

Foreword

1.0 Condensed Final EIS

The report that follows is organized as a Condensed Final Environmental Impact Statement (FEIS). Using this approach is consistent with Federal Highway Administration Technical Advisory 6640.8A, material that is unchanged from the Draft Environmental Impact Statement (DEIS) is incorporated by reference. This FEIS, consequently, provides more emphasis on new information or changed conditions since the DEIS was published, avoiding the unnecessary repetition of material from the DEIS. The format of the FEIS remains parallel to that of the DEIS so that major sections correspond in both documents.

Each major section of the FEIS briefly summarizes the information provided in the DEIS with citation provided to the appropriate section, table or figure where the information is found. A copy (CD) of the DEIS is included with the FEIS for this purpose.

Three new sections and four new appendices have been added to the FEIS. Section 3.5 presents the basis for selection of the preferred alternative, while Sections 7.3.1 and 7.3.2 summarize the results of the December 2006, February 2007, and July 2007 public hearings. Four new appendices are included with the FEIS. Appendix M is found in Volume 3 with the remainder, Appendices N through P, included in Volume 4:

- Appendix M: DEIS Comments and Responses;
- Appendix N: Fine Particulate Matter (PM_{2.5}) Project Level Hot-Spot Analysis Report;
- Appendix O: Water Quality Information; and
- Appendix P: Road Closure Comments and Responses.

2.0 DEIS Changes and Additions

The FEIS also includes additional information and analyses. Included among the changes and additions from the DEIS are:

- The results of additional 2007 water resources field studies completed by the Illinois Natural History Survey and expanded impact analyses to water resources;
- A clarification of regional benefits for the identified project needs to be served by the proposed transportation system improvements;
- Mainline and crossroad design refinements and associated right-of-way changes in response to comments on the DEIS (see Exhibits 2 - 4 in Volume 2 of the FEIS);
- Rationale for selecting the Preferred Alternative; and
- The findings of the Fine Particulate Matter (PM_{2.5}) Project Level Hot-Spot Analysis.

Limitation on Claims Notice, 23 USC Section 139(l)

A Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

Summary

1. Purpose and Need for the Action

The purpose of the Prairie Parkway Study is to identify a transportation system improvement(s) that will help enhance north-south mobility between Interstate 80 (I-80) and Interstate 88 (I-88) and that will address project needs. The proposed action will meet four needs. The proposed transportation system improvement will:

1. Improve regional mobility by providing north-south, higher functional class (principal arterials) multi-lane roads to serve the intended longer-distance travel; that serves the projected growth in north-south traffic in the study area; and reduces regional travel times;
2. Address local system deficiencies by serving the study area's projected growth in local traffic and by improving travel times;
3. Improve access from the study area to regional jobs by serving the growth in work trips and by improving mobility from the study area to current and future jobs; and
4. Improve safety by reducing existing and projected growth in motor vehicle crashes.

Chapter 1 describes in greater detail the basis for the purpose of and the need for the action.

2. Affected Environment

Figure S-1 shows the study area. The affected environment encompasses a variety of features, including communities, agricultural resources, cultural resources, and natural resources. These are described briefly below and in detail in Chapter 2.

Social/Economic Characteristics

Communities in the project area included in the 2000 US Census population include: Morris (11,937), Minooka (3,979), Plano (5,483), Yorkville (6,255), and Sugar Grove (3,907). Both population and households in the Prairie Parkway study area are expected to grow approximately 90 percent between 2000 and 2030 to 938,934 and 320,316, respectively (al Chalabi Group, 2006). According to the 2000 US Census, the percent of each racial and ethnic group in the project corridors is consistently lower than the study area as a whole and the State of Illinois. In 2000, the study area and the project corridors generally had similar median family incomes and percentages of families below the poverty level.

The project corridor traverses a primarily non-urban area. The predominant land use is agriculture. The largest area of urbanized development is along I-80 in the southeast corner of the study area and in the northeast quadrant of the study area. Public facilities and services generally consist of schools, worship centers, cemeteries, community centers, medical service centers, and emergency management systems (such as police and fire departments).

The existing study area road system covers 1,428 route-miles. The majority of streets and highways within the study area are classified by the Illinois Department of Transportation (IDOT) as rural roads, which is consistent with the surrounding rural land use. Commuter rail and bus transportation is provided in the eastern portion of the study area. Paratransit services in the study area serve mostly senior and social services. The bicycling infrastructure within the study area consists mainly of state, county, and local on-road bicycle accommodations. No bicycle/multi-use trails are crossed by the project corridors. Public airports serve Grundy County and the greater Aurora area. A private airport is located along US-30 east of Big Rock.

Agricultural Characteristics

Agriculture is the primary land use in the study area. In 2002, the number of farms was 407 in Grundy County, 412 in Kendall County, and 619 in Kane County. In all three counties, farm acreage decreased between 1987 and 1997, but increased slightly in Kendall and Grundy counties between 1997 and 2002. Corn and soybeans are the dominant crops, accounting for more than 93 percent of the total farmed area and 74 percent of the total farm revenues. Livestock operations account for less than five percent of total farm revenue in Grundy County, but make up more substantial portions in Kane County (24 percent of revenue) and Kendall County (19 percent of revenue).

Over 80 percent of soils in these three counties are classified as prime farmland or prime farmland if drained. Highly erodible soils also are found in these counties and comprise five percent of the area of Grundy County, 13 percent of Kendall County, and 18 percent of Kane County.

A portion of the land in each county has been set aside as part of the Conservation Reserve Program (CRP). In 2007, a total of 2,296 acres, 512 acres, and 240 acres of land were associated with the CRP in Grundy, Kendall, and Kane counties, respectively. In addition, Kane County has 4,263 acres of farmland enrolled in the Farmland Protection Program, in accordance with their 2030 strategic plan for the county. Based on a July 2007 Centennial Farm Query, there are 38 Centennial Farms in Kane County, 44 in Kendall County, and 81 in Grundy County.

Cultural Resources

A search of Illinois Historic Preservation Agency (IHPA) State cultural resources files indicates that 60 prehistoric and historic archaeological sites were previously recorded in the study area. Ninety percent of these sites are isolated finds of prehistoric tools and

surface lithic scatters confined to the disturbed plow zone. A pedestrian survey conducted as part of the Prairie Parkway Study resulted in the discovery of 767 additional archaeological sites. A total archaeological survey was completed within the rights-of-way. One standing structure eligible for the National Register of Historic Places (NRHP) is located within the project corridors. A second structure, which was determined eligible for the NRHP was identified in the project corridors, but is no longer standing as of October 2006.

Air Quality

The northeastern Illinois non-attainment area for the 8-hour ozone and PM_{2.5} (particulate matter 2.5 micrometers) National Ambient Air Quality Standards (NAAQS) includes the counties of Cook, DuPage, Kane, Lake, McHenry and Will, the townships of Aux Sable and Goose Lake in Grundy County, and Oswego Township in Kendall County. This area is designated as “moderate” non-attainment for both the 8-hour ozone and PM_{2.5} standards. The following statistics are used to compare monitored air quality data to the standards for determining attainment of the NAAQS. Ozone: fourth highest yearly value averaged over three years; 24-hour PM_{2.5}: 98th annual percentile value averaged over three years; PM_{2.5} annual arithmetic mean: annual value averaged over three years. The Prairie Parkway study area is partially within the non-attainment area for the 8-hour ozone and PM_{2.5} NAAQS. The two nearest ozone monitors to the Prairie Parkway study area are Elgin in Kane County and Braidwood in Will County. For PM_{2.5} the two nearest monitor sites are Aurora in Kane County and Joliet in Will County. Based on the published monitor data for 2003, 2004, and 2005, none of these monitoring sites were in non-attainment of the NAAQS for ozone or particulate matter.

Natural Resources

The overall topography of the study area is level to rolling, with a high point of 889 feet above mean sea level in the north end of the project area to 551 feet above mean sea level in the south end of the project corridor. The main soil type in the study area is Drummer silty clay loam, which is also a hydric soil. There are eight active sand and gravel pits and stone quarry operations near the project corridors.

Approximately 90 percent of the project corridor is cropland, urban land, or barren land that provides little natural habitat. There are 17 other types of vegetative cover that provide habitat for aquatic and wildlife species. The primary upland cover types providing habitat for wildlife are near stream corridors. Two upland areas of special interest identified are located in the project corridors. One is a high-quality example of wet-mesic upland forest at the corridors’ Fox River crossing. It is associated with a complex of high-quality calcareous seeps. The other occurs at the corridor’s southern Big Rock Creek crossing near Plano. This site is highlighted primarily because of the occurrence of the state-listed endangered rock elm (*Ulmus thomasii*).

During field surveys of the project corridors, 120 bird species, 14 mammal species, and eight amphibian and reptile species were observed. Neo-tropical migrants are bird

species of concern because of habitat reduction. Thirty-five species of neo-tropical migrants were observed during the survey, with 27 of these species likely breeding in the project area. Invasive and noxious plant species are found within the uplands and wetlands of the project corridor. During the 2007 field surveys, the state endangered greater redhorse and the state threatened slippershell mussel were observed in Big Rock Creek and Valley Run, respectively.

One federally-listed endangered species, the Indiana bat, has the potential to occur in the project corridor although no individuals were observed. Twelve state threatened and endangered species, including three plants, three birds, one mammal, one reptile, two fish, and two mussels, have the potential to occur based upon historical records, field surveys, and available habitat.

There are no Nature Preserves within the project corridor; however, portions of two Nature Preserves are within one mile of the corridor. Two Illinois Natural Areas Inventory (INAI) sites, Aux Sable Creek and the Fox River, are crossed by the project corridor. A crossing of the main stem of Aux Sable Creek has been avoided; however, Valley Run, which is included in the Aux Sable Creek INAI area, is crossed by IL-47. There are no Natural Heritage Landmarks or Land and Water Reserves within the corridors.

Limited areas of wetland, prairie, and forest remain in Grundy, Kendall, and Kane counties. Remaining prairies and oak savannas in these counties exist and continue to decline.

Groundwater is the primary source of potable water in the project corridor. There are no sole source aquifers (SSAs) in Illinois, and therefore no SSAs in the project corridor. There are two wellhead protection recharge areas for Plano's public wells near the project corridor.

Seep areas occur at groundwater discharge locations in the study area, including a groundwater seep identified on the south side of the Fox River. There are also other seep locations, such as the north bank of the Fox River where groundwater discharges into nearby streams.

Water Resources/Quality

The surface water resources in the project corridor include 11 streams within the Illinois River and the Fox River watershed. There are three Fox River sub-watersheds (Hollenbeck Creek, Rob Roy Creek, and Big Rock Creek), and one Illinois River sub-watersheds (Aux Sable Creek) in the project corridor with tributaries within these sub-watersheds. These sub-watersheds vary in size from 15.3 to 193.8 square miles and include four high quality streams: Big Rock Creek, Rob Roy Creek, Aux Sable Creek, and Welch Creek.

Floodplains

The larger waterways within the project corridor that are identified as floodplains are the Fox River, and Big Rock, Aux Sable, Welch, and West Aux Sable creek. Four of these floodplains are unstudied and do not have water surface elevations associated with them. The Fox River is the only studied floodway/floodplain crossed by the project corridor.

Wetlands

Fifty-two wetlands are within the project corridor, totaling approximately 60.4 acres. Individual wetlands are generally small, from 0.02 acres to 9.29 acres. Most of the wetlands are near or along streams. Wet meadows and wet floodplain forests comprise the majority of wetlands in number and in total area. The highest quality wetland is in a seep area on the south bank of the Fox River. The wetlands include three farmed wetlands in the project corridor identified in Kane County's Advanced Identification of Wetlands (ADID) study.

Special Waste

The US Environmental Protection Agency's (USEPA) Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) was reviewed to ascertain whether the proposed project will involve any listed sites. As a result of this review, it has been determined that the proposed project will require right-of-way and/or easement from one of two CERCLIS listed hazardous waste sites in the project corridor.

A Preliminary Environmental Site Assessment (PESA) conducted for the project corridor identified 135 non-CERCLIS sites near the project corridor. Eleven of these non-CERCLIS sites were identified as having the potential for containing chemical concentrations above the Illinois Environmental Protection Agency objectives.

Three potential landfill sites in Kendall County have been proposed within the vicinity of the project corridor; however, none of the proposed landfills have received support from local authorities and no applications or permits have been approved.

Parks and Recreation/Special Lands

There are no public or private parks, school playgrounds or athletic fields, Illinois Nature Preserves, Forest Preserve Districts, recreation areas, or wildlife and waterfowl refuges present within the project rights-of-way. As such, there are no lands that involved use of Land and Water Conservation Act of 1965 funds or Open Space Lands Acquisition and Development Act funds.

Visual Resources

Two regional landscapes frame the visual resources of the study area, one rural and open (e.g. Grand Prairie) and the other more urban and more enclosed by terrain and vegetation (e.g. Fox River). Four landscape units are found within the two regional landscapes: the Illinois Prairie (open, rural, and nearly flat), Big Rock Prairie (similar to Illinois Prairie but interrupted by occasional streams and associated woods), Upper Fox Valley (streams and varied terrain), and Lower Fox Valley (more developed area). Suburban districts encompassing several existing communities also occur. The Upper Fox Valley and Big Rock landscape units contain some of the highest quality scenic resources in the study area.

3. Alternatives

Detailed Study Alternatives

Two detailed build alternatives are evaluated in the Draft Environmental Impact Statement (DEIS). Concurrence on the decision to evaluate these alternatives in detail occurred at a meeting on September 9, 2005 of a National Environmental Policy Act (NEPA)/Section 404 Merger Team consisting of representatives of the Federal Highway Administration (FHWA), the Illinois Department of Transportation (IDOT), and environmental resource and regulatory agencies. The detailed build alternatives are:

- New Freeway Corridor B5 with IL-47 widening from I-80 to Caton Farm Road, referred to as “Alternative B5 with IL-47 Widening”.
- New Freeway Corridor B2 with IL-47 widening from I-80 to Caton Farm Road, referred to as “Alternative B2 with IL-47 Widening”.

These alternatives are compared with the No-Action Alternative. The No-Action Alternative assumes that neither detailed build alternative is built. It further assumes that the other programmed transportation projects in the study area are implemented as planned, as listed in the *Fiscal Year 2007-2012 Transportation Improvement Program (TIP)* for the Chicago Metropolitan Areas (Chicago Area Transportation Study, October 2006). Planned improvements assumed in the No-Action Alternative also include widening of IL-47 to four lanes from Caton Farm Road north to I-88, adding two ramps (eastbound entrance ramp and westbound exit ramp) at the I-88 and IL-47 interchange, and construction of a four-lane road in the proposed WiKaDuKe Trail corridor. Other projects likely to be implemented identified by IDOT representatives and County engineers also are included in the No-Action Alternative. These other planned improvement projects are projected to be implemented regardless if the project is constructed or not.

The findings of an alternatives study provided the basis for selection of the detailed build alternatives in the DEIS. This study was conducted using an approach that applied the principles of the IDOT’s Context Sensitive Solutions (CSS) policy and the

joint NEPA/Section 404 (of the Clean Water Act) Merger Process. The selection of detailed build alternatives was conducted using the following steps:

1. Identification of initial alternatives;
2. A “functional evaluation” of alternatives that focused on the potential travel benefits of each alternative; and
3. A “locational evaluation” of alternatives that focused on identifying alternatives that will have a lower potential for environmental impact.

The results of this three step process were presented to study area stakeholders, environmental resource agencies, and regulatory agencies for comment. The following decisions were reached based on the alternatives study:

- Congestion Management Alternatives—Congestion management and transit alternatives alone will not meet the purpose and need for this project as stand-alone projects or in combination with each other. They will have little effect on regional mobility and will not address local system deficiencies. They will provide marginal improved access to jobs, but will not reduce the potential for crashes.
- Arterial Road Improvement Alternatives—Arterial improvements also should be a component of the overall transportation system solutions strategy for the study area but will not meet the purpose and need for this project except as a component of a freeway/arterial improvement combination alternative. Freeway alternatives were found to consistently out-perform arterial alternatives on improving regional mobility, addressing local system deficiencies, improving access to jobs, and reducing the potential for crashes. Five stand-alone arterial improvements were evaluated. Three combinations for improving two or three north-south arterials were evaluated.
- Freeway Alternatives—Freeway alternatives will out-perform congestion management, transit, and stand-alone arterial improvements and will meet the project’s purpose and need, except when the freeway terminates at the west side of the study area. The freeway alternatives will result in the greatest reductions in vehicle-miles traveled within the study area. Regional trip use, improved access to jobs, and reduced potential for crashes will be the greatest for the freeway alternatives. Since there is a general lack of through south to north multi-lane roads in the study area between I-80 and I-88, however, the study area’s travel needs will not be best resolved by a single solution. Six stand-alone freeway corridors were evaluated.
- Freeway/Arterial Combination Alternatives—Travel benefits will be greatest with a freeway/arterial combination alternative. Three representative freeway/arterial combination alternatives in the central and eastern portions of the study area were evaluated. It was found that the travel benefits of these alternatives will be similar. Thus, potential for minimizing environmental impacts was the driving factor in

deciding which central and/or eastern corridors to evaluate in detail. The eastern freeway corridor alternatives were found to have the greatest potential for both adverse community and natural resource impact and were not selected as a part of the detailed build alternatives.

In terms of the freeway component of freeway/arterial improvement combination alternatives, the Alternative B2 and Alternative B5 corridors were the corridors having the preferred blend of better ratings for travel benefits, a location close to population centers, and lower potential for environmental impacts.

In evaluating the arterial component of the combination alternatives, IL-47 and the WiKaDuKe Trail corridor were identified as two corridors that will provide the additional travel benefits. Both of these corridors were described previously in Section 3.1 of the DEIS and identified by the IDOT and the Chicago Area Transportation Study (CATS) as Strategic Regional Arterials. Funds for Phase 1 engineering for IL-47 from Cross Street in Sugar Grove to north of US-34 in Yorkville in the IDOT's *FY2008-2013 Proposed Highway Improvement Program* (April 2007), permit requests by Yorkville for widening IL-47 both north and south of Yorkville, the completion of the *WiKaDuKe Trail Land Use and Access Management Study* (Teska Associates, November 2004), and construction of several sections of the WiKaDuKe Trail, all indicate a commitment to widen these roads in the future. Current plans include improving the full WiKaDuKe Trail corridor, but only part of the IL-47 corridor. Thus, the detailed build alternatives include the widening to four lanes of IL-47 from I-80 to Caton Farm Road to provide for widening of IL-47 the full distance between I-80 and I-88 by 2030.

A congestion management component also is included in the detailed build alternatives. A series of engineering evaluations and iterative designs after selection of the detailed build alternatives resulted in modifications to the alignments within the corridors from those assessed during the selection of the alternatives. These refined alignments were used as the basis of assessing potential impacts in Chapter 4.

Preferred Alternative

IDOT and FHWA identified Alternative B5 with IL-47 Widening as the Preferred Alternative based on the following information:

- The findings of the project's purpose and need statement (Chapter 1);
- The descriptions of the various alternatives (Chapter 3);
- The environmental consequences of the detailed build alternatives as documented in the DEIS, and the Preferred Alternative in the FEIS (Chapter 4); and
- Consideration of all public and agency comments.

Concurrence on selection of the Preferred Alternative occurred at a NEPA/Section 404 Merger meeting on May 29, 2007 (see pages 7-4 and 7-5). Alternative B5 with IL-47 Widening was selected as the Preferred Alternative for the following reasons:

- Its ability to meet the project's purpose and need in terms of:
 - Improving future regional mobility by reducing vehicle-hours of travel, impeded miles of travel, and travel delay, as well as reducing the cost of travel delay and achieving a desirable level of service on its components.
 - Addressing local system deficiencies by reducing the use of the arterial road system for regional trips, reducing hours of travel on the local road system, and reducing travel time in minutes between I-80 and I-88 for those using the project.
 - Improving access to regional jobs by bringing forecast regional jobs closer (in terms of travel time) to area residents and thus compensate for the study area's low jobs to population ratio in contrast with that of the Chicago metropolitan area.
 - The forecast to have fewer crashes with associated crash cost savings (Alternative B2 is forecast to have fewer crashes overall).
- Local and other government agency support.

The impacts of Alternative B2 and the Preferred Alternative are similar both in terms of the types of resources affected and the extent of impact. Thus, in general, neither is environmentally preferable over the other. The Illinois Department of Agriculture (IDOA), however, has indicated that they would consider the Preferred Alternative to be consistent with the IDOT's Agricultural Land Preservation Policy and in compliance with the state's Farmland Preservation Act. IDOA did not reach this conclusion for Alternative B2. Appropriate mitigation of the impacts is important to the implementation of the Preferred Alternative.

Chapter 3 describes the detailed build alternatives and provides more detail on the evaluation that led to the selection of the Preferred Alternative.

4. Environmental Consequences

The key environmental impacts of the Preferred Alternative, B5 with IL 47 Widening, are summarized in Table S-1 and described in the paragraphs that follow. The impacts presented in Table S-1 will not occur with the No-Action Alternative.

Table S-1. Summary of Key Environmental Impacts

Design Characteristics and Environmental Resources Affected	Preferred Alternative
Design Characteristics	
• Length of freeway (miles)	37.1
• Length of IL-47 widening (miles)	11.50
• New Right-of-Way required for construction (acres)	2,634
• Number of Interchanges	7
• New Impervious Area (acres)	593.4
• Estimated Cost (2007)	\$907.9 million
Social/Economic Impacts	
• Total Residences displaced	21
• Businesses (non-agricultural) displaced	0
• Worship Centers displaced	0
Agricultural Impacts	
• Farm Residences displaced	9
• Farm Business displaced	1
• Cropland (acres)	2,282
• Orchard/Vineyard (acres)	1.1
• Pasture and Hayland (acres)	26.8
• Farm Severances (by tract)	70
• Total Number of Affected Farms	188
• Farm Owners affected	198
• Total Adverse Travel by Farm Operators Moving Between One Part of their Operation and Another, Based on a Single Round Trip (miles) per Year for each Operator	258
• Farm Operators affected	192
• Prime Farmland (acres)**	2505
• Statewide and Local Important Farmland (acres)**	71
• Landlocked Parcels	16
Cultural Resource Impacts	
• National Register-Eligible Historic Resources with Adverse Effects	0
• National Register-Eligible Archaeological Resources with Adverse Effects	0

Table S-1 (concluded). Summary of Key Environmental Impacts

Design Characteristics and Environmental Resources Affected	Preferred Alternative
Noise Impacts	
<ul style="list-style-type: none"> Number of Residences, Classrooms, or Churches with Noise Impacts (Approaching, Meeting or Exceeding 67 dBA or greater than 14 dBA increase over existing) (Projected 2030) 	91
Natural Resource Impacts	
<ul style="list-style-type: none"> Forest Impacts (acres) 	51.0
<ul style="list-style-type: none"> Protected Species Adversely Affected 	0
Special and Protected Lands	
<ul style="list-style-type: none"> Nature Preserves Affected 	0
<ul style="list-style-type: none"> Illinois Natural Areas Affected 	2
<ul style="list-style-type: none"> Parks and Forest Preserves Affected 	0
Water Resources/Quality Impacts	
<ul style="list-style-type: none"> Stream Crossings/ Water Crossings* 	62/18
<ul style="list-style-type: none"> Private Water Wells within 200 feet/displaced 	35/20
Floodplain Impacts	
<ul style="list-style-type: none"> Affected 100-Year Floodplains (Zone A) (acres) 	80.5
<ul style="list-style-type: none"> Number of Floodplains Crossed 	19
Wetland Impacts	
<ul style="list-style-type: none"> Wetlands Displaced (acres) 	2.31
<ul style="list-style-type: none"> Number of Wetlands Filled 	14
Special Waste Site Involvement	
<ul style="list-style-type: none"> Number of Special Waste Sites Affected (Comprehensive Environmental Response Compensation and Liability Information System [CERCLIS]/Non-CERCLIS) 	1/7
Visual Impacts	Moderate
Indirect and Cumulative Impacts***	
<ul style="list-style-type: none"> Forecast Population Increase (number above No-Action) 	19,700
<ul style="list-style-type: none"> Forecast Employment Increase (above No-Action) 	28,800
<ul style="list-style-type: none"> Forecast Change in Land Area Needed for Development (to support population and employment increases above No-Action)(acres) 	5,400

* Stream crossings include all direct crossings of streams and their tributaries. Water crossings reflect drainage areas where the crossing does not affect a defined stream bed.

** Soils in the Prime Farmland and Statewide and Local Important categories were reclassified accounting for the difference in acreage shown in these two classes.

*** The population and employment numbers are based on forecasts from al Chalabi Group (2006) and are the net change of the Preferred Alternative above the No-Action Alternative (see page xxi for a more detailed discussion).

Social/Economic Impacts

Twenty-one residential relocations will result from the construction of the Preferred Alternative. One vacant commercial building along IL-47 will be displaced by the proposed action. Adequate replacement housing is available for residences displaced by the project. All relocation activities will be accomplished in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended.

The Preferred Alternative will pass adjacent to the Lakewood Springs subdivision, south of US-34 with associated noise and visual impacts. It will not, however, divide neighborhoods or subdivisions or separate them from their public services, and no community cohesion impacts are anticipated. The Preferred Alternative will not disproportionately affect concentrations of minorities, low-income households, or the elderly.

Noise impacts from the Preferred Alternative will affect nine classrooms at Saratoga Elementary School. No worship centers will be displaced. The IL-47 Widening component of the Preferred Alternative will not affect the Morris Municipal Airport.

No bypasses are planned with the proposed project. Because the Preferred Alternative will not bypass any existing communities, the potential direct effects on existing businesses will be minor. There will be both potential benefits and costs to existing local businesses associated with the improved accessibility offered by the Preferred Alternative. It will generate approximately 21,600 to 28,600 construction jobs. These construction jobs will be temporary in nature and may be available for several years depending upon construction funding. The purchase of right-of-way for the Preferred Alternative will result in a tax loss for area taxing districts of approximately 0.3 percent of total taxes collected.

The compatibility with land use plans of the Preferred Alternative will vary by jurisdiction. A freeway alignment corresponding to the Protected Corridor and in the same general location as the freeway portion of the Preferred Alternative, is included in a majority of area land use plans, except the land use plans for Grundy and Kane counties. The Preferred Alternative is expected to induce some residential and commercial development in the study area that is not consistent with the land use patterns envisioned in area land use plans.

Agriculture Impacts

The Preferred Alternative will affect 2,593 acres of agricultural soils. Approximately 43 percent of the agricultural land traversed by the Preferred Alternative will be within planned development boundaries for local municipalities. South of Caton Farm Road, over 50 percent of the agricultural lands of the Preferred Alternative will be within planned development boundaries. The soils affected will be typically productive soils (Class 1 through Class 3) associated with prime farmland. No existing Kane County Agricultural Conservation Easement and Farmland Protection Program land will be

used. Land will be used from five Centennial Farms, one of which is also a Sesquicentennial Farm.

Cultural Resource Impacts

No above ground historic resources listed on or eligible for inclusion in the National Register of Historic Places will be adversely affected by the Preferred Alternative based on a determination of the State Historic Preservation Officer. A total survey was completed within the rights-of-way of the Preferred Alternative except where landowners have withheld permission to survey.

Air Quality Impacts

The Preferred Alternative will not have the potential for contributing to a violation of the NAAQS for carbon monoxide (CO). A PM_{2.5} hot-spot analysis was conducted. It was determined as a result of the analysis that the Preferred Alternative will not cause or contribute to a new violation of the PM_{2.5} NAAQS, or increase the frequency or severity of a violation.

Based on analysis conducted by Chicago Metropolitan Agency for Planning (CMAP) staff, the CATS Policy Committee determined that the 2030 Regional Transportation Plan (RTP) and the TIP for federal fiscal years 2007 to 2012 conforms with the 8-hour ozone standard and the annual fine particulate matter (PM_{2.5}) standard. The Preferred Alternative design concept and scope are consistent with the conformed 2030 RTP and identified in the TIP as project number 09-02-9033.

Noise Impacts

Noise impacts will occur at 91 receptors (i.e., home, church, or classroom) for the Preferred Alternative. There is a subdivision along the east side of the Preferred Alternative, south of US-34, where impacts will result at 39 of the 66 residences. The remainder of the affected receptors will include individual homes, farms, and a school along the Preferred Alternative. Noise abatement will likely be both feasible and reasonable in two areas, including the subdivision south of US-34 and Saratoga Elementary School along the west side of IL-47. A final decision on the installation of abatement measures will be made upon completion of the project design and the public involvement process.

Natural Resource Impacts

The Preferred Alternative will not affect bedrock conditions but construction activities such as grading, filling, compaction, and excavation will alter surface geology. Mining activities will not be directly affected but at one location the Preferred Alternative will limit directional expansion of mining activities on a parcel owned by the mine operator. During construction, the proposed project will create a short-term increase in demand

for construction materials in the project corridors, which could benefit local mining operations.

Existing vegetative cover will be removed. The Preferred Alternative will affect 2913 acres of land. Land uses that will be affected consist primarily of cropland and urban land. The Preferred Alternative will affect eight forest stands and other forest habitat totaling 51.0 acres. In addition to habitat loss, some wildlife species may be affected by forest fragmentation and by obstruction or elimination of wildlife movement corridors.

Implementation of existing maintenance provisions should minimize the establishment of invasive species in the project right-of-way and limit impacts to adjacent natural habitats.

The project will have no affect on federally-listed species. Five state-listed species were analyzed and potential impacts were determined to be not adverse. Two natural areas, the Fox River and the Valley Run tributary of Aux Sable Creek, will be adversely affected. Mitigation of forest impacts will be provided at two locations in the vicinity of the Preferred Alternative in collaboration with the Kendall and Kane County Forest Preserve Districts.

Water Resources/Quality Impacts

Surface water impacts will be associated with both construction and operation of the proposed action. The Preferred Alternative will cross 11 streams and their tributaries. Alternative B5 with IL-47 Widening will have 62 stream crossings and 18 water crossings. The water crossings provide pathways for drainage in undefined areas. IL-47 will account for 10 of the stream crossings. The primary crossing structure will be culverts; however, the Preferred Alternative will have 11 bridges. Additionally, erosion control measures will be implemented during construction to limit the effects to the streams with highly erodible soils in the project corridors.

Included in the design of the Preferred Alternative will be measures to mitigate the effects of storm water runoff on water quality. Drainage from the Prairie Parkway right-of-way will be controlled and treated via a series of vegetated-swales and either dry detention basins, infiltration basins, or wet detention basins with wetland plantings. For watersheds, such as Hollenbeck Creek, Fox River, Aux Sable Creek, and Big Rock Creek, wet detention basins with wetland plantings will be used to achieve additional pollutant removal. These planned storm water control measures will maintain the general use water quality standards of the streams crossed by the proposed project.

Floodplain Impacts

The Preferred Alternative will require 19 transverse encroachments and four longitudinal encroachments. It also will add approximately 593.4 acres of impervious area. Compensation for fill in the floodplain/ floodway will be based on IDOT and Illinois Department of Natural Resources, Office of Water Resources criteria. Detention

storage will be used both to mitigate this impact and to compensate for the additional impervious area created with the proposed project.

Wetland Impacts

The assessment of potential wetland impacts is based upon direct impacts related to the roadway construction, which includes areas within the proposed rights-of-way of mainline construction and of cross street improvements. Construction will include placement of fill for roadways, ramps, and grading for drainage and storm water conveyance and storage. Wetland impacts related to roadway construction will include vegetation removal, placement of clean fill, and changes to the wetland hydrologic regime. Besides the loss of wetland acreage, some wetland functions and values may be affected by the proposed project.

The Preferred Alternative will directly affect 14 of the 52 wetland sites. Eleven of the affected wetland sites are within the Fox River watershed (Hydrologic Unit 07120007) and the remaining three wetlands are within the Illinois River watershed (Hydrologic Unit 07120005). The Preferred Alternative will impact 2.31 acres, of which 0.44 acres occur within the Illinois River watershed.

Avoidance of wetlands, in particular the wetlands associated with the seeps along the Fox River, was a consideration in the development of the Preferred Alternative. Mitigation for wetland impacts will follow the IDOT's *Wetland Action Plan*. The compensation plan for this proposed project will be to purchase or utilize credits from a wetland bank. Wetland impacts will be mitigated at the IDOT Morris Wetland Bank or other local wetland banks dependent upon the availability of wetland mitigation credits. The Chicago District, Corps of Engineers has approved the use of the Morris Wetland Bank for mitigation for this project, outside the Chicago District boundaries. The Morris Wetland Bank is located near Morris, Illinois in the Rock Island District, Corps of Engineers. Acquisition of conservation easements is also proposed at Wetland Site 50 to mitigate for wetland and Illinois Natural Area Inventory (INIA) impacts associated with the Fox River.

Special Waste Site Involvement

The Preferred Alternative will require right-of-way and/or easement from one site (Monarch Foundry, Site 1582B-3) included in the CERCLIS listing as of October 9, 2007.

Seven of the 11 non-CERCLIS sites potentially affected by regulated substances cannot be avoided by the Preferred Alternative. Three proposed landfill sites have been identified that if built, would have the potential to be impacted by the Preferred Alternative.

Visual Impacts

Impacts to visual and aesthetic resources from the proposed project will result from the Preferred Alternative. Impacts will result from changes to the terrain, and natural and/or built features that will have a long-term effect on the visual environment.

Indirect and Cumulative Impacts

The indirect impacts of the Prairie Parkway Study will be associated with induced land development resulting from improved accessibility and mobility provided by the proposed action. Cumulative impacts will result from the project, induced development, other reasonably foreseeable development, and other transportation improvements. Examples of the latter include the widening of IL-47 from Caton Farm Road to I-88 and the WiKaDuKe Trail that are expected to occur with or without the project.

The study area population and employment is projected to grow as a result of the Preferred Alternative by 2030 (al Chalabi Group, 2006). This expansion is not new regional growth, but rather a shift of expected regional growth from other parts of the region to the study area. While the change in the location of growth is notable in the study area, as a whole it is a small fraction of the 14-county 2030 regional population (0.3 percent of 11.6 million) and employment (0.6 percent of 7.6 million).

Much of that development will occur within five miles of the proposed interchanges which is generally the induced impact area. A comparison of the Preferred Alternative to the No-Action Alternative shows that the population in the induced impact area is forecast to increase from 203,000 for the No-Action to 222,700 for the Preferred Alternative, an increase of 19,700. Employment is forecast to increase from 98,000 for the No-Action Alternative to 126,800 for the Preferred Alternative, an increase of 28,800. The population and employment growth in the induced impact area with the No-Action Alternative is forecast to require an additional 44,500 acres and the Preferred Alternative is forecasted to require 49,900 acres (increase of 5,400 acres above the No-Action Alternative) of land for development and local circulation.

The most notable indirect effect of the detailed build alternatives will be to shift development between 2007 and 2030 near the proposed interchanges with US and State highways. Development likely will be low density since planned densities are low, but there is a potential for development to occur in a more scattered and less compact pattern. This phenomenon will increase the potential for development in areas not planned for development in area land use plans.

Cumulative impacts will be differentiated in the patterns of development between the No-Action and Preferred Alternative. With the No-Action Alternative, population growth will remain concentrated along existing transportation corridors. Improved accessibility associated with Preferred Alternative will spread future residential development over a wide area, although still focused in northern Kendall County and southern Kane County, as well as along IL-47. The Preferred Alternative will tend to

cause development to occur south of Yorkville at freeway interchanges and along IL-47. Additionally, where development occurs adjacent to streams additional forest lands will be used, further fragmenting the habitat. Forested areas most vulnerable to new development will include Welch, Rob Roy, Youngs and Little Rock Creeks, and the Fox River. The cumulative impact upon water resources is related to the increase in population, resulting in changes in land uses and impervious areas, which will affect water quality.

Regulations in several local communities in the study area, including the villages of Minooka and Montgomery and the cities of Yorkville and Plano, include ordinances that focus on protecting water quality or regulated natural resources. Most of the local and county land use plans have anticipated and planned for the increased mobility and access provided by the proposed action. These plans are mostly current, and the accompanying land use regulatory controls, such as zoning and subdivision regulations, are able to locate new growth consistent with local public planning policy. Other mitigation opportunities could be undertaken through additional and coordinated local land use controls.

5. Public Involvement

The Prairie Parkway Study has used Context Sensitive Solutions (CSS) principles since its inception. This effort aided IDOT in establishing its CSS policy, which continues to be a part of the Prairie Parkway Study. CSS is an interdisciplinary approach that seeks effective, multimodal transportation solutions by working with stakeholders to develop, build and maintain cost-effective transportation facilities that fit into and reflect a project's surroundings. Through early, frequent, and meaningful communication with stakeholders, and a flexible and creative approach to design, the resulting project should improve safety and mobility for the traveling public, while seeking to preserve and enhance the scenic, economic, historic, and natural qualities of the region through which it passes.

The heart of CSS is extensive and continuous multi-level partnerships with stakeholders in determining what type of facility will solve the identified transportation problems and meet the area's need. The Prairie Parkway Study has proactively established working relationships with a wide range of stakeholders since it was initiated. This has included multiple stakeholder meetings with municipalities, townships, counties, legislators, agencies, civic groups, conservation groups, environmental groups, farm bureaus, chambers of commerce, economic development groups, and other interested groups. A Technical Advisory Group also was established with a subset of the above stakeholders which has been superseded by a Corridor Planning Group and several task forces. Twelve sets of public information meetings and one set of public workshops also were conducted using different meeting formats. A project website, newsletters, fact sheets, and the media were used to disseminate information concerning the project. Focus groups and a telephone survey were used to gain both qualitative and quantitative information about study issues and possible solutions. Following the May

2005 public meetings, nine letters or resolutions were received in favor of Alternative B5 (Protected Corridor) with IL-47 Widening and none received in favor of Alternative B2 with IL-47 Widening.

Following the May 2005 public meeting for alternatives studies, the governmental bodies in the project area submitted letters or resolutions regarding the project. There were four resolutions and four letters in support of Alternative B5 (Protected Corridor) with IL-47 Widening and one resolution in support of either detailed build alternative.

An initial draft of the preliminary design for the detailed build alternatives was presented to local elected officials and the public in April 2006. Comments received indicated general approval or opposition to a specific alignment or property impact. The alignments were further refined based on comments made at these meetings. The design of detailed build alternatives was presented, subsequently, at the DEIS public hearings in December 2006 and February 2007. Thereafter, letters of support were received for the Preferred Alternative (B5 with IL-47 Widening) as submitted by local officials from the Village of Channahon, the Grundy County Board, and the United City of Yorkville. One letter of support for Alternative B2 was received from the Village of Lisbon, and one resolution opposing the Prairie Parkway Project was received from the Village of Big Rock.

6. Other Proposed Actions

Other proposed actions in the study area are programmed transportation projects listed in the *Fiscal Year 2007-2012 TIP* for the Chicago Metropolitan Area (Chicago Area Transportation Study, October 2006). Other actions include widening of IL-47 to four lanes from Caton Farm Road north to the Kane County line, construction of several sections of a four lane road in the proposed WiKaDuKe Trail corridor on the east side of the study area, and other projects with a high probability of implementation identified by county engineers. These projects are shown in DEIS Chapter 3 in Figure 3-1 and listed in Table 3-1.

7. Major Unresolved Issues with Other Agencies

There are no major unresolved issues with other agencies.

8. Other Federal Actions Required for the Proposed Action

A Corps of Engineers Section 404 permit and accompanying Section 401 certification will be required for water resource impacts with the Preferred Alternative. A National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges from construction sites will also be required.