

# WALTON AREA CONGESTION RELIEF



## US 25 Corridor Study

From KY 14/16 to North of the City of Walton  
Boone and Kenton Counties, KY  
Item No. 6-105.00

November 2023



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# US 25 CORRIDOR STUDY

## EXECUTIVE SUMMARY

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Item No. 6-105.00

Prepared for the  
Kentucky Transportation Cabinet

**LOCHNER**

by

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INTERNATIONAL

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## EXECUTIVE SUMMARY

### INTRODUCTION AND STUDY BACKGROUND

Rapid growth in commercial, industrial, and residential land uses in the Walton area, coupled with a steady rise in freight traffic on US 25, has created a need to improve mobility and safety in the area. The Kentucky Transportation Cabinet, in cooperation with regional and local governments, initiated the Walton Area Congestion Relief Study to identify improvement options at several key locations in the area. This document presents the options developed for the US 25 corridor through Walton; other area congestion relief strategies, including improving the I-75/KY 14 interchange, are being studied separately.

Funding for this project is identified in Kentucky's 2022-2028 Enacted Highway Plan (generally referred to as the Six Year Highway Plan) as Item No. 6-105.00. Currently, the Six Year Highway Plan includes only planning funds for this project.

### EXISTING CONDITIONS

The study area is located at the confluence of I-71 and I-75, approximately 13 miles south of the Cincinnati-Northern Kentucky International Airport and 16 miles southwest of downtown Cincinnati. The overall location of the project study area is shown in **Figure ES-1**. US 25 is one of the primary north-south routes through this area and is a major freight corridor. The I-71/I-75 corridor lies to the west of US 25 and includes the I-75/KY 14 interchange, at Walton. To the immediate east of US 25 for the majority of the project length, the CSX and Norfolk Southern railroad lines also run north-south, with several at-grade crossings in the Walton area.

The study segment of US 25 is a two-lane minor arterial located in one of the most rapidly developing areas in Kentucky. With a location that is advantageous to regional and national freight routes, and with extensive transportation infrastructure in place, northern Kentucky has become a hub for freight logistics and distribution services. With limited alternative routes, US 25 provides an important north-south connection for these industries.

Lined with historic buildings, US 25 serves as Walton's Main Street. It is used by a substantial number of pedestrians and includes on-street parking. With narrow, 10-foot travel lanes and 1-foot shoulders, its design is not compatible with current or expected future traffic volumes and types, which, in addition to local use, includes an increasing volume of heavy trucks. Various intersections along US 25 are also deficient.

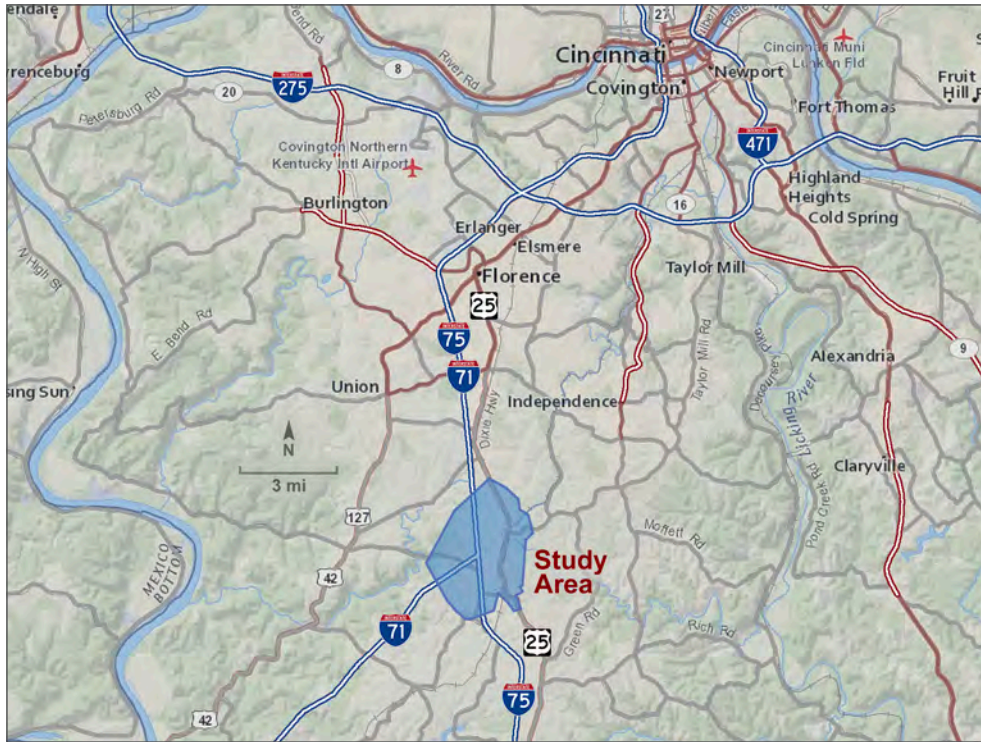


FIGURE ES-1 – Regional Location

There is local concern about recent increases in truck traffic on US 25, which is primarily the result of an increase in industrial development in the area. With many parcels on the periphery of Walton slated for additional industrial development, further increases in truck traffic on US 25 are expected. This is a concern because it is seen as incompatible with the City of Walton’s goal of protecting its small-town character.<sup>1</sup>

Currently, the corridor is not experiencing a large number of crashes, but the planned increase in industrial development to the north, east, and south of Walton will likely increase conflicts between vehicular traffic, pedestrians, and freight, which could increase the potential for crashes.

### STUDY GOALS AND OBJECTIVES

The primary purpose of this project is to improve regional connectivity and accommodate ongoing growth in the Walton area. Additionally, the Boone County Trans-

<sup>1</sup> Walton Main Street Strategic Plan. 2015. [https://www.boonecountyky.org/planning\\_commission/walton\\_main\\_street\\_strategic\\_plan.php](https://www.boonecountyky.org/planning_commission/walton_main_street_strategic_plan.php). Accessed March 2023.

portation Plan emphasizes several county-wide goals, four of which are considered secondary purposes of this project:

1. Improve safety and security for all travelers
2. Provide sufficient future capacity and mobility
3. Facilitate freight logistics
4. Support economic vitality

To help achieve these goals, the concepts developed for this project should strive to address the mobility needs of pedestrians, cyclists, and transit users, should consider the needs of freight and rail operations, and should seek to remove truck traffic from US 25 through Walton, as much as possible. Doing so would help achieve the goals of improving safety and mobility, facilitating freight logistics, and supporting economic vitality.

## **IMPROVEMENT CONCEPTS CONSIDERED**

Various concepts were developed for meeting the purpose of the project. These include Transportation System Management and Operations (TSMO) options and new corridor concepts. The No-Build concept also remains under consideration.

### **The No-Build Concept**

The No-Build Concept would maintain the existing year (2023) lane configuration and traffic control for all study area roadways and intersections.

### **Transportation System Management and Operations (TSMO) Concepts**

Referred to as spot improvements, three physical improvement TSMO concepts were developed, each intended to provide short-term, cost-effective ways of meeting the project purposes. Their locations are shown on **Figure ES-2**.

By providing operational improvements at three deficient locations, the proposed spot improvements would help achieve two of the Boone County goals: (1) Improve safety and security for all travelers, and (2) Provide sufficient future capacity and mobility. Improving sight distance and providing protected turns are expected to decrease crash frequency and thus improve safety. Removing turning movements from through lanes would help provide for future capacity and mobility. The spot improvements would not achieve the project's primary purpose, however: to improve regional connectivity and support ongoing growth in the Walton area.

#### ***Spot Improvement 1: US 25 and KY 14/KY 16 (Mary Grubbs Highway)***

The US 25 and KY 14/KY 16 intersection is approximately 0.75 miles east of the I-75/KY 14 interchange. The US 25 southbound approach, between the north end

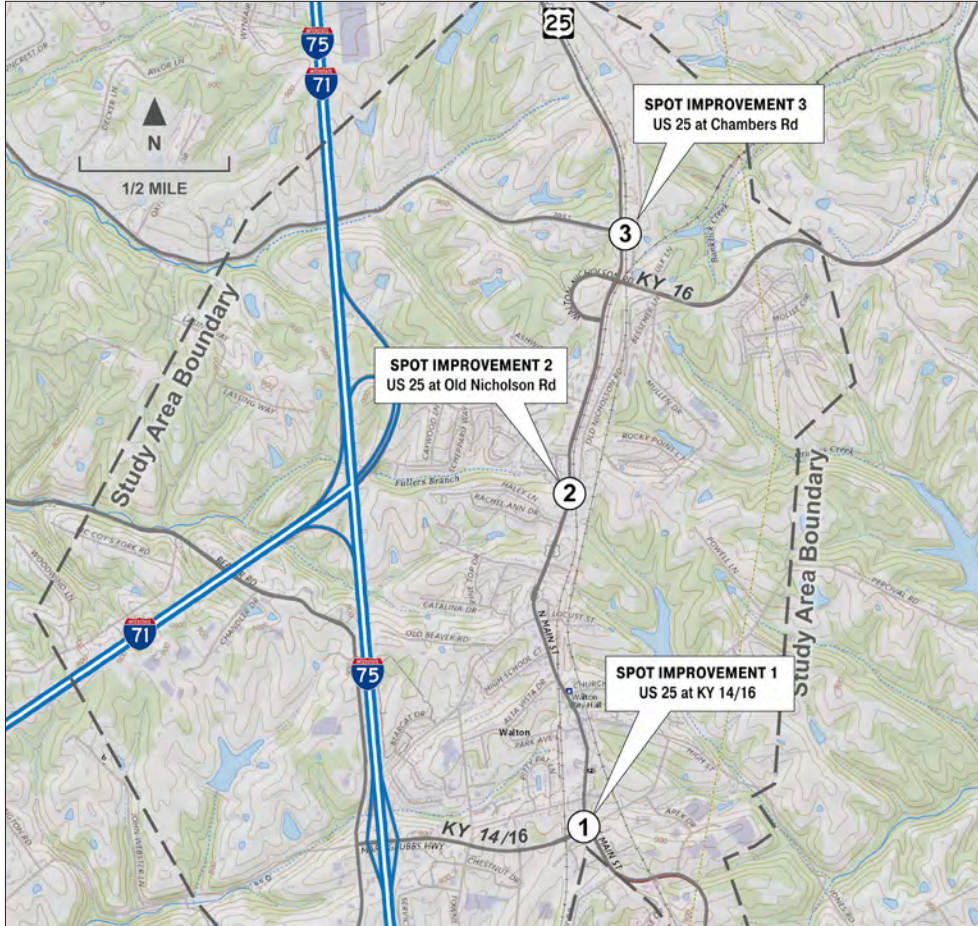


Figure ES-2 – Spot Improvement Locations

of Needmore Street and KY 14/KY 16, is a two-lane curb and gutter design. It abuts residential and business properties. Lack of dedicated storage or movement for right turn and through traffic causes delays and encourages cut-through traffic on local streets to reach KY 14/KY 16. The local streets in this area are not designed for the higher volumes caused by this cut-through traffic.

The KY 14/KY 16 eastbound approach to US 25 has documented crashes resulting primarily from lane change traffic movements. KY 16 is controlled access roadway, with dedicated left, through and right turn lanes and no private access.

As shown in red in **Figure ES-3**, Spot Improvement 1 would include widening this section to allow for dedicated right turn and through lanes, which would relieve traffic backups and reduce cut-through traffic. In this concept, the dedicated left turn lane would be extended for increased storage, along with upgraded striping, directional arrows, and signage, to improve traffic flow. Upgraded striping, directional arrows,

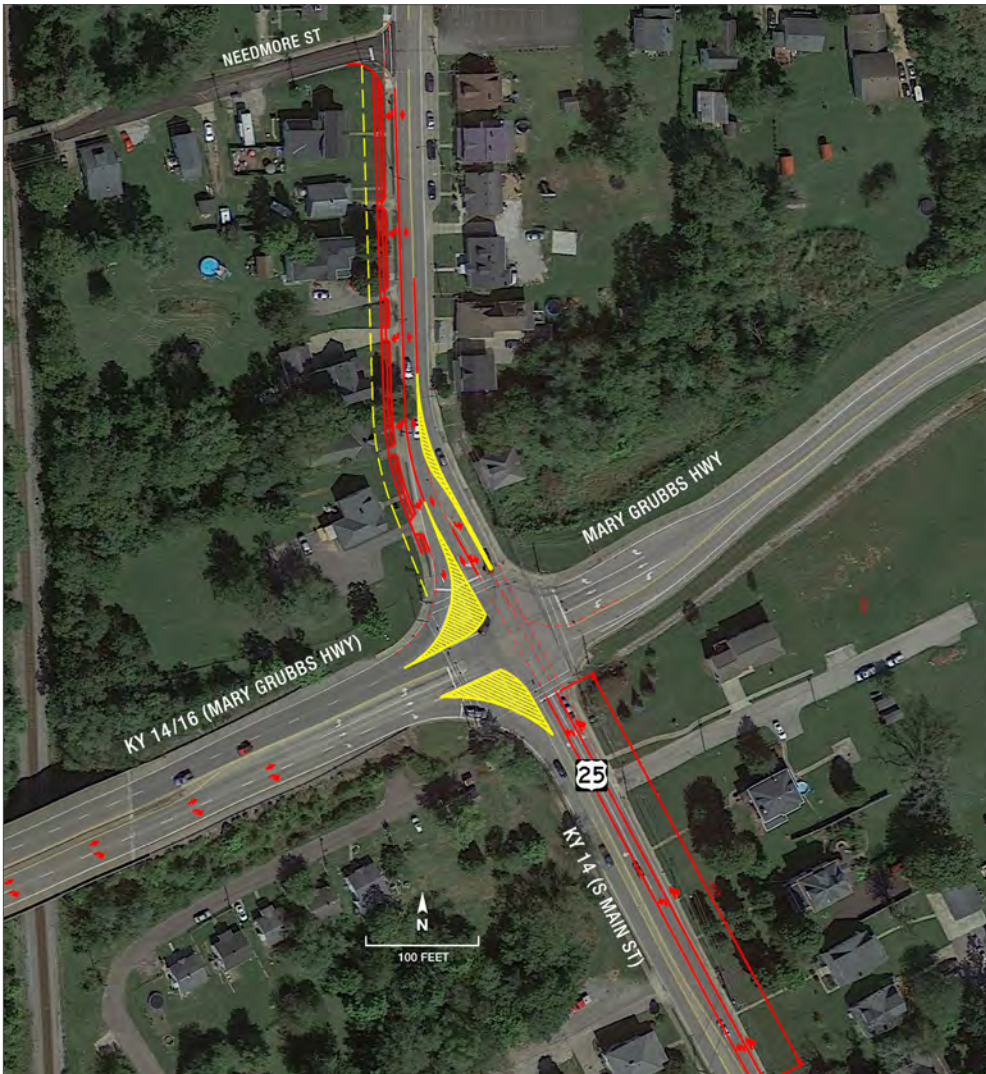


Figure ES-3 – Spot Improvement No. 1

and signing would be implemented on the KY 14/KY16 approach to improve traffic channelization, driver awareness, and safety.

This improvement would require two residential relocations, the purchase of additional right-of-way, relocation of utility service poles, relocation of storm sewer inlets, removal of driveway entrances, and modifications to existing sidewalks.

**Spot Improvement 2: US 25 and Old Nicholson Road**

The US 25/Old Nicholson Road intersection is approximately 1.3 miles north of the US 25 and KY 14/KY 16 intersection along US 25. As shown in **Figure ES-4**, the northern legs of the US 25 and Old Nicholson Road intersection are severely



Figure ES-4 – Spot Improvement No. 2 Realignment Options (Red and Blue)

skewed (by approximately 26 degrees). This intersection serves as the only point of access to residents and businesses on Old Nicholson Road, which is a dead-end to the north. North of the US 25 intersection, an at-grade crossing with CSX railroad frequently causes traffic disruption and limits traffic storage on Old Nicholson Road between US 25 and the railroad crossing. The southbound right turn radius from Old Nicholson Road to US 25 is too sharp to accommodate semi-trailer trucks. Lack of left-turn storage from southbound US 25 to Old Nicholson Road can also cause disruption to through movements in this location.

As shown in **Figure ES-4**, Spot Improvement 2 includes two intersection realignment options for the CSX at-grade crossing (one in blue and one in red). The northern option (blue) would provide semi-trailer truck storage for left turns from southbound US 25 and improve the northbound right turn radius from Old Nicholson Road.



The southern option (red) would provide semi-trailer truck lane storage between US 25 and CSX Railroad and improve the right turn radius for southbound Old Nicholson Road to access northbound US 25. Widening and adding a left turn lane would likely not be necessary; storage for one tractor trailer would be sufficient at the railroad crossing.

The third option (green) would connect Old Nicholson Road to Mullen Drive, approximately 0.33 miles north of the existing Old Nicholson/US 25 intersection. This new connection would make it possible to close the Old Nicholson Road at US 25 and eliminate the at-grade crossing of the CSX railroad tracks. It would, however, require a new at-grade crossing of the Norfolk Southern tracks (see **Figure ES-5**).

The northern option (blue) would potentially affect utility poles and would require right-of-way acquisition. The southern option (red) would potentially require utility relocations, right-of-way acquisition, and one business relocation. Likely impacts associated with the third option (green) include utility relocations at the project termini and right-of-way acquisition from the Norfolk Southern Railroad.

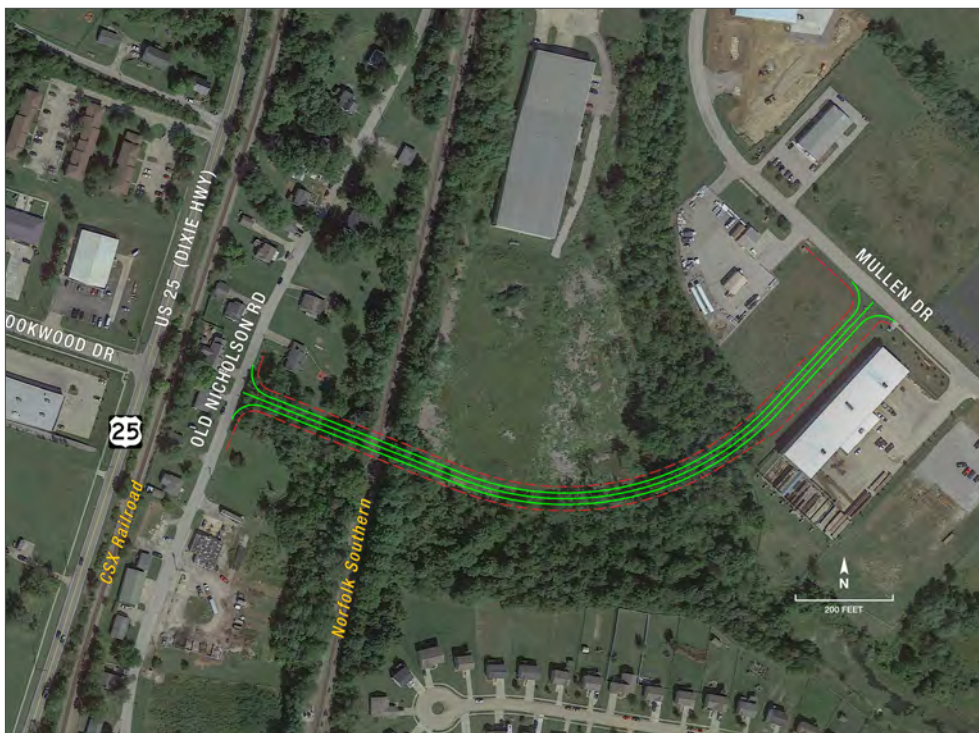


Figure ES-5 – Spot Improvement No. 2, Third Option (Green)

### Spot Improvement 3: US 25 and Chambers Road

As shown in **Figure ES-6** (on the following page), Spot Improvement 3 includes improvements to the US 25/Chambers Road intersection, which is approximately 2.1 miles north of the US 25 and KY 14/KY 16 intersection.

US 25 has a two-lane rural cross section through the Chambers Road intersection. To the east, Chambers Road crosses the CSX railroad at-grade and ties into Old Lexington Pike. Turning radii and sight distances are deficient for traffic turning movements at this intersection. Land uses along Chambers Road and US 25 are primarily residential through this section of the study area.

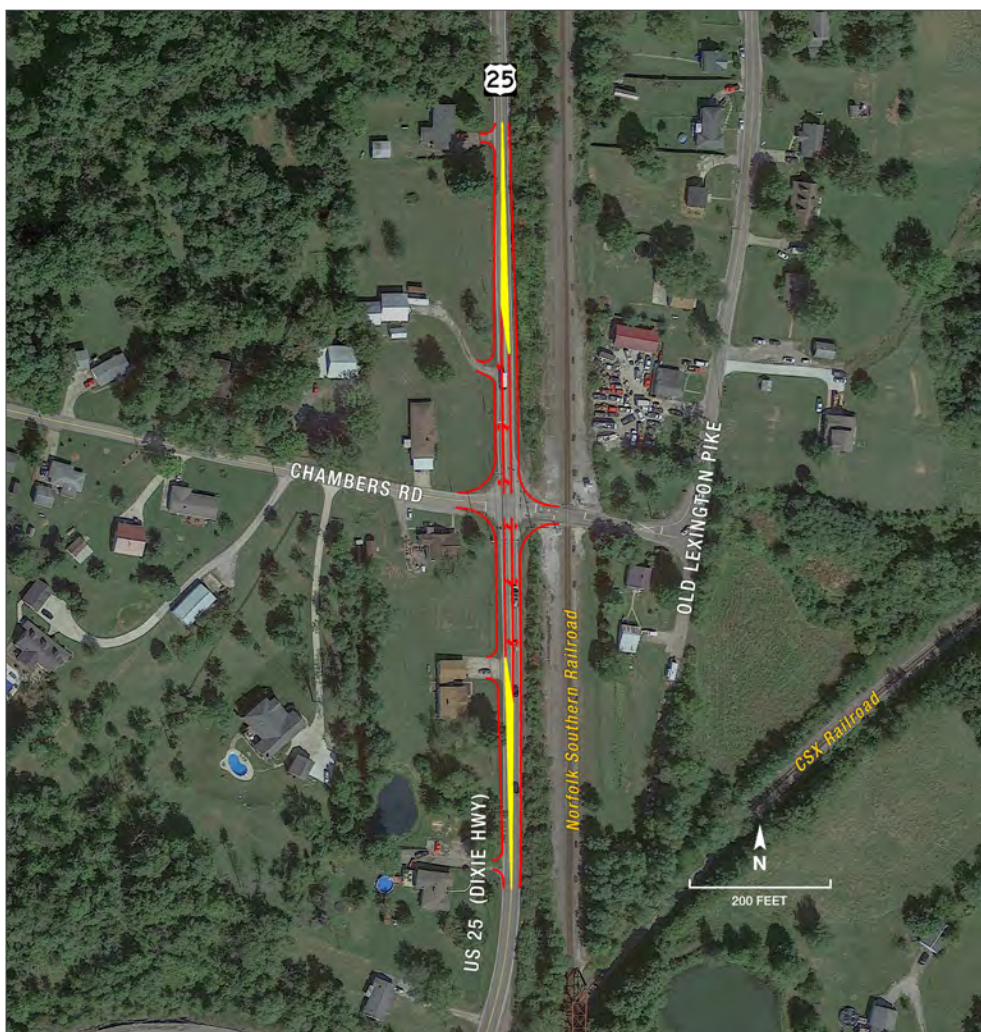


Figure ES-6 – Spot Improvement No. 3

Spot Improvement 3 includes northbound and southbound dedicated left turn storage lanes on US 25 at Chambers Road and increased turning radii at the intersection.

Potential impacts for this concept would be limited to one or more utility pole relocations, modification of the existing traffic signal, a water line relocation, and right-of-way acquisition.

### **Spot Improvement Costs**

The estimated costs for each spot improvement are shown in **Table ES-1**.

**Table ES-1 – Spot Improvement Cost Estimates**

	Spot Improvement 1	Spot Improvement 2			Spot Improvement 3
		Red Option	Blue Option	Green Option	
<b>Engineering and Design</b>	\$36,000	\$56,000	\$101,000	\$96,000	\$131,000
<b>Right-of-Way</b>	\$893,000	\$487,000	\$46,000	\$88,000	\$29,000
<b>Utilities Relocation</b>	\$78,000	\$180,000	\$180,000	\$29,000	\$106,000
<b>Construction</b>	\$239,000	\$379,000	\$671,000	\$636,000	\$871,000
<b>Total</b>	\$1,246,000	\$1,102,000	\$998,000	\$849,000	\$1,137,000

### **New Corridor Concepts**

While the spot improvements could be made with minimal new construction, a greater level of project benefits may result from concepts that would construct an entirely new roadway through the study area. Four new routes were developed for consideration, each with a different set of benefits and impacts. Two of these are west of US 25 and two are to the east. They have been named as follows:

- Western Concept #1 (Yellow)
- Western Concept #2 (Blue)
- Eastern Concept #3 (Red)
- Eastern Concept #4 (Green)

The locations of these four concepts are shown in **Figure ES-7**.

Each of the new corridor concepts has the potential to improve area connectivity and to help create a more robust regional highway network. In so doing, each would

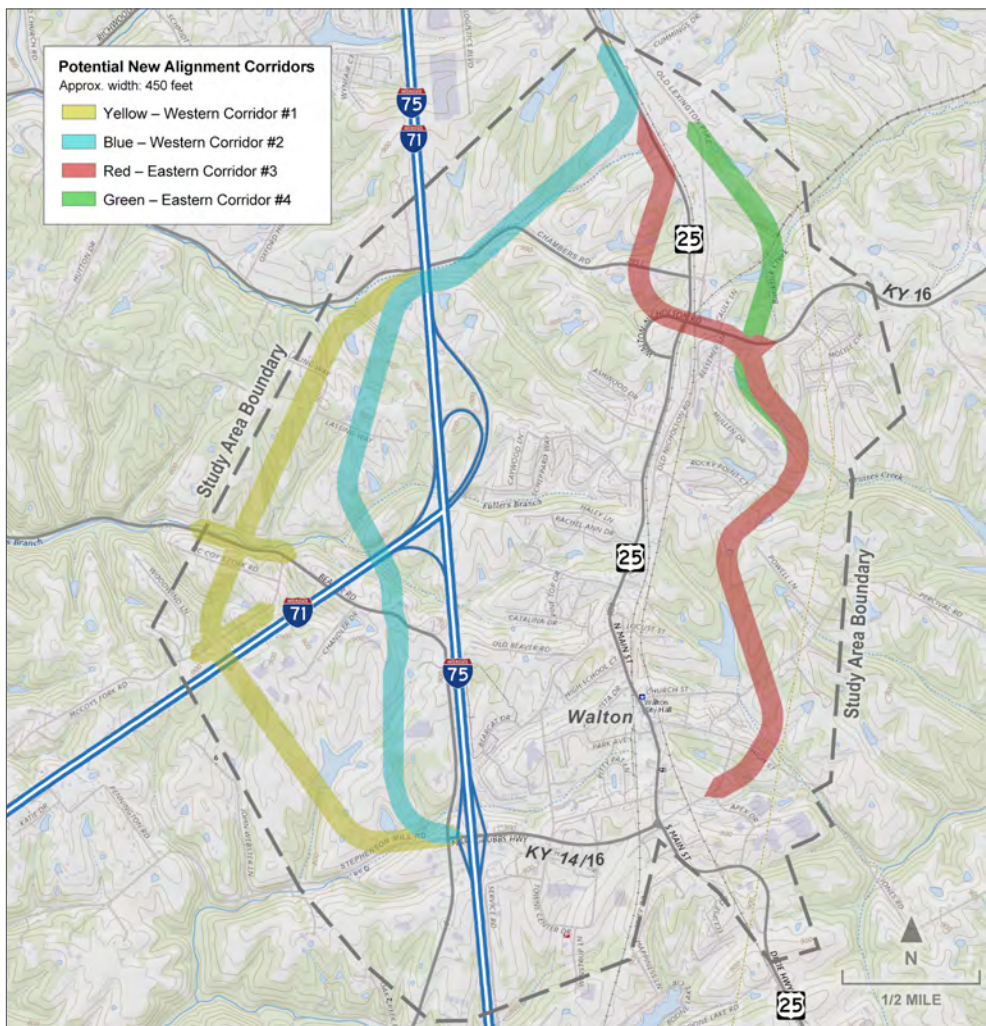


Figure ES-7 – New Corridor Concepts

support ongoing freight-oriented growth in the area. They also have the potential to reduce the volume of freight traffic on US 25, which would improve the pedestrian experience in Walton. These concepts would differ in the level of benefit they could potentially achieve, however.

Both western concepts are longer than the eastern concepts and thus both have higher projected travel times—which means they are projected to attract lower volumes of future traffic. Because they are shorter, the eastern concepts have lower travel times and would therefore attract more traffic.

Because they would require multiple bridges over interstate highways, the Western concepts are substantially more expensive than the Eastern concepts. These costs, and the other key potential impacts of the new corridor concepts, are shown in **Table ES-2**.

**Table ES-2 – Key Impacts of New Corridor Concepts**

	Miles of New Construction	Residential Relocations	Stream Impact (linear ft)	Wetland Impact (acres)	Farmland Impact (acres)	Historic Property Impact	Cost Estimate (\$ million)
<b>Alt 1</b>	4.8	10	6,400	2.4	17.1	0	39.7
<b>Alt 2</b>	3.6	6	3,206	1.6	20.8	2	33.0
<b>Alt 3</b>	2.9	6	1,366	1.2	10.9	1	18.6
<b>Alt 4</b>	2.9	6	3,160	2.0	8.8	0	17.8

## RECOMMENDATIONS

It is recommended that the TSMO spot improvement concepts be advanced when funding becomes available. These improvements would provide immediate safety and congestion relief benefits at a modest cost and with minimal impacts. They would continue to provide benefit even if a new corridor concept is advanced in the future.

If funding is available for a new corridor concept, both eastern concepts (#3 and #4) should be advanced for further study, as they provide the greatest benefit with the lowest cost and have fewer overall environmental impacts than the western concepts. They more directly serve existing and planned industrial and residential development and provide the opportunity to further evaluate and address the bridge carrying KY 16 over US 25, which is critical to the local traffic network. Combining corridor concepts #3 and #4 would improve direct access to US 25 and provide direct access to the developing industrial sites along Old Lexington Pike.

If advanced, the new corridor concept should be designed as the US 25 thru-movement, requiring turns onto existing US 25. This would make it easier to use the new route to access existing and future development and support the goal of reducing truck traffic through Walton. This goal could be further advanced by formally removing the US 25 designation from the existing route and designating the new route as US 25. This would require an interlocal agreement between KYTC and a local government (either Boone County, or the City of Walton) to transfer maintenance

of the existing route. That action would then allow a wide range of traffic calming and Complete Streets solutions that would not be possible if the route remains a designated truck route.

Complete Streets solutions should be advanced appropriate, based on anticipated future conditions. Complete Street concepts were not explored in detail, because the appropriate solutions will depend on other project decisions. If US 25 remains a designated freight route, then a modest implementation of sidewalk improvements through Walton to address gaps and poor conditions would be appropriate. If a new route becomes the designated US 25 route and the existing US 25 through Walton becomes a local street, more comprehensive solutions such as speed tables, sidewalk bump-outs, bicycle lanes, etc., should be considered to address the local vision for improved mobility for all modes. Each of these improvements would provide benefits and address portions of the project purpose and need. If all of these solutions are implemented, the projects purpose and need would be met.

## **NEXT STEPS**

Funding recommendations for future phases should be prioritized through KYTC's SHIFT (Strategic Highway Investment Formula for Tomorrow) process to feed into a future state highway plan. Once funding is secured, the next phase for the development of any future project is Phase I Preliminary Design, including environmental analyses, which is required to be eligible for federal funding for future phases. KYTC's STIP should be amended to reflect any future project development phases. Coordination with local officials, key stakeholders, and the public should be considered as part of the design process.

## **ADDITIONAL INFORMATION**

Written requests for additional information should be sent to:

KYTC Division of Planning  
ATTN: Director  
200 Mero Street  
Frankfort, KY 40622  
Phone: 502.564.7183