water periods. Stream flow was determined based on United States Geological Survey (USGS) topographic maps. All of the stream segments sampled within the project study area have permanent flow.

Stream Substrate. Streams' bottoms are composed of sand, gravel, cobble, detritus, mud, silt or clay. Excessive sand, mud, and silt in the stream substrate can diminish habitat quality for fish and aquatic macroinvertebrates. Other substrate types such as gravel, cobble, and detritus can contribute to a diverse fish and aquatic macroinvertebrate assemblage. Streams in the project study area have mostly silt, mud, or clay substrates.

Stream Width. A wide stream may have more variation in substrate type than a narrow stream, and thus support a more diverse assemblage of aquatic biota. The width of streams assessed for this project ranges from less than five (5) feet for intermittent tributaries to the Rock River to almost 500 feet for the Rock River itself. However, the flow regime is a more important determinant of aquatic species richness.

Habitat Assessment Score. Habitat assessments were conducted for each stream in the project study area in order to determine which streams should be sampled for biological and chemical attributes. Habitat assessment scores, based on a modification of a standard U.S. EPA method, derive from 12 physical stream parameters including stream substrate, canopy cover, sediment deposition, and stream bank stability. These parameters reflect the quality of in-stream and riparian habitat as it influences the structure and function of the stream community. Habitat assessment data together with biological and chemical data help provide a more comprehensive and integrated picture of stream conditions. Habitat assessment scores greater than 130 indicate excellent conditions, 110 to 129.9 good conditions, 80 to 109.9 fair conditions, and below 80 poor conditions. No sites were ranked "good" or "excellent" within the project study area. The average of habitat assessment scores was 65.5 (Range 99.5 to 31.5), indicating that most of the assessment sites (**Table 3-44**) within the project study area are well *below* the cutoff for a habitat quality rating of "poor." These scores indicate degraded habitat.

Fish Species. Forty-six (46) species of fish were sampled within the project study area. The number of species in project area streams ranged from 27 (Rock River and Elkhorn Creek) to four (4) (Unnamed Tributaries to the Rock River and Rock Creek). The most abundant species that were sampled included the Johnny darter, spotfin shiner, and creek chub which made up 12.3 percent, 9.2 percent, and 8.4 percent of the individuals from the 14 stream sites, respectively. The most widely distributed species in the project area were the Johnny darter, creek chub, and bluntnose minnow, which occurred in 11, 11, and ten (10) stream segments, respectively. Dominant fish species are those that make up 17 percent or more of the total catch at a sampling site. The Johnny darter (three (3) sites) and spotfin shiner (two (2) sites) were dominant in multiple stream segments. The creek chub, fantail darter, sand shiner, blacknose dace, brook stickleback, and fathead minnow dominated one (1) site each. Three (3) sampling sites had co-dominants (spotfin shiner/sand shiner, bluntnose minnow/fantail darter and creek

chub/big mouth shiner) (**Table 3-44**). No State or Federally Listed Threatened or Endangered Fish Species were collected during sampling.

Percentage Intolerant/Tolerant Fish. Intolerant species (hornyhead chub, southern redbelly dace, bullhead minnow, highfin carpsucker, northern hogsucker, smallmouth bass, banded darter, slenderhead darter, and emerald shiner) are those fish species that are sensitive to various environmental perturbations and are generally indicative of good stream conditions. Tolerant species of fish (common carp, bigmouth shiner, bluntnose minnow, fathead minnow, creek chub, white sucker, and green sunfish) are those that can tolerate various environmental changes and can withstand a wide variety of water conditions. Intolerant and tolerant species are based on IDNR/IEPA protocols. Of the 46 species of fish identified in the project study area, 25 percent of the individuals are classified as tolerant, 13 percent as intolerant, and 62 percent as intermediate between these two states. Intermediate species (spotfin shiner, sand shiner, Johnny darter, fantail darter, brook stickleback, and blacknose dace) generally comprise the largest numbers of fish in Illinois streams. Generally, streams contained a higher percentage of tolerant fish than intolerant fish (**Table 3-44**). Exceptions included the Rock River, Elkhorn Creek, and Rock Creek.

Mussel Species. Live mussels were found at two (2) sites, the Rock River (at U.S. 30) and Elkhorn Creek (at U.S. 30). The Rock River has been noted as one of the highest mollusk diversity streams in the State. A total of 92 individuals representing ten (10) species were found at the Rock River. The most common species were the pink heelsplitter (24 individuals), fragile papershell (17 individuals), maple leaf (13 individuals), and threehorn wartyback (13 individuals). Five (5) individuals of the State-Threatened Species, the black sandshell were also found at this site. At Elkhorn Creek, a total of 33 live mussels were recorded and included the plain pocketbook (27), the creeper (3), and the black sandshell (3).

Aquatic Macroinvertebrates. Aquatic macroinvertebrate populations were assessed for the 14 project study area stream segments. Generally, streams in the project study area are not outstanding in terms of the assemblage of aquatic macroinvertebrates. The taxon richness of aquatic macroinvertebrates was highest in Spring Brook Creek (U.S. 30 – Site 18), followed by Rock Creek (U.S. 30 – Site 22) and Elkhorn Creek (U.S. 30 – Site 3), respectively. Some aquatic macroinvertebrates are indicative of good water quality; for example, mayflies, stoneflies, and caddisflies. The presence of other aquatic macroinvertebrates, such as midge fly and blackfly larvae, leeches, and aquatic worms, is indicative of degraded water quality. Several metrics of aquatic macroinvertebrate assemblages are used to assay water quality and focus on the order, family, genus, or species taxonomic levels. **Table 3-44** summarizes the stream aquatic macroinvertebrate biota analyzed with Hilsenhoff's Family Level Biotic Index (HBI). The HBI is based on tolerance values assigned to macroinvertebrate families. The tolerance values are based on the ability of macroinvertebrates to withstand organic pollutants. The HBI is reported on a 1–10 scale. An HBI value of one (1) indicates a macroinvertebrate community that is intolerant of organic enrichment, whereas a ten (10) indicates high tolerance of organic enrichment. Based on the HBI metric, streams with low scores generally have better water quality than those streams with high scores. Six (6) streams in the project study area were rated

"fair", seven (7) were rated "fairly poor" and one (1) stream was rated as "poor". None of the streams sampled were rated as good, very good, or excellent.

Water quality was also assessed based on the EPT Richness Index. EPT Richness is the total number of taxa of Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies) – an index commonly used in water quality assessments (Plafkin et al. 1989). No Plecoptera (stoneflies) were recorded in this study. In general, Plecoptera are among the most sensitive of aquatic insect orders and are commonly restricted to flowing waters with higher levels of dissolved oxygen (Bouchard 2004). Rock Creek (Site 22) had the highest EPT score, although it was ranked as fairly poor using the HBI. Site 15, an Unnamed Tributary to Rock Creek, had the lowest EPT Richness of the segments sampled (**Table 3-44**).

3.9.1.2 Water Quality

The IEPA assigns designated uses to some waters of the State. Designated uses include aquatic life, fish consumption, swimming, recreation, and aesthetic quality. Water quality conditions are assessed in terms of the degree to which waters attain their designated use. The IEPA uses various criteria (numeric and narrative water quality standards) to assess the level of support of each applicable designated use. There are four (4) use support levels: Fully Supporting, Not Supporting, Insufficient Information, or Not Assessed. Each assessed use receives a use-support rating of either full or nonsupport (**IEPA 2014**).

Results of the most recent statewide assessments can be found in the Integrated Water Quality Report and Section 303(d) List published by IEPA (2014). Water bodies that attain full support are considered to be unimpaired; those that are in nonsupport are considered to be impaired, and are included on the IEPA 303(d) list. Streams on the 303(d) List will require future preparation of a total maximum daily load analysis focused on the Water Quality Constituents that are causing the impairment.

Six (6) streams in the project area (Rock River, Elkhorn Creek, Deer Creek, French Creek, Rock Creek, and Cattail Creek) have designated uses. These designated uses include aquatic life, fish consumption, swimming, recreation, and aesthetic quality. None of the designated uses for Deer Creek, French Creek, or Cattail Creek have been assessed by IEPA. IEPA has assessed designated uses and use-support for the Rock River, Rock Creek, and Elkhorn Creek. The **swimming, and boating designated uses are** fully supported in the Rock River. The aquatic life designated use is fully supported in Elkhorn Creek **and Rock Creek**.

The Rock River and Elkhorn Creek are the only impaired waters in the project study area. Elkhorn Creek is not supportive of fish consumption. The Rock River impairment is to the fish consumption and aquatic life designated use. The potential causes of the impairment (aquatic life and fish consumption) in the Rock River are fish kills (229), ethanol (521), mercury (274), and Polychlorinated biphenyls (348) (IEPA, 2014).

Water quality characteristics of the streams in the project study area are compared with the Illinois General Use Water Quality Standards. The General Use Standards protect the State's

water for aquatic life, wildlife, agricultural use, secondary contact use, and most industrial uses and ensure the aesthetic quality of the State's aquatic environment. These standards must be met in Waters of the State for which there is no specific designation. All waters within the U.S. 30 project study area are designated as General Use.

Surface water samples and field data were collected in April, June, and October of 2007 from the 14 sites shown in **Exhibit 3-7**. Average water quality results for streams in the project study area and relevant water quality standards are shown in **Table 3-45**. Water quality in the project study area is generally representative of intensively row-cropped agricultural areas, with occasional minor excursions of the general use water quality standards.

The chronic standard for zinc was exceeded in ten (10) of 14 stream segments sampled in June 2007. The chronic standard is designed to be protective from long-term exposure to low concentrations of metals. Elevated zinc concentrations in surface waters may be related to runoff from mining sites, effluents of industrial operations that use zinc (such as steel production), or runoff from agricultural lands where sewage containing high levels of zinc (from industrial operations) has been applied. The project area does not have widespread industrial sources of heavy metals – if these sources were present, other metals such as lead and copper would also be expected to be elevated. Zinc occurs naturally in soil, but is tightly bound to clay and organic matter. Farmers apply zinc with their fertilizer when the soil has been shown to be zinc-deficient, but silty clay/clayey silt soils are not likely to be zinc deficient. Most of the surface soils in the watersheds of the streams that reported elevated zinc levels are clays and silts. Zinc deficiency is most common in severely eroded soils, sands, and sandy loams (sandy soils occur at the far western end of the project area). According to local fertilizer distributors, it is not common for farmers in Whiteside County to use fertilizer with zinc added, but some of them do. They did not know of specific areas of the county where this fertilizer mix is normally applied. The elevated zinc samples do not coincide with any elevated ammonia concentrations (phosphorus was not measured). Based on these factors, it is likely that the elevated zinc levels in the U.S. 30 samples are a laboratory artifact, but may be related to fertilizer use.

Streams

Fish, mussel, and aquatic macroinvertebrate populations were sampled during 2007 at the 14 sites summarized in **Table 3-45** and depicted in **Exhibit 3-7**. In addition to the survey data, the IDNR has developed a Biological Stream Rating System (BSRS) based on population characteristics of multiple aquatic taxonomic groups (fish, mussels, macroinvertebrates, and crayfish). The objective of the BSRS is to identify stream segments of exceptional quality and to focus protection efforts to uncommon resources or biologically significant streams (www.dnr.state.il.us/orc/BioStrmRatings/). The BSRS incorporates various taxonomic groups and average standardized taxonomic scores to generate an overall rating for stream segments that is representative of multiple signals of stream conditions. This approach results in assigning up to three (3) designations for a stream segment, which are a diversity rating, integrity rating, and identification as a biologically significant stream. The ratings for diversity and integrity range from A (Excellent) to E (Very Poor). Biologically significant streams, by definition, have no range

of ratings. The rating system is only applied to wadeable streams. French Creek (Site 12) was the only project area stream included in this assessment. Elkhorn Creek was rated upstream of the project area.

Brief synopses of each stream within the project area are given in the following pages. Physical and biological data are given in **Table 3-45** and stream locations are shown on **Exhibit 3-7**. A photograph of each stream as it occurs in the project area is provided. The photographs depict the nature of the streams' woody riparian habitat, size, and adjacent cover types.

Union Drainage Ditch. The Union Drainage Ditch (Site 1) is a first order tributary of the Rock River. This stream exhibited low levels of siltation and clear water and contained a mix of shallow gravel riffles and pools at the sampling location. These habitat attributes usually indicate higher quality streams. However, the low number of fish (34 individuals representing six (6) species) collected at this site indicates that stream quality may be low. All species encountered are intermediate or tolerant of pollution and are common inhabitants of similar sized streams in northern Illinois. No live mussel specimens were collected at this location.

Union Drainage Ditch

Rock River. The Rock River (Site 2) is the largest stream in the project study area. It is the collecting point for most other streams in the project study area and drains 10,915 square miles, about 5,650 of which are in Illinois. A total of 27 species of fish (10 families) and 92 individual mussels representing ten (10) species were collected during field surveys of the Rock River during 2007. The State Threatened Species, the black sandshell mussel, was found at this site.

This segment of the Rock River from Sterling/Rock Falls to Oregon, a distance of 29 river miles, is listed on the National Park Services' National Rivers Inventory (NRI). The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic River System. Rivers were included on the NRI to the degree to which they are free-flowing, to the degree to which the rivers and their corridors are undeveloped, and for the outstanding natural and cultural characteristics of the rivers and their immediate environments. The Rock River's Outstanding Remarkable Value is its recreational attributes. The river is identified in the NRI listing as a broad interstate river flowing through a very intensely farmed portion of Illinois; containing well wooded banks and slow current that offer an interesting and leisure canoe trip. The river also provides for moderate fishing use. The U.S. 30 project is approximately four (4) miles downstream of the dams at Sterling/Rock Falls."

Rock River

According to studies conducted by the Illinois Natural History Survey (2008), the reach of the Rock River in the project area scored relatively low for Cumulative EPT (Ephemeroptera, Plecoptera, Trichoptera) Richness and Mean Taxa Richness. Although the Rock River is listed on the IEPA 303(d) List, a total maximum daily load (TMDL) report has yet to be developed to address the causes of impairment.

A major fish kill affecting over 72,000 fish occurred in the Rock River in mid-June 2009. The fish kill was believed to be related to an upstream train derailment that released large quantities of an ethanol product. The fish kill extended from north of Grand Detour to south of Prophetstown and included the project study area. The long-term impacts of this event on the fish and other biota in the Rock River are unknown.

Elkhorn Creek. Elkhorn Creek (Site 3) is a tributary of the Rock River and has a drainage area of 237 square miles. Twenty-seven (27) species of fish (8 families) were collected from this stream. Thirty-three (33) living mussel specimens representing three (3) species, including one (1) State Threatened Species (black sandshell), were collected from Elkhorn Creek. A segment of Elkhorn Creek approximately 11 miles upstream of the project study area has been rated as a Class B stream (Good) on the basis of water quality under the BSRS.

Deer Creek. Two (2) locations within the project study area (Stream Sites 6 and 7) were sampled for Deer Creek. Overall habitat conditions are similar at both locations. The stream is a fairly narrow (<16-26 feet) third order stream with relatively high levels of siltation in pools. Some clean riffles were also present. All species present are common inhabitants of small, headwater streams in northern Illinois. Over 75 percent of species present were intermediate or tolerant and represent some of the most common fishes in Illinois. No live mussel specimens were collected in either stream reach.

Unnamed Tributary to Rock River. Two (2) locations within the project study area (Stream Sites 9 and 10) were sampled for the perennial Unnamed Tributary to the Rock River. Site 10 is 1.5 miles downstream of Site 9. Both are relatively narrow (7 feet and 16 feet wide, respectively) second order streams surrounded by agricultural land. Abundant accumulations of silt were found in pool habitats upstream of U.S. 30 (Site 9). Although species diversity was significantly higher (17) at Site 10 compared to Site 9 (4 species), all species encountered in this Unnamed Tributary are common inhabitants of northern Illinois streams and are either intermediate or

tolerant species, with the exception of a single southern redbelly dace collected at Site 9. Both sites are low in EPT richness.

Unnamed Tributary to Rock River

French Creek. French Creek (Sites 11 and 12) contained a dichotomy of habitat types. Upstream of Sawyer Road (Site 12), the stream appears channelized and is devoid of woody riparian vegetation. Downstream (Site 11), it is composed of alternating shallow pools and riffles and is wooded along the north bank. The presence of gravel and cobble substrates and low levels of siltation downstream of the bridge contributes to the presence of high numbers of two (2) darter species (fantail and Johnny darter). Over 90 percent of species present are intermediate or tolerant and represent some of the most common fishes in Illinois. The single intolerant species present (southern redbelly dace) is frequently found in lower quality streams in Illinois and is not indicative of higher quality habitat. While the total number of individuals was high, the fish fauna present (12 total species) at Site 12 and upstream habitat attributes reflect a site of lower quality. The EPT Richness at this location was also very low. French Creek, from U.S. 30 downstream to its confluence with Rock Creek, has been rated as a Class D stream (Poor) on the basis of diversity under the BSRS.

French Creek

Rock Creek. Two locations (Sites 13 and 22) within the project study area were sampled for Rock Creek. Rock Creek (Site 13) south of Morrison is a third order stream approximately 49 feet wide with both open and tree-lined banks. Stream banks are very steep. In-stream habitat is rather uniform and composed entirely of a run. Stream surveys at this located identified a low number of species (8) and low total number of individuals (21). While these results may be related to poor sampling conditions related to high water levels limiting on the use of electroshocking equipment, it is unlikely that additional sampling efforts would have produced intolerant species that were not observed at other sites within the U.S. 30 project area.

Rock Creek

Rock Creek at Bunker Hill Road (Site 22) is approximately 50 feet wide with open banks devoid of woody vegetation. Alternating riffles and runs are present at the site, with some siltation present. Surrounding land use is entirely agricultural, with little to no buffer along Rock Creek. Fish diversity (8) and total number of individuals (84) are

low for a stream the size of Rock Creek. With one exception, all species collected at Site 22 are common to northern Illinois streams and are either intermediate or tolerant.

Unnamed Tributary to Rock Creek. Two (2) Unnamed Tributaries to Rock Creek within the project study area (Stream Sites 14 and 15) were sampled. Both locations are narrow, shallow reaches with gravel riffles and shallow pools. All fish species collected from these locations are intermediate or tolerant species and are common inhabitants of small first or second order streams in Illinois.

Unnamed Tributary to Rock Creek

Spring Brook Creek. Spring Brook Creek (Site 18) is a 16 to 23 foot wide second order tributary of Cattail Creek with open banks. In-stream habitat is good with alternating riffles and pools. Siltation levels are low, most likely due to upstream land use not consisting of row-crop agriculture. Species diversity (9) is average for second order streams in northern Illinois and with one exception, all species were either intermediate or tolerant. The single intolerant species collected (southern redbelly dace) is not indicative of high quality habitat as that species is frequently encountered in streams with degraded habitat across central and northern Illinois. The low level of siltation present at Site 18 may explain the very high number of blacknose dace (>100) collected at this site.

Spring Brook Creek

Table 3-45: Water Quality of Streams in Project Study Area

Parameter	Union Drain-age Ditch	Rock River	Elk-horn Creek	Deer Creek	Deer Creek	Un-named Trib. Rock River	Un-named Trib. Rock River	French Creek	Rock Creek	Un-named Trib. Rock Creek	Un-named Trib. Rock Creek	Un-named Trib. Rock Creek	Spring Brook Creek	Rock Creek	Water Quality Standard
	Site 1	Site 2	Site 3	Site 6	Site 7	Site 9	Site 10	Site 12	Site 13	Site 14	Site 15	Site 16	Site 18	Site 22	
Dissolved Oxygen (mg/L)[f]	3.39	8.00	6.93	7.95	7.16	6.44	8.04	7.86	6.83	7.37	7.08	8.31	8.39	6.43	3.5 or 5.0 Min[b]
pH (Standard Units)[a]	7.28	8.31	7.91	7.54	7.99	7.39	7.46	7.73	7.34	7.34	7.06	7.44	7.51	8.18	6.5-9.0
Ammonia (mg/L)	0.05	0.15	0.05	0.04	0.02	0.02	0.03	0.04	0.08	0.02	0.02	0.03	<0.01	<0.01	15 mg/L
Total Phosphorus (mg/L)	0.03	0.01	0.02	0.03	0.01	0.01	0.02	0.02	0.03	0.02	0.02	0.02	0.03	<0.01	0.05 mg/L[c]
Hardness (mg/L)	312	305	364	383	391	308	352	370	340	363	344	360	360	355	NS[d]
Chloride (mg/L)	73.2	48.8	36.2	29.6	27.7	22.8	38.9	37	31.7	34.6	61.1	40.4	26.9	33	500 mg/L
Copper (µ/L)	2.15	2.95	3.13	2.47	3.26	2.85	3.19	2.65	2.13	2.58	2.75	3.29	2.93	2.79	exp[-1.464 + 0.9422 ln(H)][e] µ/L
Lead (µ/L)	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	exp[-1.301 + 1.273 ln(H)][e] µ/L
Zinc (µ/L)	83.2	111.2	62.9	61.6	63.2	84.4	15.2	61.9	100.0	51.0	83.4	20.4	14.3	<7.3	exp[0.9035 + 0.8473 ln(H)][e] µ/L

[a] Median value [b] Varies depending on season [c] Standard applies to lakes and reservoirs [d] No Standard
[e] Where ln(H) = natural logarithm of measured hardness concentration (mg/L) [f] Excluding April data

3.9.2 Environmental Consequences

The No-Build Alternative may cause negligible water quality impacts from erosion and sedimentation during pavement and structure maintenance activities over and near waterways. Potential impacts associated with highway operations (runoff) and maintenance activities (herbicide application, deicing) would be unchanged from current conditions.

The Build Alternatives would require construction of new bridges and culverts and/or in-stream work for widening of existing bridges. Surface water impacts are generally related to increased sedimentation, siltation, and suspended solids loads in streams and rivers from roadway and bridge construction, operation, and maintenance. The project's potential construction, operation, and maintenance impacts are discussed below. Permits and certifications required for potential impacts to surface water resources are discussed in Section 3.17, Permits/Certifications.

3.9.2.1 Construction Impacts to Surface Water

Typical operations associated with roadway construction include clearing, grading, filling, and excavation. These activities all increase the erosion potential of surface soils because of the reduction in vegetative cover and increased impervious areas resulting from compaction of soil by heavy equipment.

Aquatic resources of project area streams are summarized in **Table 3-46**. These aquatic resources are described in detail in Section 3.9.2. Stream construction impacts are summarized in **Table 3-47**. These impacts are based on preliminary design information and will be defined in final design. Construction impacts may vary based on the means and methods employed by the contractor during construction. During construction of bridges with piers in the water, construction equipment and materials are placed in the stream channel during demolition of the existing structure (if any), and construction of the proposed structure. Equipment in the stream channel is necessary for pile driving and pier construction operations, as well as for installation of sheet piling. Based on preliminary engineering data, only the bridges over Elkhorn Creek and the Rock River will require piers.

The stream channel is generally graded upstream and downstream of the new structure. Equipment would also be used within the floodplain to construct slope walls and to place riprap along the abutment cones and the channel bottoms, as required based on the results of detailed hydraulic analyses. These in-stream activities may have both direct and indirect impacts on aquatic biota, especially mussels. Individuals within the construction footprint may be crushed or disturbed by heavy equipment, while increased sediment in the water column can clog gills. Elkhorn Creek and the Rock River have clean riffle complexes that support the only mussel populations identified in the project area. Both streams produced live specimens of the black sandshell mussel, a State Threatened Species. These waterways also had the highest number of intolerant fish species. Fish will move away from the area of disturbance and should not be negatively impacted by bridge construction.

The same construction process would be used for construction of bridges without piers in the water, except equipment would not be required within the stream channel for pile driving and pier construction.

Table 3-46: Aquatic Resources in Project Area Streams *(See Text for Potential Impacts to these Habitat Features)*

Stream Name	Aquatic Habitat Conditions	Mussel Beds	Intolerant Fish Species (Nos.)
Spring Brook Creek	Alternating pools and riffles, low siltation levels	None	Two
Tributary Rock Creek	Shallow riffles and pools, sparse to no woody riparian habitat	None	None
Rock Creek (N)	In-stream habitat uniform	None	One
Rock Creek (S)	In-stream habitat uniform	None	One
French Creek	Stream channelized in places, lacks woody riparian vegetation	None	One
Tributary Rock River	Abundant silt accumulation in pools, sparse woody riparian habitat	None	Two
Deer Creek	Siltation in pools, some clean riffles, sparse woody riparian habitat	None	Three
Elkhorn Creek	Clean riffles and alternating pools	Yes, 33 individuals	Five
Rock River	Shallow gravel riffles on the west bank	Yes, 92 individuals	Four
Union Drainage Ditch	Low siltation levels, clear water, shallow gravel riffles and pools	None	None

Proposed culvert locations are listed in **Table 3-47**. Box culverts will be required on the Tributary to Rock Creek, Tributary to the Rock River, and Union Drainage Ditch. No mussel species were found at any of the proposed culvert locations; however, one (1) fish species that is intolerant of pollution was found in French Creek and two (2) intolerant fish species were found in the Tributary to the Rock River. Intolerant fish species were not found at any of the other proposed culvert locations. A “remove and replace” method will be used to construct box culverts in stream channels. A temporary culvert will be installed to divert stream water during construction of the box culvert.

Table 3-47: Construction Impacts to Perennial Streams

Stream Name	Construction Activity	Additional Information	Estimated Structure Dimensions	Align-ments	Exhibit 3-10 Page Number
Spring Brook Creek	Construct **bridges** spanning Acker Road, Burlington Northern Santa Fe Railroad, Union Pacific Railroad, and the Creek.	The proposed bridges and approaches will be on new alignment. It is anticipated that there will be no piers or other construction work within the stream.	**Bridges will be 1200 feet in length and 40 feet in width (face-to-face).**	The bridges **and approaches** are common to both Alternates 4 and 5.	1 & 2
Tributary Rock Creek	Construct and replace culverts within the stream at three different locations.	The project will impact the stream at three locations. These include (1) the replacement of the existing culvert at IL 78, (2) construction of a box culvert on new U.S. 30, and (3) construction of a box culvert at new U.S. 30 intersection with IL 78.	The replacement box culvert on IL 78 will be 200 feet in length and **15** feet in width; the box culvert on new U.S. 30 will be **200** feet in length and **15** feet in width; and the box culvert at the new U.S. 30/IL 78 intersection will be **90** feet in length and **15** feet in width.	The three box culverts are associated with Alternate 4.	6
Rock Creek (North)	Construct bridges spanning **Crosby Road, the stream, and Browns Road.**	The bridges and approaches will be on new alignment. There will be no piers within the stream.	The bridge will be **600** feet in length and **40** feet in width **(face-to-face)**.	The bridges **and approaches** are associated with Alternate 4.	7
Rock Creek (South)	Construct **bridges** over the stream.	The bridges and approaches will be on new alignment. There will be no piers within the stream.	The bridges will be **160** feet in length and **40** feet in width **(face-to-face)**.	The bridges **and approaches** are associated with Alternate 5.	10
French Creek	Construct bridges over the stream.	**The bridges and approaches will be on new alignment. There will be no piers within the stream.**	**The bridges will be 130 feet in length and 40 feet in width (face-to-face)**.	**The bridges and approaches are associated with Alternate 4.**	11
Tributary Rock River	Construct a box culvert within the stream.	U.S. 30 occurs on new alignment at this location.	The box culvert will be 250 feet in length and **11** feet in width.	The box culvert is common to both Alternates 4 and 5.	12
Deer Creek	The reconstruction of the existing bridge and the construction of a new bridge next to the existing bridge.	There will be no piers within the stream.	The bridges will be **230** feet in length and **40** feet in width **(face-to-face)**.	The bridges **and approaches** are common to both Alternates 4	12

Table 3-47: Construction Impacts to Perennial Streams					
Stream Name	**Construction Activity**	**Additional Information**	**Estimated Structure Dimensions**	**Align-ments**	**Exhibit 3-10 Page Number**
				and 5.	
Elkhorn Creek	The reconstruction of the existing bridge and the construction of a new bridge next to the existing bridge.	The existing bridge has two piers in the stream and takes up 200 square feet of stream bottom. The new bridges will have the same pier configuration as the existing bridge.	The bridges will be **450 feet in length and 40 feet in width (face-to-face).**	The bridges **and approaches** are common to both Alternates 4 and 5.	14
Rock River	The reconstruction of the existing bridge and the construction of a new bridge next to the existing bridge.	The existing bridge has six piers in the water and takes up 1155 square feet of stream bottom. The new bridges will have the same pier configuration as the existing bridge.	The bridges will be **1100 feet in length and 40 feet in width (face-to-face).**	The bridges **and approaches** are common to both Alternates 4 and 5.	14 & 15
Union Drainage Ditch	The existing box culvert will be replaced.	The box culvert will be replaced on the existing alignment and extended to carry four lanes of traffic.	The replacement box culvert will be **200 feet in length and 9 feet in width.**	The box culvert is common to both Alternates 4 and 5.	15

Round culverts will be installed to convey surface water at crossings of diverted streams. Installation will require excavation, riprap, and earthwork in the channel. Improperly designed or constructed culverts can cause habitat fragmentation by changing the elevation of the streambed, preventing upstream migration of aquatic organisms, increasing water velocities, preventing natural channel migration within the floodplain, and disrupting substrate continuity. Adverse impacts can be minimized through use of open bottom arched culverts instead of traditional box culverts, oversizing and recessing box culverts eight (8) inches (or more) below the surface of the stream substrate and back filling with natural channel substrate to maintain the same level of resistance as the natural stream channel, installing a low-flow culvert to provide for fish passage during drier seasons, and other measures.

Construction of any type of structure will involve heavy equipment crossing and working in the streams. Crossing through and working in streams will cause an increase in turbidity and sedimentation, and temporarily alter downstream hydraulics and substrate conditions. The level of water present in the streams while work is being conducted affects the amount of sediment transported downstream. Short-term increases in turbidity and sedimentation may be expected during construction in proportion to the proximity of excavated sites to surface water and the

frequency and duration of storm events. However, turbidity and sedimentation are expected to return to baseline levels soon after construction.

The U.S. Department of Interior's National Park Service stated in a letter to IDOT dated July 25, 2011 that the segment of the Rock River with the project study area is believed to be on the NRI (see Appendix D). The NRI is a register of rivers that may be eligible for inclusion in the Wild and Scenic River System. Rivers were included on the NRI to the degree to which they are free-flowing, to the degree to which the rivers and their corridors are undeveloped, and for the outstanding natural and cultural characteristics of the rivers and their immediate environments.

IDOT identified that this segment of the Rock River has been identified by the National Park Service as having recreational values (canoeing and fishing). Though the Illinois DNR has no information on the recreational use of the river, canoeing and fishing do occur. The project will have no effect on fishing but will have temporary effects on canoeing. Canoes have access points above (Sterling/Rock Falls) and below (Prophetstown State Park) the U.S. 30 crossing. During the construction and reconstruction of the two (2) bridges, access under the bridges will not be available. This condition is expected to last approximately three (3) years. Portage of the construction site may not be possible because of construction activity on the bridge approaches. Once construction of the bridges has been completed, the river will be open to canoeing under the U.S. 30 bridges. The project has been coordinated with the National Park Service (Appendix D). Based on the above considerations, the project as described will not have an adverse effect on the river's water quality, change the free flow characteristics of this reach, change the long term recreational use of the river, or impair the incorporation of this reach into the Wild and Scenic River System at some future date.

In-stream disturbance is regulated under Section 404 of the Clean Water Act. Construction of bridges and culverts will be conducted under Nationwide Permit 14 (NWP 14), "Linear Transportation Projects." The following limits apply to NWP 14:

- The discharge of dredged or fill materials into the waterway cannot cause the loss of >1/2 acre of waters of the United States.
- Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project.
- Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites.
- Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows.
- Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations.

- The areas affected by temporary fills must be revegetated, as appropriate.

Although the IEPA has issued water quality certification for NWP 14 under Section 401 of the Clean Water Act, this project will require individual water quality certification because the area of impact will exceed 100 linear feet, as measured along the stream channel. The water quality certification will include the following conditions, at a minimum, to protect stream water quality and prevent impacts to aquatic biota:

- Spoil material excavated, dredged, or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all State statutes.
- Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
- The activity shall not cause violation of the Illinois Environmental Protection Act (the Act), water pollution as defined and prohibited by the Act, violation of applicable water quality standards, or interference with water use practices near public recreation areas or water supply intakes.
- All areas affected by construction must be mulched and seeded as soon after construction as possible.
- Necessary measures shall be taken to reduce erosion during construction.
- All construction within the waterway shall be conducted during zero or low flow conditions.
- Temporary work pads, cofferdams, access roads, and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation.
- Stream flow shall be maintained by utilizing dam and pumping, fluming, culverts, or other techniques.

This project will result in the disturbance of more than one (1) acre of total land area. Accordingly, it is subject to the requirement for a NPDES permit for stormwater discharges from the construction sites. Permit coverage for the project will be obtained either under the IEPA General Permit for Stormwater Discharges from Construction Site Activities (NPDES Permit Number ILR10) or under an individual NPDES permit. Requirements applicable to such a permit will be followed, including the preparation of a Stormwater Pollution Prevention Plan. Such a plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges from the construction site and shall describe and ensure the implementation of practices which will be used to reduce the pollutants in discharges associated with construction site activity and to assure compliance with the terms of the permit.

3.9.2.2 Operational Impacts to Surface Water

Operational impacts of the project on water quality result from stormwater runoff from highway surfaces, bridge decks, median areas, and adjoining right-of-way. The increase in impervious area will increase stormwater runoff volumes and could increase in-stream erosion. The runoff

carries pollutants that have accumulated as a result of roadway use. Primary highway runoff components include suspended sediments (pavement wear and dirt), lead (gasoline, tire filler), zinc (tire filler, motor oil stabilizers), copper (metal platings, brake linings), and petroleum (gasoline, antifreeze, hydraulic fluids). Throughout the mid-1980s, the FHWA conducted nationwide studies to determine highway runoff constituents, amounts relative to roadway types and traffic conditions, and the potential impacts to surface water resources (FHWA, 1990). FHWA's research concluded that pollutants in highway runoff are not present in amounts sufficient to threaten surface water or groundwater where average daily traffic volumes are below 30,000. Forecast traffic for U.S. 30 for the design year (2038) ranges from 5,900 from Emerson Road to Mathew Road to 20,800 from Prophetstown Road to IL 40 forecasted ADT (**Table 1-1**). Although adverse impacts to surface water quality are not expected, features such as grassed medians and roadside ditches will be incorporated into the roadway design to reduce stormwater runoff and associated pollutant loadings to nearby waterways. Pollutant removal in vegetated swales occurs through filtration by the vegetation, deposition of particulate matter in low velocity areas, and infiltration through soils. In general, a well-designed, well-maintained grass swale system can remove 70 percent total suspended solids, 30 percent total phosphorus, and 50 to 90 percent of trace metals (Young 1996).

3.9.2.3 Maintenance Impacts to Surface Water

Maintenance impacts associated with the Build Alternatives include application of deicing agents and spraying for weeds within the right-of-way. Deicing salts can affect water quality by increasing chloride levels in runoff and snowmelt. Impacts are associated with the movement of salt from the roadway into drainage ditches and waterways. According to theIDOT, the ten-year average (2000-2010) application of deicing salt for State-maintained highways in Whiteside County was 15.8 tons per lane mile. The amount of salt applied in any given year is dependent on the frequency, length, and intensity of winter storms in the project area. As such, the ten-year high during this period was 21.8 tons per lane mile and the ten-year low was 10.15 tons per lane mile. Ultimately, roadways with a greater number of lane miles will receive more salt than a smaller roadway under the same weather conditions.

Proposed highway improvements would increase the number of lane miles in the project area, thereby increasing the total salt loading over current levels. This could increase the delivery of sodium chloride ions to receiving surface waters. Research shows that occasional high levels of chlorides occur in drainage ditches and waterways because of rapid runoff and snowmelt. The research also indicates that no long-term buildup of chlorides occurs in waterways because of regular salt applications in the winter. Studies by the USGS (Research Project R-18-0) of sodium chloride concentrations originating from highway runoff have shown that the additional input of sodium chloride ions from deicing salts would be offset by a proportional increase in runoff for dilution. Streams in the project area generally have chloride levels ranging from 22 to 73 parts per million (**Table 3-45**). The highest concentrations are reported for Union Drainage Ditch, which receives runoff from the urban area of Rock Falls. Any relative increase in salt application expected within the project area under the proposed construction scenario will be due to the additional lane miles. Because the Illinois General Use Standard (water quality) for

chloride is 500 parts per million, it is reasonable to expect that the additional chloride that may reach project-area streams from salting U.S. 30 will not result in chloride levels that violate State water quality standards.

Application of herbicides is prohibited at waterway crossings or adjacent to the highway right-of-way within 150 feet of a State Listed Natural Area, or near an occurrence of a threatened or endangered species.

3.9.3 Indirect Impacts

Indirect impacts considered in this section include those to project area streams caused by project-induced growth. Indirect impacts are possible near project area communities. The city of Morrison has identified an area on the southeastern side of the city as an enterprise zone. This area is targeted for future industrial expansion. Sterling and Rock Falls have also designated enterprise zones for their communities. Future industrial development is expected to occur within these zones and will not result in impacts to water quality of project-area streams. Residential development in Whiteside County is regulated under Chapter 11 of the Whiteside County Code, which provides for stormwater control and prevention of adverse impacts to surface water flows and water quality. Based on these provisions, the project is not expected to result in indirect adverse impacts to surface waters from induced development.

3.9.4 Cumulative Impacts

Short-term construction and long-term operation and maintenance of U.S. 30 will result in minor impacts to project area streams as described above. The project is also expected to enhance economic development within the area. These cumulative activities are not expected to result in adverse impacts to water quality or in-stream habitat of area streams.

3.9.5 Measures to Minimize Harm and Mitigation

Principles and standards from IDOT's *Construction Procedure Memorandum on Erosion and Sediment Control*, Chapter 59-8 of the *IDOT Bureau of Design & Environment Manual*, Section 280 of the *Standard Specification for Road and Bridge Construction* (January 1, 2012), and other erosion control best management practices will be used to minimize water quality impacts of construction and operation of the proposed facility. Construction in or near waterways will be performed in accordance with IDOT's *Standard Specifications for Road and Bridge Construction.* Erosion control measures will be installed before erosion prone construction activities begin. Construction at stream crossings will be conducted during low or normal flow periods and will comply with all Federal and State laws, local ordinances, and regulations. An erosion control plan will be developed as part of the plans and specifications for construction.

Basic erosion control principles and best management practices that will be used include the following:

- The size of disturbed area exposed at any one time and the duration of exposure will be minimized. Construction contracts could include limits on the amount of soil that can be exposed, measures to prevent erosion during spring thaw if construction is not completed before winter, and specifications to complete grading as soon as possible and revegetate with temporary and permanent cover. The exact type and methods of erosion control to be utilized will be determined during the project's design phase.
- Control methods will be used to prevent erosion and sedimentation in sensitive areas. Such methods include proper design of drainage channels with respect to width, depth, gradient, side slopes, and energy dissipation; protective ground cover such as vegetation, mulch, erosion mat, or riprap; diversion dikes and intercepting embankments to divert sheet flow away from disturbed areas; and sediment control devices such as ditch checks, erosion bales, silt fences, and retention/detention basins.

3.10 Wetlands

The USACE Wetland Delineation Manual (1987) defines wetlands as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions." Impacts to wetlands from Illinois highway projects are regulated by the USACEunder Section 404 of the Clean Water Act and by the IDNR under the Illinois Interagency Wetlands Policy Act.

3.10.1 Affected Environment

Published data from the Land Cover of Illinois 1999-2000 (www.agr.state.il.us/gis/stats/landcover/counties/county.php?CNTY=Whiteside) shows 13,045 acres of wetland land cover in Whiteside County. These data are based on high level aerial photography, and may differ substantially from information collected from intensive field surveys. According to this publication, wetlands cover slightly less than three (3) percent of the land in the county. Five (5) types of wetlands, categorized by combinations of hydrology and vegetation, are present in Whiteside County. The majority by acreage (10,454 acres, 2.3 % of county) are forested floodplain wetlands. Marshes, or seasonally/temporarily flooded wetlands largely composed of emergent vegetation, cover the next largest area (1879 acres, 0.4 % of county). Less common (510 acres, 0.1 % of county) are wet meadow wetlands, which may only be saturated or inundated for a brief period. Ponds are the least extensive of the wetlands in Whiteside County (202 acres, <0.1 % of county). **Table 3-48** summarizes the potential extent of wetland types that occur within the county.

Table 3-48: Summary of Wetland Land Cover in Whiteside County		
Wetland Types	**Acreage in Whiteside County**	**% of Wetland Coverage in Co.**
Floodplain Forest	10,454	2.3
Seasonally/Temporarily Flooded	1,879	0.4
Shallow Marsh/Wet Meadow	510	0.1
Shallow Water	202	<0.1
Deep Marsh	<1	<0.1
Swamp	<1	<0.1
TOTAL	**13,045**	**2.9**

Source: www.agr.state.il.us/gis/stats/landcover/counties/county.php?CNTY=Whiteside

3.10.1.1 Wetland Plant Community

One hundred and one (101) routine onsite wetland delineations were performed in the project study area. Seventy-two (72) of these sites were determined to meet the wetland criteria defined by the *USACE Wetland Delineation Manual (1987)*: hydrophytic vegetation, hydric soils, and wetland hydrology. Fifty of these wetland sites were in or adjacent to the many corridors analyzed during this study. These 50 sites represent four (4) wetland cover types (plant communities) which are discussed below and summarized in **Table 3-49** in order of decreasing predominance. Wet meadow wetlands (55.1 acres) are the most extensive in the project study area. Forested wetlands (38.5 acres), marsh (4.2 acres), and sedge meadows (4.7 acres) are also present. **Table 3-50** summarizes the characteristics of individual wetlands in the project study area.

Table 3-49: Summary of Wetland Cover Types and Acreages Identified for the U.S. 30 Project			
Wetland Cover Type	**Total Wetland Area (acres)**	**Percentage of Total Wetland Area**	**No. Wetland Sites**
Wet Meadow	55.1	53.7	28
Forested Wetland	38.5	37.6	15
Marsh	4.2	4.1	3
Sedge Meadow	4.7	4.6	3

Source: Illinois Natural History Survey (2008, 2009)

Table 3-50: Wetland Sites Identified for the U.S. 30 Project

Table 3-50: Wetland sites identified for the U.S. 30 project

Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 34	Forested wetland	None	Black willow, Reed canary grass, Water pepper, Pinkweed	Birds silt loam	0.2	9.5	-2.9	29.4	Flood Storage Surface Water Recharge
Site 35	Wet meadow	None	Three-seeded mercury, Reed canary grass, Mild water pepper	Birds silt loam	0.2	7.8	-1.8	20.8	Flood Storage Surface Water Recharge
Site 36	Wet meadow	PEMC, PSS1C	Reed canary grass	Ambraw clay loam	13.0	6.7	-0.5	26.3	Flood Storage Ground Water Recharge
Site 39	Wet meadow	PEMF	Reed canary grass	Birds silt loam	0.9	9.6	-1.5	13.6	Flood Storage Ground Water Recharge
Site 40	Wet meadow	None	Reed canary grass	Birds silt loam	16	14.4	-1.5	16.3	Wildlife Habitat Ground Water Recharge Flood Storage
Site 41	Forested wetland	None	Silver maple, Black willow, Sandbar willow, Orange jewelweed, Reed canary grass	Birds silt loam	1.5	9.1	-3.3	12.5	Wildlife Habitat Flood Storage Ground Water Recharge
Site 42	Forested wetland	None	Cottonwood, Black willow	Birds silt loam	0.9	9.7	-2.0	5.3	Wildlife Habitat Flood Storage
Site 43	Marsh	PUBF	Common water plantain, Reed canary grass	Birds silt loam	2.1	9.7	-4.2	10.0	Flood Storage Ground Water Recharge

Table 3-50: Wetland sites identified for the U.S. 30 project

Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 44	Wet meadow	PEMA	Reed canary grass	Birds silt loam	1.24	10.7	-2.5	25.0	Flood Storage Sediment Sink
Site 45	Wet meadow	PEMF	Reed canary grass, Bur cucumber	Birds silt loam	0.2	8.5	-2.9	6.3	Flood Storage Ground Water Recharge
Site 46	Forested wetland	PFO1A	Green ash, Wood nettle	Drummer silt loam	0.6	9.3	-0.5	5.9	Wildlife Habitat Flood Storage
Site 47	Wet meadow	PSS1A	Reed canary grass	Birds silt loam	0.6	7.8	-1.8	14.3	Flood Storage Pollutant Sink
Site 48	Wet meadow	None	Reed canary grass	Birds silt loam	1	15.0	-1.7	11.8	Flood Storage Sediment Sink
Site 50	Forested wetland	PFO1C	Silver maple, Cottonwood, Virginia wild rye, Reed canary grass	Birds silt loam	4.7	11.1	-1.6	21.7	Flood Storage Wildlife Habitat Water Storage
Site 51	Sedge meadow	PEMA	Black willow, Redtop, Common tussock sedge, Rice cutgrass	Elvers silt loam	1.6	16.6	-2.5	21.1	Flood Storage Sediment Sink
Site 52	Forested wetland	PEMA	Box elder, Cottonwood, Black willow, Giant ragweed, Side-flowered aster, Hairy-fruited lake sedge, Wood nettle	Elvers silt loam	4.2	18.3	-1.6	11.8	Flood Storage Wildlife Habitat Ground Water Recharge

Table 3-50: Wetland sites identified for the U.S. 30 project

Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 54	Forested wetland	None	Honey locust, Black willow, Cottonwood, Poison ivy, Reed canary grass	Blackoar silt loam	8.8	15.2	-1.2	13.3	Wildlife Habitat Flood Storage Ground Water Recharge
Site 55	Wet meadow	PEMF	Giant ragweed, Wild balsam-apple, Reed canary grass, Water knotweed	Blackoar silt loam	0.7	7.2	-2.7	6.7	Flood Storage Ground Water Recharge
Site 58	Wet meadow	PFO1A	Reed canary grass	Undetermined	0.02	2.8	1.0	71.4	Flood Storage
Site 60	Wet meadow	PEMCD	Reed canary grass	Prophetstown silt loam	8.7	4.3	-1.8	10.0	Sediment Sink
Site 62	Forested wetland	PFO1A	Black walnut, American elm, Honewort, Wood nettle	Sawmill silty clay loam	1.8	13.8	-0.3	0.0	Wildlife Habitat Flood Storage
Site 63	Wet meadow	PUBGh	Barnyard grass, Salt-marsh cockspur grass	Seaton silt loam	0.2	3.7	-1.3	33.3	Flood Storage
Site 64	Forested wetland	None	Cottonwood, American elm, Fowl manna grass, Wood nettle, Rice cutgrass, Canada clearweed	Undetermined	1	15.5	-1.0	14.3	Wildlife Habitat Flood Storage
Site 65	Wet meadow	None	Rice cutgrass	Prophetstown silt loam	0.3	6.7	-1.9	18.8	Ground Water Recharge

Table 3-50: Wetland sites identified for the U.S. 30 project

Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 67	Forested wetland	PEMCh	Cottonwood, Black willow, Sandbar willow, Reed canary grass, Narrow-leaved cattail	Drummer silty clay loam	5.4	11.2	-1.9	20.6	Ground Water Recharge Wildlife Habitat
Site 68	Wet Meadow	None	Quack grass, Yellow nut-sedge, Water knotweed, Common cattail, Common ironweed	Undetermined	0.4	7.1	-1.2	25.0	Sediment Sink
Site 70	Wet meadow	None	Pinkweed, Narrow-leaved cattail, Stinging nettle	Drummer silt loam	0.8	2.3	0.4	56.0	Sediment Sink
Site 71	Wet meadow	None	Reed canary grass	Drummer silt loam	0.7	7.5	-1.0	26.7	Flood Storage Surface Water Recharge
Site 72	Wet meadow (Vegetated Gravel Bar)	None	Reed canary grass	Undetermined	0.08	6.5	-1.6	20.0	Flood Storage Sediment Sink
Site 73	Forested wetland	PFO1C	Box elder, Cottonwood, Black willow, American elm, Virginia wild rye, Ground ivy, Wood nettle	Birds silt loam	4.2	13.8	-1.1	22.5	Wildlife Habitat Flood Storage
Site 74	Wet meadow	None	Reed canary grass, Curlytop knotweed	Undetermined	0.2	4.3	-1.5	26.3	Flood Storage

Table 3-50: Wetland sites identified for the U.S. 30 project

Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 78	Forested wetland	PFO1A, PUBH	Silver maple, Canada clearweed, Reed canary grass, Wood nettle	Craigmile fine sandy loam	1.1	17.7	-1.7	19.2	Wildlife Habitat Flood Storage Sediment Sink
Site 81	Wet meadow	None	Orange jewelweed, Rice cutgrass, Reed canary grass	Ambraw clay loam	3	25.8	-1.6	11.5	Flood Storage Wildlife Habitat
Site 82	Forested wetland	PFO1A	Box elder, Jerusalem artichoke, Reed canary grass	Undetermined	3.2	10.0	-0.8	20.7	Wildlife Habitat Flood Storage
Site 83	Wet meadow	PEMA	Broad-leaved wooly sedge, Sawtooth sunflower, Canada goldenrod, Narrow-leaved cattail	Drummer silt loam	0.4	12.5	0.5	17.9	Sediment Sink Ground Water Recharge
Site 85	Sedge meadow	PEMC, PEMCH	Red footed spike rush, Broad-leaf water-plantain	Sawmill silty clay loam	2.5	7.3	-3.7	20.0	Wildlife Habitat Sediment Sink
Site 91	Sedge meadow	None	Sedge	Birds silt loam	0.6	2.2	-0.7	27.3	Ground water Recharge
Site 92	Forested wetland	PEMC	Virginia waterleaf, Jewelweed, Honewort, Black Walnut	Undetermined	0.1	3.0	-0.2	20.0	Wildlife Habitat
Site 95	Wet meadow	PFO1A	Giant ragweed, Stinging nettle	Undetermined	0.3	9.0	0.5	21.1	Ground Water Recharge

Table 3-50: Wetland sites identified for the U.S. 30 project									
Wetland No.	Plant Community	NWI Classification	Dominant Vegetation	Soil Series	Acres	FQI	Wetness coefficient	% Adventive	Poss. Wetland Functions
Site 104	Forested wetland	PUBGX	Cottonwood, Reed canary grass	Undetermined	0.8	5.1	-3.1	12.5	Ground Water Recharge

Wetland quality was assessed based on floristic quality, wetness, and percent adventive species. Adventive species are non-native species that are not fully naturalized to their new environment. The presence of high percentages of adventive species is an indication of low floristic quality. Floristic quality was measured using the Floristic Quality Assessment (FQA) methodology of Taft et al. (1997). The FQA method was applied to wetland plant communities identified in the project area. The FQA method is based on a numerical Floristic Quality Index (FQI) of plant communities. The numerical rating describes the natural quality of plant communities. A low FQI often indicates disturbance and low natural quality, whereas a high FQI indicates low disturbance and high natural quality. The basis for the numerical rating is the assignment of coefficients of conservatism (numbered 0 to 10) to each plant species known to occur in Illinois. Higher coefficients of conservatism generally are assigned to species that are native and found in specialized habitats, whereas lower coefficients are assigned to species that are common and habitat generalists. An FQI below ten (10) suggests a site of low natural quality, while a score of below five (5) may denote a highly disturbed site (INHS 2008). Sites with an FQI of less than 20 are usually severely degraded, unmanaged plant communities, or very small habitat remnants (Taft et al. 1997). Populations scoring between 20 and 34 are degraded but have potential for recovery, populations scoring between 35 and 45 are regionally noteworthy, and locations with populations scoring greater than 45 may be classified as a statewide-significant natural area (Taft et al. 1997). Calculated FQIs in this document include all native and nonnative plant species recorded at the site.

A wetness coefficient was determined for each wetland site. Each plant species in the wetland was assigned a coefficient of wetness (W), based on the plant's wetland indicator status, as assigned by the U.S. Fish & Wildlife Service. These values were then summed for all species within the site and divided by the number of species present to determine the mean wetness coefficient, or the wetness coefficient for the site (Taft et al. 1997). Negative wetland coefficients indicate that the vegetation at a site is predominantly hydrophytic. The higher the negative number, the wetter the site and conversely, the lower the negative number the dryer the site. Positive wetland coefficients indicate that the vegetation at a jurisdictional wetland site is predominantly facultative.

Wet Meadow Wetlands. Typically, wet meadows are saturated or inundated for only a relatively brief period during the growing season. Wet meadows comprise 53.8 percent (55.1 acres) of wetland cover within the project study area. The majority of wet meadow wetlands in the project study area are of low natural quality (FQI ranges 2.3-15.0, mean: 8.0), with the exception of Site 81(FQI = 25.8). Reed canary grass is by far the predominant plant species in these sites; other common dominants include giant ragweed and sawtooth sunflower. Many of these sites have very high percentages of adventive species (6.3-71.4 percent; mean: 21.3 percent), also indicating low natural quality. Wet meadows in the project study area exhibit both the driest and wettest conditions of all sites in the project area, as determined by the range of wetness coefficients (1.0 to -2.9). In general, the wet meadow wetlands exhibit average wetness among all wetland sites in the project study area (mean wetness coefficient = -1.23).

Forested Wetlands. Forested wetlands include wetlands with a wide range of hydrology, but all are dominated by canopy level vegetation. In the U.S. 30 project study area, forested wetlands (38.5 acres, 37.6 percent of total acreage) are dominated in the canopy level by cottonwood, black willow, silver maple, or box elder. Understory dominants commonly include reed canary grass and wood nettle. Two (2) forested sites (Sites 73 and 78) were sampled quantitatively for species richness and tree density. Site 73 is overwhelmingly dominated by box elder, with representation of black willow, cottonwood, and honey locust, as well. Tree density is 1746/acre. Site 78 is dominated by American elm, honey locust, black walnut, and hackberry, with less representation of silver maple. Tree density is 971/acre. Floristic quality at both is average (Site 73 FQI = 13.8, Site 78 FQI = 17.7). Within the project study area, forested wetlands have average to low floristic quality, average wetness, and relatively low percentages of adventive species (mean FQI = 11.5; mean wetness coefficient = -1.55; mean percent adventive = 15.3).

Marsh Wetlands. Marshes are shallow wetlands that are seasonally or semi-permanently flooded, usually dominated by emergent and herbaceous species. Marsh wetlands comprise 4.1 percent (2 acres) of wetland cover within the project study area. Marshes have above average floristic quality with respect to other wetlands in the project study area, though quality is still rather low (FQI range: 4.5-9.7; mean: 7.9). Marsh wetlands are comprised of 10 to 50 percent adventive species (mean = 23.5). One (1) of the marshes has the second wettest wetness coefficient (Site 43 = -4.2), and marshes in general are wetter than average for the project study area (mean wetness coefficient = -2.60).

Sedge Meadow Wetlands. Sedge meadow wetlands are wetlands with saturated soils year-round, seasonal flooding, and vegetation dominated by sedge species. Three (3) sedge meadow wetlands with 4.7 acres of total coverage are present within the project study area. Tussock sedge dominates, with other dominants including red-footed spike rush, broad-leaf water plantain, reed canary grass, and rice cutgrass. FQI ranges from 2.2 to 16.6. Wetland Site 51, which has the highest FQI of the sedge meadows in the project area, also has the highest percent of adventive species (21.1 percent).

3.10.1.2 Wetland Functions

Wetland functions can be loosely categorized as hydrologic, biogeochemical, or biological in nature. Examples of hydrologic functions include surface and groundwater recharge, temporary storage of flood water, and increased watershed storage capability. Biogeochemical functions include retention of particulates and transformation of nutrients. Biological functions include the maintenance of native plant diversity, provision of wildlife habitat, and fisheries support. This section discusses the potential wetland functions provided by wetlands within the project study area. Potential wetland functions, which were based on site observations, position within the watershed and apparent connectivity to other wetlands and streams, are summarized in **Table 3-50.**

Biological Functions. All wetlands have the potential to provide habitat to wildlife. Wetlands along riparian corridors provide nesting or foraging habitat for many species and also serve as

refugia for wildlife migrating through the project area. Other more isolated wetlands are important sources of food, water, and/or vegetative cover necessary for nesting/breeding and foraging habitat. Each floristic assemblage (categorized above) provides different services to area wildlife. For example, the variable vegetative structures of forested wetlands and meadow-type wetlands provide nesting, perching, and foraging structures for various birds suited to those habitats. Wetland sites 52, 78, and 81 exhibit the highest FQI ratings of all wetlands within the study area; these sites, to a reduced extent, preserve the floristic heritage of the area and provide diverse vegetative structure for area wildlife.

Hydrologic Functions. Wetlands located immediately adjacent to waterways can readily receive floodwater and detain and desynchronize the waters from tributaries. By providing extra storage capacity higher in the watershed, wetlands protect areas downstream that might otherwise become inundated during a flood event. These wetlands can also moderate the extremes of seasonal or annual rainfall variation by feeding water back into streams, thereby increasing base flow during times of relative water shortage. Other more isolated wetlands can provide similar services of detention and desynchronization, even though water is fed to the wetlands by overland flow rather than directly from waterways. The water stored in these wetlands can percolate down into the soil, augmenting local water tables and aquifers. Wetland data on hydrologic connectivity and flood storage functions of individual wetlands are based on hydrology observations as part of the wetland delineations completed in the project study area. For example, wetland sites 50 and 52 likely provide many of these functions during flood events on Rock Creek.

Biogeochemical Functions. Because the waters that flow into wetlands from adjacent streams lose flow velocity, they deposit particulates previously held in suspension. The deposition of sediments in these wetlands has many potentially beneficial consequences. By removing some of the sediment load from area streams, downstream regions are spared the consequences of excessive siltation, which can deteriorate navigable channels and downstream reservoirs. Sediment deposition reduces turbidity, thereby aiding the primary productivity of streams and supporting fish populations. Removing sediments also removes agricultural additives associated with eroded soils, such as nitrogen, phosphorous, and pesticides. The nutrients nitrogen and phosphorous can disrupt aquatic systems at high concentrations, but by settling out in wetlands, plants and soil microorganisms have an opportunity to breakdown and utilize them. The surplus of nutrients contributes to the extremely high biological productivity of wetlands. The heavy metals, pesticides, and other chemicals that may be deposited with the soils are removed from surface water, improving surface water quality. The drainage basin for Deer Creek and its tributaries is largely agricultural. Wetland sites adjacent to these water bodies are relatively large and flat. Flood waters would slow and deposit sediment and associated fertilizers and/or pesticides in these areas.

3.10.2 Environmental Consequences

Project planning has included all feasible measures to minimize impacts to wetlands. As shown in **Table 3-50**, 50 wetland areas have been identified in the project area. Build Alternatives 4 and 5 will impact one (1) wetland area. The No-Build Alternative would not affect wetlands.

3.10.3 Acreage Impacts

Build Alternatives 4 and 5 would both impact wetland Site 78 located immediately west of the Rock River in the eastern section of the project where the two (2) alternatives coincide. The site occurs along the margin of an island in the Rock River and along the adjacent side channel. (**Exhibit 3-10, p. 14**) This site is a forested, riparian wetland within the floodplain of the Rock River. The wetland is dominated by American elm, honey locust, black walnut, hackberry, and silver maple in the overstory, with Canada clearweed, reed canary grass, and wood nettle dominating the understory. The wetland extends both north and south of the existing U.S. 30 bridge and includes both sides of the side channel. Proposed construction will impact 0.24 acre of this 1.1 acre wetland.

3.10.4 Indirect Impacts

Indirect impacts to wetlands may occur from changes in the quality of stormwater runoff entering the wetland, hydrologic modifications that affect wetland hydrology, and wetland destruction from induced growth from the proposed project. Wetlands are located adjacent to the potential construction limits of both Build Alternatives 4 and 5. Measures to prevent adverse impacts to these adjacent wetlands from stormwater runoff from the highway will be identified for the Preferred Alternative in the Final Environmental Impact Statement.

Whiteside County regulates impacts to wetlands and floodplains through its zoning regulations. Therefore, wetland destruction from induced growth within Whiteside County as a result of the project is not expected.

3.10.5 Cumulative Impacts

There are no other planned activities in the project area that would result in cumulative adverse impacts to wetlands.

3.10.6 Measures to Minimize Harm and Mitigation

3.10.6.1 Wetland Avoidance and Minimization

Minimization of wetland impacts was an important factor in the development and screening of alternatives. Preliminary alignments were developed to avoid wetland impacts wherever possible. Alignments were developed to follow existing U.S. 30 as much as possible. Build Alternatives 4 and 5 incorporate alignment shifts where practicable to minimize impacts to

wetlands. As a result of these adjustments, wetland impacts have been reduced to impacts to a single wetland area from improvements to the Rock River Bridge for both Build Alternatives 4 and 5.

3.10.6.2 Wetland Compensation

Where there is no practicable alternative to filling wetlands, State and Federal regulations require compensatory mitigation. Mitigation may include constructing new wetlands, restoring former wetlands that have been altered by agricultural or drainage activities, and preservation of high quality wetlands. Compensation for affected wetlands is based on the IDOT's Wetland Action Plan. The IDOT's Wetland Action Plan (1998) provides preliminary compensation ratios based on level of wetland impact and location of wetland compensation with respect to impact locations. Preliminary wetland compensation goals have been developed for the U.S. 30 project following guidelines regarding replacement and sequencing stated in the Illinois Interagency Wetland Policy Act. Generally, the rule establishes replacement requirements that vary depending on whether mitigation occurs onsite, offsite (in-basin), or offsite (out-of-basin). Other factors, such as presence of State or Federally listed species, designation as an Illinois Natural Area, or FQI score of ≥ 20, also determine compensation goals.

3.10.6.3 Commitments

The following are commitments to minimize wetland impacts:

- **One wetland site, Site # 78, will possibly be impacted during construction of this project. A maximum of 0.24 acre of jurisdictional wetlands will be impacted. This will be mitigated by purchasing 0.48 acre of wetland bank credits from the Kilbuck Creek Wetland Bank, which is in-basin, but off-site. This is a mitigation ratio of 2 to 1.**
- **Wetland Site # 70, located west of Agnew Road will not be impacted by project construction.**
- **All wetland boundaries in the project limits shall be shown on the contract plans.**
- **All wetland boundaries which are within the project right-of-way shall be marked in the field with temporary snow fence. The construction limits near Site # 78 shall also be marked with snow fence.**
- **No construction activities shall take place in any wetland, or beyond the construction limits of Site # 78 along the Rock River. This includes driving and parking vehicles, and stockpiling materials.**

3.11 Floodplains

3.11.1 Affected Environment

Floodplains provide flood and storm water attenuation by decreasing water velocities and providing temporary water storage. By temporarily storing water, floodplains help to retain sediments and pollutants and attenuate erosion by reducing flow velocities during flood events.

Because they retain fertile topsoil sediments that otherwise would have flowed downstream, floodplains are often very biologically productive. The high primary productivity of these areas can support abundant wildlife. The extent to which these functions are expressed varies depending on vegetative structure, stream hydrology, and distance from the stream. Floodplains are often fertile and used for agriculture. Consequently, the wooded parts of most floodplains associated with streams within the project study area tend to be narrow and confined to the area immediately adjacent to the stream channel.

Floodplain and floodway are defined in the Illinois Administrative Code (17IAC3706):

- The regulatory *Floodplain* is the land that is subject to a one (1) percent annual chance or greater of flooding in any given year. The regulatory floodplain is also known as the 100-year floodplain.
- The *Floodway* is the portion of the floodplain required to store and discharge flood waters without causing significant damaging or potentially damaging increases in flood heights and velocities.

3.11.1.1 100-Year Floodplains

The 100-year floodplain boundaries for streams in the project study area were obtained from flood insurance maps developed by the FEMA for Whiteside County (http://www.illinoisfloodmaps.org/dfirm.aspx?county=whiteside). Six (6) streams within the project study area have designated 100-year floodplains: Cattail Creek, Rock Creek, the Unnamed Tributary to Rock Creek, French Creek, Elkhorn Creek, and the Rock River (see **Exhibit 3-10**). The streams and associated floodplains lie within the Lower Rock River and the Copperas-Duck Watershed (HUC 8: 07090005 and 07080101, respectively).

3.11.1.2 Natural and Beneficial Floodplain Values

Floodplains provide numerous benefits to both human and natural systems. They reduce the frequency and severity of floods, maintain water quality by filtering out excess sediments and nutrients, and contribute to groundwater recharge by promoting infiltration. Floodplains also support high biological productivity and diversity. To better understand the state of floodplains in the project area and the resource values they serve, their cover types are summarized in **Table 3-51**. Encroachment on floodplains impacts these values and impairs their function.

Table 3-51: Cover Types within the Designated 100-year Floodplains or Streams in the Project Study Area

Stream	Acreage in Project Area	Cover Types in the Floodplain (acres, % of total)
Cattail Creek	2,168.35	Agricultural (2033.75, 93%), Forest (26.92, 1.2%), Forested Wetland (70.18, 3.2%), Surface Water (4.22, 0.2%), Urban and Built-Up Land (7.71, 0.4%), Other Wetland (25.57, 1.2%)

Table 3-51: Cover Types within the Designated 100-year Floodplains or Streams in the Project Study Area		
Stream	**Acreage in Project Area**	**Cover Types in the Floodplain (acres, % of total)**
Tributary to Rock Creek	18.02	Agricultural (7.42, 41.2%), Commercial (.04, 0.2%), Cropland (2.70, 15.0%), Existing ROW (2.09, 11.6%), Residential (5.07, 11.6%), Urban and Build-Up Land (0.15, 0.8%), Water (0.55, 3.1%)
Rock Creek	2,078.37	Agricultural (1308.62, 63%), Forest (395.68, 19.1%), Forested Wetland (268.67, 12.9%), Surface Water (58.97, 2.8%), Urban and Built-Up Land (31.67, 1.5%), Other Wetland (13.88, 0.7%)
French Creek	851.30	Agricultural (691.3, 81.2%), Existing ROW (29.1, 3.4%), Railroad ROW (14.7, 1.7%), Residential (92.3, 10.8%), Forested (23.9, 2.8%)
Elkhorn Creek	1,168.38	Agricultural (865.84, 74.1%), Forest (112.92, 9.7%), Forested Wetland (112.54, 9.6%), Surface Water (25.63, 2.2%), Urban and Built-Up Land (41.77, 3.6%), Other Wetland (9.68, 0.8%)
Rock River	2,819.51	Agricultural (1566.54, 55.5%), Forest (94.14, 3.3%), Forested Wetland (358.80, 12.7%), Surface Water (580.81, 20.6%), Urban and Built-Up Land (98.13, 3.5%), Other Wetland (121.96, 4.3%)
Union Drainage Ditch	3.68	Agricultural (2.10, 57.1%), Existing ROW (1.14, 31.0%), Residential (0.44, 12.0%)

Source: Illinois Department of Natural Resources, 1996

3.11.1.3 Floodways

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so the one-percent-annual-chance flood (the 100-year flood) can be carried without substantial increases in flood heights. Floodway maps are developed through detailed Flood Insurance Studies. Because of the high cost of these studies, some areas with historically low development pressure may not have designated floodways. In Illinois, any portion of a stream or watercourse that lies within the floodway fringe of a stream in which base floodplain elevations have been determined may have a State regulated floodway. The Flood Insurance Rate Map may not depict these State regulated floodways. The IDNR Office of Water Resources regulates these areas.

Though a Flood Insurance Study has been completed for areas of the Rock River within Whiteside County, the only mapped floodways are located near Erie, Lyndon, and Prophetstown. The IDNR Office of Water Resources (Osman, personal communication, October 26, 2010) has confirmed that there are no mapped floodways within the project study area as of October 2010. In areas with a 100-year floodplain where no floodway has been delineated, the Office of Water Resources generally requires a permit for work anywhere in the floodplain.

3.11.2 Environmental Consequences

Executive Order 11988 (www.fema.gov/plan/ehp/ehplaws/eo11988.shtm) and 23 CFR 650 Subpart A direct Federal agencies to take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. The Order also requires agencies to elevate structures above the base flood level whenever possible. The object of the Order is to avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

3.11.2.1 Floodplains Encroachments

Potential floodplain encroachments for Build Alternatives 4 and 5 are shown in **Table 3-52**. **The** potential floodplain encroachments are **a mix of transverse and longitudinal**. Transverse crossings are approximately perpendicular to the floodplain edge, such as a perpendicular bridge crossing of a river or stream. **A longitudinal encroachment is an encroachment on a floodplain that is parallel to the direction of flow (IDOT 2011).** Build Alternative 5 crosses the project area streams lower in the drainage area where floodplains are wider, resulting in a greater impact.

Table 3-52: Summary of Floodplain Encroachments of Build Alternatives 4 and 5

Stream	Encroach-ments (number)	Flood-plain Area Impacted (acres)	Impact Length (feet)	Build Alternative	Floodplain Cover Type(s) Impacted	Exhibit 3-10 Page #
Union Drainage Ditch	1	1.6	292.8	Common to 4 and 5	Agriculture	15
Rock River	1	7.3	1,542.3	Common to 4 and 5	Forest/Agriculture Wetlands	14, 15
Elkhorn Creek	**7**	46.6	7,144.0	Common to 4 and 5	Agriculture/ Industrial/Forest	14
Rock Creek (N)	1	1.9	458.5	Alternate 4	Agriculture/ Forest	7
Rock Creek (S)	1	**11.07**	1,863.6	Alternate 5	Agriculture	10
Tributary Rock Creek	**4**	5.8	525.5	Alternate 4	Agriculture	6
Cattail Creek	**5**	20.6	4,397.8	Common to 4 and 5	Agriculture	1

Potential encroachments on the 100-year floodplains of Union Drainage Ditch, the Rock River, Elkhorn Creek, and Cattail Creek are common to both Build Alternatives. These encroachments are a result of widening the existing bridge approaches to accommodate four (4) traffic lanes.

Build Alternative 4 also crosses the unnamed tributary of Rock Creek north of Morrison, upstream of its confluence with Rock Creek.

The floodplain of Rock Creek is crossed north of Morrison for Build Alternative 4 and south of Morrison for Build Alternative 5. Because Build Alternative 5 crosses these streams lower in the drainage area, its floodplain encroachment is higher.

Total potential floodplain encroachment is approximately **14,358** linear feet for Build Alternative 4 and **15,238** linear feet for Build Alternative 5. These encroachments would result in the placement of approximately **77,365** cubic yards of fill within the floodplain for Build Alternative 4, and **107,685** cubic yards of fill within the floodplain for Build Alternative 5.

3.11.2.2 Natural and Beneficial Floodplain Values

Most of the floodplain area affected under Build Alternative 4 or 5 is in row-crop agricultural use. Although agriculture is a recognized natural floodplain value in Executive Order 11988, the Order acknowledges that agricultural uses may be incompatible with wildlife production and may induce aggravated erosion and sedimentation. Of the remaining natural floodplain values, the loss of cropland may affect only the water resources value in that its loss reduces the amount of land available for flood storage and possibly the natural moderation of floods.

The loss of natural vegetation in riparian forested areas will have a minor impact on water quality and forestry resources. In theory, the loss of naturally vegetated floodplains may aggravate the flood hazard through loss of their ability to slow floodwaters and reduce flood velocities and peaks. Given the small acreage affected compared to the size of the floodplain, loss of cover type is not expected to alter the flood hazard. For similar reasons, the loss of naturally vegetated areas may adversely affect water quality maintenance. The slowing of floodwater (and runoff) by ground cover allows the deposition of sediments, reducing the impact of sediment adsorbed nutrients and pesticides on water quality.

3.11.2.3 Floodways

Neither Build Alternative would impact any mapped floodways. In areas with a 100-year floodplain where no floodway has been delineated, the IDNR Office of Water Resources generally requires a permit for work anywhere in the floodplain. Minimum Federal standards limit increases to flood heights within the floodway to one (1) foot, provided that hazardous velocities are not produced (FEMA 2011). In Illinois, however, under the Rivers, Lakes, and Streams Act (615 ILCS 5/23, 29 & 30 and 615 ILCS 5/18), encroachment in the floodplain is limited to that which will cause only an insignificant increase in flood heights. The State of Illinois has adopted this more stringent standard, which limits the increase in flood height to 0.1 foot, no

more than a ten (10) percent reduction in floodplain volume, and no more than a ten (10) percent increase in average velocity (FEMA 2011).

3.11.3 Measures to Minimize Harm and Mitigation

3.11.3.1 Floodplain Minimization

Minimization of floodplain impacts was considered in the project's alternatives development/screening phase. Floodplain encroachment has been reduced to the minimum consistent with the IDOT Drainage Manual: Chapter 3 – Floodplain Encroachments (2004), and the IDOT Bureau of Design and Environmental Manual: Chapter 26 – Floodplain Findings (**2011**). **The realignment of the Build Alternatives, as described in Section 2.8.2, did result in a decrease in the length of floodplain encroachments. For Build Alternative 4, there was a decrease of 2,014 linear feet in floodplain encroachments and for Build Alternative 5 there was a decrease of 6,673 linear feet.** Additional analyses will be conducted for the Preferred Alternative to determine whether feasible measures exist to reduce floodplain impacts even further.

3.11.3.2 Floodplain Development

As noted, one purpose of Executive Order 11988 is to avoid direct and indirect support of floodplain development. According to the Order, an action supports floodplain development if it encourages, allows, serves, or otherwise facilitates additional floodplain development. The FHWA defines incompatible floodplain development as "any development that is not consistent with a community's floodplain development plan" (FHWA 1987). Incompatible floodplain development in Whiteside County is regulated under Chapter 11: Flooding and Stormwater Management of the Whiteside County Code. These regulations describe design criteria, standards, and methods for minimizing increases in stormwater runoff volumes and rates from development. While these regulations do not prohibit development within the 100-year floodplain, they prevent incompatible development by providing requirements for compensatory storage and other measures to minimize increases in stormwater runoff, and also provide for protection of structures within the 100- year floodplain from flood damage.

It should be noted that after the development of the Build Alternatives 4 and 5, Whiteside County in association with the Illinois State Water Survey, had delineated new 100-year floodplain areas and issued new Floodplain Insurance Rate Maps (FIRM) within the project study area. **These maps became effective in February 2011; therefore, the floodplain impacts associated with Build Alternatives 4 and 5 are based on the new FIRMs.** The most noteworthy change was the addition a 100-year floodplain associated with French Creek just east of the city of Morrison.

3.11.3.3 Floodplain Mitigation

Detailed hydraulic analyses will be conducted for all of the streams crossed by the Preferred Alternative **during the design phase**. These analyses will determine the size of waterway openings needed to minimize flood backwater elevations consistent with IDOT and FHWA policies. All structures will have adequate capacity for the 50-year flood flow without damage to the roadway or structures interrupting public or emergency vehicles. The floodplain crossings will be designed to minimize the potential to interrupt or terminate a transportation facility needed for emergency vehicles or a community's only evacuation route. Build Alternative 4 would require placement of **77,365** cubic yards of fill within the floodplains of project area streams; Build Alternative 5 would require **107,685** cubic yards of fill. Placement of large amounts of fill in the floodplain reduces the capacity of the floodplain for natural flood flow storage. Construction of either Build Alternative will require excavation of compensatory storage areas or other measures to reduce increases in flood elevations to less than 0.1 feet and prevent adverse impacts to upstream and downstream uses. The types, locations, and sizes of compensatory storage areas will be developed for the Preferred Alternative **during design**.

3.12 Upland Plant Communities

The U.S. 30 project study area landscape includes two (2) major landforms: uplands and floodplains. These landforms are the products of past glaciations and subsequent stream erosion. The uplands begin along the bluff line east of Cattail Creek west of the project area. The uplands extend eastward from the bluff line, and this area includes rolling hills of loess and glacial till deposits. The land becomes more level and less rolling at the eastern end of the corridor near Elkhorn Creek. The uplands are dissected by the floodplains of major streams as discussed in the previous section.

3.12.1 Affected Environment

3.12.1.1 Illinois Natural Divisions

Natural Divisions in Illinois (**Exhibit 3-8**) have been mapped by Schwegman et al. (1973). The project study area lies within two (2) Illinois Natural Divisions. The majority of the project study area lies within the Rock River Hill Country Division. The far eastern portion of the project study area, near Rock Falls, is located in the Upper Mississippi/Illinois River Bottomlands Division. These Natural Divisions are discussed in detail below.

Rock River Hill Country. The rolling topography of the north-central and northwestern Illinois region drained by the Rock River is known as the Rock River Hill Country Natural Division. Over 99 percent of the project study area is located within this division. Prairie formerly dominated the uplands of this region, with forested lands abundant along waterways. The majority of this division has been converted to agricultural uses, though limited areas of prairies remain, as do some tracts of forest near waterways.

Upper Mississippi River Bottomlands. The floodplains of the Mississippi River and major tributaries in western and west-central Illinois, north of the confluence with the Missouri River, comprise the Upper Mississippi River Bottomlands Natural Division. Much of the division was originally forested, but has largely been converted to agricultural uses. The far eastern portion of the project study area, near Rock Falls (less than one (1) percent of the project study area), falls within this Natural Division.

3.12.1.2 Cover Types

Cover types were mapped for the areas of potential IDOT corridors using a modification of the U.S. Fish and Wildlife Service Cover Types for the Habitat Evaluation Procedure. Twenty-two (22) cover types (see **Table 3-53**) were mapped during field studies in 2007 and 2009. Cropland, Urban and Built-up Land, Pasture and Hayland, and Forest were the largest cover types observed.

Table 3-53: Ranked Summary of Cover Types in Project Area

Cover Type	Acreage in Project Area	Percentage of Total Project Area
Cropland	28,839.55	82.25%
Urban and Built-up Land	3,247.27	9.26%
Pasture and Hayland	906.57	2.59%
Forest	888.28	2.53%
Non-Native Grassland	163.15	0.47%
Tree Farm	133.34	0.38%
CRP Tree Planting	129.46	0.37%
Wet Meadow	125.77	0.36%
Shrubland	112.25	0.32%
Marsh	111.08	0.32%
Savanna	84.69	0.24%
CRP Grassland	76.01	0.22%
Grassland (Prairie)	66.81	0.19%
Riverine (River)	62.76	0.18%
Forested Wetland	39.35	0.11%
Lacustrine (Lake)	26.30	0.08%
Stream	19.32	0.06%
Sedge Meadow	13.64	0.04%
Forbland	6.60	0.02%
Mining	6.42	0.02%
Shrub-scrub Wetland	2.13	0.01%
Pond	0.57	0.00%
Total	**35,061.29**	**100.00%**

Source: Illinois Natural History Survey (2008, 2009)

Cropland covers about 82 percent of the survey area. Although cropland can provide a valuable food source to area wildlife, it contains a limited natural plant community and lacks many of the features necessary for wildlife habitat. Within the Cropland cover type, natural plant communities of variable quality may be found in fencerows or fallow fields. Cropland is not discussed further in this section.

Urban and Built-up Land covers about nine (9) percent of the survey area. Like Cropland, it provides limited wildlife habitat and limited natural plant communities. Remnant natural plant communities may exist within landscaped areas or abandoned areas. Urban and Built-up Land are not discussed further in this section.

Forest. Less than three (3) percent of the upland areas are covered by upland forest. This coverage represents a loss of more than 75 percent of presettlement (early 1800's) forested cover (INHS 2008). The loss of forest cover is a direct loss of habitat for a wide range of plant and animal species. Loss of forest habitat also affects migrant bird species that rely on the cover and food sources that forests provide. Habitat generalists, less sensitive to edge effects or that often thrive in edge habitats, have prospered, but the overall result of forest loss has been a decrease in plant and animal diversity and a local loss of natural history and natural resources. Some species have declined to a level that requires State or Federal protection to prevent further decline or extinction. Further loss of forest has been cited in the *Illinois Comprehensive Wildlife Conservation Plan and Strategy* (IDNR 2005) as a major challenge to the conservation of natural resources in the Rock River Hill Country Natural Division. The report also cites clearing of riparian forests as a major challenge. Forests adjacent to streams moderate water temperatures, slow soil erosion and stream flow, and add organic material to aquatic food chains. Loss of forests located in the upland reaches of a watershed can also impact stream quality in similar ways, particularly with respect to stream sediment load and flood event moderation.

Quantitative assessments were conducted on 12 upland forest stands within the project area. **Table 3-54** summarizes characteristics of these forest stands. Forest communities within the project area are limited to dry-mesic upland and dry-mesic upland sand forest. The stands surveyed range from 10 to 50 acres and all are disturbed or degraded to some extent. The dry-mesic upland forests can be classified as oak–hickory forests. Most examples of this forest type appear to have been grazed in the past by domestic livestock and are currently browsed by abundant deer herds. Some forest stands have also been selectively logged in the recent past. Dominant canopy trees within this forest type were bitternut hickory (*Carya cordiformis*), shagbark hickory (*Carya ovata*), hackberry (*Celtis occidentalis*), black walnut (*Juglans nigra*), bur oak (*Quercus macrocarpa*), red oak (*Quercus rubra*), black oak (*Quercus velutina)*, and slippery elm (*Ulmus rubra).*

Table 3-54: Characteristics of Selected Forest Stands in the Project Study Area					
Forest Stand No.	**Forest Type**	**Total Stand Acreage**	**# Tree Species**	**Density (trees/acre)**	**Basal Area (ft^2/acre)**
2	Dry-mesic Upland Sand	10	11	156	128
3	Dry-mesic Upland Sand	20	13	159	113
4	Dry-mesic Upland	10	10	152	121
Forest Stand No.	**Forest Type**	**Total Stand Acreage**	**# Tree Species**	**Density (trees/acre)**	**Basal Area (ft^2/acre)**
5	Dry-mesic Upland Sand	50	14	174	122
6	Dry-mesic Upland Sand	20	15	192	118
7	Dry-mesic Upland	13	12	146	98
8	Dry-mesic Upland	12	16	123	63
9	Dry-mesic Upland	26	13	94	120
10	Dry-mesic Upland	14	10	120	106
11	Dry-mesic Upland	22	15	124	106
12	Dry-mesic Upland	41	17	102	91
13	Dry-mesic Upland	11	14	75	104

Source: Illinois Natural History Survey (2008, 2009)

Dry-mesic upland sand forest is restricted to the bluff east of Cattail Creek and small areas adjacent to the large sand dune along the southern edge of U.S. 30 near Fulton. Large black oaks are found in this forest type. The areas assessed appeared to have been grazed in the distant past, and nearby areas are still fenced and pastured. Several introduced woody species are common, with white mulberry found extensively throughout the bluff. The shrub layer is dominated in some areas by native and non-native thorny species. The herbaceous layer has some native flora, but the exotic garlic mustard dominated the forest floor in many areas.

Forests provide habitat to neotropical migrants by providing nesting and foraging habitat, as well as refuge from predators or brood parasites. The specific assemblage of species that a given stand supports depends on many factors, including the total size of the stand, the structure and specific diversity of the stand, and the ratio of "edge" habitat to protected interior. Larger stands typically have a low ratio of "edge" habitat to dense interior; this reduces the susceptibility of neotropical migrants to brood parasitism (Faaborg et al. 1993). Variety of vegetative structure supports a higher diversity of migrant species by providing abundant structures for nesting and by supporting diverse food sources. Dense vegetative cover, regardless of specific diversity, provides refuge from predation. All of the forest stands surveyed in the project study area are moderately to severely degraded. None is particularly large (less than 50 acres). However, most are concentrated in specific areas giving them a functionally larger size than their acreages would suggest. Forest sites 2 (**Exhibit 3-10, p. 2**), 5, and 6 (**Exhibit 3-10, p. 3**) occur along the bluff line of Cattail Creek; Forest sites 3, 12, and 13 are associated with Spring Brook Creek (**Exhibit 3-10, p. 2**); and Forest sites 7 (**Exhibit 3-10, p. 5**), 8, 9, and 11 (**Exhibit 3-10, p. 7**) occur along Rock Creek and its tributaries. Forest sites 4 (**Exhibit 3-10, p. 1**) and 10 (**Exhibit 3-10, p. 7**) are isolated in the agricultural landscape.

Additional wooded areas that may be impacted by the project were characterized in July 2010. These areas are dominated by trees, but are not large enough to contain functional forest interior. These areas include wooded buffers along streams, trees on steep slopes, and isolated or disjunct woodlots between agricultural fields. The largest of these areas (Forested Area 14, **Exhibit 3-10, p. 9**) is an eight (8) acre woodlot located south of Morrison and east of Henry Road. The canopy is dominated by a dense growth of basswood, hackberry, and silver maple. Bush honeysuckle dominates the understory.

A wooded buffer is also present along both sides of Elkhorn Creek and the Rock River (**Exhibit 10, p. 14**). The floodplain forest at the Elkhorn Creek crossing is dominated by green ash, hackberry, locust, and cottonwood immediately adjacent to the roadway, with a large number of silver maples both upstream and downstream of the crossing. This forested area is fragmented and disturbed, with relatively few mature trees. The relatively young overstory canopy is dense and restricts the development of the understory. The forested riparian area of the Rock River is dominated by American elm, honey locust, black walnut, hackberry, and silver maple in the overstory, with Canada clearweed, reed canary grass, and wood nettle dominating the understory. While both the Rock River and Elkhorn Creek crossings are part of much larger contiguous blocks, they are highly disturbed within the project study area and do not contain true forest interior. However, they are important for foraging flyways and are contiguous with areas outside of the corridor that contain a forest interior.

Grassland (Prairie). Prairies are one of Illinois' rarest cover types. The prairies in the project study area are classified as dry sand hill prairie and black soil prairie based on vegetation, substrate, soil, and position in the landscape. Two (2) dry sand hill prairies occur along the bluff east of Cattail Creek (**Exhibit 3-10, p. 2** & **3**). These prairie areas occur as openings within the dry-mesic sand forest community (Forest Stand 5). This community is very rare in the U.S. 30 project area and in this area of Illinois. Woody vegetation is encroaching along the edges, but the grasslands are still open and dominated by sand prairie grasses and forbs. The dry sand hill prairie east of Cattail Creek and southwest of existing U.S. 30 (**Exhibit 3-10, p. 2** & **3**) is the most diverse and has several populations of endangered and threatened species**.** The other dry sand prairie is located further south along the bluff and has fewer species. Common species that occur in this community type include western ragweed (*Ambrosia psilostachya*), cheat grass brome (*Bromus tectorum),* Schweinitz's flatsedge (*Cyperus schweinitzii*), bush clover (*Lespedeza capitata*), horsebalm (*Collinsonia canadensis),* common sorrel (*Rumex acetosella*), and little bluestem (*Schizachyrium scoparium).* State Endangered and Threatened Species found in this plant community include kitten tails (*Besseya bullii*), prairie dandelion (*Microseris cuspidata*), and broomrape (*Orobanche ludoviciana*).

Three (3) black-soil prairie remnants occur in the U.S. 30 project study area, including two (2) along an abandoned rail line (**Exhibit 3-10, p. 13**). These two (2) areas are adjacent to I-88, and are owned by the Natural Land Institute and managed by the Whiteside County Soil and Water Conservation Service. The Lyndon-Agnew Prairie Nature Preserve occurs partially within the U.S. 30 project study area along this same abandoned rail line. In general, with the exception of

these sites, cool-season grasses with a few disturbance-tolerant prairie species dominate the majority of the railroad alignments. The other black-soil prairie community is near Union Grove (**Exhibit 3-10, p. 4**). This site is identified in the "Roadside Prairie Inventory" as Site 17 (Handel 2004). The following species occur in the black-soil prairie community: big bluestem (*Andropogon* gerardii), heath aster (*Aster ericoides*), Canada wild rye (*Elymus* canadensis), sawtooth sunflower (*Helianthus grosseserratus*), bee balm (*Monarda fistulosa*), reed canary grass (*Phalaris arundinacea*), Virginia mountain mint (*Pycnanthemum virginianum*), Canada goldenrod (*Solidago canadensis*), prairie cord grass (*Spartina pectinata*), and the non-native smooth brome (*Bromus inermis*). None of the prairie remnants occur within or near Build Alternatives 4 or 5.

3.12.2 Environmental Consequences

3.12.2.1 Construction Impacts

Build Alternative 4 would require conversion of **approximately 676** acres of land to highway use, while Build Alternative 5 would require conversion of **678** acres. Most of this land is currently in agricultural production. Impacts to agriculture are discussed in Section 3.3. **Table 3-55** lists the acreage of each cover type converted for each Build Alternative.

Table 3-55: Acres of Cover Types Converted to Highway Use

Cover Type	Build Alternative 4	Build Alternative 5
Cropland	**600**	**622**
Urban/Built-up Land	**58.6**	**42.0**
Upland Forest	9.71	6.42
Wetlands	0.24	0.24
Urban Grassland	7.40	7.40
TOTAL	**676**	**678**

Table 3-56 lists impacts to forested areas for the Build Alternatives. Build Alternative 4 would impact 9.7 acres of forest, resulting in the removal of approximately 1,127 trees. Approximately seven (7) of those acres occur at Forest Areas 9 and 11 (which are located on the north side of Morrison, see **Exhibit 3-10, p. 7**). Forest Area 9 is an approximately 40 acre block of woods which would be nearly bisected by the alignment. The majority of Forest Area 11 is south of the alignment; however, there are several wooded drainage features extending north from the main block of the forest which would be impacted by the alignment. Approximately five (5) acres of Forest Area 9 and three (3) acres of Forest Area 11 would be cleared removing approximately 767 trees from the two (2) parcels combined. Forest Area 9 would be the more negatively impacted of the two (2) as the parcel is dominated by older, large diameter trees with an open understory and a true forest interior. The fragmentation would likely destroy the forest interior habitat and create two (2) separate parcels dominated by edge habitat. The portions of Forest Area 11 impacted by the corridor are currently heavily influenced by edge habitat. The remaining 2.4 acres of impact occurs in isolated wooded edges in multiple locations, including along Elkhorn Creek and the Rock River.

Build Alternative 5 would impact 6.4 acres of wooded areas, including 3.7 acres from Forested Area 14 (**Exhibit 3-10, p. 9**) and one (1) acre from the riparian area along Rock Creek (**Exhibit 3-10, p. 10**). The remaining 1.7 acres of impact occurs in isolated wooded edges in multiple locations. Build Alternative 5 would result in the removal of approximately 960 trees.

Table 3-56: Forest Impacts

Alternative	Forest Area Impacted	Acre Impact	Dominant Tree Species	Estimated Number of Trees Removed
Alternative 4	9	4.6	Sugar Maple, American Basswood, Red Oak	432
	11	2.7	Black Walnut, White Oak, Hackberry	335
	Elkhorn Creek/Rock River	1.0	Green Ash, Hackberry, Locust, Cottonwood	150
	Other	1.4	Cottonwood, Sycamore, Silver Maple	210
	TOTAL	**9.7**		**1,127**
Alternative 5	14	3.7	Basswood, Hackberry, Silver Maple	555
	Elkhorn Creek/Rock River	1.0	Green Ash, Hackberry, Locust, Cottonwood	150
	Other	1.7	Cottonwood, Sycamore, Silver Maple	255
	TOTAL	**6.4**		**960**

3.12.2.2 Maintenance Impacts

Many invasive species are spread preferentially along highway right-of-way through mowing and transport by vehicles. Control of weeds along the right-of-way typically requires application of herbicides. Either Build Alternative 4 or Alternative 5 would increase the right-of-way area and the total volume of herbicide applied to highways in Whiteside County. Both Build Alternatives are similar in length and would therefore have similar exposure to invasive plant species.

3.12.3 Indirect Impacts

As discussed earlier and as shown on the environmental exhibits, the project study area is predominantly row-cropped agricultural land. Areas of natural vegetation are relatively small and isolated. The cities of Fulton, Morrison, Sterling, and Rock Falls have identified enterprise zones as areas of targeted industrial growth. Development related to U.S. 30 improvements is planned to occur within those areas. The project is not expected to encourage unplanned or incompatible growth and indirect impacts to natural communities are unlikely.

3.12.4 Cumulative Impacts

Agriculture is the primary land use in the project area, and conversion of natural land cover to crop land is the primary cause of loss of forest and prairie communities. The project will result in conversion of minimal acreage of forest cover to highway use.

3.12.5 Measures to Minimize Harm and Mitigation

Mitigation for impacts to upland communities will include tree replacement and prairie seeding. Trees will be replaced in accordance with IDOT tree replacement policy (D&E-18). The locations and specifications for tree and prairie planting will be developed during final design.

3.13 Wildlife Resources

Based on field observations and review of historical records, potential wildlife within the project study area includes 46 mammal species, 46 species of reptiles and amphibians, and 224 species of birds (Illinois Natural History Survey 2008, 2009).

As noted in the preceding section, most of the project study area consists of agricultural lands, including row cropped land, pasture, hayfields, fencerows, orchards, tree farms, and farm ponds. Fields planted in row crops (which cover more than 82 percent of the project area) are of limited value to wildlife, but the remaining agricultural land uses provide at least some habitat. About nine (9) percent of the land cover is urban/built-up land, which also constitutes poor wildlife habitat. The natural plant communities occurring within the project study area can be defined in two (2) generalized groups: forested lands, which include both upland and wetland areas; and, grasslands, which include prairies, wet meadows, pastures, and non-native grasslands. The entire study area is highly modified from human activities which creates fragmented and disturbed habitats. The fragmentation and degraded habitats serve to favor “generalists” which can quickly adapt to regular disturbance over “specialists.”

Avian species have been especially negatively impacted by the loss of forests. Area-sensitive forested species often require large tracts of forest to nest and produce successful broods. Wood thrushes (*Hylocichla mustelina*), for example, have been found to have a nesting success of 72 percent in fragmented forests greater than 250 acres while only 43 percent in fragmented forests less than 200 acres (Hoover et al. 1995). Nesting success is also substantially influenced by the shape of the fragmented forest. The core area of a forest, or the portion of a forest at least 300 feet from the outside edge of the forest, has been shown to provide a better predictor of nesting success than total area alone (Porneluzi et al. 1992). Therefore, compact forested areas which have a higher percentage of core to edge area favor successful breeding of area-sensitive species.

Because of the importance of the size and shape of forested areas on habitat quality, forested areas within Build Alternatives 4 and 5 were further evaluated to determine the relative extent of core habitat versus edge habitat.

The grassland habitat within Build Alternatives 4 and 5 was also evaluated in greater detail to identify land that is not regularly disturbed by mowing or grazing which could potentially support breeding by a grassland species. Grassland avian species exhibit sensitivity to the size of the available habitat, but they also require a period free of disturbance for successful breeding. Pastures in the study area are generally heavily grazed and do not provide high quality habitat. Fallow land and hay fields may provide suitable habitat, but are often mown in the middle of the nesting season which prevents successful breeding. There are no grassland communities within Build Alternative 4 or 5 that are dominated by prairie species.

3.13.1 Affected Environment

3.13.1.1 Wildlife Habitat

Two (2) primary wildlife habitats coincide with the wooded and non-wooded natural vegetation communities. Transitional habitat also exists between these two (2) habitat types. Forest dwelling species may occasionally occur in open areas around forest stands, and species more common to non-wooded habitats may occasionally be found in wooded areas. Edges between major habitats are preferred by many generalist wildlife species, not only for the diversity of food materials available, but also for the usually dense cover provided through the characteristic overlap of vegetation communities. Wildlife species that occur in the project study area are discussed in the following paragraphs.

Forested Habitat. Mammals restricted to forested habitats include the hoary bat, eastern chipmunk, southern flying squirrel, woodland vole, and gray fox. The Virginia opossum, eastern red bat, eastern fox and eastern gray squirrels, white-footed mouse, bobcat, raccoon, and white-tailed deer are associated primarily with forests, but also use other habitats. Little brown bats, big brown bats, northern bats, eastern pipistrelles, and eastern red bats forage in or along the edges of forested areas, but roost in buildings or other artificial structures as well as in trees (Barbour and Davis 1969). Woodchucks and eastern cottontails occupy forest edges rather than forest interiors. Many mammals occur in both upland and bottomland forests, but woodchucks and chipmunks need well-drained soil that is not subject to flooding for their hibernation burrows. Optimal forests for eastern gray squirrels and southern flying squirrels include many mast producing trees (e.g. oaks, hickories).

Amphibian or reptile species that occur in forest habitats include the American toad, gray treefrog, green frog, common gartersnake, and eastern racer (Pope 1964). None of the reptile or amphibian species currently known from Whiteside County is restricted to forested habitat.

Many of the birds breeding in Illinois nest in one (1) or several related habitats. Some species have habitat requirements that are very narrow; others' requirements are broader. Foraging habitat is typically broader still. Habitat uses during migration also range from very specific to nearly universal utilization. For many species, forests provide cover, nesting habitat, and/or food sources at various times of the year or stages of the life cycle. The species or groups of species

most impacted by the availability of forested habitat include raptors, nearly all owl species, all woodpeckers and flickers, and most of the Neotropical migrants.

Grassland Habitat. Mammals strongly associated with grassland habitats are not often restricted to native prairies: many species often occupy non-native grassland and forbland as well. The species restricted to grassland habitats include the least shrew, thirteen-lined ground squirrel, western harvest mouse, deer mouse, prairie vole, least weasel, and American badger. Additionally, the masked shrew, northern short-tailed shrew, eastern cottontail, woodchuck, meadow vole, southern bog lemming, meadow jumping mouse, and red fox are strongly associated with grassland habitats.

Like grassland mammals, grassland reptile species can also occupy hayfields, pastures, and road and railroad right-of-ways, in addition to native prairie. The six-lined racerunner, western foxsnake, gophersnake, and plains gartersnake are all restricted to grassland habitats. Other reptile or amphibian species, such as the tiger salamander, western chorus frog, eastern racer, and DeKay's brownsnake, may be found in these habitats, but are not restricted to them.

Birds most closely associated with grasslands include game species such as the gray partridge, ring-necked pheasant, and northern bobwhite. A number of hawk species are also known from grasslands (Red-tailed hawks, rough-legged hawks, Swainson's hawks, and the American kestrel). A number of neotropical and North American migrants are also known from grasslands. These species include purple martins, some swallow species, nearly all of the emberizid species (sparrows), and some icterid species (meadowlarks).

3.13.1.2 Important Wildlife Species

Mammals. Mammals of recreational and commercial interest are fur-bearing and game mammals (as defined in §520 Illinois Complied Statutes (ILCS) 5/1.2g and 5/1.2h, respectively, of the Illinois Wildlife Code). Many of Illinois' game and fur-bearing mammals have been documented in the U.S. 30 project study area. The mammal of the greatest economic and recreational importance is the white-tailed deer. Preliminary data for the 2006 firearm seasons indicated a harvest of 115,192 deer in Illinois, 958 of which were killed in Whiteside County (1.39 deer/square mile) (Zylka 2008). The county's harvest ranked 54th among the 99 Illinois counties in which deer were hunted (Zylka 2008).

White-tailed deer (*Odocoileus virginianus)* also are of economic importance because of injuries and property damage resulting from deer/vehicle collisions. In Illinois, there were 19,731 deer/vehicle collisions during 2000; 25,660 during 2003; and 25,491 during 2006. During 2006, however, 6.2 percent of all vehicle crashes and 0.09 percent of fatal crashes in the State involved collisions with deer. Most of the deer/vehicle collisions during 2006 (78.2 percent) happened on rural roads; 45.0 percent of those occurred on State roads and 46.7 percent on county and local roads (www.dot.state.il.us/travelstats/final2006crashfacts.pdf).

Birds

Neotropical Migrants. Neotropical migrants are birds that winter in the American tropics and migrate to the United States and Canada to breed. Groups such as flycatchers, vireos, swallows, thrushes, and warblers are Neotropical migrants. A total of 50 species of Neotropical migrants were observed within the project study area. The breeding season survey detected 25 species of these migrants that nest within the project study area. The most abundant Neotropical migrant species were the chimney swift (25 individuals) and the house wren (22 individuals). The most widely distributed species within the project study area were the house wren (6 point census sites), eastern wood-pewee (6 point census sites), and the indigo bunting (6 point census sites). The house wren nests in cavities and will use nest boxes. It occurs in woodlands, shrublands, farmlands, and suburban areas. The eastern woodpewee occurs within areas of open forests or woodlands, wooded edges, and parks. The indigo bunting occurs within wooded edges, shrublands, and weedy fields.

Species of Neotropical migrants occupy many different kinds of habitat from woody streamside thickets, forest edges, open woodlands, shrubby areas, parks, old brushy fields, early successional fields, hedgerows to grasslands and forests. The more sensitive species are area-sensitive and require large contiguous acreages of grassland or forest habitat. These area-sensitive species rarely nest in small habitat blocks, avoid habitat edges, or do not nest successfully near edges. These species generally do poorly in areas where the habitat is broken into small isolated blocks of varying sizes by roads, pipelines, power lines, and residential areas. This process of breaking large contiguous habitat into smaller areas is called habitat fragmentation. Herkert et al. (1993) have provided a list of those forest and grassland species of Illinois that are area-sensitive. They have divided them into those species that are “highly sensitive” to fragmentation and those that are “moderately sensitive”. Several of these area-sensitive species were observed within the project study area. “Highly sensitive” forest species included the yellow-throated vireo and American redstart. “Moderately sensitive” forest species included the red-eyed vireo, blue-gray gnatcatcher, and wood thrush.

Amphibians and Reptiles. The most abundant amphibian and reptile species within the project study area were frogs and turtles: the green frog, American bullfrog, northern leopard frog, and snapping and painted turtles. The majority of species encountered during field surveys are considered common.

Important use areas for amphibians and reptiles are defined as specific areas (pond, marsh, or similar feature) having a high species diversity relative to other areas in the region. Areas with five (5) or more amphibian and reptile species were designated as important use areas. During the 2007 and 2008 surveys of the project study area, one (1) location was identified as an important use area for reptiles and amphibians.

Important Use Area 1 occurs along an Unnamed Tributary of the Rock River (**Exhibit 3-10, p. 12**) that crosses U.S. 30. The riparian area is covered in reed canary grass south of the road, and forested north of the road. Three (3) species of frogs (northern cricket frog, northern leopard

frog, and unidentified species) and three (3) species of snakes (western foxsnake, plains gartersnake, and common gartersnake; all roadkilled) were observed at this site.

3.13.2 Environmental Consequences

3.13.2.1 Wildlife Habitat Loss

The No-Build Alternative will not cause the loss of wildlife habitat. The Build Alternatives would cause the conversion of **a minimum of 676** acres of cover types to highway use (**Table 3-55**). As discussed in the prior section, approximately **90** percent of this conversion would be agricultural land, mainly row-cropped land. Loss of wildlife habitat can be measured through estimates of cover type losses that support wildlife. Construction of either Build Alternative will result in the minimal conversion of some cover types that support various species of wildlife. These habitats include upland forest, nonnative grassland, and wetland. Build Alternatives 4 and 5 impacted a total of 9.7 acres and 6.4 acres of forested area, respectively. Most of the areas impacted are classified as edge habitat, rather than forest interior, or core habitat, which provides the highest quality habitat for forest interior species. Based on field observation, Build Alternative 4 would impact 8.54 acres of forested area containing core habitat, compared to 1.03 acres impacted by Build Alternative 5. **Build Alternative 4 avoids impacting reptile and amphibian important use areas while Build Alternative 5 will impact reptile and amphibian Important Use Area 1 located along an unnamed tributary of the Rock River at the existing U.S. 30 crossing.**

Potential impacts to the wildlife species that occupy these habitats are discussed in the following paragraphs.

3.13.2.2 Wildlife Impacts

Many of the wildlife species identified in the project area are habitat generalists. No adverse impacts are expected to modify their continued abundance as a result of the project. Neotropical migrants may be impacted by the loss of forested habitat from either Build Alternative. In general, right-of-way conversions along the edge of a forested block are less likely to impact area sensitive migrant species than cutting through the center of the forested area.

Highway construction may affect wildlife not only through the direct loss of habitat, but also by disrupting animal movement. Fencing along a highway can limit wildlife movement and lead to higher mortality in unfenced areas; however, fencing is not proposed for the U.S. 30 right-of-way. The U.S. 30 project area is rural and comprised mainly of row cropped agriculture, which provides little wildlife habitat. Hedgerows and narrow wooded and/or non-wooded waterways spread throughout the agricultural landscape within the study area act as movement corridors for wildlife, but the primary wildlife habitat crossed by the alternatives occurs along Elkhorn Creek, Spring Brook Creek, Rock Creek, French Creek, and the Rock River. These larger perennial waterways

with associated floodplains provide limited, but relatively contiguous forested habitat. These serve as both dispersal corridors throughout the county for more mobile species and permanent habitat for resident animals. The Rock River's suitability as a dispersal corridor for amphibians and reptiles may be limited, however because Phillips (1998) stated that its riparian zone and backwater sloughs have suffered destruction and or degradation

Build Alternatives 4 and 5 are the same at the Rock River, Elkhorn Creek, and Spring Brook Creek crossing and would generally remain unchanged with respect to the configuration within the landscape present today. Build Alternatives 4 and 5 cross Rock Creek at different locations. The crossings at Rock Creek would result in new perpendicular intrusions of the woodland habitat surrounding the stream. All of these waterway crossings are of a size for which a bridge structure is required, and box culverts would not be considered. Bridge structures are wider and more open than box culverts, and allow wildlife to pass underneath the roadways relatively unencumbered. As a result, the overall connectivity and distribution of animals through the woodland habitat along the streams would remain consistent with what is present currently.

3.13.2.3 Construction Mortality

Construction of a roadway, from clearing to paving, can result in the death of slow-moving and nesting animals in the roadway's path. The most pronounced and immediate effects may be on burrowing rodents and reptiles (or other species) with small territories. Individuals of those species either would be killed or permanently displaced by excavation, filling, and other ground disturbance. More mobile wildlife species in the project study area would move from the construction area into surrounding habitats during construction. In addition, some degree of construction-related wildlife impact may result from the disruption of wildlife travel patterns arising from construction noise and activity. Road construction in road segments where wildlife frequently crosses the highway can impair efficient crossing. As a result of noise and construction-related barriers, wildlife may spend more time on the highway searching for a safe place to cross. Increased wildlife road crossing time is correlated with a higher probability of animal/vehicle collisions. Aside from mortality issues, another potential impact would be temporarily displacing wildlife species by habitat alteration or noise disturbance (including nesting birds) from construction equipment.

3.13.2.4 Operational Mortality

Recent studies by the USEPA and the Highway Safety Information System (HSIS) report that the overall rate of vehicle/animal collisions has steadily increased over a seven-year period. The HSIS study, which included data from Illinois and four (4) other states, also found the rate of animal crashes, expressed as number of accidents per million vehicle kilometers, was greatest on two-lane rural roads, followed by multilane rural and urban road types. The study reported collision rates for rural roads ranged from 0.07 to 1.16 crashes per kilometer per year (0.04 to

0.72 per mile) (Hughes and Saremi 1995). Deer/vehicle collisions in Illinois rose 23 percent between 2000 and 2006 (www.dot.state.il.us/travelstats/final2006crashfacts.pdf). This is due in part to population growth, increased traffic, and the ever-growing white-tailed deer population. Road-killed opossums, raccoons, and striped skunks are also commonly observed. Reptiles and amphibians are also subject to road-kill: all three (3) snakes identified in *Important Use Area 1* were road-kills.

The IDOT Division of Traffic Safety provided data on animal/vehicle collisions on U.S. 30 and IL 78 in Whiteside County for the years 2002 through 2006. The total number of such collisions on U.S. 30 in Whiteside County was 109, of which 102 took place within the project study area. At least one (1) animal/vehicle collision occurred along each mile of U.S. 30 during the five-year period.

There were eight (8) animal/vehicle collisions each in Miles 2 and 5. Marsh, forested wetland, and sand prairie are on the south side of U.S. 30 along Mile 2 (Elston Road – Long's Garden Road) and there are mostly cornfields to the north. Habitat along Mile 5 (0.5 miles west of BNSF RR – 0.5 miles west of Millard Road) includes crop fields and forest associated with a line of high sand dunes (bluffs). Altogether, there were 21 animal/vehicle collisions on U.S. 30 in the 3.5 miles east of Elston Road. Five (5) animal/vehicle crashes occurred in the 0.5 mile beginning at Sawyer Road on the east edge of Morrison (Mile 13.5). Businesses and crop fields border this stretch of U.S. 30. Five (5) animal/vehicle crashes took place in Mile 14 (Bishop Road- Lyndon Road), which is bordered mostly by crop fields. There were 11 animal/vehicle collisions in Mile 19 (Blue Goose Road – Matznick Road). Habitat along this segment of U.S. 30 includes a wooded riparian corridor (Deer Creek), cornfields, residences, and woodland. Collisions in Mile 24 were concentrated near the intersection with Como Road. A quarry, crop fields, and industrial property are located at this intersection. There were relatively few deer/vehicle collisions (9) over the five-year period from Mile 6 (0.5 miles west of Millard Road) to the western edge of Morrison.

Traffic volumes are predicted to increase throughout the corridor. This increase may lead to increased vehicle/wildlife conflicts and wildlife mortality. Under the Build Alternatives, U.S. 30 would be widened from the existing two (2) lanes to four (4) lanes with a grassed median, except in urban areas. Wildlife would be expected to take longer to cross the wider road, which may result in a higher probability of animal/vehicle collisions. The wider facility may also give drivers more room to maneuver safely around wildlife crossing the highway.

3.13.3 Indirect Impacts

As discussed earlier and as shown on the environmental exhibits, the project study area is predominantly row-cropped agricultural land. Areas of natural vegetation are relatively small and isolated. The cities of Fulton, Morrison, Sterling, and Rock Falls have identified enterprise zones as areas of targeted industrial growth. Development related to U.S. 30 improvements is planned to occur within those areas. The project is not expected to encourage unplanned or incompatible growth and indirect impacts to wildlife are unlikely.

3.13.4 Cumulative Impacts

The focus of the discussion in this section is the project's potential to impact biodiversity. Field studies conducted for this project established that the existing biodiversity in the project area is low. Most of the species identified are habitat generalists that can successfully utilize fragmented and degraded habitat. There are no known planned developments or activities in the project study area that have the potential to adversely impact existing biodiversity, either individually or cumulatively.

3.13.5 Measures to Minimize Harm and Mitigation

Build Alternatives 4 and 5 have been developed to maximize use of existing U.S. 30 while meeting the Purpose and Need for the project. Remaining on existing alignment minimizes the potential for impacting forest blocks, prairie restoration areas, and other higher quality wildlife habitat in the study area. In addition, mitigation proposed for the project will include planting tree blocks to replace trees removed for project construction and establishing prairie areas within IDOT right-of-way. Potential tree replacement areas and prairie areas will be identified for the Preferred Alternative. In addition, bridges and culverts will be designed to provide for safe wildlife passage beneath the roadway.

3.14 Threatened and Endangered Species

Under Section 7 of the Federal Endangered Species Act, the FHWA is required to consult with the U.S. Fish and Wildlife Service (USFWS), to insure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. Under the Illinois Endangered Species Act and Illinois Natural Areas Preservation Act, the IDOT is required to consult with the IDNR about proposed projects that they authorize or fund.

3.14.1 Affected Environment

3.14.1.1 Federally Listed Species

Federally listed species of concern for Whiteside County were identified based on the USFWS county distribution list for Whiteside County (www.fws.gov/midwest/endangered/lists/illinois-cty.html). **Four (4)** species are listed: Eastern prairie fringed orchid, Higgins eye pearly mussel, **Sheepnose mussel**, and the Indiana bat **and one (1) species is proposed for listing, the Northern long eared bat.**

The Indiana bat (*Myotis sodalis*) is listed as a Federally and State Endangered Species. Indiana bat winter habitat consists of caves and mines where individuals hibernate (October through March) in characteristic dense clusters. There are no caves or mines within the project area. The nearest sizeable hibernaculum for Indiana bats is in LaSalle County, about 45 miles

southeast of the project study area. This hibernaculum is within an abandoned limestone mine and is the largest known in Illinois.

Summer habitat (April through September) includes a variety of wooded settings (uplands, wetlands, and riparian areas). In summer, most reproductive females occupy roost sites under the exfoliating bark of dead trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are typically within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Tree species known to have been used by Indiana bat maternity colonies in Illinois are slippery elm, northern red oak, shagbark hickory, bitternut hickory, white oak, American elm, sycamore, cottonwood, and green ash. Bats feed exclusively on flying insects. Indiana bats typically forage in semi-open to closed (open understory) forested habitats, forest edges, and riparian areas (USFWS 2007).

There are no records of the Indiana bat from Whiteside County (USFWS 2007). Mist netting surveys conducted in 1988 at a site within the project study area caught bats, but none were Indiana bats. The project study area contains approximately 200 acres of forested habitat (forested wetlands and upland forests). The riparian corridor and island on the west side of the Rock River contains potentially suitable habitat for the Indiana bat. Mist-netting was conducted at one (1) site within the project study area during 2007 and 2008. Thirty (30) individuals representing five (5) bat species were captured. Two (2) specimens captured at this site during 2007 exhibited some, but not all, of the diagnostic features of the Indiana bat. The site was mist netted the following year (2008), but neither these bats nor any Indiana bats were captured.

On October 2, 2013 the Northern long eared bat was proposed for listing as Federally Endangered. The mist net survey that had previously been conducted for this project in July/August of 2007 had captured one adult female, post-lactating Northern long eared bat. Therefore, In order to protect the Northern long eared bat, no tree removal shall occur between April 1 and September 30 of any given year (see Appendix D).

The Higgins eye (*Lampsilis higginsii*) pearly mussel (Federally Endangered) is primarily a large river species that prefers mud-gravel substrates in fairly deep water. Although it was collected from the Rock River as dead and relict species in 1925 and 1988, respectively, it is currently restricted to the Mississippi River in Illinois (Herkert 1992) and the Rock River below the Steel Dam at Rock Island. There is no habitat for this species within the project study area streams. The project will not affect the Higgins eye pearly mussel.

The sheepnose (*Plethobasus cyphyus*) mussel is listed as a Federally Endangered species. The species occurs in large rivers and streams where it is usually found in shallow areas with moderate to swift currents flowing over coarse sand and gravel. The species is known to occur in Pool 14 of the Mississippi River. The species is considered to be extirpated from the Rock River. A mussel survey at the U.S. 30 crossing of the Rock River did not identify this species. The project does not involve a crossing of the

Mississippi River. It has been determined that the project will not affect the sheepnose mussel.

The eastern prairie fringed orchid (*Platanthera leucophaea*) is listed as a Federally and State Threatened Species. The orchid occurs in mesic to wet prairie. There are some degraded mesic prairies within the project study area. Botanical and wetland surveys during 2007 and 2008 did not identify this species or areas that might be suitable for this species. Therefore, it is concluded that the project will not affect the eastern prairie fringed orchid.

3.14.1.2 State Listed Species

State listed species of concern for Whiteside County were identified based on the Ecological Compliance Assessment Tool (EcoCAT) screening by IDNR. These include the black sandshell, gravel chub, lake sturgeon, and kitten tails. The bald eagle was also identified, but it is no longer a State Listed Species.

The lake sturgeon (*Acipenser fulvescens*) is listed as State Endangered and the gravel chub (*Erimystax x-puctatus*) is listed as State Threatened. Fish surveys were conducted at 14 locations within the project study area in 2007. Of the 47 fish species collected, no State Endangered or State Threatened Species were found. Therefore, the project will not affect either of these species.

The black sandshell (*Ligumia recta*) (State Threatened) is usually found in riffles of medium to large rivers (Cummings and Mayer 1992). It was the only listed mussel species found alive during the project surveys. Five (5) specimens were collected from the Rock River (Aquatic Sampling Site 2) and three (3) specimens were collected from Elkhorn Creek (Aquatic Sampling Site 3) (**Exhibit 3-7**).

Kitten tails (*Besseya bullii*) is a State Threatened Plant Species that occurs in savannas with sand and sandstone substrates, and gravel prairies along the Mississippi, Illinois and Rock Rivers in northwestern Illinois. Kitten tails are considered “vulnerable” indicating a moderate risk for extinction due to restricted range, relatively few populations (less than 80), recent and widespread decline, or other factors. Kitten tails were found in the dry sand hill prairies and dry-mesic gravel hill prairies west of the western terminus of the project study area. No kitten tails populations were found near Build Alternative 4 or 5. Therefore, the project will not affect the kitten tails.

Prairie dandelion (*Microseris cuspidate)* is a State Endangered Species that reaches its eastern range limit in dry-mesic prairies in Illinois. It was originally scattered locally throughout the northern half of the State, but has been largely extirpated by woody encroachment, overgrazing, gravel mining, and urban growth. Eight (8) Illinois populations are known, four (4) in State nature preserves (Herkert and Ebinger 2002). One (1) population was located on the northernmost dry sand hill prairie. No prairie dandelion populations were found near Build Alternative 4 or 5. Therefore, the project will not affect the prairie dandelion.

Broomrape (*Orobanche ludoviciana*) is a State Threatened species that reaches its eastern limit in Illinois, where it occupies blowouts in dry sand prairies and on alluvial floodplains along rivers. It is parasitic on the roots of various members of the Asteraceae (Gleason and Cronquist 1991). Two (2) populations of this plant were found in the northernmost dry sand hill prairie. No broomrape populations were found near Build Alternative 4 or 5. Therefore, the project will not affect the broomrape.

3.14.1.3 Hybrid Plant Species

Pecan (*Carya illinoinensis*) is a native tree that is distributed along the Mississippi River and its tributaries from northwestern Illinois and southeastern Iowa to the Gulf Coast and then westward to Texas. Pecan is the only native nut tree grown for commercial use in the United States. The USDA Research Service has a pecan genetics and breeding program to develop pecans that uniformly produce on a year to year basis and to improve disease resistance. This improvement program hinges on the genetic diversity of the pecan throughout its native range.

The Abbott Thinshell Pecan Tree in Whiteside County is a tree with very desirable genetic characteristics. The tree is rare because it is a natural hybrid formed from the hybridization of a pecan with a bitternut hickory (*Carya cordiformis*). Since the 1840's, efforts have been made to integrate the genes for winter hardiness and early nut-maturity from the bitternut hickory into the pecan. The Abbott Thinshell Pecan Tree represents a major step in reaching this goal (Kopf 1994).

The decline of genetic diversity is a major problem worldwide. The diversity of species and genetic strains provides a pool of critically important resources. As noted above, the USDA conducts a national genetics effort to improve the pecan and they maintain an active breeding program to produce improved pecan varieties. The Abbott Thinshell Pecan Tree is one of the most valuable trees in this program. Two hundred seedlings from this tree were sent to Europe in 2008.

3.14.2 Environmental Consequences

3.14.2.1 Federally Listed Species

No Federally listed species were identified within the project study area and therefore, none would be impacted by construction of Build Alternative 4 or 5. **One adult female of the proposed for listing Northern long eared bat was captured during the mist net survey. As a result in order to protect the Northern long eared bat, no tree removal shall occur between April 1 and September 30 of any given year (see Appendix D).**

3.14.2.2 State Listed Species

One (1) State listed species was identified within the proposed alignment of Build Alternatives 4 and 5. The black sandshell mussel (*Ligumia recta*) (State Threatened) was collected from the Rock River and Elkhorn Creek. Build Alternatives 4 and 5 coincide in the section of U.S. 30 that crosses these two (2) waterways and both follow the existing U.S. 30 alignment. Proposed construction will include widening or replacing these bridges. The need for replacement and the types, sizes, and locations of new structures will be determined for the Preferred Alternative based on detailed structural, hydraulic, and geotechnical analyses.

The potential impacts of construction at Elkhorn Creek and the Rock River on the black sandshell mussel will depend upon the design and proposed construction methods for these bridges. Any in-stream construction has the potential to disturb the stream substrate and increase sedimentation. Because of potential adverse impacts to the black sandshell mussel, the Department will prepare a Conservation Plan at least one (1) year prior to construction that will include relocation of mussels within the construction limits to other suitable habitats within the Rock River and Elkhorn Creek. The Conservation Plan will be made available for public review.

IDNR reviewed the DEIS and concurred with the commitment with regard to the black sandshell mussel to prepare an Incidental Take Authorization one (1) year before construction, and therefore closed consultation (See Appendix D).

3.14.2.3 Hybrid Plant Species

Section 3(d) of Departmental Policy D&E-18, *Preservation and Replacement of Trees*, states that "in planning, designing, and constructing new highways, careful consideration shall be given to preserving trees in the selection of alignments, in the development of major design elements, and in the determination of the extent of clearing required for construction… where specimen trees…(those that are outstanding examples possessing exceptional size, form, etc.; or those having recognized historical significance) or trees that perform a special function…guardrail or other shielding shall be preferred as *an alternative* to *removal of the tre*es…and careful consideration should be given to the potential for damage to root systems that could cause the loss of trees." Because tree roots can extend one and one half times the height, protection should include a buffer.

The Abbott Thinshell Pecan Tree is located within existing U.S. 30 right-of-way. The original plan was to reconstruct existing U.S. 30 as the west bound lanes of the new facility and widen to the south. While this alternative would not have required removal of the tree, it would have required construction immediately adjacent to it, potentially damaging roots and eventually causing the tree to die. In order to prevent impacts to the Abbott Thinshell Pecan Tree, the alignment for both Build Alternatives 4 and 5 has been shifted to the south. The current construction limits are 13 feet beyond the tree's dripline. Construction specifications will include protective requirements for the tree during construction, including installation of temporary

protective fencing. Based on these avoidance and protection measures, the proposed construction is not expected to adversely impact the Abbott Thinshell Pecan Tree.

3.15 Special Lands

3.15.1 Affected Environment

This section describes publicly owned Section 4(f) properties, Federally funded recreational land established by Section 6(f) of the Land and Water Conservation Fund Act (LAWCON), and State funded Open Space Land Acquisition and Development (OSLAD) Act lands.

3.15.1.1 Section 4(f) Lands

Section 4(f) of the Department of Transportation Act of 1966 stipulates that the FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of land, and the action includes all possible planning to minimize harm to the property resulting from use.

The following describes a variety of parks and open spaces within the project study area protected by Section 4(f).

Morrison-Rockwood State Park is comprised of 1,164 acres located north of the city of Morrison. The park offers picnic areas, camping, fishing, hunting, boating, hiking trails, and equestrian trails (**Exhibit 3-10, p. 5**).

Whiteside County Fairgrounds resides within the southwestern portion of the city of Morrison and is home to the annual Whiteside County Fair. The first fair was held here in 1872 and the fair has been held here every year since. In addition, the fairgrounds hold year round events such as horse shows, bull riding, tractor pulls, and demolition derbies (**Exhibit 3-10, p. 10**).

Waterworks Park has 12.4 acres and offers a baseball diamond, sand volleyball courts, tennis courts, a playground, picnic area, and a walking path. The park is located in the southern portion of the city of Morrison (**Exhibit 3-10, p. 10**).

Kelly Park has 3.4 acres and includes a nine-hole Frisbee golf course, tennis courts, picnic area, playground, and a walking path. The park is located on the north side of Morrison (**Exhibit 3-10, p. 7**).

Kiwanis Park in the northern portion of Morrison is a half-acre with a Rolle Bolle court, playground, and picnic area (**Exhibit 3-10, p. 7**).

French Creek Park is a 16 acre park located in the southern portion of Morrison and offers soccer fields, a walking path, a playground area, and picnic area. The city of Morrison Recreation Soccer Program utilizes the park soccer fields (**Exhibit 3-10, p. 10**).

Morrison Sports Complex. The city of Morrison **has** a recreational complex, which has five (5) baseball fields, football/soccer field, playground areas, a sledding hill, and a walking path. The complex is located just off of U.S. 30 on the east end of the city.

3.15.1.2 Section 6(f) Lands

The LAWCON established a fund from which State and local governments could receive grants to preserve and develop outdoor parks, recreation areas, and refuges. Section 6(f) of this act prohibits the conversion of property acquired or developed with LAWCON funds to a non-recreational purpose without the approval of the Department of the Interior's National Park Service.
There were three (3) LAWCON projects within the Morrison Rockwood State Park.

3.15.1.3 Open Space Land Acquisition and Development (OSLAD) Act Lands

The OSLAD Program is an Illinois financed grant program that provides funding assistance to local government agencies for acquisition and/or development of land for public parks and open space. In fiscal year 2010, the IDNR issued a grant to the Coloma Township Park District to develop the Joshua Nailor Memorial Park. This proposed park is located along Riverdale Road approximately 300 feet south of existing U.S. 30 in Rock Falls within the project study area.

3.15.2 Environmental Consequences

The proposed Build Alternatives will have no impacts to Section 4(f), Section 6(f), or OSLAD lands.

3.16 Special Waste

3.16.1 Affected Environment

The Illinois State Geological Survey (ISGS) **conducted a site reconnaissance visit and reviewed the USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and Resource Conservation and Recovery Act Corrective Action Sites' (RCRA-CORRACTS) databases. The ISGS provided the results of the visit and database review in a site inspection letter report dated August 28, 2013 (see Appendix D). The letter report did not identify any RCRA-CORRACTS sites but did identify one (1) CERCLIS site, the Prairie Hill Recycling and Disposal Facility (Exhibit 3-10, page 12, Site 81). The Prairie Hill Recycling & Disposal Facility consisted of three (3) landfills. The Whiteside County Landfills #1 and #2 have been closed. The Prairie Hill**

Recycling and Disposal Facility was opened in 1996 and was located along the east side of landfills #1 and #2. Aerial photographs indicate that a landfill has been located at this site since at least 1970. The 23 acre landfill contained general solid waste, animal waste, special waste, and non-hazardous waste.

The report also identified 52 sites that contain REC. According to the American Society for Testing and Materials (ASTM), RECs is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property (ASTM E1527-05). Table 3-57 lists the REC sites as identified by ISGS in the site inspection letter report.

3.16.2 Environmental Consequences

There **is one (1)** CERCLIS site involved with Build Alternative 5 but there is no prudent or feasible alternative for avoidance. All areas of contamination will be addressed to protect human health and the environment in accordance with applicable Federal and State laws and regulations.

A shown in Table 3-57, Build Alternatives 4 and 5 would potentially impact 38 sites with RECs. Build Alternative 4 would impact an additional 10 sites with RECs north of Morrison for a total of 48. Build Alternative 5 would impact an additional four (4) sites with RECs south of Morrison for a total of 42.

IDOT will manage and dispose of areas of contamination in accordance with applicable Federal and State laws and regulations and in a manner that would protect human health and the environment.

Table 3-57: Sites that contain RECs in the U.S. 30 Project Area

ISGS Site Number	Site Description	Build Alternative	Exhibit 3-10 Page Number
1454V-5	Tree service company and trailer dealership	4 & 5	1
1454V-7	Motel	4 & 5	1
1454V-8	Railroad tracks and ROW	4 & 5	1
1454V-21	Animal grease recycling facility	4 & 5	2
1454V-25	Farmstead	4 & 5	3
1454V-26	Farmstead	4 & 5	3
1454V-29	Farmstead	4 & 5	3

Table 3-57: Sites that contain RECs in the U.S. 30 Project Area			
ISGS Site Number	Site Description	Build Alternative	Exhibit 3-10 Page Number
1454V-34	Commercial buildings	4	6
1454V-38	Farmstead	4	6
1454V-40	Farmstead	4	6 & 7
1454V-41	Vehicle repair facility	4	6 & 7
1454V-61	Farmstead	4	8
1454V-65	Residences	4	11
1454V-70	Farmstead	4	11
1454V-71	Farmstead	4	11
1454V-75	Agricultural fertilizer distributor	4	11
1454V-76	Railroad tracks and ROW	4	11
1454V-79	Farmstead	5	11
1454V-81*	Landfill	5	12
1454V-83	Municipal buildings	5	12
1454V-86	Farmstead	5	12
1454V-88	Residence	4 & 5	12
1454V-92	Vehicle repair facility	4 & 5	12
1454V-93	Farmstead	4 & 5	12
1454V-94	Farmstead	4 & 5	12
1454V-97	Residence	4 & 5	12
1454V-98	Restaurant	4 & 5	12
1454V-108	Farmstead	4 & 5	13
1454V-111	Motorcycle repair shop and residence	4 & 5	13
1454V-125	General merchandise distribution facility	4 & 5	14
1454V-126	Agricultural services facility	4 & 5	14
1454V-127	Double G Arena & Wahl Equestrian Center	4 & 5	14
1454V-136	Aggregate quarry and ready-mix concrete production facility	4 & 5	14

Table 3-57: Sites that contain RECs in the U.S. 30 Project Area			
ISGS Site Number	Site Description	Build Alternative	Exhibit 3-10 Page Number
1454V-141	Residence	4 & 5	14
1454V-145	Vehicle repair facility	4 & 5	14
1454V-163	Farmstead	4 & 5	15
1454V-168	Residence	4 & 5	15
1454V-170	Trailer and shed dealership	4 & 5	15
1454V-172	Rotary airlock remanufacturing facility	4 & 5	15
1454V-175	Agricultural equipment dealership	4 & 5	15
1454V-182	Auto body shop	4 & 5	15
1454V-184	Commercial building	4 & 5	15
1454V-186	Freight shipping facility	4 & 5	15
1454V-188	Farmstead	4 & 5	6
1454V-189	Farmstead	4 & 5	6
1454V-192	Farmstead	4 & 5	9
1454V-197	Farmstead	4 & 5	9
1454V-198	Wireless communications tower	4 & 5	9
1454V-201	Farmstead	4 & 5	10
1454V-213	Farmstead	4 & 5	11
1454V-214	Commercial buildings	4 & 5	11
1454V-215	Railroad tracks and ROW	4 & 5	11

*CERCLIS Site

3.17 Permits/Certifications

This section discusses the permits and certifications expected to be required for the proposed project with either Build Alternative 4 or 5.

Section 404 Permit: Section 404 of Clean Water Act requires a permit to be obtained from the USACE for the discharge of dredge or fill material into waters of the United States. This permit is expected to be a NWP 14 for the proposed construction associated with Spring Brook Creek, the Unnamed Tributary of Rock Creek, Rock Creek, French Creek, the Unnamed Tributary of Rock River, Deer Creek, Elkhorn Creek, Rock River, and the Union Drainage Ditch.

Section 401 Water Quality Certification: Section 401 of the Clean Water Act appoints States the authority to review activities in waterways and wetlands and to issue quality certifications under Section 401 of the Clean Water Act. This certification is obtained from the IEPA and is required in conjunction with a Section 404 Permit. NWP 14 (Linear Transportation Projects) have received water quality certification from the IEPA (2007) with conditions. Those stream crossings that affect an area of the stream channel greater than 100 linear feet, as measured along the stream corridor, will require an individual water quality certification. All stream crossings in the project study area exceed the 100 linear foot threshold. Therefore, all stream crossings will require an anti-degradation statement and a 30-day public comment period before an Individual Water Quality Certification can be issued by the IEPA.

Section 402 National Pollutant Discharge Elimination System (NPDES) Construction Permit: This permit is required for construction activities involving clearing, grading, and excavation activities that disturb more than one (1) acre of land area. The proposed project will disturb more than one (1) acre of land area and therefore a NPDES permit will have to be obtained from the IEPA. It is the responsibility of the contractor to obtain this permit in addition to preparing a Stormwater Pollution Prevention Plan (SWPPP). This plan identifies the expected potential sources of pollution that could affect the quality of stormwater discharges from the construction site. It also would describe and ensure the implementation of practices used to reduce pollutants in the discharges associated with construction site activity. The plan would help to ensure compliance with the terms of the permit.

***Construction in Floodways of Rivers, Lakes, and Streams*:** This permit is obtained from the IDNR, Office of Water Resources, for construction in the floodway of identified streams serving a tributary area of 6,400 acres or more in a rural area. This would apply to the proposed project's improvements associated with the Elkhorn Creek and Rock River.

***Incidental Take Authorization (ITA) Permit*:** An ITA permit is recommended from the IDNR when a proposed project has the possibility of impacting an Illinois Endangered or Threatened Species which may be injured or killed due to construction. In order to obtain an ITA permit, a Conservation Plan must be prepared which will identify the potential impacts, measures to minimize harm, and mitigation. This permit **will** be necessary because of the potential impacts to the State Threatened black sandshell (*Ligumia recta*) mussel found in Elkhorn Creek and the Rock River. **IDOT will prepare a Conservation Plan and apply for the ITA permit one (1) year before construction begins on the Rock River and Elkhorn Creek bridges.**

3.18 Visual Resources

The purpose of this section is to assess the visual impacts of the proposed project and to propose measures to mitigate any adverse visual impacts associated with the construction of the U.S. 30 improvements on the surrounding visual environment. This coincides with the key goal of the CSS process which is to have the proposed project fit into the surrounding landscape in harmony with the visual environment.

In discussing and reviewing the visual impacts of the proposed project, two (2) views must be considered: The view *from* the road and the view *of* the road. The following subsections were developed utilizing the guidance provided the FHWA manual titled "Visual Impact Assessment for Highway Projects, 1981."

3.18.1 Affected Environment

3.18.1.1 Existing U.S. 30 Corridor

The existing U.S. 30 roadway is part of the Lincoln Highway National Scenic Byway. The various land forms that can be seen from the scenic byway throughout the project study area are mainly flat to a combination of hills, ravines, and deciduous trees.

The following discussion describes the existing U.S. 30 corridor starting at the eastern terminus of IL 40 in Rock Falls heading west to IL 136 and Frog Pond Road.

Starting at IL 40 in the city of Rock Falls, the view *from* the road is a mix of residential and commercial buildings. The view *of* the road is a five-lane highway.

Figure 3-1: Typical View *from* U.S. 30

Continuing west, the view *from* the road becomes a mix of homes and few commercial buildings residing adjacent to the existing U.S. 30, scattered farmsteads (farm house, barn, silo), agricultural land, and deciduous trees (**Figure 3-1**). As you continue west, the existing U.S. 30 roadway crosses a number of creeks/streams including the Rock River. The view *of* the road is a two-lane highway with aggregate shoulders (**Figure 3-2**). The view *from* the road and the view *of* the road as just desribed is essentially the view shed of the majority of the project study area.

Figure 3-2: Typical View *of* U.S. 30

The only portion of the existing U.S. 30 where the view shed changes is through the city of Morrison. The existing U.S. 30 roadway bisects the city. The view *from* the road is a mix of residential homes, commercial buildings, and churches. The view *of* the road is a two-lane roadway with turn lanes at certain intersections (**Figure 3-3**).

Figure 3-3: Typical View *of* U.S. 30

3.18.2 Environmental Consequences

The No-Build Alternative would not affect the visual characteristics of the project study area.

Construction of the U.S. 30 proposed project would affect the visual characteristics of the project study area, including travelers with views from the highway (local traffic, commuter traffic, tourist traffic), and neighborhoods with views of the highway (adjacent residences, recreational facilities). This assessment provides a general overview of visual effects in the project study area, then focuses on change in views at visually sensitive locations, primarily from residences along the existing U.S. 30 route in addition to those that live in the areas to the north and south of the city of Morrison where the Build Alternatives are proposed to be constructed.

3.18.2.1 Visually Sensitive Locations

- Residences living adjacent to the existing U.S. 30 roadway from Prophetstown Road in Rock Falls to just east of the city of Morrison
- Riverside Estates Manufactured Home Community
- White Oaks Subdivision located just west of Blue Goose Road
- Ruffit Park camp ground
- Residences living north of Morrison along Norrish Road
- Residences and farmsteads living north of Morrison between Lyndon Road and Hillside Road
- Residences and farmsteads living south of Morrison between Lyndon Road and Hillside Road
- Residences living adjacent to the existing U.S. 30 roadway from Hillside Road to IL 136/Frog Pond Road just east of the city of Fulton

3.18.2.2 Visual Character of the Proposed Improvements

Design features of the proposed project include cuts and fills on the existing terrain, the paved highway surface, bridge structures, and retaining walls. The project would clear existing vegetation within the existing and proposed right-of-way at various locations along the proposed project. Cut and fill locations do vary between Build Alternative 4 and 5 because of the difference in their routes around the city of Morrison and the difference in the terrain.

3.18.2.3 Visual Effects

This subsection addresses the visual change that would result from the improvements and its potential effect on viewer groups. The views were evaluated for their potential to alter views *of* the roadway and views *from* the roadway. The following discussion identifies the potential view changes for those at the sensitive locations listed above in addition to the change in views for Build Alternatives 4 and 5 around the city of Morrison.

Build Alternative 4 and 5 both follow the same alignment both east and west of the city of Morrison. A majority of the alignment will stay on the existing U.S. 30 roadway, therefore, the proposed project will have an impact on those that live adjacent to the existing U.S. 30 roadway including the neighborhoods of Riverside Estates Manufactured Home Community just west of Regan Road, the White Oaks Subdivision located just west of Blue Goose Road, and the Ruffit Park camp ground just west of Como Road. Because the proposed project improvements east and west of Morrison follow the existing U.S. 30 alignment and is currently a two-lane facility, the existing roadway would be widened to a four-lane facility with a median. This will bring the roadway closer to the residences, could potentially displace residents, and lastly would remove existing vegetation that may currently serve as a visual barrier of the roadway.

Build Alternative 4 bypasses the city of Morrison to the north and Build Alternative 5 bypasses Morrison to the south. The northern area has a very different view shed than that of the south. The area located to the north of Morrison has a view of residences located along Norrish Road, rolling hills, and forested areas (**Figure 3-4**) whereas Build Alternative 5 has a view of flat agricultural ground and scattered farmsteads (**Figure 3-5**). Build Alternative 4 because of its terrain will require a number of cut and fills in addition to the construction of structures to cross the creeks in the area. These construction improvements would change the view shed within the northern portion of Morrison. As for Build Alternative 5, the land is currently agricultural ground and thus "open space." The construction of the proposed project would interrupt the view of the open space and therefore change the view for those living throughout the area.

Figure 3-4: Viewshed North of Morrison

Figure 3-5: Viewshed South of Morrison

3.18.3 Measures to Minimize Harm and Mitigation

The visual quality of the adversely affected areas can be improved by:

- Landscape planting, including trees native to Illinois and prairie plant species, and natural re-vegetation of cut and fill slopes
- Landscaping along the right-of-way for those residences living adjacent to the proposed U.S. 30 roadway
- Replacing vegetation cleared from the existing or proposed right-of-way with grasses, trees, and shrubs
- Any new directional signs and/or marquees placed on the existing U.S. 30 roadway that is designated as the Lincoln Highway National Scenic Byway will be coordinated with the Illinois Lincoln Highway Coalition

3.19 Irreversible and Irretrievable Commitment of Resources

An irreversible commitment of a resource is one that cannot be changed once it occurs. An irretrievable commitment means that the resource cannot be recovered or reused. The following describes commitments of natural, physical, human, and fiscal resources that Build Alternative 4 and 5 would require:

- Capital and labor required to construct the proposed project would be an irreversible and irretrievable commitment of resources.
- Construction materials such as cement, aggregate, bituminous materials, and steel required to construct the proposed project would be irretrievably committed at least for the life of the project.
- Fossil fuels and energy used for equipment and vehicles would be irretrievably consumed during construction and operations.
- The use of approximately 650 acres of land for the proposed project is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable (FHWA Environmental Review Toolkit: NEPA Implementation Guidance. 1987).
- With the proposed project, agricultural land would be removed from production and farming operations would adversely be affected.
- State and Federal funds and manpower used to build the proposed project represent an irretrievable monetary commitment. However, these benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources (FHWA Environmental Review Toolkit: NEPA Implementation Guidance. 1987).

3.20 Summary of Measures to Minimize Harm and Mitigation

Section 101(b) of the NEPA, requires that Federal agencies incorporate into their project planning all practicable measures to mitigate adverse environmental impacts resulting from the proposed action. The following section summarizes the measures to minimize harm for the proposed project. Discussions are more detailed and in the sections previously documented in the SDEIS. Final mitigation plans would be incorporated into final engineering plans and specifications prepared for the proposed highway.

***Residential and Business Displacements*.** Where possible, the alignments were shifted to avoid impacts to residences and businesses. In addition, where practical, the alignments were shifted away from homes and/or businesses in order to create the least disruption possible.

Agriculture. The following management and design practices were and will continue to be incorporated into the proposed project to help minimize disruptions to agricultural activities and limit adverse impacts to designated soils:

- design alignment to parallel property lines, where feasible, to keep farm severances, severance management zones, and uneconomical remnants to a minimum,
- where practical, construct field access roads to maintain access to farm fields,
- maintain existing surface and subsurface drainage,
- locate field tiles draining to, or intersected by, the proposed highway's right-of-way by trenching to ensure that proper field drainage is maintained during construction,
- investigate areas of cropland and nonnative grasses on landlocked parcels for use as borrow areas. If suitable, they would be given priority as sources of borrow, thereby reducing additional impacts to agricultural lands,
- implement sedimentation and erosion control measures to minimize loss of topsoil into streams and roadside ditches (See Section 3.9, Surface Waters and Aquatic Resources for more information), and
- lessen agricultural impacts by using landlocked parcels for mitigation purposes

Cultural. A photo log documenting all structures believed to be 40 years or older was produced. From this, the IHPA identified 27 of these structures as potentially eligible for the NRHP. The 27 structures were mapped and during the development of the alternatives were avoided. No potentially eligible structures will be impacted.

Noise and Air Quality.

- To reduce the potential for noise impacts during construction, IDOT will require contractors to adhere to the latest edition of the *Standard Specifications for Road and Bridge Construction*. These specifications include guidelines for screening stationary equipment, exhaust noise, noise from loose equipment parts, and excessive tailgate banging.
- Dust control during construction will be accomplished in accordance with *Standard Specifications for Road and Bridge Construction* which requires application of water or approved dust control measures during grading operations and on haul roads.
- The location of pavement material batch plants will be in accordance with the *Standard Specifications* or any special provisions developed during coordination with the IEPA regarding air quality standards and emissions.
- Open burning of construction waste or brush will be done in accordance with local ordinances.
- Demolition and disposal of structures is regulated under the *Standard Specifications for Road and Bridge Construction.*

In response to a request from USEPA (see Appendix D), IDOT is committed to a construction diesel emissions reduction plan for the U.S. 30 project in order to reduce

and mitigate the known construction emissions to the degree feasible. The following options will be considered by the Department in a diesel reduction plan:

- **retrofitting off-road construction equipment including repower or engine upgrades,**
- **using ultra-low-sulfur fuels for all equipment,**
- **limiting the age of on-road vehicles in construction projects to 1998 and newer and 1996 and newer for off-road equipment,**
- **diesel particulate traps and oxidation catalysts,**
- **using existing power sources or clean fuel generators rather than temporary power generators, and**
- **encouraging the use of off-road equipment that meets Tier 3 standards**

Surface Water Resources. Principles and standards from IDOT's *Construction Procedure Memorandum on Erosion and Sediment Control*, Chapter 59-8 of the *IDOT Bureau of Design & Environment Manual*, Section 280 of the *Standard Specifications for Road and Bridge Construction* (January 1, 2012), and other erosion control best management practices will be used to minimize water quality impacts of construction and operation of the proposed facility. Construction in or near waterways will be performed in accordance with IDOT's *Standard Specifications for Road and Bridge Construction.* Erosion control measures will be installed before erosion prone construction activities begin. Construction at stream crossings will be conducted during low or normal flow periods and will comply with all Federal and State laws, local ordinances, and regulations. An erosion control plan will be developed as part of the plans and specifications for construction.

Basic erosion control principles and best management practices that will be used include the following:

- The size of disturbed area exposed at any one time and the duration of exposure will be minimized. Construction contracts could include limits on the amount of soil that can be exposed, measures to prevent erosion during spring thaw if construction is not completed before winter, and specifications to complete grading as soon as possible and revegetate with temporary and permanent cover. The exact type and methods of erosion control to be utilized will be determined during the project's design phase.
- Control methods will be used to prevent erosion and sedimentation in sensitive areas. Such methods include proper design of drainage channels with respect to width, depth, gradient, side slopes, and energy dissipation; protective ground cover such as vegetation, mulch, erosion mat, or riprap; diversion dikes and intercepting embankments to divert sheet flow away from disturbed areas; and sediment control devices such as ditch checks, erosion bales, silt fences, and retention/detention basins.

Wetlands. Minimization of wetland impacts was an important factor in the development and screening of alternatives. Preliminary alignments were developed to avoid wetland impacts wherever possible. Alignments were developed to follow existing U.S. 30 as much as possible.

Build Alternatives 4 and 5 incorporate alignment shifts where practicable to minimize impacts to wetlands. As a result of these adjustments, wetland impacts have been reduced to impacts to a single wetland area from improvements to the Rock River Bridge for both Build Alternatives 4 and 5.

Floodplains. Minimization of floodplain impacts was considered in the project's alternatives development/screening phase. Floodplain encroachment has been reduced to the minimum consistent with IDOT standards. **The realignment of the Build Alternatives as described in Section 2.8.2 did result in a decrease in the length of floodplain encroachments. For Build Alternative 4, there was a decrease of 2,014 linear feet in floodplain encroachments and for Build Alternative 5 there was a decrease of 6,673 linear feet.** Additional analyses will be conducted for the Preferred Alternative to determine whether feasible measures exist to reduce floodplain impacts even further. One (1) purpose of Executive Order 11988 is to avoid direct and indirect support of floodplain development. According to the Order, an action supports floodplain development if it encourages, allows, serves, or otherwise facilitates additional floodplain development. Incompatible floodplain development in Whiteside County is regulated under the county zoning regulations. For this reason, this project will not directly or indirectly support incompatible floodplain development. Detailed hydraulic analyses will be conducted for all of the streams crossed by the Preferred Alternative **during the design phase of the project**. These analyses will determine the size of waterway openings needed to minimize flood backwater elevations consistent with IDOT and FHWA policies.

Endangered, Threatened, and Hybrid Species. The State Threatened black sandshell (*Ligumia recta)* mussel is found in Elkhorn Creek and the Rock River. Prior to construction, the Department will prepare a Conservation Plan that will include relocation of mussels within the construction limits to other suitable habitats within the Rock River and Elkhorn Creek.

The Abbott Thinshell Pecan Tree is located within existing U.S. 30 right-of-way. In order to prevent impacts to the Abbott Thinshell Pecan Tree, the alignment for Both Alternatives 4 and 5 has been shifted south. The current construction limits are 13 feet beyond the tree's dripline. Construction specifications will include protective requirements for the tree during construction, including installation of temporary protection fencing.

In order to protect the Northern long eared bat no tree removal shall occur between April 1 and September 30 of any given year (see Appendix D).

Wildlife Resources. Build Alternatives 4 and 5 have been developed to maximize use of existing U.S. 30 while meeting the Purpose and Need for the project. Remaining on existing alignment minimizes the potential for impacting forest blocks, prairie restoration areas, and other higher quality wildlife habitat in the project study area. In addition, mitigation proposed for the project will include planting tree blocks to replace trees removed for project construction and establishing prairie areas within IDOT right-of-way. Potential tree replacement areas and prairie areas will be identified for the Preferred Alternative. To the extent feasible, wildlife passages will be incorporated into the design of bridges and larger culverts to allow a safe haven for the

wildlife to cross U.S. 30 under the roadway. This will eliminate conflict points between the traveling public and the wildlife.

***Special Waste*. Prior to the purchase of property and prior to construction, a Preliminary Site Investigation (PSI) will be performed at each affected property containing a REC to determine the nature and extent of the waste present. The PSI will include assessment for lead-based paint and asbestos containing materials.**

A PSI will be conducted if the proposed improvements require excavation on or adjacent to a property identified with a REC or requires excavation, including subsurface utility relocation, on a property with an easement.

If construction is managed by IDOT, special waste issues encountered during construction will be managed in accordance with the IDOT "Standard Specifications for Road and Bridge Construction" and "Supplemental Specifications and Recurring Special Provisions".

Accidental spills of hazardous materials and wastes during construction or operation of the transportation system require special response measures. Occurrences will be handled in accordance with local government response procedures. Refueling, storage of fuels, or maintenance of construction equipment will not be allowed within 100 feet of wetlands or water bodies to avoid accidental spills impacting these resources.

Visual Resources. Although the visual scale of the highway will increase, landscaping features within and adjacent to the highway right-of-way would minimize adverse effects. A landscaping plan that will be developed during a future engineering phase could include the following provisions:

- preserve the existing vegetation as much as possible,
- perform landscape planting, including trees and prairie plant species, and natural re-vegetation of cut and fill slopes,
- landscape along the right-of-way, and
- replace vegetation cleared from the existing or proposed right-of-way with grasses, trees, and shrubs

3.21 Additional Commitments

Traffic. A traffic management plan would be developed and implemented during the construction phase of the project to provide reliable access to agricultural fields, residences, businesses, community facilities and services, and local roads. Local roads intersected by the proposed project will remain open to traffic with minor interruptions during construction. IDOT will coordinate construction activities, sequencing, and traffic management plans with fire, police, and emergency rescue service to minimize delays, but it is expected that, for various durations, side road connections will be closed to accommodate construction activities.

Property Acquisition. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, provides for payment of just compensation of private property acquired for a Federal-aid project. Offers of just compensation for residential and business properties will be based upon approved estimates of fair market value supported and documented by professional real estate appraisals obtained by IDOT. In addition to the just compensation for the acquired property, the Act also provides for certain relocation assistance and payment to displaced homeowners, residential tenants, and businesses that are required to relocate because of the project. IDOT will offer and provide relocation assistance to each displaced family and business. Each displaced family and business will be contacted by IDOT to address specific needs and problems. Displaced families will be eligible for moving costs and may also be eligible for replacement housing payments. Displaced businesses will be eligible for searching and moving costs to relocate to a replacement business site. IDOT's acquisition and relocation agents will be available to present and explain both the acquisition program and the relocation program to each displaced family and business.

Septic tanks, field drains, irrigation systems, or wells on acquired properties would be abandoned in accordance with State regulations and local zoning standards.

3.22 Biological Commitments

The following is a list of biological commitments for the U.S. 30 project:

- **All trees removed from the project area for construction or maintenance purposes will be replaced with deciduous tree species which are native to the Department's District 2 area. Trees will be replaced according to the IDOT Departmental Policy D&E-18 (September 18, 2002). The location of the replacement trees shall be determined by the Department's District 2 Roadside Manager. Trees which do not fit within the project limits may be planted elsewhere, as determined by the Roadside Manager.**
- **According to IDOT BDE-59-7.15(3), all unmowed areas should be designated in the plans and seeded with the appropriate native seeding selections from Class 4, per directive of the December 8, 1999 Studies and Plans Memorandum.**
- **All woody plants which will have diameters of greater than four (4) inches at maturity shall not be planted on the foreslopes, in the ditches, or in the clear zone as established in the BDE Manual.**
- **The Abbott Thinshell Pecan Tree is located within the existing U.S. 30 right-of-way and will not be impacted by project construction. The proposed alignment has been shifted 13 feet south of the tree's dripline to avoid impacting the tree. Temporary fencing will be installed around the tree at its dripline to protect the tree during construction.**
- **The State Threatened Black Sandshell Mussel (*Ligumia recta*) is found in Elkhorn Creek and the Rock River. Prior to construction, the Department will prepare a Conservation Plan that will include relocation of the mussels within the construction limits to other suitable habitats within the Rock River and Elkhorn Creek and obtain an Incidental Take Authorization from IDNR.**

- **Wildlife passages will be incorporated into the design of bridges and larger culverts to allow a safe haven for wildlife to cross U.S. 30 under the roadway. This will eliminate conflict points between the motorist and the wildlife.**
- **As mitigation for impacting native forests and prairie areas, blocks of trees and prairie areas will be planted. Potential tree replacements areas and prairie areas will be identified for the Preferred Alternative.**
- **The proposed project will possibly impact one (1) wetland site, Site #78, along the Rock River. A maximum of 0.24 acre of jurisdictional wetlands will be impacted. This will be mitigated by purchasing 0.48 acre of wetland bank credits from the Kilbuck Creek Wetland Bank, which is in-basin, but off-site. This is a mitigation ratio 2 to 1.**
- **Wetland Site #70, located west of Agnew Road, will not be impacted by project construction.**
- **All wetland boundaries in the project limits shall be shown on the contract plans.**
- **All wetland boundaries which are within the project right-of-way shall be marked in the field with temporary snow fence. The construction limits near Site #78 will also be marked with snow fence.**
- **No construction activities shall take place in any wetland, or beyond the construction limits of Site #78 along the Rock River. This includes driving and parking vehicles, and stockpiling materials.**
- **In order to protect the Northern long eared bat, no tree removal shall occur between April 1 and September 30 of any given year (see Appendix D).**

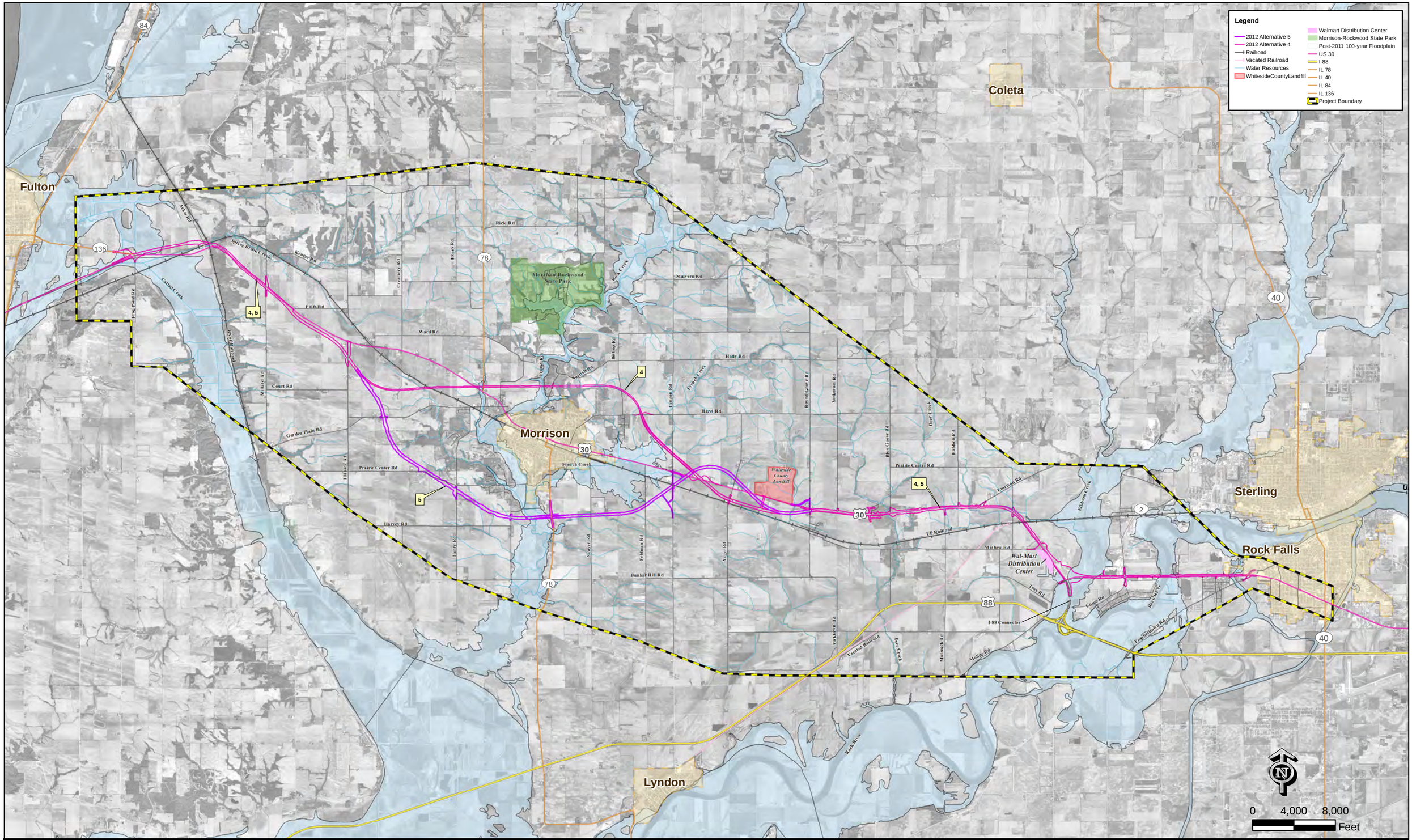


Exhibit 3-1
Build Alternatives 4 and 5
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

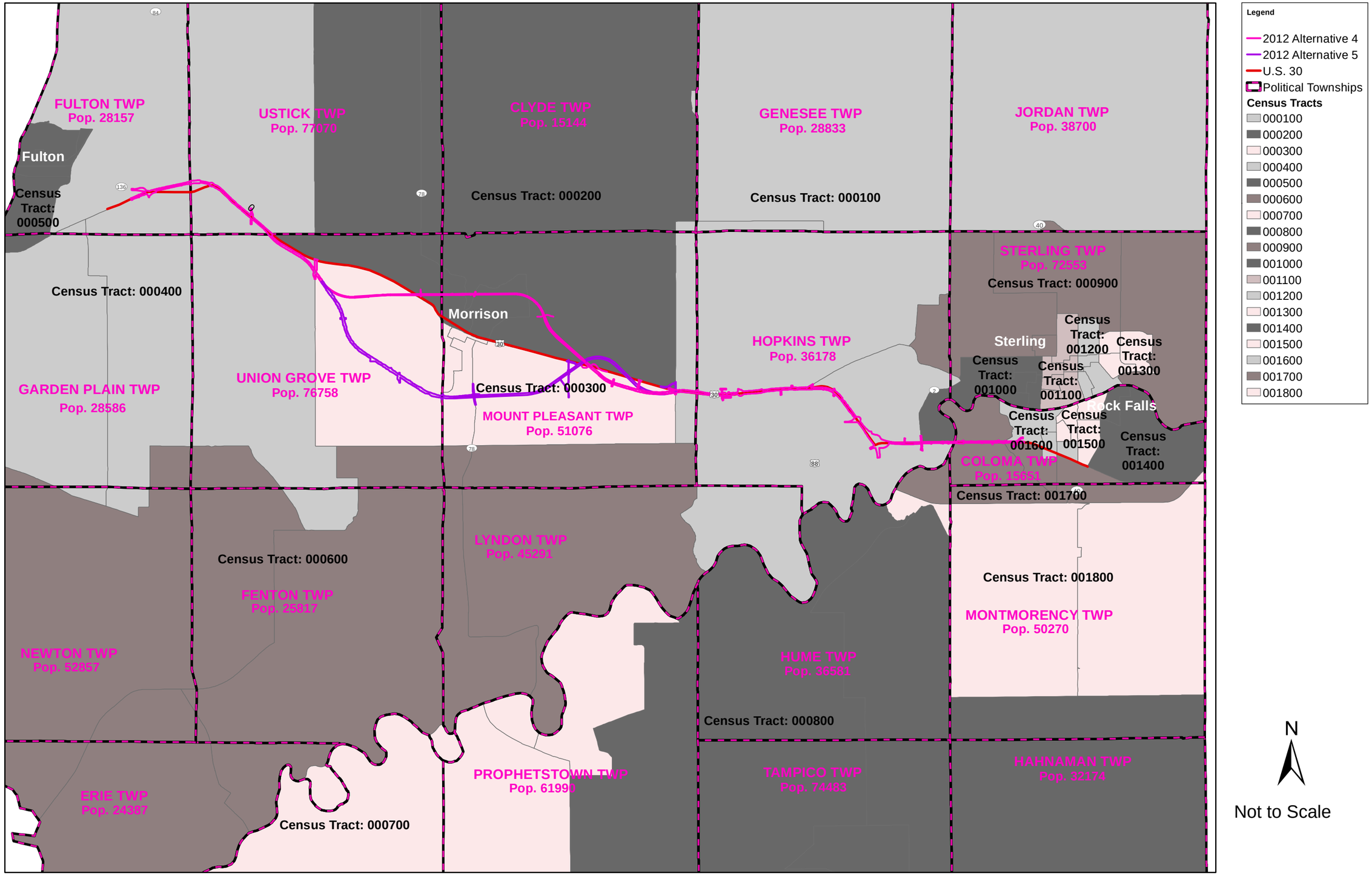


Exhibit 3-2
Townships and Census Tracts
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

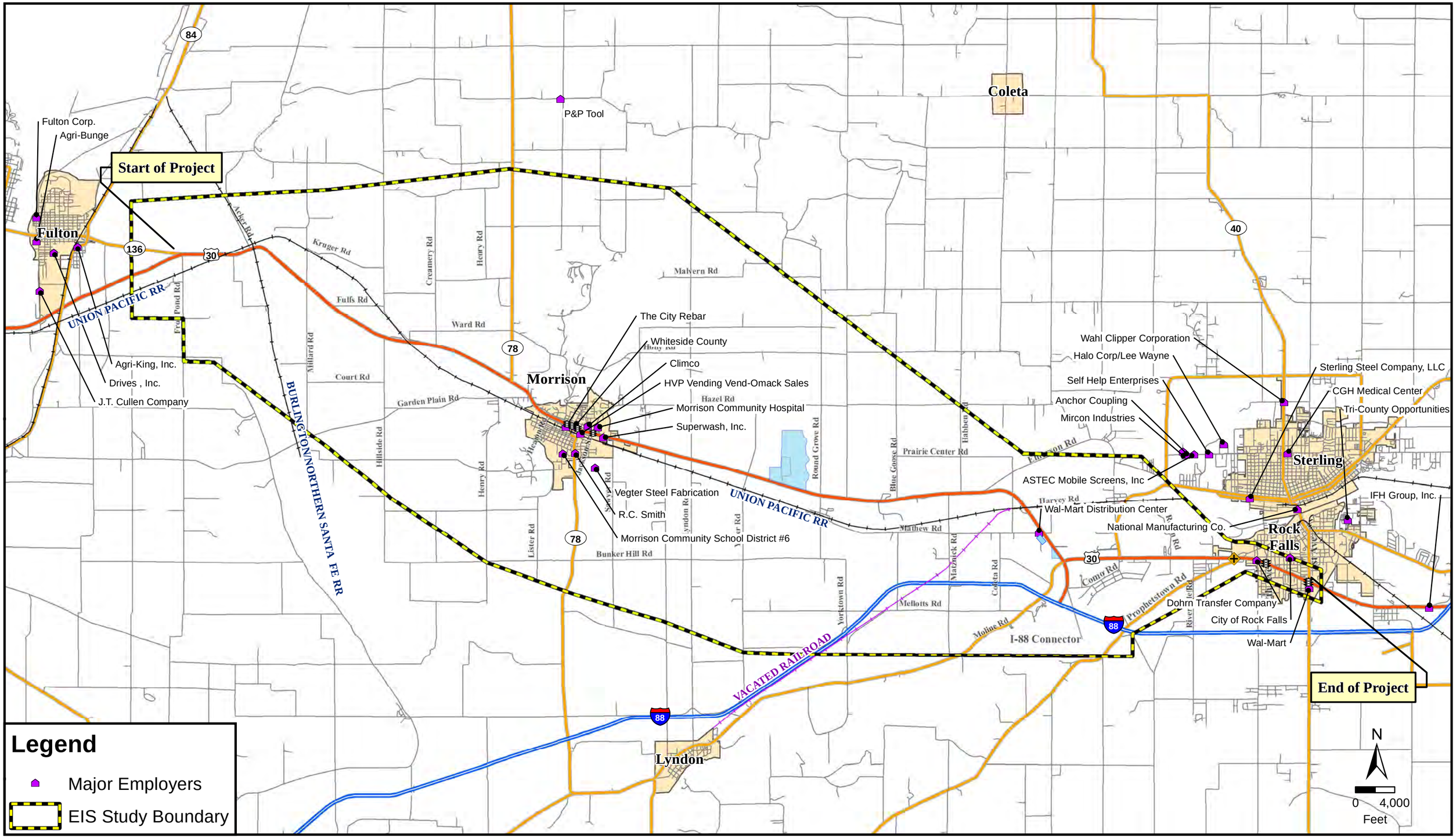
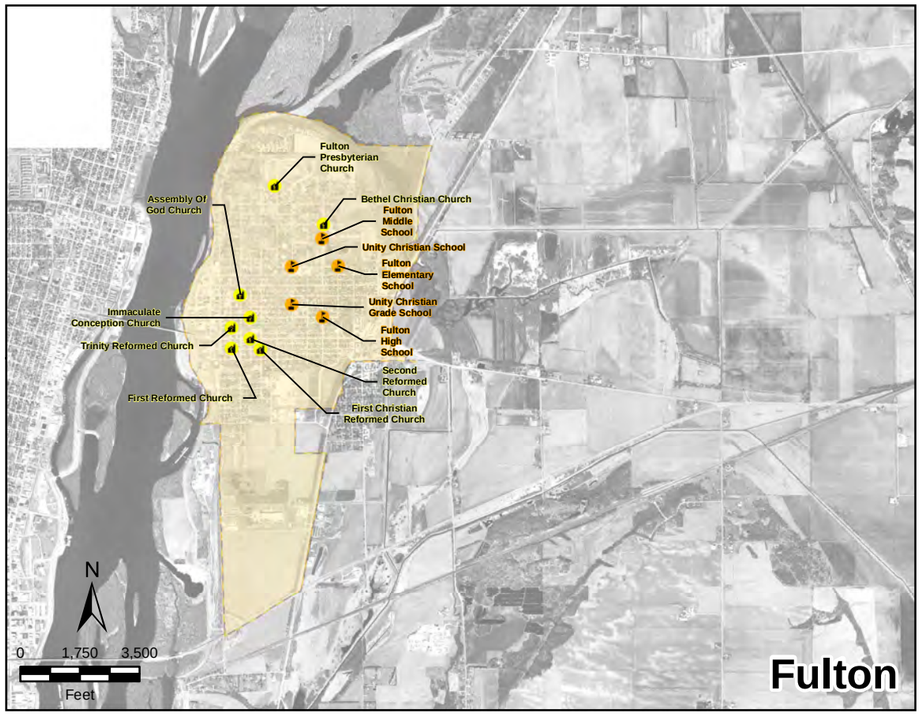
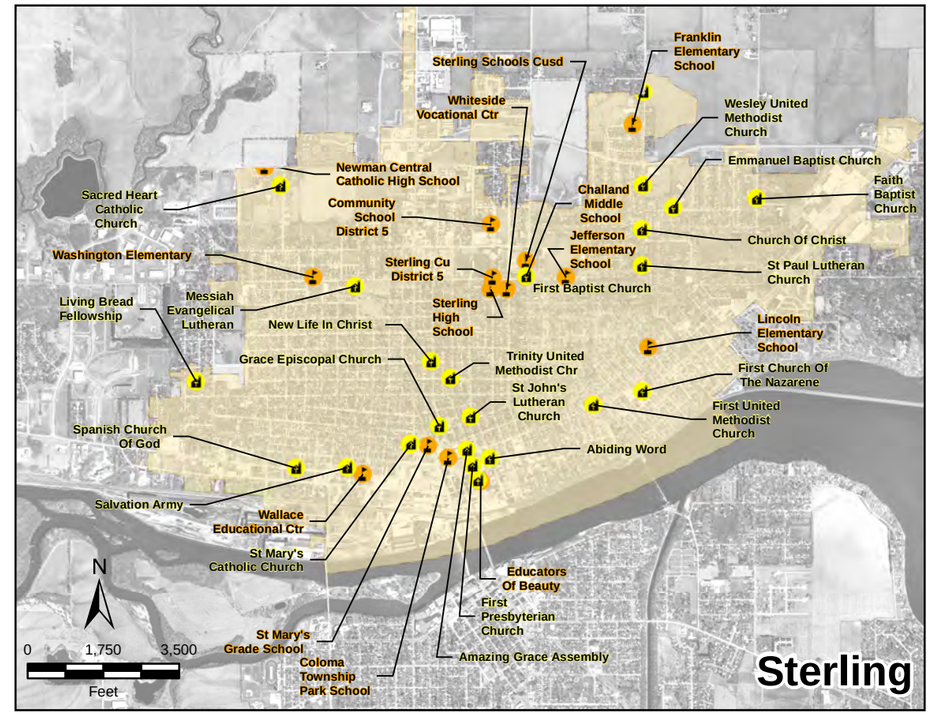


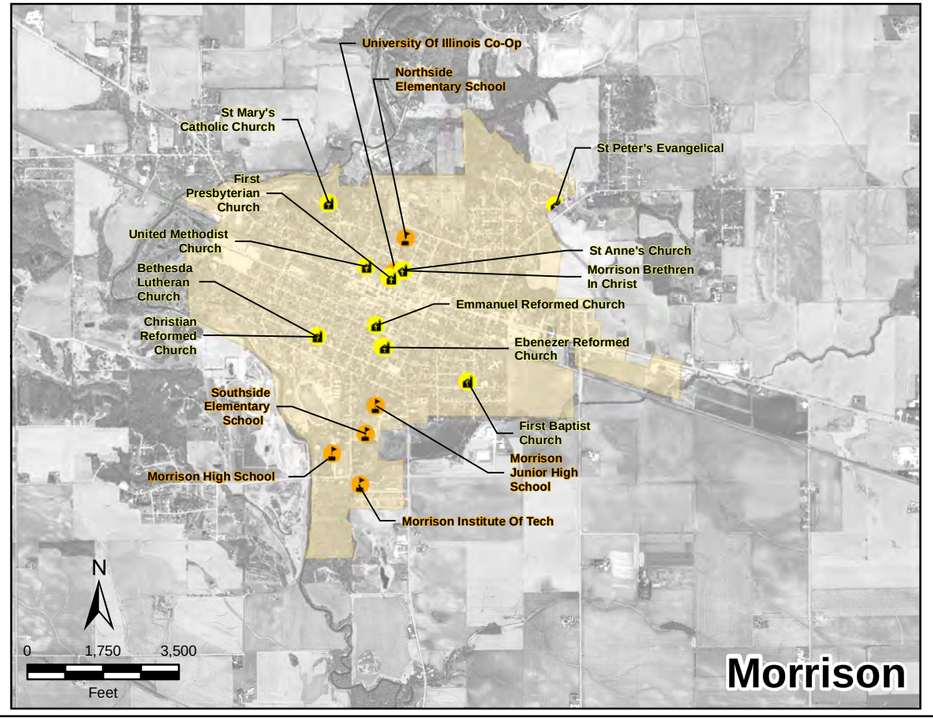
Exhibit 3-3
Major Employers
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



Legend

- Churches
- Schools





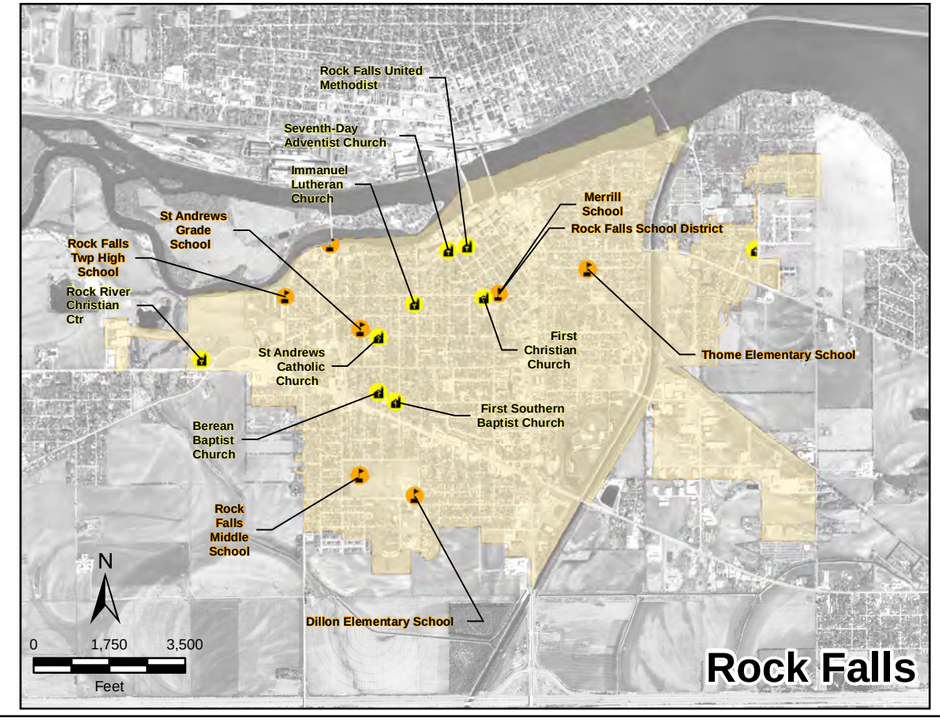
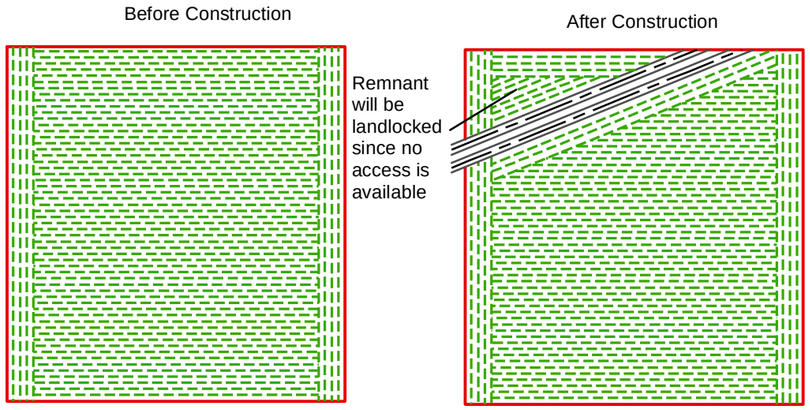
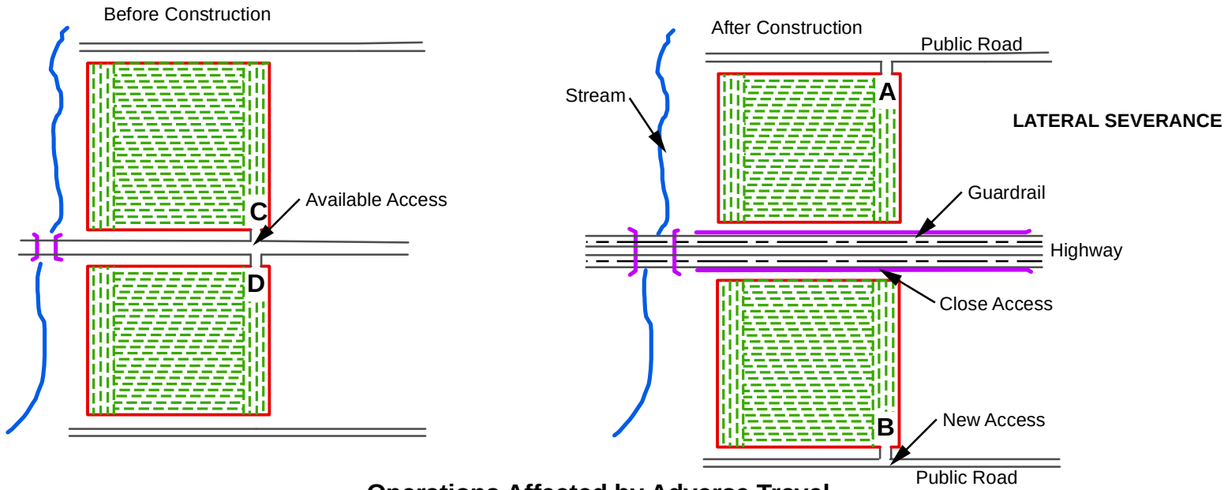


Exhibit 3-4
Schools and Churches
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Name: 3-4 Schools and Churches

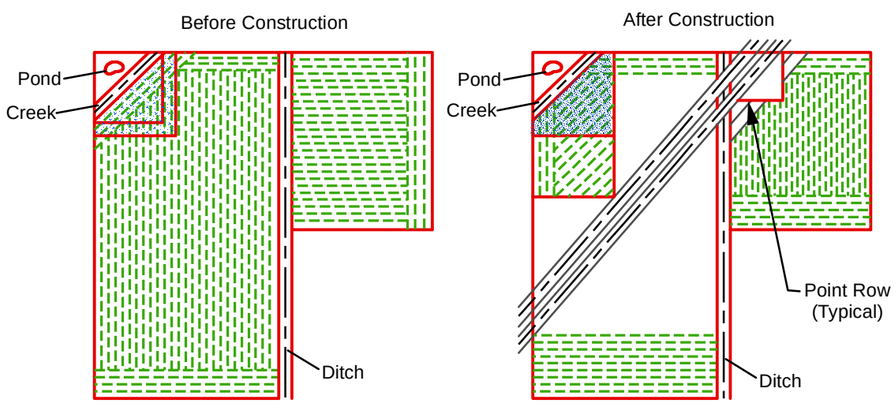


Landlocked Parcel



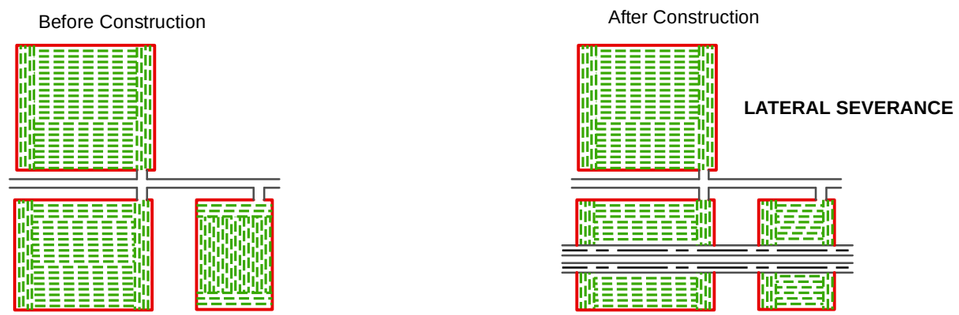
Operations Affected by Adverse Travel

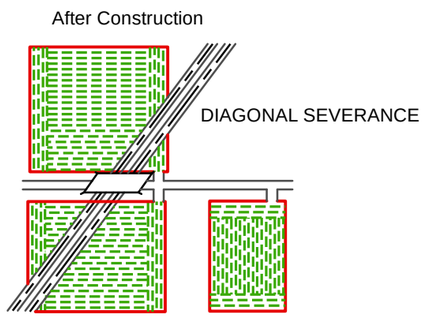
No Direct Access - Usually Results in Adverse Travel for Operator



Severance Management Zone

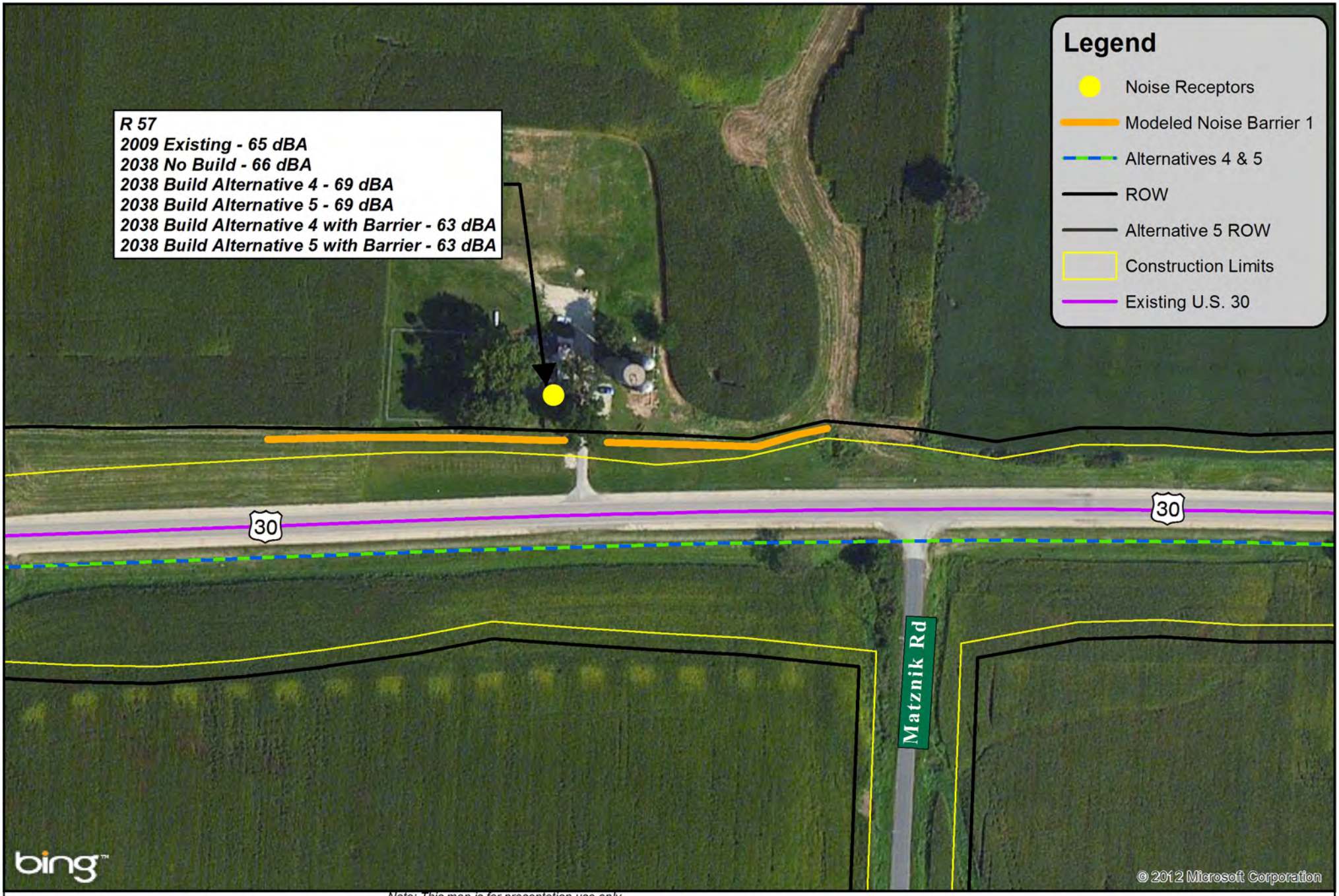
Existing NEW





Severed Farm Operation

Exhibit 3-5
Parcel Severance Details
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



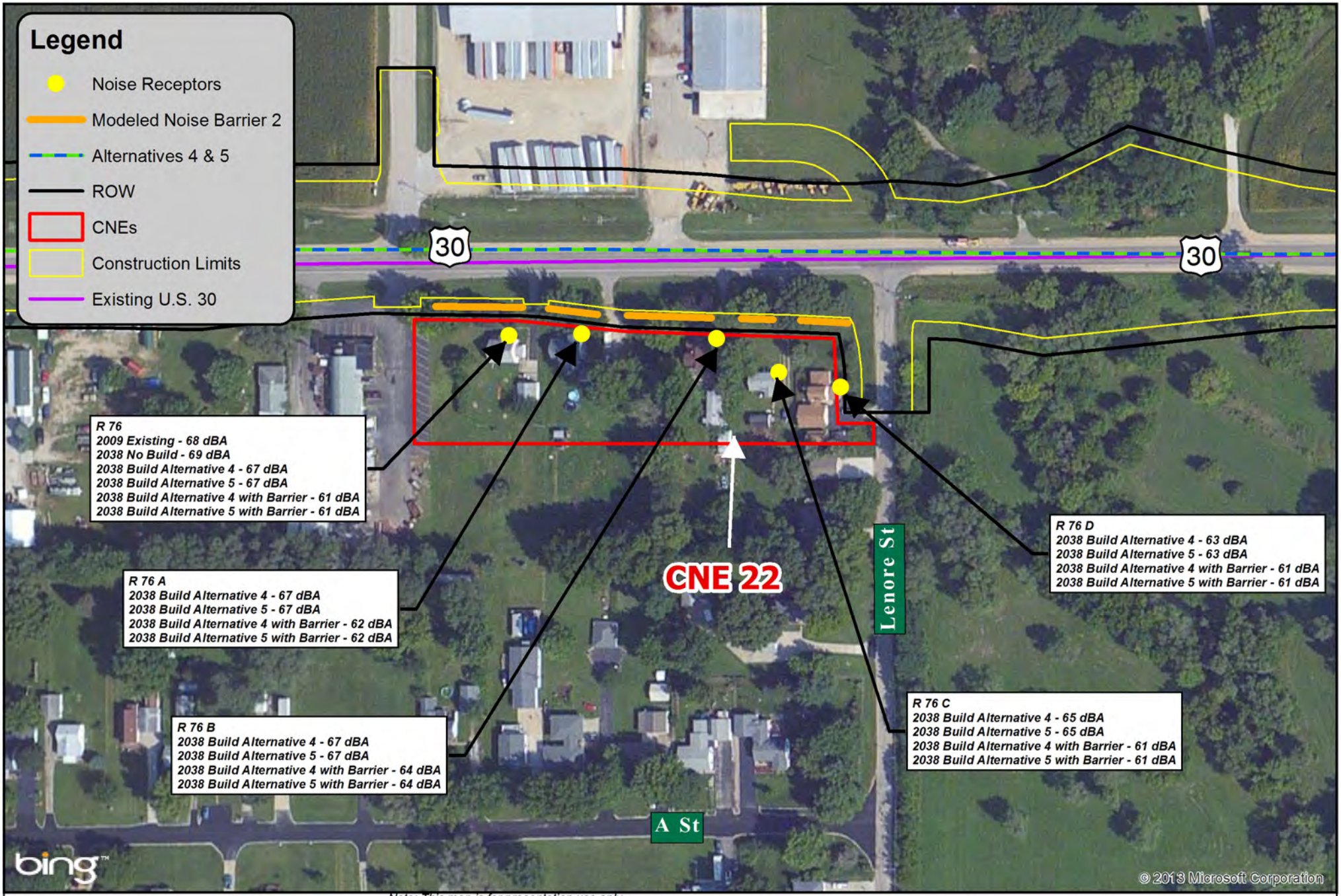
N

0 75 150

Feet

Note: This map is for presentation use only and not to be used for construction purposes.

Exhibit 3-6a
Noise Barrier Analysis (Barrier 1: Feasible, not Reasonable)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



Note: This map is for presentation use only and not to be used for construction purposes.

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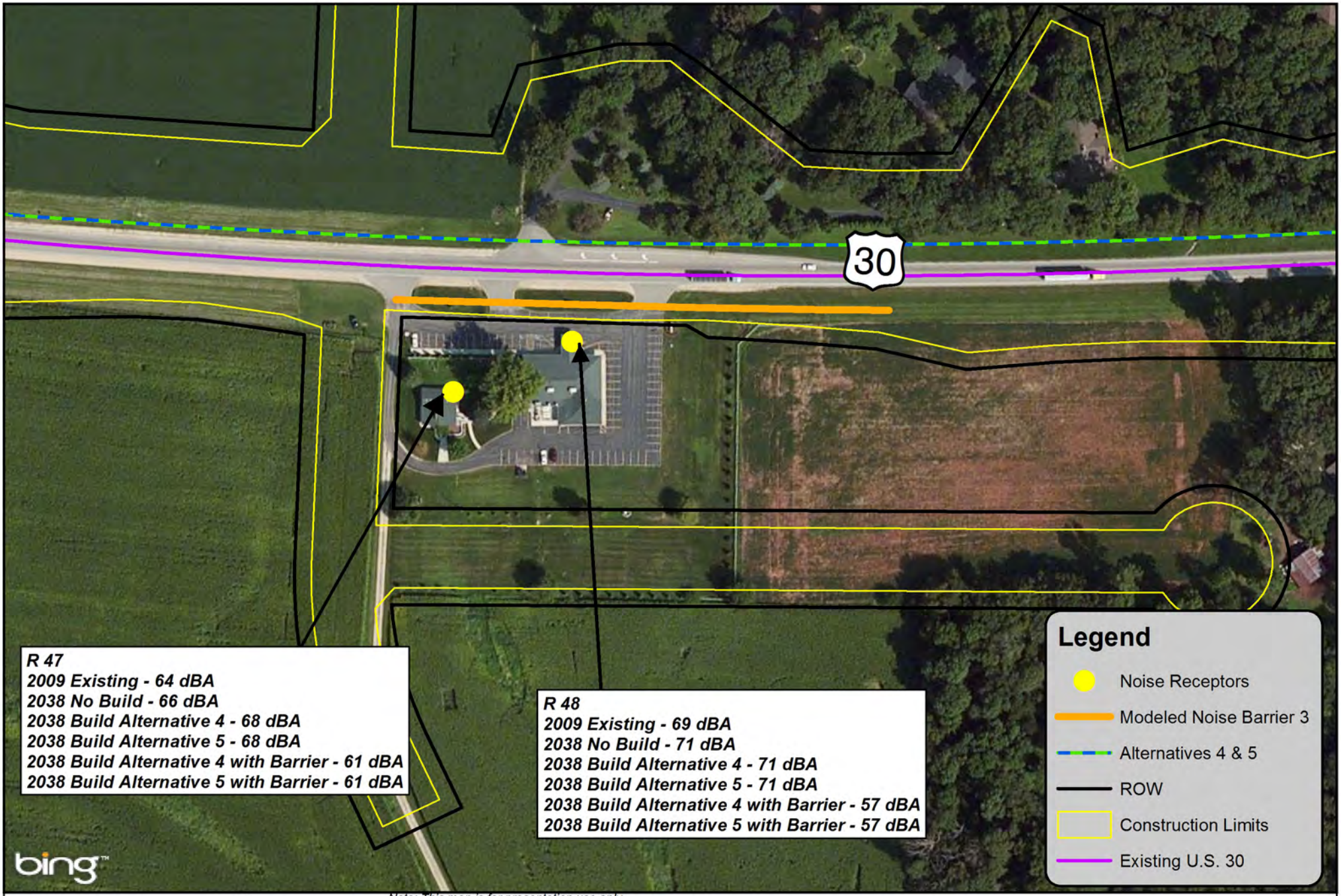
Exhibit 3-6b
Noise Barrier Analysis (Barrier 2: Feasible, not Reasonable)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



Note: This map is for presentation use only and not to be used for construction purposes.

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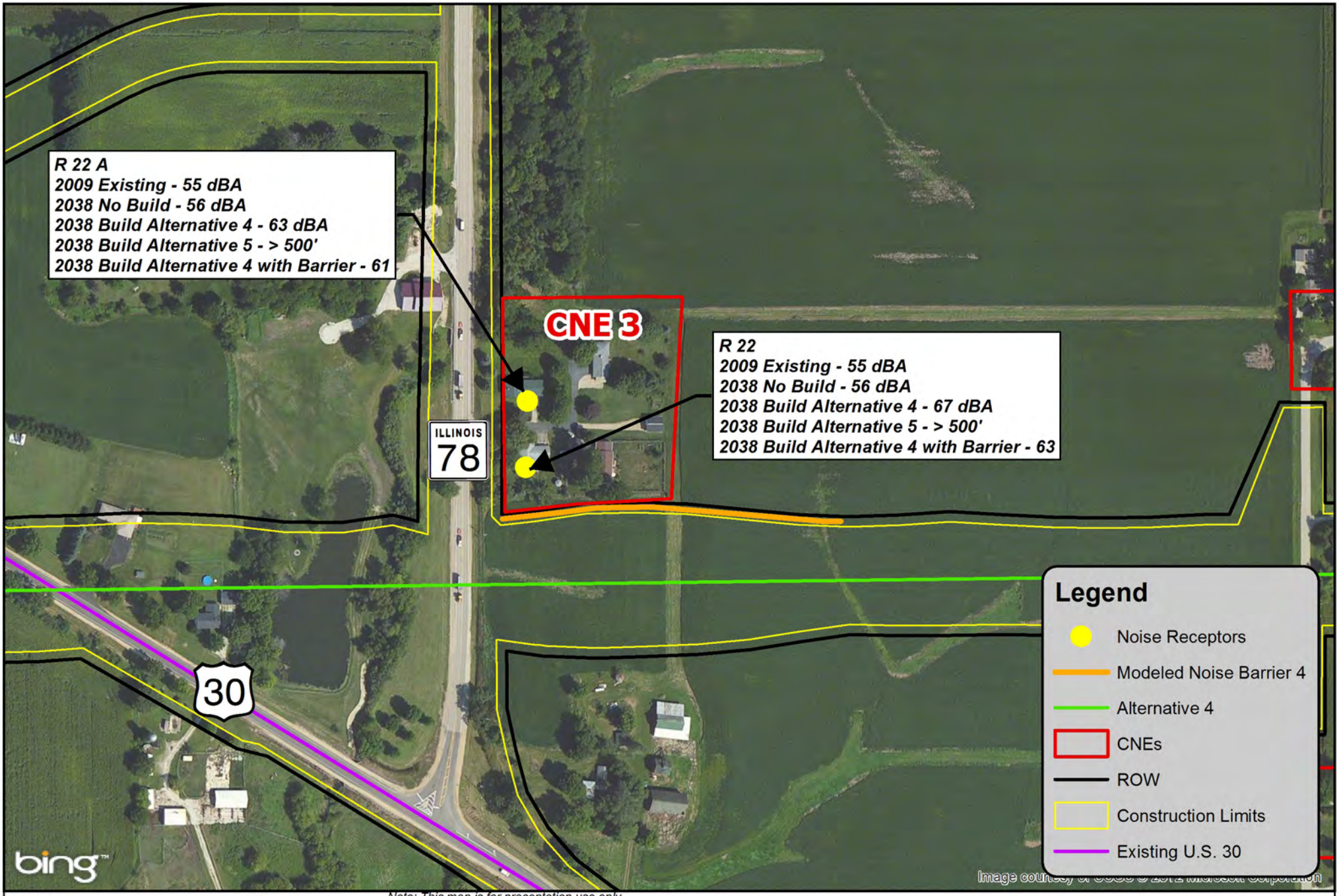
Exhibit 3-6c
Noise Barrier Analysis (Barrier 3: Feasible, not Reasonable)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



Note: This map is for presentation use only and not to be used for construction purposes.

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Exhibit 3-6d
Noise Barrier Analysis (Barrier 4: Not Feasible or Reasonable)
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

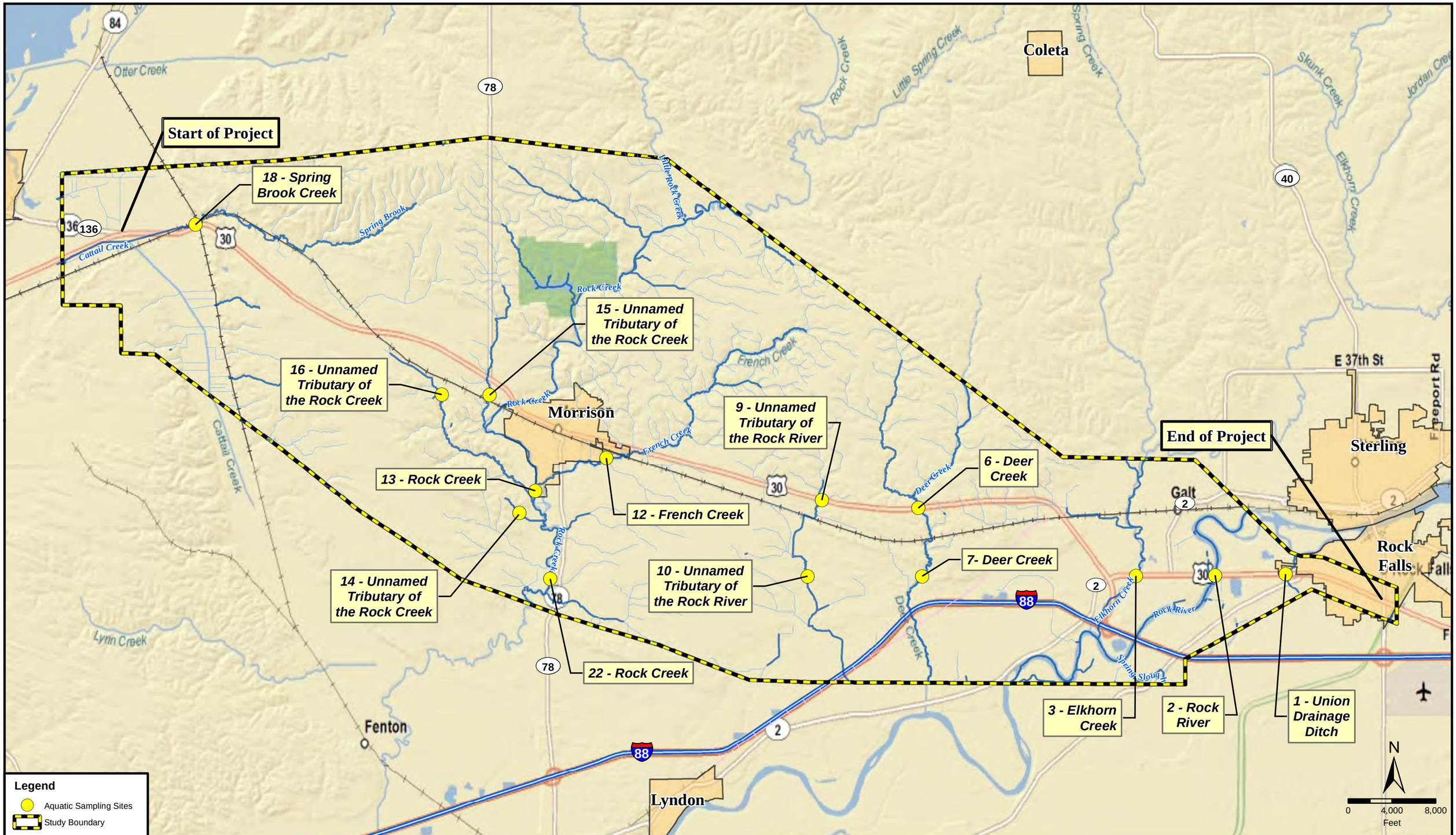


Exhibit 3-7
Project Area Streams & Aquatic Sampling Sites
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

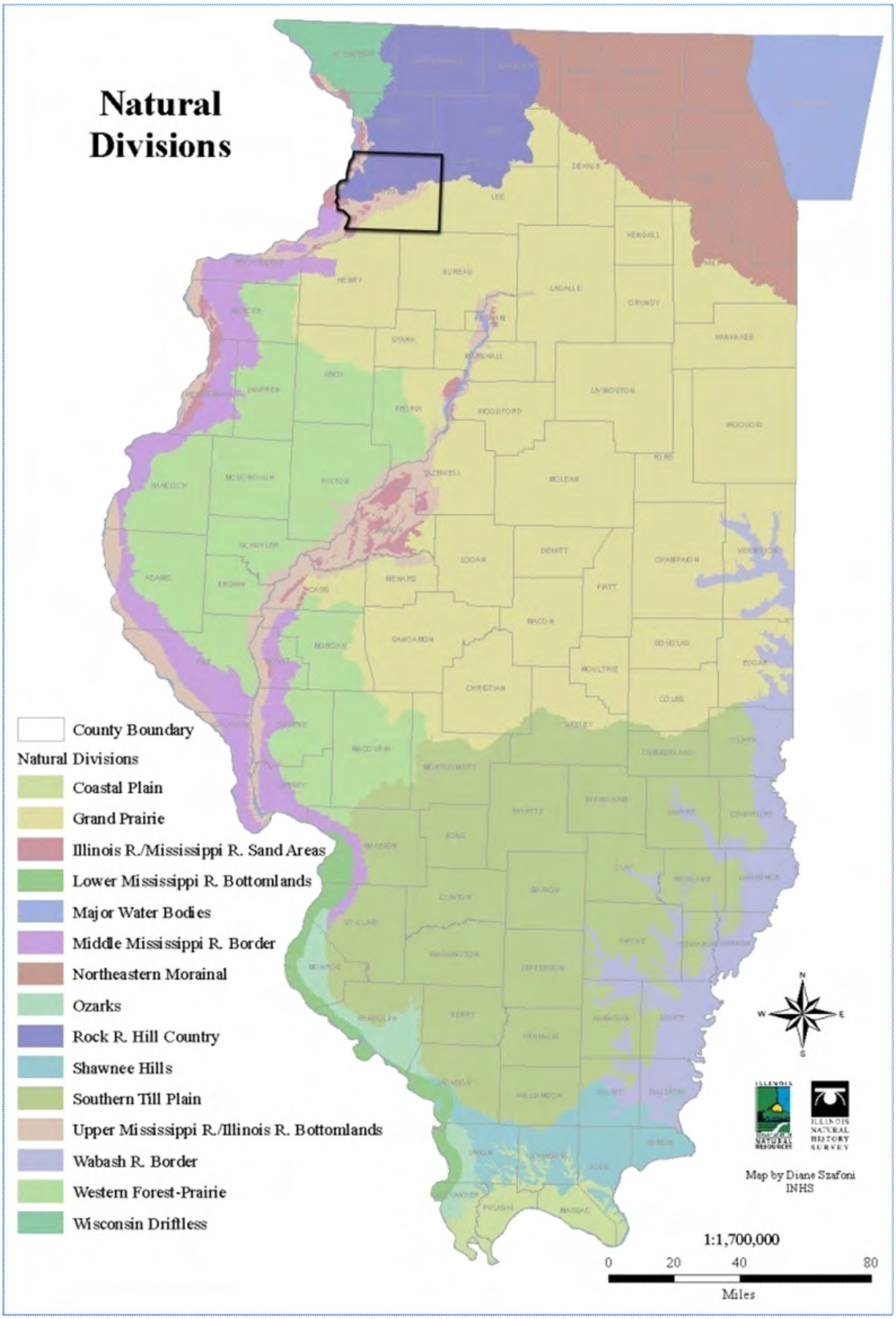


Exhibit 3-8
Illinois Natural Divisions
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Name 3-8 Illinois Natural Divisions

WHITESIDE COUNTY GREENWAYS & TRAILS PLAN

GREENWAY AND TRAIL RESOURCES

GREENWAY AND TRAIL RESOURCES INCLUDE THE NATURAL AND MAN MADE FEATURES THAT AFFECT OPEN SPACES AND THUS PROVIDE THE BASIS FOR DEVELOPING PLANS AND ESTABLISHING PRIORITIES FOR GREENWAYS. NATURAL FEATURES INCLUDE SOIL TYPES, TERRAIN, AND DRAINAGE CHARACTERISTICS WITH CORRESPONDING FLOOD PLAINS AND WETLANDS, AS WELL AS VEGETATION AND WILDLIFE HABITAT. MAN MADE FEATURES INCLUDE URBANIZATION AND THE ASSOCIATED CONSTRAINTS FOR GREENWAYS. OTHER MAN MADE FEATURES INCLUDE EXISTING TRAILS, ROADS AND RAILROAD RIGHTS OF WAY WHICH OFFER POTENTIAL FOR USE AS GREENWAYS OR TRAILS.

DRAINAGE IS PRIMARILY DIRECTED TO THE 2 MAJOR RIVERS WITHIN WHITESIDE COUNTY, THE ROCK RIVER AND THE MISSISSIPPI RIVER AND THEIR TRIBUTARIES. A LARGE PORTION OF CERTAIN PARTS OF THE COUNTY ARE WITHIN DESIGNATED FLOOD ZONES. THE FLOOD PLAINS OF THESE AND OTHER STREAMS OF THE COUNTY ARE NOT WELL SUITED FOR INTENSIVE DEVELOPMENT BUT HAVE GREAT VALUE AS WETLANDS AND LINEAR OPEN SPACE. THESE AREAS, ALONG WITH WOODED AND NATURAL AREAS THROUGHOUT THE COUNTY, OFFER WONDERFUL HABITAT FOR ALL TYPES OF WILDLIFE.

URBAN GROWTH BRINGS WITH IT OPPORTUNITIES FOR GREENWAY PLANNING AND DEVELOPMENT. LOCAL ZONING AND SUBDIVISION ORDINANCES CAN BE A POSITIVE INFLUENCE ON THE DEVELOPMENT OF THE GREENWAYS AND TRAILS. THE STERLING–ROCK FALLS AREA HAS THE HIGHEST GROWTH AND LOCAL SUBDIVISION ORDINANCES SHOULD PROVIDE FOR THE DEDICATION OF LAND OR CASH IN LIEU OF LAND FOR PARK AND RECREATIONAL PURPOSES, INCLUDING GREENWAYS AND TRAILS.

THE NEED TO PROVIDE QUALITY LAND USE RELATIONSHIPS WITH ADEQUATE OPEN SPACE AND RECREATIONAL AREAS ARE APPARENT AS POPULATION GROWTH CAN HAVE A MAJOR INFLUENCE ON THE NEED FOR AND DEVELOPMENT OF GREENWAYS.

THE MAJORITY OF THE COUNTY'S POPULATION IS IN THE STERLING/ROCK FALLS METRO AREA. IT IS ANTICIPATED THAT THERE WILL CONTINUE TO BE A DEMAND FOR SUBDIVISION WITHIN THOSE CITIES AS WELL AS WITHIN THE SMALL COMMUNITIES AND RURAL AREAS THROUGHOUT THE COUNTY. HOWEVER, SPECIAL EFFORT SHOULD BE MADE TO LIMIT RURAL GROWTH TO AREAS THAT HAVE OR WILL BE PROVIDED WITH SATISFACTORY ROADS AND INFRASTRUCTURE, AND TO DISCOURAGE URBAN DEVELOPMENT ON PRIME FARMLAND AND ENVIRONMENTALLY SENSITIVE AREAS. THESE EFFORTS SHOULD BE SUPPLEMENTED THROUGH PROPER SUBDIVISION AND ZONING REGULATIONS.

PUBLIC OPEN SPACE IS LAND OWNED BY PUBLIC ENTITIES AND ACCESSIBLE TO THE GENERAL PUBLIC. THE MAJORITY OF PUBLIC OPEN SPACE SITES IN WHITESIDE COUNTY ARE STATE AND MUNICIPAL PARK LAND. MORRISON ROCKWOOD STATE PARK, PROPHETSTOWN STATE PARK, BIG BEND CONSERVATION AREA, ALBANY MOUNDS HISTORIC SITE, THE HENNEPIN FEEDER CANAL AND THE U.S. FISH AND GAME WILDLIFE REFUGE ARE ALL PRIMARY EXAMPLES OF VALUABLE PUBLIC OPEN SPACE AND GREENWAY AREAS.

MANY SMALL TO MEDIUM NEIGHBORHOOD PARKS ARE PROVIDED BY ALL OF THE CITIES AND VILLAGES WITHIN THE COUNTY. THE LARGEST ASSET THE COUNTY POSSESSES FOR THE DEVELOPMENT OF GREENWAYS AND TRAILS ARE THE ROCK RIVER, THE MISSISSIPPI RIVER AND THE HISTORIC HENNEPIN FEEDER CANAL. THE MISSISSIPPI HAS ALREADY GENERATED THE DEVELOPMENT OF THE GREAT RIVER TRAIL THROUGHOUT THE ENTIRE LENGTH OF THE COUNTY AND ALL BUT A SMALL PORTION HAS BEEN COMPLETED AND IS EXPERIENCING WONDERFUL USE. THE ROCK RIVER IS CURRENTLY CREATING THE INTEREST TO DEVELOP A TRAIL SYSTEM FROM THE PROPOSED UPPER DAM IN STERLING TO THE OPPOLD MARINA AT THE EASTERN EDGE OF THE COUNTY. ROCK FALLS IS ALSO PLANNING A TRAIL ALONG THE RIVER FROM THE UPPER DAM TO LAWRENCE PARK, THE PARK ON AN ISLAND. THE OTHER GEM OF THE COUNTY IS THE HISTORIC HENNEPIN FEEDER CANAL, BUILT TO CONNECT THE ROCK RIVER WITH THE ILLINOIS MISSISSIPPI CANAL; IT IS THE PERFECT EXAMPLE OF A LINEAR PARK CONTAINING WILDLIFE HABITAT, WATER AND A SCENIC TRAIL TO RIVAL ANY OTHER IN THE STATE.

IMPLEMENTATION

AS THE WHITESIDE COUNTY GREENWAY AND TRAIL PLAN IS COMPLETED, THE PLANNING PROCESS ENTERS THE CRUCIAL PHASE OF IMPLEMENTATION. THE PLAN CREATES A VISION TO SERVE AS AN ADVISORY GUIDE FOR PUBLIC AND PRIVATE ACTIONS REGARDING GREENWAY PRESERVATION AND DEVELOPMENT WITHIN THE COUNTY. CONSISTENT WITH THIS PURPOSE, THE PLANNING PROCESS BEGAN WITH THE CREATION OF GREENWAY AND TRAIL COALITION, A CITIZEN-BASED ORGANIZATION CHARGED WITH EVALUATING THE EXISTING GREENWAY RESOURCES IN RELATION TO ANTICIPATED FUTURE NEEDS FOR GREENWAYS.

TO FULFILL THE PLANS PURPOSE AS A GUIDE FOR THE REGION WIDE DEVELOPMENT AND PRESERVATION OF GREENWAYS, THIS CHAPTER PRESENTS A SUMMARY OF THE AVAILABLE METHODS AND THE RESPONSIBILITIES FOR IMPLEMENTATION TO ACHIEVE THE VISION FOR WHITESIDE COUNTY.

1. A NUMBER OF METHODS AND STRATEGIES ARE AVAILABLE TO AID IN THE IMPLEMENTATION OF THE PROPOSED GREENWAYS AND TRAILS. THESE INCLUDE THE USE OF REGULATORY ORDINANCES AND A VARIETY OF ACQUISITION, OWNERSHIP AND FINANCIAL STRATEGIES.
2. REGULATORY ORDINANCES INCLUDING ZONING, SUBDIVISION REGULATIONS, AND THE COMPREHENSIVE PLAN MAY BE USED BY LOCAL GOVERNMENTS TO GUIDE DEVELOPMENT AND ALSO HAVE REQUIREMENTS FOR GREENWAY CREATION AND PRESERVATION. REGULATORY ORDINANCES PROVIDE A LEGAL FRAMEWORK FOR THE IMPLEMENTATION OF PROPOSED GREENWAYS.
3. ZONING CONTROLS THE USE OF LAND AND THE ZONING ORDINANCE IS PROBABLY THE MOST EFFECTIVE MEANS FOR IMPLEMENTING THE GREENWAY AND TRAIL PLAN. THE COUNTY SHOULD REVIEW ITS CURRENT ZONING ORDINANCE TO ENSURE THAT IT INCLUDES ADEQUATE PROVISIONS TO PRESERVE OPEN SPACE AND WILDLIFE HABITAT.
4. THE SUBDIVISION ORDINANCE ALSO REPRESENTS ANOTHER EFFECTIVE TOOL FOR IMPLEMENTING GREENWAY REQUIREMENTS. BY SETTING STANDARDS FOR THE DESIGN OF STREETS, SIDEWALKS, UTILITIES AND COMMUNITY FACILITIES, SUBDIVISION REGULATIONS CAN GREATLY AFFECT THE OVERALL PATTERNS AND QUALITY OF DEVELOPMENT. THESE REGULATIONS MAY ALSO REQUIRE DEDICATIONS OF LAND, OR FEE IN LIEU OF LAND, FOR PARKS, OPEN SPACE OR TRAILS IN NEW DEVELOPMENTS. SUBDIVISION REGULATIONS MAY ALSO REQUIRE DEDICATIONS FOR STORM WATER DETENTION BASINS DESIGNED TO SERVE DUAL USAGE AS RECREATIONAL FACILITIES.

ACQUISITION AND OWNERSHIP STRATEGIES ARE THE MOST DIFFICULT ASPECT OF IMPLEMENTING A GREENWAYS PLAN. A WIDE VARIETY OF ACQUISITION OPTIONS ARE AVAILABLE FOR CONSIDERATION. A NUMBER OF THESE ARE WIDELY ACCEPTED AND OFTEN USED WITH MUCH SUCCESS. A NUMBER OF OTHER LESS COMMON BUT INNOVATIVE OPTIONS ARE ALSO AVAILABLE AND MAY BE EFFECTIVE IN CERTAIN SITUATIONS.

ALONG WITH DETERMINING HOW TO ACQUIRE A PARTICULAR GREENWAY, ANOTHER IMPORTANT ISSUE MUST BE ADDRESSED: WHO WILL OWN IT? THERE ARE THREE AVENUES OF OWNERSHIP – PRIVATE, PUBLIC OR MIXED OWNERSHIP. USUALLY, IF THE GREENWAY WILL BE USED FOR A RECREATIONAL PURPOSE OR IS USED AS A MODE OF TRANSPORTATION, LOCAL GOVERNMENT WOULD BE THE MOST LIKELY OWNER. HOWEVER, IF THE GREENWAY SERVES AN ENVIRONMENTAL PURPOSE SUCH AS WETLANDS PROTECTION, WILDLIFE HABITAT PROTECTION, OR STREAM PRESERVATION, A PRIVATE ENTITY SUCH AS A LAND TRUST MAY BE THE MOST APPROPRIATE OWNER OF THE GREENWAY. THERE MAY BE INSTANCES WHERE MULTIPLE OR JOINT OWNERSHIP OF A GREENWAY WILL OCCUR, PARTICULARLY FOR REGIONAL GREENWAY SYSTEMS OR WHERE IMPLEMENTATION AND MANAGEMENT COSTS ARE A BURDEN FOR ONE ENTITY. A NUMBER OF POTENTIAL ACQUISITION AND OWNERSHIP STRATEGIES HAVE BEEN IDENTIFIED BY THE CONSERVATION FUND, A NATIONAL NONPROFIT LAND AND WATER CONSERVATION ORGANIZATION THAT PROTECTS LAND THROUGH PARTNERSHIPS. THESE STRATEGIES ARE IDENTIFIED IN THE FOLLOWING TABLES.

SUMMARY

THE FOLLOWING IS A SUMMARY OF THE FUTURE ACTIONS THAT ARE REQUIRED TO SUCCESSFULLY IMPLEMENT THIS PLAN.

1. THE PROCESS SHOULD BEGIN WITH THE OFFICIAL ADOPTION OF THE PLAN BY WHITESIDE COUNTY.
2. THE GREENWAY AND TRAILS COALITION SHOULD DETERMINE THE FEASIBILITY OF ONE OF ITS MEMBER ORGANIZATIONS, BECOMING A FOUNDATION OR SIMILAR ENTITY WITH THE LEGAL CAPABILITIES TO ACQUIRE PROPERTY, MANAGE AND MAINTAIN GREENWAYS ON A COUNTYWIDE BASIS, AND RECEIVE AND DISPERSE FUNDS DERIVED FROM PRIVATE DONATIONS, GOVERNMENT GRANTS AND OTHER SOURCES.
3. ONCE THIS HAS BEEN DETERMINED, THE COALITION OR WHATEVER MANAGEMENT GROUP HAS BEEN CREATED SHOULD TARGET FUTURE GREENWAYS FOR IMPLEMENTATION. STRATEGIES FOR ACQUISITION, OWNERSHIP AND FINANCING OR TARGETED GREENWAYS SHOULD BE EVALUATED TO MAXIMIZE THE USE OF PRIVATE FUNDING SOURCES ALONG WITH FEDERAL AND STATE GRANT PROGRAMS.
4. THE COALITION IN COOPERATION WITH WHITESIDE COUNTY SHOULD PERFORM AN ANNUAL REVIEW OF THE GREENWAY AND TRAIL PLAN TO MEASURE PROGRESS AND TO TARGET FUTURE PROJECTS FOR NEXT YEAR. MAJOR UPDATES OF THE PLAN SHOULD BE CONSIDERED AT INTERVALS OF NO MORE THAN 10 YEARS.
5. AN ACTIVE PUBLIC RELATIONS AND EDUCATION CAMPAIGN SHOULD BE CARRIED OUT BY THE COALITION TO BROADEN PUBLIC UNDERSTANDING AND SUPPORT FOR GREENWAYS. EFFECTIVE SOURCES SHOULD INCLUDE A NEWSLETTER, SLIDE AND VIDEO PRESENTATIONS AND IMPLEMENTING A WHITESIDE COUNTY WEB SITE TO ATTRACT TOURISM.

TYPES OF TRAILS

DEDICATED TRAILS ARE DESIGNED AND BUILT OFF-ROAD FOR THE EXCLUSIVE USE OF PEDESTRIANS, BICYCLISTS, CROSS-COUNTRY SKIERS, SKATERS, PEOPLE IN WHEELCHAIRS, EQUESTRIANS, OR BY MOTORIZED USE SUCH AS SNOWMOBILES. THE USES ALLOWED ON EACH TRAIL ARE ESTABLISHED BY THE ORGANIZATIONS AND PUBLIC AGENCIES INVOLVED IN ITS ACQUISITION, DEVELOPMENT AND MAINTENANCE. ALTHOUGH MORE THAN ONE TYPE OF NON-MOTORIZED USE IS ALLOWED ON MOST TRAILS, MOTORIZED RECREATIONAL VEHICLE TRAFFIC TYPICALLY IS SEGREGATED BY LOCATION OR SEASON.

SHARED-USE TRAILS ARE LOW-VOLUME STREETS OR RURAL ROADS DESIGNATED AND INTENDED TO BE SHARED BY EXISTING VEHICULAR TRAFFIC WITH PROPOSED BICYCLE AND OTHER NON-MOTORIZED USES. GENERALLY SHARED-USE TRAILS WILL REQUIRE AT LEAST SOME SIGNAGE AND PERHAPS PAINT STRIPING TO IDENTIFY THE ROUTES AND TO ALERT MOTORISTS. SOME MAY ACCOMMODATE OTHER USES SUCH AS EQUESTRIANS OR SNOWMOBILING WITHIN THE RIGHT-OF-WAY, ALTHOUGH NOT ON THE PAVEMENT. STATE LAW AND LOCAL ORDINANCES GOVERN SUCH USES.

GREENWAY DEFINITION

A GREENWAY IS ANY LINEAR OPEN SPACE ESTABLISHED ALONG EITHER A NATURAL CORRIDOR SUCH AS A STREAM VALLEY OR OVERLAND ALONG A MAN-MADE CORRIDOR SUCH AS A CONVERTED RAILROAD RIGHT-OF-WAY, CANAL, SCENIC ROAD OR PARKWAY. LIKE ARTERIES LINKING VITAL ORGANS, GREENWAYS CONNECTING PARKS, NATURE PRESERVES, WETLANDS, STREAMS, CULTURAL AND HISTORIC SITES WITH EACH OTHER AND WITH POPULATED AREAS.

SOME GREENWAYS – THOUGH NOT ALL – ARE TRAILS THAT ALLOW HUMANS PASSAGE INTO AND THROUGH OTHER NATURAL WORLD. ANY NATURAL OR LANDSCAPED COURSE FOR PEDESTRIANS OR BICYCLES IS A GREENWAY.

COUNTY WIDE PRIORITY SCHEDULE

THE ULTIMATE GOAL OF THIS PROJECT IS FOR THE WHITESIDE COUNTY GREENWAY AND TRAIL PLAN TO BECOME A LINK IN THE GRAND ILLINOIS TRAIL.

OBVIOUSLY, THE FIRST STEP TOWARD ACHIEVING THIS IS FOR WHITESIDE COUNTY TO HAVE A CONTINUOUS PATH STRETCHING FROM THE HENNEPIN FEEDER CANAL ON THE EAST END OF THE COUNTY, TRAVELING CROSS-COUNTY TO THE MISSISSIPPI RIVER AND THE GREAT RIVER TRAIL ON THE WEST.

AS A CONDITION TO ALL OF THE ABOVE, THE WHITESIDE COUNTY BOARD SHOULD ADOPT A RESOLUTION CREATING A TASK FORCE WHICH WILL COORDINATE THE CONSTRUCTION OF THE VARIOUS SEPARATELY FUNDED PORTIONS OF THE CONSTRUCTION OF THE LOCAL GREENWAYS AND TRAILS OVER THE NEXT FIVE YEARS.

THE FOLLOWING PRIORITY SCHEDULE SHOULD BE USED AS A GUIDELINE FOR THE IMPLEMENTATION OF THE PLAN.

1. ROCKWOOD TRAIL FROM KELLY PARK TO COVERED BRIDGE, COVERED BRIDGE TO ROCKWOOD STATE PARK, AND ROCKWOOD STATE PARK TO GREAT RIVER TRAIL AT FULTON – MORRISON/MT. PLEASANT TOWNSHIP.
2. CONNECT MORRISON CITY TRAILS TO HAZEL RD. TO STERLING TO ROCK FALLS HENNEPIN FEEDER CANAL.
3. CONNECT MORRISON CITY TRAIL AT SAWYER & FELDMAN RD TO LYNDON AT OLD BRIDGE OVER ROCK RIVER.
4. RIVERFRONT TRAIL FROM UPPER DAM TO OPPOLD MARINA – STERLING PARK DISTRICT
5. RIVERFRONT TRAIL FROM UPPER DAM TO LOWER DAM – COLOMA PARK DISTRICT/CITY OF ROCK FALLS
6. RIVERFRONT TRAIL CONNECTION FROM MERIDOSIA ROAD TO BUNGE GRAIN – VILLAGE OF ALBANY
7. RIVERFRONT TRAIL FROM LOWER DAM TO LAWRENCE PARK – COLOMA PARK DISTRICT/CITY OF ROCK FALLS
8. LYNN BOULEVARD TRAIL FROM LINCOLN HIGHWAY TO LOCUST AVENUE – STERLING PARK DISTRICT
9. BRIDGE FOR CREEK CROSSING AT MARINA – CITY OF FULTON
10. HERITAGE PARK TRAIL FROM CORDOVA RIVER TO ALBANY ROAD, CORDOVA ROAD TO GREAT RIVER ROAD – VILLAGE OF ERIE
11. LYNN BOULEVARD TRAIL FROM LOCUST AVENUE TO WESTWOOD – STERLING PARK DISTRICT
12. CATTAIL PARK CONNECTION TO THE GREAT RIVER TRAIL – CITY OF FULTON
13. LYNDON ROAD CONNECTION TO THE HISTORIC LYNDON BRIDGE – LYNDON/PROPHETSTOWN

LOCAL PRIORITY SCHEDULE

THE FOLLOWING PRIORITY LISTS FOR EACH MUNICIPALITY IS BASED ON THE CONDITIONS AT THE TIME OF THE CREATION OF THIS PLAN. THE PRIORITY LISTS SHOULD ALSO BE PART OF THE ONGOING REVIEW PROCESS AND REVISED AS NEEDED.

ALBANY
1. RIVERFRONT TRAIL CONNECTION FROM MERIDOSIA ROAD TO BUNGE GRAIN

ERIE
1. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES
2. HERITAGE PARK TRAIL FROM CORDOVA ROAD TO ALBANY ROAD

FULTON
1. CATTAIL PARK CONNECTION TO THE GREAT RIVER TRAIL
2. BRIDGE FOR CREEK CROSSING AT MARINA

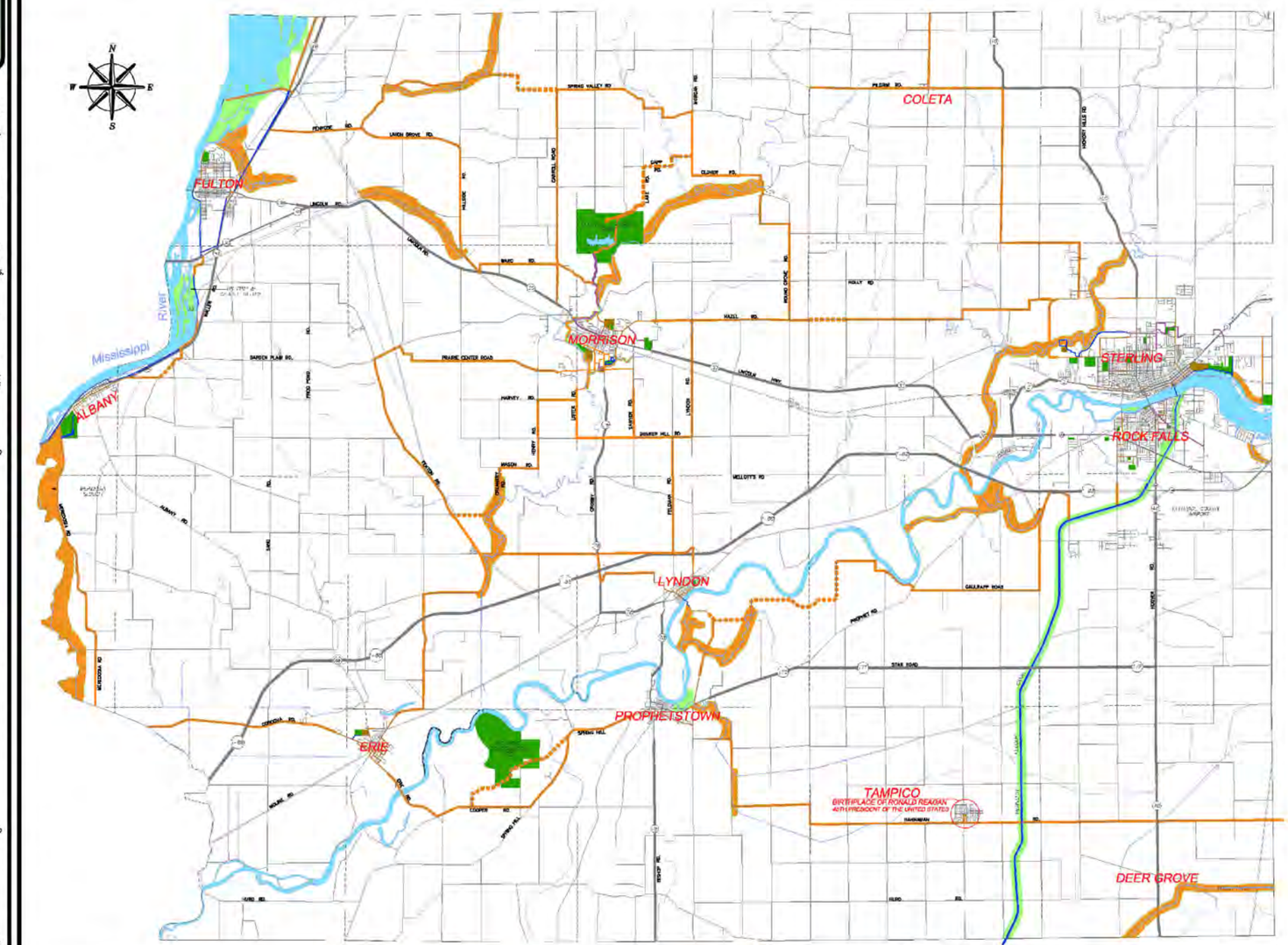
LYNDON
1. LYNDON ROAD CONNECTION TO THE HISTORIC LYNDON BRIDGE
2. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES

MORRISON
1. ROCKWOOD TRAIL FROM KELLY PARK TO COVERED BRIDGE, COVERED BRIDGE TO ROCKWOOD STATE PARK, AND ROCKWOOD STATE PARK TO GREAT RIVER TRAIL AT FULTON – MORRISON/MT. PLEASANT TOWNSHIP.
2. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES THAT CONNECT LOCAL PARKS & SCHOOLS.
3. DEDICATED PATH FROM JACKSON ST. TO NEW CITY PARK (SPORTS COMPLEX)
4. NEW RT. 30 BRIDGE OVER ROCK CREEK W/ DEDICATED PATH
5. DEDICATED PATH ALONG N. SIDE RT 30 FROM GENESEE TO THE NEW BRIDGE OVER ROCK CREEK.
6. SHARED USE TRAIL EXTENSION FROM INDUSTRIAL PARK RD. TO SAWYER RD.
7. SHARED USE TRAIL ON GENESEE AVE. TO PRAIRIE CENTER RD. TO HENRY RD.
8. DEDICATED TRAIL FROM W. END PROPOSED ROCK CREEK BRIDGE ALONG N. SIDE OF ROCK CREEK TO COVERED BRIDGE
9. DEDICATED TRAIL FROM ACADEMIC DR. TO THE JUNCTION OF RT. 78 & INDUSTRIAL PARK RD.

PROPHETSTOWN
1. LYNDON ROAD CONNECTION TO THE HISTORIC LYNDON BRIDGE
2. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES

ROCK FALLS
1. RIVERFRONT TRAIL FROM UPPER DAM TO LOWER DAM
2. RIVERFRONT TRAIL FROM LOWER DAM TO LAWRENCE PARK
3. SIGNAGE FROM LAWRENCE PARK TO FEEDER CANAL
4. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES

STERLING
1. RIVERFRONT TRAIL FROM UPPER DAM TO OPPOLD MARINA
2. LYNN BOULEVARD TRAIL FROM LINCOLN HIGHWAY TO LOCUST AVENUE
3. LYNN BOULEVARD TRAIL FROM LOCUST AVENUE TO WESTWOOD
4. MARKING, STRIPING, AND BICYCLE SAFE STORM SEWER GRATES OF SHARED USE ROUTES



LEGEND

- SHARED USE TRAIL (PAVED)
- SHARED USE TRAIL (GRAVEL)
- EXISTING DEDICATED TRAIL
- PROPOSED DEDICATED TRAIL
- EXISTING GREENWAY OR PARK
- PROPOSED GREENWAY

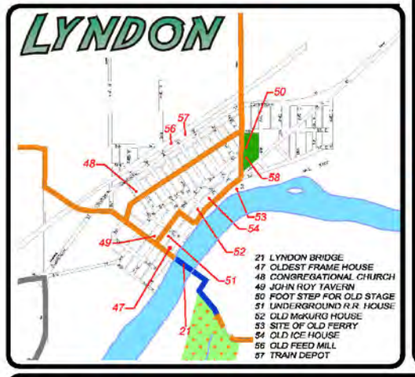
WHITESIDE COUNTY GREENWAYS & TRAILS PLAN

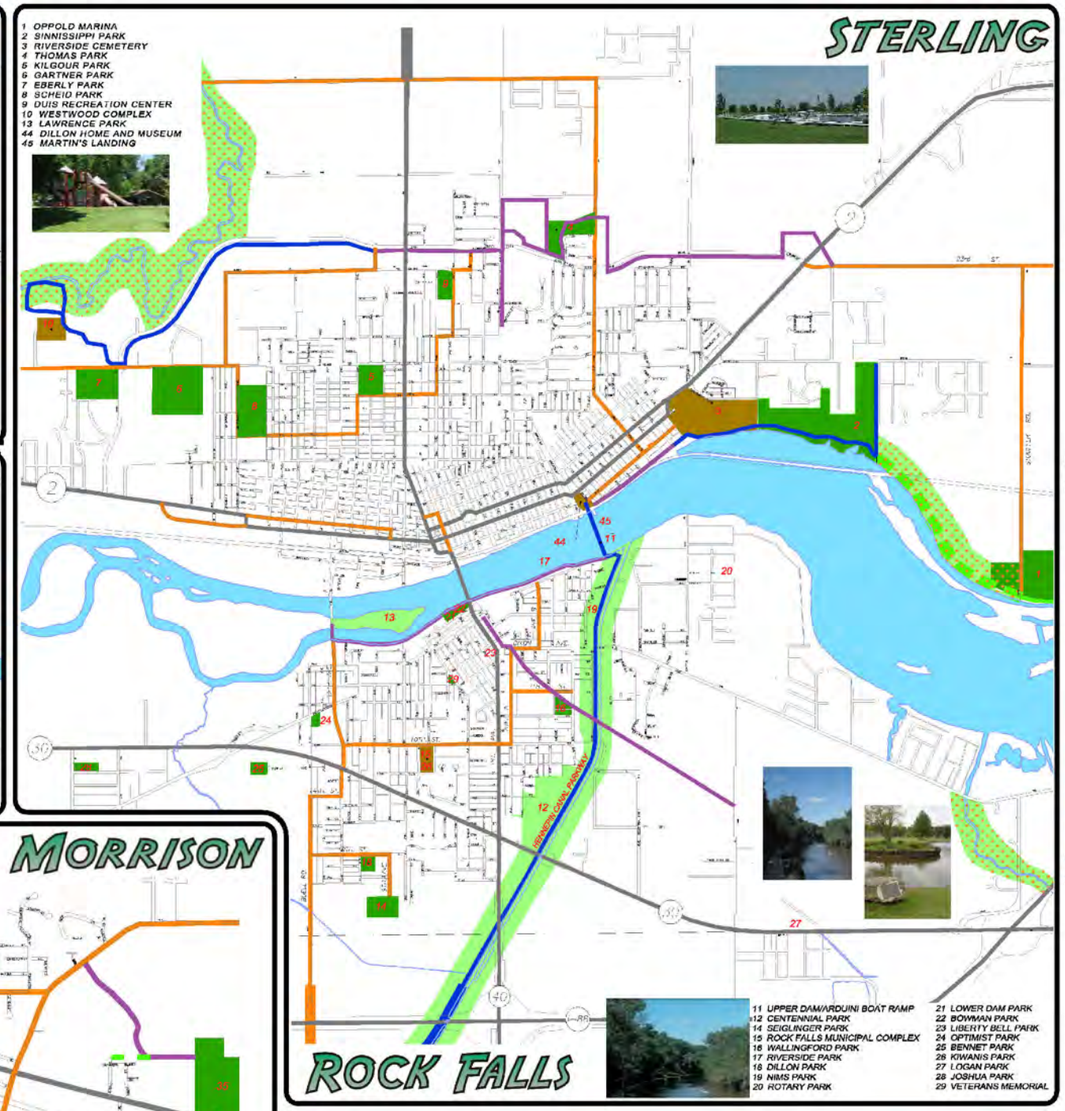
WHITESIDE COUNTY
wendler
GROUNDBREAKING SOLUTIONS
engineers • surveyors • scientists

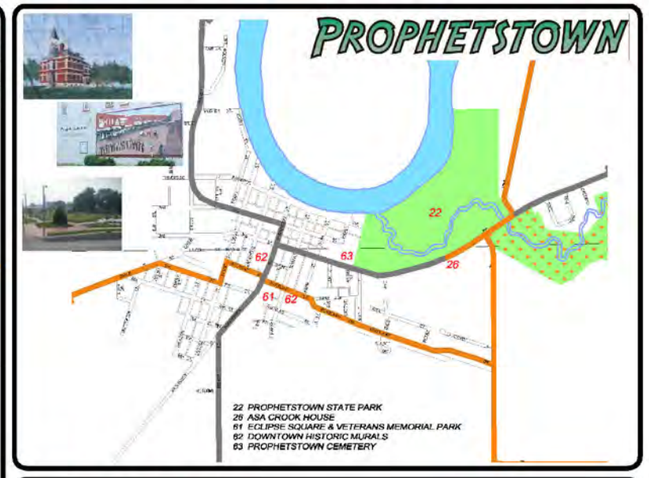
ILLINOIS DEPARTMENT OF NATURAL RESOURCES

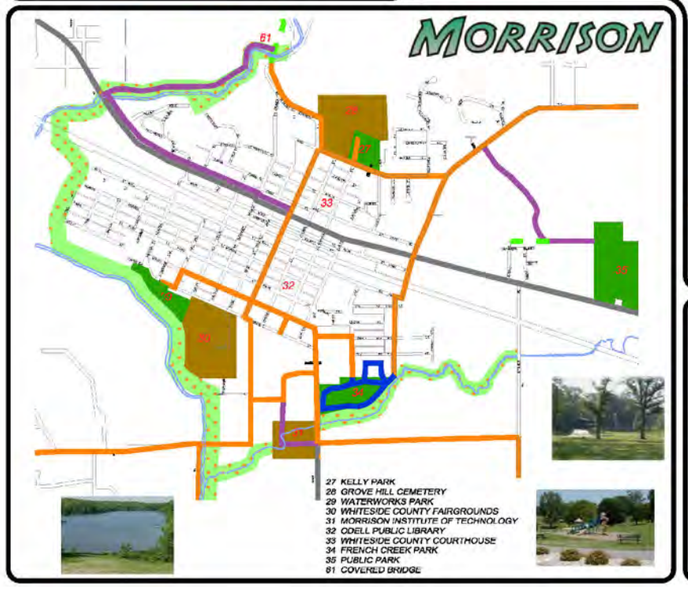
Exhibit 3-9a
Whiteside County Greenway and Trails Plan
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

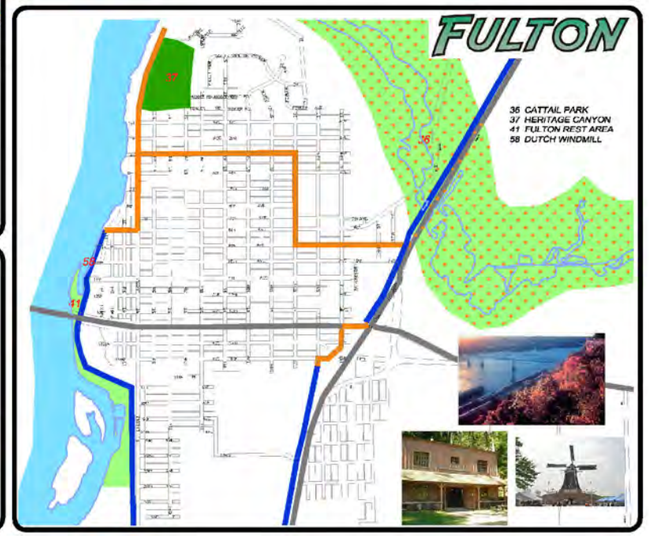
Name: 3-9a Whiteside County Greenway and Trails Plan











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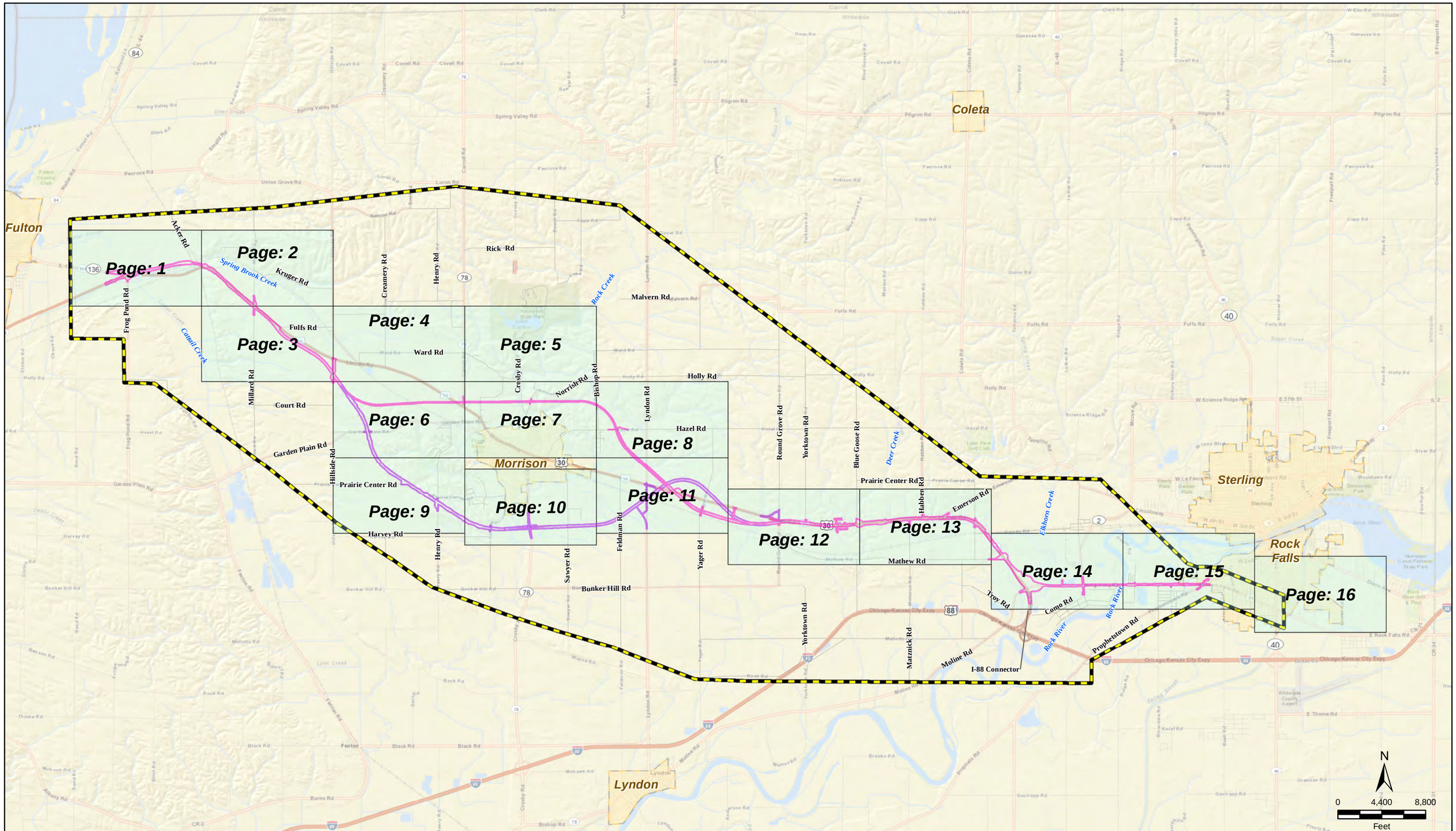
Not to Scale

Exhibit 3-9b
Whiteside County Greenway and Trails Plan
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



Index Sheet of Exhibit 3-10
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

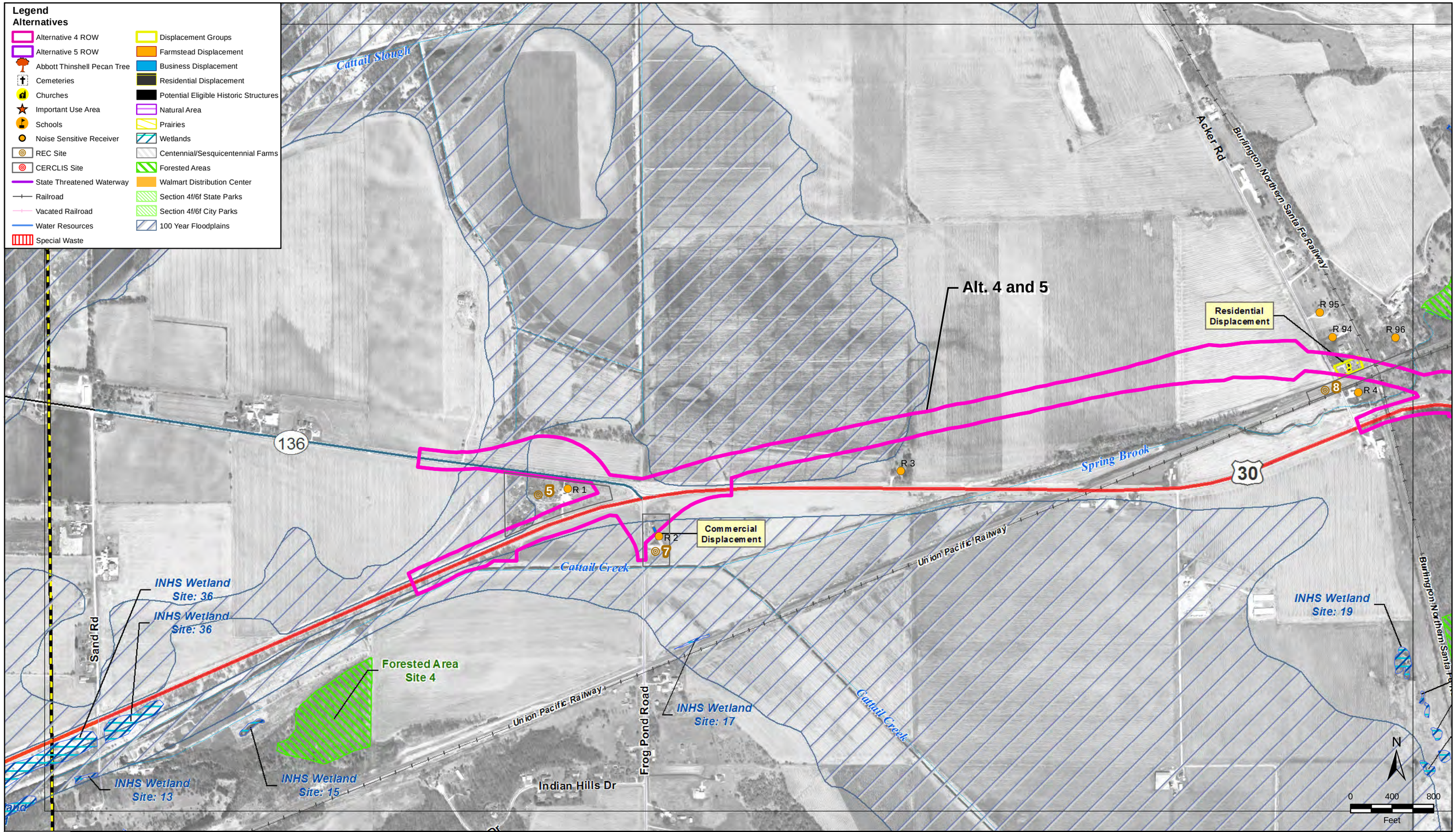


Exhibit 3-10, Page 1

U.S. 30 Supplemental Draft Environmental Impact Statement

Whiteside County, Illinois

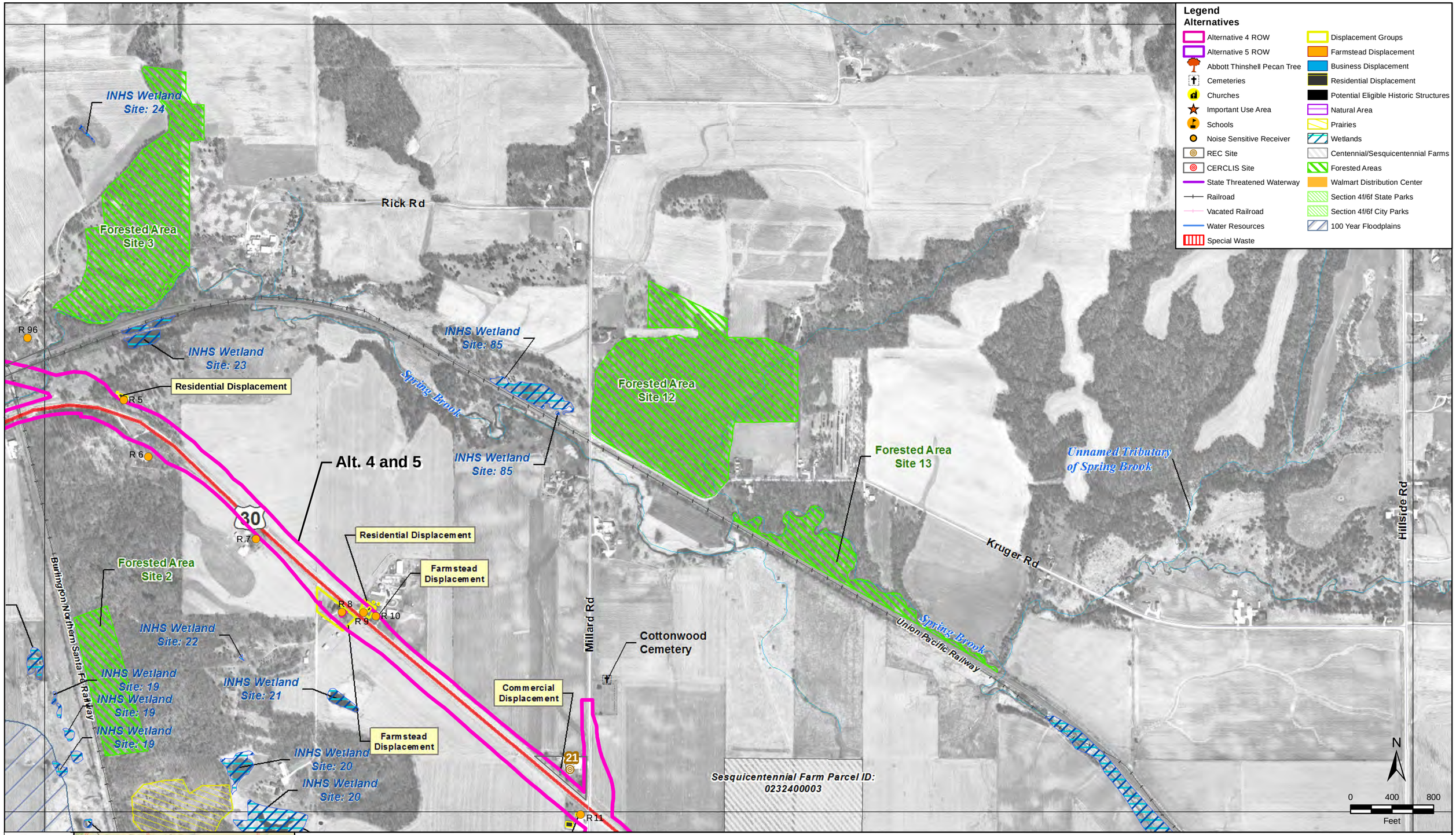


Exhibit 3-10, Page 2
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Site: 20

INHS Wetland Site: 20

INHS Wetland Site: 19

INHS Wetland Site: 19

INHS Wetland Site: 18

Forested Area Site 5

Forested Area Site 6

Burlington Northern Santa Fe Railway

Residential Displacement

R 11

R 12

25

Farmstead Displacement

Sesquicentennial Farm Parcel ID: 0232400003

26

R 13

Abbott Thinshell Pecan Tree

R 14

Millard Rd

Fulfs Rd

R 15

Alt. 4 and 5

Historic Site: #6

R 16

30

INHS Wetland Site: 86

INHS Wetland Site: 86

Union Pacific Railway

Hillside Rd

Well Rd

Historic Site: #5

29

R 17

N

0 400 800

Feet

Legend

Alternatives

- Alternative 4 ROW
- Alternative 5 ROW
- Abbott Thinshell Pecan Tree
- Cemeteries
- Churches
- Important Use Area
- Schools
- Noise Sensitive Receiver
- REC Site
- CERCLIS Site
- State Threatened Waterway
- Railroad
- Vacated Railroad
- Water Resources
- Special Waste
- Displacement Groups
- Farmstead Displacement
- Business Displacement
- Residential Displacement
- Potential Eligible Historic Structures
- Natural Area
- Prairies
- Wetlands
- Centennial/Sesquicentennial Farms
- Forested Areas
- Walmart Distribution Center
- Section 4f/6f State Parks
- Section 4f/6f City Parks
- 100 Year Floodplains

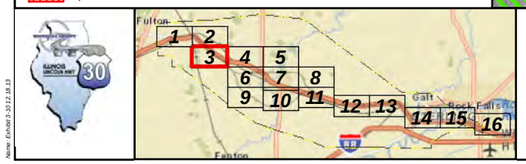
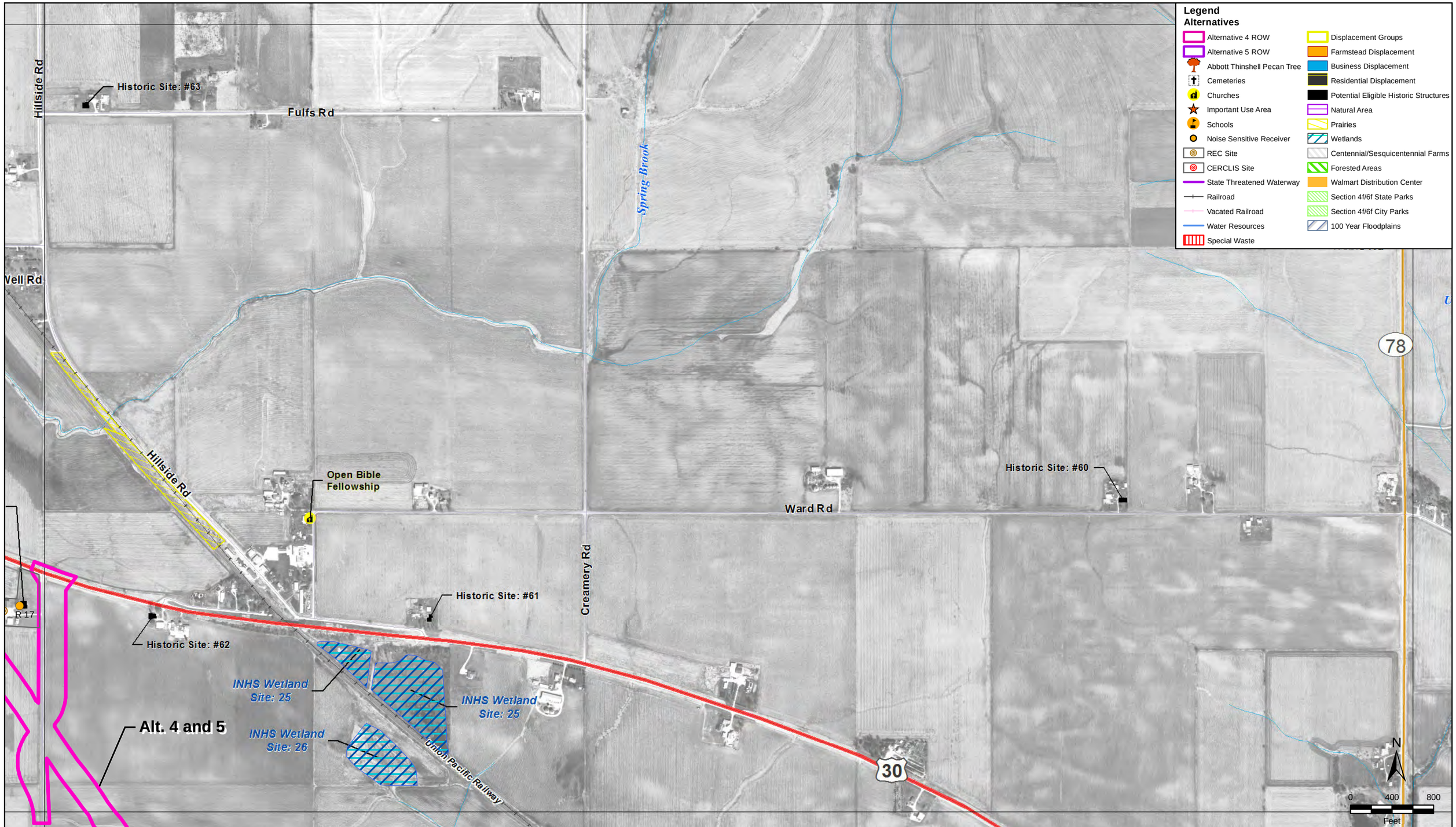


Exhibit 3-10, Page 3

U.S. 30 Supplemental Draft Environmental Impact Statement

Whiteside County, Illinois



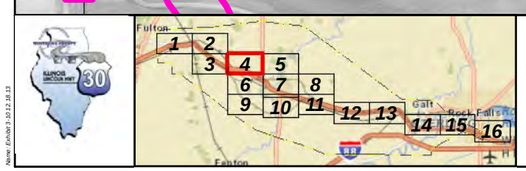


Exhibit 3-10, Page 4
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Morrison-Rockwood State Park

Morrison Rockwood Park Rd

Rock Creek

Unnamed Tributary of Rock Creek

78

Rd

RockwoodCt

Crosby Rd

Rock Creek

Family Burial 1

Forested Area Site 7

INHS Wetland Site: 108

INHS Wetland Site: 106

INHS Wetland Site: 105

Bishop Rd

N

0 400 800

Feet

Legend

Alternatives

- Alternative 4 ROW
- Alternative 5 ROW
- Abbott Thinshell Pecan Tree
- Cemeteries
- Churches
- Important Use Area
- Schools
- Noise Sensitive Receiver
- REC Site
- CERCLIS Site
- State Threatened Waterway
- Railroad
- Vacated Railroad
- Water Resources
- Special Waste
- Displacement Groups
- Farmstead Displacement
- Business Displacement
- Residential Displacement
- Potential Eligible Historic Structures
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- Section 4f/6f State Parks
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- 100 Year Floodplains

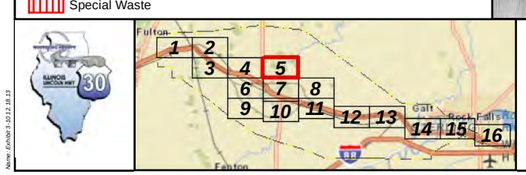


Exhibit 3-10, Page 5

U.S. 30 Supplemental Draft Environmental Impact Statement

Whiteside County, Illinois

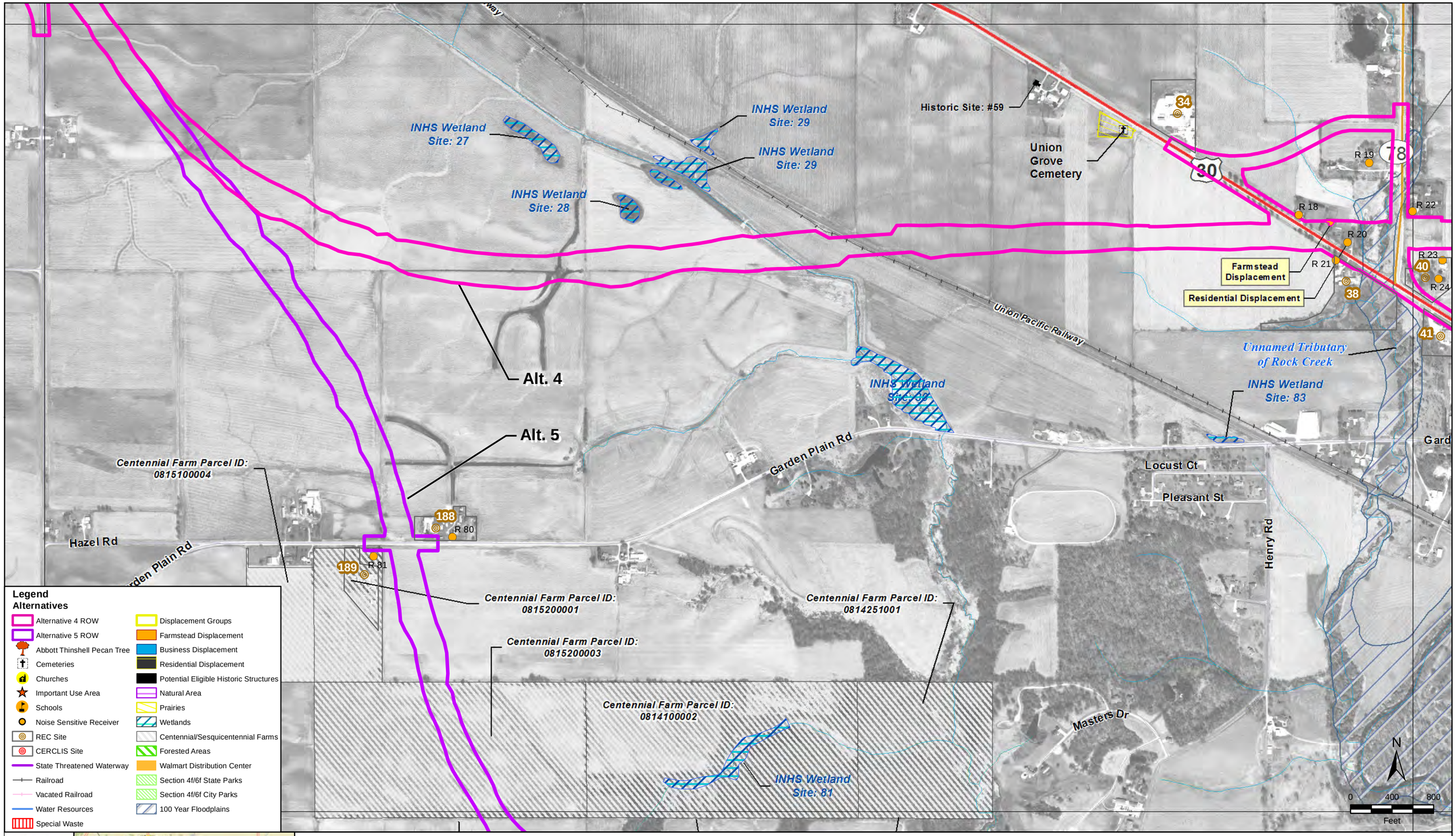
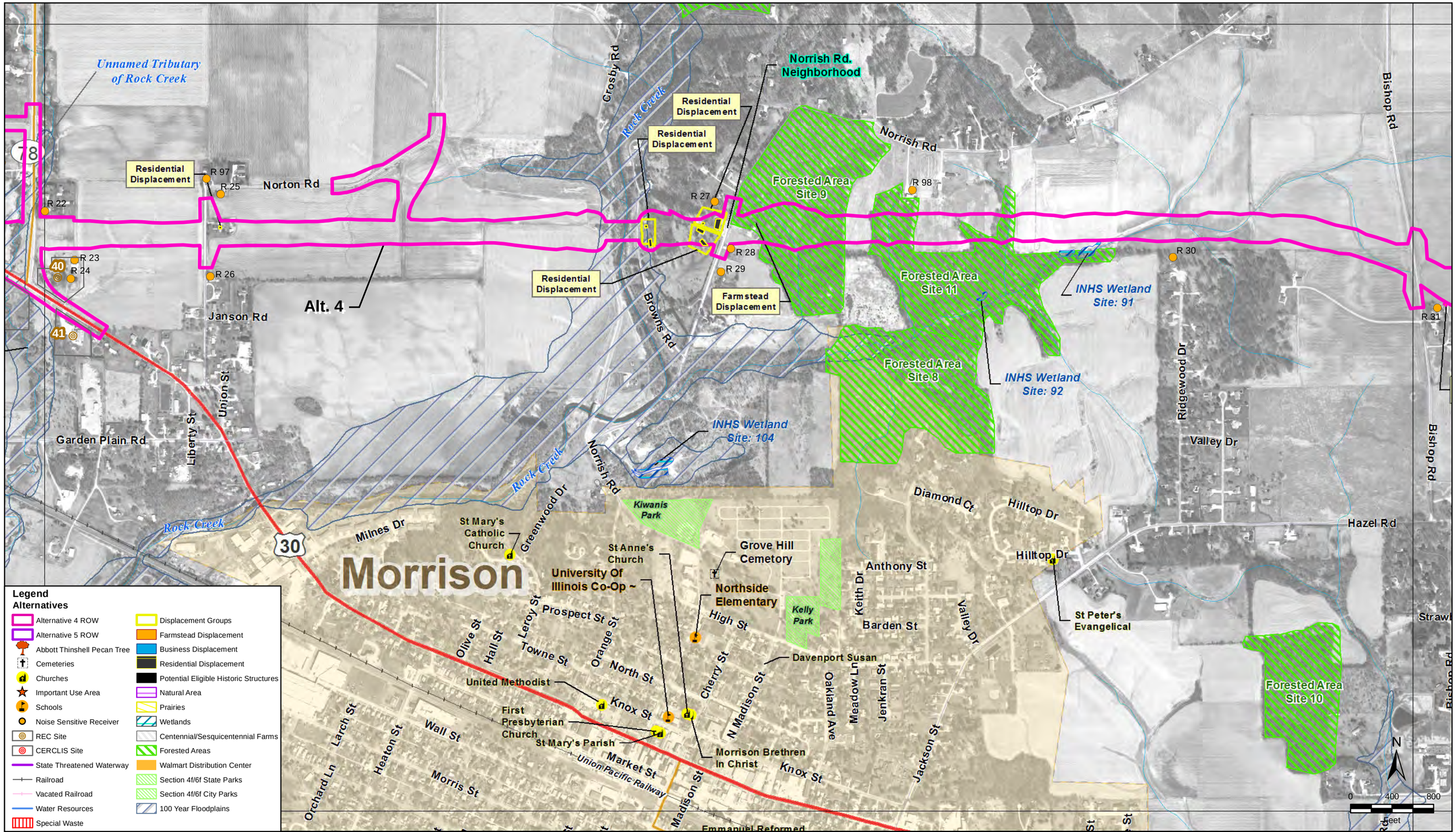


Exhibit 3-10, Page 6

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



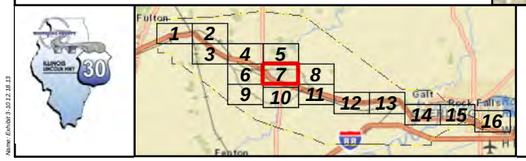
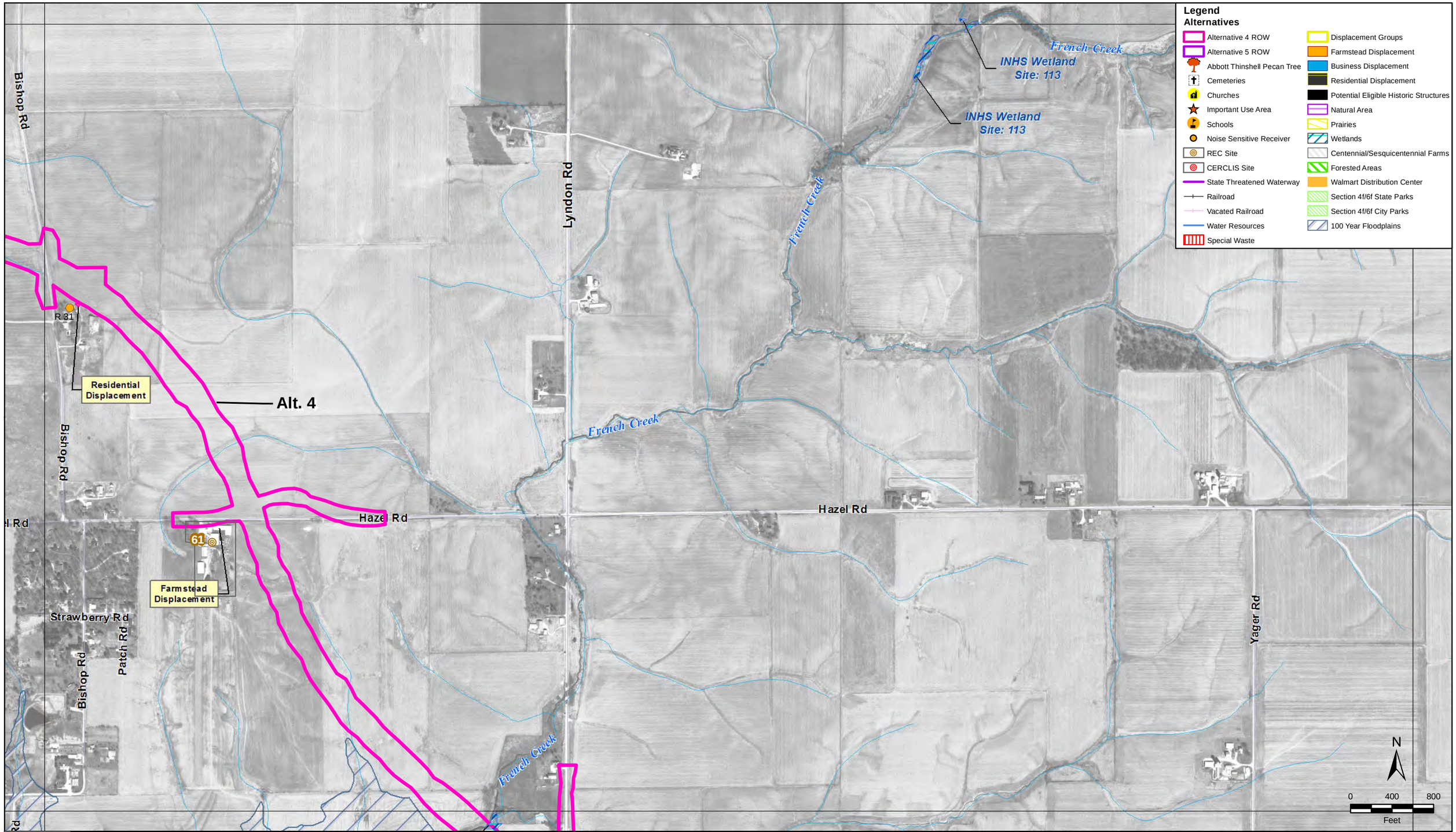


Exhibit 3-10, Page 7

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



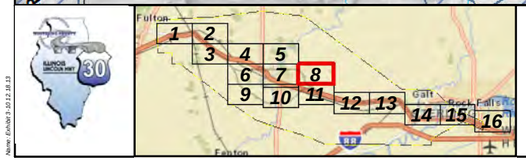


Exhibit 3-10, Page 8
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Legend
Alternatives
Alternative 4 ROW
Alternative 5 ROW
Abbott Thinshell Pecan Tree
Cemeteries
Churches
Important Use Area
Schools
Noise Sensitive Receiver
REC Site
CERCLIS Site
State Threatened Waterway
Railroad
Vacated Railroad
Water Resources
Special Waste
Displacement Groups
Farmstead Displacement
Business Displacement
Residential Displacement
Potential Eligible Historic Structures
Natural Area
Prairies
Wetlands
Centennial/Sesquicentennial Farms
Forested Areas
Walmart Distribution Center
Section 4f/6f State Parks
Section 4f/6f City Parks
100 Year Floodplains

Centennial Farm Parcel ID: 0815200003
Centennial Farm Parcel ID: 0814251001
Centennial Farm Parcel ID: 0814100002
Historic Site: #55
Residential Displacement
Farmstead Displacement
Prairie Center Rd
Henry Rd
R 82
R 83
R 84
R 85
192
197
198
Alt. 5
Forested Area Site 14
N
0 400 800
Feet

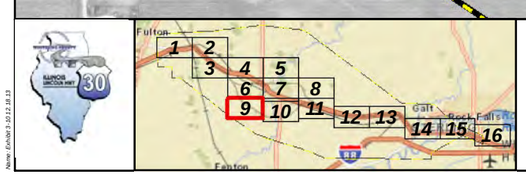
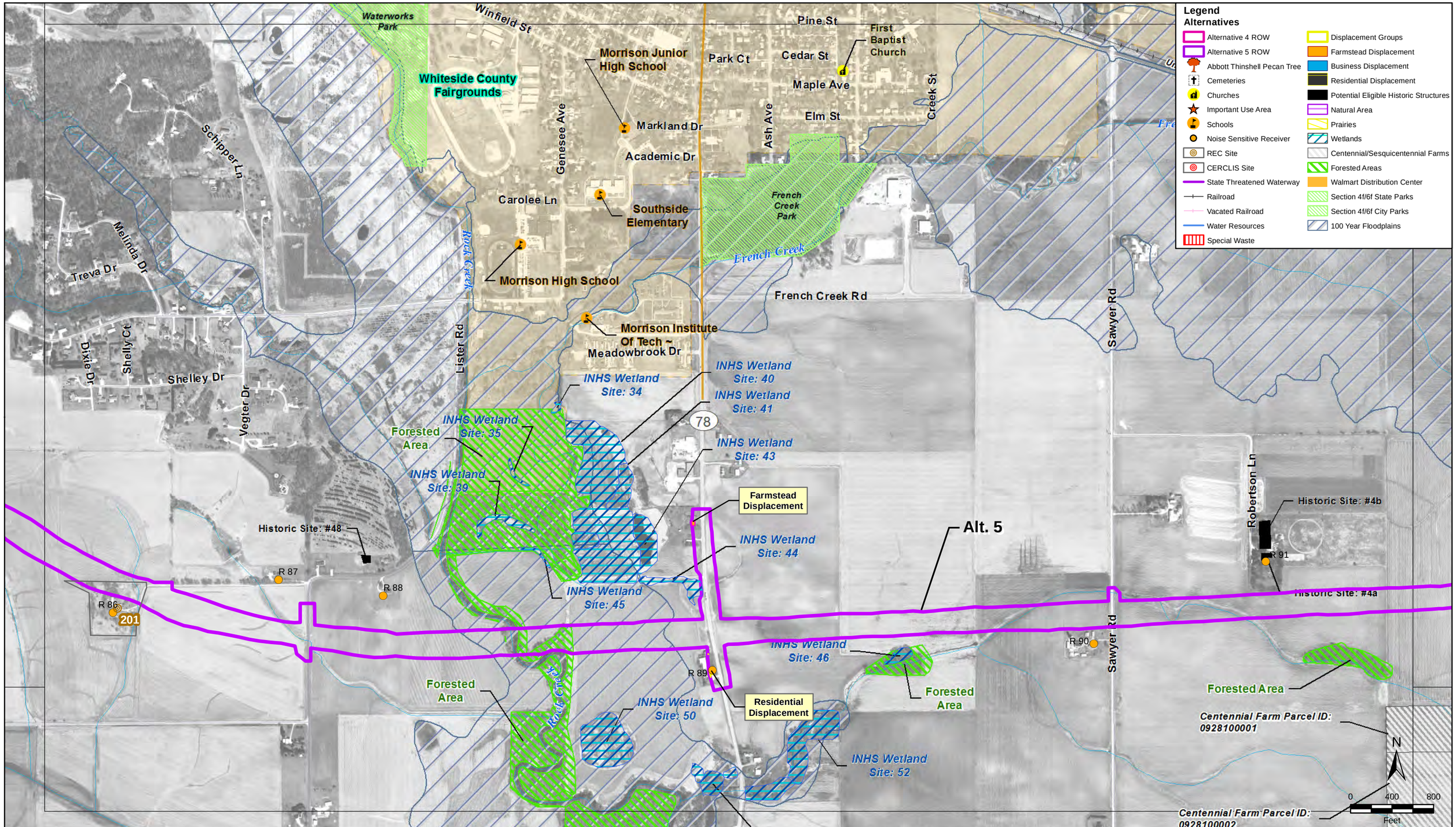


Exhibit 3-10, Page 9
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



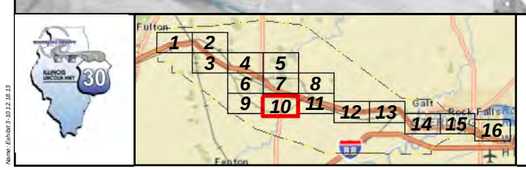
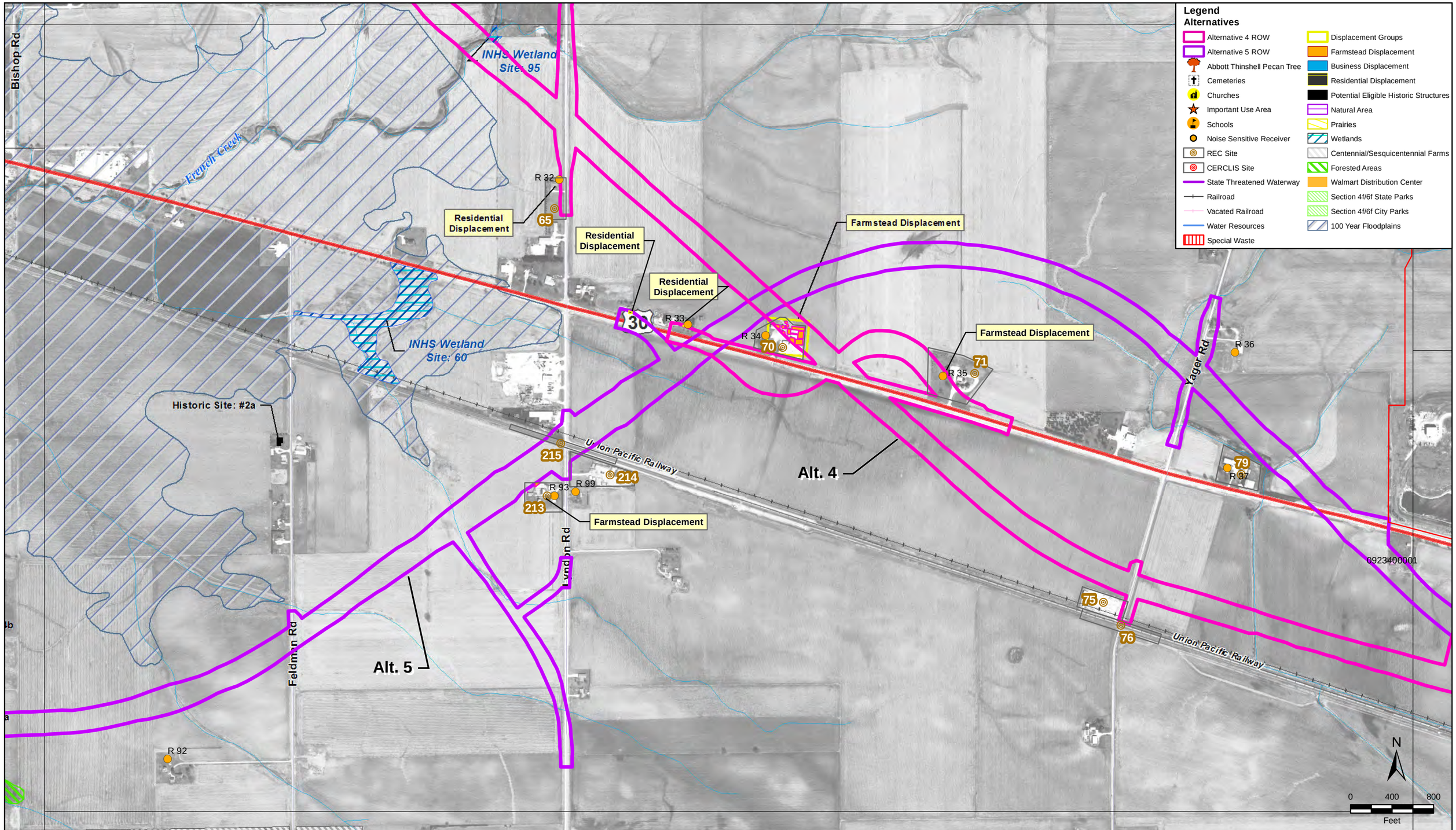


Exhibit 3-10, Page 10

U.S. 30 Supplemental Draft Environmental Impact Statement

Whiteside County, Illinois



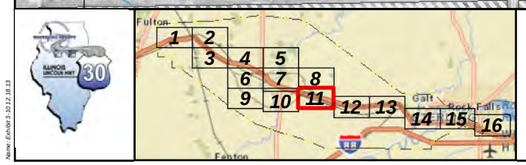


Exhibit 3-10, Page 11
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

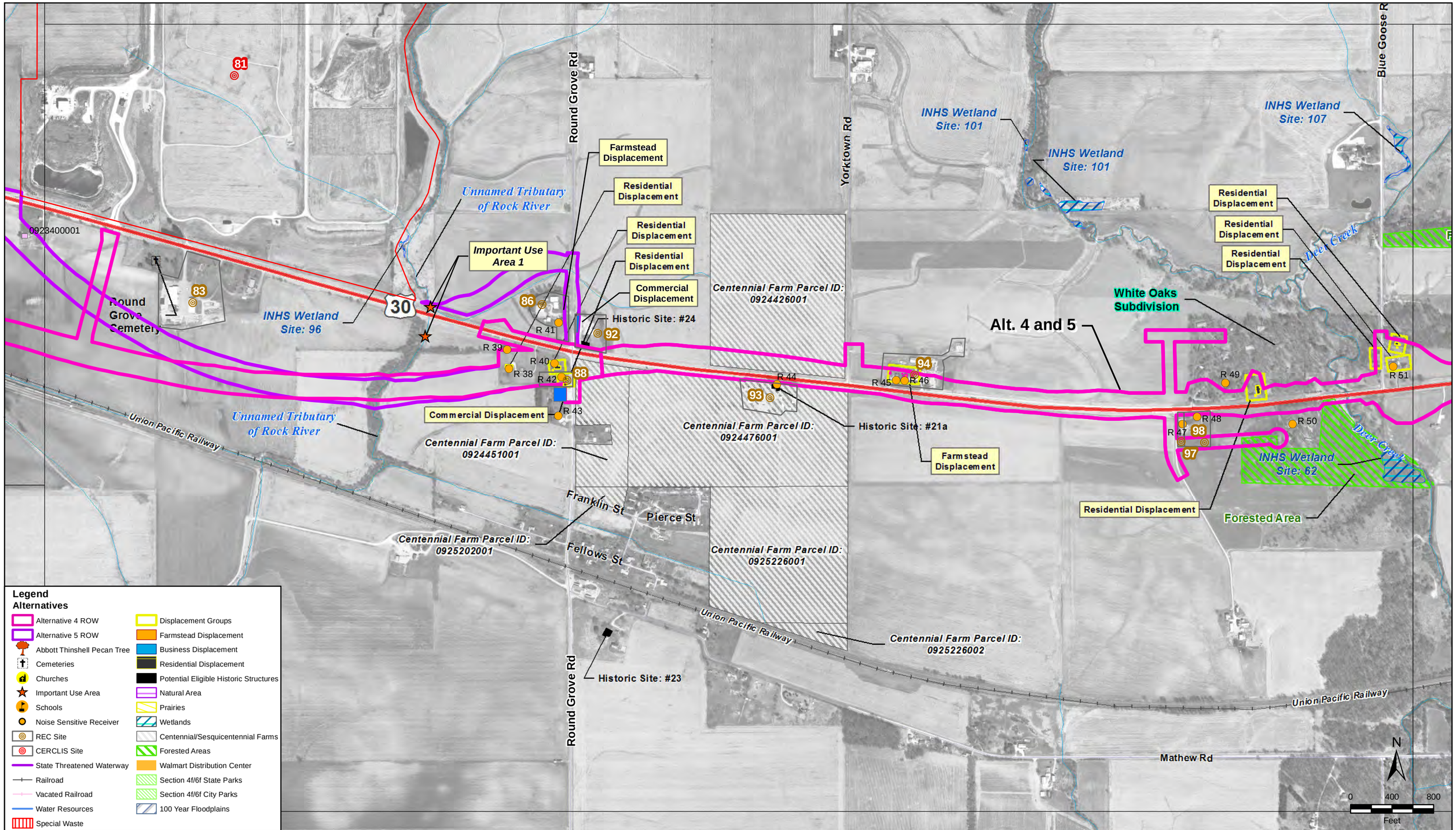


Exhibit 3-10, Page 12

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

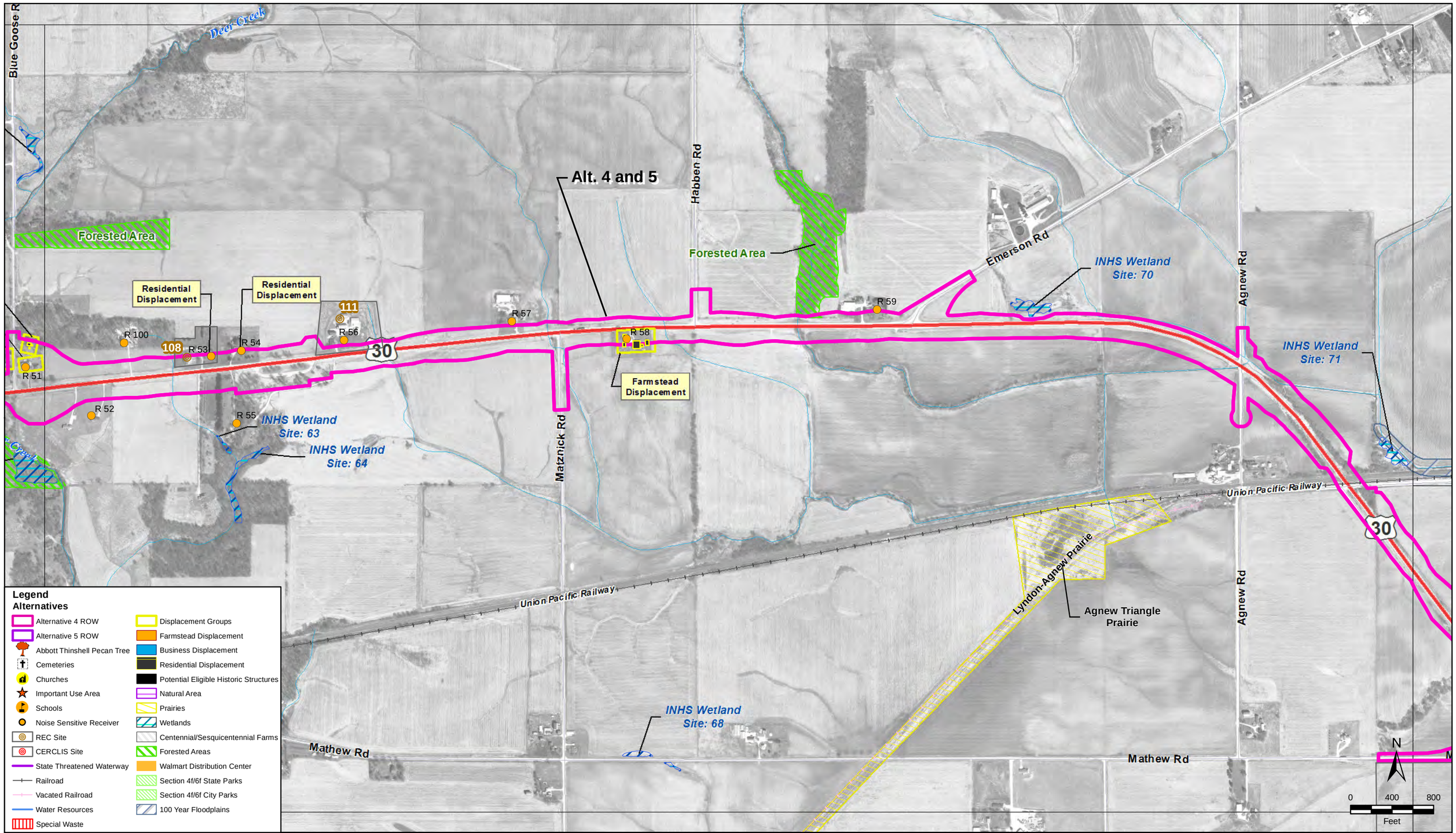
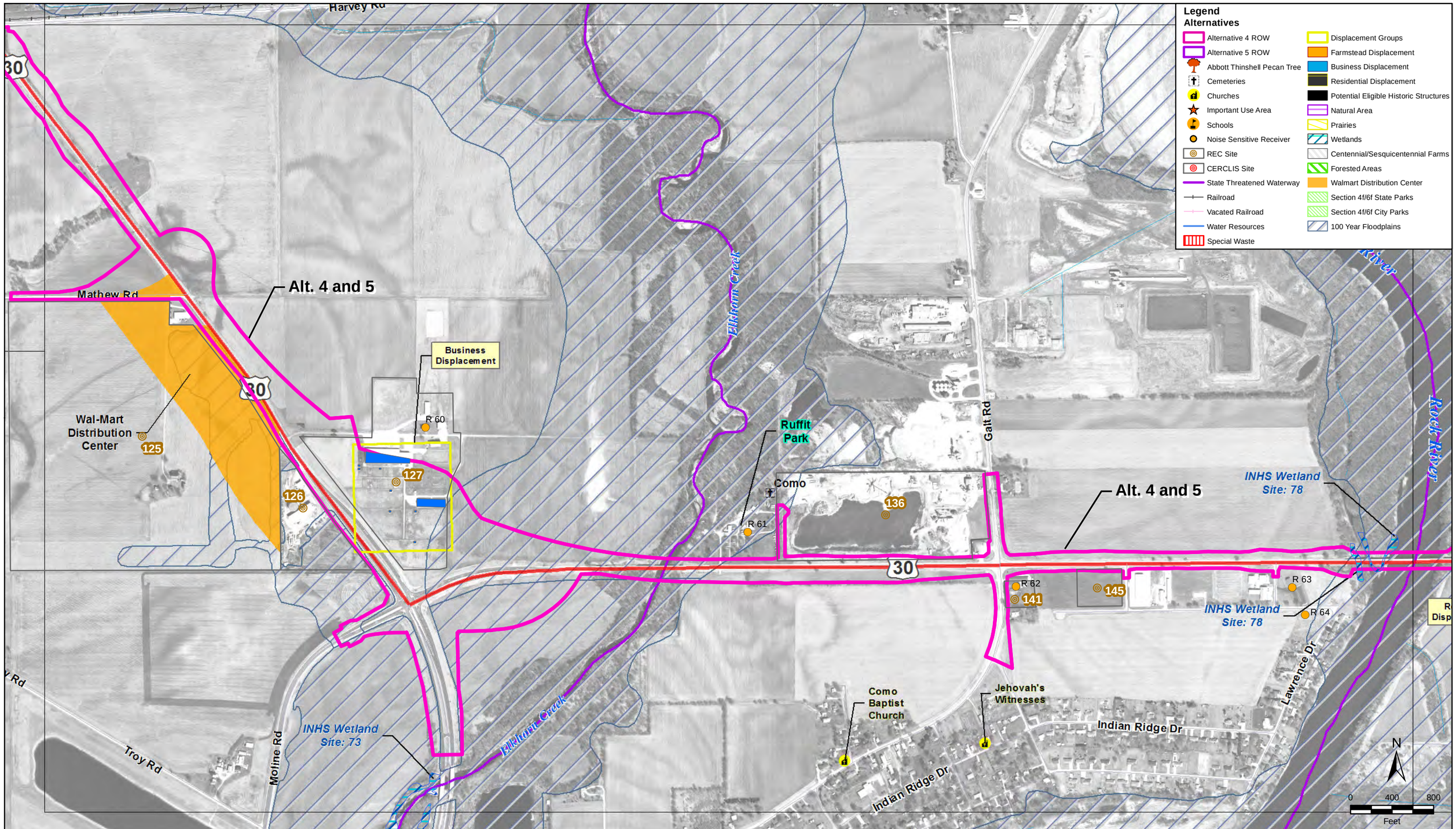


Exhibit 3-10, Page 13

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



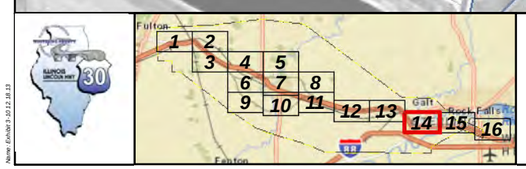
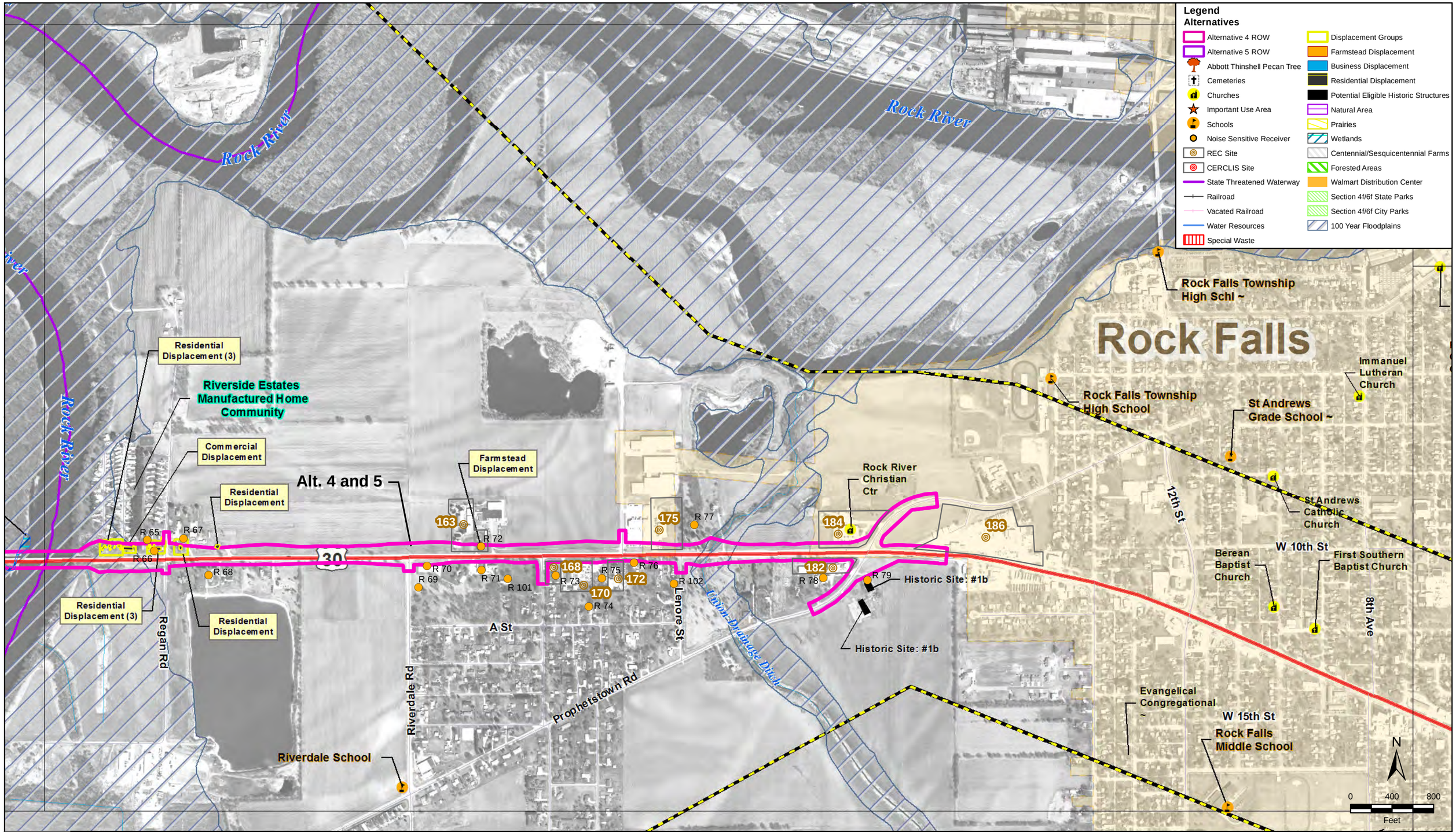


Exhibit 3-10, Page 14

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois



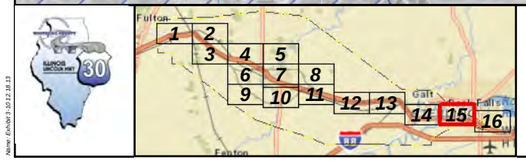


Exhibit 3-10, Page 15

U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Methodist
Congregational Church
Church
Seventh-Day Adventist Church ~
W 4th St
Thome Elementary School
First Christian Church
Merrill School
East Coloma School District 12 ~
Harvest Time Bible Church
E 7th St
Rock Falls School District
Galt Ave
40
Rock Falls
W 10th St
E 10th St
W 14th St
Alt. 4 and 5
30
40
30
N
0 400 800
Feet

Legend
Alternatives

- Alternative 4 ROW
- Alternative 5 ROW
- Abbott Thinshell Pecan Tree
- Cemeteries
- Churches
- Important Use Area
- Schools
- Noise Sensitive Receiver
- REC Site
- CERCLIS Site
- State Threatened Waterway
- Railroad
- Vacated Railroad
- Water Resources
- Special Waste
- Displacement Groups
- Farmstead Displacement
- Business Displacement
- Residential Displacement
- Potential Eligible Historic Structures
- Natural Area
- Prairies
- Wetlands
- Centennial/Sesquicentennial Farms
- Forested Areas
- Walmart Distribution Center
- Section 4f/6f State Parks
- Section 4f/6f City Parks
- 100 Year Floodplains

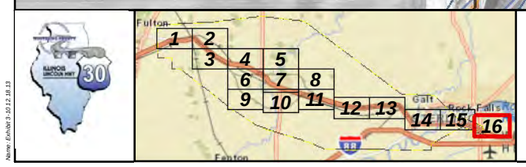


Exhibit 3-10, Page 16
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

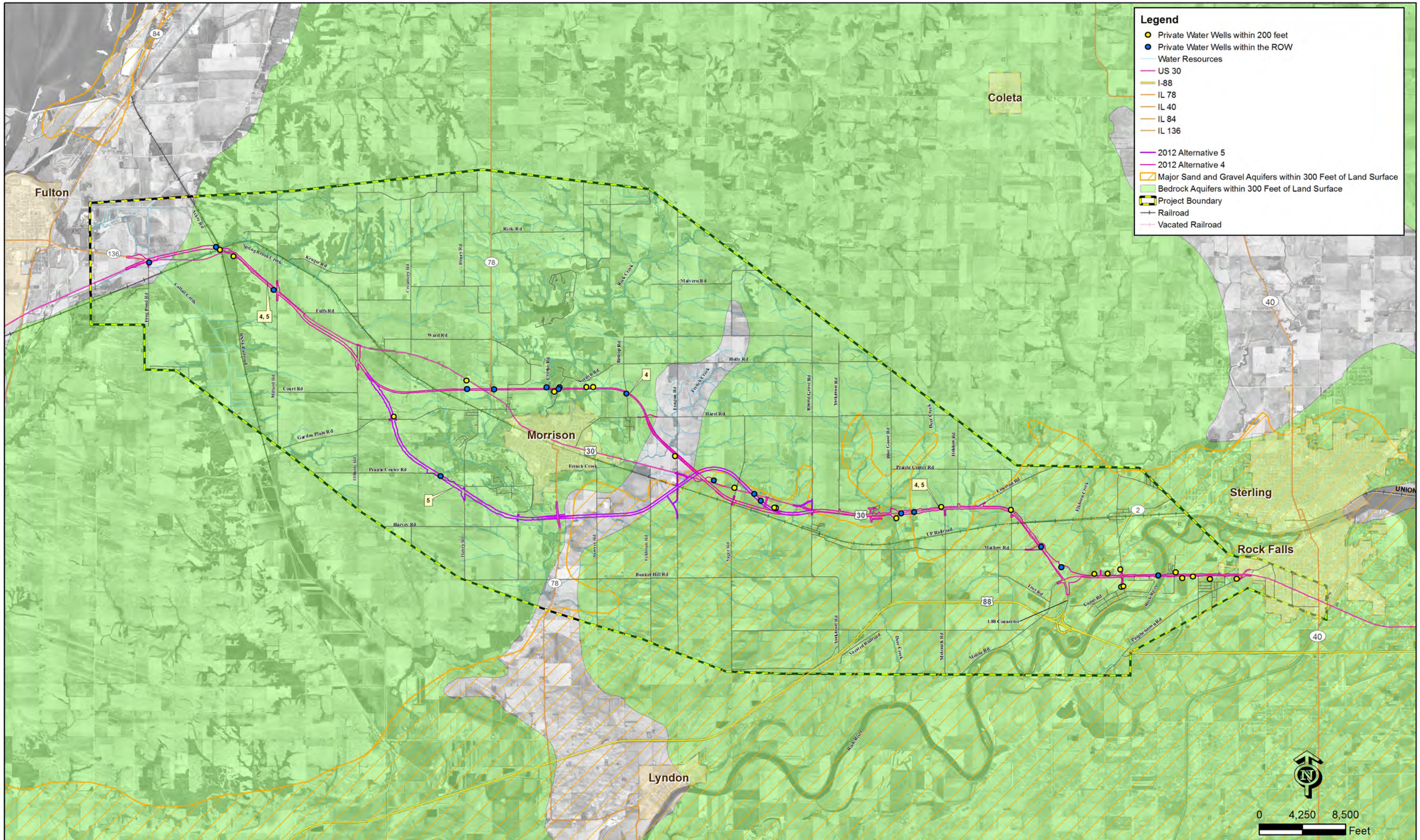


Exhibit 3-11
Water Wells within 200 feet of the Build Alternatives
U.S. 30 Supplemental Draft Environmental Impact Statement
Whiteside County, Illinois

Chapter 4

Agency Coordination and Public Involvement

4.0 Agency Coordination and Public Involvement

The purpose of this chapter is to provide an overview of the coordination that has taken place for the proposed project with the environmental regulatory agencies, including those that are Cooperating (CA) and Participating Agencies (PA). In addition, this chapter gives a summary of the public involvement effort associated with this project that was achieved utilizing IDOT's CSS process and FHWA Section 6002 Guidance.

4.1 Compliance with Federal Coordination Legislation

Per SAFETEA-LU Section 6002, the joint lead agencies for this project are FHWA and IDOT. As joint lead agencies, FHWA and IDOT are responsible for preparing the EIS and providing opportunities for the public and the Participating and Cooperating Agencies to be involved with the decision making for the proposed project. **Table 4-1** lists the coordination activities undertaken during the project to comply with Section 6002 requirements.

Table 4-1: Section 6002

Section 6002 Requirement	Description of Activity	Dates Completed
Identify Participating Agencies (PA) and Cooperating Agencies (CA) and place notification letters on PA and CA status in project file.	Invitation Letters sent as project's early coordination effort/Documented in Stakeholder Involvement Plan (SIP)	07-23-07 (*PA Letters)*
Determine and document lead/joint lead agency status.	Documented in SIP	08-30-07 (*SIP)*
Develop coordination plan with PAs and file.	Utilized Community Advisory Group (CAG) to engage PAs in coordination plan (SIP)/Documented in SIP	08-30-07 (*SIP)*
Identify schedule for environmental review process with PAs and file.	Utilized CAG to include PAs in process/Documented in SIP	08-30-07 *(SIP)*
Give opportunity for PAs and the public to provide input during development of Purpose and Need and document involvement.	Utilized CAG and NEPA/404 Merger meeting to seek input from the PAs; utilized CAG to seek input from the public/Documented in SIP and meeting minutes.	05-08-08 *(CAG)* 09-04-08 *(404/Merger)* 01-29-09 *(PIM)*
Give opportunity for PAs and the public to provide input during development of range of alternatives and document involvement.	Utilized CAG and NEPA/404 Merger meeting to seek input from the PAs; utilized CAG and Public Informational meeting to seek input from the public/Documented in SIP and meeting minutes.	01-29-09 *(PIM)* 02-03-09 *(404/Merger)* 06-10-09 *(CAG)*
Coordinate with PAs to identify appropriate methodology to be used and level of detail required in analysis and document.	Utilized CAG and NEPA/404 Merger meeting to seek input from the PAs/Documented in SIP and meeting minutes.	02-03-09 *(404/Merger)* 06-10-09 *(CAG)*

4.1.1 Cooperating/Participating Agencies

Cooperating Agencies. A CA is invited by the lead agencies to be a sponsor of an EIS (see **Appendix C** for invitation letters). A CA is any Federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project. A State or local agency of similar qualifications or, when the effects are on lands of tribal interest, a Native American tribe may, by agreement with FHWA and IDOT be a CA. Cooperating Agencies assume responsibility for developing information and preparing environmental analyses for topics which they have special expertise. Furthermore, they may adopt, without re-circulating, a lead agencies' NEPA document when after an independent review of the document, they conclude that their comments and suggestions have been satisfied. The USACE is the only Federal agency that is serving as a CA for the proposed U.S. 30 project. The responsibilities of the USACE as a CA for this project are as follows:

- Identify as early as possible any issues of concern regarding the project's potential environmental and socioeconomic impact
- Communicate issues of concern formally in the EIS scoping process
- Provide input and comment on the project's Purpose and Need
- Provide input and comment on the procedures used to develop alternatives or analyze impacts
- Provide input on the range of alternatives to be considered
- Provide input and comment on the sufficiency of environmental impact analyses

The USACE has fulfilled all aspects of these responsibilities by being a member of thePSG in addition to attending the NEPA/404 Merger meetings. Through these two (2) avenues of interaction, the USACE has been able to provide input on the project's Purpose and Need, procedures used to develop alternatives, and on a range of reasonable alternatives and their associated impacts.

Participating Agencies. According to SAFETEA-LU Section 6002, a PA is any Federal, State, tribal, regional, or local government agency that may have an interest in the project. By definition, all CAs for a project will also be considered PAs. However, not all PAs will serve as CAs. Invitations soliciting PA participation are included in **Appendix C**. A non-Federal agency must formally accept the invitation in order to be considered a PA. If an agency declines, its response should state the reason for doing so. If the agency chooses not to participate, the agency may still comment on the process at public/stakeholder involvement venues (community advisory groups, stakeholder meetings, public meetings, etc.). A non-Federal agency that does not respond to the invitation will not be considered a PA. Two (2) agencies declined and 25 that did not respond are considered to have declined. A list of PAs that accepted the invitation and their roles and responsibilities can be found in **Table 4-2**.

Table 4-2: Participating Agencies		
Agency Name	**Other Project Roles**	**Responsibilities**
City of Fulton	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
City of Morrison	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
City of Prophetstown	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Illinois Department of Agriculture	NEPA/404 Merger Meeting Attendee	Agricultural Land. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Illinois Historic Preservation Agency	NEPA/404 Merger Meeting Attendee	Archaeological & historic resources. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Natural Resource Conservation Service	N/A	Prime farmland; erosion & sediment control. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Union Grove Township	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Whiteside County Board	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative
Whiteside County Highway & Public Works Department	CAG	Function varies by jurisdiction. Provide comments on Purpose and Need, methodologies, range of alternatives, & preferred alternative

As with the USACE, the PAs have been able to fulfill all aspects of their responsibilities by either being a member of the CAG or by attending the NEPA/404 Merger meetings. Once again, through these two (2) avenues of interaction, the PAs have been able to provide input on the project's Purpose and Need, procedures used to develop alternatives, and on a range of reasonable alternatives and their associated impacts.

4.2 State and Federal Agency Coordination

4.2.1 NEPA/404 Process

The U.S. 30 project has been presented at a NEPA/404 Merger meeting three (3) times. The federal agencies that were involved in the NEPA/404 Merger process for the project are as follows:

- Federal Highway Administration (FHWA)

- U.S. Environmental Protection Agency (USEPA)
- U.S. Army Corps of Engineers (USACE)
- U.S. Fish and Wildlife Service (USFWS)

The first presentation of the proposed project occurred in May 2007, prior to the official start of the EIS. The purpose of this presentation was to introduce the project to the environmental regulatory agencies.

The second presentation occurred on September 8, 2008, at which the project's Purpose and Need Statement was presented and received concurrence from the environmental regulatory agencies.

The third presentation occurred on February 3, 2009. The purpose of this meeting was to update the environmental regulatory agencies on the progress of the project. The presentation included the development of corridors, a summary of the Public Informational Open House held on January 29, 2009, and the next steps of the project.

On August 18, 2010, the FHWA and IDOT received concurrence from the agencies involved in the NEPA/404 Merger process, that the overall impacts of the U.S. 30 project on wetlands would not require an Individual 404 Permit. Therefore, the U.S. 30 project is no longer required to be carried through the NEPA/404 Merger process.

4.3 Public Involvement/Context Sensitive Solutions

The following paragraphs include information taken directly from the IDOT CSS website in order to provide a concise explanation of this in-depth public involvement process.

The mission of the IDOT is to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity, and demonstrate respect for our environment. This is accomplished by making safety, usability, multimodalism, environment, and community the focus of every project. To ensure that the mission is met, IDOT elected to implement their CSS process into the proposed U.S. 30 overall project process.

CSS is an interdisciplinary approach that seeks effective, multi-modal transportation solutions by working with stakeholders to develop, build, and maintain cost effective transportation facilities which fit into the project's surroundings or its "context". Through early, frequent, and meaningful communication with stakeholders, along with a flexible and creative approach to design, the resulting project(s) should improve safety and mobility for the traveling public, while seeking to preserve and enhance the scenic, economic, historic, and natural qualities of the settings through which they pass. In regard to this project, U.S. 30 in Whiteside County is designated as a national scenic byway and has provided one of many reasons to incorporate the CSS approach as part of the project process.

The CSS approach provides stakeholders with the tools and information they require to effectively participate in the study process, including providing an understanding of the NEPA process, transportation planning guidelines, design guidelines, and the relationship between transportation issues (needs) and project alternatives. In other words, using the CSS process

should provide all project stakeholders a mechanism to share comments or concerns about transportation objectives and project alternatives, as well as improve the ability of the project team to understand and address concerns raised. This integrated approach to problem solving and decision-making will help build community consensus and promote involvement through the study process.

The CSS efforts for the U.S. 30 project are led by the PSG which is a combined group of individuals from IDOT, FHWA, USACE, and the consultant team. The PSG serves as a clearinghouse for which community issues and concerns are presented and addressed as the project moves forward.

To aid with the PSG efforts, the group has formed several advisory groups, including such groups as the CAG and the Technical Advisory Group (TAG). Members of both advisory groups serve as interest groups responsible for assisting the PSG with identifying key community issues that pose a potential impact, developing a Problem Statement, and disseminating information to their interest groups.

For more information on IDOT CSS guidelines, please visit the IDOT CSS website at www.dot.il.gov/css/home.html.

4.3.1 Stakeholder Involvement Plan (SIP)

The SIP is a document that is used as a blueprint for defining methods and tools to educate and engage the public and others throughout the project development process. In addition, it is used to fulfill the CSS guidelines of the project. The SIP, by its nature, is a work in progress and thus subject to revision by the PSG anytime events warrant. The SIP also sets the framework for how the joint lead agencies will develop the project and how the stakeholders and the public will interact with the joint lead agencies to provide input for the success of the project. The SIP identifies the list of potential stakeholders in the project study area and the potential cooperating and participating agencies. This list may change as the project advances and additional stakeholders are identified. The SIP for the U.S. 30 project can be found in the **Public Involvement Document**.

4.3.1.1 Illinois Lincoln Highway Coalition

The Illinois Lincoln Highway Coalition oversees the Lincoln Highway National Scenic Byway in Illinois. This organization was coordinated with because the existing U.S. 30 roadway in Whiteside County is part of the Lincoln Highway National Scenic Byway. The Illinois Lincoln Highway Coalition coordination is specifically referenced because the IDOT must abide by the National Scenic Byways Program's restriction of outdoor advertising signs, which are large outdoor signs with which the advertising changes frequently.

4.3.2 Project Study Group (PSG)

The PSG is a multi-disciplinary team that guides the development of the U.S. 30 project. The PSG primarily is composed of IDOT and FHWA employees. The disciplines included in the PSG are based on the context of the project. The membership of the PSG is not static, but may change as the understanding of the project's context evolves. The primary objectives of the PSG include:

- Expediting the project development process.
- Identifying project development issues.
- Providing guidance to developing solutions to issues identified.
- Promoting partnership with stakeholders to address identified project needs.
- Rendering ultimate recommendations based on consensus of stakeholders and engineering judgment.

Based on the initial project scope and its apparent context components, the members of the PSG for the U.S. 30 EIS and Phase I Design Report are listed in the SIP.

Since its formation, the PSG has met on several occasions in order to keep the project moving forward by assessing engineering, technical, and environmental impacts and addressing stakeholder issues and concerns that are significant to reaching project milestones. All minutes of the PSG Meetings can be found in the **Public Involvement Document**.

PSG Meeting #1. The first PSG meeting took place on June 20, 2007. The purpose of the meeting was to explain IDOT's CSS process and to define the roles and responsibilities of the PSG in that process. The PSG was informed about the various aspects of implementing the CSS process via the formation of a CAG, conducting stakeholder meetings, public informational open houses, and distributing newsletters to engage the community surrounding the U.S. 30 project.

The PSG members received the following materials at the PSG meeting:

- Project Overview and Maps,
- BDE Procedure Memo 48-06,
- Project Study Group Roles and Responsibilities,
- List of PSG Members, and
- Draft Stakeholder Involvement Plan

PSG Meeting #2. During the second PSG Meeting on July 12, 2007, it was established that the Notice of Intent (NOI) for the start of the EIS would be published in August 2007. Also, a draft SIP had been completed and distributed to members of the PSG for their review. The CSS process was further defined at this meeting and included the following:

- CSS definition,
- Stakeholder definition (including examples of stakeholders),

- PSG and PSG Roles & Responsibilities,
- Community Advisory Group (CAG) and CAG Roles and Responsibilities,
- Consensus Building definition,
- Technical Advisory Group (TAG) Roles and Responsibilities,
- Stakeholder Meetings definition,
- How Representation is Assured, and
- Proposed Stakeholder Advisory Group Meeting Schedule (available in the SIP)

There were also discussions about the relevance of implementing a Corridor CAG and at this point no one knew if this was actually necessary but that it should be tested out and included in the SIP document. The first Public Informational Open House was scheduled for July 25, 2007 and the agenda and displays were discussed with the PSG for their input and approval. The PSG meeting #2 concluded with discussions on preparing an outline for the development of the project website, scheduling the first newsletter to be distributed after the Public Informational Open House, and briefing packets to be delivered to legislators by July 20, 2007 regarding the project's progress.

PSG Meeting #3. The third PSG Meeting took place on August 7, 2007. The main purpose of this meeting was to highlight the results from the first Public Informational Open House, identify potential CAG members, discuss the number of CAG groups to develop, and decide if the Corridor CAG would serve the same purpose as the CAG. PSG members agreed upon where CAG meetings would be held and the date and time of the meetings. The first CAG meeting agenda was discussed and revised as well as the outline for the first newsletter and the timeframe of distribution. The meeting adjourned with a discussion on the outline for the website that was drafted and presented for the PSG's review.

PSG Meeting #4. The focus of the fourth PSG Meeting held on October 10, 2007, was to discuss the draft Problem Statement developed by the CAG as well as concerns voiced by CAG members regarding under representation of certain groups i.e. bicyclist groups.

The PSG was also given a summary of the results gathered from the Community Context Audit and was asked to review the Purpose and Need outline. Another important item of discussion was the process in which to present the corridor alternatives to the CAG for their input and comments.

The meeting adjourned with the PSG receiving information about stakeholders meetings that were scheduled.

PSG Meeting #5. The fifth PSG meeting took place on April 11, 2008. Many milestones had been achieved before this meeting which included:

- CAG Meeting conducted on October 17, 2007
- Traffic Analysis completed in February 2008

- Crash Analysis submitted and being revised to address IDOT comments
- Stakeholder Involvement Plan (SIP) submitted and awaiting FHWA approval
- EIS Timeframe approved by FHWA. The completion of Phase I is projected for Fall 2011
- Draft Purpose and Need submitted to IDOT and will be sent to FHWA for their first round of comments

The PSG discussed the Draft Purpose and Need Statement, the project timeline, and the corridor screening process. After identifying issues and concerns, the PSG examined consensus building tools to be implemented at the next CAG meeting scheduled for May 2008.

PSG Meeting #6. The sixth PSG meeting was held on September 18, 2008. An overview was given of the events that occurred at the last CAG meeting and four (4) new members were introduced to the CAG to balance representation. These new members represented Friends of the Park/Illinois Bicyclists, Natural Land Institute, Whiteside County Natural Area Guardians, and the Management and Planning Programs Involving Nonmetropolitan Group (MAPPING).

A project logo had been selected for the project and presented to the members. Through the engineering process, corridor alternatives were established and the corridor screening process was explained and agreed upon by the CAG.

The PSG also discussed the screening matrix that was based on 23 criteria and was approved by IDOT, BDE, and FHWA to use as a process of narrowing down the 16 corridors previously identified by the CAG. The corridor screening process would ultimately aid in determining which corridors would be carried forward for further consideration. The meeting concluded with discussions of the next CAG meeting (#4) and the next steps for the project.

PSG Meeting #7. The seventh meeting was held on December 16, 2008. The PSG received the CAG meeting #4 comments and suggestions regarding which corridors they recommended for further consideration. The PSG discussed, in detail, the comments and recommendations received by the CAG and agreed to use the screening matrix for preliminary evaluation of the alignments within the project corridors. Environmental impacts were also discussed at this meeting.

PSG Meeting #8. The eighth meeting was held on May 14, 2009. The focus of this meeting included the public acceptance memo, environmental maps, matrix rankings, information summary spreadsheets, and alternative maps. A summary of the second Public Informational Open House was presented informing the PSG of the public's main concerns of the corridors that were selected for further consideration. It was discussed how the list of 16 proposed corridor alternatives were going to be narrowed down to six (6) alignments based upon the screening matrix and research. Before the conclusion of the meeting, a revised project timeline was given to all PSG members.

PSG Meeting #9. The ninth PSG meeting took place on April 27, 2010. The PSG discussed the project's progress to date, the six (6) alternatives considered after adjustments, and the

stakeholder meeting with the business community. It was determined that Alternatives 4 and 5 were the frontrunners.

It was also discussed and agreed upon to host a CAG meeting in early June 2010. Two (2) new members representing local businesses were added to the CAG based upon the stakeholder meeting with the city of Morrison business community. A revised project timeline was distributed.

PSG Meeting #10. The tenth PSG meeting took place on November 16, 2010. The PSG discussed the comments received from the CAG and the public on the six (6) reasonable alternatives. Based on these comments (see **Public Involvement Document** for meeting minutes), it was concluded that the primary concerns were to utilize the existing U.S. 30 roadway to the extent possible, minimize agricultural and property impacts, and minimize residential displacements. It was determined by the PSG that Alternatives 4 and 5 best addressed the public's concerns and gave their concurrence on these alternatives to be carried forward for further study in the DEIS as the Build Alternatives.

PSG Meeting #11. The eleventh PSG meeting took place on May 24, 2011 and was utilized as a dry run for the June 15, 2011 public hearing. The PSG members were able to view and comment on the materials that had been prepared for the hearing. These materials included: a loop presentation, aerial displays, and property owner maps.

PSG Meeting #12. The twelfth PSG meeting took place on June 28, 2012. The topics discussed with the group included: comments received as a result of the public hearing and comments made by the regulatory agencies on the DEIS, the FEMA's floodplain modernization in Whiteside County, the associated expansion of the 100-year French Creek floodplain, and the necessary revisions to the Build Alternatives as a result of the floodplain modernization. The group was also informed that meetings were held on May 8, 2012 with the CAG and May 22, 2012 with the Whiteside County Engineer and Township Road Commissioners. The purpose of the two (2) meetings was to inform these groups of the revisions to the Build Alternatives and the initiation of the SDEIS.

4.3.3 Community Advisory Group (CAG)

As dictated by the NNEPA and in conjunction with IDOT's CSS process, giving numerous opportunities for the public to "GET INVOLVED" and "STAY INVOLVED" have been implemented through advisory groups and public and stakeholder meetings.

One of the key focus groups formed for this project has been the CAG. Individuals who form the CAG are key stakeholders identified by the PSG who represent a special interest group in the areas surrounding the U.S. 30 project, as well as those individuals or groups expressing an interest in serving on the committee. This group represents a diverse cross section of the community that includes residents, public officials, farmers, business leaders, environmentalists,

and special interest groups. Currently there are 40 members that serve on the U.S. 30 CAG. **Table 4-3** lists the CAG representation.

Table 4-3: CAG Representation		
City of Fulton	City of Morrison	City of Rock Falls
City of Sterling	Local Area Chamber of Commerce	Local Area Development Corporation Agencies
Historical Societies	Morrison-Rockwood State Park	Whiteside County Farm Bureau
Whiteside County Government	Rotary Clubs	Kiwanis Club
U.S. 30 Coalition	Iowa-Illinois Highway Partnership	Local School Districts
Morrison Institute of Technology	Local Business Owners	Home Owners
Farmers	Whiteside County Natural Area Guardians	Illinois League of Bicyclist
The MAPPING Group	Friends of the Park	Natural Land Institute
Land Developers	Illinois Lincoln Highway Coalition	Illinois Lincoln Highway Association

Throughout the design and planning phase of this project, CAG members have been required to participate in a number of evening meetings that include workshop-style exercises developed to solicit input and garner consensus on project milestones.

CAG meetings were held in coordination with the PSG meetings. The PSG, being an agency leadership consortium, provided the guidance necessary in determining the focus of the CAG meetings.

CAG Meeting #1. The first CAG meeting was held on September 12, 2007 at the Odell Community Center in Morrison. The purpose of this meeting was three-fold. The first was to explain the CSS process, the SIP, as well as highlight the role, responsibilities, and ground rules of the CAG. The second was to assist the team with identifying key issues associated with the project, establish context for the communities within the project study area, and begin developing a Problem Statement which states the key issues in a concise manner. The third and final purpose was to begin discussions about a project logo to be used for identifying the project throughout the remaining phases of the project.

After the roles, responsibilities, and ground rules of the CAG were presented, each member was asked to sign a Partnership Agreement that explained the group's mission and to show proof that each member agreed to abide by the governance stated.

Each member of the CAG was then provided a Community Context Audit form to complete prior to attending the meeting. The purpose of the Community Context Audit form was to assist with identifying various community characteristics that make each transportation project location unique to its residents, its businesses, and the public in general. This information was used to help define the Purpose and Need of the proposed transportation improvements based upon

community goals and local plans for future development. The audit was designed to take into account the community's history or heritage, present conditions, and anticipated needs.

Another task performed by the CAG was to identify and categorize key issues of the project. These issues were presented to the PSG and narrowed down to five (5) categories in developing the Problem Statement. The five (5) categories included:

- Social Economics
- Safety
- Access
- Agricultural
- Roadway Characteristics

The Problem Statement is defined as a draft statement used to identify transportation and infrastructure problems in the area. The Problem Statement is developed to be realistic under the constraints of engineering considerations, available funding, and geographic limitations. Once the Problem Statement was defined, it aided the PSG in developing the project's Purpose and Need Statement.

CAG Meeting #2. The second CAG meeting was hosted on October 17, 2007 at the Odell Community Center in Morrison. The purpose of the meeting was to review and garner consensus on the results from the Community Context Audit, as well as review and discuss the revised Problem Statement. The Problem Statement was developed after the first CAG meeting by the PSG. In addition, the CAG identified potential corridor alternatives, and finally, presented conceptual ideas of a project logo.

After some discussion, consensus was garnered on the following Problem Statement:

"The problem with U.S. 30 in Whiteside County from Fulton to Rock Falls is increasing traffic volume and congestion which overloads the area-wide traffic system, compromises safety, mobility, and reduces the quality of life of the adjacent communities. There is a need for improved access, economic development, and accessibility to the region while preserving agricultural and environmentally significant areas."

The second exercise for the CAG was to share with the project study team their conceptual ideas of a logo. The project study team had been given a homework assignment at the first CAG meeting that required members to design artistic drawings and be prepared to share and discuss their ideas with the committee. The CAG was also given the opportunity to review and comment on several logo concepts, however, due to a strong desire to have a logo that encompassed Whiteside County, the project study team decided to take their comments into consideration and present a final logo concept at the next CAG Meeting.

The final group exercise was for CAG members to begin developing corridor alternatives based on knowledge shared amongst the CAG members in addition to the engineering and environmental constraints within the project study area that are fatal flaws which could eliminate

a corridor during the screening process. CAG members were then given a project map along with tracing paper to begin drawing potential corridor alternatives. The corridor alternatives gathered from this exercise were used for further study by the PSG.

CAG Meeting #3. The third CAG meeting was held on May 8, 2008 at the Odell Community Center in Morrison. An overall project progress report was given which highlighted the last CAG and PSG meetings, the revised SIP that was approved by FHWA, an overview of the Draft Purpose and Need Statement, and the corridor screening process.

CAG members were informed of the efforts completed by the PSG to keep the project moving forward. Several key benchmarks were reached such as the submission of the draft Purpose and Need Statement to FHWA, the completion of the Problem Statement, refining of the SIP, reviewing the 16 corridors proposed during the October 2007 CAG meeting, developing a corridor screening process to be approved by the PSG and FHWA, completing the Traffic Analysis Report, and finalizing conceptual designs for a project logo based on the CAG's comments.

CAG members were then asked to review project logo choices that were designed based upon their comments, suggestions, and a desire to have a logo that maintained a regional and county feel within the project study area. After careful review and some discussion, the CAG chose a project logo. The project logo is exhibited in the top right hand corner of each page of this document.

The PSG informed the CAG of the multiple-level corridor screening process that will be used to evaluate the 16 corridors identified as well as the next steps for the project.

CAG Meeting #4. The fourth CAG meeting took place on November 6, 2008 at the Morrison Institute of Technology (MIT) in Morrison. It was announced that the Draft Purpose and Need Statement had been approved by IDOT and FHWA and was now posted on the U.S. 30 project website. CAG members were then informed of the results of the first step in the corridor screening process which involved the corridors meeting the conditions in the approved Purpose and Need. Those corridors that ranked well in the screening process conducted by the PSG were then presented to the CAG for their input regarding the PSG recommendations. The CAG was assured that their comments would be shared with the PSG to assist with the selection of preferred corridor alternatives.

CAG Meeting #5. The fifth CAG meeting took place on June 10, 2009 at the Odell Community Center in Morrison. During this meeting, the CAG was updated on the Public Informational Open House that took place on January 29, 2009, results from the environmental survey, alignment adjustments and evaluation results, potential environmental impacts, and the next steps for the project.

The project study team informed the CAG that 237 people attended the Public Informational Open House and were able to view and comment on the 16 corridors that the CAG identified. The public's main concerns were impacts to agricultural land, development, and environmental disturbance.

The CAG was presented with the six (6) alignments created based on engineering and environmental assessments, technical input from the CAG and PSG, as well as public comments gathered from the Public Informational Open House. The CAG was informed that these six (6) alignments were created by avoiding or minimizing as many impacts to properties, the environment, and historically significant structures. Although the six (6) alignments were screened against 23 criteria, the CAG was assured that the project study team will continue to evaluate the six (6) alignments to determine the preferred alignment.

CAG Meeting #6. The sixth CAG meeting took place on June 2, 2010 at the Odell Community Center in Morrison. The CAG was introduced to the new IDOT Project Liaison for the U.S. 30 project as well as two (2) new CAG members. The purpose of this meeting was to update the CAG on the progress of the U.S. 30 EIS and Phase I Design Report and to gather input regarding the six (6) alternatives identified for analysis.

The CAG was informed that since the last time they met, concerns had been expressed by Morrison's business community regarding the potential impacts of a U.S. 30 bypass. It was explained that a stakeholder meeting was held with the businesses of Morrison on April 15, 2010 in order to address their concerns and answer their questions. At this stakeholder meeting, business representatives were informed that IDOT will assess the impacts of a potential bypass on the city of Morrison. The results of this analysis will be presented in the DEIS as part of the overall socio-economic analysis of the project.

The CAG was then engaged in a group exercise that included reviewing the six (6) alignments identified by the PSG and evaluating them, for discussion purposes, against environmental categories such as agricultural, wetlands, forests, historic properties, and other factors. After the exercise, the CAG members shared their comments, concerns, and opinions. This list was summarized into the following and was shared with the PSG to assist in determining which alternatives will be considered for further study.

- No-Build Alternative is not an option
- Preserve farmland – Stay on existing U.S. 30 as much as possible
- Concerns regarding sustainability and viability of Morrison businesses
- Proximity to the industrial park would allow for better economic development, growth and opportunities
- Quality of life in the area should be a concern
- Concern about the north alignment restricting development and compatibility with project surroundings
- Environmental sensitivity/prudence

CAG Meeting #7: The seventh CAG meeting took place on June 8, 2011 at the Odell Community Center in Morrison. The purpose of the meeting was to provide the CAG with the information that would be presented at the June 15, 2011 public hearing and to gather input on the DEIS and its proposed alternatives.

The CAG members were divided into groups and provided aerial maps illustrating Alternatives 4 and 5 and their associated environmental impacts and displacements. The CAG members were asked to discuss these alternatives and their impacts amongst their group and then share their comments, concerns, and opinions with the entire CAG. Listed below is a summary of the points expressed:

- **Minimize impacts to farmland**
- **Residential displacements associated with the northern route**
- **Northern route prevents residential development growth and is incompatible with existing land use**
- **Consequences of No-Build Alternative – negatively impacts safety and economic development**
- **Concerns regarding economic development**
- **Floodplain impacts and mitigation**

CAG Meeting #8: The eighth CAG meeting took place on May 8, 2012 at the United Methodist Church in Morrison. The purpose of the meeting was to discuss the results of the June 15, 2011 public hearing, the FEMA floodplain modernization, the revised Build Alternatives, and the Supplemental DEIS. The CAG was informed that in February of 2011, FEMA completed its Floodplain Insurance Study of Whiteside County. The results of this study included revised mapping of the 100-year floodplains within the U.S. 30 project study area. The most considerable revision was the expansion of the floodplain associated with French Creek, which is located just outside of Morrison's eastern city limits. The Build Alternatives were developed prior to the FEMA's issuance of the revised floodplain mapping within the project study area. Subsequent to the approval of the DEIS, it was determined that the Build Alternatives would have longitudinal encroachments on the revised floodplains within the project study area and also could indirectly promote future development within the 100-year floodplain. Alternatives with longitudinal impacts cannot be approved if a reasonable alternative with more limited floodplain impacts is available. Consequently, efforts were directed toward partial realignment of Build Alternatives 4 and 5 outside of the French Creek floodplain while retaining the basic nature of the original alignments. As a result, it was determined that a SDEIS was necessary to document these changes and the associated impacts.

4.3.4 Stakeholder Meetings

The purpose of the stakeholder meetings is two-fold. First, the meetings are designed to share information regarding the project status and next steps. The second is to build consensus and gather input.

In an ongoing effort to afford the opportunity for all stakeholders in the region, who have a vested interest in the U.S. 30 project, to be heard and their comments considered; the PSG proactively meets with community stakeholders such as concerned citizens, local organizations, public officials, and special interest groups to engage and solicit their input. The meetings/briefings may be one-on-one or may be conducted with several regional leaders.

The first round of stakeholder briefings was held **in July** 2007 **followed by a second round in the months of August, September and October in 2007**. These meetings were held with State Legislators, Federal Legislators, City Councils, Mayors, City Managers, Economic Development Directors, Chamber of Commerce Representatives, State and Federal Resource Agencies and any local, regional, statewide, or national groups with potential interest in the project.

A third and fourth round of stakeholder meetings **were** held **in January and February of** 2009 **and June** 2009. **These meetings were held** to present a project progress report, share comments and concerns conveyed during the first **and second** round of meetings, and to gather input from the stakeholders.

On April 15, 2010 and May 24, 2011, meetings were held with the Morrison Business Advisory Group (MBAG). The purpose of the meetings was to discuss the concerns of the businesses of Morrison in regard to a potential bypass of Morrison with the construction of U.S. 30.

On September 13, 2010, a meeting was held with the Whiteside County Farm Bureau. At this meeting, IDOT was able to provide information as it pertained to the Whiteside County Farm Bureau in regard to the U.S. 30 project and gather input form the Farm Bureau Board.

A meeting was held on May 22, 2012 with the Whiteside County Engineer and Township Roadway Commissioners to get their thoughts and concerns regarding access before the project's preliminary design progresses. Some of the issues discussed involved how to terminate certain side roads and the distance between local access points. The result of the meeting was the County and Townships will coordinate with each other and provide IDOT with a list of issues and concerns for both alternatives. A letter was received from the Whiteside County Highway Engineer on October 3, 2012 on behalf of the Highway Department and the Township Roadway Commissioners. The letter provided their summary of the concerns associated with the U.S. 30 proposed alternatives. IDOT sent a response letter on November 2, 2012 addressing their concerns and stating that on-going coordination will continue as the project moves forward.

A complete list of all stakeholder meetings, **the associated minutes, and correspondence** are located in the **Public Involvement Document (Pubic Involvment CD located in the back of the document)**.

4.3.5 Public Informational Open Houses

Informal open house meetings and hearings were and will be scheduled to allow the general public an opportunity to view various displays and learn more about the project status, provide input, and interact with the planning and design team as the project moves forward.

A total of two (2) Public Informational Open Houses were held. A copy of the meeting summaries which include the handouts, displays, and the comments received are located in the **Public Involvement Document.**

Public Informational Open House #1. The first Public Informational Open House Meeting was held on July 25, 2007 at the Odell Community Center in Morrison with 252 people in attendance. The purpose of the meeting was to present the results from the 2006 U.S. 30 Corridor Study, highlight the next steps of project development, interact with the public, and explain the public involvement process known as CSS. The meeting was set up as an open house format, allowing participants the opportunity to visit display boards at various stations and to interact with representatives from IDOT as well as the consulting team from Volkert, Inc., H.R. Green Company, Kaskaskia Engineering Group, and Hudson and Associates, LLC.

There were a total of 13 open house stations. The first station was the Welcome Station which was designed to greet all attendees and explain the meeting process. Attendees were asked to sign in and given a welcome brochure, project map, and other project related materials to view. The next 11 stations provided the public with project information. Study team members manned each station and were available to provide further information and address questions as needed. A thirteenth station was setup for the public to fill out a comment form or record their comments on a tape recorder.

Three (3) key issues emerged out of the comments received: environmental issues, economic development, and opposition to a bypass of the city of Morrison. **In response, IDOT continued their efforts in minimizing the environmental and economic impacts of the proposed alternatives as they were developed. In turn, these efforts were repeatedly shared with the public and input sought via the project website, CAG meetings, and various stakeholder meetings. These stakeholder meetings included such groups as the Whiteside County Natural Area Guardians, all of the project study area communities, rotary clubs, and the development organizations.**

Public Informational Open House #2. The second Public Informational Open House was held on January 29, 2009 at the United Methodist Church in Morrison with 237 people in attendance. The purpose of the meeting was to present the corridors in which alternatives would be developed and to gather public input. The format of this meeting was identical to the first Public Informational Open House allowing participants to interact with the project study team and view display boards that were strategically placed at various stations. There were a total of seven (7) stations manned by IDOT staff and/or a representative from the consultant team.

Each station provided information that was developed to inform the public of the process and project findings. The Welcome Station was designed to greet all attendees and explain the meeting process. Attendees were instructed to sign-in, given a welcome/introduction brochure that explained the purpose of the open house, and a public comment form to complete. Participants then visited the next five (5) stations where they viewed a map that showed 16 proposed corridors developed by the PSG and the CAG; an environmental map that highlighted environmental resources and issues; a map that showed focus areas for alignment studies, as

well as exhibits that explained the project timeline and next steps. A seventh station was set up for the public to fill out a comment form to submit their feedback to the PSG. Study team members were available to provide further information and address any questions.

Attendees were also given the opportunity to correspond via email, postal mail, or by contacting the project hotline (1-866-ROUTE 30) within ten (10) days of the January 29, 2009 meeting.

In total, 63 comment forms were collected.

The following information was requested on the comment form:

- Respondent Profile. Whether the attendee is a homeowner, business owner, farmland owner, belong to a special interest, or a combination of any of these categories
- Potential cultural or community impacts that may be associated with the corridors identified
- Comments/Issues/Questions regarding the corridors developed by the PSG and the CAG
- Knowledge and understanding of the corridor evaluation process
- Interest in being included on the Stakeholder List
- Respondent's opinions on whether IDOT is coordinating and/or communicating effectively with the public

Three (3) key issues emerged out of the comments received: concern regarding farmland/environmental issues, preference for a southern corridor but with some opposition to the southern corridor, and some opposition to a northern corridor. **In response, IDOT continued their efforts in minimizing the environmental and economic impacts of the proposed alternatives as they were developed. In turn, these efforts were once again shared with the public and input sought via the project website, CAG meetings, and various stakeholder meetings. These stakeholder meetings included meeting with organizations for a second time, such as the Whiteside County Natural Area Guardians and all of the project study area city councils, in addition to meeting with Whiteside County Farm Bureau and the Morrison Business Advisory Group.**

***Public Hearing*. A public hearing was held on June 15, 2011 at the United Methodist Church in Morrison with 212 people in attendance. The purpose of the hearing was to afford the public with an opportunity to view and comment on the DEIS document, discuss their concerns regarding the project with the project team, and provide comments on the two (2) proposed Build Alternatives and the No-Build Alternative. Attendees were able to provide written comments or speak to a court reporter at the meeting. Attendees were also given the opportunity to provide comments by mail, through the project website, or by leaving a message on the project hotline by July 29, 2011. The information in the DEIS and comments received from the public hearing will**

be used to select a preferred alternative. This selection process will be documented in the Final EIS.

An open house format was used to present information to the public at the hearing. There were a total of nine (9) stations manned by IDOT staff and/or a representative from the consultant team. Each station provided information that was developed to inform the public of the process and project findings. The Welcome Station was designed to greet all attendees and explain the meeting process. Attendees were instructed to sign-in, given a public hearing brochure that included project details, a map of the Build Alternatives, and a comment form. Participants then visited the next station where they viewed a PowerPoint presentation that highlighted the purpose of the meeting, the project's history and process to date, the DEIS process and the next steps of the project. The next two (2) stations provided exhibits illustrating the proposed typical sections and an aerial map that illustrated the proposed Build Alternatives 4 and 5 which highlighted environmental resources, property lines and business and residential displacements. Station five (5) provided an opportunity for the public to meet and discuss their issues and concerns about the project with members of the CAG. Stations six (6) and seven (7) provided the public an opportunity to view the DEIS and maps that showed property owner impacts of Build Alternatives 4 and 5. The last two (2) stations were set up for the public to fill out a comment form or speak to a court reporter.

Eighty-eight comments were received at the public hearing or submitted before July 29, 2011 for official inclusion in the public record. The most common concerns stated were regarding farmland preservation, safety, economic development and impacts to businesses, property, and the environment. In response, IDOT continued their efforts in minimizing the environmental and economic impacts of the proposed alternatives as they were developed. In turn, these efforts were once again shared with the public and input sought via the response letters sent to the individuals who provided comment, the project website, CAG meetings, and various stakeholder meetings. These stakeholder meetings included meeting with organizations for a second time, such as the Morrison Business Advisory Group, and included first time meetings with the Whiteside County Engineer and the Township Roadway Commissioners.

On the public hearing comment form, respondents were asked to select the stakeholder type that best described them: homeowner, farmer/farmland owner, business owner, developer, and/or other. Respondents that identified themselves as "other" are individuals that represent either special interest groups, elected officials or other entities. Approximately 22 percent of those that provided a comment did not identify themselves with a category, but of those who did, homeowners and "other" were the largest groups with 24 percent each.

Respondents were also asked to indicate their preference for either a Build Alternative (Alternative 4 or 5) or the No-Build Alternative. Thirty-eight percent of homeowners and 50 percent of farmers/farmland owners preferred the No-Build Alternative. A majority of

business owners (37.5 percent) and those that identified themselves as "other" (76.2%) preferred Build Alternative 5.

In summary of the 88 comments received, 63 of these comments contained an identified singular alternative preference by the respondent. Of the 63, approximately 59 percent of the respondents preferred Build Alternative 5 (37) followed by the No-Build Alternative (23), and Build Alternative 4 (3).

4.3.5.1 Comments Received on DEIS From State and Federal Agencies

Four (4) regulatory agencies provided comments on the DEIS: two (2) Federal agencies and two (2) State agencies. Their comments and IDOT's responses are summarized below.

U.S. Department of the Interior – National Park Service (NPS). The NPS stated a concern that the Rock River is on the NRI. IDOT provided a response stating the project will not have an adverse effect on the river's water quality, free flow characteristics, recreational use, or impair the inclusion of this reach of the river to be incorporated into the Wild and Scenic River System at some future date.

U.S. Environmental Protection Agency (USEPA). A summary of the USEPA comments and IDOT responses are as follows:

- **Comment: Recommend considering a Morrison west side bypass extending from IL 78 north to IL 78 south.**
  - **Response: IDOT stated that this does not meet the Purpose and Need Statement and is not supported by the traffic volumes.**
- **Comment: Recommend the stream and floodplain crossings be widened and the stream banks modified to create a stepped plateau and reduce scour.**
  - **Response: IDOT stated that benching adjacent to the channel does not provide a permanent waterway opening and will not eliminate scour.**
- **Comment: Recommend that the floodplain crossings be redesigned to take into account forecast climate change and recent flooding history within the project area.**
  - **Response: IDOT stated the effect of climate change on flow patterns and volumes of streams cannot be predicted. Floodplain crossing designs will be based on current conditions.**

Illinois Department of Agriculture (IDOA). The IDOA stated they would have no objection to the use of either Alternative for the proposed highway improvements. They consider such an action to be consistent with the IDOT's Agricultural Land Preservation Policy and in compliance with the state's Farmland Preservation Act. IDOT did not provide a response because one was not warranted.

Illinois Department of Natural Resources (IDNR). The IDNR had the following comments:

- **Concern about the impacts to the State Threatened Black Sandshell mussel in Rock River and Elkhorn Creek.**
- **Potential impacts to the Black Sandshell mussel will require a Conservation Plan for an Incidental Taking of a Threatened Species, an ITA Permit to be acquired one year prior to construction, and relocating any mussels in harm's way.**
- **Because the DEIS states that IDOT will prepare a Conservation Plan in order to receive an ITA Permit, the consultation on this project is closed.**

IDOT did not provide a response because one was not warranted.

The agency comment letters and IDOT response letters can be found in Appendix D.

4.3.6 Project Newsletters

Newsletters were published and distributed to all stakeholders listed in the project database and everyone who had indicated interest in receiving project updates as the project meets major milestones.

Newsletter #1. The first newsletter was published in the fall of 2007 after the first Public Informational Open House in July 2007. This newsletter addressed the concerns of the public regarding potential environmental and property impacts as well as informed the public about how they could get involved and stay involved. The newsletter also gave an overview of the project explaining the need, scope, limitations, and schedule, as well as policies, procedures, and processes of the project. The newsletter contained information about the CSS process and the importance of public input. Other alternatives on how to remain updated with the project were also available in the newsletter.

Newsletter #2. The second newsletter was published in the winter of 2008 and highlighted the first two (2) CAG meetings and the next steps for the project. The newsletter announced the development of the Problem Statement and the efforts of the PSG to meet with stakeholders in the project study area to ensure that their concerns were addressed. The newsletter also briefly explained roles and responsibilities of the CAG as well as their mission and ground rules.

Newsletter #3. The third newsletter was published in early 2009 which highlighted the major milestones accomplished by the PSG while moving the project forward. One (1) of the major milestones included the approval of the Purpose and Need Statement by FHWA with concurrence from State and Federal regulatory and resource agencies. The newsletter briefly explained the process of choosing a logo for the U. S. 30 project as well as the screening process the CAG implemented in defining corridors to be evaluated by the PSG. The newsletter also announced the second Public Informational Open House as well as addressed frequently asked questions (FAQs) that were developed from various comments and concerns received from the public and stakeholders.

Newsletter #4. The fourth newsletter was published in the fall of 2009 after the second Public Informational Open House and the fifth CAG meeting. The newsletter highlighted the six (6) alignments developed based on the Purpose and Need of the project, engineering feasibility, avoidance of environmental resources, and public input. The newsletter also contained information about environmental resources that IDOT is committed to enhancing and improving. There were also references to project terminology and their definitions to assist the public in better understanding certain aspects of the project.

Newsletter #5. The fifth newsletter was published in the summer of 2010. The newsletter highlighted the project study team meeting with the Morrison business owners, the sixth CAG meeting, and a detailed description of the six (6) proposed alternatives. In addition, the main purpose of this newsletter was to solicit input from the public on the six (6) proposed alternatives, therefore, a comment form, along with a map of the six (6) alternatives, was provided.

A total of 67 comments were received through postal mail or email via the project website. Key issues that have been identified previously as the public's concerns were once again restated:

- impacts on agricultural ground and activity,
- potential negative economic impact of a bypass on the city of Morrison,
- displacement of residential property, residences, and businesses,
- want use of the existing U.S. 30 roadway to the extent possible, and
- oppose project overall

The comments received can be found in the **Public Involvement Document**.

Newsletter #6. The sixth newsletter was published in the fall of 2012. The newsletter highlighted the results of the 2011 public hearing, the FEMA floodplain modernization, the revised Build Alternatives, the SDEIS, and included a map illustrating the old and revised Build Alternatives. The newsletter also featured meetings held in May 2012 with the CAG and the Whiteside County Engineer and Township Road Commissioners. The purpose of the CAG meeting was to discuss the revisions of the Build Alternatives and the initiation of the SDEIS. The Whiteside County Engineer and Township Road Commissioners meeting discussed the revised Build Alternatives as well as how each alignment would affect access for the various side roads crossed.

All copies of the newsletters are located in the **Public Involvement Document.**

4.3.7 Website

A project website was activated in November 2007. The project website allows stakeholders to keep up to date on the project as well as members of the public who are unable to attend meetings. The website allows the public to submit their contact information to receive newsletters and other project information. The site showcases project status/updates, timelines, FAQs, project maps, contact information, email, and space for the public to submit comments.

The website is also used to announce public meetings. The website address is www.dot.il.gov/us30/index1.html.

4.3.8 Project Hotline

A project hotline was activated in July 2007. The number is **1-866-ROUTE30 (1-866-768-8330)**. The hotline is another avenue for the public to voice their comments or concerns. Messages left on the hotline number are transcribed to a hotline form and forwarded to the appropriate consultant team member that can address the context of the comment or concern rendered. This process is designed to have a response to the message originator within 72 hours.

4.3.9 Letters and Emails

Letters and emails are another public involvement tool for stakeholders to submit their comments and concerns. Once received by the project study team, every effort is made to address these comments and concerns with a written response in a timely manner.

4.4 Summary

The public involvement process has continued to be welcomed during the project development. As with public outreach, the team is looking for the public's knowledge and input in making the project safe, functional, and conducive for the residents, businesses, and traveling public. Public involvement seeks to be the consensus building pipeline between all parties involved. As a requirement of SAFETEA-LU in conjunction with IDOT's CSS policy, it is imperative that the public is given multiple opportunities to voice their concerns and interests to the PSG. To ensure that the CSS process is implemented, public involvement and stakeholder outreach was applied using specific techniques, tools, and forums to engage the communities impacted by the U.S. 30 project. Data collected from the various forums was used to aid the PSG in gaining a better understanding of the public's interests and concerns as the project progresses. Such activities included stakeholder and special interest group meetings, PSG meetings, CAG meetings, Public Informational Meetings, the project hotline and website.

Chapter 5

References

5.0 References

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Chapter 6

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6.0 List of Preparers

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APPENDIX A

QUANTITATIVE DATA SPREADSHEETS & OPINION OF PROBABLE COST

US Route 30 - Whiteside County
Corridor Evaluation
Information Summary

Corridor Section Alternative Screening: PSG (9-18-08) and CAG (11-6-08) 1400 FOOT FOOTPRINT

Evaluation Factor	Definition/Clarification	Indicators	SECTION 1			SECTION 2												
			1A	1B	1C	2A	2B	2C	2D	2E	2F	2G	2H	2J	2K	2L	2M	2N
Traffic & Safety																		
Traffic Operations / Congestion Relief	Evaluate corridors from a traffic operations standpoint based on Level of Service. LOS A to F correspond to point values 1 to 6. Point values then totalled for each corridor for comparison.	Roadway Segment LOS (points)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Corridor Utilization	Improve LOS along existing US 30 in design year.	Existing Roadway LOS in Year 2033 within Segment (points)	5	1	3	3	4	3	2	1	3	2	3	3	5	3	2	2
Potential for Crash Reduction	Evaluate proposed countermeasure effectiveness based on traffic volumes from US 30 Corridor OD study and average crash reduction rates as given in the FHWA study "Effects of the conversion of Rural Two-Lane Roadways to Four-Lane Roadways".	Crash Reduction Factor (points) Based on crashes on both new corridor and existing roadway resulting from proposed Corridor	50	33	39	40	40	40	30	29	39	30	41	40	42	40	30	21
Environmental Sensitivity - Social and Economic Criteria																		
Property Impacts	Evaluate potential property impacts	Commercial / Industrial (acres)	4.65	1.18	7.51	28.00	53.35	19.20	6.43	18.69	17.34	0.00	24.59	22.32	46.01	19.20	13.54	0.00
		Public Facilities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	0.00	0.88	2.13	0.00	5.93	0.00	0.00	0.00
		Agricultural Ground (acres)	987.22	1,006.81	727.07	2,742.76	2,085.90	2,909.02	2,832.05	1,435.58	2,940.78	2,305.79	2,562.45	2,713.98	2,275.84	2,905.21	2,873.57	2,715.49
		Residential (acres)	25.47	14.58	23.95	51.51	201.44	47.50	72.30	117.47	75.89	78.04	103.27	58.17	149.69	55.74	53.59	44.75
		Total (acres)	1,017.34	1,022.57	758.53	2,822.27	2,340.68	2,975.73	2,910.78	1,573.88	3,034.00	2,384.71	2,692.44	2,794.47	2,477.47	2,980.15	2,940.69	2,760.24
Agricultural Land Severance	Evaluate corridors relative to Farm Severance	Number of farms severed = longitudinal	7	0	7	11	10	7	12	22	12	37	9	5	7	4	7	2
		Number of farms severed = diagonal	32	37	32	52	61	58	46	39	57	15	66	61	72	63	60	57
Displacements	Evaluate potential displacements	Churches (each)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Commercial / Industrial (each)	2	2	6	5	23	6	1	7	6	0	7	5	9	5	1	0
		Schools (each)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Public Facilities (each)	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	0
		Farmsteads (each)	3	32	19	22	22	24	51	21	41	31	16	15	17	38	45	26
		Residential (each)	3	10	15	28	100	30	32	51	49	53	32	32	46	32	33	34
		Total (each)	8	44	40	55	145	60	84	81	96	84	57	52	74	75	79	60
Centennial Farm Impacts	Evaluate corridors relative to disturbance of centennial farms	Area of centennial farms affected (acres)	38.07	0.00	0.00	45.48	0.00	67.78	73.22	0.00	0.00	91.71	44.24	43.55	0.00	68.35	68.35	155.05
Economic Sustainability	Evaluate potential to sustain the economic viability of the communities	Requires ROW from Enterprise Zone (acres)	0.00	0.00	0.00	16.07	16.07	16.07	0.00	0.00	0.00	0.00	16.07	16.07	16.07	16.07	0.00	0.00
		Brings roadway closer to Enterprise Zone (Rank 1 to 5)	N/A	N/A	N/A	4	5	4	3	1	2	2	4	4	4	4	4	3
Environmental Sensitivity - Additional Criteria																		
Special Waste	Evaluate potential impact on special waste sites.	Number of sites affected (each)	0	0	0	2	3	2	0	4	2	0	2	2	4	2	0	0
Section 4f/6f Properties	Evaluate potential impact on 4(f)/6f properties (parkland, recreational land, historic sites).	Number of sites affected (each)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floodplain	Evaluate potential impact on floodplains.	Area of floodplain affected - longitudinal (acres)	0.00	28.84	0.00	0.00	0.00	0.00	0.00	12.13	72.88	65.51	0.00	0.00	0.00	0.00	0.00	0.00
		Area of floodplain affected - diagonal (acres)	141.45	316.17	193.22	88.79	61.26	88.79	107.16	14.35	0.00	0.00	88.79	88.79	154.62	88.79	88.79	100.03
Natural Area	Evaluate potential impact to Natural Area	Number of sites affected (each)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nature Preserve	Evaluate potential impact to Nature Preserve	Number of sites affected (each)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Quality	Evaluate potential impact on air quality.	Total point value for LOS under "Traffic Operations/ Congestion Relief" criterion (points)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water Resources	Evaluate potential impacts to streams using Habitat Assessment Score. Point values assigned to each stream site based on HA score. Point values range from 1 to 4 with 1 being poor and 4 being excellent.	Habitat Assessment Score (number of times corridor crosses stream x assigned point value)	2	5	4	9	8	10	13	4	13	12	10	9	11	9	9	10
Wetlands	Evaluate potential impacts to wetlands using Floristic Quality Index (FQI). Point values assigned to each site based on FQI. Point values range from 1 to 4 with 1 being severely degraded & 4 being statewide significant natural area.	Area of sites affected (acres x assigned point value)	0.16	0.73	0.10	18.34	27.44	10.47	10.91	10.03	10.79	3.16	22.90	19.94	20.12	10.47	5.82	8.83
Threatened & Endangered Species and/or habitat	Evaluate potential impacts to T&E species by type	State Threatened - Number of sites affected	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		State Endangered - Number of sites affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Federal Theatened - Number of sites affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Federal Endangered - Number of sites affected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest Areas	Evaluate potential impact on forested areas	Area of sites affected (acres)	51.37	69.61	120.32	1.11	116.53	0.00	1.33	87.18	3.56	6.00	95.85	21.13	64.27	1.33	24.69	11.12
Prairies	Evaluate potential impact on prairies	Area of sites affected (acres)	78.28	26.02	138.77	12.45	88.96	2.67	54.04	149.45	61.83	74.95	93.18	26.69	96.30	16.23	176.14	82.95
Wildlife Habitat	Evaluate potential impacts to high quality wildlife cover types	Area of sites affected (acres)	137.88	100.74	278.44	14.46	231.51	2.67	55.60	242.85	67.83	102.52	200.38	48.26	165.91	17.57	205.49	102.08
Cost																		
Construction Cost	Opinion of probable construction cost	Total Construction Cost	$51,600,000	$82,100,000	$44,300,000	$97,400,000	$100,500,000	$98,300,000	$82,600,000	$62,700,000	$111,000,000	$90,900,000	$128,800,000	$104,400,000	$140,100,000	$98,800,000	$77,900,000	$73,900,000
Land Acquisition Cost	Opinion of probable land acquisition cost	Single Family Homes	$55,485	$128,304	$190,642	$647,459	$3,814,432	$626,801	$595,327	$1,471,312	$627,567	$640,190	$774,954	$740,072	$1,451,830	$734,480	$607,563	$691,520
		Farm Buildings	$127,437	$161,300	$204,374	$209,643	$385,061	$286,525	$299,952	$334,340	$300,364	$226,098	$239,537	$186,062	$370,405	$333,960	$398,566	$416,747
		Commercial Buildings	$50,944	$50,944	$71,032	$118,603	$614,011	$118,603	$11,289	$130,013	$133,037	$0	$124,772	$107,314	$137,798	$118,603	$23,492	$0
		Residential Property Impacts	$50,659	$27,838	$41,650	$107,565	$480,705	$92,237	$104,615	$262,010	$107,081	$119,098	$198,241	$123,087	$292,309	$112,525	$109,119	$90,985
		Agricultural Property Impacts	$140,869	$120,761	$68,534	$394,830	$397,167	$450,165	$414,177	$266,338	$497,706	$376,993	$407,299	$385,652	$395,118	$419,635	$408,566	$356,555
		Commercial Property Impacts	$5,963	$2,981	$8,745	$31,282	$67,827	$24,825	$6,939	$29,376	$18,310	$0	$31,076	$25,191	$42,261	$24,825	$11,450	$0
		Total Land Acquisition cost	$248,434	$202,523	$189,960	$652,281	$1,559,710	$685,831	$537,021	$687,737	$756,134	$496,091	$761,387	$641,245	$867,486	$675,588	$552,626	$447,540
Operational & Maintenance Costs	Evaluate costs as reflected by resulting lane miles. Assumes a direct correlation between total lane miles & operational/maintenance costs.	Length of proposed corridor (lane miles)	16.52	17.91	16.64	34.59	32.28	33.95	33.80	30.01	36.15	38.08	36.28	33.54	36.45	33.40	32.96	28.48
		Length of resulting existing alignment not in corridor (lane mi.)	0.52	7.60	7.57	10.97	11.12	11.67	13.18	7.03	12.53	13.23	8.14	10.80	6.29	11.44	12.95	14.00
		Total Length (lane miles)	17.05	25.52	24.21	45.56	43.40	45.63	46.98	37.04	48.67	51.30	44.42	44.34	42.74	44.84	45.91	42.49

Scoring for Non-Measurable Criteria:
1 = Zero benefit; high adverse impact
2 = Low benefit; moderate-high adverse impact
3 = Moderate benefit; moderate adverse impact
4 = Moderate-high benefit; low adverse impact
5 = High benefit; no impact

High Value is Desirable for this Criterion
Low Value is Desirable for this Criterion

US Route 30 - Whiteside County
Corridor Evaluation
Information Summary

1400 FOOT FOOTPRINT

Evaluation Factor	Definition/Clarification	Indicators	3B	3C	3D	3E	3G
Traffic & Safety							
Traffic Operations / Congestion Relief	Evaluate corridors from a traffic operations standpoint based on Level of Service. LOS A to F correspond to point values 1 to 6. Point values then totalled for each corridor for comparison.	Roadway Segment LOS (points)	1	1	1	1	1
Corridor Utilization	Improve LOS along existing US 30 in design year.	Existing Roadway LOS in Year 2033 within Segment (points)	5	5	3	3	3
Potential for Crash Reduction	Evaluate proposed countermeasure effectiveness based on traffic volumes from US 30 Corridor OD study and average crash reduction rates as given in the FHWA study "Effects of the conversion of Rural Two-Lane Roadways to Four-Lane Roadways".	Crash Reduction Factor (points) Based on crashes on both new corridor and existing roadway resulting from proposed Corridor	49	50	30	30	30
Environmental Sensitivity - Social and Economic Criteria							
Property Impacts	Evaluate potential property impacts	Commercial / Industrial (acres)	96.47	87.66	75.62	75.62	83.15
		Public Facilities (acres)	77.09	151.25	5.59	5.59	87.34
		Agricultural Ground (acres)	1,420.00	1,273.08	1,559.52	1,599.90	1,488.88
		Residential (acres)	99.67	99.31	23.16	19.64	110.37
		Total (acres)	1,693.23	1,611.31	1,663.89	1,700.74	1,769.74
Agricultural Land Severance	Evaluate corridors relative to Farm Severance	Number of farms severed = longitudinal	8	11	47	37	19
		Number of farms severed = diagonal	55	50	0	16	33
Displacements	Evaluate potential displacements	Churches (each)	0	0	0	0	0
		Commercial / Industrial (each)	43	1	1	1	13
		Schools (each)	0	0	0	0	0
		Public Facilities (each)	0	2	0	0	0
		Farmsteads (each)	12	10	60	27	37
		Residential (each)	12	3	22	11	68
		Total (each)	67	16	83	39	118
Centennial Farm Impacts	Evaluate corridors relative to disturbance of centennial farms	Area of centennial farms affected (acres)	67.36	57.89	0.00	0.00	3.12
Economic Sustainability	Evaluate potential to sustain the economic viability of the communities	Requires ROW from Enterpise Zone (acres)	0.00	0.00	0.00	0.00	0.00
		Brings roadway closer to Enterprise Zone (Rank 1 to 5)	N/A	N/A	N/A	N/A	N/A
Environmental Sensitivity - Additional Criteria							
Special Waste	Evaluate potential impact on special waste sites.	Number of sites affected (each)	0	6	0	0	0
Section 4f/6f Properties	Evaluate potential impact on 4(f)/6f properties (parkland, recreational land, historic sites).	Number of sites affected (each)	0	0	0	0	0
Floodplain	Evaluate potential impact on floodplains.	Area of floodplain affected - longitudinal (acres)	6.12	6.13	0.00	0.00	0.00
		Area of floodplain affected - diagonal (acres)	0.00	0.00	0.00	0.00	0.00
Natural Area	Evaluate potential impact to Natural Area	Number of sites affected (each)	0	0	0	0	0
Nature Preserve	Evaluate potential impact to Nature Preserve	Number of sites affected (each)	0	0	1	1	1
Air Quality	Evaluate potential impact on air quality.	Total point value for LOS under "Traffic Operations/ Congestion Relief" criterion (points)	1	1	1	1	1
Water Resources	Evaluate potential impacts to streams using Habitat Assessment Score. Point values assigned to each stream site based on HA score. Point values range from 1 to 4 with 1 being poor and 4 being excellent.	Habitat Assessment Score (number of times corridor crosses stream x assigned point value)	10	10	9	8	5
Wetlands	Evaluate potential impacts to wetlands using Floristic Quality Index (FQI). Point values assigned to each site based on FQI. Point values range from 1 to 4 with 1 being severely degraded & 4 being statewide significant natural area.	Area of sites affected (acres x assigned point value)	1.83	1.82	0.00	0.00	0.00
Threatened & Endangered Species and/or habitat	Evaluate potential impacts to T&E species by type	State Threatened - Number of sites affected	0	0	0	0	0
		State Endangered - Number of sites affected	0	0	0	0	0
		Federal Theatened - Number of sites affected	0	0	0	0	0
		Federal Endangered - Number of sites affected	0	0	0	0	0
		Total	0	0	0	0	0
Forest Areas	Evaluate potential impact on forested areas	Area of sites affected (acres)	4.23	63.60	0.00	36.03	93.18
Prairies	Evaluate potential impact on prairies	Area of sites affected (acres)	16.01	173.24	14.68	88.74	150.78
Wildlife Habitat	Evaluate potential impacts to high quality wildlife cover types	Area of sites affected (acres)	21.57	244.41	14.68	131.21	260.20
Cost							
Construction Cost	Opinion of probable construction cost	Total Construction Cost	$52,300,000	$57,400,000	$37,800,000	$36,000,000	$37,300,000
Land Acquisition Cost	Opinion of probable land acquisition cost	Single Family Homes	$238,823	$137,252	$119,924	$78,085	$855,704
		Farm Buildings	$186,853	$196,198	$220,383	$297,421	$328,302
		Commercial Buildings	$12,380,405	$12,342,122	$12,342,122	$12,342,122	$12,388,407
		Residential Property Impacts	$178,410	$171,914	$35,752	$28,316	$202,328
		Agricultural Property Impacts	$260,866	$229,529	$304,148	$317,701	$285,718
		Commercial Property Impacts	$140,787	$133,692	$123,032	$123,032	$135,220
		Total Land Acquisition cost	$12,960,467	$12,877,257	$12,805,054	$12,811,171	$13,011,673
Operational & Maintenance Costs	Evaluate costs as reflected by resulting lane miles. Assumes a direct correlation between total lane miles & operational/maintenance costs.	Length of proposed corridor (lane miles)	29.53	29.24	27.06	27.85	28.61
		Length of resulting existing alignment not in corridor (lane mi.)	4.12	0.00	14.46	14.46	13.55
		Total Length (lane miles)	33.65	29.24	41.51	42.31	42.16

Scoring for Non-Measurable Criteria:
1 = Zero benefit; high adverse impact
2 = Low benefit; moderate-high adverse impact
3 = Moderate benefit; moderate adverse impact
4 = Moderate-high benefit; low adverse impact
5 = High benefit; no impact

High Value is Desirable for this Criterion
Low Value is Desirable for this Criterion

US Route 30 - Whiteside County
Information Summary

INITIAL ALTERNATIVES

IMPACTS IN THIS SPREADSHEET WERE ASSESSED WITH A 200 FOOT WIDE FOOTPRINT

THE DATA IN THIS SPREADSHEET DOES NOT INCLUDE THE EAST END OF THE PROJECT FROM MOLINE ROAD TO IL 40

Evaluation Factor	Definition/Clarification	Indicators	ALTERNATIVES					
			1A-EB	2A-WB	3A-WB	4A-EB	5A-WB	6A-WB
Traffic & Safety								
Traffic Operations /Congestion Relief	Evaluate alternatives from a traffic operations standpoint based on Level of Service. LOS A to F correspond to point values 1 to 6. Point values then totalled for each alternative for comparison.	Roadway Segment LOS (points)	1	1	1	1	1	1
Utilization of Improvements	Improve LOS along existing US 30 in design year.	Existing Roadway LOS in 2033 within Segment (points)	1.92	1.75	2.76	1.69	1.52	2.36
Potential for Crash Reduction	Evaluate proposed countermeasure effectiveness based on traffic volumes from US 30 Corridor OD study and average crash reduction rates as given in the FHWA study "Effects of the conversion of Rural Two-Lane Roadways to Four-Lane Roadways".	Crash Reduction Factor (points) based on crashes on both new roadway and existing roadway resulting from proposed alternative.	66	61	70	64	60	68
Environmental Sensitivity - Social and Economic Criteria								
Property Impacts	Evaluate potential property impacts	Commercial / Industrial (acres)	9.10	11.86	1.79	11.18	11.15	1.08
		Public Facilities (acres)	23.79	24.06	0.59	23.75	24.07	0.62
		Agricultural Ground (acres)	448.10	516.20	522.01	397.23	464.87	465.76
		Residential (acres)	47.59	26.34	25.80	48.56	24.03	21.97
		Total (acres)	**528.58**	**578.46**	**550.19**	**480.71**	**524.12**	**489.44**
Agricultural Land Severance	Evaluate alternatives relative to Farm Severance	Number of farms severed = longitudinal	18	10	10	12	2	6
		Number of farms severed = diagonal	21	33	32	9	28	26
Displacements	Evaluate potential displacements	Churches (each)	0	0	0	0	0	0
		Commercial / Industrial (each)	1	4	1	4	3	0
		Schools (each)	0	0	0	0	0	0
		Public Facilities (each)	0	0	0	0	0	0
		Farmsteads (each)	13	10	7	16	12	13
		Residential (each)	19	9	6	21	8	7
		Total (each)	**33**	**23**	**14**	**41**	**23**	**20**
Centennial Farm Impacts	Evaluate alternatives re: disturbance to centennial farms	Area of centennial farms affected (acres)	3.38	7.79	12.07	6.58	13.50	17.22
Economic Sustainability	Evaluate potential to sustain the economic viability of the communities	Requires ROW from Enterpise Zone (acres)	15.66	20.44	2.35	15.66	20.43	2.37
		Brings roadway closer to Enterprise Zone (Rank 1 to 5)	5	1	1	1	1	1
Environmental Sensitivity - Additional Criteria								
Special Waste	Evaluate potential impact on special waste sites.	Number of sites affected (each)	2	2	0	3	2	0
Section 4f/6f Properties	Evaluate potential impact on 4(f)/6f properties (parkland, recreational land, historic sites).	Number of sites affected (each)	3	3	1	5	2	0
Floodplain	Evaluate potential impact on floodplains.	Area of floodplain affected - longitudinal (acres)	2.66	0.00	0.00	2.55	0.00	14.91
		Area of floodplain affected - diagonal (acres)	27.95	37.44	40.55	31.95	40.85	28.88
Natural Area	Evaluate potential impact to Natural Area	Number of sites affected (each)	0	0	0	0	0	0
Nature Preserve	Evaluate potential impact to Nature Preserve	Number of sites affected (each)	0	0	0	0	0	0
Air Quality	Evaluate potential impact on air quality.	Total point value for LOS under "Traffic Operations/ Congestion Relief" criterion (points)	1	1	1	1	1	1
Water Resources	Evaluate potential impacts to streams using Habitat Assessment Score. Point values assigned to each stream site based on HA score. Point values range from 1 to 4 with 1 being poor and 4 being excellent.	Habitat Assessment Score (number of times alternative crosses stream x assigned point value)	14	17	18	13	16	17
Wetlands	Evaluate potential impacts to wetlands using Floristic Quality Index (FQI). Point values assigned to each site based on FQI. Point values range from 1 to 4 with 1 being severely degraded & 4 being statewide significant natural area.	Area of sites affected (acres x assigned point value)	0.95	2.40	1.11	0.47	1.48	0.21
Threatened & Endangered Species and/or habitat	Evaluate potential impacts to T&E species by type	State Threatened - Number of sites affected	1	1	1	1	1	1
		State Endangered - Number of sites affected	0	0	0	0	0	0
		Federal Theatened - Number of sites affected	0	0	0	0	0	0
		Federal Endangered - Number of sites affected	0	0	0	0	0	0
		Total	**1**	**1**	**1**	**1**	**1**	**1**
Forest Areas	Evaluate potential impact on forested areas	Area of sites affected (acres)	35.34	26.04	31.59	16.43	7.84	17.39
Prairies	Evaluate potential impact on prairies	Area of sites affected (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Wildlife Habitat	Evaluate potential impacts to high quality wildlife cover types	Area of sites affected (acres)	42.55	39.24	44.72	25.80	20.12	29.48
Cost								
Construction Cost	Opinion of probable construction cost	Total Construction Cost	$219,925,000	$253,748,000	$240,851,000	$238,198,000	$247,395,000	$235,394,000
Land Acquisition Cost	Opinion of probable land acquisition cost	Single Family Homes	$1,529,160	$533,850	$546,447	$1,712,193	$599,496	$782,415
		Farm Buildings	$797,100	$556,120	$251,050	$1,419,970	$996,630	$858,450
		Commercial Buildings	$60,264	$190,086	$60,264	$232,986	$129,822	$0
		Residential Property Impacts	$240,239	$121,404	$112,373	$261,796	$123,955	$113,166
		Agricultural Property Impacts	$2,240,485	$2,580,995	$2,610,054	$1,986,141	$2,324,334	$2,328,820
		Commercial Property Impacts	$38,128	$49,214	$4,328	$53,132	$47,123	$2,261
		Total Land Acquisition cost	**$4,905,376**	**$4,031,669**	**$3,584,517**	**$5,666,218**	**$4,221,360**	**$4,085,112**
Operational & Maintenance Costs	Evaluate costs as reflected by resulting lane miles. Assumes a direct correlation between total lane miles & operational/maintenance costs.	Length of proposed alignment (lane miles)	80.28	86.47	83.90	78.51	81.84	79.07
		Length of resulting existing roadway not in alternative (lane mi.)	19.13	21.14	37.99	11.52	15.72	32.88
		Total Length (lane miles)	**99.41**	**107.61**	**121.89**	**90.03**	**97.56**	**111.95**

Scoring for Non-Measurable Criteria
1= No adverse impact -or- High benefit
2 =Low adverse impact -or- Moderately high benefit
3 =Moderate adverse impact -or- Moderate benefit
4 = Moderately high adverse impact -or- Low benefit
5 = High adverse impact -or- Zero benefit

High Value is Desirable for this Criterion
Low Value is Desirable for this Criterion

U.S. 30
OPINION OF PROBABLE COST

ALTERNATIVES 4 & 5
DECEMBER 2012

THESE NUMBERS ARE NOT TO BE USED FOR ACTUAL COSTS

PRELIMINARY COST OF ALTERNATIVES			
COSTS		**ALTERNATIVES**	
		Alt 4	**Alt 5**
Land Acquisition Cost	Single Family Homes	**$1,822,980**	**$1,299,585**
	Farm Buildings	**$3,435,150**	**$2,809,755**
	Commercial Buildings	**$407,070**	**$521,892**
	Residential Property Impacts	**$297,795**	**$239,077**
	Agricultural Property Impacts	**$4,644,320**	**$4,763,680**
	Commercial Property Impacts	**$18,340**	**$18,086**
	Total Land Acquisition Cost	**$10,625,655**	**$9,652,075**
Preliminary Cost Estimate (East End of Project -Moline Rd. to Prophetstown Rd.) where all Alternatives are the same and includes widening only		**$62,123,000**	**$62,123,000**
Preliminary Cost (2020 Dollars) includes Construction Costs & Land Acquisition Costs		**$437,004,000**	**$404,625,000**

Illinois Department of Transportation

APPENDIX B

PROJECT INITIATION LETTER
&
NOTICE OF INTENT

Illinois Department of Transportation
Office of the Secretary
2300 South Dirksen Parkway / Springfield, Illinois / 62764
Telephone 217/782-5597

RE: FAP 309 (U.S. Route 30)
Section (20-1, 17R, 16, 15, 110)PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07, P-92-106-07
Whiteside County, Illinois

Notification of Project Initiation

July 13, 2007

Mr. Norman Stoner
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, IL 62704

Attn: Mr. Matt Fuller

Dear Mr. Stoner:

The Illinois Department of Transportation (IDOT), in accordance with 23 U.S.C. 139(e), is formally notifying the Federal Highway Administration (FHWA)-Illinois Division that IDOT has initiated the project planning process for the U.S. Route 30 Environmental Impact Statement.

General Location of the Proposed Project:
The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

Type of Work:
The project involves new construction/major rehabilitation on U.S. Route 30. New construction consists of a 4-lane roadway on new alignmentbetween U.S. Route 30/IL Route 136 intersection eastward to the Rock River. Major rehabilitation on U.S. Route 30 from the Rock River to the U.S. Route 30/IL Route 40 intersection in Rock Falls is proposed. The corridor is approximately 19 miles in length. It is anticipated that the environmental review process will begin in July of 2007 with the publication of the Notice of Intent. The project will follow the IDOT/FHWA negotiated time frames agreement for Environmental Impact Statements. Potential Cooperating Agencies include the U.S. Army Corps of Engineers (USACOE), U.S. Environmental Protection Agency (USEPA) and U.S. Fish and Wildlife Services (USFWS). While potential Participating Agencies include the Illinois Department of Agriculture (IDOA), Illinois Environmental Protection Agency (IEPA), and the Illinois Department of Natural Resources (IDNR).

Potential Environmental Impacts:
The project study area consists of primarily agricultural land. Issues pertaining to severance of farmland and access for farm equipment will require in-depth examination and coordination with members of the agricultural community. In regard to Section 4(f) there are parks and publicly-owned lands within the project study area. A potential Section 6(f) property occurs near Rock Falls on the eastern end of the project study limits. This property has received State funding under the Open Space Land Acquisition and Development Grant program. An initial site survey of the project area did identify a number of structures older than fifty years that could qualify as eligible for inclusion on the National Register of Historic Places. The project area also contains habitat for Federal and State Threatened & Endangered. State designated Natural Areas and Nature Preserves also occur within the project study area. There are seven stream crossings, the largest being the Rock River. FEMA 100-year floodplains are associated with some of the streams, the largest being the floodplain of the Mississippi River on the western edge of the study area. Forested, scrub/shrub, and emergent wetlands are found throughout the project study area.

Additional Anticipated Federal Approvals Required:
Given the number of stream, creek, and river crossings within the project area, it is anticipated that a Section 404 permit will be required.

Should you have any questions or need additional information regarding this project initiation notification, please feel free to contact Ross E. Monk, Program Development Engineer, District Two (815)284-5307 or Barbara H. Stevens, Environmental Section Chief, Bureau of Design & Environment (217)785-4245.

Sincerely,

Eric E. Harm
Acting Bureau Chief of Design & Environment

cc: Paul Niedernhofer – IDOT, BDE
Tim Craven – IDOT, B&S
Mark Nardini – IDOT, District 2
Dawn Perkins – IDOT District 2

depicted on a noise exposure map submitted under § 47503 of the Act, it should be noted that the FAA is not involved in any way in determining the relative locations of specific properties with regard to the depicted noise contours, or in interpreting the NEMs to resolve questions concerning, for example, which properties should be covered by the provisions of § 47506 of the Act. These functions are inseparable from the ultimate land use control and planning responsibilities of local government. These local responsibilities are not changed in any way under 14 CFR Part 150 or through FAA's review of NEMs. Therefore, the responsibility for the detailed overlaying of noise exposure contours onto the map depicting properties on the surface rests exclusively with the airport operator that submitted those maps, or with those public agencies and planning agencies with which consultation is required under § 47503 of the Act. The FAA has relied on the certification by the airport operator, under 14 CFR 150.21, that the statutorily required consultation has been accomplished.

The FAA has formally received the noise compatibility program amendment for Springfield-Beckley Municipal Airport, also effective on June 25, 2007. Preliminary review of the submitted material indicates that it conforms to the requirements for the submittal of noise compatibility programs, but that further review will be necessary prior to approval or disapproval of the program amendment. The formal review period, limited by law to a maximum of 180 days, will be completed on or before December 21, 2007.

The FAA's detailed evaluation will be conducted under the provisions of 14 CFR 150.33. The primary considerations in the evaluation process are whether the proposed amendment measures may reduce the level of aviation safety, create an undue burden on interstate or foreign commerce, or be reasonably consistent with obtaining the goal of reducing existing non-compatible land uses and preventing the introduction of additional non-compatible land uses.

Interested persons are invited to comment on the proposed program with specific reference to these factors. All comments, other than those properly addressed to local land use authorities, will be considered by the FAA to the extent practicable. Copies of the NEMs, the FAA's evaluation of the maps, and the proposed noise compatibility program amendments are available for examination at the following locations:

Federal Aviation Administration Detroit Airports District Office, 11677 South Wayne Road, Suite 107, Romulus, Michigan 48174.

City of Springfield, Office of the City Manager, 76 E. High Street, Springfield, Ohio 45502.

Questions may be directed to the individual named above under the heading, **FOR FURTHER INFORMATION CONTACT**.

Issued in Romulus, Michigan: June 25, 2007.

Jack Delaney,

Acting Manager, Detroit Airports District Office, Great Lakes Region.

[FR Doc. 07–3884 Filed 8–8–07; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement; Whiteside County, IL

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for proposed transportation improvements between U.S. Route 30 and IL Route 136 intersection near Fulton, Illinois eastward to the U.S. Route 30 and IL Route 40 intersection in Rock Falls, Illinois.

FOR FURTHER INFORMATION CONTACT: Norman R. Stoner, P.E., Division Administrator, Federal Highway Administration, 3250 Executive Park Drive, Springfield, Illinois 62703, Phone: (217) 492–4600. George F. Ryan, P.E., Deputy Director of Highways, Region Two Engineer, Illinois Department of Transportation, 819 Depot Avenue, Dixon, Illinois 61021, Phone: (815) 284–2271.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Illinois Department of Transportation (IDOT), will prepare an environmental impact statement (EIS) on potential transportation improvements along an approximately 24-mile long corridor of U.S. Route 30 in Whiteside County, Illinois. Improvements to the corridor are considered necessary to enhance mobility and improve system continuity.

Primary environmental resources that may be affected are: agricultural land, wetlands, floodplains, and streams. Compatibility with the regional land use plans and context sensitivity will also be important considerations.

Alternatives to be evaluated will include (1) Taking no action: (2) widening portions of the existing two-lane highway to four lanes; and (3) constructing a four-lane limited access highway on new location.

To help ensure that a full range of issues related to this proposed project are identified and addressed, a comprehensive public involvement program is underway. Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and local agencies, and private organizations and citizens who have previously expressed or are known to have interest in this project. A series of public informational meetings are being held and additional meetings will be held with community advisory groups, local and State officials, and public interest groups. A project web site and project hotline are established. Comments or questions concerning this proposed action and the EIS are invited from all interested parties and should be directed to the FHWA at the address provided above. A public hearing will be held after the draft EIS is published and made available for public and agency review. Public notice will be given of the time and place of meetings and the public hearing.

(Catalog of Federal of Federal Domestic Assistance Program Number 20.205, Highway Research, Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program).

Issued on: August 2, 2007.

Norman R. Stoner,

Division Administrator, Springfield, Illinois.

[FR Doc. 07–3874 Filed 8–08–07; 8:45 am]

BILLING CODE 4910–22–M

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket Nos. FMCSA–98–3637, FMCSA–98–4334, FMCSA–99–5748, FMCSA–00–7006, FMCSA–00–7363, FMCSA–00–7918, FMCSA–00–8203, FMCSA–00–8398, FMCSA–01–9258, FMCSA–02–13411, FMCSA–03–14223, FMCSA–03–14504, FMCSA–05–20027, FMCSA–05–20560]

Qualification of Drivers; Exemption Renewals; Vision

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of final disposition.

SUMMARY: FMCSA previously announced its decision to renew the exemptions from the vision requirement in the Federal Motor Carrier Safety

Illinois Department of Transportation

APPENDIX C

COOPERATING & PARTICIPATING AGENCY INVITATION, ACCEPTANCE, AND DECLINE LETTERS

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

April 28, 2008

Refer To: HPER-IL

Mr. Barry Cooper, Great Lakes Regional Administrator, AGL-1
Federal Aviation Administration Great Lakes Region Headquarters
O'Hare Lake Office Center
2300 East Devon Avenue
Des Plaines, IL 60018

Dear Mr. Cooper:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S Route 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor/Feasibility Study.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals, and address local system deficiencies. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the City of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Additionally, FHWA is required to invite agencies with jurisdiction by law or with special expertise with respect to environmental issues to be cooperating agencies, in accordance with 40 CFR 1501.6 of the Council on Environmental Quality's Regulations for Implementing the Procedural Provision of the National Environmental Policy Act.

The FHWA and IDOT identified the Federal Aviation Administration (FAA) as an agency that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the FAA to become a *participating agency* and a *cooperating agency* in the development of the EIS for the U.S. Route 30 project. The designation does not imply that your agency supports the proposal.

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The FHWA and IDOT propose that your agency's role in the development of the above project should include the following as they relate to your area of expertise:

1. Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be carried forward, and the methodologies and level of detail required in the alternatives analysis;
2. Participate in coordination meetings and joint field reviews, as appropriate; and
3. Timely review and comment on the pre-draft or pre-final environmental documents to reflect the views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

Please respond to our office at the above listed address in writing, with an acceptance or denial of this invitation to be both a cooperating and participating agency prior to June 2, 2008. If your agency declines to be a participating agency, the response should state your reason for declining the invitation. Pursuant to SAFETEA-LU Section 6002, a Federal agency that chooses to decline to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EIS, please contact me at (217) 492-4625, or Barbara H. Stevens, IDOT Environmental Section Chief, Bureau of Design and Environment at (217) 785-4245.

Thank you for your cooperation and interest in this project.

Sincerely,

Matt Fuller
Environmental Programs Engineer

For: Norman R. Stoner, P.E.
Division Administrator

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

April 28, 2008

Refer To: HPER-IL

Mr. Edward G. Buikema, Regional Administrator
Federal Emergency Management Agency, Region V
536 South Clark Street, 6th Floor
Chicago, IL 60605

Dear Mr. Buikema:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S Route 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor/Feasibility Study.

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The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Additionally, FHWA is required to invite agencies with jurisdiction by law or with special expertise with respect to environmental issues to be cooperating agencies, in accordance with 40 CFR 1501.6 of the Council on Environmental Quality's Regulations for Implementing the Procedural Provision of the National Environmental Policy Act.

The FHWA and IDOT identified the Federal Emergency Management Agency (FEMA) as an agency that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite FEMA to become a *participating agency* and a *cooperating agency* in the development of the EIS for the U.S. Route 30 project. The designation does not imply that your agency supports the proposal.

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U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

April 28, 2008

Refer To: HPER-IL

Mr. John Betker, Project Manager
U.S. Army Corps of Engineers, Rock Island District
1 Clock Tower Building
Rodman Avenue
Rock Island, IL 61201-2004

Dear Mr. Betker:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S Route 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor/Feasibility Study.

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The FHWA and IDOT identified the U.S. Army Corps of Engineers (USACE) as an agency that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite USACE to become a *participating agency* and a *cooperating agency* in the development of the EIS for the U.S. Route 30 project. The designation does not imply that your agency supports the proposal.

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U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

April 28, 2008

Refer To: HPER-IL

Mr. Kenneth Westlake
Supervisor, NEPA Implementation
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mailcode (E-19J)
Chicago, IL 60604-3590

Dear Mr. Westlake:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S Route 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor/Feasibility Study.

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The FHWA and IDOT identified the U.S. Environmental Protection Agency (USEPA) as an agency that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite USEPA to become a *participating agency* and a *cooperating agency* in the development of the EIS for the U.S. Route 30 project. The designation does not imply that your agency supports the proposal.

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U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

April 28, 2008

Refer To: HPER-IL

Ms. Heidi Woeber
U.S. Fish and Wildlife Service
Ecological Services Field Office
1511 47th Avenue
Moline, IL 61265

Dear Ms. Woeber:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S Route 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the U.S. Route 30/IL Route 136 intersection and extends to the U.S. Route 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the U.S. Route 30 Corridor/Feasibility Study.

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The FHWA and IDOT identified the U.S. Fish and Wildlife Service (USFWS) as an agency that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite USFWS to become a *participating agency* and a *cooperating agency* in the development of the EIS for the U.S. Route 30 project. The designation does not imply that your agency supports the proposal.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Daniel L. Bitler, Supervisor
Albany Township
608 Sycamore Street
Albany, IL 61230

Dear Mr. Bitler:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the city of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. FHWA and IDOT suggest that your agency's role in the development of the above project should include the following as they relate to your area of expertise:

1. Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be carried forward and the methodologies and level of detail required in the alternatives analysis;

2. Participate in coordination meetings and joint field reviews, as appropriate; and

3. Timely review and comment on the pre-draft or pre-final environmental documents to reflect the views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

Please respond to FHWA and IDOT in writing with an acceptance or denial of the invitation prior to September 24, 2007. This response should state your reason for declining the invitation. Pursuant to SAFETEA-LU Section 6002, a federal agency that chooses to decline the invitation must specifically state that your agency:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; or
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss the project or our agencies' respective roles and responsibilities during the preparation of this EIS in more detail, please contact JD Stevenson, FHWA Planning, Environment and Right-of-Way Team Leader at (217) 492-4638 or Barbara H. Stevens, IDOT Environmental Section Chief, Bureau of Design and Environment at (217) 785-4245.

Thank you for your cooperation and interest in this project.

Sincerely,

Eric E Harm

Eric E. Harm, P.E.
Interim Engineer of Design and Environment

Attachment

cc: George F. Ryan - IDOT Deputy Director, Region 2 Engineer
Norman Stoner - FHWA IL Division Administrator

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable Lametta K. Wynn
Mayor of Clinton
611 South Third Street
Clinton, IA 52732

Dear Mayor Wynn:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable Howard Van Zuiden
Mayor of Fulton
415 11th Avenue
Fulton, IL 61252

Dear Mayor Van Zuiden:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

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Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable Roger Drey
Mayor of Morrison
300 East Park
Morrison, IL 61270

Dear Mayor Drey:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable Bud Thompson
Mayor of Prophetstown
339 Washington Street
Prophetstown, IL 61277

Dear Mayor Thompson:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
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Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable David Blanton
Mayor of Rock Falls
603 West 10th Street
Rock Falls, IL 61070

Dear Mayor Blanton:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Honorable Amy Viering
Mayor of Sterling
212 Third Avenue
Sterling, IL 61081

Dear Mayor Viering:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

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Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Ms. Sue Gravort, Supervisor
Clyde Township
18388 Round Grove Road
Morrison, IL 61270

Dear Ms. Gravort:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Ms. Debra Burke, Supervisor
Coloma Township
1200 Prophet Road
Rock Falls, IL 61270

Dear Ms. Burke:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Ms. Laverne Sterenberg, Supervisor
Garden Plain Township
15585 Sand Road
Fulton, IL 61252

Dear Ms. Sterenberg:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Allen K. Johnson, Supervisor
Hopkins Township
P.O. Box 16
Sterling, IL 61081

Dear Mr. Johnson:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Ms. Susan Shea, Director
Illinois Department of Transportation
Division of Aeronautics
1 Langhorne Bond Drive
Springfield, IL 62707-8415

Dear Ms. Shea:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Gary R. Clark, Director
Illinois Department of Natural Resources
Office of Water Resources
One Natural Resources Way, 2nd Floor
Springfield, IL 62702

Dear Director Clark:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Sam Flood, Acting Director
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Dear Director Flood:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Charles Hartke, Director
Illinois Department of Agriculture
State Fairgrounds
P.O. Box 19281
Springfield, IL 62794-9281

Dear Director Hartke:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Brett Hanson, Regional Coordinator
Illinois Environmental Protection Agency
4302 North Main Street
Rockford, IL 61103

Dear Mr. Hanson:

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Ms. Anne Haaker
State Historic Preservation Officer
Illinois Historic Preservation Agency
#1 Old State Capitol Plaza
Springfield, IL 62701-1507

Dear Ms. Haaker:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. John Nelson, Coordinator
Illinois Nature Preserve Commission
Moraine Hills State Park
1501 South River Road
McHenry, IL 60051

Dear Mr. Nelson:

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Michael E. Ransom, Supervisor
Lyndon Township
18499 Moline Road
Lyndon, IL 61261

Dear Mr. Ransom:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Elwin R. Schmitt, Supervisor
Montmorency Township
3005 Star Road
Rock Falls, IL 61071

Dear Mr. Schmitt:

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Mark Kaiser, District Conservationist
USDA - Natural Resources Conservation Service
Whiteside County
16255 Liberty Street
Morrison, IL 61270

Dear Mr. Kaiser:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. B. Craig Gray, Supervisor
Mount Pleasant Township
210 West Morris Street
Morrison, IL 61270

Dear Mr. Gray:

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Richard A. Gebhardt, Supervisor
Sterling Township
1406 Parkview Road
Sterling, IL 61081

Dear Mr. Gebhardt:

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P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Rick Deter, Supervisor
Union Grove Township
13653 Shelly Drive
Morrison, IL 61270

Dear Mr. Deter:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the city of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Scott Bechtel, Supervisor
Ustick Township
22146 Smaltz Road
Fulton, IL 61252

Dear Mr. Bechtel:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the city of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Tony Arduini, County Board Chairman
Whiteside County Board
200 East Knox Street
Morrison, IL 61270

Dear Mr. Arduini:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the city of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 24, 2007

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07,
P-92-106-07
Whiteside County, Illinois

RE: Invitation for Participating Agency

Mr. Steve Haring, County Engineer
Whiteside County
18819 Lincoln Road
Morrison, IL 61270

Dear Mr. Haring:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for proposed transportation improvements to US 30. The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois (please see attached map). The western study limits are just west of the US 30/IL 136 intersection and extend to the US 30/IL 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006 as part of the US 30 Corridor/Feasibility Study. These study limits could potentially be modified slightly through the Context Sensitive Solutions (CSS) process and discussions with the FHWA to determine logical termini.

The general purpose of the project, as currently defined, is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand within the project study area and also help to alleviate truck traffic through the city of Morrison. Compatibility with the local development plans and context sensitivity are important considerations.

Your agency has been identified as one that may have an interest in the project because of the potential human and natural environmental impacts. With this letter, FHWA and IDOT, the joint lead agencies for the project, extend your agency an invitation to become a participating agency in the development of the EIS for US 30. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. John Miller
Chair
Pokagon Band of Potawatomi Indians
58620 Sink Road
Dowagiac, MI 49047

Dear Mr. Miller:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Pokagon Band of Potawatomi Indians as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Pokagon Band of Potawatomi Indians tribe to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Pokagon Band of Potawatomi Indians supports the proposal.

MOVING THE
AMERICAN
ECONOMY

The FHWA and IDOT propose that your role in the development of the above project should include the following as they relate to your area of expertise:

1. Provide meaningful and early input on defining the project's purpose and need, determining the range of alternatives to be carried forward, and the methodologies and level of detail required in the alternatives analysis;
2. Participate in coordination meetings and joint field reviews, as appropriate; and
3. Participate and comment on appropriate Section 106 documentation.

Please respond to our office at the above listed address in writing, with an acceptance or denial of this invitation to be both a participating agency and a consulting party prior to June 10, 2008. Pursuant to SAFETEA-LU Section 6002, a non-Federal agency must accept in writing to be a participating agency.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EIS, please contact Matt Fuller of my staff at (217) 492-4625, or Barbara H. Stevens, IDOT Environmental Section Chief, Bureau of Design and Environment at (217) 785-4245.

Thank you for your cooperation and interest in this project.

Sincerely,

Norman R. Stoner, P.E.
Division Administrator

U.S. Department
of Transportation

**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. Kenneth Meshiguad, Chairperson
Hannahville Indian Community
N14911 Hannahville Boulevard Road
Wilson, MI 49896

Dear Mr. Meshiguad:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified Hannahville Indian Community as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Hannahville Indian Community to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Hannahville Indian Community supports the proposal.

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AMERICAN
ECONOMY

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. Philip Shopodock
Chairman, Executive Council
Forest County Potawatomi Community
P. O. Box 340
Crandon, WI 54520

Dear Mr. Shopodock:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Forest County Potawatomi Community as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Forest County Potawatomi Community to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Forest County Potawatomi Community supports the proposal.

MOVING THE
AMERICAN
ECONOMY

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. John A. Barrett
Chairperson, Business Committee
Citizen Band Potawatomi Tribe
1901 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Mr. Barrett:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Citizen Band Potawatomi Tribe as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Citizen Band Potawatomi tribe to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Citizen Band Potawatomi Tribe supports the proposal.

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AMERICAN
ECONOMY

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Ms. Fredia Perkins
Chairperson
Sac & Fox Nation of Missouri
305 N. Main Street
Reserve, KS 66454

Dear Ms. Perkins:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Sac & Fox Nation of Missouri as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Sac & Fox Nation of Missouri to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Sac & Fox Nation of Missouri supports the proposal.

MOVING THE
AMERICAN
ECONOMY

U.S. Department
of Transportation
**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Ms. Kay Rhoades
Sac & Fox Nation
Rt. 2 Box 246
Stroud, OK 74079

Dear Ms. Rhoades:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified Sac & Fox Nation as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Sac & Fox Nation to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Sac & Fox Nation supports the proposal.

MOVING THE
AMERICAN
ECONOMY

U.S. Department
of Transportation

**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. Jonathan Buffalo
Historic Preservation Coordinator
Sac & Fox Tribe of the
Mississippi in Iowa
3137 F Avenue
Tama, IA 52339

Dear Mr. Buffalo:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Sac & Fox Tribe of the Mississippi in Iowa as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Sac & Fox Tribe of the Mississippi in Iowa to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Sac & Fox Tribe of the Mississippi in Iowa supports the proposal.

MOVING THE
AMERICAN
ECONOMY

U.S. Department
of Transportation

**Federal Highway
Administration**

Illinois Division

3250 Executive Park Dr.
Springfield, IL 62703

May 8, 2008

Refer To: HDA-IL

Mr. Rey Kitchkumme
Vice Chair, Tribal Council
Prairie Band of Potawatomi
14880 K Road
Mayetta, KS 66509

Dear Mr. Kitchkumme:

The Federal Highway Administration (FHWA), in cooperation with the Illinois Department of Transportation (IDOT) is initiating an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 (US 30). The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The western study limits are just west of the US 30/IL Route 136 intersection and extends to the US 30/IL Route 40 intersection in Rock Falls to the east. These limits were based on the results of the Origin-Destination Study that was completed in August 2006, as part of the US 30 Corridor/Feasibility Study.

The FHWA and IDOT, as joint lead agencies for this project, are responsible for identifying Federal, tribal, State and local agencies that may have an interest in the project and inviting those entities to be participating agencies. Pursuant to Section 6002 of the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), participating agencies are responsible to identify, as early as possible, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Furthermore, Section 106 of the National Historic Preservation Act (Section 106) encourages Federal agencies to invite consulting parties, entities with an interest in the Federal undertaking, to participate in the Section 106 review process.

The FHWA and IDOT identified the Prairie Band of Potawatomi as a tribal government that may have an interest in the project. Therefore, with this letter, FHWA and IDOT invite the Prairie Band of Potawatomi tribe to become a *participating agency* and a *Section 106 consulting party* in the development of the US 30 EIS. The designation does not imply that the Prairie Band of Potawatomi supports the proposal.

MOVING THE
AMERICAN
ECONOMY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
16255 Liberty Street
Morrison, IL 61270

Ph: (815)772-2124 Fax: (815)772-7973
Website: www.il.nrcs.usda.gov

September 18, 2007

OCT 2007
Received
IDOT
DIST. TWO

JD Stevenson
Federal Highway Administration – Illinois Division
3250 Executive Park Drive
Springfield, IL 62703

Barbara H. Stevens
Bureau of Design and Environment
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, IL 62764

RE: Whiteside County US Route 30 FAP Route 309 (US 30)

This is in response to the letter (enclosed) dated August 24, 2007 that I received from Eric E. Harm, interim engineer, regarding USDA's – Natural Resources Conservation Service (NRCS) involvement in the Environmental Impact Statement (EIS) for the Whiteside County US Route 30 project.

NRCS is a federal agency of the United States Department of Agriculture that has no regulatory authority in respect to this project. However, we can offer our expertise in supplying relevant information in regards to the soil and water resources of Whiteside County that this project may impact.

We will accept the invitation to participate based on the natural resource information that we can provide to the involved groups and units of government so they can make informed decisions regarding this project.

Sincerely,

Mark K. Kaiser

Mark K. Kaiser
District Conservationist

CC: US 30 file
Bob Dean, ASTC, NRCS
Mark Besse, Chairman Whiteside SWCD

RECEIVED
SEP 20 2007
ENVIRONMENT SECTION

Illinois Department of Agriculture
Rod R. Blagojevich, Governor • Chuck Hartke, Director

Bureau of Land and Water Resources
State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 217/524-6858 • Fax 217/557-0993

September 4, 2007

Mr. Eric E. Harm
Bureau of Design and Environment
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764-0002

Re: Invitation for Participating Agency
FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos. P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07, P-92-106-07
Whiteside County, Illinois

Dear Mr. Harm:

Thank you for your August 24, 2007 correspondence notifying the Illinois Department of Agriculture (IDOA) that the Federal Highway Administration, in cooperation with the Illinois Department of Transportation (IDOT), is initiating an Environmental Impact Statement for the proposed transportation improvements to US 30.

The project study area is in Whiteside County and extends from Fulton, Illinois to Rock Falls, Illinois. The general purpose of the project as currently defined is to improve regional mobility, accommodate land use planning goals and address local system deficiencies in this northwest region of Illinois. Improvements to the corridor will accommodate the projected growth in travel demand with the project study area and also help to alleviate truck traffic through the city of Morrison.

The IDOA accepts your invitation to become a participating agency in the development of the Environmental Impact Statement.

Sincerely,

Steven D. Chard

Steven D. Chard, Acting Bureau Chief
Bureau of Land and Water Resources

SDC:TS

cc: Agency Project File

RECEIVED
SEP 06 2007
ENVIRONMENT SECTION

DOE

Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos. P-92-107-07, P-92-103-07, P-92-104-07, P-92-105-07, P-92-106-07

October 17, 2007

Eric Harm
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, IL 62764

Dear Mr. Harm:

We have received your invitation to be a participating agency in the FAP Route 309 (US 30) project. We accept the invitation and look forward to consulting with the Federal Highway Administration and your office.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

Prophetstown

PRACTICALLY PERFECT.

Bud Thompson
Mayor

September 14, 2007

Mr. Eric E. Harm
Interim Engineer of Design and Environment
Illinois Department of Transportation
Springfield, IL.

Dear Mr. Harm:

Our community is twelve miles south of Morrison on Illinois Route 78. Even so, we believe the proposed widening of Highway U.S. 30, will be of benefit to our citizens. Both in an economic way and in the improvement of highway safety.

I, as Mayor, wish to participate in future meetings.

Sincerely,

Bud Thompson

Bud Thompson
Mayor

RECEIVED REGION 2

D-2	D-3	
✓		PROGRAM DEVELOPMENT
		PROJECT IMPLEMENTATION
		OPERATIONS
		ADMINISTRATIVE SERVICES
		LOCAL ROADS

SEP 18 2007

	REGION ENGINEER
	Confer with Region Engineer
	Correspondence for RE signature
	Correspondence for your signature

CITY OF PROPHETSTOWN, ILLINOIS 61277 • FOUNDED IN 1882
City Hall, 339 Washington Street, P.O. Box 85 • Prophetstown, IL 61277
Phone: (815) 537-5598 Fax : (815) 537-2388
www.prophetstown.il.gov

RECEIVED
SEP 17 2007
ENVIRONMENT SECTION

COUNTY OF WHITESIDE

Whiteside County Courthouse ◆ 200 East Knox Street ◆ Morrison, Illinois 61270
Voice: 815 / 772 - 5100 ◆ Fax: 815 / 772 - 7673
www.whiteside.org

COUNTY BOARD — TONY ARDUINI, CHAIR

STANDING COMMITTEES

EXECUTIVE
Tony Arduini
William McGinn
Sue Britt
James C. Duffy
Glenn A. Frank
Eugene L. Jacoby
John "Jack" McMillin
Glenn C. Truesdell

COUNTY OFFICES
James C. Duffy
William E. Nice
Scott M. Mohr
Ruth M. Stanley

PUBLIC WORKS
Glenn A. Frank
William McGinn
John Espinoza
Gerald "Jerry" Kelly
Lawrence A. Sikkema

HEALTH & SOCIAL SERVICES
Eugene L. Jacoby
Sarah McNeill
Ronald Marlier
Merritt W. Pitcher
Kyle D. Wagenecht

PUBLIC SAFETY
Sue Britt
Terry Woodard
Paul A. Hoffmiller
Orin J. Peterson

JUDICIARY
John "Jack" McMillin
Myron Hofmeister
Keith B. Frederick
William "Bill" Milby

FINANCE
Glenn C. Truesdell
Karen Nelson
William Abbott
Richard "Dick" Cox

September 6, 2007

RECEIVED REGION 2
D-2 ✓ D-3
PROGRAM DEVELOPMENT
PROJECT IMPLEMENTATION
OPERATIONS
ADMINISTRATIVE SERVICES
LOCAL ROADS
SEP 18 2007
REGION ENGINEER
Confer with Region Engineer
Correspondence for RE signature
Correspondence for your signature

Eric E. Harm
Interim Engineer of Design and Environment
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

Re: US 30 Four-lane Study

Dear Mr. Harm:

Whiteside County is very much interested in participating in the process of the US 30 Four-lane study. Whiteside County Highway Engineer, Steve Haring and Whiteside County Economic Development Director, Betty Steinert along with myself as Whiteside County Board Chairman will be your contacts on behalf of the county. Steve will be very beneficial to the process on the environmental impacts portion and Betty will be very beneficial in the socioeconomic impacts.

If you should have any questions and for contact information please see below. You may contact any one of us if you should have any questions.

Sincerely,

Tony Arduini, Chair
Whiteside County Board

cc: Steve Haring, Whiteside County Highway Eng.
Betty J. Steinert, Whiteside County ED Director

Steve Haring, County Eng.
18819 Lincoln Road
Morrison, IL 61270
P: 815-772-7651 Ext. 104
Email: sharing@whiteside.org

Betty J. Steinert, ED Director
200 East Knox Street
Morrison, IL 61270
P: 815-772-5247
Email: bsteinert@whiteside.org

City Of fulton ILLINOIS

Phone 815.589.2616
Fax 815.589.4421

www.cityoffulton.us

415 11th Avenue
Fulton, IL 61252

August 28, 2007

Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764
Att: Eric Harm

Re: Invitation for Participating Agency/Whiteside County

Dear Eric:

The City of Fulton accepts the invitation to be a participating agency in the development of the EIS for US 30. We understand our obligations and that our contributions to the study, review and comments on the pre-environmental document are needed. We look forward to participating in coordination meetings and field reviews as needed.

We believe this study to be very important so that we can continue with US 30 improvements from our community to Interstate 88. We will also consider that you will forward this response to the FHWA.

Respectfully,

Howard Van Zuiden
Mayor, City of Fulton

RECEIVED
SEP 04 2007
ENVIRONMENT SECTION

STEVE J. HARING, P. E.
COUNTY ENGINEER

WHITESIDE COUNTY HIGHWAY & PUBLIC WORKS DEPARTMENT
18819 LINCOLN ROAD
MORRISON, IL 61270
PHONE: (815) 772-7651
FAX: (815) 772-4870

August 29, 2007

I.D.O.T.
2300 South Dirksen Parkway
Springfield, IL 62764

Attn: Eric E. Harm
Interim Engineer of Design and Environment

RE: FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Whiteside County
Invitation for Participating Agency

Dear Sir:

We received the above-mentioned invitation earlier this week and would like to inform you that Whiteside County does accept the invitation to participate in the project named above and agrees to become a participating agency in the development of the EIS for US 30.

Please feel free to contact this office if you feel we can be of assistance with the proposed project.

Very truly yours,

Steve J. Haring

Steve J. Haring, P.E.
County Engineer

SJH/ad

Cc: JD Stevenson – FHWA IL Division Administrator

RECEIVED
SEP 04 2007
ENVIRONMENT SECTION

CITY OF MORRISON

200 West Main Street
Morrison, Illinois 61270-2400
Phone 815 / 772-7657

Roger K. Drey • Mayor

August 31, 2007

Re: FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE-1
Job Nos: P-92-107-07, P-92-103-07, P-92-104-07,
P-92-105-07, P-92-106-07
Whiteside County , Illinois

Re: Invitation for Participating Agency

Eric E. Harm
Interim Engineer of Design and Environment
IDOT
2300 South Dirksen Parkway
Springfield, Illinois 62764

Dear Mr. Harm,

I am sending this e-mail in response to a letter that I received from you, in regards to FAP Route 309 (US 30), in Whiteside County, Illinois. The letter asks that we respond, in writing as to whether we wish to participate with input, or wish to decline the invitation for participation.

The City of Morrison would like to be an active participant in the process. The US 30 project does affect our community and we want to be involved. Notices have been sent to Mr. George Ryan and Mr. Norman Stoner, as well.

Sincerely,

Roger Drey, Mayor
City of Morrison

RECEIVED
SEP 04 2007
ENVIRONMENT SECTION

UNION GROVE TOWNSHIP
13653 Shelly Drive
Morrison, IL 61270

Barbara H. Stevens
Bureau of Design and Environment
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, Illinois 62764

September 17, 2007

OCT 2007
Received
IDOT
DIST. TWO

Dear Ms. Stevens,

I received a letter from Mr. Eric E. Harm requesting my input in the form of comments and suggestions on various proposed alternatives to the improvement of US Route 30 through Union Grove Township. This letter is to advise that I accept the invitation and along with consideration from our highway commissioner and trustees I will try to provide your agency with meaningful and relevant support.

Sincerely,

Rick Deter

Rick Deter
Supervisor

RECEIVED
SEP 20 2007
ENVIRONMENT
SECTION

RICHARD A. GEBHARDT
Supervisor

ELIZABETH M. HALL
Town Clerk

JAMES L. LOPEZ
Highway Commissioner

MARSHA FRANCIS
Assessor

STERLING TOWNSHIP

108 Fourth Ave. - Suite #2
STERLING, ILLINOIS 61081
Phone (815) 625-3990
Fax (815) 625-3193

Trustees:
GERALD A. KELLY
RUTH M. STANLEY
WILLIAM C. McGINN
THOMAS AUSMAN

August 31, 2007

Illinois Department of Transportation
2300 So. Dirksen Parkway
Springfield, Illinois 62764

Attention: Eric E. Harm
Interim Engineer of Design and Enviroment

Dear Mr. Harm,

We are in denial of your invitation as a participating agency in proposed transportation improvements to US 30.

Our Township has no jurisdiction or authority with respect to this project.

Yours truly,

Richard A. Gebhardt,
Supervisor
Sterling Township

RECEIVED
SEP 04 2007
ENVIRONMENT SECTION

Illinois Department of
Natural Resources
One Natural Resources Way • Springfield, Illinois 62702-1271
http://dnr.state.il.us

Rod R. Blagojevich, Governor
Sam Flood, Acting Director

OCT 2007
Received
IDOT
DIST. TWO

September 21, 2007

SUBJECT: US 30 Corridor Project
Fulton to Rock Falls
Whiteside County

JD Stevenson
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Barbara H. Stevens
Bureau of Design and Environment
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, Illinois 62764

Dear Mr. Stevenson and Ms. Stevens:

Thank you for the August 24, 2007 invitation to the Illinois Department of Natural Resources, Office of Water Resources to become a participating agency in the development of the EIS for the subject project.

Since we would have little information to add to the EIS effort that could not be obtained from FEMA flood mapping or our Part 3700 Floodway Construction and Part 3704 Public Water Regulation Rules, we decline the invitation. However, if questions arise concerning the application of the rules to the project, please feel free to contact Mike Diedrichsen or Mark McCauley of our Downstate Regulatory Programs Section (217/782-3863) for clarification.

Thank you again for the invitation.

Sincerely,

Gary R. Clark, Director
Office of Water Resources

GRC:MLD:crw

RECEIVED
SEP 25 2007
ENVIRONMENT
SECTION

U.S. Department
of Transportation
**Federal Aviation
Administration**

RECEIVED
JUN 04 2008
ILLINOIS
DIVISION

Great Lakes Region
2300 E. Devon Avenue
Des Plaines, IL 60018

MAY 30 2008

Mr. Matt Fuller
Environmental Programs Engineer
Federal Highway Administration
Illinois Division
3250 Executive Park Drive
Springfield, IL 62703

Dear Mr. Fuller:

This is in response to your April 28, 2008 letter regarding initiation of an Environmental Impact Statement (EIS) for the proposed transportation improvements to U.S. Route 30 in the area around Morrison, IL. Your letter invited the FAA to become a *participating agency* and a *cooperating agency* in the development of the EIS for this project.

Since there are no airports impacted by or near this highway project, we have no authority with respect to the project. We also have no information relevant to the project and we do not intend to submit comments on the project. We appreciate being notified about the project and invited to participate but must decline your invitation to be a *participating agency* and a *cooperating agency*.

If you need further assistance, please feel free to call Michael Landon of my staff at (847) 294-7294.

Sincerely,

Barry D. Cooper
Regional Administrator
Great Lakes Region

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Rock Island Field Office
1511 47th Avenue
Moline, Illinois 61265
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER TO:
FWS/RIFO

RECEIVED
MAY 27 2008
ILLINOIS DIVISION

May 21, 2008

Mr. Matt Fuller
Environmental Programs Engineer
U.S. Department of Transportation
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Dear Mr. Fuller: Refer to: HPER-IL

This responds to your letter of April 28, 2008, requesting our comments on plans for the proposed transportation improvements to U.S. Route 30, Whiteside County, Illinois. Thank you for the opportunity to review the proposed plans and provide information concerning threatened and endangered species.

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the U.S. Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action.

As of August 9, 2007, the bald eagle is no longer included on the list of threatened and endangered species. It remains protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. For more information go to http://www.fws.gov/midwest/eagle/guidelines/index.html

Habitat Descriptions for Federal Threatened and Endangered Species in Whiteside County, Illinois

The **eastern prairie fringed orchid** *(Platanthera leucophaea)* is listed as threatened and considered to potentially occur statewide in Illinois based on its historical records and habitat distribution, but we are unaware of any record for Whiteside County. It occupies mesic to wet

grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. Growth of the prairie fringed orchid begins in May and flowering occurs in July. This species should be searched for whenever wet prairie remnants or other wet meadows are encountered.

The **prairie bush clover** (*Lespedeza leptostachya*) is listed as threatened and considered to potentially occur statewide in Illinois based on its historical records and habitat distribution, but we are unaware of any record for Whiteside County. It occupies dry to mesic prairies with gravelly soil. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever prairie remnants are encountered.

The endangered **Indiana bat** (*Myotis sodalis*) is known to occur in several Illinois counties, but we are unaware of any record for Whiteside County. Potential habitat for this species occurs statewide, therefore, Indiana bats are considered to potentially occur in any area with forested habitat.

Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females form nursery colonies under the loose bark of trees (dead or alive) and/or cavities, where each female gives birth to a single young in June or early July. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. The species or size of tree does not appear to influence whether Indiana bats utilize a tree for roosting provided the appropriate bark structure is present.

During the summer, the Indiana bat frequents the corridors of small streams with riparian woods as well as mature upland forests. It forages for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fencerows, over farm ponds, and in pastures.

Suitable summer habitat in Illinois is considered to have the following characteristics within a ½ mile radius of a project site:

1) forest cover of 15% or greater;
2) permanent water;
3) one or more of the following tree species: shagbark and shellbark hickory that may be dead or alive, and dead bitternut hickory, American elm, slippery elm, eastern

cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark;

4) potential roost trees with 10% or more peeling or loose bark

If the project site contains any habitat that fits the above description, it may be necessary to conduct a survey to determine whether the bat is present. In addition, search for this species should be made prior to any cave-impacting activities. If habitat is present or Indiana bats are known to be present, they must not be harmed, harassed, or disturbed, and this field office should be contacted for further assistance.

The endangered **Higgins eye pearlymussel** (*Lampsilis higginsii*) is listed for the Mississippi River north of Lock and Dam 20, so it may potentially occur in Whiteside County. This species prefers sand/gravel substrates with a swift current and is most often found in the main channel border or an open, flowing side channel.

The State of Illinois has also designated certain mussel refuge areas that contain this species. Their regulations would affect the commercial harvest of mussels on these refuges. If project is located near a known Higgins eye mussel bed, it may be necessary to conduct a survey to determine the presence of the species.

The project lies within the range of the freshwater **sheepnose mussel** (*Plethobasus cyphyus)* that is declining throughout its national range and is currently a Federal Candidate species. It is known to occur in Whiteside County. Significant declines relative to its historical distribution and its small isolated remaining populations continue to be threatened due to habitat loss and degradation. Your proactive efforts to conserve these species now may help avoid the need to list the species under the Endangered Species Act in the future. We encourage early project coordination to avoid potential impacts to this mussel and its habitat.

The sheepnose mussel is primarily a larger-stream species occurring mainly in shallow shoal habitats with moderate to swift currents over coarse sand and gravel but includes mud, cobble, and boulders as well. This includes larger rivers with deep runs, while those specimens found in streams occur mainly in stable flow refuges with little sediment turbidity.

At a minimum, project evaluations should contain delineations of whether or not sheepnose mussel habitat occurs within project boundaries. In cases where the species is known to occur or potential habitat is rated moderate to high, surveys may be necessary. Please contact this office for further information should this species or their habitat be suspected.

Wetlands

Because wetlands are vital as flood water retention areas and for groundwater retention and filtration and also because they provide habitat for many plants and animals, we recommend that project plans include efforts to minimize impacts to wetland areas and instead enhance and

incorporate the wetland areas into the design. Priority consideration should be given to avoid impacts to these wetland areas. Any future activities in the study area that would alter these wetlands may require a Section 404 permit. Unavoidable impacts will require a mitigation plan to compensate for any losses of wetland functions and values. The U.S. Army Corps of Engineers, Clock Tower Building, P.O. Box 2004, Rock Island, Illinois 61204-2004, should be contacted for information about the permit process.

These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement. If you have questions, please contact Heidi Woeber of my staff at extension 209.

Sincerely,

for Richard C. Nelson
Field Supervisor

cc: ILDNR (Hamer)

S:\Office Users\Heidi\techassUS30WhitesideCOhighway.doc

Illinois Department of Transportation

APPENDIX D

AGENCY ENVIRONMENTAL RESPONSES

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Rock Island Field Office
1511 47th Avenue
Moline, Illinois 61265
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER TO:

Felecia Hurley
Illinois Department of Transportation:

Electronic Mail
March 5, 2014

We have reviewed your letter dated February 26, 2014, for the BDE Seq. No. 11116 and A – FAP 309 (US 30) - Whiteside County, Illinois, and have the following comments. The proposed project is being processed as an Environmental Impact Statement and currently has three alternatives to improve US 30 from IL 146 to IL 40 in Whiteside County. The three alternatives are the No Build, Build Alternative 4 (northern), and Build Alternative 5 (southern). The U.S. 30 Draft Environmental Impact Statement (DEIS) was signed in April 2011. A Supplemental DEIS is currently being prepared to disclose the alignment shifts of Build Alternatives 4 and 5 just east of the city of Morrison due to the changes in the 100 year mapped floodplains.

The April 2011 signed DEIS states that this project has no effect on federally listed species. On October 2, 2013, the Northern long eared bat was proposed for listing as federally endangered. A mist net survey had previously been conducted for this project in July/August of 2007. While no Indiana bats were captured; one adult female, post lactating Northern long eared bat was captured. Build Alternatives 4 and 5will impact a total of 9.7 and 6.4 acres of forested area, respectively. Most of the areas impacted are classified as edge habitat rather than forest interior, or core habitat, which provides the highest quality of habitat for forest interior species. Based on field observation, Build Alternative 4 would impact 8.54 acres of forested area containing core habitat, compared to 1.03 acres impacted by Build Alternative 5.

A tree clearing date restriction will be included to avoid direct impacts to this species. Tree clearing will be minimal and will not change the character of the remaining forested habitat. Trees will be replaced in accordance with Departmental Policy D&E-18. ILDOT has determined that, with these conservation measures in place, the project may affect, but is not likely to adversely affect the Northern long eared bat. We concur with your determination that the project is not likely to adversely affect this species with the tree clearing restriction in place.

The DEIS adequately addresses the potential impacts of the project alternatives on fish and wildlife resources and federally listed threatened and endangered species in the project area.

This precludes the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. Should this project be modified or new information indicate endangered species may be affected, consultation should be initiated.

Heidi Woeber
Fish and Wildlife Biologist
Ecological Services
U.S. Fish and Wildlife Service
1511 47th Avenue
Moline, IL 61265
309/757-5800, ext. 209
309/757-5807 Fax
heidi_woeber@fws.gov

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

February 26, 2014

CONCUR
By Steve Hamer
Division of Impact Analysis
~~IDOC~~ IDNR
3-5-2014

Re: FAP 309 (US 30)
Job No. P-92-107-07
Whiteside County
BDE Seq. No. 11116 and A

Mr. Richard Nelson
U.S. Fish and Wildlife Service
1511 47th Avenue
Moline, IL 61265

Dear Mr. Nelson:

The proposed project is being processed as an Environmental Impact Statement and currently has three alternatives to improve US 30 from IL 136 to IL 40 in Whiteside County. The three alternatives are the No Build, Build Alternative 4 (northern), and Build Alternative 5 (southern). USFWS is a participating agency for this project. The U.S. 30 Draft Environmental Impact Statement (DEIS) was signed in April 2011. A Supplemental DEIS is currently being prepared to disclose the alignment shifts of Build Alternatives 4 and 5 just east of the city of Morrison due to the changes in the 100 year mapped floodplains.

The April 2011 signed DEIS states that this project has no effect on federally listed species. On October 2, 2013 the Northern long eared bat was proposed for listing as federally endangered. A mist net survey had previously been conducted for this project in July/August of 2007. While no Indiana bats were captured; one adult female, post-lactating Northern long eared bat was captured. The results can be found in Table 6-1, page 91, of the 2008 INHS final report. Please follow the link to view the report. http://www.dot.il.gov/desenv/Environment/309/INHS_2007_Report-WebVersion.pdf.

Build Alternatives 4 and 5, impact a total of 9.7 acres and 6.4 acres of forested area, respectively. Most of the areas impacted are classified as edge habitat, rather than forest interior, or core habitat, which provides the highest quality habitat for forest interior species. Based on field observation, Build Alternative 4 would impact 8.54 acres of forested area containing core habitat, compared to 1.03 acres impacted by Build Alternative 5.

In order to protect the Northern long eared bat no tree removal shall occur between April 1 and September 30 of any given year. This office concludes that this project may affect, not likely to adversely affect the Northern long eared bat.

COSIM 4.0 PRE-SCREEN MODELING RESULTS

10-29-13
09:53 AM
US 30; IL 136 to Il 40 EIS

Performed by:	**Nardini**
Intersection Location:	**Whiteside County**
Intersection Name:	**US 30 & Emerson Rd (NW Quadrant)**
Highest Approach Volume:	**762 vph**
Closest Receptor:	**132 feet**

Pass

Intersection PASSES Pre-Screen. COSIM analysis not required.
Highest design-year approach volume on the busiest leg of the intersection
is less than 5,000 vph or 62,500 ADT.

Please include the following statement in the project report or NEPA document:

In accordance with the IDOT-IEPA Agreement on Microscale Air Quality Assessments for IDOT Sponsored Transportation Projects, this project is exempt from a project-level carbon monoxide air quality analysis because the highest design-year approach volume on the busiest leg of the intersection is less than 5,000 vph or 62,500 ADT.

ILLINOIS STATE
GEOLOGICAL SURVEY
PRAIRIE RESEARCH INSTITUTE

615 E. Peabody Drive
Champaign, IL 61820

August 28, 2013

Mr. James Curtis, P.G.
Chief, Geologic & Special Waste Unit
Illinois Department of Transportation
Bureau of Design & Environment, Room 330
2300 South Dirksen Pkwy
Springfield, IL 62764

Dear Mr. Curtis,

Information in this letter pertains to the following project:

Project name:	FAP 309 (US 30) from the Mississippi River to I-88
County:	Whiteside
District:	2
Sequence #:	11116C
Job No.:	P92-107-07
ISGS Project:	1454V
Survey Target Date:	October 9, 2013
Design Date:	NA

This letter report is submitted in response to your request, received by the ISGS on April 12, 2013, to conduct a *site inspection letter report only* of a corridor for a new four-lane expressway for US 30 from the Mississippi River to I-88, Fulton, Morrison, Sterling, and Rock Falls, Whiteside County (see Attachment 1). **This letter contains the findings of the site inspections. A full PESA is not anticipated at this time. A site reconnaissance visit has been conducted, and the USEPA CERCLIS and RCRA-CORRACTS databases have been reviewed where applicable, but no other regulatory databases were reviewed. In addition, no personal interviews with local residents and city officials were conducted.** Acquisition of additional ROW or easements, excavation or subsurface utility relocation, and railroad ROW involvement are expected. In-stream work is not anticipated for this project. In the project area, US 30 is known as Clinton Road west of Frog Pond Road, Fulton; Lincoln Road between Frog Pond Road, Fulton and Moline Road, Sterling; and Rock Falls Road east of Moline Road, Sterling. IL 136 is known as Fulton Road west of US 30, Fulton. IL 78 is known as Carroll Road north of US 30 and as Crosby Road south of US 30, Morrison. These roads will be referred to by their local road names throughout this report.

This historical review was performed in compliance with the IDOT-ISGS PESA Manual (Erdmann et al., 2012) and not with the All Appropriate Inquiries environmental assessment standard (40 CFR Part 312) that took effect on November 1, 2006, or with the ASTM standard E1527-05.

Man-Made Hazards

The project area is primarily under commercial, agricultural, industrial, and residential use. The project area will be described from west to east along the project route. Attachment 1 contains project location maps. Attachment 2 contains maps of all sites discussed in this report. The versions of the USEPA's CERCLIS database and USEPA's RCRA-CORRACTS database utilized for this report were dated August 16, 2013 and August 14, 2013, respectively.

This project intersects ISGS PESA #333, which was submitted to IDOT on October 29, 1993, at the intersection of US 30 and Galt Road in Sterling. This project intersects ISGS PESA #715, which was submitted to IDOT on December 1, 1995, at US 30 and Prophetstown Road in Rock Falls. This project intersects ISGS PESA #1315, which was submitted to IDOT on December 10, 2001, at US 30 and Carroll Road in Morrison. This project intersects ISGS PESA #1370, which was submitted to IDOT on May 22, 2002, between Crosby Road and Sawyer Road approximately 2.01 km (1.25 mi) south of US 30 in Morrison. This project intersects ISGS PESA #1454, which was submitted to IDOT on July 11, 2003, throughout the project area. This project intersects ISGS PESA #1454A, which was submitted to IDOT on August 31, 2007, throughout the project area. This project intersects ISGS PESA #1454B, which was submitted to IDOT on February 7, 2008, between Carroll Road and Lyndon Road approximately 1.6 km (1 mi) north of US 30 in Morrison. This project intersects ISGS PESA #1912, which was submitted to IDOT on October 1, 2009, at the intersection of US 30, IL 136, and Frog Pond Road in Fulton. This project intersects ISGS PESA #2335, which was submitted to IDOT on March 8, 2011, along US 30 between Yager Road in Morrison and Emerson Road in Sterling. No information from these earlier projects will be discussed in this report.

Summary

The following site in the project area appears on the USEPA CERCLIS database: 81.

The following sites in the project area appear on the USEPA RCRA-CORRACTS database: None.

The following sites in the project area contain RECs: 5, 7, 8, 21, 25, 26, 29, 34, 38, 40, 41, 61, 65, 70, 71, 75, 76, 79, 81, 83, 86, 88, 92, 93, 94, 97, 98, 108, 111, 125, 126, 127, 136, 141, 145, 163, 168, 170, 172, 175, 182, 184, 186, 188, 189, 192, 197, 198, 201, 213, 214, and 215.

Project Sites

Site 1454V-1 (1912-1). Agricultural land, 6800 block of Fulton Road and 7000-8400 blocks of Clinton Road and Lincoln Road, Fulton (north side of Fulton Road west of the intersection of Lincoln Road and Fulton Road, north of Lincoln Road between Fulton Road and Acker Road, and southeast and southwest corners of Clinton Road/Lincoln Road and Frog Pond

Illinois Department of Transportation
Division of Highways / Region 2 / District 2
819 Depot Avenue / Dixon, Illinois / 61021-3500
Telephone 815/284-2271

March 20, 2012

Re: Draft Environmental Impact Statement
FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110) PE 1
Job No. P-92-107-07
Whiteside County
IL 136 to IL 40

Mr. Kenneth A. Westlake
Chief, NEPA Implementation Section
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Mr. Westlake:

Thank you for your comments in review of the US Route 30 Draft Environmental Impact Statement (DEIS). We appreciate your agency's coordination with this project. The responses provided below are organized according to your comments.

Please note that subsequent to the publication of the DEIS, IDOT and FHWA became aware that the floodplain encroachment at French Creek involved a greater area than previously analyzed due to recently published FEMA maps. The longitudinal encroachment of this floodplain was determined to be unacceptable, as there were other alternatives that avoided this type of impact. Therefore, Alternates 4 and 5 are being revised to avoid any encroachment into the French Creek floodplain. Because of this change, it is anticipated that the Department will develop a Supplemental DEIS.

Alternatives

In your comment you indicated that it was not clear how the east-west bypass alternatives will fully address the traffic congestion in Morrison caused by the north-south IL 78 truck traffic. Because of the relatively low traffic volume on the north-south IL 78 route, the project team did not identify the north-south traffic as the primary cause of congestion in Morrison. The 2009 traffic counts on US 30 through Morrison showed an average annual daily traffic (AADT) volume of 11,000 vehicles per day (vpd) which included 1,250 trucks. The traffic volume on IL 78 south of Morrison was measured at 2,150 vpd (with 195 trucks) and IL 78 north of Morrison was found to have an AADT of 1,400 vpd (with 185 trucks). Therefore, the truck traffic on IL 78 through Morrison only accounted for approximately 15% of the total truck traffic in Morrison. Other contributing factors to the congestion in Morrison included traffic from unmarked state or county highways intersecting with US 30 in Morrison, as well as other intersecting township roads and local traffic circulating within the local street system.

The traffic congestion in Morrison will significantly decrease as a result of either of the two recommended US Route 30 bypass alignments included in the DEIS. The Level of Service (LOS) of the existing route through town was reviewed and is projected to have a LOS of C or D following a US Route 30 bypass. This is considered an acceptable LOS, based on AASHTO policy, because the designation of the existing route through Morrison will no longer be a primary arterial highway, but will likely change to an unmarked local collector.

You noted that the Purpose and Need discussion on safety identified eight roads which intersect with US Route 30 that had substandard angles of 75 to 90 degrees, and indicated that the DEIS was not clear on how the proposed alternatives address these conditions or how they will be addressed by the project. The Supplemental DEIS will include how the proposal will improve safety by either removing traffic from the subject intersections, or by improving the geometrics at the intersections that will remain along the proposed improvement.

You commented that the north-south traffic on the west side of Sterling-Rock Falls creates safety and congestion problems, specifically at three non-standard intersections (Emerson Rd., Prophetstown Rd., and Agnew Rd.). Two of the intersections (Emerson Rd. and Prophetstown Rd.) will be addressed by improving the geometrics of these intersections. The intersection of Agnew Rd. with US 30 will be eliminated.

Air Quality

You recommended that the Department commit to a construction diesel emissions reduction plan for this project in order to reduce and mitigate the known construction emissions to the degree feasible. The Department will add the six options to consider in a diesel emissions reduction plan to Section 3.20, "Summary of Measures to Minimize Harm for Noise and Air", in the Supplemental DEIS.

Streams and Floodplains

Your premise indicates that "although a longitudinal transportation project by its nature fragments open space and severs habitat connections, they can be designed and constructed with some accommodations". We would not consider this project to be characterized as a "longitudinal transportation project". The project crosses most natural resources at a transverse (perpendicular) angle, which minimizes environmental impacts to these natural resource features (rivers, streams, wetlands, forests, riparian corridors, and floodplains). The dominant cover type in the project area is cropland, which makes up 82% of the study area. The next common cover types are residential/urban, pasture/hayland, and forest, which account for 9%, 3%, and 3% of the project area respectively. The remaining 18 cover types make up the remaining 3% of the project area and include wetlands, streams, and non-native grasslands. Many of the natural resources (forests, wetlands, riparian habitat) within the project area have been reduced in size, have limited distribution, and low natural quality. The project makes use of the existing infrastructure to minimize environmental impacts and reduce the potential for impacts to wildlife connectivity. The DEIS did not directly consider wildlife connectivity. Section 3.13.2.2, "Wildlife Impacts", will be revised in the Supplemental DEIS to discuss this issue in greater detail.

You recommended that the project provide habitat connectivity by widening the stream and floodplain crossings. The stream banks should be modified by creating a stepped plateau, which provides a more stable bank and incorporates better flood control than narrow buttressed channels. By using this design the flood control function is expanded and wildlife connectivity is provided on the stepped portion of the floodplain. It is indicated that this design also reduces or eliminates scouring. Benching or excavation of the overbank adjacent to the channel beneath a structure does not provide a permanent waterway opening. The additional waterway opening is temporary because the benched area silts in over time. For those rare projects where we do bench the overbanks at the highway crossing, the IDNR requires a contract stating IDOT will maintain the as-built opening. IDNR also requires vertical and horizontal transitions both upstream and downstream from the structure. Modifying the bank by excavation, i.e., reducing the bank height below natural levels, does not necessarily provide a more stable bank. At crossings where the stream meanders or bends beneath the structure, reducing bank height as prescribed here would have the opposite effect. Regarding scour, benching will not eliminate local or general scour.

You recommended that the floodplain crossings be redesigned to take into account forecast climate change and recent flooding history within the project area. The recent flooding history within the project area has been taken into account through the use of the updated FEMA floodplain maps (Effective February 18, 2011). The effect of climate change on flow patterns and volumes of particular streams cannot be predicted with a reasonable degree of certainty. Floodplain crossing designs should and will be based on current conditions.

If you have any questions regarding this project, please contact Cassandra Rodgers (815/284-5455, Cassandra.Rodgers@illinois.gov) or Mark Nardini (815/284-5460, Mark.Nardini@illinois.gov) of my staff.

Thank you for your comments.

Sincerely,

Eric S. Therkildsen, P.E.
Acting Deputy Director of Highways,
Region Two Engineer

jjw-0238/sb

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

Pat Quinn, Governor
Marc Miller, Acting Director

February 2, 2012

Mr. Eric S. Therkildsen, P.E.
Illinois Department of Transportation
Deputy Director of Highways, Region 2 Engineer
819 Depot Ave.
Dixon, Illinois 61021

RE: FAP 309 (US 30)
Draft EIS
Numerous Counties
INDR #0712998
ATTN: Cassandra Rodgers

Dear Mr. Therkildsen:

This letter is in response to the above referenced project that was reviewed by the Illinois Department of Natural Resources. Based on the results of further review, this project has potential for impacts to resources that occur in the project area for which surveys were performed by the Illinois Natural History Survey.

Based on those surveys requested, no state listed plants were found in the project corridor and no listed fish species were identified. The mussel surveys did identify in both the Rock River and Elkhorn Creek the presence of the state threatened black sandshell (Ligumia recta). As identified in the Draft EIS in Chapter 3, section 3.14.2.2, the Illinois Department of Transportation will make application for an Incidental Take Authorization (ITA) to the Illinois Department of Natural Resources one year prior to construction. This coordination effort should be addressed to Mr. Robert Szafoni, Endangered Species Project Manager, Division of Natural Heritage, One Natural Resources Way, Springfield, Illinois 62702-1271. It is important that this process be implemented in a timely manner to assure the project meet the impending construction schedule. Based on the referenced ITA application in the DEIS, consultation is closed on this project.

If you have any questions on the above, please contact me at 217-785-4862.

Sincerely,

Steve Hamer

Steve Hamer
Transportation Review Program
Division of Environment and Ecosystems

cc: Robert Szafoni, IDNR/ORC; Charles Perino, IDOT; John Betker, USACOE; Heidi Woeber, USFWS
file

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ENVIRONMENT SECTION

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Illinois Department of Transportation
Division of Highways / Region 2 / District 2
819 Depot Avenue / Dixon, Illinois / 61021-3500
Telephone 815/284-2271

PROGRAM DEVELOPMENT
Studies and Plans/Environment Section
FAP Route 309 (US 30)
Section (20-1, 17R, 16, 15, 110)PE1
Job No. P-92-107-07
Whiteside County
IL 136 to IL 40 in Rock Falls

September 22, 2011

Hector Santiago
National Park Service
Midwest Regional Office
601 Riverfront Drive
Omaha, Nebraska 68102

Dear Mr. Santiago:

The Illinois Department of Transportation is undertaking a study of U.S. 30 which involves the proposed construction of a four lane limited access expressway between Rock Falls/Sterling west to the U.S. 30/IL 136 intersection east of Fulton, a distance of approximately 24 miles (Exhibit 1-1). Approximately 60% of the proposed roadway will be on existing alignment; the remaining 40% will be on new alignment (a north or south bypass of Morrison). The project is being processed as an Environmental Impact Statement (EIS). Coordination with the U.S. Department of the Interior (letter attached) indicated the requirement to coordinate with your office.

The project crosses the Rock River approximately 2 miles west of Rock Falls. The segment of the Rock River from Sterling/Rock Falls to Oregon, a distance of 29 river miles, is listed on the National Rivers Inventory (NRI). The stream's Outstandingly Remarkable Value (ORV) is its recreational attribute. The river is identified in the NRI listing as "a broad interstate river flowing out of Wisconsin and through a very intensively farmed portion of Illinois. Well wooded banks and slow current offer an interesting and leisure canoe trip. The River provides for a moderate fishing use". There are two dams, a mile apart, on the Rock River at Sterling/Rock Falls. These dams can be portaged on the east side of the river and there are public launching areas available. Downstream of Sterling/Rock Falls the Rock River flows through low farmland. U.S. Route 30 is approximately 4 river miles downstream from the last of these dams. Canoe use in this section of the river is not known. The best fishing is in the tailwater below the dams and the pools above the dams.

Both alternatives 4 and 5, which were carried forward into the EIS cross the Rock River at the existing U.S. Route 30 bridge site (Exhibit 3-10, Pages 14 & 15). The Rock River is approximately 500 feet in width at this site. Aquatic habitat consists of a wide and moderately deep channel with gravel bars and a wooded island on the west bank. The surrounding land uses are composed of residential areas, agricultural land, and forested land. These features are depicted on the attached photographs.

Fish and mussel surveys at the bridge site were completed in 2007. With 27 fish species present, the Rock River at the U.S. Route 30 bridge site represented one of the most diverse sites sampled in the current study. However, that high level of diversity, when compared to other sites in the project corridor, may be due more to its large catchment size rather than habitat quality. Large rivers are difficult to collect with standard techniques and, given the long channel width (approximately 260 feet) and depth (greater than 5 feet), the results may not accurately represent the total fish fauna present at the site. It is likely that at least 15-20 other species may occur at the site in small numbers. Shallow gravel riffles lacking silt accumulation are present on and along the west bank indicating that habitat quality is good. The dominant fish species consisted of spotfin shiner, sand shiner, gizzard shad, and freshwater drum, which represented 20%, 20%, 15%, and 9% of the catch respectively. The presence of three intolerant species (bullhead minnow, smallmouth bass, and banded darter) in high numbers supports a higher quality habitat designation for this site. These intolerant species represented 13% of the catch.

Six man-hours were spent during the survey for mussels at the U.S. Route 30 bridge site. An area of 3500 square meters was sampled over a river substrate of predominantly silted sand/gravel with small patches of silted rip-rap. Catch-per-unit-effort was 15.3 individuals per hour. A total of 92 individuals representing 10 species were found alive. The most abundant mussels included the Pink Heelsplitter (24 individuals), Fragile Papershell (17 individuals), Mapleleaf (13 individuals), and the Three horned Wartyback (13 individuals). The site also contained 5 individuals of the state-listed Black Sandshell.

Water quality information from the Illinois EPA "Integrated Water Quality Report and Section 303 (d) List (2010)" indicates that this segment of the Rock River is in full support of its aquatic life, primary contact (swimming), and secondary contact (boating) designated uses. It is in nonsupport of its fish consumption designated use, and therefore is considered an impaired stream. This impairment is caused by mercury and PCB sediment contamination from atmospheric deposition (toxics) and unknown sources. The aesthetic quality designated use has not been assessed by Illinois EPA.

Construction activities at the Rock River crossing will consist of the following activities: The existing bridge is approximately 1100 feet in length, has six piers within the river, and bridges the 100-year floodplain. A new bridge, similar in length and pier number, will be constructed adjacent to and upstream of the existing bridge. After the new bridge is completed, the existing bridge will be reconstructed at its current location. The piers will be constructed using steel sheet piling. Once the piling is in place, the water within it will be pumped out into the river. The bottom material will be disposed of at an upland site. Placement of the piers would displace 1155 square feet of river bottom. Temporary stone work pads/causeways will be used on each structure of the river crossing. These work pads/causeways will consist of clean aggregate material and will be properly culverted to maintain low flow. The purpose of these temporary structures is to allow construction equipment access to the piers and the bridge superstructures. These work pads/causeways will temporarily affect approximately 10,000 square feet of river bottom. After construction, the aggregate material will be removed and disposed of at an upland location.

As proposed, the project will have temporary affects on the stream's recreational Outstandingly Remarkable Value (ORV) due to the construction activities mentioned in the preceding paragraph. Though the Illinois DNR has no information on the recreational usage of the river, canoeing does occur. There are access points above (Sterling/Rock Falls) and below (Prophetstown State Park) the U.S. Route 30 crossing. During the construction and reconstruction of the two bridges, access under the bridges will not be available. This condition is expected to last approximately 3 years. Portage of the construction site may not be possible because of construction activity on the bridge approaches. Once construction of the bridges has been completed, the river will be open to canoeing.

The following procedures will be in place during construction of the Rock River bridges: Erosion and sediment control practices will be used to minimize water quality impacts at the construction site. Construction at the Rock River will be conducted at low to normal flow periods and will comply with all Corps of Engineers 404 permit conditions, Illinois EPA water quality conditions, and NPDES Construction permit conditions.

It is estimated that approximately 1.38 acres of trees will be removed from the riparian corridor of the river for construction of the new bridges. The dominant tree species are silver maple (*Acer saccharinum*) and box elder (*Acer negundo*). After construction, the disturbed riparian corridor will be seeded with native herbaceous species and replacement riparian species of trees. The trees will be replaced at a rate of 125 trees per acre. Therefore, approximately 173 trees will be planted within the riparian corridor as mitigation for these impacts. The replacement trees will consist of riparian species such as swamp white oak (*Quercus bicolor*), pin oak (*Quercus palustris*), sycamore (*Platanus occidentalis*), and pecan (*Carya illinoensis*).

Based on the above considerations, we believe that the project as described will not have an adverse affect on the river's water quality, change the free flow characteristics of this reach of the Rock River, change the long term recreational use of the River, or impair the inclusion of this reach of the river to be incorporated into the Wild and Scenic River System at some future date.

If you have any questions regarding this project please contact Cassandra Rodgers (815/284-5455, cassandra.rodgers@illinois.gov) or Mark Nardini (815/284-5460, mark.nardini@illinois.gov) of my staff.

Sincerely,

Eric S. Therkildsen, P.E.
Acting Deputy Director of Highways,
Region Two Engineer

Env/cr-0738/sb

c: Michael T. Chezik, USDI
Jim Allen, FHWA
Barbara Stevens, IDOT BDE

Enclosures
Exhibit 1-1, Map of Project Area
Exhibit 3-10, Pages 14 & 15. Aerial Photo of Rock River Crossing
Photographs of Project Area
Letter from the U.S. Department of Interior

Illinois Department of Agriculture

Pat Quinn, Governor
Thomas E. Jennings, Director

Bureau of Land and Water Resources

State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 217/524-6858 • Fax 217/557-0993

July 29, 2011

Mr. Eric S. Therkildsen, P.E.
IDOT / Division of Highways / District 2
819 Depot Avenue
Dixon, Illinois 61021-3500

Re: Draft Environmental Impact Statement
U.S. 30 (FAP 309) from IL 136 to IL 40 - 678 acres
Whiteside County, Illinois

Dear Mr. Therkildsen:

The Illinois Department of Agriculture (IDOA) has completed its review of the agricultural impacts associated with the improvements to ±24 miles of original U.S. 30 from IL 136/Frog Pond Road to IL 40 in Whiteside County. The IDOA conducted a Study of Agricultural Impacts (copy enclosed) associated with the request in accordance with the rules governing the state's Farmland Preservation Act (505 ILCS 75/1 et seq.).

The project involves the construction of an expressway facility. Both alternatives share similar impacts to 12 miles of roadway. Alternative 4 requires an additional 13 miles for a total length of 25 miles, while Alternative 5 requires an additional 14 miles for a total length of 26 miles. Both alternatives require almost identical acreage for final construction, the final total being dependent upon the selection of the north or south bypass around Morrison.

Based upon our study, the IDOA would have no objection to the use of either Alternative for the proposed highway improvements. The IDOA would consider such an action to be consistent with the IDOT's Agricultural Land Preservation Policy and in compliance with the state's Farmland Preservation Act.

Should you have any questions regarding our review of this road improvement or our study, please contact Terry Savko of my staff at 217-785-4458.

Sincerely,

Steven D. Chard

Steven D. Chard, Acting Chief
Bureau of Land and Water Resources

SDC:TS
Enclosure

cc: Governor Pat Quinn
Sen. John Cullerton
Sen. Christine Radogno
Rep. Michael Madigan
Rep. Tom Cross
Sen. Tim Bivins
Sen. Mike Jacobs
Rep. Jerry Mitchell
Rep. Richard Mortland
Shari West, IDOA
Jared Thornley, IDOA
Jeff Williams, IDOA
Inter-Agency Committee
Dave Harrison, Whiteside Co. SWCD
Kevin Rund, Illinois Farm Bureau
Agency Project File

ILLINOIS DEPARTMENT OF AGRICULTURE
STUDY OF AGRICULTURAL IMPACTS

FAP 309 (US Route 30)
Section (20-1,17R,16,15,110)PE1
Whiteside County, Illinois

The Illinois Department of Agriculture (IDOA) conducted a study of agricultural impacts on the proposal by the IDOT District 2 to improve 24 miles of U.S. 30 from IL 136 to IL 40 in Whiteside County with a four-lane expressway. The project is needed to address existing capability deficiencies and traffic congestion, increasing transportation demand, lack of roadway continuity and the overall safety of the roadway within the US 30 project study area. The scope of work includes its construction as a 4-lane expressway with either a north or south bypass around Morrison. The results of our study are as follows:

- **New right-of-way** – Total area converted to right-of-way (ROW) for both alignments is almost identical, affecting 682 acres and 676 acres for Alternate 4 and Alternate 5, respectively. Converted agricultural acres total 614 acres to 625 acres, respectively. In addition, ROW takes will impact 149 adjoining farm operations versus to 154 adjoining farm operations, respectively.

- **Land use** – Approximately 90 percent of Alternative 4's proposed ROW is presently in agricultural use. Alternative 5's alignment has approximately 92 percent of its proposed ROW in agricultural use.

- **Prime farmland status** – According to the Whiteside Soil Survey that was prepared by the USDA Natural Resources Conservation Service, Alternative 4 has 434 acres of ROW comprised of Prime soils, 150 acres are Important soils, and 30 acres contain soils that are neither Prime nor Important. Alternative 5 has 419 acres of ROW comprised of Prime soils, 168 acres are Important soils, and 38 acres contain soils that are neither Prime nor Important.

- **Minimum design standards** – This project has been designed to minimize agricultural impacts as it addresses capacity deficiencies and traffic congestion along the entire scope of the construction project.

- At this time, an unknown quantity of **landlocked parcels**, **severed parcels**, **uneconomical remnants** and **adverse travel** will be created. However, field access will be addressed so that all essential farm fields will be accessible to landowners and/or tenant farmers. In addition, Alternatives 4 and 5 will jointly impact 2 Centennial Farms. The north bypass will not affect any other Centennial Farms, while the south bypass will impact one more.

- **Relocations** – Seven farmsteads will be displaced by both Alternatives 4 and 5. When including the bypass impacts, Alternative 4 displaces 11 farmsteads while Alternative 5 displaces 8.

- **Secondary agricultural land conversion** – No agricultural land will be used for wetland mitigation, tree replacement, or floodplain compensatory storage.

- **Field entrances** – All field entrances will be rebuilt to meet the new grade line of the road and widened, if necessary, to accommodate new, wider farm equipment now in use.

- **Drainage impacts** – All tile and drainage systems will be retained, with new outlets being provided for any tile that currently empty into the ditch system of the highway.

- **Agricultural Conservation and Protection Area** - None of the parcels are located in a County-designated Ag Area. However, use of Alternate 4 with the north bypass will affect 2 Centennial Farms while Alternative 5 with the south bypass will impact 3 Centennial Farms.

- **Loss of gross agricultural receipts** - The conversion of all agricultural land within the Alternative 4 ±25 mile corridor would result in a potential annual loss of **$365,330** cash receipts from crops and livestock based upon statistics from the *Illinois Agricultural Statistics 2010 Annual Bulletin.* ***(Whiteside County Total Cash Receipts) ÷ (Land in Farms in Whiteside County) = ($595/ac) x (614 ac in ag use.)*** Alternative 5's ±26 mile corridor would result in the potential loss of **$371,875** cash receipts from crops and livestock based upon statistics from the Illinois Agricultural Statistics 2010 Annual Bulletin. ***(Whiteside County Total Cash Receipts) ÷ (Land in Farms in Whiteside County) = ($595/ac) x (625 ac in ag use.)***

IDOA Opinion - The U.S. 30 improvement project has been designed to address existing capability deficiencies and traffic congestion, its increasing transportation demand, the lack of roadway continuity as well as the overall safety of the roadway. The final alignment will utilize ±47% of existing right-of-way (ROW) and land adjacent to the existing ROW.

Both Alternative 4 and 5 have been designed to minimize the amount of new ROW needed. Both will cause similar farmland conversion impacts. Also, use of existing ROW will significantly reduce the amount of agricultural land that potentially would be converted to highway use.

We believe the final alignment, when selected, coupled with the measures to be employed to minimize adverse impacts to agriculture, will result in the project achieving compliance with IDOT's Agricultural Land Preservation Policy and the Illinois Farmland Preservation Act.

72911
TS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 29 2011

AUG 2011
Received
IDOT
DIST. TWO

REPLY TO THE ATTENTION OF:

E-19J

Norman Stoner, P.E.
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Re: **Comments on the Draft Environmental Impact Statement for US 30 from Fulton to Rock Falls, Whiteside County, IL, CEQ# 20110162**

Dear Mr. Stoner:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency has reviewed the proposed Draft Environmental Impact Statement (DEIS) for US 30 from the IL 136 intersection at Fulton to the IL 40 intersection in Rock Falls, in Whiteside County, Illinois. This is at the northwestern edge of Illinois near the Mississippi River, just north of the Quad Cities and running east-west parallel to the I-80 interstate highway. The project proposes to improve traffic capacity, reduce congestion, improve safety, anticipate increased travel demands, and bring this segment of US 30 into system continuity with segments further west in Iowa.

EPA has participated briefly in the NEPA process for this project, which includes providing early scoping comments on May 29, 2007 and concurrence with Purpose and Need on September 4, 2008, both at merged NEPA / Clean Water Act Section 404 (NEPA / 404) meetings. This project was subsequently withdrawn from the merged NEPA / 404 process in July 2010 because wetland impacts for all alternatives being considered were reduced to a level not requiring a 404 Wetland Permit. On November 30, 2010, we agreed to be a Cooperating Agency for this project.

Two build alternatives are presented in the DEIS as the result of much public involvement, but a preferred alternative is not selected. Both build alternatives would utilize a four lane divided expressway configuration, as opposed to a freeway design which would limit local accessibility. The difference between the two proposals is that one bypasses the City of Morrison on the north side and the other would bypass the city on the south side. Other alternatives considered but rejected as not meeting Purpose and Need included the No Build Alternative, several Transportation Demand Management possibilities, and a Transportation System Management Alternative.

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We have reviewed the DEIS and in keeping with our responsibilities under NEPA, give the document a rating of **EC-2, Environmental Concerns - insufficient information**, see the attached Summary of Rating Definitions for clarification. The following sections outline our observations regarding the proposed Purpose and Need, Alternatives, Environmental Impacts, and Proposed Mitigation of Unavoidable Impacts. Some of these points are discussed in greater detail in the attachment: Concerns Regarding the DEIS Proposed Project for US 30 in Whiteside County, Illinois.

PURPOSE AND NEED

We previously concurred with the Purpose and Need (P&N) statement because it adequately states the conditions to be addressed by this project. However, we note three parts of the P&N discussion are significant factors contributing to existing conditions which should be addressed by this project's alternatives, but are not. We will discuss these further under Alternatives and in the attached discussion.

ALTERNATIVES

It is not clear how any bypass with only an east-west consideration, such as the two retained alternatives, will fully address the traffic congestion in Morrison caused by the north-south IL 78 truck traffic. We recommend future NEPA documents consider an alternative that includes a Morrison west side bypass extending from IL 78 on the north side to IL 78 south of the city. A portion of the dismissed Alternative A-I accomplished this, connecting IL 78 north to south. This north-south portion of A-I could either be incorporated as part of a full southern bypass alternative or as a spur bypass on just the western side of the city.

One safety issue noted in the Purpose and Need discussion, Chapter 1 page 7 and Table 1-4, is that eight roads intersect with US 30 at less than the State Design Standard of 75 to 90 degree angles. It is not clear that the proposed alternatives address these conditions or how they will be addressed by this project. The future NEPA documents should clarify how this proposal meets this component of the P&N.

The north-south traffic on the west side of Sterling - Rock Falls creates safety and congestion problems specifically at three of the above non-standard intersections. We recommend consideration of an alternative that consolidates this north-south traffic, perhaps on a westside collector, and eliminates these non-standard intersections.

ENVIRONMENTAL IMPACTS

>>AIR QUALITY

The DEIS correctly presents that this project location does not require conformity with a State Implementation Plan for Air Quality. Although modeling Mobile Source Air Toxics (MSATs) is

a developing field of science, we commend the qualitative assessment of these potential impacts in this DEIS for alternative impacts. We recommend that Illinois Department of Transportation (IDOT) commit to a construction diesel emissions reduction plan for this project to reduce and mitigate the known construction emissions to the degree feasible. Although not required by EPA regulations, similar projects have included commitments to some or all of the following reduction methods.

Options to consider in a diesel emissions reduction plan include:

(a) retrofitting off-road construction equipment including repower or engine upgrades
(b) using ultra-low-sulfur fuels for all equipment
(c) limiting the age of on-road vehicles in construction projects to 1998 and newer and 1996 and newer for off-road equipment
(d) diesel particulate traps and oxidation catalysts
(e) using existing power sources or clean fuel generators rather than temporary power generators
(f) encouraging the use of off-road equipment that meets the Tier 3 standards.

>>STREAMS AND FLOODPLAINS

Although a longitudinal transportation project by its nature fragments open space and severs habitat connections, they can be designed and constructed with some accommodations for connectivity. One area for such consideration is at water and floodplain crossings. Fourteen streams could potentially be crossed by one or both of the proposed alternatives (DEIS Table 3-39). The associated floodplains (DEIS Table 3-46) to seven of these streams widens their potential natural habitat area. The DEIS notes that only the Rock River has an associated floodway designation which must be kept open to accommodate a possible 100-year flood event. We recommend that to provide habitat connectivity and promote the recovery of natural areas within the project area, the stream and floodplain crossings be widened. Most of the stream banks pictured in the DEIS have steep sides and would be subject to erosion. Modification of such stream banks by creating a stepped plateau provides a more stable bank and incorporates better flood control than narrow buttressed channels. To create such a stepped bank, the original river bed is retained up to the high water level. At that height, the bank is stepped back a distance of 10 to 50 feet, creating a local floodplain. This plateau is planted with native species having deep root systems which stabilizes the soil when flooded. By using a stepped bank construction at stream crossings the flood control function is expanded and wildlife connectivity is provided on the created plateau. This design also reduces or eliminates scouring.

We commend IDOT for alignment adjustments made to reduce impacts to streams and floodplains. We note that design features are routinely being planned for a 50-year flood level. In addition to the above stepped bank design, we recommend these floodplain crossings be redesigned taking forecast climate change and recent flooding history into consideration. We believe these considerations may warrant using a 100-year or even 500-year flood level reference in designing protection and bridging structures.

We recognize the state's best management practices for erosion control measures, but recommend consideration be given to utilizing compost blankets, berms, and socks at points where rapid regrowth cover and long term utility are appropriate . Please refer to http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail &bmp=119&minmeasure=4 and related adjacent EPA websites.

MITIGATION of UNAVOIDABLE IMPACTS

Many other impacts are appropriately addressed in the DEIS, including mitigation proposals. Table 2-8 is very useful in identifying the possible impacts of the project build alternatives. We recommend that a similar summary table be included in future NEPA documents, clarifying each impact within categories, and provide sufficient information for each specific impact and associated mitigation to be identified and understood as to location, nature of what is impacted (i.e. size, quality, description, etc.), and the specifics concerning mitigation for that impact. Where appropriate, indicate any commitments to mitigation monitoring and maintenance, including goals and managers of proposed adaptive management mitigation.

We appreciate the opportunity to review this document. If you have any questions, or wish to discuss our comments further, please contact me or Norm West of my staff at (312)-353-5692 or at west.norman@epa.gov.

Sincerely,

for, Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Cc: Eric S. Therkildsen, IDOT

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

Concerns Regarding the DEIS Proposed Project for US 30 in Whiteside County, Illinois

INTRODUCTION

The Region 5 office of U.S. Environmental Protection Agency, has reviewed the proposed Draft Environmental Impact Statement (DEIS) for US 30 from the IL 136 intersection near Fulton to the IL 40 intersection in Rock Falls, in Whiteside County, Illinois. We were involved in the project early-on in the scoping stage and developing the Purpose and Need statement for the project. When the project was withdrawn from the Illinois merged NEPA / 404 process, we had only briefly seen a large number of early alternative corridors of possible consideration.

When reading the DEIS, we note that a significant amount of the discussion supporting the P&N focuses on three conditions which do not seem to be addressed by the proposal alternatives. A key problem identified in the P&N is a segment of US 30 within Morrison which is joined by Illinois Route 78 (IL 78). Specifically, trucks moving north and south along IL 78 must negotiate several geometric tight turns and narrow roadway conditions, multiple closely spaced traffic intersections and stoplights, and a high volume of local traffic on this main street of the city. Another part of the P&N discussion indicated a robust business and commuting traffic that is generated by industries in Sterling and accesses and then leaves US 30 at several points, creating north-south "crossing-traffic" temporarily on US 30. This "crossing traffic" must deal with several safety conditions caused by roadway and intersection substandard geometry and is coincident with local high-truck-traffic areas, e.g. Wal-Mart, steel and hardware industries, landfill traffic, and others. The third P&N concern is substandard intersection geometry which creates safety issues in this area. Intersections of side roads with US 30 having intersection angles less than 75 degrees (6 intersections near Sterling - Rock Falls and 4 intersections further west) create line-of-sight problems and greater risk turning movements.

MORRISON and ILLINOIS 78

The DEIS notes that safety concerns in Morrison and other locations exist due to changing road characteristics and would be resolved by providing US 30 system conformity so drivers can correctly anticipate what to expect in various circumstances. Because these corrections cannot be made along the existing US 30 in the City of Morrison, it is appropriate to realign the roadway around the city so the new alignment can be constructed consistent with recently upgraded segments of the system further west in Iowa. This would clearly avoid the geometric constraint problems in Morrison for those traveling on US 30.

However, traffic congestion within Morrison is described as due partly to north-south truck traffic on IL 78. This truck traffic apparently consists of longer tractor trailer vehicles that come into Morrison both from the south and north on IL 78. For approximately one mile, IL 78 joins US 30 in Morrison, which is the city's main street and thus carries significant local traffic. Historic development of the city along this major roadway both limits widening the street and creates multiple street changes that are inconsistent with IDOT standards. Section 3.2.2.6.1 assumes trucks will use a bypass of the city and thus the problem is solved, but the proposed

bypasses are not reasonable routes for the IL 78 trucks to follow around the city. While the proposed alternatives solve the US 30 congestion by going around the problem, it leaves Morrison with the north-south traffic problem unresolved.

The early alternative A-I (Exhibit 2-3) comes eastward from Fulton, west of Morrison, and indicates a potential intersection with IL 78 on the north. A modification of this western portion of the A-I alternative closer to the proposed alternate 4 and 5 paths could still arrive at an IL 78 northern intersection. The road then would carry US 30 along with IL78 south along the west side of Morrison and swing eastward to intersect with IL 78 on the south side. Because this alternative did not extend east from this intersection it was dropped. If the segment of alternative A-I connecting IL 78 north to IL 78 south were to continue eastward along the alternate 5 proposed path, the Morrison by-pass would then meet the P&N. We recognize this alternative would increase some impacts, but further consideration of this concept is important to more fully meet the project P&N in this area. .

CROSSING TRAFFIC WEST of STERLING - ROCK FALLS

Our understanding of the project P&N discussion for the eastern end of the corridor indicates the interaction of multiple traffic flows on non-uniform / non-standard roadways which include high risk geometry situations. One source of traffic in this section of US 30 comes from the interstate I-88. This traffic gets off and on I-88 at both Illinois Route 40 (IL 40) on the east side of Rock Falls and at a newly constructed "connector road" exit on the west side of Rock Falls. A significant percentage of this traffic is large trucks servicing local industries, so it gets on US 30 to move east or west a distance and then turns north (or perhaps occasionally south) to reach Rock Falls and Sterling businesses, noted above. A second flow of traffic is comprised of local businesses and residents who utilize US 30 as a local street, which its geometry indicates it is at most points in this section. A third traffic flow is comprised of a commuting population coming to and from the industries and businesses in Rock Falls and Sterling. Some of this group come from I-88 but a component of this group are arriving and departing along local country roads that come into Rock Falls and Sterling on the south and west side. They are required to make turns onto and off of US 30 to reach their destinations. The current road grid design thus causes US 30 to not only serve as an east-west arterial, but to also provide north-south crossing traffic access to their destinations by traveling a short distance (approximately 1 to 3 miles) on US 30. We recommend consideration of alternatives that addresses this truck and commuter traffic as north-south cross traffic. The current proposals do not meet the need of these cross flows and therefore does not meet the project P&N.

NON-STANDARD INTERSECTIONS

Table 1-4 in the DEIS lists eight roads that have less than 75 degree angles of intersection with US 30. The western most intersection at Illinois Route 136 (IL 136) was not included in this list but clearly could be. Recent reconstruction described extending a turning lane but said nothing of correcting the intersection angle. Matthew Road, adjacent to the Wal-Mart Distribution Center is mentioned elsewhere in the DEIS and should probably be on this list. We further note that most of these intersections are identified as having higher volume or high truck traffic and safety concerns (Exhibits 1-5A to 1-6C). Although discussion suggests other state projects

would address some of these conditions and further studies will consider other additional intersections, this proposal does not solve these problems in a clear definitive manner. It is a reasonable expectation that a major roadway rebuilding project such as the one proposed would resolve all geometric inconsistencies of this nature in order to achieve its P&N. We recommend that by addressing the above "crossing traffic" on the west side of Sterling - Rock Falls, some of these problematic intersections, up to six (6), could be reconfigured to resolve their safety concerns.

CONCLUSION

The solutions proposed in this DEIS represent a misunderstanding of the Context Sensitive Solutions concept (CSS). It apparently assumes that having public input bestows CSS benefits on the project. By this proposal solving the US 30 problems while sidestepping the congestion causing conditions in Morrison, the north-south traffic issues at Morrison and Sterling-Rock Falls, and the safety conditions at deficient angled intersections, the proposal bypassed CSS. As presented, the proposal has left these concerns for Whiteside County or other local authorized agencies to contend with and solve in light of the new US 30 configuration. The very nature of the new US 30 expressway configuration makes such solutions much more difficult to achieve and finance after the fact.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

In reply refer to

July 25, 2011

9043.1
ER 11/475

Mr. Norman Stoner
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Dear Mr. Stoner:

As requested, the Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (EIS) (Section 4(f) Evaluation) for the U.S. 30 Transportation Improvement Project (From IL-136 to IL-40), Federal Aid Primary Route 309, Whiteside County, Illinois. The Department offers the following comments and recommendations for your consideration:

Section 4(f) Comments

This document considers effects to identified properties in the project study area eligible to be considered under Section 4(f) of the Department of Transportation Act of 1966 (48 U.S.C. 1653(f)) associated with the proposed reconstruction of U.S. 30 from IL-136 to IL-40 in Whiteside County, Illinois. The proposed reconstruction would provide improved traffic capacity, reduced congestion, improved safety, and address the anticipation for an increase in transportation demand.

This evaluation, prepared by the Illinois Department of Transportation (IDOT) and Federal Highway Administration (FHWA), considered the impacts to 7 recreational properties; no cultural resource sites eligible for consideration as 4(f) resources will be affected. All 7 recreational properties will be avoided by the project and there will be no direct or indirect effect on any 4(f) resource. The Department would concur with the FHWA and the IDOT on a determination of no eligible properties.

General Comments

A concern the Department has is with the Rock River, which is on the Nationwide Rivers Inventory (NRI). The EIS does not mention this fact, nor do we believe the National Park Service (NPS) was contacted concerning this designation. The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic River System. Rivers were included on the NRI to the degree to which they are free-flowing, to the degree to which the rivers and their corridors are undeveloped, and for the outstanding natural and cultural characteristics of the rivers and their immediate environments. Section 5(d) of the National Wild

and Scenic River Act (Public Law 90-542) requires that "In all planning for the use and development of water and related land resources, consideration shall be given by all federal agencies involved to potential national wild, scenic and recreational river areas." In partial fulfillment of the Section 5(d) requirements, the NPS has compiled and maintains the NRI.

The intent of the NRI is to provide information to assist in making balanced decisions regarding use of the nation's river resources. A Presidential directive and subsequent instructions issued by the President's Council on Environmental Quality, and codified in agency manuals, require that each Federal agency, as part of its normal environmental review processes, take care to avoid or mitigate adverse effects on rivers identified in the NRI. Further, all agencies are required to consult with the NPS prior to taking actions that could effectively foreclose wild, scenic, or recreational status for rivers on the inventory.

The Rock River, running through Ogle, Lee, Whiteside, and Henry Counties, is broad interstate river flowing out of Wisconsin and through a very intensively farmed portion of Illinois. A total of 97 miles were nominated to the NRI in 1982; a segment from Osborn to Sterling (68 river miles), and a segment from Sterling to Oregon (29 river miles). Well-wooded banks and slow current offer an interesting and leisurely canoe trip. The river receives moderate fishing use. To be nominated, a river must have at least one outstanding remarkable value (ORV); the Rock River was nominated based upon its recreational values.

The project proposes to replace the existing bridge over the Rock River and build a second bridge immediately adjacent to the new bridge. The proposal is to keep the existing pier configuration of the present bridge, which has six bridge piers within the bed and banks of the river. The second bridge would add an additional six piers. This action by FHWA and IDOT has the potential to impact the free-flowing characteristics of the Rock River.

We would recommend that FHWA and IDOT contact the Regional Rivers Coordinator for the NPS, to discuss this issue. The Coordinator, Hector Santiago, can be contacted at the Midwest Regional Office, 601 Riverfront Drive, Omaha, Nebraska 68102, telephone 402-661-1848 and via email at Hector_Santiago@nps.gov.

The Department has a continuing interest in working with the FHWA and the IDOT to ensure impacts to resources of concern to the Department are adequately addressed. For issues concerning Section 4(f) resources, please contact Regional Environmental Coordinator Nick Chevance, Midwest Regional Office, National Park Service, 601 Riverfront Drive, Omaha, Nebraska 68102, telephone 402-661-1844.

We appreciate the opportunity to provide these comments.

Sincerely,

Michael T. Chezik
Regional Environmental Officer

cc:
N. Chevance, NPS, Omaha, NE
H. Santiago, NPS, Omaha, NE

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

December 7, 2010

Whiteside County
FAP 309, US 30
Project: P-02-004-03

IDOT Seq # 11116, 11116a&b

FEDERAL 106 PROJECT

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

Dear Ms. Haaker:

Enclosed is a copy of a report assessing the potential impact of the project referenced above on historic properties previously determined eligible for the National Register of Historic Places.

Through coordination between the IHPA and IDOT twenty-seven structures were identified as potentially eligible for the NRHP. One site, the Odell Library Building, is listed on the NRHP. The project will be near three of the potentially eligible buildings. These historic properties will not be affected by either of the build alternatives or the no-build alternative. The road will be moved farther away from two of the historic properties.

In accordance with the established procedure for coordination of Illinois Department of Transportation projects, we request the concurrence of the State Historic Preservation Officer in our determination that this project will have "No Effect" on historic period properties protected under Section 106 of the National Historic Preservation Act of 1966, as amended.

Very truly yours,

John A. Walthall, PhD
Cultural Resources Unit

CONCUR

By: Anne E. Haaker
Deputy State Historic Preservation Officer

Date: 12/13/10

COSIM 3.0 PRE-SCREEN MODELING RESULTS

11-29-10
10:23 AM
US 30: IL 136 to IL 40

Performed by:	**Nardini**
Intersection Location:	**Whiteside County**
Intersection Name:	**US 30 & Emerson RD (NW Quadrant)**
Highest Approach Volume:	**762 vph**
Closest Receptor:	**132 feet**

Pass

Intersection PASSES Pre-Screen. COSIM analysis not required.
Highest approach volume for the design year on any leg of the intersection
is below Pre-Screen Cutoff ADT for the closest receptor distance.

Please include the following statement in the project report or NEPA document:

A Pre-Screen carbon monoxide analysis was completed for the proposed project. The results from this proposed roadway improvement indicate that a COSIM air quality analysis is not required, as the results for the worst-case receptor are below the 8-hour average National Ambient Air Quality Standard for CO of 9.0 ppm which is necessary to protect the public health and welfare.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 18, 2010

Whiteside County
FAP 309, US 30
IDOT Seq. #11116a&b
ISAS Log # 07036 & 07190

ADVERSE AFFECT TO HISTORIC PROPERTY

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

Dear Ms. Haaker:

Attached is a preliminary Phase I Archaeological Report completed by Illinois State Archaeological Survey personnel concerning archaeological sites likely to be impacted by the proposed project referenced above. Ongoing archaeological survey in the 34,821 acre project area, which extends 30 km from Sterling to Fulton, has thus far resulted in the discovery of 43 archaeological sites that warrant Phase II Testing to evaluation their National Register Eligibility.

Of the 43 identified sites, all are habitation areas: 29 are recommended for further investigation because of their prehistoric components, 11 are recommended for their early to middle nineteenth century Euro-American components, and three are recommended for both prehistoric and historic components. Based on current information, all or most of these 43 sites cannot be avoided and appear eligible for the National Register of Historic Places under Criterion D. Since the sites are important for the scientific data they likely contain, they do not require preservation in place.

In accordance with the established procedure for coordination of Illinois Department of Transportation projects, we request the concurrence of the State Historic Preservation Officer in our determination that the proposed improvements to FAP 309/US 30 will adversely impact archaeological sites subject to protection under Section 106 of the National Historic Preservation Act of 1966, as amended. FHWA and IDOT will draft a Programmatic Agreement to mitigate these adverse impacts, as well as yet to be identified impacts, which we will send to your office for review and eventual ratification. Project notification was sent to those American Indian Tribes with an interest in this part of Illinois. No Tribe has expressed concern about the project.

Very truly yours,

John A. Walthall, PhD
Cultural Resources Unit

CONCUR

By: Anne E. Haaker
Deputy State Historic Preservation Officer
Date: 8.24.10

February 7, 2008

Barbara Stevens
Chief, Environment Section
Bureau of Design and Environment, IDOT
2300 Dirksen Parkway
Springfield, IL 62764

Dear Ms. Stevens,

Information in this letter pertains to the following project:

Project name:	FAP 309 (US 30) from the Mississippi River to I-88 - Additional study area north of US 30
County:	Whiteside
IDOT Sequence #:	11116B
Job No.:	P92-004-03
ISGS Project:	1454B
Design Date:	March 1, 2008

This letter report is submitted in response to your request, received by the ISGS on December 3, 2007, to conduct a *historical review only* of the additional study area added to the north side of US 30 as part of a corridor for a new four-lane expressway for US 30 from the Mississippi River to I-88, Whiteside County (see Attachment 1). This project covers the following area: T21N, R4E, Sections 1-4 and 12; T21N, R5E, Sections 1-17, 23 and 24; T21N, R6E, Sections 5-10 and 15-22; T22N, R4E, Sections 28-29 and 32-35. Most parcels in the project area have addresses in either Morrison or Sterling. **This letter contains the findings of the historical search and will constitute the Final Report for this project, unless the ISGS is otherwise notified. A site reconnaissance visit has been conducted, and regulatory files have been reviewed where applicable, but only limited personal interviews with local residents and city officials were conducted, and no field testing was conducted specifically for this project.** This project includes acquisition of new ROW or easements. It is not known if railroad ROW will be acquired, subsurface utility relocation or excavation will be undertaken, or if building demolition or modifications are anticipated for the project.

This historical review was performed in compliance with the IDOT-ISGS PESA Manual (Erdmann et al., 1996) and not with the All Appropriate Inquiries environmental assessment standard (40 CFR Part 312) that took effect on November 1, 2006.

Man-Made Hazards

The project area was dominantly agricultural. Residential structures were located on farms, in scattered residential areas throughout the project area, and in Morrison. Scattered commercial, municipal, county-owned, or recreational properties were present within the project corridor. The

Illinois Department of Transportation

Memorandum

SEP 2007
Received
IDOT
DIST. TWO

To: George F. Ryan Attn: Ross Monk

From: Barbara H. Stevens

Subject: PESA Review

Date: September 10, 2007 *Barbara H. Stevens*

Refer to: US 30 (FAP 309), Section: (20-1, 17R, 16, 15, 110)PE1
Job No. P-92-004
Mississippi River to I-88
Whiteside County
ISGS # 1454A

Contract # 64852
Sequence # 11116A

Attached is a copy of the Preliminary Environmental Site Assessment conducted by the Illinois State Geological Survey (ISGS) for the subject project as described in your Special Waste Survey Request.

Volatile organic, metals, and pesticides testing was done for this project and the attached (ISGS) report indicates possible detection of contamination at two sites. The report has assessed a **high** risk for this project and recommends that further soil boring and sample analysis needs to be performed to determine the precise nature and extent of the contamination if excavation or additional right-of-way is required at these locations.

It is the opinion of this office, in consultation with the Chief Counsel's Office, that if right-of-way acquisition **includes a parcel with an underground storage tank(s) and Land Acquisition Procedures are followed** and if construction excavation and **utility relocation** do not exceed the maximum testing depth at each site and does not exceed the attached stipulations, then no additional preliminary testing for the project is necessary.

*Please note that an archived **CERCLIS** site is located at Prairie Hill Recycling & Disposal Facility (Site 1454A). Also magnetic anomalies were detected in existing IDOT ROW at the Paul L. Stoecker horse farm (Site 1454A-4) and A+ Self Storage (Site 1454A-12). These anomalies may be due to the presence of underground storage tanks (USTs).*

If the stipulations can be met, then the project will be in compliance with Departmental Hazardous Waste Policy LEN-13. If the stipulations cannot be met, then the statewide consultant should be requested to perform additional investigations. Please notify this office of any actions you may decide to take concerning these sites (i.e., avoidance, further investigation, etc.). The PESA Response form can be found on PMA.

Other findings and recommendations of the report should be carefully considered. If you have any questions regarding this report or the tasking of the statewide consultant, please contact Debbra Mehra at 217/785-6068 or Steven Gobelman at 217/785-4246.

Attachments

cc: Office of Chief Counsel – Rm. 311
District Bureau of Land Acquisition
Central Bureau of Land Acquisition
District Utility Coordinator

s:\gen\wpdocs\mehra\phase1\district2\1454A

STIPULATION ATTACHMENT

Property Name	Property Address	Intersection	Location Quadrant	ISGS Boring	Maximum Excavation Depth meters/feet	Radius of Influence meters/feet
Bridge over UPRR tracks	10500 block of Lincoln Rd., Morrison	US 30 W. of Hillside Rd.		1454A-5	NG	C
Rock River Lumber & Grain	13080 Lincoln Rd., Morrison	NE Side of US 30 NW of IL 78		1454A-7	NG	C
Magnetic Anomalies:						
Paul L. Stoecker horse farm	8693 Lincoln Rd., Fulton	SW Side of US 30 E. of Acker Rd.		1454A-4		
A+ Self Storage	16194 Lincoln Rd., Morrison	US 30 & French Creek	NW	1454A-12		
CERCLIS Site:						
Prairie Hill Recycling & Disposal Facility	18762 Lincoln Rd., Morrison	N. Side of US 30 W. of Round Grove Rd.		1454A-15		

Legend

NG – No excavation or grading
A – 15 (50)
B – 7.6 (25)
C – Entire Site

Note: Construction excavation and utility relocation should not exceed the maximum testing depth for all sites mentioned in the PESA report (not just those listed above in the stipulations attachment chart).

Illinois Department of Transportation

APPENDIX E

AD-1006 FORMS

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 2/3/14
Name Of Project US 30 from IL 136 to IL 40	Federal Agency Involved Federal Highway Administration
Proposed Land Use Road and Right of Way	County And State Whiteside County, Illinois
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 2/3/14

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated N/A	Average Farm Size 372
Major Crop(s) Corn, soybeans, wheat, hay	Farmable Land In Govt. Jurisdiction Acres: 29,633,500 % 97		Amount Of Farmland As Defined in FPPA Acres: 27,695,900 % 91	
Name Of Land Evaluation System Used Illinois	Name Of Local Site Assessment System Statewide		Date Land Evaluation Returned By NRCS 2/11/14	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site 4	Site 5	Site C	Site D
A. Total Acres To Be Converted Directly	599.0	621.0		
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	599.0	621.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	460.0	474.0		
B. Total Acres Statewide And Local Important Farmland	97.0	105.0		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0	0.0		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	50.7	50.7		
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to ~~100~~ 150 Points)*	119	119	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	150*	~~160~~			
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	150*	~~100~~	119	119	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	150*	~~160~~	122	123	0	0
TOTAL POINTS *(Total of above 2 lines)*	300*	~~260~~	241	242	0	0

See the attached Illinois LESA Site Assessment *CORRIDOR* Factors

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection:

When utilizing the Illinois State Site Assessment Corridor factors, 150 points are assigned to the Land Evaluation portion, and 150 points are assigned to the Site Assessment portion of the LESA System for a maximum score of 300 points.

(See Instructions on reverse side) **Form AD-1006 (10-83)**

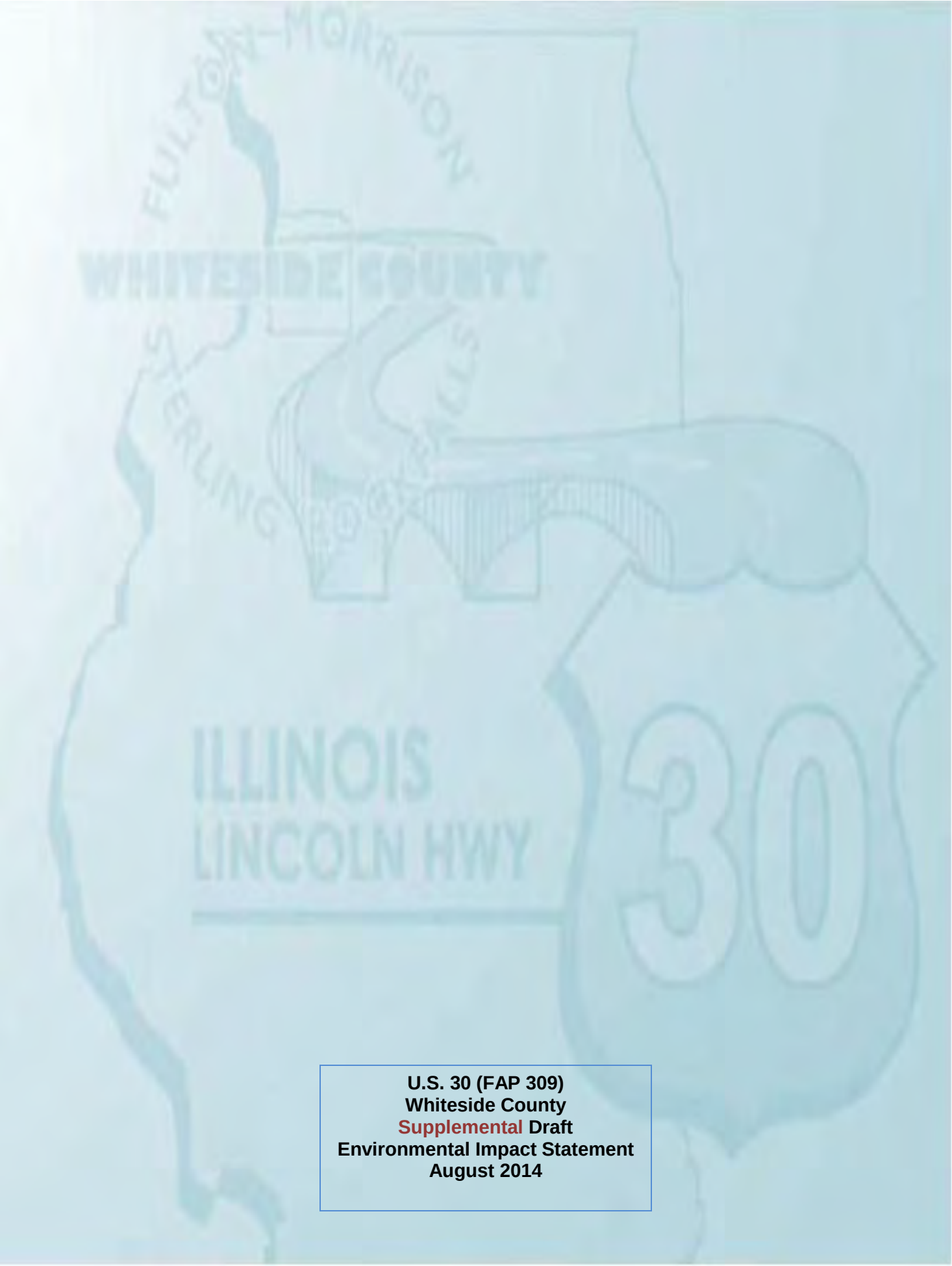
This form was electronically produced by National Production Services Staff

US Route 30
IL 136, East of Fulton to IL 49 in Rock Falls
Whiteside County, Illinois
Federal Highway Administration Funds

PART VI-B **Illinois Site Assessment CORRIDOR Factors**	**Maximum Points**	**Alt 4**	**Alt 5**
1. Amount of agricultural land required	30	26	25
2. Location of the proposed alignment	30	23	23
3. Acres of off-site agricultural land required for borrow materials	15	15	15
4. Acres of Prime and Important farmland required for mitigation	15	0	0
5. Creation of Severed Farm Parcels	10	9	10
6. Creation of Uneconomical Remnants	10	10	10
7. Creation of Landlocked Parcels	10	10	10
8. Creation of Adverse Travel	10	10	10
9. Relocations of rural residences and farm buildings	10	9	10
10. Utilization of minimum design standards	10	10	10
TOTAL SITE ASSESSMENT CORRIDOR POINTS	**150**	122	123
PART VII			
Relative Value of Farmland	150	119	119
Total Site Assessment CORRIDOR Factors	150	122	123
TOTAL ILLINOIS LESA POINTS	**300**	**241**	**242**

21114
TS

The Illinois LESA System applies the **225 point cutoff** when evaluating state and federally funded projects. Site or Corridor alternatives receiving **175 or fewer points** have a **low rating** for protection, and it is not necessary to evaluate additional alternatives. Those alternatives receiving **176 to 225 points** are in the **moderate range** for protection. In most cases, alternatives **exceeding the 225 point level should be retained for agricultural use**, and an alternate site should be utilized for the intended project. Selecting the alternative with the lowest total points will usually protect the best farmland located in the most agriculturally viable areas. LESA also serves to maintain and promote the agricultural industry in Illinois.



U.S. 30 (FAP 309)
Whiteside County
Supplemental Draft
Environmental Impact Statement
August 2014