

**RIVER CROSSING ALTERNATIVES SUMMARY**  
**Caton Farm Road/Bruce Road Phase I Study**  
**February 13, 2006**

A full and reasonable range of alternative corridors have been considered and evaluated with respect to their ability to satisfy the project's Purpose and Need. In addition, each alternative has been evaluated to determine if any fatal flaws exist that would result in discarding an alternative from further consideration.

The crossings of the Des Plaines River Valley carry a large potential for impacts. The U.S. Fish and Wildlife Service has indicated that there are several populations or habitats of federally listed plants and animals in the areas adjoining the proposed river crossings. These species include the federally endangered lakeside daisy, the federally endangered leafy prairie clover, and the federally endangered Hine's emerald dragonfly. U.S. Fish and Wildlife Service also identified potential habitat for the federally endangered Indiana bat.

Also within the river valley are a number of Illinois Nature Preserves. These areas are formally dedicated by the state to be maintained in their natural condition. The ones along the river valley areas are noted for their ecological features, including the presence of valuable habitat and species. For the purpose of this project, an alternative that encroaches upon a nature preserve has a fatal flaw.

The following alternative corridors have been considered and evaluated. The corridor locations are shown in attached Exhibit 1.

- Romeo Road - 135th Street
- Taylor Road - 143rd Street
- Airport Road - 151st Street
- Renwick Road - Thornton Street
- Existing IL Route 7
- Stateville Road - Division Street
- Caton Farm Road - Bruce Road
- Caton Farm - Oak Avenue
- Theodore Street - Rosalind Street

**A. Romeo Road - 135th Street**

A four-lane bridge already exists in this corridor, which is located approximately 3.5 miles north of the IL Route 7 crossing. This corridor also crosses the southern portion of the

Romeoville Prairie Nature Preserve, which is located on both the east and west sides of the Des Plaines River in this area. The Romeoville Prairie Nature Preserve contains the Lakeside Daisy, Leafy Prairie Clover, and the Hine's Emerald Dragonfly. In addition, the Leafy Prairie Clover and Hine's Emerald Dragonfly have been observed in the vicinity of this alignment on the east side of the I&M Canal and west of the Metra/Heritage Corridor Railroad Tracks. Furthermore, this corridor is located within the groundwater recharge area for the Hine's Emerald Dragonfly.

This corridor does not satisfy the Purpose and Need for this project because it does not provide an additional river crossing to improve the system linkage in the study area by creating a well spaced grid network of arterial routes traversing the Des Plaines River Valley between Caton Farm Road at US Route 30 and IL Route 7 at Cedar Road. Furthermore, widening this bridge through the Romeoville Prairie Nature Preserve is also considered to be a fatal flaw for this alternative. Therefore, this alternative is proposed to be eliminated from further consideration as part of this project.

#### **B. Taylor Road - 143rd Street**

This alternative consists of constructing a new bridge connecting Taylor Road on the west side of the Des Plaines River Valley with 143<sup>rd</sup> Street on the east side of the river. This corridor is located approximately 2.5 miles north of the IL Route 7 crossing.

This corridor crosses the Long Run Seep Nature Preserve, which is located between New Avenue and High Road where 143<sup>rd</sup> Street terminates at High Road. Long Run Seep Nature Preserve is recognized for its high quality fen and seep habitat and contains a population of the Hine's Emerald Dragonfly.

Because this corridor extends through a Nature Preserve, this alternative is fatally flawed and as such is proposed to be eliminated from further consideration as part of this project.

#### **C. Airport Road - 151st Street**

This alternative consists of constructing a new bridge connecting Airport Road on the west side of the Des Plaines River Valley with 151<sup>st</sup> Street on the east side of the River. This corridor is located approximately 1.5 miles north of the IL Route 7 crossing.

The U.S. Fish and Wildlife Service has indicated that a population of the Hine's Emerald Dragonfly is located along this corridor on the west side of the Des Plaines River. This site is one of the State's largest breeding populations of the Hine's Emerald Dragonfly. This corridor is also located within the groundwater recharge area for the Hine's Emerald Dragonfly.

Although this corridor provides an additional River crossing, it does not satisfy the Purpose and Need for the project because it does not improve the system linkage in the study area by creating a well spaced grid network of arterial routes traversing the Des Plaines River Valley.

Because this corridor is located approximately 1.5 miles north of the eastern terminus of the project, it is not feasible to incorporate this crossing into an efficient arterial roadway network between Caton Farm Road at US Route 30 and IL Route 7 at Cedar Road.

Therefore, this alternative is proposed to be eliminated from further consideration as part of this project.

#### **D. Illinois Route 7 - Renwick Road and Renwick Road -Thornton Road**

The Illinois Route 7 option would involve expanding (or reconstructing) the existing Illinois Route 7 bridge from 2 to 4 lanes. To incorporate this option into a regional network, Illinois Route 7 would also need to be expanded from 2 to 4 lanes between the bridge and the proposed widening of Illinois Route 7 east of Cedar Road. To the west, existing roadways would be expanded as needed between the bridge and the project terminus.

The expansion of the Illinois Route 7 Bridge does not address the 4-mile gap between that bridge and the Ruby Street Bridge in Joliet. Furthermore, an expansion of the bridge and Illinois Route 7 through Lockport would significantly change the character of the Lockport Historic District and displace a large number of homes and businesses.

A variation of this option consists of a crossing the Des Plaines River Valley at Renwick Road - Thornton Road, just north of the existing Illinois Route 7 crossing. The approach road on the east bridge terminus would follow an expanded Thornton Road, which converges with Illinois Route 7 just west of Farrell Road. As with the preceding option, existing roadways on the west would be expanded as needed.

The Renwick Road - Thornton Road variation crosses the Des Plaines River Valley less than half a mile north of the existing Illinois Route 7 bridge. Like the Renwick Road - Illinois Route 7 alignment option, it does not address the 4-mile gap between the Illinois Route 7 bridge in Lockport and the Ruby Street (Illinois Route 53) bridge in Joliet. Furthermore, this option poses environmental drawbacks similar to that of the Illinois Route 7 bridge expansion option. On the eastern bridge terminus, the alignment cuts through a fully developed residential area.

In 1995, Illinois Department of Transportation (IDOT) dropped these alignments from the previous Strategic Regional Arterial (SRA) study corridors due to the large-scale displacements and adverse impacts to the Lockport Historic District.

The U.S. Fish and Wildlife Service has indicated that these options would be unacceptable since they would cross the Lockport Prairie Nature Preserve, home to the lakeside daisy, leafy prairie clover and the Hine's emerald dragonfly.

For the above stated reasons, these crossings are fatally flawed and proposed to be eliminated from further consideration.

## **E. Stateville Road - Division Street**

Until 1981, there was a bridge crossing located on the Stateville Road - Division Street alignment. This bridge was closed after being damaged in a barge collision and has since been abandoned and removed. The U. S. Fish and Wildlife service objects to this option since it would cross the Lockport Prairie Nature Preserve (dedicated after the road closure), home of the lakeside daisy, leafy prairie clover and the Hine's emerald dragonfly. On this basis, this option is also fatally flawed and therefore proposed to be eliminated from further consideration.

## **F. Caton Farm Road - Bruce Road**

This bridge option would be in the vicinity of Caton Farm Road on the west and Bruce Road on the east. Variations of the crossing location for this option are limited by the Lockport Locks - 500' north of extended Caton Farm Road and by the EJ&E tracks - 1000' south of Caton Farm Road. The exact bridge placement will depend upon minimizing environmental issues and engineering constraints. Therefore, a proposed bridge may be slightly offset from these two roads to the north or south.

This option is well located to achieve the purpose and need for this project. It splits the gap in the bridge crossings, it is well located to develop approach roads that could then become part of the SRA network, and it is in good proximity to the rapidly growing areas cited in the purpose and need discussions.

This is the first river crossing corridor without Illinois Nature Preserve involvement. Nevertheless, the U.S. Fish and Wildlife Service has noted concerns about this alternative. Specifically,

- The northerly area for this alternative includes breeding habitat for the Hine's emerald dragonfly.
- Adult Hine's emerald dragonflies were sighted on both sides of the river.
- The leafy prairie clover is located on the in Dellwood Park West on the east side of the river area, which this corridor crosses.
- The area includes potential habitat for the Indiana bat.

An additional concern for this alternative is the presence of the Lockport Lock and Dam. The U. S. Coast Guard has indicated that only an alignment option at the southern limit of this alternative would be acceptable on the basis of security concerns.

Based on the above discussion, this option includes concerns that will need to be further addressed, but has no fatal flaw evident at this point. Therefore, a corridor based upon this crossing is proposed for more detailed engineering and environmental studies

### **G. Caton Farm Road - Oak Avenue**

Similar to the above option, this option also begins in the vicinity of Caton Farm Road on the west. The difference is it that crosses the Des Plaines River in a diagonal southeasterly to connect to Oak Street, approximately mile south of Bruce Road. This option is not among the historical crossing locations, but rather was developed as a response to the concerns raised to the Caton Farm Road - Bruce Road Option. From a purpose and need perspective, it would be somewhat inferior to the Caton Farm Road - Bruce Road option. It proceeds further south resulting in adverse travel to complete the regional connection.

This corridor is located further from the locations noted for the presence of the Hine's emerald dragonfly, and therefore appears to have diminished impacts to threatened and endangered species habitat areas. The option also addresses the security concerns of cited in the U. S. Coast Guard letter.

Based upon the above, a corridor based upon this crossing is proposed for more detailed engineering and environmental studies.

### **H. Theodore Street - Rosalind Street**

This option would place a Des Plaines River crossing connecting to Theodore Street (Illinois Route 7) on the west side of the Des Plaines River Valley in Joliet. On the east side of the River this crossing would connect to Rosalind Street. From the perspective of purpose and need, this option is inferior to both the Caton Farm Road -Oak Avenue and Caton Farm Road-Bruce Road options. This crossing is approximately one mile south of the western terminus of the project, the southernmost of the two termini. This would result in two miles of adverse travel for the motorist traversing the corridor. Also, due to dense development at each end of the crossing, it will be more difficult to develop into a regional corridor and would be less accessible to some of the areas of growth, and direct socio-economic impacts including displacements would be relatively high. This option is also only one mile from a crossing to the south (Ruby Road), and more than three miles from the Illinois Route 7 crossing. Therefore, it does not as effectively split the existing 4 mile gap as the previous two options and would have less potential to reduce congestion in the vicinity of the existing Illinois Route 7 crossing in Lockport, and as such does not meet the Purpose and Need for the project.

Based upon the above, this alternative is proposed to be eliminated from further consideration as part of this project.