



EXECUTIVE SUMMARY

Glasgow Small Urban Area Study



Prepared for:



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The Kentucky Transportation Cabinet (KYTC) initiated the Small Urban Area (SUA) study for the city of Glasgow, Kentucky in Barren County. The goal of the study is to identify and examine transportation and multimodal issues related to safety and congestion in Glasgow and the surrounding area. The SUA study area includes the city limits of Glasgow which is a little over 38 square miles. The 2014 Barren County Comprehensive Plan requested the development of an urban transportation study for the Glasgow area, as the last Glasgow SUA Study was completed in 1988. This SUA planning study was funded with State Planning and Research (SPR) funds.

The basic elements accomplished under this SUA study include the following:

- Evaluate existing conditions, crash history, and geometric deficiencies to identify possible safety improvements.
- Evaluate existing traffic and estimate future traffic volumes on state-maintained and other major routes within the study area to evaluate capacity needs of the transportation network.
- Work with an Advisory Committee to identify problem areas and improvement alternatives.
- Produce a list of short-term recommendations which the KYTC, City of Glasgow, Barren County, and/or private developers can take for further project development and implementation.
- Address long-term concerns by examining the future transportation needs and determining options for future improvement projects.

The first Advisory Committee meeting was held on February 24, 2016 in Glasgow. At the meeting, attendees were asked to identify locations: 1) where congestion is an issue, 2) where there are trouble spots related to safety, 3) areas where growth is anticipated, and 4) locations for possible transportation and multimodal improvements. The Advisory Committee identified 18 locations with possible congestion issues, 14 trouble spots related to safety, seven growth areas (primarily south and west of downtown), and 19 locations for possible transportation and multimodal improvements.

The project team developed 23 conceptual improvement projects, as shown in **Figure ES-1**, based on a combination of input from the Advisory Committee, a review of the existing conditions, traffic analyses, and field reconnaissance.

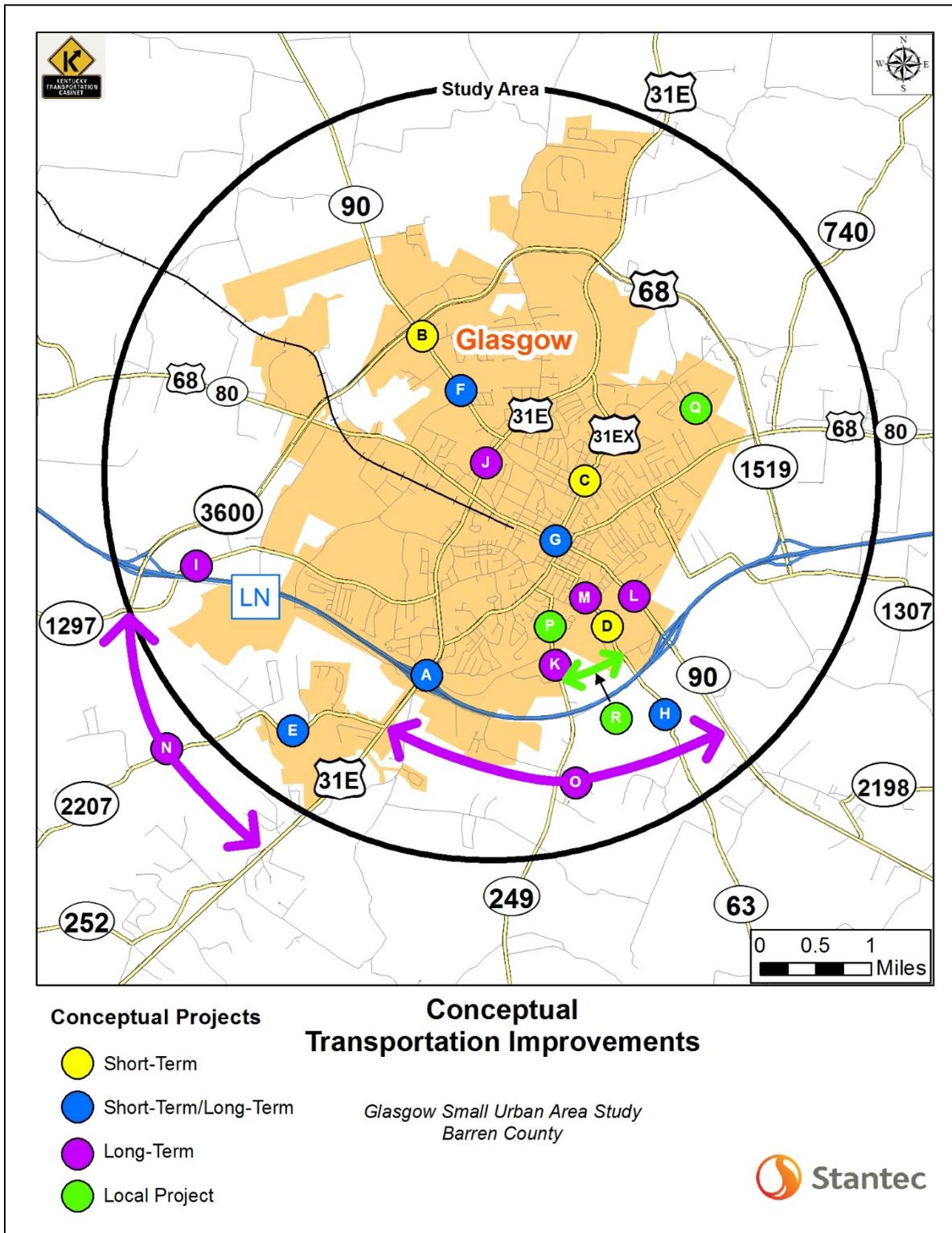


Figure ES-1: Glasgow Small Urban Area Study – Recommended Projects

Three classes of improvement projects were developed. The improvement concepts are categorized as follows:

- **Short-term:** The short-term concepts are typically lower-cost projects that can be implemented in the near future. These types of improvements should require little or no right-of-way to construct and in some cases may be implemented by the KYTC Division of Maintenance.
- **Long-term:** The long-term concepts are higher-cost projects that will require more significant resources to implement. These types of improvements are more likely to require additional right-of-way to construct and will need to be funded through the KYTC Highway Plan.
- **Local projects:** The local projects are not located on the state-maintained system and would likely need to be funded by the City of Glasgow or Barren County. A private developer may also take on this responsibility.

A second Advisory Committee Meeting was held on May 26, 2016 in Glasgow. During this meeting, attendees were asked to indicate their level of support for each of the improvement concepts, shown in **Figure ES-1**. Factoring in input from the Advisory Committee, the project team prioritized the conceptual improvements as high, medium, or low. **Tables ES-1, ES-2, and ES-3** present the improvement concepts based on this prioritization. Along with short and long-term projects, local improvements were also prioritized, shown in **Table ES-4**.

It was decided that Projects F1, F2, and B, all concepts to improve KY 90, should be combined and considered together in the design phase. During that phase, a traffic study should be conducted to determine the appropriate number of lanes for KY 90. Thus, Project F1 (road diet to restripe KY 90 as three lanes) and Project F2 (widening the corridor to a five-lane section) will both be considered. Project B, improvement of the intersection of KY 90 and US 68 near Walmart, would likely not move forward as a standalone project and should be considered with the corridor wide improvements to KY 90. The combination of these projects is ranked as a high priority.

Project A includes both a short-term (A1) and long-term (A2) solution to improve the US 31E interchange with the Louie B. Nunn Cumberland Parkway (LN 9008). Project A1, interchange improvement, includes the signalization of the westbound ramp terminal intersection and widening US 31E under the parkway bridge to accommodate additional turn lane storage. Project A2, reconstruction of the interchange, reconfigures the interchange to a new type (such as a single point urban interchange) to increase spacing between traffic signals. The project team recommended that both solutions be considered together in the design phase. The combination of these projects is ranked as a medium priority.

Cost estimates were prepared for each improvement concept, shown in **Table ES-5**, based on unit costs plus additional costs for special features (i.e. culverts and traffic signals). KYTC District 3 assisted in this effort by providing right-of-way and utility cost estimates.

ID	Route	Location	Length	Short-Term or Long-Term	Improvement Type	2016 Cost Estimate (All Phases)	Priority
F1, F2 and B	KY 90	US 68 (Veterans Outer Loop) to US 31E	1.3 Miles	Short-Term	Road Diet to convert the existing undivided four-lane section to a three-lane section (two travel lanes with a continuous center left-turn lane)	\$830,000	High
		Near Walmart / US 68 (Veterans Outer Loop)	0.25 Miles	Long-Term	Corridor widening to provide a five-lane section and multimodal accommodations	\$10,100,000	
E1	KY 2207	Sugar Hill Dr. to Autumn Ridge Rd.	1.0 Miles	Short-Term	Intersection improvement to relocate the signalized entrance to Walmart at Max Wagoner Road	\$650,000	High
J	US 31E	US 68 to KY 90	0.6 Miles	Long-Term	Application of high-friction pavement surface to minimize effects of wet weather, single vehicle crashes	\$400,000	High
G1	Downtown Square	Downtown	N/A	Short-Term	Provide Access Management by constructing a raised median along US 31E, close portions of Smith Road (frontage road), and extend Wall Street	\$6,750,000	High
C	US 31EX	Happy Valley Road	N/A	Short-Term	Intersection and pedestrian crossing improvements to eliminate the mid-block pedestrian crossings and reduce vehicular weaving conflicts	\$180,000	High
H1	KY 63	South of LBN Cumberland Parkway	0.6 Miles	Short-Term	Intersection improvement to provide a left-turn lane from northbound US 31EX to Happy Valley Road	\$60,000	High
H2	KY 63	South of LBN Cumberland Parkway	0.6 Miles	Long-Term	Application of high-friction pavement surface to minimize effects of wet weather, single vehicle crashes	\$275,000	High
					Reconstruction of KY 63 to improve the horizontal and vertical alignment.	\$2,750,000	High

Table ES-1: Recommended High Priority Projects

ID	Route	Location	Length	Short-Term or Long-Term	Improvement Type	2016 Cost Estimate (All Phases)	Priority
N	KY 3600 extension	KY 1297 to US 31E	2.7 Miles	Long-Term	New route to connect the LBN Cumberland Parkway interchange at KY 3600 to US 31E	\$15,100,000	Medium
I	KY 1297	KY 3600 to Donnelly Drive	1.5 Miles	Long-Term	Minor widening to include wider lanes and shoulders	\$5,900,000	Medium
G2	Downtown Square	Downtown	N/A	Long-Term	One-Way Conversion of Main Street and Washington Street, including intersection improvements within the Downtown Square	\$3,700,000	Medium
A1 and A2	US 31E	LBN Cumberland Parkway Interchange	0.4 Miles	Short-Term	Interchange improvement to include signalization of the westbound exit ramp	\$540,000	Medium
				Long-Term	Interchange Reconstruction	\$20,900,000	
D	KY 63	South Fork Creek to Temple Trace	0.2 Miles	Short-Term	Maintenance and drainage improvements	\$220,000	Medium

Table ES-2: Recommended Medium Priority Projects

ID	Route	Location	Length	Short-Term or Long-Term	Improvement Type	2016 Cost Estimate (All Phases)	Priority
L	KY 90	North of LBN Cumberland Parkway	0.4 Miles	Long-Term	Minor widening to provide a three-lane section and Access Management	\$4,050,000	Low
O	Southern Beltway	US 31E to KY 90	3.3 Miles	Long-Term	New route to connect US 31E to KY 90 south of the LBN Cumberland Parkway	\$16,500,000	Low
K	KY 249	LBN Cumberland Parkway Overpass to Trojan Trail	0.6 Miles	Long-Term	Realignment to address curvature issues from north of the LBN Cumberland Parkway to the proposed bridge replacement over South Fork	\$4,650,000	Low
E2	KY 2207	Sugar Hill Dr. to Autumn Ridge Rd.	1.0 Miles	Long-Term	Reconstruction of KY 2207 to improve the horizontal and vertical alignment.	\$5,050,000	Low
M	KY 63	S Franklin / E College Street	0.3 Miles	Long-Term	Realignment from near South Fork bridge to College Street	\$7,650,000	Low

Table ES-3: Recommended Low Priority Projects

ID	Route	Location	Length	Short-Term or Long-Term	Improvement Type	2016 Cost Estimate (All Phases)	Priority
Q	Scottie Drive	US 68 Business to Glenview Drive	0.7 Miles	Local Project	Minor widening to provide a three-lane section	\$3,550,000	High
R	KY 249 to KY 63 Connector	North of the LBN Cumberland Parkway	0.6 Miles	Local Project	New route to connect KY 249 to KY 63 north of the LBN Cumberland Parkway	\$2,300,000	Medium
P	KY 249	Trojan Trail to Twyman Park	0.5 Miles	Local Project	Multimodal improvement to provide a shared-use path connection	\$1,730,000	Low

Table ES-4: Recommended Local Projects

ID	Route	Improvement Type	2016 Cost Estimates					Priority
			Design	Right-of-Way	Utility Relocation	Construction	Total Cost	
A1	US 31E	Interchange Improvement	\$90,000	\$0	\$0	\$450,000	\$540,000	Medium
A2	US 31E	Interchange Reconstruction	\$1,800,000	\$100,000	\$1,000,000	\$18,000,000	\$20,900,000	Medium
B	KY 90	Intersection Improvement	\$100,000	\$0	\$50,000	\$500,000	\$650,000	High
C	US 31EX	Intersection Improvement	\$10,000	\$0	\$0	\$50,000	\$60,000	High
D	KY 63	Maintenance and Drainage Improvements	\$20,000	\$50,000	\$50,000	\$100,000	\$220,000	Medium
E1	KY 2207	High-Friction Treatment	\$50,000	\$0	\$0	\$350,000	\$400,000	High
E2	KY 2207	Reconstruction to Improve Curves	\$300,000	\$750,000	\$1,000,000	\$3,000,000	\$5,050,000	Low
F1	KY 90	Road Diet	\$80,000	\$0	\$0	\$750,000	\$830,000	High
F2	KY 90	Widening	\$400,000	\$3,000,000	\$2,500,000	\$4,200,000	\$10,100,000	High
G1	Downtown Square	Intersection and Pedestrian Crossing Improvements	\$30,000	\$0	\$0	\$150,000	\$180,000	High
G2	Downtown Square	One-way Conversion	\$300,000	\$250,000	\$150,000	\$3,000,000	\$3,700,000	Medium
H1	KY 63	High-Friction Treatment	\$50,000	\$0	\$0	\$225,000	\$275,000	High
H2	KY 63	Realignment	\$200,000	\$400,000	\$400,000	\$1,750,000	\$2,750,000	High
I	KY 1297	Widening	\$300,000	\$900,000	\$1,200,000	\$3,500,000	\$5,900,000	Medium
J	US 31E	Access Management	\$500,000	\$2,000,000	\$750,000	\$3,500,000	\$6,750,000	High
K	KY 249	Realignment	\$300,000	\$750,000	\$400,000	\$3,200,000	\$4,650,000	Low
L	KY 90	Minor Widening/ Access Management	\$300,000	\$500,000	\$750,000	\$2,500,000	\$4,050,000	Low
M	KY 63	Realignment	\$300,000	\$2,500,000	\$1,750,000	\$3,100,000	\$7,650,000	Low
N	KY 3600 extension	New Route	\$1,000,000	\$3,000,000	\$1,500,000	\$9,600,000	\$15,100,000	Medium
O	Southern Beltway	New Route	\$1,100,000	\$3,500,000	\$1,500,000	\$10,400,000	\$16,500,000	Low
P	KY 249	Multimodal	\$80,000	\$400,000	\$750,000	\$500,000	\$1,730,000	Low
Q	Scottie Drive	Minor Widening	\$200,000	\$750,000	\$1,000,000	\$1,600,000	\$3,550,000	High
R	KY 249 to KY 63	New Route	\$200,000	\$500,000	\$300,000	\$1,300,000	\$2,300,000	Medium

Table ES-5: 2016 Cost Estimates