

Elgin O'Hare Expressway Western Extension Options

Travel Pattern Analysis

Analysis Objectives and Procedures

The travel demand model was used to evaluate travel patterns and traffic impacts associated with a potential Western Extension of the Elgin O'Hare (EO) Expressway. In the context of the Elgin O'Hare-West Bypass project, Alternative G203 (Elgin O'Hare Extension east to O'Hare and West Bypass) was used to test the impacts of the potential Western Extension.

Scenarios Considered

- Scenario I - Elgin O'Hare Western Extension to County Farm Road
- Scenario II - Elgin O'Hare Western Extension to US 20 at North Street

Findings

- The travel market served by the Western Extension is predominantly west of Roselle Road.
- Projected 2030 traffic on the existing EO east of Roselle Road is not affected by either western extension scenario. Exhibit 1 and Exhibit 2 shows modeled ADT demand for Scenario I and Scenario II respectively.
- The Western Extension between US 20 and County Farm Road carries projected 2030 traffic of approximately 50,000 ADT (Scenario I) and 100,000 ADT (Scenario II).
- The Western Extension between County Farm Road and US 20 at North Street carries projected 2030 traffic of approximately 80,000 ADT (Scenario II).
- Scenarios I and II result in (2030) traffic redistribution on various roadways:
 - Traffic demand would be reduced on Greenbrook Boulevard, between County Farm Road and US 20.
 - Traffic would be increased on County Farm Road, under both extension scenarios, requiring a six lane cross section, and likely residential displacements.
 - Traffic would also be increased on US 20 in Bartlett as a result of the full extension, requiring at least a six lane cross section, and an examination of the US 20 corridor to the west.

Conclusions

1. The western extension of the EO would reduce traffic on relatively short segment of Greenbrook Boulevard, but in doing so, an extension would redistribute travel to other parts of the network, requiring substantial additional improvements along County Farm Road and US 20. Traffic would increase from 23,000 to 41,000 approximately which would require additional capacity on County Farm Road making it a six lane facility.
2. The 2030 ADT on Greenbrook Boulevard is 30,700 without the western extension. This demand can be accommodated by the existing four-lane facility and does not require any additional capacity improvements as opposed to County Farm Road as discussed above due to the western extension options.
3. The magnitude of the travel impact on US 20 suggests that a larger examination of the US 20 corridor would be required, likely from Shales Parkway to Gary Avenue.
4. In addition, Scenario I has County Farm Road as a terminus to the expressway. This would not be a suitable logical terminus, given the curvilinear alignment in the vicinity of the interchange and the north-south orientation of County Farm Road. The north-south orientation would force an east-west travel pattern along the EO onto a north-south route. In comparison, the current terminus at Lake Street, as well as the western extension to US 20 in Bartlett in Scenario II is more suited since it is connecting to east-west facilities.
5. Finally, the two extension scenarios serve a different travel market, which is west of Roselle Road, and therefore do not influence the seven roadway alternatives under consideration to the east. Consequently, any examination of a westward extension of the EO should be considered as part of a separate, future Phase I study.