



“Public involvement has been crucial throughout the entire process.”

This publication provides a format to keep you informed about the new study developments.

In This Issue:

A Message from IDOT1
 Where Are We? Putting the pieces together.....1
 Travel Benefit Evaluations.....4
 Environmental Impact Evaluation.....6
 What are the Next Steps?.....8

***Where are we?
Putting the pieces together...***

In April 2004, Part A of the Prairie Parkway Preliminary Engineering Study concluded with the assessment that the study area (Kendall and portions of Kane, DeKalb, LaSalle, Grundy and Will counties) was in need of north-south transportation improvements to meet the increasing travel needs of the study area population, which is expected to double by 2030. The primary needs include improving regional mobility, addressing deficiencies in the local roads, improving accessibility to jobs, and increasing safety. With this conclusion, IDOT moved on to Part B of the study.

continued on page 2

A Message from Illinois Department of Transportation

Last December, we presented a wide range of concepts suggested by elected officials, civic organizations, interest groups, and the general public to improve north-south travel in the study area. These concepts included the expansion of existing streets, construction of new freeways, implementation of traffic management strategies, as well as public transit improvements.

We have recently completed a comprehensive analysis: measuring the traffic benefits and the environmental impacts associated with each of the suggested transportation improvements. We now need your feedback and opinions on the evaluation results. Your comments will help us make the best decisions on what transportation improvements to advance for further studies.

The evaluation findings can be reviewed in this issue of *Directions* and on our website at www.prairie-parkway.com. As a partner in this study, your input has been a vital component of the process. I encourage and value your continued involvement.

Sincerely,

Gregory L. Mounts, P.E.
 Deputy Director of Highways,
 Region Two Engineer



Identify Alternatives

The primary needs include improving the following areas: regional mobility, deficiencies in the local roads, accessibility to jobs, and safety.

continued on page 1

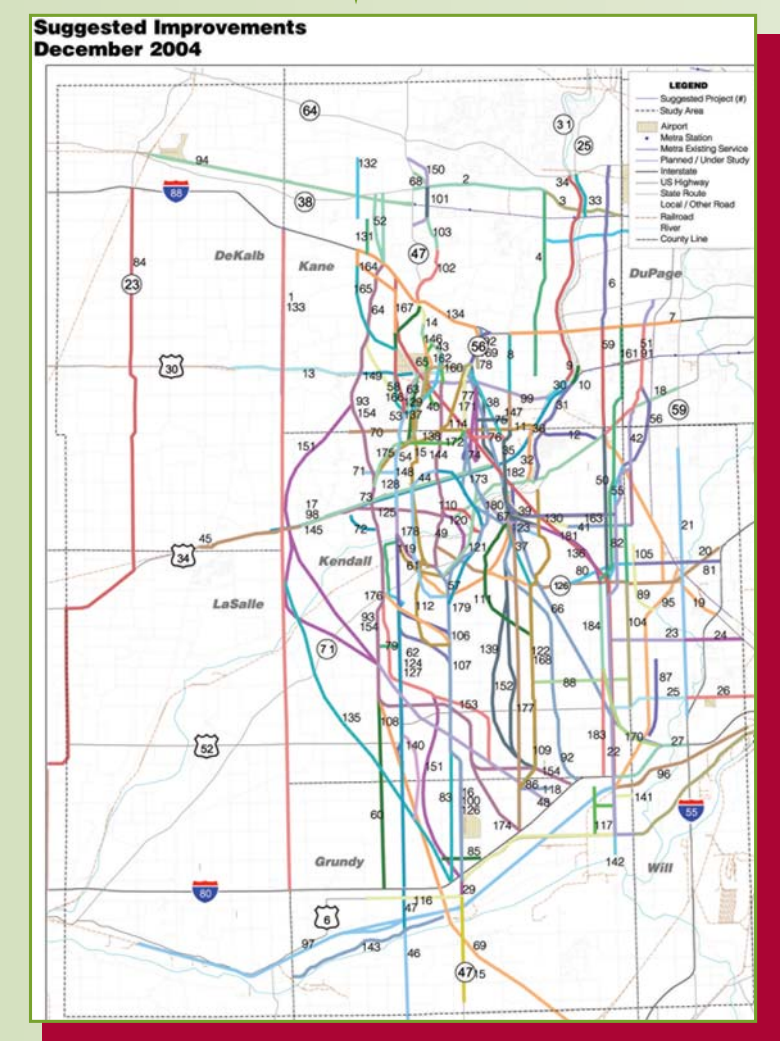
Part B began with two public workshops held in June of 2004 and continued with over 35 stakeholder meetings to identify potential transportation improvements for the study area. This was a great example of IDOT applying their principles of Context Sensitive Solutions (CSS) as the public took colored markers in hand and drew up suggestions for improvements. From these meetings and the needs identified in Part A, more than 150 improvement ideas were suggested. These ideas ranged from local improvements, to widening study area arterial roads, to new multi-county freeways, and to transit suggestions.

The study team combined this wide variety of ideas into four types of regional improvement concepts to meet the purpose of the study: transit, traffic management techniques, arterial road widening and extensions, and new freeways. These concepts were developed to address the regional travel needs of the study area and focused on the project purpose of improving north-south travel. The resulting concepts incorporated most of the public suggestions, and provided an array of concepts covering the study area.

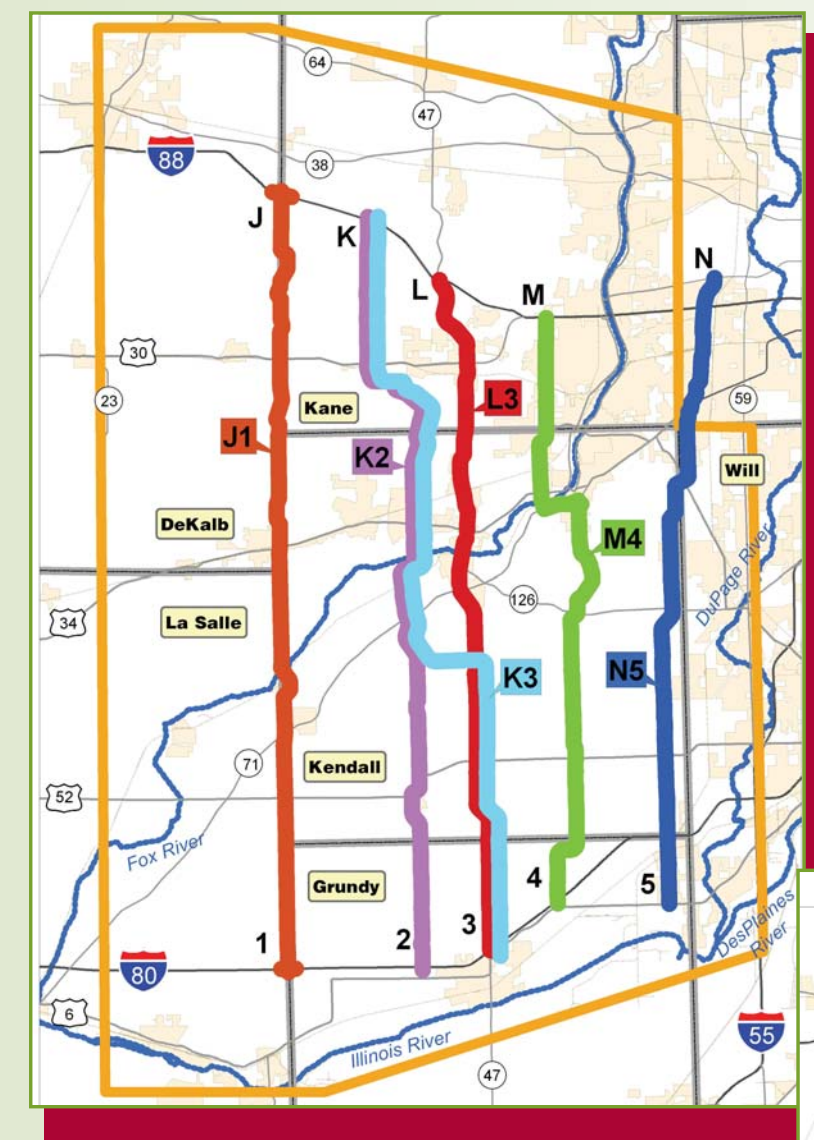
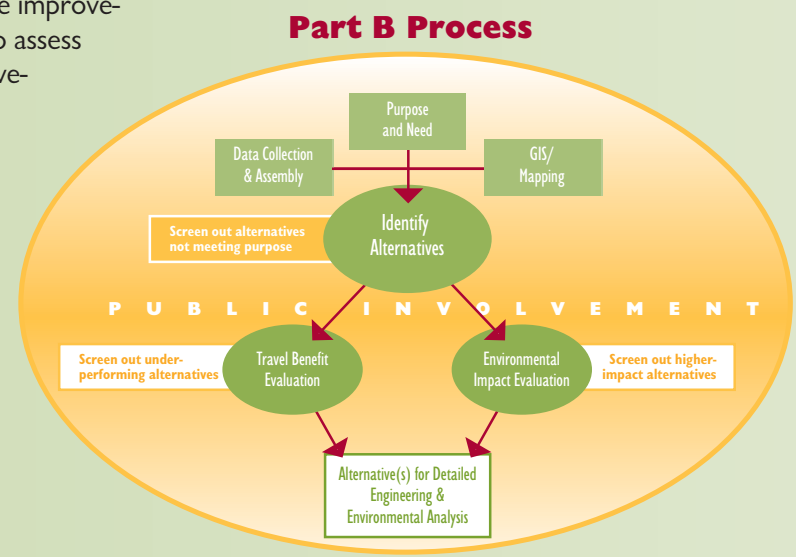
For convenience, each alternative is referred to by a symbol that simply reflects a tie-in point at I-88 (Letters A-N) and I-80 (Numbers 1 to 5). For example, an arterial road widening that extends from location "J" at I-88 to location "1" at I-80 is referred to as alternative "J1". The exhibit shows a general location of the corridors; however the locations can move several miles without significantly affecting the results of this evaluation. The purpose at this point in the study is to identify the most effective corridors. Later studies will refine the alignments to make more specific adjustments using updated and refined information.

After the wide range of possible alternatives was defined, the Study team began the process of evaluating the concepts. This included a Travel Benefit Evaluation of the possible improvements, and an Environmental Impact Evaluation to assess the potential impacts of the transportation improvements on the natural and man-made environment.

The findings of these evaluation steps are discussed in detail in this issue of *Directions*. Please keep in mind that **no decisions have been made as to which improvements will proceed for additional study and review**. IDOT is simply asking for public review and comments on these findings at this point in the study.

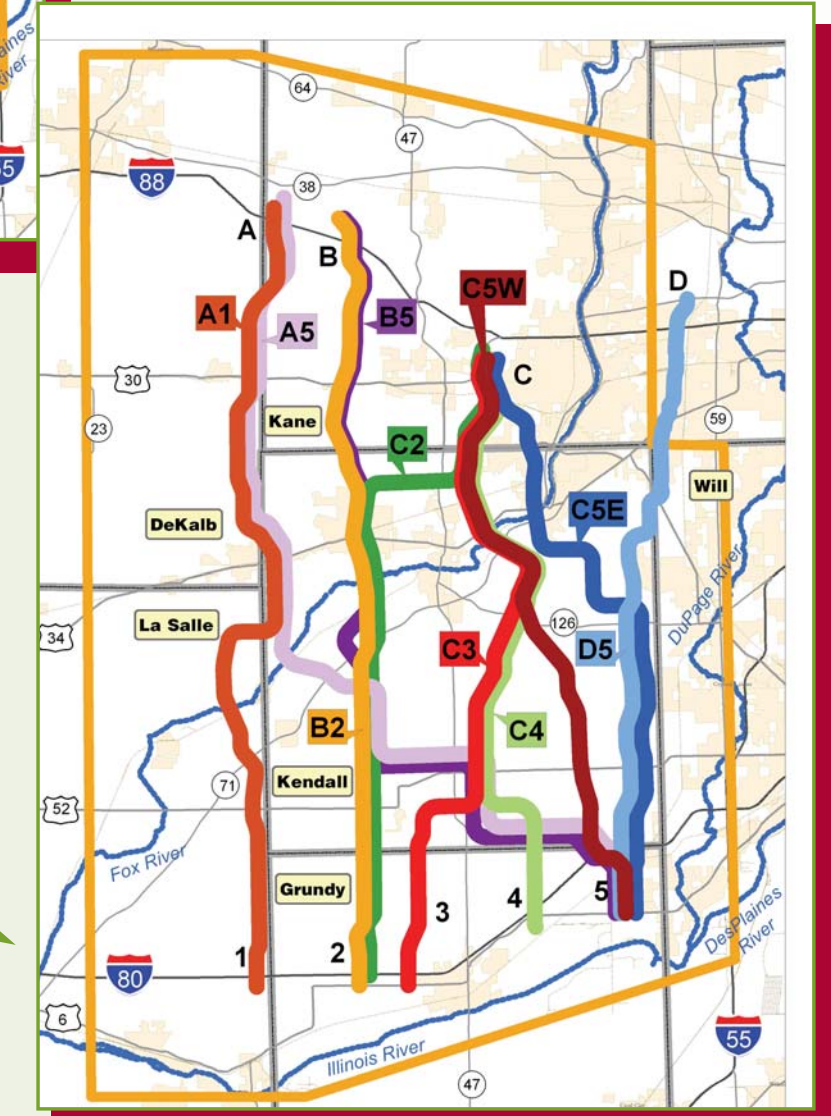


Community members 150 suggested improvements to the region.



Arterial Road Alternatives

Nearly all ideas merge together into regional concepts.



Freeway Alternatives

Travel Benefit Evaluation

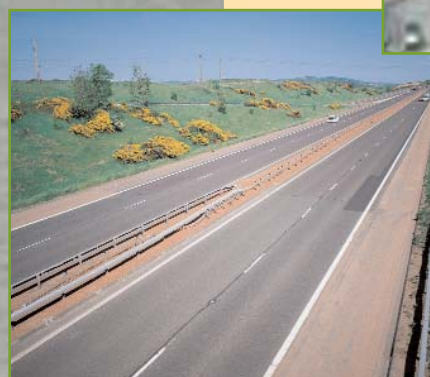
The travel benefit evaluation was performed using a computerized regional traffic model that forecasts future traffic conditions for each of the alternatives. This is the same regional traffic model used in Part A of the study to evaluate the transportation system performance. Updated population and employment forecasts for the year 2030 were used as inputs to the regional traffic model. These 2030 population and employment forecasts predict that population and employment will double in the study area between 2000 and 2030.

The purpose of the travel benefit evaluation was to assess how well each of the alternatives would address the four main factors of the purpose and need for improvements:

- improve regional mobility
- address local system deficiencies
- improve access from the study area to regional jobs
- improve safety

The traffic performance resulting from the addition of an individual alternative was compared to the traffic performance which would be expected using only the baseline network of roadways found in the year 2030. This 2030 baseline roadway network is identical to the 2030 baseline network used in Part A of the study and includes the roads that exist today as well as other transportation projects that were already firmly planned by the State and local governments. For example, the 2030 baseline network included the widening of IL 47 to four through lanes in Yorkville, and the construction of a new Eldamain bridge over the Fox River to the west of Yorkville.

What is the Baseline? This is the existing roads and other projects having a commitment to be built by 2030.



	2030 Baseline	TRAFFIC MANAGEMENT + TRANSIT ALTERNATIVES		ARTERIAL ALTERNATIVES					FREEWAY ALTERNATIVES				
		Tic Mgt	+ Transit	West County Line	Dauberman/ Eldamain/ Saratoga	IL 47	Orchard/ Grove/ Brisbin	Wikaduke	West County Line	Recorded Corridor	Recorded South	Powerline - IL56/ W Yorkville Bypass	East Corridor
REGIONAL MOBILITY													
Additional Capacity (Lane Miles)	0	0	0	93	98	75	83	47	-	-	-	-	-
Arterials	0	0	0	-	-	-	-	-	145	142	128	128	93
Freeways	0	0	0	-	-	-	-	-	-	-	-	-	-
Regional Travel (Change)													
Miles of Travel	3	2	2	3	3	1	1	1	10	7	8	8	7
Hours of Travel	3	3	2	3	3	2	2	1	7	6	5	4	7
Type of Travel													
Local													
Regional													
ADDRESS LOCAL SYSTEM DEFICIENCIES													
Study Area Travel (Non-US/State Roads)													
Miles of Travel	1	1	1	7	7	3	4	5	7	4	6	5	4
Hours of Travel	1	2	2	3	5	4	4	1	7	3	3	1	4
ACCESS TO REGIONAL JOBS													
Transportation Improvements Only													
<=30 minutes	1	2	2	4	3	8	2	3	5	7	5	6	7
<=40 minutes	1	1	1	2	2	3	2	3	4	6	5	5	7
<=60 minutes	1	1	1	2	3	2	2	3	4	6	5	6	6
<=90 minutes	1	2	1	2	3	2	3	4	4	6	5	6	6
SAFETY													
Crashes													
Regional	3	2	2	3	3	1	1	1	10	7	9	8	7

Table 1

best performing concepts

Freeway/arterial combinations produced the largest improvement in travel conditions.

The results of the evaluation of each individual stand-alone alternative, as compared to the 2030 baseline, or "No-Action" alternative, are presented in Table 1. Table 1 shows how well the various proposed improvements would better the travel conditions in the study area. The ratings are on a "1" to "10" scale, with "10" indicating the concept which performs the best, and "1" indicating the worst performance. The columns in the table cluster the arterial road improvements together as well as the freeway alternatives. The alternatives are also presented with west to east shown as left to right on the table. In the table, the alternatives receiving the two highest rating are highlighted in green for each measure.

General findings from the travel benefits evaluation of the stand alone alternatives show:

Regional Mobility

- Stand-alone arterial road alternatives are expected to make overall traffic conditions the same or worse by increasing total system-wide vehicle miles traveled and vehicle hours traveled. Forecasted traffic for these alternatives is expected to be at or near capacity, despite the presumed improvement. For these alternatives, 65% to 75% of travel on widened arterial roads is expected to be for local trips, meaning the beginning and the end of the trip is in the study area.
- Stand-alone freeways are expected to improve overall traffic conditions, showing large declines in system-wide vehicle miles of travel and vehicle hours of travel. Forecasted traffic is 30,000 to 60,000 vehicles per day on freeways and is about 65% to 75% regional travel, meaning at least one or both ends of the trip fall outside the study area.
- Regional trips, including trucks, are expected to show greater benefit with freeways than arterial road improvements.
- The model shows that traffic management alternatives, transit, and stand alone arterial road alternatives would be less effective than freeways in addressing regional mobility.
- The limited number of Fox River bridge crossings affects regional and local traffic. New freeway alternatives are more likely to add new river crossings and greater lane capacity than arterial alternatives.
- The traffic model shows both a heavy demand for straight south regional traffic at the south end of the study area and travel to and from the southeast.

Local System Deficiencies

- Traffic management and transit alternatives are expected to result in a slight decline in vehicle miles of travel and vehicle hours of travel.
- Stand-alone arterial road and freeway alternatives resulted in similar levels of improvement in study area vehicle miles of travel and vehicle hours of travel.

Job Accessibility

- Traffic benefit and transit alternatives are expected to result in minor improvements in access to regional jobs.
- Stand-alone arterial road alternatives resulted in a moderate improvement in job accessibility.
- Stand-alone freeway alternatives resulted in the most improved levels of job accessibility. However, the west county line (A1) alternative showed the lowest regional job accessibility benefits of the freeway alternatives.

Safety

- Transit and traffic management alternatives are expected to result in little improvement in safety.
- Stand alone arterial road alternatives resulted in a moderate level of safety improvement.
- Stand-alone freeway alternative exhibited the highest improvements in safety.

Arterial and Freeway Combination Alternatives	Base 2030	ARTERIAL ROAD COMBINATIONS				ARTERIAL ROAD / FREEWAY COMBINATIONS			
		IL 47+Wikaduke	IL 47+Wikaduke +Dauberman/ Eldamain/ Saratoga	IL 47+Wikaduke +Orchard/Grove/ Brisbin	IL 47+Wikaduke +Recorded Corridor	IL 47+Wikaduke +East Corridor	IL 47+Wikaduke +Recorded South	IL 47+Wikaduke +Recorded East	IL 47+Wikaduke +Recorded South
REGIONAL MOBILITY									
Additional Capacity (Lane Miles) (1)	0	105	172	168	105	105	105	105	105
Arterials	0	105	172	168	105	105	105	105	105
Freeways	0	0	0	0	0	0	0	0	0
TOTAL	0	105	172	168	105	105	105	105	105
Regional Travel									
Miles of Travel	3	1	2	1	7	10	8	7	7
Hours of Travel	3	4	5	4	10	10	8	7	7
ADDRESS LOCAL SYSTEM DEFICIENCIES									
Study Area Travel (Non-US/State Roads)									
Miles of Travel	1	7	9	10	10	10	10	10	10
Hours of Travel	1	6	9	7	10	10	8	7	7
ACCESS TO REGIONAL JOBS									
Transportation Improvements Only									
<=30 minutes	1	5	7	6	10	10	10	7	7
<=40 minutes	1	5	5	6	9	10	10	7	7
<=60 minutes	1	5	7	6	10	10	10	8	8
<=90 minutes	1	5	7	7	10	10	10	9	9
SAFETY									
Crashes									
Regional	3	1	2	2	8	10	10	9	9

Table 2

best performing concepts

In addition to the "stand-alone" improvements, a number of combination improvement concepts were evaluated to test the results of a mix of improvement types. All combination improvement scenarios assumed that IL 47 and the proposed WiKaDuKe arterial would be widened to four lanes by the year 2030, and included one of the following additional improvements: arterial road widening of Dauberman/ Eldamain/ Saratoga (Alternative K2), or widening Orchard/ Grove/ Brisbin (M4); or new freeway along the protected corridor (B5), or the east corridor (C5W), or the straight south variation of the recorded corridor (B2). Table 2 shows the results of the travel benefit evaluation for these combinations of improvements.

General findings from the travel benefit evaluation of the combination alternatives include:

- **Regional mobility:** Arterial road improvement combinations are still expected to worsen travel conditions by increasing system-wide vehicle miles of travel, with a slight increase in vehicle hours of travel over the no action alternative. Arterial road combinations still primarily serve local traffic.
- **Regional mobility:** Freeway/arterial road combinations produced the best improvement in overall traffic conditions with the largest declines in system-wide vehicle miles of travel and vehicle hours of travel. Freeway combinations still primarily serve regional travel with the arterial roads serving primarily local travel.
- **Local system deficiencies:** Arterial road and freeway/arterial combinations resulted in similar levels of improvement with declines in vehicle miles of travel and vehicle hours of travel, and performed significantly better than stand-alone arterial road alternatives.
- **Job accessibility:** Freeway/arterial combinations exhibit the best job accessibility improvement of all alternatives.
- **Safety:** Freeway/arterial combinations are expected to produce the largest improvements in safety.
- Combinations of a freeway/arterial road improvements perform best for improving regional mobility, providing better access to jobs, improving local road deficiencies, and improving regional safety.
- In many cases, combinations of multiple arterial road improvements do not perform as well as stand-alone freeway alternatives.

Environmental Impact Evaluation

Impact Evaluation

Understanding the travel benefits is one part of a solution, but it is also important to understand how the environment will be affected by a new project, so that steps can be taken to eliminate or reduce potential impacts. The environmental impact evaluation began with the identification of more than 60 important environmental factors in the study area. Some of the natural environment factors included threatened and endangered species, natural areas, nature preserves, seeps and fens, local and state parks, forest preserves, recreational areas and open space and wetlands, floodplains, and other water features (including Class 1, Class A and B and protected streams).

For the built environment, a similar data collection process was initiated. The built environmental data obtained included developments recently opened, currently under construction, planned, proposed, or even still in the concept stage; Kane County farmland in the agricultural conservation easement program, centennial and sesquicentennial farms, landfills and hazardous waste (CERCLIS) sites, historic sites and historic bridges, schools and churches, quarries, and water wells.

IDOT has assembled a very detailed inventory of the best publicly available data relating to the location of sensitive environmental areas throughout the study area. This data was mapped and used by the study engineers to develop conceptual layouts for the arterials and freeways with the goal of avoiding as many environmental issues as possible. The impacts on these factors for each corridor were tabulated, reviewed by environmental specialists, and returned to the designer for further improvement. Through this iterative process, the IDOT was able to minimize the environmental impact.

The Fox River presented one of the key challenges for developing alternatives. In addition to the Fox River being an important environmental issue on its own, the habitat on the banks, in the stream, and nearby – as well as existing land uses – all presented additional cause for sensitivity in selecting river crossing points for the corridors. To begin, the planners mapped all the known natural and built environmental features along the Fox River from Sheridan to Oswego. Next, all potential crossing areas were identified and studied, leading to five locations with the least potential for impacts being selected for review by the regulatory environmental resource agencies. The resource agencies traveled to the locations to see the potential impacts and assess the quality of the environmental features.

The Fox River presented one of the more important challenges because of its environmental issues.



Footprint Length = 8000'	A1	A5	B2, C2	C4	C5E
	W. Millington	E. Millington	W. Yorkville	E. Yorkville	Orchard/Grove
NWI Wetlands	6	1	10	1	1
Floodplains (FEMA)	8	7	7	10	1
Streams - CLASS A & B	10	10	1	10	10
Water Bodies	10	10	7	7	1
Parks / Nature Preserves / Natural Areas	10	10	10	1	10
Open Space, Conservation Areas, Forest Preserves, Parks Natural Areas (DOT)	6	10	10	6	1
Special Use					
CERCLIS	10	10	10	1	1
Landfills	10	1	10	10	10
Quarries	10	10	10	10	1
Affected Buildings/Property (Estimated)					
Houses	10	10	9	7	1
Farmstead Areas	3	1	6	10	3
Centennial Farms	10	10	10	1	10
Developments					
Open/Under Construction	10	10	10	10	1
Planned/Proposed/Concept	10	10	10	1	10
Compatibility With Land Use Plans	Medium	Medium	High	Low	Low
Cost (Length of Bridge)	Low	Low	Low	High	Medium
Number of categories above that the corridor has the greatest impact	0	3	1	7	9

Table 3
Indicates the most impacts



The study team assessed over 60 types of environmental issues along an 8000 foot length of roadway at each of the potential river crossings. Table 3 summarizes the findings of the environmental impact evaluation at each of the potential Fox River crossings. In this table, the results are rated by the level of impact; a "1" rating indicates that this corridor has the most impacts for a given environmental factor, while a "10" rating indicates that the corridor has the least impacts. In this table, the two worst rated alternatives – those with the most negative impact at the Fox River crossing – are highlighted in orange. The columns show the rating of each environmental impact for each alternative, and are presented west to east or left to right across the table.

General findings from the potential Fox River crossing environmental impact evaluation include:

- Crossings east of Yorkville (C3, C4, C5W and C5E) are expected to have the greatest impacts on Wetlands and Floodplains.
- The east Yorkville crossing (C3, C4, C5W) has the greatest impact on Streams and Water Bodies. The west Yorkville crossing (B2, B5,C2) crosses a Class B stream.
- Crossings east of Yorkville (C3, C4, C5W and C5E) have greatest impacts on Parks and Natural Areas/Preserves.
- The Orchard Rd crossing (C5E) has the greatest impacts on houses; the east Yorkville crossing (C3, C4, C5W) affects the most centennial farms; and the east Millington (A5) crossing has the most farmstead impacts.
- Crossings east of Yorkville (C3, C4, C5W and C5E) have greatest impacts on developments and worst land use compatibility.
- Crossings east of Yorkville (C3, C4, C5W and C5E) are higher cost.

Key Findings:

- Fox River crossings east of Yorkville (C3, C4, C5W and C5E) are expected to have high overall negative impacts, including open space, natural areas, wetlands and floodplains, and development impacts.
- Fox River crossing west of Yorkville (B2, B5 and C2) has lesser overall environmental impacts, and greater overall compatibility with the natural and built environment.

When performing a similar evaluation for the full length of each new location alternative, similar trends emerge. Arterial road improvement alternatives generally follow existing roadways. These were evaluated and found to produce fewer impacts than freeway alternatives that create new roadway locations. In order to focus on the alternatives that have high impacts, only the freeway alternatives are shown. The website includes more data on the arterial alternatives. Table 4 summarizes the findings of the environmental impact evaluation for each of the potential freeway alternatives. In this table, the results are rated by the level of impact. A "1" rating indicates that this corridor has the most impacts for a given environmental factor, while a "10" rating indicates that the corridor has the least impacts. In this table, the two worst rated alternatives – those with the most impacts – are highlighted in orange. The columns show the rating of each alternative for each environmental impact, and are presented west to east or left to right across the table.

General findings from the environmental impact evaluations of the freeway alternatives include:

- Alternatives east of Yorkville (C3, C4, C5W and C5E) have the worst wetlands impacts. Many alternatives have some floodplain impacts.
- The west Yorkville alternatives (B2, B5, C2) have the greatest impact on streams. The east Yorkville alternatives (C3, C4, C5W) have the greatest impact on water bodies.
- The alternatives east of Yorkville (C3, C4, C5W and C5E) and C2 have the greatest potential impacts on threatened and endangered species sites.
- Alternatives east of Yorkville (C3, C4, C5W and C5E) have the greatest impact on open space, such as parks and natural areas.
- WiKaDuKe (D5) and the Orchard Rd (C5E) alternatives have the greatest impacts on houses and buildings; Alternatives B2 and D5 have the most farmstead impacts.
- Alternatives east of Yorkville (C3, C4, C5W and C5E) and C2 have the greatest potential impacts on new development.
- The west Yorkville crossing alternatives (B2 and B5) have the greatest compatibility with land use plans.
- The east Millington (A5) and B5 alternatives are projected to have the highest construction cost.

Key Findings:

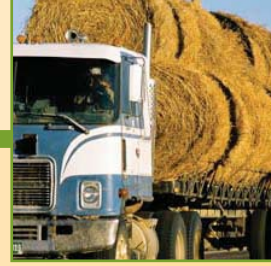
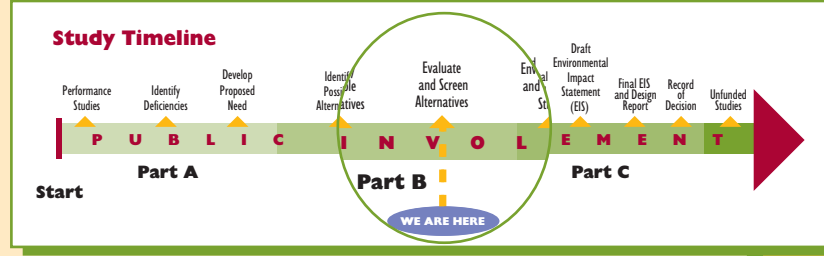
- WiKaDuKe (D5) freeway/expressway alternative has a very high magnitude of displacements.
- The east Yorkville (C3, C4 and C5W) and Orchard/Grove (C5E) alternatives have a high level of natural and built environmental impacts, due to the Fox River, wetland, development, and land use plan compatibility ratings.
- C2 has high rating of threatened and endangered species and development impacts.
- The western alternatives (A1 and A5) are less desirable than the west Yorkville alternatives for land use plan compatibility.

Fox River Crossing Location	A1	A5	B2	B5	C2	C5W	C4	C5E	D5	
	W. Millington	E. Millington	W. Yorkville	E. Yorkville	Orchard	None				
Length (miles)	38	46	36	43	33	28	29	32	31	29
NWI Wetlands	7	7	9	8	3	1	1	1	8	10
Floodplains	4	2	4	2	6	2	4	2	1	10
Streams - Class A & B	10	10	7	7	7	10	10	9	10	10
Parks / Nature Preserves / Natural Areas	10	10	10	10	9	6	6	6	1	10
Threatened & Endangered (DOT)	10	10	6	6	1	3	3	3	3	6
Affected Buildings/Property (Estimated)										
Houses	10	10	10	10	10	9	9	9	7	1
Farmstead Areas	7	5	3	4	6	7	10	4	5	1
Developments										
Specific - Known boundaries										
Open/Under Construction	10	10	10	10	2	2	2	2	1	8
Planned/Proposed/Concept	10	10	10	10	5	1	1	1	3	5
Proximity - By Section #										
Open/Under Construction	10	9	10	10	5	5	6	6	1	8
Planned/Proposed/Concept	10	9	9	8	1	1	2	1	2	8
Compatibility with Land Use	5	5	8	8	6	3	3	3	3	3
Cost	2	1	2	1	3	4	3	2	4	6
Number of categories above that the corridor has the greatest impact	2	3	3	3	6	9	7	10	9	3

Indicates the most impacts Table 4

Next Steps

IDOT welcomes input from the public at upcoming information meetings and stakeholder meetings. IDOT requests you submit comments by June 13. This input will be used along with the results of the technical evaluation of the alternatives to develop a recommended set of transportation improvements for more detailed engineering and environmental study. The alternatives that move forward will be carefully chosen to optimize travel benefits for the future with manageable impact on to the natural and man-made environment.



This newsletter is printed using soy based inks on recycled paper.

Get Involved:

Check out our website for project update, to sign-up for mailing list, and to send comments to us! Go to www.prairie-parkway.com or write to us at Illinois Department of Transportation Division of Highway-District 2, 700 E. Norris Drive, Ottawa, IL 61350-0697. Telephone 815-434-6131.



Prairie Parkway Study
 Illinois Department of Transportation
 Division of Highways and District 2
 700 E. Norris Drive
 Ottawa, IL 61350-0697

directions >