

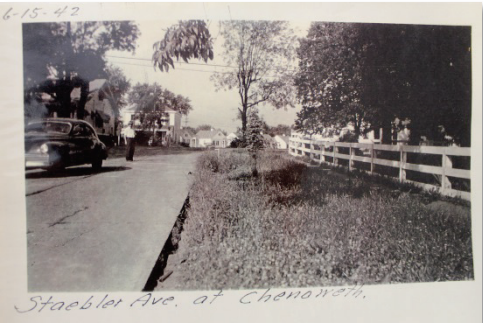
KY 1932 (Chenoweth Lane)

Corridor Study Executive Summary

US 60 (Shelbyville Road) to US 42 (Brownsboro Road)



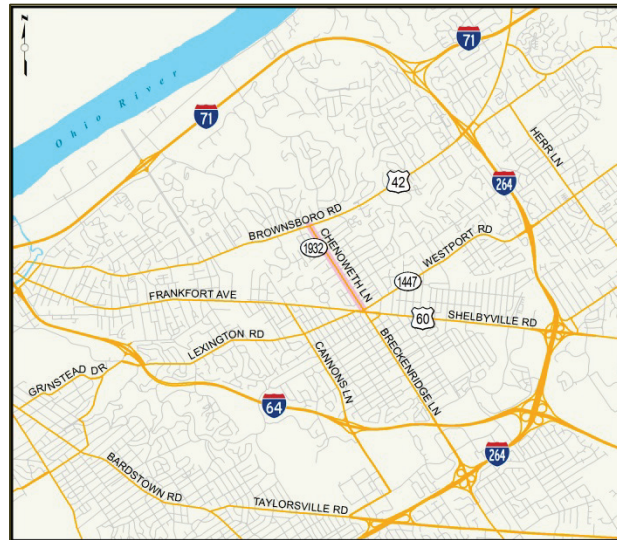
1875 Beers Atlas



1942 Staebler Ave at Chenoweth Ln

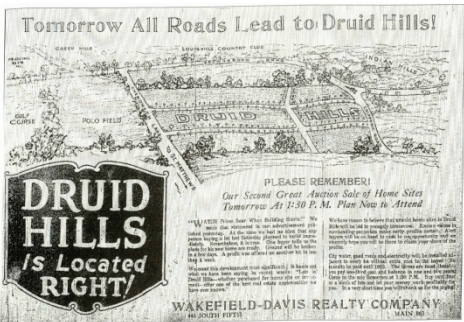


1913 Tax Map



**Jefferson County
Item Number: 5-531.00**

**Final
October 2016**



c. 1927 Druid Hills Flyer

In association with:

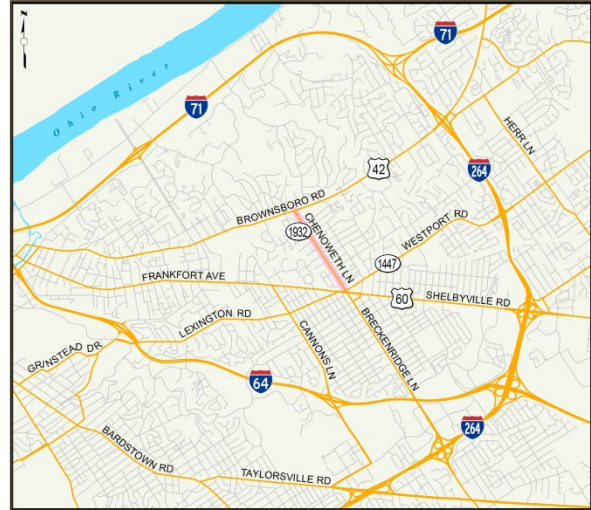


Groundbreaking by Design.

EXECUTIVE SUMMARY

The Kentucky Transportation Cabinet (KYTC) initiated a planning study in March 2015, to identify ways to improve safety, reduce congestion, and improve mode choice for non-motorists on KY 1932 (Chenoweth Lane) from US 60 (Shelbyville Road) 1.07 miles north to US 42 (Brownsboro Road) in Louisville, Jefferson County, Kentucky (**ES Figures 1 and 2**).

KY 1932 (Chenoweth Lane) is a state-maintained minor arterial route that provides local residents with access to work, school and shopping as well as access to larger regional state routes and destinations beyond. The roadway within this project area traverses or abuts at least six city jurisdictions. Over many decades, the KYTC has received and responded to numerous requests from these local governments to address congestion and safety issues throughout the corridor. Many development plans and access changes have also been implemented and/or proposed. These issues have had a cumulative impact on the functionality and character of the roadway over the years.

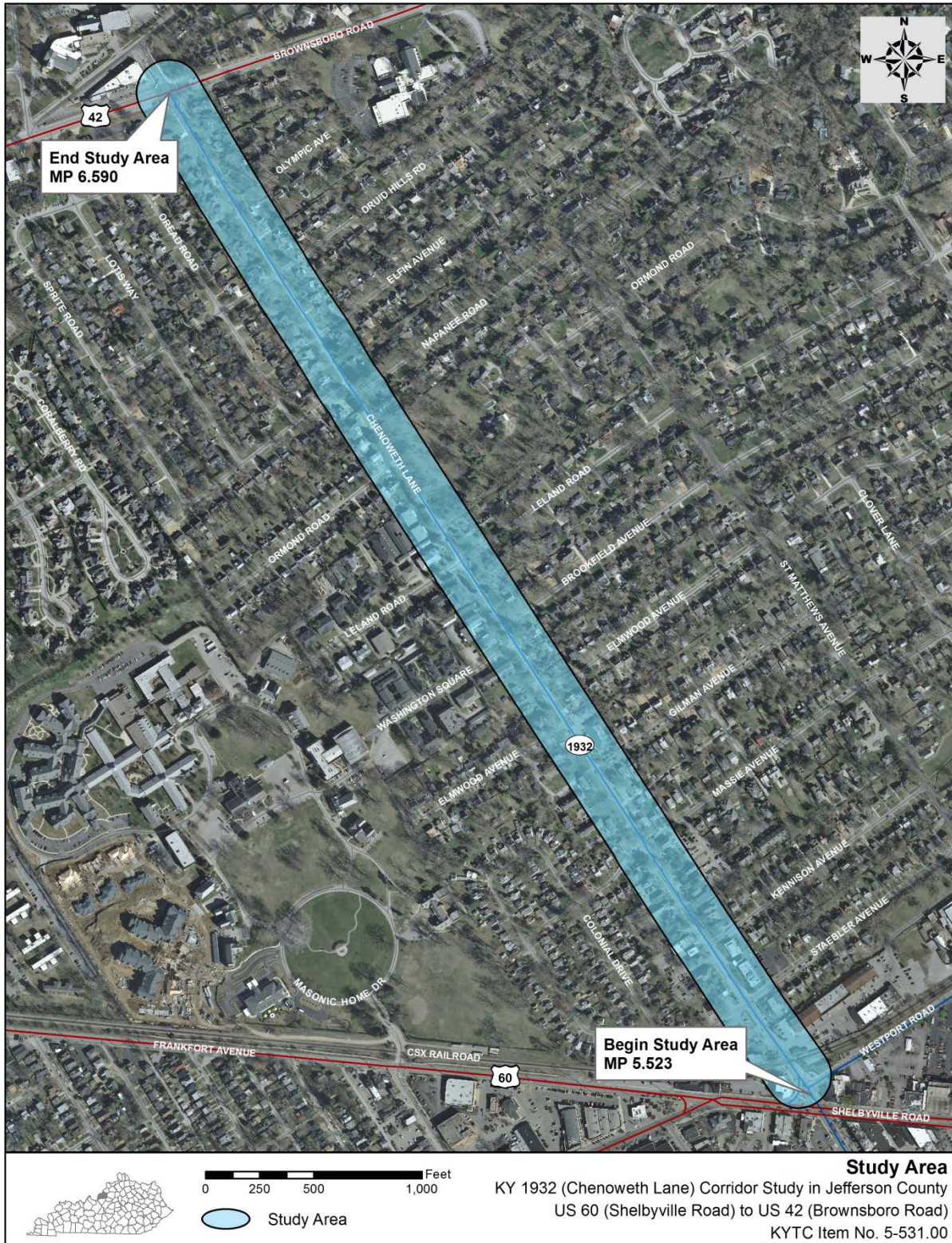


ES Figure 1: Location Map

In 1999, the KYTC proposed to take a comprehensive look at improving Chenoweth Lane between US 60 (Shelbyville Road) and US 42 (Brownsboro Road) by submitting the project for inclusion into the Kentuckiana Regional Planning and Development Agency's¹ (KIPDA) Long Range Transportation Plan. The project would be a mechanism to address the local concerns and to bring the road up to consistent and appropriate state standards. It was initially described and modeled as the most extreme case for improvement—3-lane widening from US 60 to US 42. However, at the time, no specific design concept, 3-lane or otherwise, was committed to construction. That would be determined in the Planning and Design phases. No funding was identified to begin the project.

In January 2014, representatives from the City of St. Matthews and KIPDA approached the KYTC requesting that the Cabinet lead the development of a plan that would identify needs and propose coordinated improvement concepts for Chenoweth Lane. St. Matthews had begun to develop some ideas for the southern half of the corridor, but recognized that their plans needed to be synchronized with those of other cities beyond their northern border at Leland Road and with the Cabinet's ultimate vision for the corridor. The KYTC recognized this as an opportunity to begin the work originally proposed in 1999. A single plan, led by the KYTC, would ensure good coordination of needed improvements, universal buy-in from all parties, and efficient use of available funding.

¹ KIPDA is the regional planning organization comprised of an association of local governments in a nine-county region of southern Indiana and north central Kentucky that includes Jefferson County. KIPDA is Louisville's Metropolitan Planning Organization (MPO).



ES Figure 2: Study Area

The KYTC agreed to lead the study and KIPDA agreed to support the project with SLO federal funding. Initial funding level estimates were based on the extreme case “Three Lane Widening” concept. From the start, the KYTC recognized that a planning study would be needed prior to design to understand corridor needs, coordinate community vision, and establish a widely accepted design concept. It would also provide more accurate cost estimates. All improvement options would be on the table ranging from “No Build/Do Nothing” to “Three Lane Widening.” Thus, in March of 2015, the KYTC initiated this study.

The study funding is identified in the KIPDA Transportation Improvement Program (FY 2015–2018 TIP adopted in 2014) as KIPDA Project ID 213. The project is also identified in Kentucky’s 2016–2022 Highway Plan as Item Number 5-531.00². Project funds for the future phases of design, right-of-way acquisition, and utility relocation are committed. And, although construction funds have not yet been committed, the KYTC expects the project could be ready for construction as early as 2021 or 2022 and would anticipate SLO as a likely source for that funding. This study serves as the first step toward identifying and recommending appropriate investment in the Chenoweth Lane corridor.

The project team was made up of staff from the KYTC, KIPDA, as well as consultants Qk4, Inc., and Stantec Consulting Services, Inc. The team studied existing conditions, developed a Purpose and Need Statement, engaged the public and local officials, completed traffic analyses, examined drainage, studied various alternatives, and made recommendations to be carried forward for further project development phases. A summary of that process is presented below.

PURPOSE AND NEED

The Purpose of the Chenoweth Lane project—from the CSX railroad crossing (just north of Shelbyville Road) to Brownsboro Road—is to (1) improve sight distance and safety for all users, (2) improve drainage along the corridor, and (3) improve pedestrian safety and mobility.

The Needs stem from narrow (east side) and incomplete (west side) sidewalks that do not meet Americans with Disabilities Act of 1990 (ADA) compliance, obstructions in the clear zones, inadequate drainage in the corridor, substandard shoulders, sight distance obstructions, and a higher than average crash rate in the southern section.

This Purpose and Need Statement is a result of this planning process and is, therefore, different (and more current) than the initial Purpose and Need Statement used in the KIPDA programming document. For example, one of the original project purpose elements, improve congestion, was eliminated during the planning process. It was determined through traffic analysis and community input that congestion was not a significant issue affecting the corridor.

Goals of the project are to (1) confine improvements within existing KYTC-owned right-of-way, (2) minimize impacts on established mature trees, and (3) maintain a roadway character that reflects the existing traditional and historic neighborhood setting.

² The FY 2016–2022 Highway Plan is the result of the process through which major highway projects are scheduled for the next six years. The plan was enacted by the Kentucky General Assembly on May 18, 2016.

EXISTING CONDITIONS

Chenoweth Lane is classified as an Urban Minor Arterial. It has two 11-foot travel lanes with a rural (drainage by grass ditches rather than curb and gutter) typical section, a 35-miles-per-hour (mph) speed limit, and numerous driveway access points. A near continuous (although substandard) sidewalk exists on the east side, and a sidewalk exists only along the southern half of the west side. A review of the Kentucky State Police crash data between the years of 2010 and 2015 indicated three pedestrians have been struck by vehicles at various locations along the corridor south of Elmwood Avenue. An at-grade CSX railroad crossing exists just north of US 60 that interrupts traffic flow numerous times throughout the day³. The average daily traffic (ADT) of the corridor is 11,900 vehicles with 9.7% trucks, and the southern section has three contiguous spots with statistically high crash rates (CCRF⁴ greater than 1.0). Numerous utility poles and trees line the corridor, some within the desired clear zone of 14 feet⁵. Drainage is substandard in certain areas. There are no designed bicycle facilities and transit does not serve the corridor, existing only at US 42 and US 60 at the project termini.

The land use is classified by Louisville Metro as a “Town Center” Form District in the southern portion of the corridor, and a “Neighborhood” Form District in the northern portion of the corridor. The south end of Chenoweth Lane is connected to downtown St. Matthews, a thriving, historic small city with genuine character.

PUBLIC INVOLVEMENT

Two meetings with elected officials and two open-house format public meetings were held at the Broadway Baptist Church in the study area. The first set of meetings was held on November 16, 2015, to present existing conditions and a range of typical section options and to gather public input concerning corridor needs. The second set of meetings was held on February 29, 2016, to present a set of build alternatives in addition to a No Build/Do Nothing Alternative.

It is important to note that the theme from the public at each of these meetings was near unanimous opposition to widening Chenoweth Lane. In addition to comments provided at the public meetings, local residents circulated petitions in hard copy and on-line, developed social media pages, wrote letters, and distributed flyers and stickers stating “Stop the Widening of Chenoweth Lane.” This message was communicated by the public to the KYTC and local media before any alternatives were developed as part of this planning study.

³ In an observed 55-hour period there were 53 train crossings ranging from 3:34-6:19 minutes in non-peak and 2:34-4:37 minutes in peak hours sometimes causing traffic to backup for nearly one-half the length of the corridor.

⁴ A Critical Crash Rate Factor (CCRF) greater than 1.0 is a calculated statistic (developed by the Kentucky Transportation Center) that indicates crashes may not be occurring randomly.

⁵ Clear Zone—The total roadside border area, starting at the edge of the traveled way, available for safe use by an errant vehicle.

TRAFFIC

A detailed traffic analysis was completed for this study. It included a collection of current traffic volumes and turning movements, analysis of existing traffic operations, and a forecast of future (year 2035) conditions assuming no improvements are made (i.e., a No Build/Do Nothing scenario). The 2035 forecast, based on a “worst case” 0.25% annual growth rate, showed traffic on Chenoweth Lane from the railroad crossing north to Brownsboro Road will not be over capacity and will operate at an acceptable level for an urban area, minus the disruptions from the railroad. For example, the 2035 No Build/Do Nothing volume/capacity (V/C) ratio—a standard analysis tool and metric for traffic engineers—ranges from 0.39 to 0.78, below the 0.85 threshold for signaling the onset of capacity-related issues. This discovery was an important factor in the alternatives development process, and was one of the four reasons causing the elimination of a three-lane alternative early in the planning process, before alternative concepts were developed.

ALTERNATIVES DEVELOPMENT

Alternatives were developed in phases. An initial set of alternatives was eliminated early on following the first round of Local Officials and Public meetings, and a short range of alternatives was presented to the public during the second round. A revised set of alternatives and costs based on public feedback was then discussed by the project team, who considered all of the information and public input.

Alternatives Eliminated Early: Widening the entire corridor to three lanes was eliminated early in the process, as was any option to widen the roadway to more than three lanes. There were four general reasons for this decision:

- Capacity analysis does not warrant additional lanes.
- Future growth projection does not warrant additional lanes.
- The public opposes the widening.
- Benefits will not be realized by the cost of a three-lane widening project.

Constructing a 10-foot wide shared-use (between bicyclists and pedestrians) path along one side of the road was also eliminated early. Likewise, widening the road to provide 5-foot bike lanes adjacent to each travel lane was eliminated early for the following reasons:

- A shared-use path would not connect to like facilities on either US 42 or US 60.
- Most cyclists utilize other routes.
- A bike lane would require widening Chenoweth Lane or a larger footprint, neither of which is desired by the public.
- Other north/south routes are available.
- The KYTC Bicycle/Pedestrian Review did not recommend a shared use path.
- Some cyclists currently ride St. Matthews Avenue to Napanee Road then north on Chenoweth Lane to US 42.

In addition to the listed rationale for eliminating these alternatives, neither of them would have been in concert with the three goals of the project: (1) confine improvements within existing KYTC-owned right-of-way, (2) minimize impacts on established mature trees, and (3) maintain a roadway character that reflects the existing traditional and historic neighborhood setting.

Alternatives Presented to the Public: A No Build/Do Nothing Alternative and two build alternatives were presented to the public.

Alternative 1—No Build/Do Nothing

Improvements would not be made to Chenoweth Lane and existing conditions would remain, except for routine maintenance.

Alternative 2—Urban

Drainage would be managed through curb and gutter (an urban typical section) from the railroad crossing to US 42.

This alternative had four major elements: (1) provide curb and gutter along the entire corridor while replacing the deep grass ditches with an underground storm water system and make other minor site-specific drainage improvements, (2) include improvements to sidewalks and continuous sidewalks on both sides of Chenoweth Lane, (3) include a 135-foot-long left-turn lane in both directions at Massie Avenue as the only element that widens the roadway, and (4) provide signage indicating a bike route from Massie Avenue to Brownsboro Road.

The majority of this alternative could be constructed inside the existing KYTC right-of-way with minimal impacts.

Alternative 3—Urban and Rural

Drainage would be managed through curb and gutter from the railroad crossing to Massie Avenue, then managed through grass ditches (i.e., a rural typical section but with improved ditches and less depth than the existing conditions) from Massie Avenue to US 42.

This alternative is similar to Alternative 2, except for element (1), “curb and gutter along the entire corridor.” Alternative 3 has four elements: (1) provide curb and gutter only in the commercial area of Chenoweth Lane, from Massie Avenue south, while replacing the deep grass ditches with an underground storm water system; but also provide site-specific drainage improvements to the rural section north of Massie Avenue, (2) include improvements to sidewalks and continuous sidewalks on both sides of Chenoweth Lane, (3) include a 135-foot-long left-turn lane in both directions at Massie Avenue as the only element that widens the roadway, and (4) provide signage indicating a bike route from Massie Avenue to Brownsboro Road.

As with Alternative 2, the majority of the improvements could be constructed inside the existing KYTC right-of-way with minimal impacts.

Revised Short-List of Alternatives: Based on public input and the traffic analysis, element (3), “a 135-foot-long left-turn lane in both directions at Massie Avenue,” was eliminated from both build

alternatives after the second public meeting. The public opposed this widening element, and the traffic analysis showed it provided minimal benefit—existing and future traffic would operate at acceptable levels at this intersection without these left-turn lanes. It should be noted the future design of this concept would include access management strategies through the commercial section.

RECOMMENDATIONS

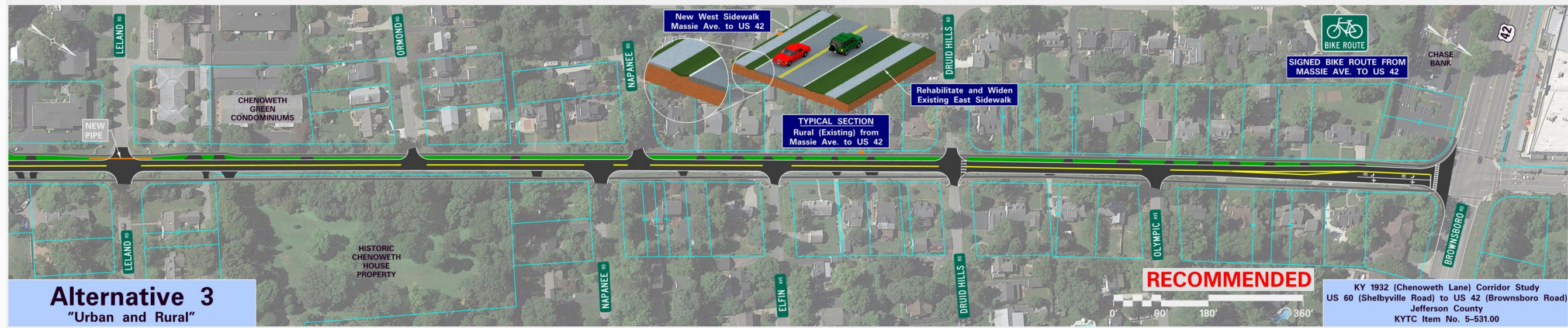
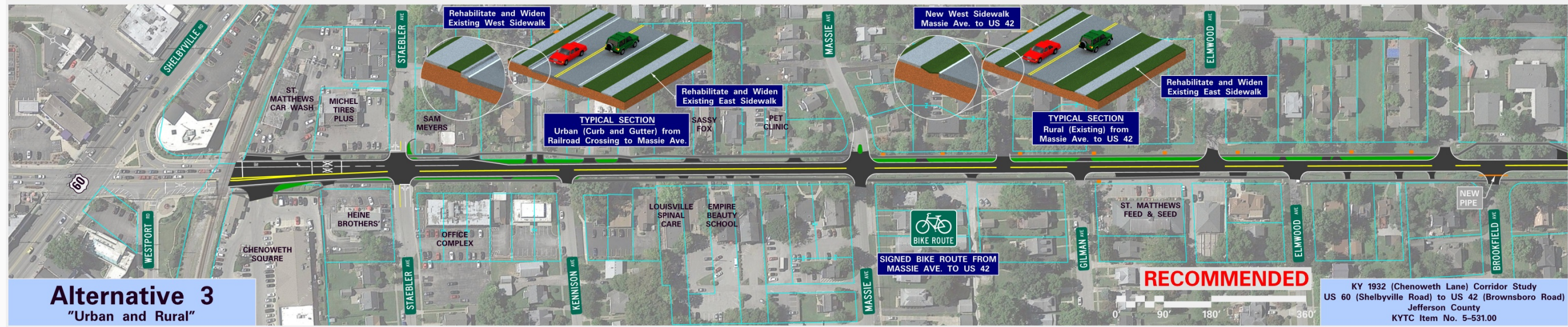
Based on existing conditions, the traffic analysis, impacts, public input, and engineering judgment, the project team recommended Alternative 3 be carried forward to the next project development phase, with the following changes: exclude the left-turn lanes at Massie Avenue, and include access management strategies through the commercial section. North of Massie Avenue, the project would include sidewalks on both sides and site-specific drainage improvements (**ES Figure 3**). It was agreed this build alternative was in line with the Purpose and Need of the project, compatible with the neighborhood setting, and acceptable to the public. The cost estimates for Alternative 3 are presented in **ES Table 1**. It should be noted that these planning-level cost estimates are significantly below the cost estimates presented in the KYTC’s 2016–2022 Highway Plan, which provides a budget that is slightly more than \$5 million for all future phases.

As standard practice, Alternative 1 (No Build/Do Nothing) will be carried forward to the next phase as a comparison to the recommended build alternative.

ES Table 1: Cost Estimate Summary for Alternative 3

Alternative	Design	Right-of-Way	Utilities	Construction		Total
				Railroad to Massie Avenue	Massie Avenue to US 42	
Alternative 3 Urban and Rural	\$800,000	\$215,000	\$625,000	\$350,000	\$550,000	\$2,540,000

Following Project Team Meeting No. 3, cost estimates were revised to include additional contingencies requested by KYTC and improvements to the existing railroad crossing.



ES Figure 3: Alternative 3—Urban and Rural