

**THE POTENTIAL EFFECT OF THE PROPOSED OUTER BELT HIGHWAY UPON THE  
LAND EVALUATION AND SITE ASSESSMENT (LESA) VALUES OF ADJACENT  
AGRICULTURAL LAND IN KENDALL COUNTY, ILLINOIS**

An Abstract of  
A Thesis  
Presented to the  
Department of Geography  
Western Illinois University

In Partial Fulfillment  
of the Requirements for  
a Masters Degree

by  
Brad Walker  
May 2003

## ABSTRACT

Concern about the conversion of agricultural land to other land uses during the 1960s and 1970s in the United States prompted the creation of the Farmland Protection Policy Act of 1981 (FPPA). The loss of agricultural land has continued throughout the country since this legislation. Much of this agricultural land loss has been in areas with large percentages of prime farmland near urbanized areas. Studies indicate that highway construction, usually near interchanges, has contributed to the conversion of agricultural land by providing easy access to rural areas for development and allowing people to drive greater distances to and from their work place. The FPPA includes a tool to help evaluate the quality of agricultural land parcels being considered for conversion to other uses called the Land Evaluation and Site Assessment system (LESA). A major new highway is being proposed in Kendall and Kane Counties in northeastern Illinois that would be constructed almost entirely through prime farmland. The highway's potential effect upon LESA scores for adjacent and nearby agricultural is the subject of this study.

The Illinois LESA system was computerized by modifying an automated LESA system application developed at Penn State University. All required data, which included soil, land use, zoning, parcel information and utility locations was gathered, necessary thematic maps were created from the data and the LESA score calculations were made for the parcels surrounding a single potential interchange located in a largely agricultural area in Kendall County. Three iterations of LESA scores were calculated: first the baseline before any new development, next after the new highway was added to the road theme, which required the splitting of eight parcels, and finally after converting four

small portions of parcels at the four corners of the interchange from agricultural to commercial land use. The LESA scores for baseline 90 parcels were compared with the scores for the 98 parcels for the second and third iterations. The results were mapped and evaluated.

The hypothesis for this study was that LESA scores adjacent to this interchange would drop below the threshold at which they might remain as productive farmland due to the construction of the new highway. The scores did not drop as significantly as hypothesized. None of the LESA scores for selected parcels dropped below the Illinois high level of protection but the addition of the highway did lower the scores of parcels adjacent to the highway, especially those that were split by the highway. Also, the rezoning of the four parcels at the potential interchange showed a very minor affect upon the LESA scores of parcels in the study area.