

BEAUMONT CENTRE TRAFFIC STUDY SCOPE OF WORK

As part of the proposal process, Stantec has identified four main objectives of the study:

- Create a “snapshot” of the multimodal (autos, pedestrians, bicycles, buses) transportation system within and adjacent to the Beaumont Centre area. From this snapshot, identify areas of concern that entail needs and deficiencies.
- Develop and assess the effectiveness of candidate multimodal transportation solutions.
- Develop a prioritized list of multimodal solutions.
- Integrate community involvement into the process.

The activities to accomplish these objectives are described below:

TASK 0. PROJECT MANAGEMENT

Stantec will apply its 10-point Project Management Framework to ensure quality, manage risk, and establish protocols for communication, documentation, and safety. Project Manager Tom Creasey will be responsible for leading or performing activities under this task to include development and dissemination of a Project Plan, holding regular internal team meetings and conference calls, financial management, monthly reporting and invoicing, and client communication.

TASK 1. PERFORM DATA COLLECTION AND RESEARCH

As identified in the Request for Qualifications, the study area is bounded by Man o’ War Boulevard, Harrodsburg Road (US 68), New Circle Road (KY 4), and the area just south of Parkers Mill Road (KY 1968).

Stantec will be moving its Lexington offices to Beaumont Centre in fall 2016. This will offer the flexibility to conduct field reviews from the various multimodal perspectives – pedestrians, bicyclists, and bus riders, along with automobile drivers and passengers. We will see and experience what travelers do every day.

Traffic counts will be collected at designated locations within the study area. Analysis periods are defined as:

- Weekday A.M. Peak (6:30 a.m. to 9:30 a.m.)
- Weekday P.M. Peak (4:00 p.m. to 7:00 p.m.)

Turning movement and vehicle classification counts, bicycle counts, and pedestrian counts shall be collected at the following study area intersections:

1. Beaumont Centre Pkwy. @ Harrodsburg Rd.
2. Beaumont Centre Pkwy. @ Fieldstone Way
3. Beaumont Centre Pkwy. @ Beaumont Centre Cir.
4. Harrodsburg Rd. @ Pasadena/Alexandria Dr.
5. Harrodsburg Rd. @ Fort Harrods Dr.
6. Harrodsburg Rd. @ Wellington Way
7. Harrodsburg Rd. @ Man o' War Blvd.
8. Harrodsburg Rd. @ New Circle Rd.
9. Man o' War Blvd. @ Lyon Dr.
10. Man o' War Blvd. @ Fort Harrods Dr.
11. Man o' War Blvd. @ Beaumont Centre Ln.
12. Beaumont Centre Circle @ Monarch St.
13. Beaumont Centre Circle @ Lakecrest Cir.
14. Beaumont Centre Circle @ Snaffle Dr.
15. Beaumont Centre Parkway @ Malone Dr.
16. Beaumont Centre Circle @ Beaumont Centre Lane
17. Malone Dr. @ Fort Harrods Dr.
18. Old Field Way @ Beaumont Centre Lane
19. Snaffle Dr. @ Ft. Harrods Dr.

These are shown on the map in **Figure 1**. Additionally, 24-hour directional traffic counts will be collected along key road segments identified at the following locations:

- A. New Circle Road north of Harrodsburg Road
- B. New Circle Road south of Harrodsburg Road
- C. Harrodsburg Road northeast of Alexandria Drive/Pasadena Drive
- D. Alexandria Drive northwest of Harrodsburg Road
- E. Pasadena Drive southeast of Harrodsburg Road
- F. Harrodsburg Road between Corporate Drive/Beaumont Centre Parkway and Fort Harrods Drive
- G. Harrodsburg Road between Fort Harrods Drive and Wellington Way
- H. Man o' War Boulevard between Harrodsburg Road and Lyon Drive
- I. Man o' War Boulevard between Lyon Drive and Ft. Harrods Drive
- J. Beaumont Centre Lane between Man o' War Boulevard and Malone Drive/Roswell Drive

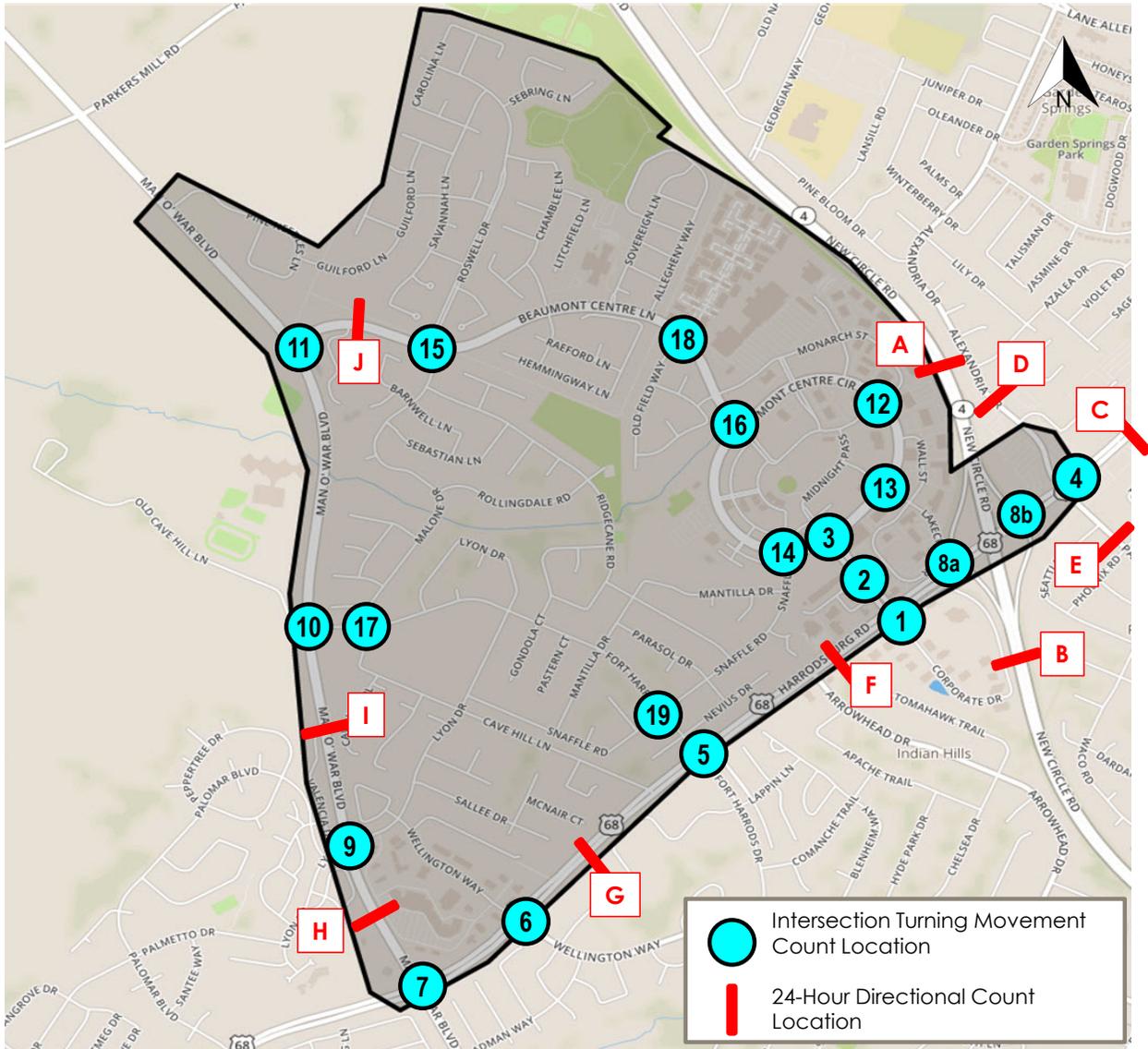


Figure 1. Traffic Count Locations

At key locations, Stantec will record the extent of traffic queues, which will assist in the development and calibration of traffic analysis tools.

Stantec will obtain available relevant data from the LFUCG Divisions of Planning and Traffic Engineering. These will include traffic studies for proposed developments, Synchro files containing signal timing plans and turning movements, travel speeds (i.e. travel; time data) from established BlueTOAD devices in the corridor, and the Lexington Area MPO (LAMPO) travel demand model. Stantec is intimately familiar with the LAMPO model already, as it was part of the consultant consortium that recently updated the model. The RFQ states that the model will be used to develop a future traffic model with a 10-year horizon. Stantec will perform this activity.

Stantec will obtain available GIS data from the LFUCG, as mentioned in the RFP. Of pertinent interest will be GIS coverages for parcels, existing and proposed land uses, property use codes, right-of-way, utilities, roadway features, sidewalks, property ownership, and aerial imagery.

As a final step, Stantec will identify multimodal facilities within and adjacent to the study area – sidewalks, pedestrian crossings, bike lanes (exclusive and shared-use), multi-use paths, and bus stops. Through our traffic counts we will also identify usage of the multimodal facilities. This analysis will serve as the basis for identifying potential connectivity enhancements to the area.

TASK 2. CONDUCT CRASH ANALYSIS

An analysis of the crash data obtained in Task 1 will be conducted. For intersection and roadway segments, Stantec will compute individual crash rates and compare those with average statewide crash rates for similar types of facilities. Stantec will identify causative factors at these locations and will prepare intersection crash maps and study area thematic maps that will be used to identify those causative factors and develop potential solutions. The crash analysis will include any pedestrian and bicycle crashes that may have occurred over the three-year period.

TASK 3. DEVELOP TRAFFIC ANALYSIS TOOLS

Stantec will obtain the existing Harrodsburg Road Synchro files for the Harrodsburg Road corridor and will update those files to include:

- Current traffic counts collected for this project
- Additional study area intersections, including those along Man o' War Boulevard (see Figure 1) and the intersections internal to Beaumont Centre

For both traffic tools, Stantec will evaluate the following scenarios (Weekday A.M. Peak and Weekday P.M. Peak):

- Existing conditions (using the data collected in Task 1)
- Projected 2026 conditions with no improvements made
- Projected 2026 conditions with improvements

The LAMPO travel demand model will be used to develop 10-year growth factors. These growth factors will be applied to existing 2016 traffic counts to create the projected 2026 traffic demands.

For all scenarios developed and evaluated (including base conditions), Stantec will provide corresponding Synchro 9 (or compatible) files to the LFUCG at the completion of the study.

TASK 4. ASSESS EXISTING AND FUTURE NO BUILD CONDITIONS

The Synchro models developed for the study will be used to provide an assessment of traffic operations for: 1) current conditions; and 2) the 2026 10-year horizon if no improvements were made. These two scenarios will form the basis for comparison with alternative transportation solutions and strategies. Performance measures will include:

- Intersection control delay and level of service
- Intersection approach 95th-percentile queues
- Arterial average travel speed, percent of base free-flow speed, no. of stops/stop rate, and level of service

TASK 5. DEVELOP SNAPSHOT AND IDENTIFY AREAS OF CONCERN

Based on data collected and the work done in Tasks 1 through 4, Stantec will develop a “snapshot” of the state of the multimodal transportation system of the Beaumont Centre study area. The snapshot will include:

- Identification of high crash areas and crash types
- Identification of congested areas, quantification of congestion (intersection delay, travel speed, queue lengths, level of service)
- Locations of multimodal facilities – sidewalks, bike lanes, shared use paths, bus stops
- Other areas of concern – general safety, lack of connectivity, mobility issues, etc.
- Locations of planned future developments or anticipated land use change

From this snapshot, “areas of concern” will be identified making extensive use of graphics and simplified charts.

TASK 7. DEVELOP RECOMMENDED SOLUTIONS

The state of the system snapshot and identified areas of concern will provide the foundation for the development of multimodal transportation solutions and strategies. These will be both short-term and long-term.

Short-Term Solutions

It is believed there are a number of short-term improvements in the Beaumont Centre area that can provide an immediate benefit. The following paragraphs describe a few preliminary examples to consider, although more will be developed over the course of the project. All options will be evaluated thoroughly by the project team and interested stakeholders before any formal recommendations are made. The list below represents a starting point for discussion.

Traffic Signal Timing

Stantec will closely examine signal operations along Harrodsburg Road and Man o' War Boulevard. Particular attention will be focused on the section of Harrodsburg Road between Alexandria Drive/Pasadena Drive and Beaumont Centre Parkway/Corporate Drive, which includes the DCD interchange.

Restricted Travel Movements

Stantec will consider restricting or eliminating some types of traffic movements (left turns, for example) that create localized congestion during peak periods.

Traffic Calming

Stantec will examine traffic calming measures to reduce or “harmonize” speeds on residential streets, especially those that have become neighborhood cut-through routes.

Enhanced Pedestrian Amenities

Stantec will examine the feasibility of signalized pedestrian crossings along Beaumont Centre Circle or signaling intersections like Beaumont Centre Circle/Beaumont Centre Lane so that pedestrians can cross safely, which would also potentially eliminate short-distance auto trips.

Based on early field review and assessment of existing conditions, a list of candidate improvements that are relatively low-cost and easily implemented will be developed.

Long-Term Solutions

Stantec will examine innovative intersection designs that can be implemented at the Harrodsburg Road/Beaumont Centre Parkway/Corporate Drive intersections.

Cut-through traffic occurs because major traffic-carrying arterials become clogged. It’s human nature for drivers to seek out a path of least resistance, especially during peak times. Thus, a fundamental principle should be to look for ways to improve the capacity and efficiency of Harrodsburg Road and Man o’ War Boulevard in order to reduce Beaumont Centre cut-through traffic. Stantec will evaluate individual intersections and the corridors as whole to identify possible operational improvements (such as lane additions) that could be made.

With respect to safety, Stantec will examine the results of the crash analyses to identify types of crashes that can be reduced or eliminated through capital improvements. Stantec also will look at pedestrian and bicycle safety and identify potential improvements – additional lighting, shared-use paths, etc. – where neighborhood safety could be enhanced through transportation improvements.

For these and other types of improvement projects, Stantec will develop a future (10-year) operational analysis and concept cost estimates that will be part of the overall solution prioritization process. For each of the alternatives developed, pro’s and con’s associated with the alternatives will be identified. The list of recommended solutions will be confined to Harrodsburg Road and Man o’ War Boulevard within the defined study area, as well as the Beaumont Centre internal the street system. Recommendations will not include modifications to New Circle Road nor its interchange with Harrodsburg Road.

TASK 8. FACILITATE COMMUNITY INVOLVEMENT

The following meetings will be conducted as part of the community involvement plan.

Kickoff Meeting

At the onset of the study, Stantec will conduct a project kickoff meeting with the public agency stakeholders listed previously. The purpose of the meeting will be to discuss study goals,



expectations and desirable outcome, opportunities and constraints, and issues to be considered.

Project Team Meetings

A project team will be established to provide input and guidance to the consultant team. The project team will include representatives from the LFUCG (Traffic Engineering, Engineering, and Planning), the Lexington Area Metropolitan Planning Organization, and the Kentucky Transportation Cabinet. Three (3) project team meetings will be held during the course of the study.

Stakeholder Review Meeting

Before each meeting set to the public, Stantec will present the results of our analyses, identification and evaluation of alternative solutions, and recommendations to the public agency stakeholders (LFUCG, KYTC, and others). Additionally, four (4) meetings will be set aside for ad hoc meetings with public officials such as Lexington-Fayette Urban County Council members, other elected officials, and local government officials, as requested.

TASK 9. PREPARE PROJECT DELIVERABLES

A draft final report will be prepared. The final report will include:

- Identification of alternatives
- Future (10-year) operational conditions with recommended improvements
- Evaluation and comparison of alternatives
- Development of recommended improvements (both short-term and long-term) and opinions of probable cost
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A draft final report will be submitted to the project team for review. After receiving review comments from the LFUCG, the report will be finalized and submitted.

Executive Summary

This will be produced as a stand-alone brief summarizing the first state of the system and development, evaluation, recommendation and prioritization of alternatives.

Project Data Appendix

As designated in the RFQ, project deliverables will be submitted in both hard copy - eight (8) each - and electronic format. All relevant project data, including community engagement materials and feedback, will be included in a project data appendix.