

Traffic Engineering Report for the East Gateway Redevelopment Plan

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The street and highway system in the East Gateway study area combines the characteristics of the old urban grid network with suburban thoroughfares. The basic infrastructure has not changed dramatically in the past 50 years but the function of some streets within the immediate area and the region has changed over time.

The major streets in the redevelopment area include Shawnee Mission Parkway and Roe Avenue. Shawnee Mission Parkway, first developed as a state highway, is a significant east/west route in northeast Johnson County as it links suburban communities with I-35 and the Country Club Plaza and points beyond in Kansas City, Missouri. It carries the highest traffic volumes of any street in the area - about 30,000 vehicles per day. With its long and storied history, traffic volumes have tended to increase and decrease as development patterns shift and street/highway improvements were implemented. The current traffic volumes on Shawnee Mission Parkway are 10 to 20 percent less than the volumes counted in 1990.



Shawnee Mission Parkway through Fairway

Roe Avenue, a former state highway, links communities in this area with I-35 and points beyond in Kansas City, Kansas. Forty years ago this was the principal connection between Johnson and Wyandotte Counties as the Roe Avenue extension across I-35 became the 18th Street Expressway, a part of the original Kansas Turnpike. Roe Avenue still serves as an important arterial street and carries about 20,000 vehicles per day.

Johnson Drive is the primary east/west street through the commercial areas of Mission. Beginning in the far western reaches of Johnson County, Johnson Drive effectively terminates immediately east of Roe Avenue where it connects with Shawnee Mission Parkway. In fact, Johnson Drive was also developed as a state highway originally, preceding the construction of Shawnee Mission Parkway. Recent studies have shown that most drivers using Johnson Drive either begin or end their trips in or near Mission; there is very little traffic using this street to merely pass through.

Other important streets in the study area include Nall Avenue, Roeland Drive, Martway and 55th Street. These streets tend to serve as links to and between other streets carrying traffic into and out of, or circulating within, the study area.

Redevelopment rarely brings about the need for wholesale changes in the transportation infrastructure. The East Gateway Redevelopment Area does have the advantage of significant infrastructure in place and the evaluation of existing traffic conditions indicates that these streets currently offer residents, workers and shoppers very high levels of traffic service. Further, the mixed-use nature of the proposed redevelopment tends to lessen the impact of new uses to an area as people are afforded opportunities that do not necessitate separate vehicle trips. For example, residents will be within walking distance of retail and employment facilities and workers can walk to lunch or even have transit options for commuting.

The best transportation strategy for the East Gateway redevelopment includes the preservation of connections to surrounding major streets like Shawnee Mission Parkway and Roe Avenue and to enhance the ability to circulate in and around the area on streets like Johnson Drive and Martway.

The most notable change to the street system is the conversion of Johnson Drive from a four-lane street to a three-lane street. Studies of existing conditions indicate that Johnson Drive would continue to function at high levels of service if the street was striped for three lanes today.



Martway as it exists today

In the urban venue contemplated with the redevelopment plan, a three-lane street is often superior to a four-lane street in terms of vehicular capacity and safety. The three-lane cross section is also easier and safer for pedestrians. Martway, also recommended to remain a three-lane street, provides significant untapped capacity for east/west travel within the City of Mission. With more and better connections between Johnson Drive and Martway, drivers will be afforded more travel path choices. This network helps avoid high concentrations of traffic at any given intersection and lessens the potential for more traffic signals.

The largest redevelopment component in this area is The Gateway, a proposed mixed-use development to replace the Mission Mall. Traffic studies for that project indicate that improvement needs are concentrated at the Shawnee Mission Parkway intersection with Roeland Drive, one of those critical connections to the major street system. Johnson Drive, Martway and Roeland Drive are all expected to perform well even with the additional traffic this project will generate.

Perhaps the only significant long-range street improvement that should be considered for this area is the expansion of Shawnee Mission Parkway from four lanes to six lanes. This street is an important connection between I-35 and Kansas City, Missouri (and points in between). The strain of this heavy commuter traffic is witnessed at intersections like Lamar, Nall and Roeland Drive. Now that Merriam has improved its section from I-35 eastward through the intersection with Antioch Road, the value to continuing that six-lane cross section to the east makes sense. It is also likely that Shawnee Mission Parkway will never be widened east of Roe Avenue. The proximity of houses and buildings to the street makes such a proposition impractical.



The nature of the redevelopment will bring about considerably more pedestrian activity. It is therefore important to plan for and construct sidewalk along both sides of all streets unless circumstances dictate otherwise. Crosswalks need to be carefully planned for good visibility between pedestrians and motorists as well as clear assignment of responsibility.

In summary, the East Gateway Redevelopment Area is fortunate to have significant infrastructure in place that can accommodate the vision identified in this study. The backbone system is in place; future transportation considerations include the proper positioning of driveways, modest intersection improvements to maintain a high level of service and circulation, and pedestrian facilities throughout the area.