Report for

City of Lexington, Kentucky

East Lexington Trail Connectivity and Traffic Safety Study

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INTRODUCTION

The Lexington Metropolitan Planning Organization's (MPO) Regional Bicycle and Pedestrian Master Plan (BPMP) proposes a system of shared use trails and on-road bicycle facilities that provide connections for people of various skill and comfort levels to safely bicycle and walk throughout the Lexington metropolitan area. The system of major bikeways identified in the plan is expected to provide the highest levels of connectivity, to extend from the rural edges of Fayette County into downtown Lexington, providing connections into adjacent counties, and attracting the greatest number of users (including children and other less-skilled users that desire a high degree of separation between trail facilities and vehicular traffic).

The BPMP included a goal to create a major bikeway to connect east Lexington to downtown. This major bikeway will extend from the trailhead at the Isaac Murphy Memorial Art Garden (IMMAG) to the Brighton Rail Trail. There are currently three planned capital improvement projects that will extend the trail toward downtown to the intersection of Liberty Road and Henry Clay Boulevard. The purpose of this study is to identify routing alternatives and transportation improvements to construct a major bikeway from IMMAG to the intersection of Liberty Road and Henry Clay Boulevard. The study will also help inform the design of the Liberty Road reconstruction.

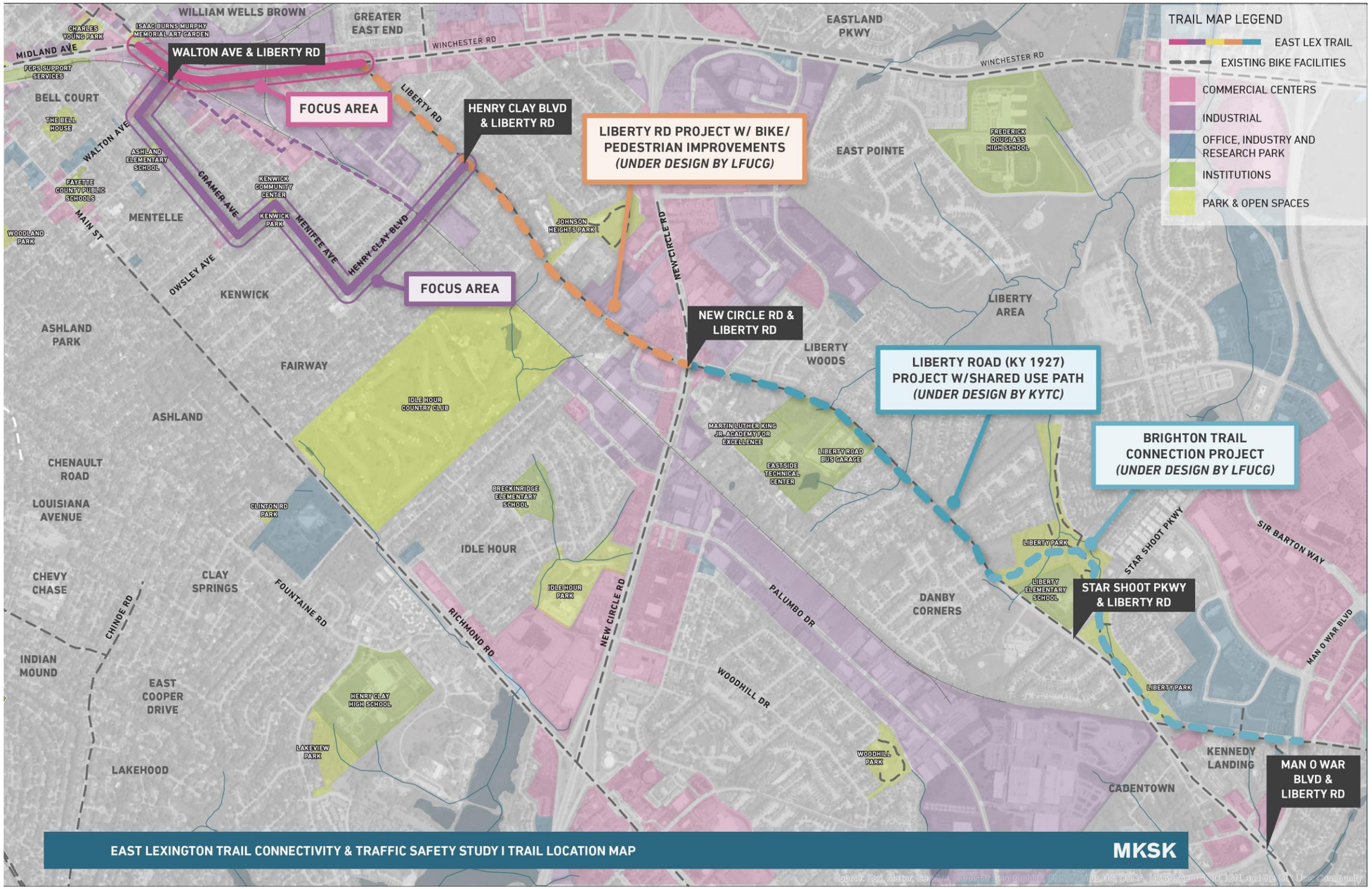
PLANNING CONSIDERATIONS

Under KYTC's guidance, the Liberty Road (KY 1927) corridor is currently nearing design completion for the final phase of its Liberty Road widening improvements where a five-lane urban roadway will replace the currently overcapacity two-lane rural roadway section. This project will include a new 10-foot shared-use path along its entire length, which extends from Liberty Elementary School to New Circle Road. Within the limits of the project, Lexington-Fayette Urban County Government (LFUCG) is also developing a new linkage that will connect the Liberty Trail to this system, which will, in-turn, extend continuity of the Brighton Trail along this corridor. KYTC is also currently evaluating the New Circle Road and Liberty Road intersection to address the need for a safe trail crossing of the Brighton Trail for continuation of this facility to its proposed downtown terminus. Together with LFUCGs planned improvement of Liberty Road from New Circle Road to Winchester Road, it is vitally important that an overarching trail implementation strategy be identified that will facilitate the City's goals for this major bikeway system. With these efforts ongoing, the focus area of this study was between IMMAG and the Liberty Road and Henry Clay Boulevard intersection, as shown on in Figure 1 (page 2).

FACILITY ROUTING AND DESIGN CONSIDERATIONS

In conducting a study to evaluate suitable routes for retrofitting a new trail system into a densely developed urban environment, there are several key factors that must be carefully considered. Among others, these can range from private property impacts and user safety to facility type and dominant user groups. The process of evaluation is also equally important in gauging the interest of the public and affected neighborhoods and businesses to better understand factors that may influence decision making. To this end, the study effort included a targeted Web-based public outreach effort to solicit feedback from area neighborhoods along the corridor from the East End area of the downtown to the Hamburg area neighborhoods. Additional outreach was also extended to key stakeholders along the corridor in considering related needs for trail routing. Collectively, more than 1,000 survey questionnaire responses were received, providing feedback in support of this study, which is summarized in Appendix D. Following is a discussion of key trail routing and design considerations based on this outreach initiative.

Figure 1 East Lexington Trail Connectivity and Traffic Safety Study Trail Location Map



A. Facility Type

As envisioned, this trail system is to become a major bikeway that will connect to Legacy Trail and Town Branch Commons providing access to more than 28 miles of the City's trail network that extend throughout the north and west of the City. As a major bikeway system, the design character of the trail will be important in helping end users to easily identify the trail route while satisfying concerns for safety. In assessing public feedback, the majority of respondents prefer a separated facility that more visibly projects an image of a shared-use trail for users of all ages. There were also a large number of respondents that distinguish themselves as avid or commuter cyclists that prefer separation of bicycle traffic from pedestrian traffic. Given this broad spectrum of user experience, it will be important to consider need and alternatives for both preferences where opportunities exist.

B. Existing Right of Way (ROW)

Existing ROW width is an important consideration for retrofit trail design in mitigating needs for private property impacts. For purposes of this study, property research was performed to determine available ROW widths for each segment of the routes that were evaluated. This included review of available record plats for adjacent neighborhoods and ROW plans for major roadways under consideration. In certain locations, conflicting record documents required evaluation and deferral to what was deemed as the most credible source document. These instances will need further review as final routes are selected and considered for implementation. Private property impacts are not just limited to ROW width, as in several circumstances encroachments were identified. These included parking areas for adjacent businesses where portions of the parking area are located both within ROW and on private property. For these instances, routing solutions were developed to identify and reasonably mitigate such impacts to the extent practicable without adversely affecting the preference for a separated trail facility.

C. On-Street Parking

Impacts to existing on-street parking is another common concern for trail retrofits in urban environments. To better understand the importance of on-street parking usage along the study routes, parking counts were conducted at different times during the period from May 26 to June 29, 2022. The counts included weekday and weekend periods as well as varied time of day to establish peak and average on-street parking counts for the various segments comprising each routing alternative. The evaluation also considered each side of the street to identify trail routing solutions that minimize adverse impacts to on-street parking needs. This information was collectively reviewed and used in outlining the alignment recommendations for each trail routing alternative. The numeric results of this analysis can be seen in the narrative summaries for each routing alternative corridor segment.

D. Conflicting Vehicular Movements

Routing a major bikeway through the urban core of Lexington provides great connectivity, but also results in more frequent conflicts with vehicular traffic. As such, reducing the number of conflicting vehicular movements is a key safety consideration. For the trail routing alternatives, the number and type of driveway crossings and street crossings for a given segment on a given side of the street were documented. This information helped determine the trail routing for each study alternative.

E. Intersection Improvements

To complete the final connection of Brighton Trail with the IMMAG, an at-grade crossing of US 60 (Midland Avenue and Winchester Road) is required. This arterial roadway is a major transportation corridor to downtown while also serving as truck transit corridor for the J.M. Smucker Company. The J.M. Smucker Company is currently served by more than 40 semi-trailer trucks entering and leaving this plant on a daily basis. With the anticipation for increased truck traffic in the future, the study included a review of existing and planned traffic to facilitate an improved trail crossing for locations at Third Street and Midland Avenue and at Winchester Road and Walton Avenue. Roadway modifications were explored and considered to incorporate traffic calming features for this major gateway to downtown.

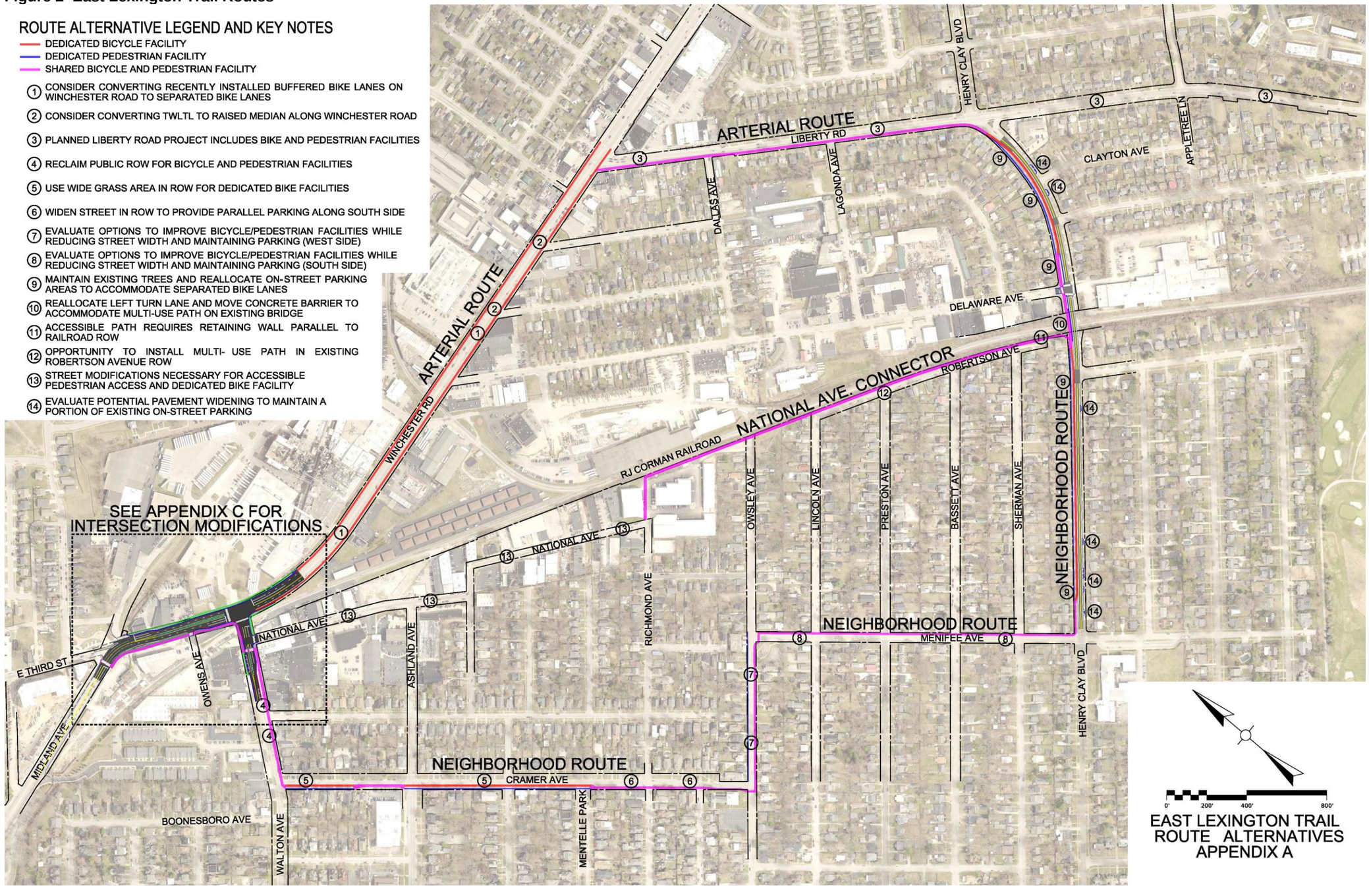
TRAIL ROUTING ALTERNATIVES

Two separate routing alternatives were developed for the trail between IMMAG and the Liberty Road and Henry Clay Boulevard intersection. The primary difference between the alternatives is that one follows arterial roadways along a more direct route, and the other uses neighborhood streets where lower traffic volumes and vehicular travel speeds are predominant. Figure 2 highlights the two alternative routes considered in the evaluation. A 11x17 version of this figure is provided in Appendix A.

The narrative included in Appendix B shows the division of each route into segments and describes the existing conditions and proposed typical sections. From IMMAG, the Arterial Route continues east along Winchester Road to the Liberty Road intersection. The route turns onto Liberty Road and continues east to the Henry Clay Boulevard intersection for a total of 0.82 miles. The Neighborhood Route follows local streets with less traffic and lower travel speeds; however, it is a less direct route at 1.48 miles long that is 80 percent longer than the Arterial Route. After turning south on Walton Avenue, the route continues for 0.10 miles to the Cramer Avenue intersection. The route then turns east onto Cramer Avenue and continues for 0.45 miles to the Owsley Avenue. The route turns north following Owsley Avenue for 0.14 miles to Menifee Avenue. The route turns east on Menifee Avenue and continues for 0.31 miles to the Henry Clay Boulevard intersection. The route turns north on Henry Clay Boulevard for 0.48 miles before reaching Liberty Road.

The National Avenue Connector addresses the public comments expressed for the trail route to parallel the railroad. The railroad continues to remain active and is operated by RJ Corman Railroad Company while the land is owned by CSX Transportation. Because CSX's policy does not permit trails that parallel active railroads, the National Avenue Connector would have to remain off railroad property and extend from Henry Clay Boulevard and tie to National Avenue at Richmond Avenue. The portion parallel to Robertson Avenue could be constructed within the existing 50-foot public ROW, however other portions are anticipated to require ROW acquisition. National Avenue currently has a 40-foot public ROW with no dedicated bicycle facilities and no sidewalk connectivity. Many land uses along this segment of National Avenue are still active commercial uses with back-out parking and continuous paved access points. Some commercial buildings extend to the railroad ROW limiting the feasibility of a dedicated bicycle facility on the street or parallel to railroad ROW. If the National Avenue Connector is constructed, street modifications will be necessary to provide accessible pedestrian facilities. Driveways and parking spaces should be defined and consolidated where possible. Continuous paved access points should also be defined. If these areas redevelop, there is potential for a streetscape project that would include dedicated bicycle facilities and pedestrian accommodations or ROW dedicated for a future public project along this corridor to complete this connection.

Figure 2 East Lexington Trail Routes



RECOMMENDED PROJECT SECTIONS

A second round of public input included an online questionnaire and a public meeting held on June 7, 2023. The public input was solicited to hear reactions to the possible improvements to see how well the ideas address comfort and safety as a trail user and how satisfied the respondents were with the trade-offs that may be necessary to make the improvements. Based on the public feedback, which is summarized in Appendix D, the general preference was for the neighborhood route to be the official signed route for the Brighton Trail; however, there was support for continued improvements to the bicycle facilities along the arterial route. Based on the feedback received, the following project segments are recommended.

A. US 60 from Third Street to Walton Avenue, and Walton Avenue

US 60 (Winchester Road and Midland Avenue) is a principal arterial with a posted speed limit of 35 miles per hour (mph) with more than 25,500 vehicles per day (vpd) and is maintained by KYTC. Improvements to Winchester Road from Third Street to Walton Avenue, to provide dedicated bicycle facilities, are anticipated to require full roadway reconstruction for both the neighborhood and arterial routes. Appendix C shows a conceptual drawing of the reconstruction of US 60 from Third Street to Walton Avenue. The shared-use trail is shown to cross US 60 on the Midland Avenue approach on the west side of the intersection. Right turns from Third Street onto US 60 are restricted; therefore, the only conflicts with the trail crossing are for illegal right turns. The crossing also avoids pedestrian and bicycle conflicts with J.M. Smucker Company truck traffic entering at Midland Place. After crossing US 60, the trail continues along the south side of Winchester Road to the Walton Avenue intersection. Figure 3 shows a conceptual rendering of the shared-use trail along the south side of US 60. Two-thirds of Questionnaire No. 2 respondents were very comfortable with this facility. Bicycle traffic could continue east along US 60 in the recently remarked buffered bike lanes or continue down the shared-use trail along Walton Avenue. The width for a continuous westbound bicycle lane on the north side is restricted by two commercial buildings; therefore, the dedicated bicycle facility is merged with a wider 8-foot minimum path. (See Appendix C, Exhibit 1.)

Figure 3 Conceptual Rendering of the Shared-Use Trail Along the South Side of US 60

Modifications to the existing 200-foot horizontal curve are not anticipated due to the potential to encourage higher travel speeds into the Midland Avenue corridor. To help provide traffic calming leading into the horizontal curve, a raised landscape median is planned west of Walton Avenue. This raised landscape median also allows for aesthetic enhancements on this important gateway to downtown Lexington. The limits of the raised median should be evaluated during the design, as it would restrict left-turning movements into and out of Owens Avenue and the 621 Winchester Road.

Through previous projects, LFUCG has heard concerns regarding travel speeds coming into Third Street, which is visually aligned with Winchester Road. The westbound Winchester Road to Third Street traffic is only stopped when a pedestrian is crossing Third Street. The visual alignment, lack of traffic restrictions, and continuous lane contributes to higher travel speeds entering Third Street. The conceptual drawing shows reducing the additional lane to closer to Third Street to help reduce travel speeds into the corridor, while providing additional space for bicycle and pedestrian traffic.

A connection to the National Avenue Entertainment District and the residential area would continue along Walton Avenue. The crossing of Walton Avenue is shown south of National Avenue to allow for a median refuge island to be installed opposite of the dedicated left-turn lane into National Avenue. The median refuge island helps provide traffic calming, while allowing the trail user to cross one direction at a time. Additional crossing enhancements, such as a raised crossing, should also be considered during the design. Streetscape enhancements are anticipated to include parallel on-street parking along both sides and a shared-use trail along the east side of the roadway, as shown in Exhibit 2 of Appendix C. The Walton Avenue streetscape improvements are anticipated to be extended to Hambrick Avenue to allow enhancements to the existing uncontrolled pedestrian crossing of Walton Avenue. The project is anticipated to require modifications to private encroachments into the existing 80-foot ROW.

B. Arterial Route–US 60 (Winchester Road) from Walton Avenue to Liberty Road

As part of a June 2023 resurfacing project of Winchester Road, KYTC has reduced the existing 11-foot drive lanes to 10-foot drive lanes and marked a 5-foot bike lane with a 3-foot buffer from Walton Avenue to Liberty Road. KYTC has extended the enhanced bicycle lanes to the east to Industry Drive. The buffer KYTC has installed provides the space to install a vertical elements (such as concrete medians, wheel stops, and delineator posts) to convert the buffered bike lanes to the BPMP-recommended separated bike lanes based on the operating speed and vehicular volume as shown in Figure 4. FHWA's *Separated Bike Guide* includes guidance on forms of separation, which help to provide greater comfort and safety for bicyclists. LFUCG could consider adding vertical elements that do not require roadway reconstruction as an interim measure.

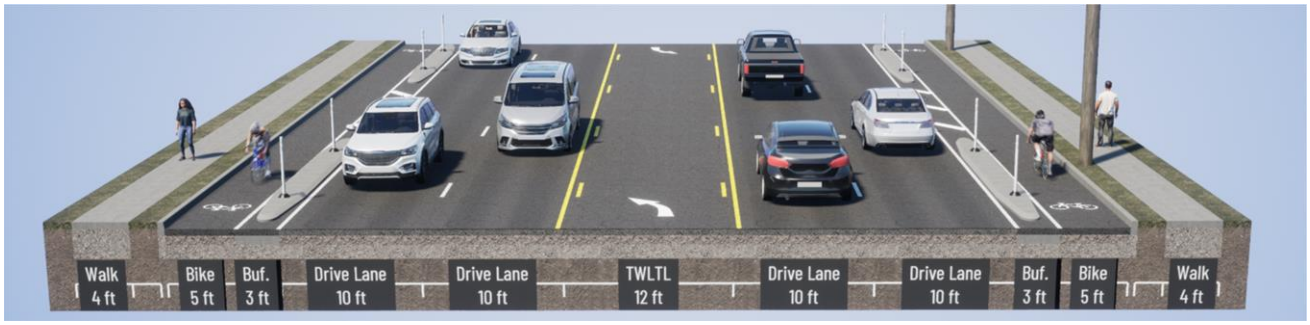


Figure 4 Typical Section Showing Vertical Elements within the Recently Marked Buffer

If a corridor study or a planned construction project is completed for the roadway, additional enhancements to provide a more continuous separation along with a raised median should be considered.

C. Arterial Route–Liberty Road

Liberty Road is a minor arterial with a posted speed limit of 35 mph (with more than 11,400 vpd). Liberty Road is maintained by LFUCG. LFUCG has a planned project to reconstruct Liberty Road from Winchester Road to New Circle Road. The BPMP-recommended facility type based on operating speeds and vehicular volume is a separated bike lane or shared-use trail. The project will consider and evaluate typical sections that include pedestrian and bicycle facilities.

D. Neighborhood Route–Cramer Avenue

Cramer Avenue is a minor collector street with a posted speed limit of 25 mph, with less than 1,600 vpd. The narrow 24-foot curb-to-curb width allows on-street parking on the north side only and help lower travel speeds with some vehicles queuing to allow opposing vehicles to pass. The street today meets the BPMP criteria for a bicycle boulevard within the wide 80-foot public ROW. Before physical construction, an interim option of adding shared lane markings and bicycle-oriented wayfinding signage is recommended to help further emphasize priority of bicyclists on this already bicycle-friendly street.

The questionnaire respondents that identify themselves as highly confident riders prefer separated bicycle facilities to shared-use trails. Highly confident riders were 66 percent of the respondents in Questionnaire No. 2 compared to 28 percent in Questionnaire No. 1. In Questionnaire No. 2, 84 percent of respondents would be very comfortable bicycling or walking along a street with a separated two-way bike lane shown in Figure 5. A shared use trail was shown in restricted segments from Mentelle Park to Owsley Avenue where back-out parking was being replaced with additional on-street parking along the south side. The public survey indicated that fewer skilled riders would feel comfortable transitioning to a shared use trail in this setting. Additional evaluation of these concerns, and possible design features to mitigate them, should be completed in the design phase.

Figure 5 Conceptual Rendering of a Two-Way Separated Bike Lane Along Cramer Avenue

Based on the difference in preferences between riders of different skill level, it is recommended that this project segment be reevaluated once dedicated bicycle facilities are constructed along Walton Avenue, Henry Clay Boulevard, and Liberty Road. These facilities will provide connectivity between downtown and east Lexington bringing trail users through the area. Once more riders have the opportunity to ride on these low-volume streets, LFUCG should solicit additional feedback to reevaluate the recommended improvements.

E. Neighborhood Route–Owsley and Menifee Avenues

Owsley and Menifee Avenues are minor collector streets with a posted speed limit of 25 mph, with just over 1,200 vpd. While both streets also meet the BPMP's bicycle boulevard criteria with a lower traffic volume, the wider curb-to-curb width and less use of on-street parking encourages higher travel speeds. Before roadway reconstruction, an interim option of adding shared lane markings and bicycle-oriented wayfinding signage is recommended to further emphasize priority for cyclists. Review of existing travel speeds should be considered to determine whether traffic calming measures including speed humps or intersection modifications are warranted.

Both Owsley and Menifee Avenue have integral sidewalks with Owsley Avenue being less than 4 feet wide and obstructed by utility poles. While Menifee Avenue has 4-foot sidewalks, driveways are constructed with a cross slope exceeding 2 percent. The sidewalks do not currently meet accessibility requirements. If a bicycle boulevard is determined to be an adequate bicycle accommodation, ADA pedestrian improvements will still be necessary. Two options have been shown that both narrow the curb-to-curb width to be consistent with the narrow section on Cramer Avenue, while maintaining parking on one side as shown in Figure 6. One option includes a shared-use trail for both bicyclists and pedestrians, while the other includes 6-foot-wide sidewalks on both sides separated with a grass buffer where bicyclists would share the roadway in the improved bicycle boulevard.

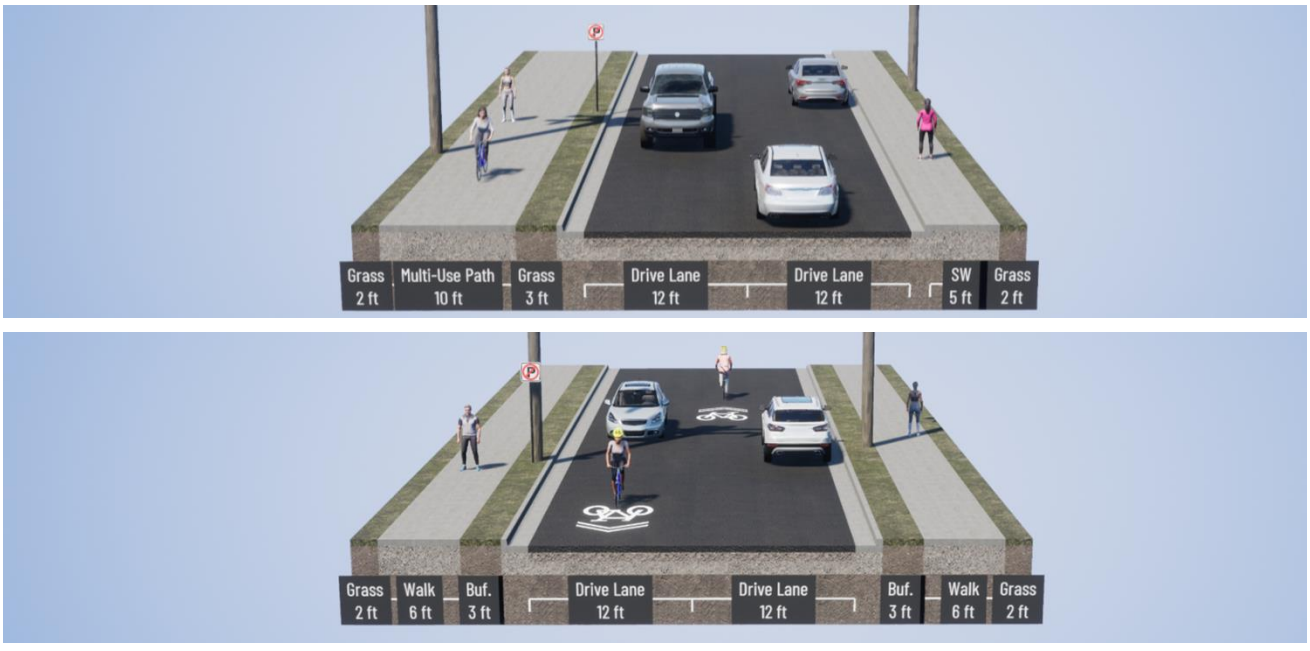


Figure 6 Option 1 (top) Shared-Use Trail on One Side
Option 2 (bottom) Bicycle Boulevard, 6-Foot Sidewalks Separated with Grass Buffer

Similar to the Cramer Avenue recommendations, it is recommended that this project segment be reevaluated once dedicated bicycle facilities are constructed along Walton Avenue, Henry Clay Boulevard, and Liberty Road. Modifications to this section of Owsley and Menifee Avenue should be considered before or at the same time as Cramer Avenue.

F. Neighborhood Route–Henry Clay Boulevard

Henry Clay Boulevard is a major collector street with a posted speed limit of 25 mph, and approximately 8,000 vpd. LFUCG has received complaints regarding travel speeds along the corridor from residents and has installed enhanced traffic signage to increase the visibility of the speed limit signs facing both directions. Considering higher than posted travel speeds, the BPMP criteria recommends separated bike lanes.

Two options for providing separated bike lanes using the existing 36-foot curb-to-curb width south of the railroad are shown in Figure 7. These options reallocate the existing on-street parking areas to accommodate separated bike lanes along this higher volume and speed roadway. Option 1 provides a two-way separated bike lane on the west (left) side and a 4-foot striped shoulder on the east (right) side that maintains an offset to the trees along the roadway. Parking bays within the planting strip may be constructed along the east (right) side where existing trees are not located to allow up to six on-street parking spaces to be accommodated. These spaces would be primarily along the Menifee Avenue end of the block. Option 2 provides a one-way separated bike lane along both sides of the street. With this option, additional on-street parking areas are not able to be added and vehicles would have to park in the driveway or an adjacent side street similar to the section of Henry Clay Boulevard south of Menifee Avenue. Providing a vertical barrier between the travel lane and separated bike lane in either option will help provide traffic calming but will be limited to areas between the existing driveways. The existing mature trees will remain undisturbed providing shade for bicyclists and pedestrians.

Figure 7 Separated Bike Lanes, Two-Way (top) and One-Way (bottom)

To accommodate a separated bicycle facility on the existing bridge, the dedicated left-turn lane onto Delaware Avenue would need to be removed. The original design drawings show 220 feet of available sight distance exceeding the 155-foot minimum for the 25-mph design speed. The space for existing 11-foot left-turn lane and taper can be reallocated to provide a separated bicycle facility as shown in Figure 8. Option 1 provides a path along the west (left) side and would be chosen if a two-way bicycle facility is selected for the adjoining segments of Henry Clay Boulevard. This option provides 15 feet for a multi-use path between the existing fence and the relocated vehicular barrier on the west (left) side. Option 2 would be chosen if one-way bicycle facilities are selected along both sides of the roadway and requires both vehicular barriers to be reconstructed.

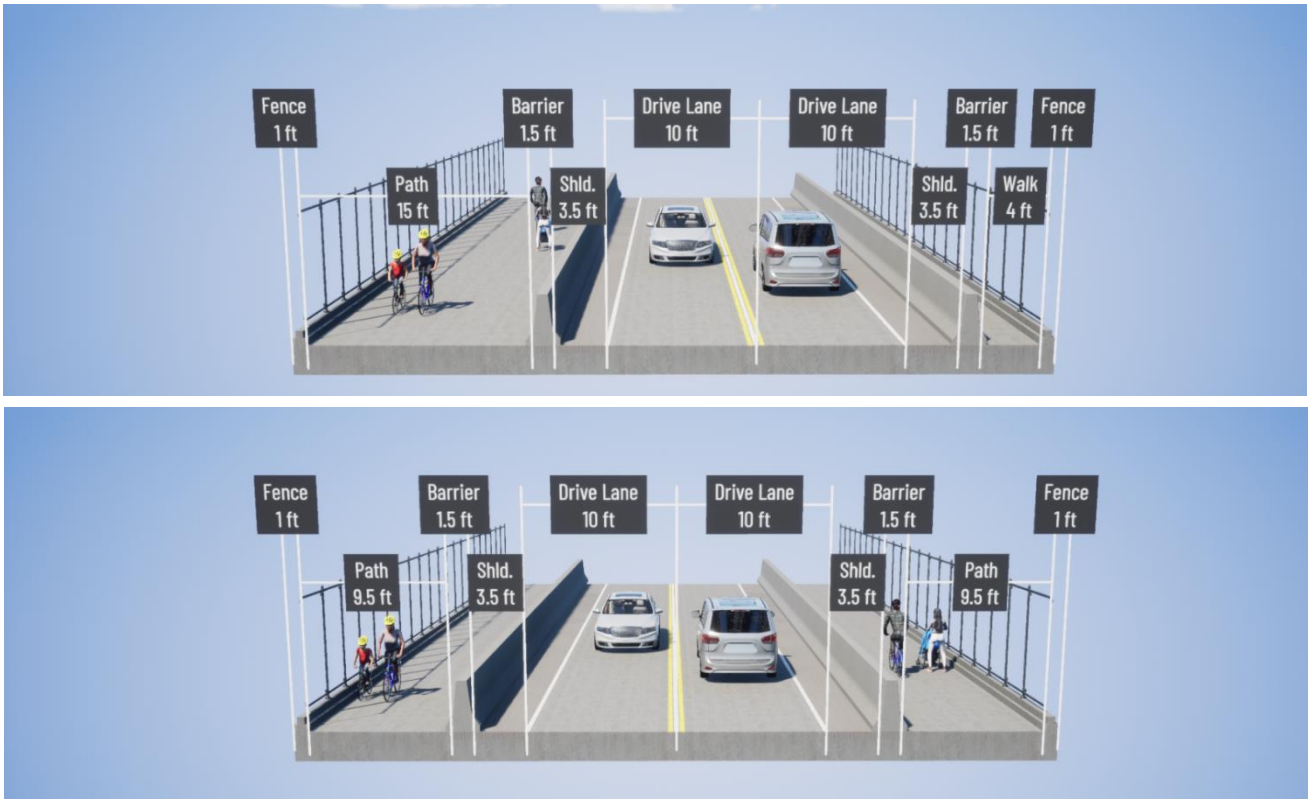


Figure 8 Option 1 (top) Separated Two-Way Bike Lane Adjoining Section with Option 2 (bottom) Separated One-Way Bike Lanes Adjoining Section

North of the railroad bridge, the ROW widens to 80-feet while maintaining the same 36-foot curb-to-curb width. While parking is allowed on both sides, the maximum number of parked vehicles observed was two in this section. Similar to the portion south of the railroad tracks, a two-way separated bike lane option allows the ability to accommodate up to three additional parking bays near Clayton Avenue. Design of a bicycle facility should also consider waste collection method and bin placement location.

SIGNAGE AND WAYFINDING STRATEGY

The wayfinding strategy developed for the East Lexington Trail Connectivity Study project is intended to provide guidance and design intent for the future development and implementation of a comprehensive signage package that unifies and enhances the user experience. This strategy also builds and reflects upon applications implemented throughout Town Branch Commons as well as the Town Branch Phase 6 project that weaves through the Distillery District connecting downtown to the larger Legacy Trail.

The East Lexington Connectivity Study recommends three different types of signs for the overall project that embody subtle design cues from the broader network of signage found throughout the Town Branch Commons, Town Branch Phase 6, and the Legacy Trail while offering a unique aesthetic for this segment of the trail. A combination of directional signs, educational signs, and trail markers provide a common thread throughout the trail and offer meaningful communication to the future users of the trail (see Appendix E).

It is recommended that the signs are constructed with suitable robust materials. Proposed materials include painted steel bases and frames with a hardwood structure. Signage surfaces would be made from aluminum sheets, with the graphics laser cut, etched, or vinyl cut.

A. Directional Signage (Location)

The series of directional signage for the trail will be placed in designated locations throughout the trail corridor where there may be trailheads or decision points for trail users. These signs will provide information pertaining to the specific location along the trail and distances to destinations along the trail corridor as well as other destinations found within the neighborhoods and districts that the trail connects and weaves through. Example destinations may be food and beverage establishments, local grocery stores like Wilson's Grocery in the Kenwick Neighborhood, the Warehouse Block along National Avenue, Liberty and Ashland Elementary Schools, and other destinations to be identified.

B. Educational Signage

Designed using similar materials and scale, educational signs could be located in areas where specific educational opportunities exist and should be highlighted along the trail. These signs could have a combination of text, images, and QR codes that convey important and meaningful information to users of the trail. Example educational opportunities could include the Warehouse Block, neighborhood history, railroad industry, local businesses, and historic community leaders.

C. Trail Markers

Designed using similar materials, the trail markers are designed to be smaller in scale and identify distances along the trail that correspond to distance markers identified on the directional signs. This strategy will provide trail users an opportunity to better understand the distances to destinations as well as understanding their location and distance of travel throughout the trail.

OPINION OF PROBABLE COST

Costs have been developed using recent LFUCG project experience for the recommended projects and broken down into design, ROW, utilities, and construction. Individual anticipated project costs for construction, ROW, utilities, and professional services are shown in Table 1. These costs have been developed in current 2023 dollars and should be escalated for future years. The average annual escalation from 2003 to 2022 is calculated as 4.4 percent by Engineering News Record and 4.8 percent by the National Highway Construction Cost Index and should be considered when requesting funding in future years.

Project Section	Construction	ROW	Utilities	Professional Services (15%)	Contingency (20%)	Total
US 60 (3rd Street to Walton Avenue) and Walton Avenue	$4,450,000	$1,290,000	$200,000	$668,000	$1,322,000	$7,930,000
Henry Clay Boulevard	$1,590,000	$90,000	$-	$239,000	$384,000	$2,303,000
Owsley and Menifee Avenues Interim	$460,000	$-	$-	$69,000	$106,000	$635,000
Cramer Avenue Interim	$260,000	$-	$-	$39,000	$60,000	$359,000
US 60 Interim (Walton Avenue to Liberty Road)	$290,000	$-	$-	$44,000	$67,000	$401,000
Owsley and Menifee Avenues Reconstruction	$2,330,000	$390,000	$100,000	$350,000	$634,000	$3,804,000
Cramer Avenue Reconstruction	$1,340,000	$130,000	$-	$201,000	$335,000	$2,006,000

Table 1 Opinion of Probable Cost

APPENDIX A
EAST LEXINGTON TRAIL ROUTE ALTERNATIVES

ROUTE ALTERNATIVE LEGEND AND KEY NOTES

- DEDICATED BICYCLE FACILITY
- DEDICATED PEDESTRIAN FACILITY
- SHARED BICYCLE AND PEDESTRIAN FACILITY

1. CONSIDER CONVERTING RECENTLY INSTALLED BUFFERED BIKE LANES ON WINCHESTER ROAD TO SEPARATED BIKE LANES
2. CONSIDER CONVERTING TWLTL TO RAISED MEDIAN ALONG WINCHESTER ROAD
3. PLANNED LIBERTY ROAD PROJECT INCLUDES BIKE AND PEDESTRIAN FACILITIES
4. RECLAIM PUBLIC ROW FOR BICYCLE AND PEDESTRIAN FACILITIES
5. USE WIDE GRASS AREA IN ROW FOR DEDICATED BIKE FACILITIES
6. WIDEN STREET IN ROW TO PROVIDE PARALLEL PARKING ALONG SOUTH SIDE
7. EVALUATE OPTIONS TO IMPROVE BICYCLE/PEDESTRIAN FACILITIES WHILE REDUCING STREET WIDTH AND MAINTAINING PARKING (WEST SIDE)
8. EVALUATE OPTIONS TO IMPROVE BICYCLE/PEDESTRIAN FACILITIES WHILE REDUCING STREET WIDTH AND MAINTAINING PARKING (SOUTH SIDE)
9. MAINTAIN EXISTING TREES AND REALLOCATE ON-STREET PARKING AREAS TO ACCOMMODATE SEPARATED BIKE LANES
10. REALLOCATE LEFT TURN LANE AND MOVE CONCRETE BARRIER TO ACCOMMODATE MULTI-USE PATH ON EXISTING BRIDGE
11. ACCESSIBLE PATH REQUIRES RETAINING WALL PARALLEL TO RAILROAD ROW
12. OPPORTUNITY TO INSTALL MULTI- USE PATH IN EXISTING ROBERTSON AVENUE ROW
13. STREET MODIFICATIONS NECESSARY FOR ACCESSIBLE PEDESTRIAN ACCESS AND DEDICATED BIKE FACILITY
14. EVALUATE POTENTIAL PAVEMENT WIDENING TO MAINTAIN A PORTION OF EXISTING ON-STREET PARKING

SEE APPENDIX C FOR INTERSECTION MODIFICATIONS

ARTERIAL ROUTE

NEIGHBORHOOD ROUTE

NATIONAL AVE. CONNECTOR

LIBERTY RD

DELAWARE AVE

ROBERTSON AVE

CRAMER AVE

MENIFEE AVE

NATIONAL AVE

CLAYTON AVE

WINCHESTER RD

RJ CORMAN RAILROAD

HENRY CLAY BLVD

APPLETREE LN

DALLAS AVE

LAGONDA AVE

OWSLEY AVE

LINCOLN AVE

PRESTON AVE

BASSETT AVE

SHERMAN AVE

RICHMOND AVE

ASHLAND AVE

OWENS AVE

E THIRD ST

MIDLAND AVE

BOONESBORO AVE

WALTON AVE

MENTELLE PARK

0' 200' 400' 800'

EAST LEXINGTON TRAIL
ROUTE ALTERNATIVES
APPENDIX A

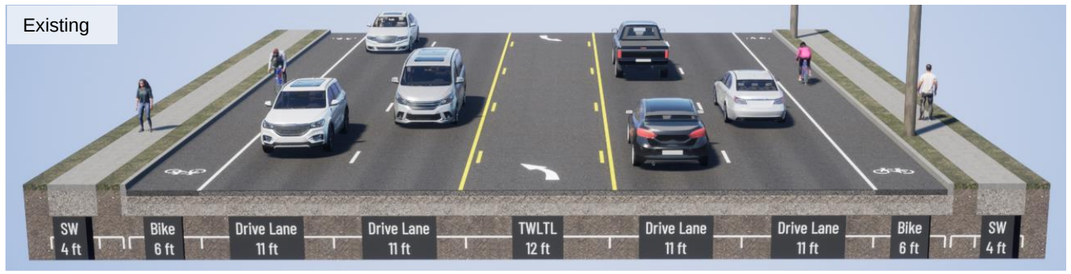
APPENDIX B
TRAIL ROUTING ALTERNATIVES

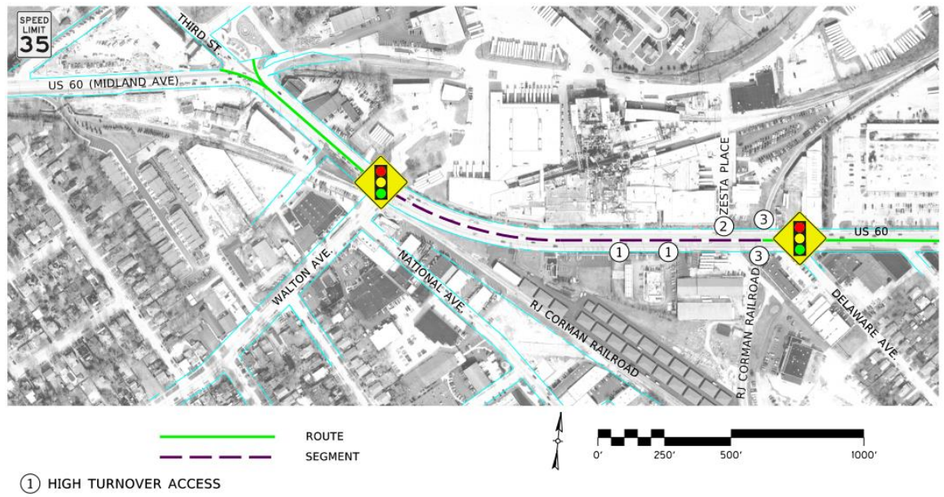
ARTERIAL ROUTE–SEGMENT 1: WINCHESTER RD. FROM WALTON AVE. TO RAILROAD

Winchester Road near Walton Ave (looking east)

Segment Length	940 ft
Classification	Principal Arterial
Adjacent Land Use	Commercial
Annual Average Daily Traffic (AADT)	25,537 (2017)
Posted Speed Limit (miles per hour [mph])	35 mph
Public ROW Width	84 ft
On-Street Parking (left [LT])	None
On-Street Parking (right [RT])	None
Street Crossings (LT)	1
Street Crossings (RT)	0
Driveways (LT)	0
Driveways (RT)	6

Existing





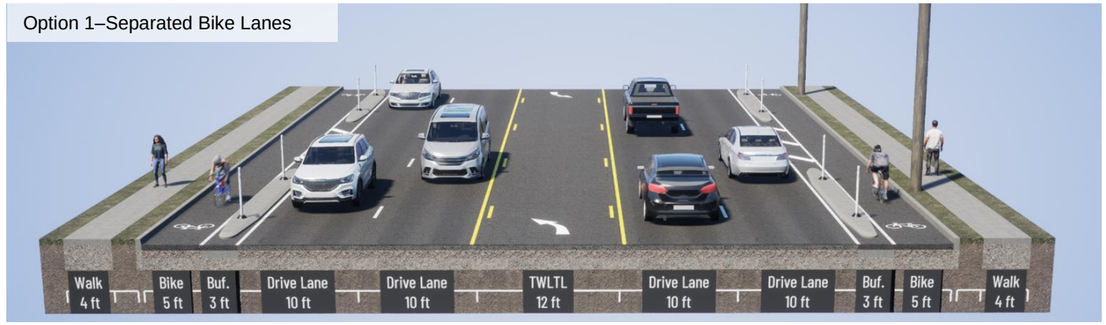
Winchester Road is a principal arterial with a posted speed limit of 35 mph with more than 25,500 vpd and is maintained by KYTC. The adjacent land use is primarily commercial, with several industries requiring semi-trucks to support their operations. The 84-foot public ROW includes a five-lane urban typical section with 6-foot bike lanes and 4-foot sidewalks. Utility poles are concentrated along the south side in the grass buffer area, immediately adjacent to the curb line. The roadway pavement structure includes a concrete pavement beneath several layers of overlay, resulting in reduced curb heights.

Three separate typical sections were considered for this segment including: buffered bike lanes, one-way separated bike lanes, and a shared-use trail. The shared-use trail option was not advanced further as the preferred designated route for the Brighton Trail because of engineering constraints, substantial costs, and because the traffic volumes and speeds along Winchester Road are not anticipated to provide the level of comfort needed to attract the interested, but concerned, riders that prefer this type of facility.

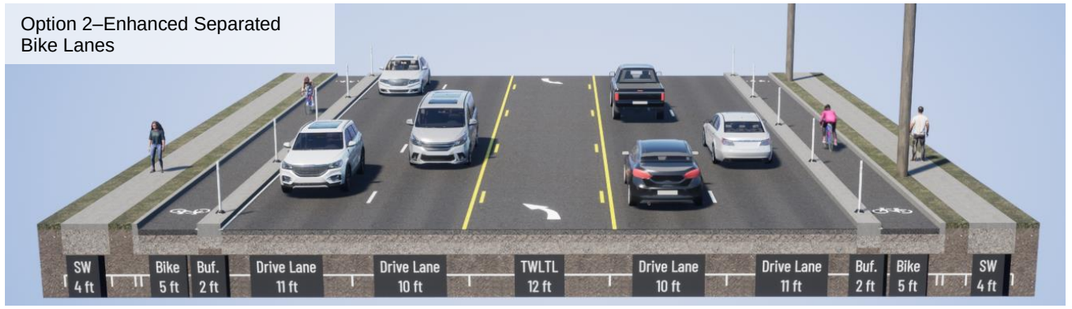
As part of a resurfacing project, KYTC reduced the existing 11-foot drive lanes to 10-foot drive lanes and marked a 5-foot bike lane with a 3-foot buffer. Option 1 below shows the marked area could be enhanced with vertical elements such as concrete medians, wheel stops, or delineator posts, to provide separated bike lanes for greater comfort and safety for bicyclists. Refer to FHWA's Separated Bike Guide, Chapter 5 for guidance on forms of separation.

Riders that identify as somewhat confident or confident prefer separated bike lanes and sidewalks to shared-use facilities. Additionally, several specific comments focused on the importance of being physically separated from vehicular traffic. To enhance the separation, as shown below in Option 2, the buffer area could be converted to a raised concrete median or a narrow-curbed landscape area providing consistent separation. Providing this level of separation will likely require a more extensive reconstruction, including drainage modifications and minor utility adjustments.

Option 1–Separated Bike Lanes



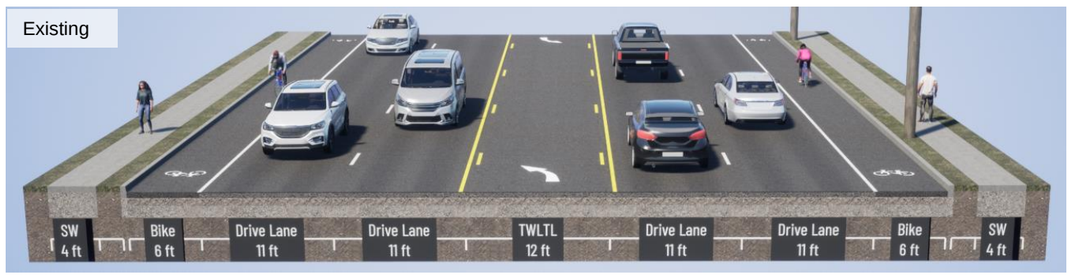
Option 2–Enhanced Separated Bike Lanes

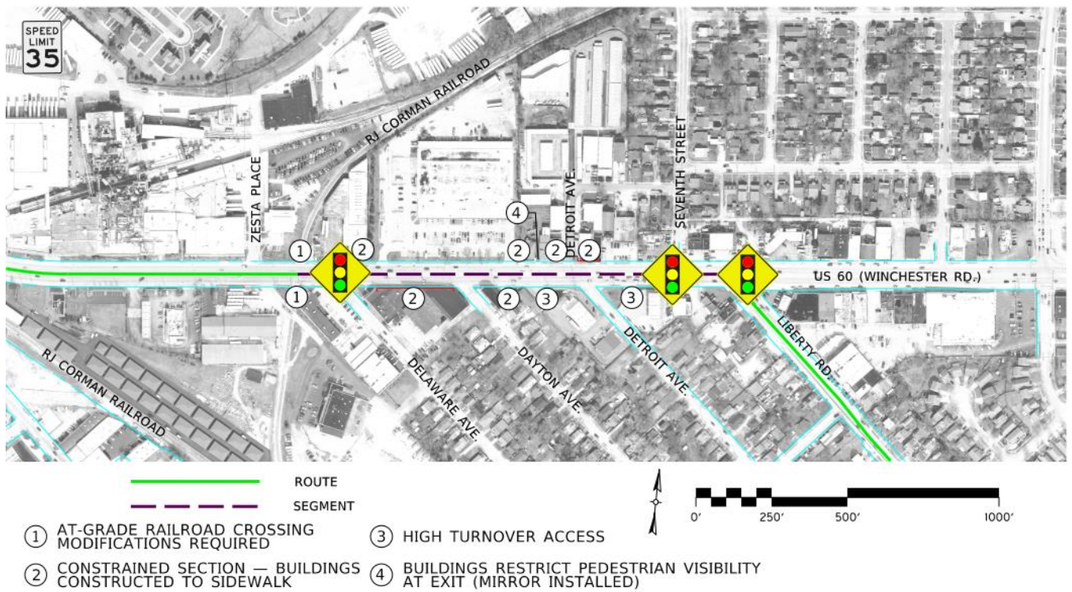


ARTERIAL ROUTE–SEGMENT 2: WINCHESTER RD. FROM RAILROAD TO LIBERTY RD.

Segment Length	1410 ft
Classification	Principal Arterial
Adjacent Land Use	Commercial
AADT	25,537 (2017)
Posted Speed Limit	35 mph
Public ROW Width	84 ft
Parking (LT)	None
Parking (RT)	None
Street Crossings (LT)	2
Street Crossings (RT)	3
Driveways (LT)	7
Driveways (RT)	6

Existing





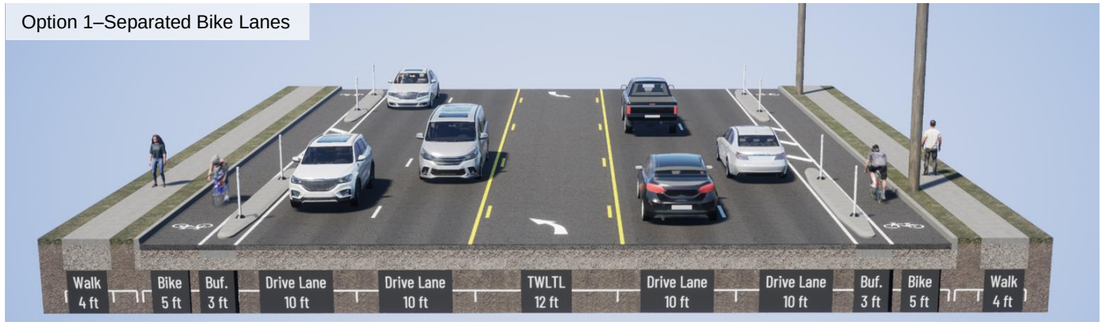
Winchester Road is a principal arterial with a posted speed limit of 35 mph with more than 25,500 vpd and is maintained by KYTC. The adjacent land use is primarily commercial with several industries requiring semi-trucks to support their operations. The 84-foot public ROW includes a five-lane urban typical section with 6-foot bike lanes and 4-foot sidewalks. Utility poles are concentrated along the south side in the grass buffer area, immediately adjacent to the curb line. The roadway pavement structure includes a concrete pavement beneath several layers of overlay, resulting in reduced curb heights.

The same options for Segment 1 would continue for Segment 2. In addition, the project could consider incorporating access management between Delaware Avenue and Seventh Street using a raised median with landscape area between Detroit and Dayton Avenues. This access management technique would reduce the conflicting vehicular movements that have resulted in 32 crashes, resulting in nine injuries (2016 through 2021). This would also help reduce vehicular travel speeds, vehicular and bike conflict locations, and provide landscape opportunities. If access management is implemented, additional modifications to permit U-turn movements at Delaware Avenue and Seventh Street should be considered to reduce impacts to people travelling to and from businesses.

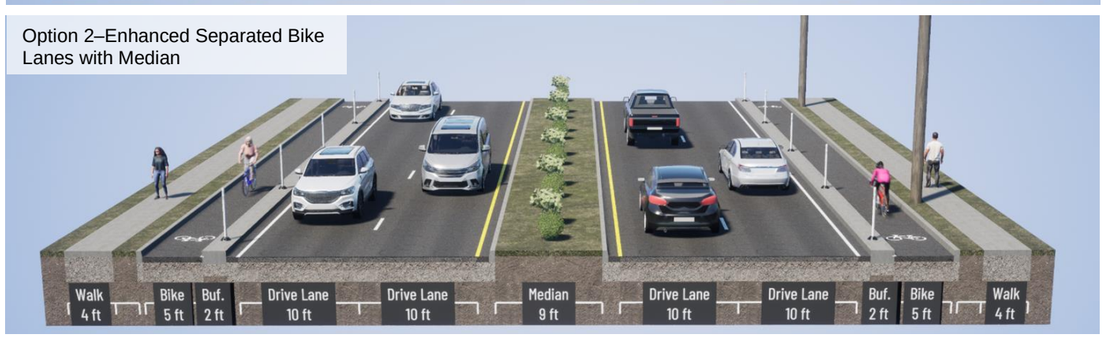
As part of a resurfacing project, KYTC reduced the existing 11-foot drive lanes to 10-foot drive lanes and marked a 5-foot bike lane with a 3-foot buffer. Option 1 below shows the marked area could be enhanced with vertical elements such as concrete medians, wheel stops, or delineator posts, to provide separated bike lanes for greater comfort and safety for bicyclists. Refer to FHWA's Separated Bike Guide, Chapter 5 for guidance on forms of separation.

Option 2 below shows the existing 12-foot two-way left-turn lane (TWLTL) could be converted to a 10-foot median, allowing a 9-foot width for landscape improvements. Installing raised medians on both sides of the travel lanes would make the vehicular corridor narrower, incorporating additional traffic calming measures entering the downtown corridor.

Option 1–Separated Bike Lanes



Option 2–Enhanced Separated Bike Lanes with Median

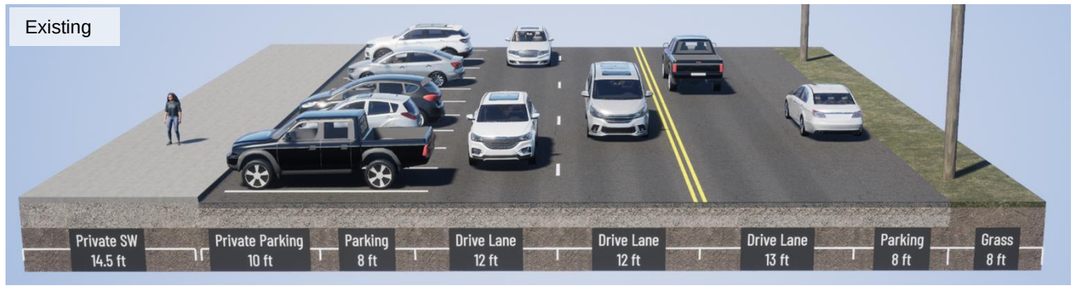


ARTERIAL ROUTE–SEGMENT 3: LIBERTY RD. FROM WINCHESTER RD. TO DALLAS AVE.

Liberty Road near Winchester Road (looking southeast)

Segment Length	600 ft
Classification	Minor Arterial
Adjacent Land Use	Commercial and Residential
AADT	11,427 (2017)
Posted Speed Limit	35 mph
Public ROW Width	61 ft
Parking (LT)	Average (Avg) = 2.5, Maximum (Max) = 10
Parking (RT)	Avg = 2.6, Max = 5
Street Crossings (LT)	0
Street Crossings (RT)	1
Driveways (LT)	2
Driveways (RT)	5 (Residential) 5 (Commercial)

Existing



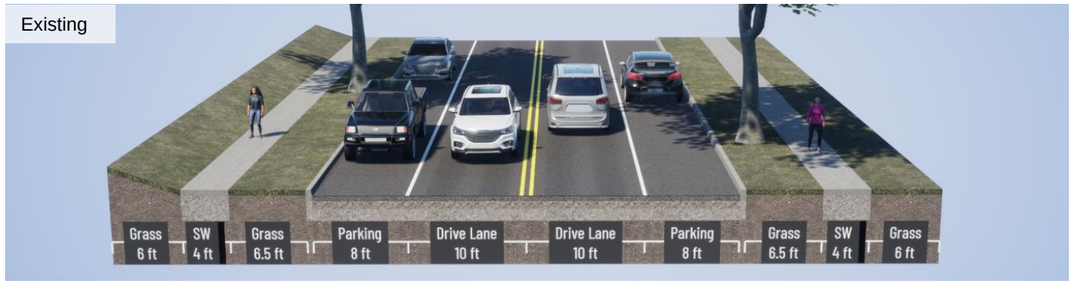
Liberty Road is a minor arterial with a posted speed limit of 35 mph with more than 11,400 vpd and is maintained by LFUCG. The adjacent land use along this 0.11-mile segment is primarily commercial with five residential parcels. The public ROW along this section varies with a minimum width of 61 feet. This section of the roadway accommodates one outbound lane and transitions from one to three inbound lanes at Winchester Road. Parking along the roadway is accommodated via back-out parking for the commercial properties and parallel parking between driveways for the residential parcels. One-half of the back-out parking stall depth serving the northern commercial properties is within the ROW. The maximum parking counts observed was 11, during business hours. During non-business hours, parking demand is lower and primarily used by the residential properties.

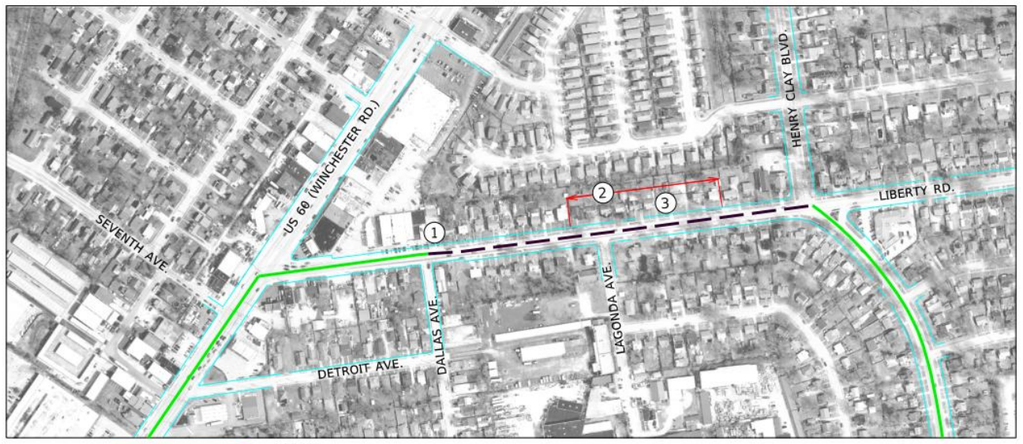
LFUCG has a planned project to reconstruct Liberty Road from Winchester Road to New Circle Road. The project will consider and evaluate various typical sections that consider bicycle and pedestrian traffic.

ARTERIAL ROUTE–SEGMENT 4: LIBERTY RD. FROM DALLAS AVE. TO HENRY CLAY

Segment Length	1,340 ft
Classification	Minor Arterial
Adjacent Land Use	Residential
AADT	11,427 (2017)
Posted Speed Limit	35 mph
Public ROW Width	70 ft
On-Street Parking (LT)	Avg = 3.5, Max = 6
On-Street Parking (RT)	Avg = 2.8, Max = 6
Street Crossings (LT)	0
Street Crossings (RT)	1
Driveways (LT)	23 (Residential) 1 (Commercial)
Driveways (RT)	20

Existing





1. BACK-OUT PARKING
2. STEEP SLOPES BEHIND SIDEWALK IN ROW
3. SIGNED AND PERMITTED ACCESSIBLE PARKING SPACE

Liberty Road is a minor arterial with a posted speed limit of 35 mph with more than 11,400 vpd and maintained by LFUCG. The adjacent land use along this 0.26-mile segment is residential. The 70-foot public ROW includes a travel lane in each direction, on-street parking, grass buffer with mature trees, 4-foot sidewalks, and 6-foot additional ROW outside the sidewalk. This section has 20 driveways on the south side and 24 driveways on the north side. The maximum amount of on-street parking observed for this segment was nine vehicles.

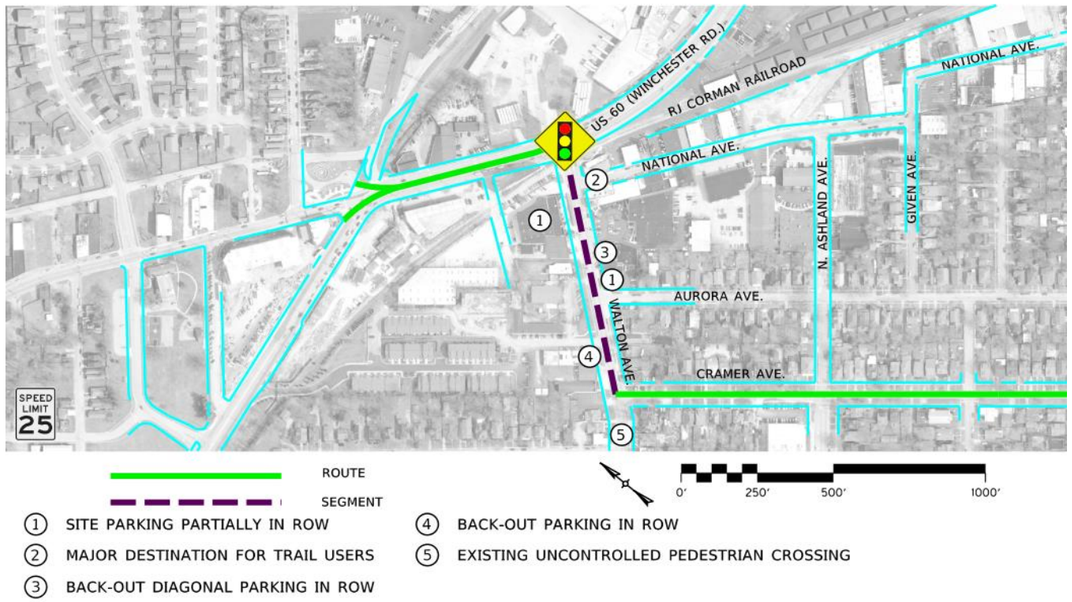
LFUCG has a planned project to reconstruct Liberty Road from Winchester Road to New Circle Road. The project will consider and evaluate various typical sections that consider bicycle and pedestrian traffic.

NEIGHBORHOOD ROUTE–SEGMENT 1: WALTON AVE. FROM WINCHESTER RD. TO CRAMER AVE.

Walton Avenue near Winchester Road (looking southwest)

Segment Length	550 ft
Classification	Major Collector
Adjacent Land Use	Commercial
AADT	7,637 (2019)
Posted Speed Limit	25 mph
Public ROW Width	80 ft
On-Street Parking (LT)	Avg = 2.5, Max = 6
On-Street Parking (RT)	Avg = 0.4, Max = 1
Street Crossings (LT)	2
Street Crossings (RT)	1
Driveways (LT)	6
Driveways (RT)	7

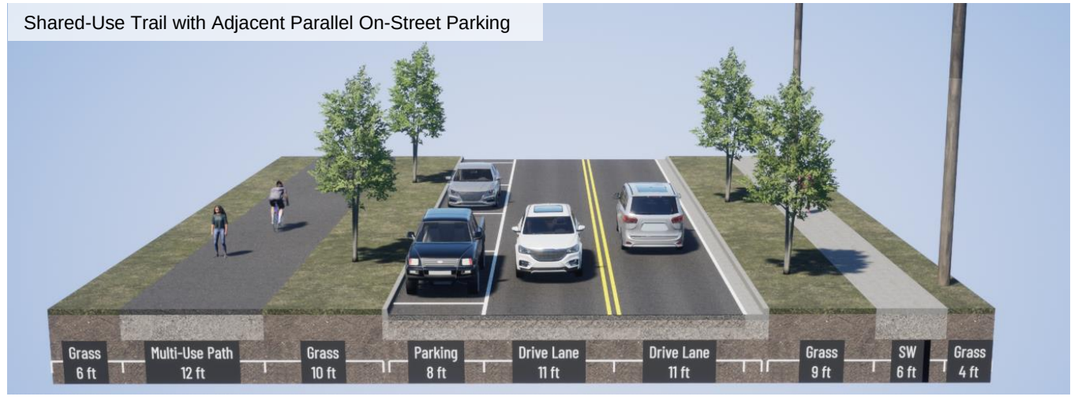
Existing



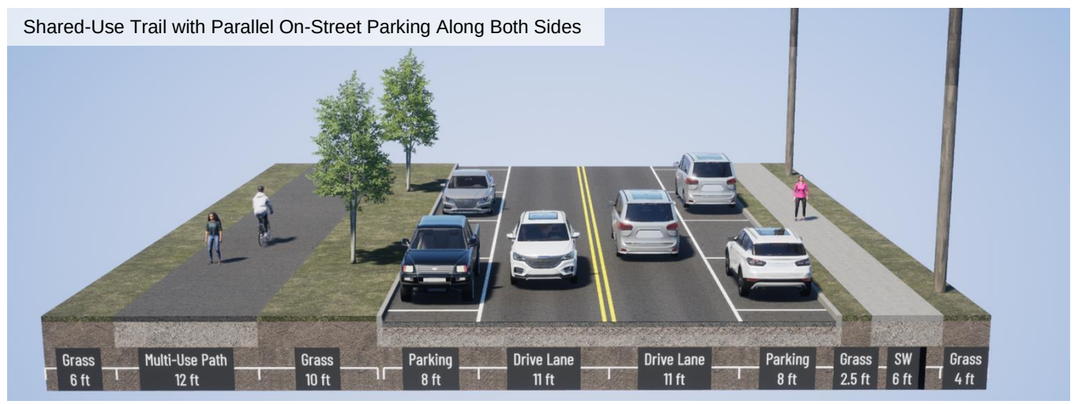
Walton Avenue is a major collector street with a posted speed limited of 25 mph with approximately 7,600 vpd and is maintained by LFUCG. The adjacent land use has partially transitioned from traditional commercial businesses to an entertainment district with restaurants and a brewery. The 80-foot public ROW includes a two- to three-lane roadway, 4-foot sidewalks, on-street parking, and private parking area encroachments. The maximum number of observed vehicles parked was six vehicles; however, there may be additional time frames where the parking demand should be reviewed.

This segment anticipates a pedestrian refuge island just south of National Avenue to connect Town Branch Commons and Legacy Trail to the neighborhood and National Avenue Entertainment District. After crossing to the east side, the diagonal back-out parking and private encroachments would transition to a shared-use facility with adjacent parallel on-street parking. The opposite side of the street is anticipated to have landscape areas and on-street parking to supplement the needs of the nearby destinations. Modifications to both sides of the street will likely result in street reconstruction. The improvements could be extended to the south of Hambrick Avenue to upgrade the existing uncontrolled pedestrian crossing.

Shared-Use Trail with Adjacent Parallel On-Street Parking



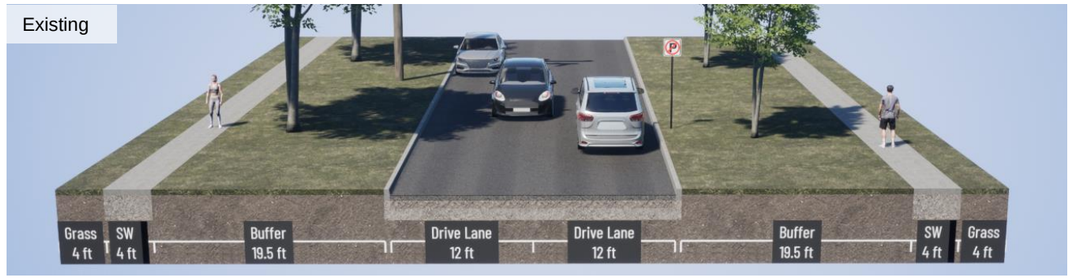
Shared-Use Trail with Parallel On-Street Parking Along Both Sides

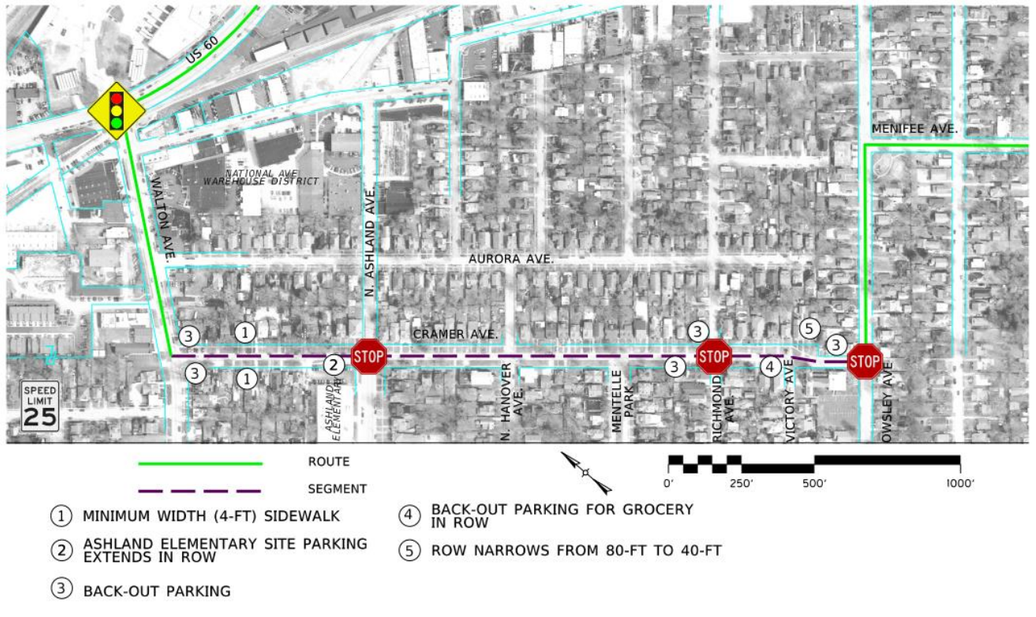


NEIGHBORHOOD ROUTE–SEGMENT 2: CRAMER AVE. FROM WALTON AVE. TO OWSLEY AVE.

Segment Length	2,390 ft
Classification	Minor Collector
Adjacent Land Use	Residential
AADT	1,594 (2019)
Posted Speed Limit	25 mph
Public ROW Width	80 ft
On-Street Parking (LT)	Avg = 17.8, Max = 20
On-Street Parking (RT)	Avg = 7.4, Max = 9
Street Crossings (LT)	3
Street Crossings (RT)	5
Driveways (LT)	35
Driveways (RT)	14

Existing

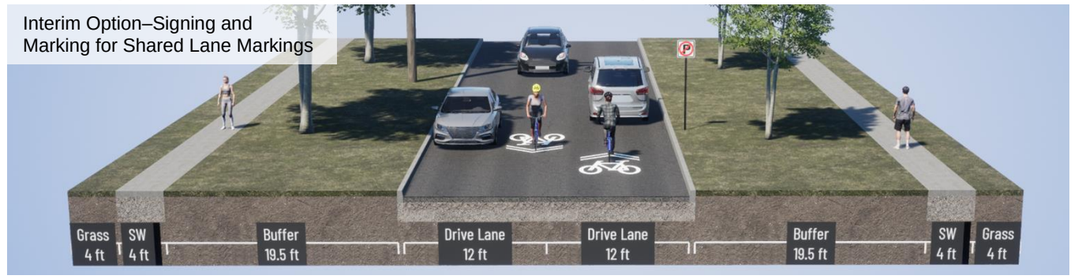




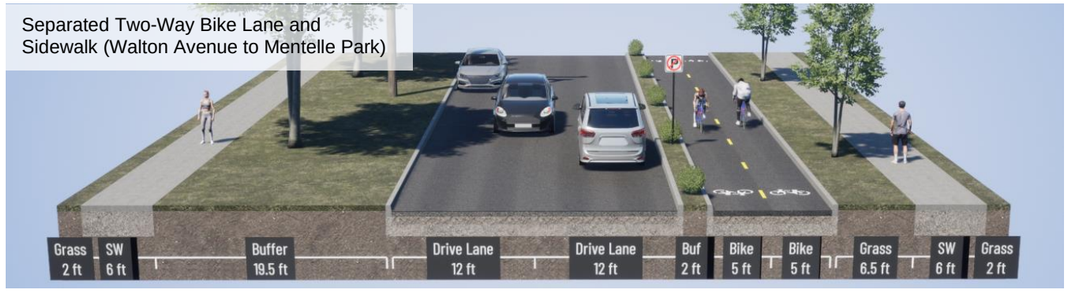
Cramer Avenue is a minor collector street with a posted speed limit of 25 mph with less than 1,600 vpd and is maintained by LFUCG. The adjacent land use is residential with an elementary school and neighborhood market. The street meets LFUCG's criteria for a bicycle boulevard street with low travel speeds and traffic volumes. The narrow 24-foot curb-to-curb width allows on-street parking on the north side only and helps lower travel speeds with some vehicles queuing to allow opposing vehicles to pass. The 80-foot overall public ROW provides large greenspace areas along with 4-foot-wide sidewalks.

Before physical construction, an interim option of adding shared lane markings and bicycle-oriented wayfinding signage would help further emphasize priority for bicyclists on this already bicycle friendly street. For the ultimate implementation, this segment is anticipated to have a combination of shared-use trail and two-way separated bicycle facility along the south side, as the south side has only 14 driveway conflicts (compared to 35 driveways on the north side). Providing physical separation between the bicycle facility and the roadway is important to limit vehicles from parking in the bicycle facility as well as providing more space to negate the existing traffic calming effect of the narrow street. While the ROW width is substantial, some residents currently use the wide area between the street and the sidewalk to park vehicles. With the wide existing ROW, additional on-street parking could be considered between Mentelle Park and Victory Avenue to service an apartment complex and the neighborhood grocery store. The ROW narrows to 40-foot ROW between Victory and Owsley Avenues, requiring reduced facility width and the potential need for ROW acquisition.

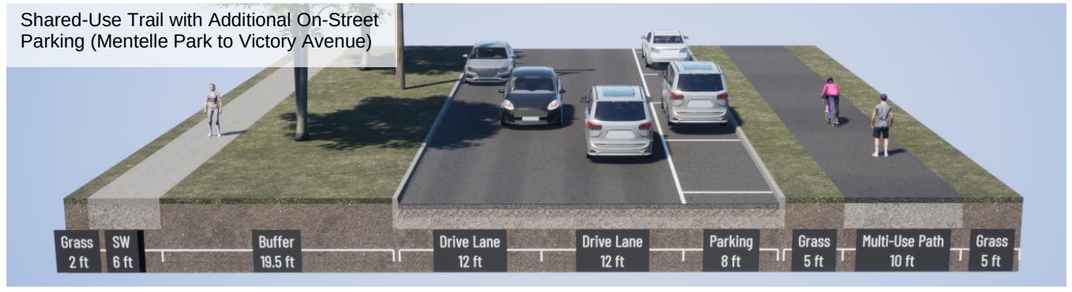
Interim Option–Signing and Marking for Shared Lane Markings



Separated Two-Way Bike Lane and Sidewalk (Walton Avenue to Mentelle Park)



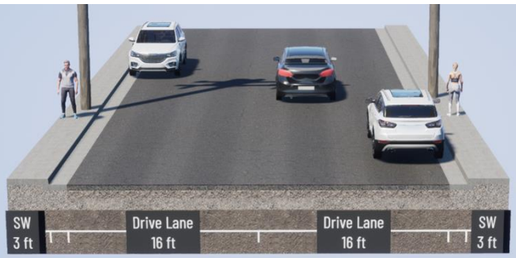
Shared-Use Trail with Additional On-Street Parking (Mentelle Park to Victory Avenue)



NEIGHBORHOOD ROUTE–SEGMENT 3: OWSLEY AVE. FROM CRAMER AVE. TO MENIFEE AVE.

Segment Length	750 ft
Classification	Minor Collector
Adjacent Land Use	Residential
AADT	1,229 (2019)
Posted Speed Limit	25 mph
Public ROW Width	45 ft
On-Street Parking (LT)	Avg = 4.4, Max = 8
On-Street Parking (RT)	Avg = 4, Max = 5
Street Crossings (LT)	0
Street Crossings (RT)	0
Driveways (LT)	14
Driveways (RT)	10

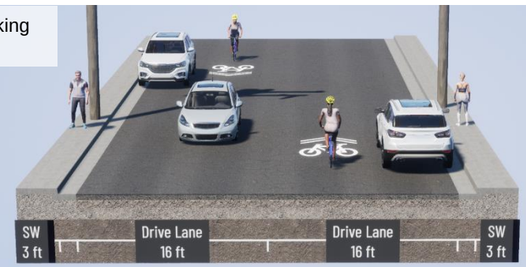
Existing



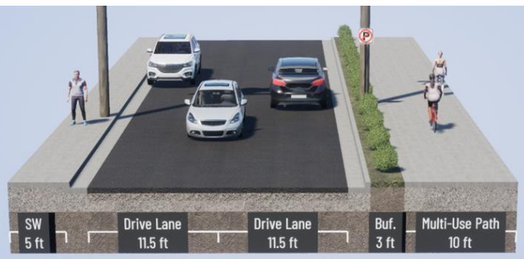
Owsley Avenue is a minor collector street with a posted speed limit of 25 mph with just over 1,200 vpd and is maintained by LFUCG. The street meets LFUCG's criteria for a bicycle boulevard street with low travel speeds and traffic volumes. While providing the same function as Cramer Avenue with lower traffic volumes, the 35-foot curb-to-curb width provides excess road space that encourages faster driving speeds. The 45-foot public ROW has narrow 3-foot sidewalks with several further reduced by utility poles and steeper cross slopes at driveway openings. These sidewalks do not meet current accessibility requirements and, if the roadway is modified, should be addressed to meet current accessibility guidelines. On-street parking demand is evenly split between both sides of the roadway with a maximum of 11 parked vehicles observed along the corridor.

Before physical construction, an interim option of adding shared lane markings and bicycle-oriented wayfinding signage would help further emphasize priority for bicyclists. Review of existing travel speeds should be considered to determine whether traffic calming measures are warranted. Two options have been shown that both narrow the curb-to-curb width to be consistent with Cramer Avenue and maintain parking on the west (left) side. Option 1 includes a shared-use trail along the side with fewer driveways and opposite of the higher demand for on-street parking. Option 2 includes enhanced sidewalks along both sides with shared lane markings. A separated bicycle facility was not shown due to the limited typical section width. Parking restrictions at both ends of the block will reduce the parking capacity to just under the maximum parked vehicles observed. ROW acquisition may be required to provide the desired facility width, turning movements at either end, and to consider space to accommodate waste and recycling bins on trash collection day.

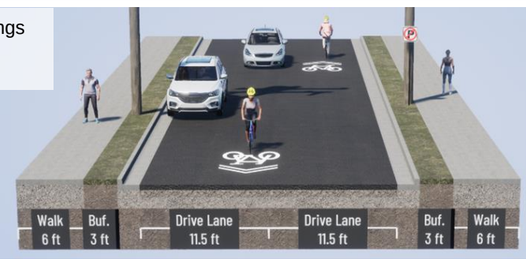
Interim Option–Signing and Marking for Shared Lane Markings



Option 1–Path Option with Parking on One Side



Option 2–Shared Lane Markings with Improved Sidewalks and Parking on One Side

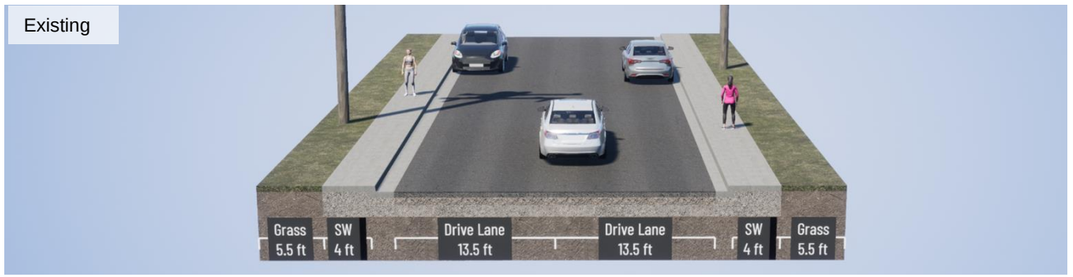


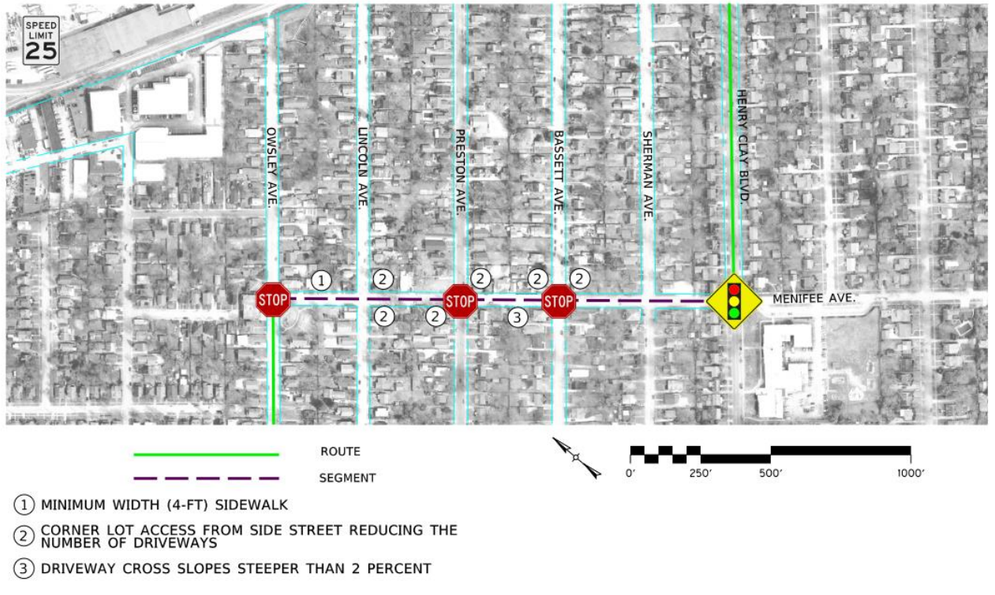
NEIGHBORHOOD ROUTE–SEGMENT 4: MENIFEE AVE. FROM OWSLEY AVE. TO HENRY CLAY


Menifee Avenue near Owsley Avenue (looking southeast)

Segment Length	1650 ft
Classification	Minor Collector
Adjacent Land Use	Residential
AADT	1,229 (2019)
Posted Speed Limit	25 mph
Public ROW Width	50 ft
On-Street Parking (LT)	Avg = 0.9, Max = 1
On-Street Parking (RT)	Avg = 3.9, Max = 5
Street Crossings (LT)	4
Street Crossings (RT)	4
Driveways (LT)	11
Driveways (RT)	8

Existing

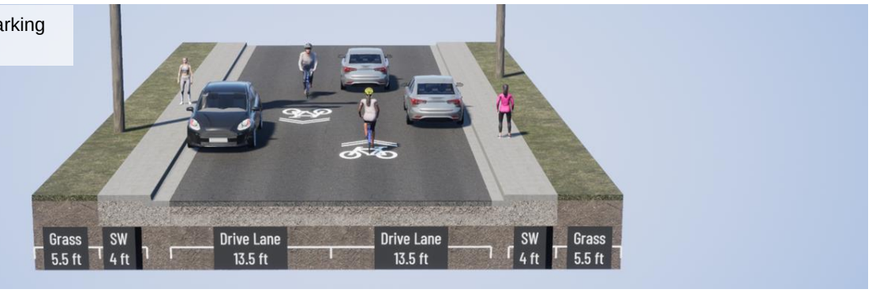




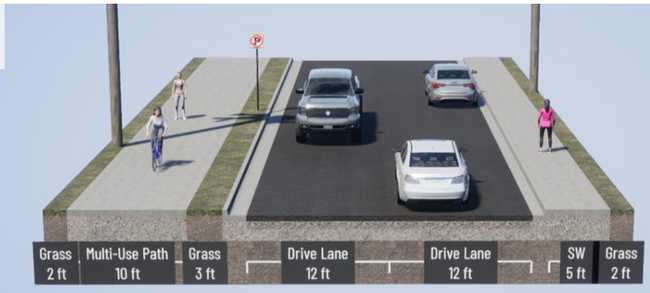
Menifee Avenue is a minor collector street with a posted speed limit of 25 mph with more than 1,200 vpd and is maintained by LFUCG. The street meets LFUCG's criteria for a bicycle boulevard street with low travel speeds and traffic volumes. While providing the same function as Cramer and Owsley Avenues, the 30-foot curb-to-curb width also provides greater comfort because the overall parking demand is less with a maximum of six parked cars observed. The 50-foot public ROW has slightly wider sidewalks and more ROW width outside of the sidewalks.

Before physical construction, an interim option of adding shared lane markings and bicycle-oriented wayfinding signage would help further emphasize priority for bicyclists. Review of existing travel speeds should be considered to determine if traffic calming measures are warranted. Two options have been shown that both narrow the curb-to-curb width to be consistent with Cramer Avenue and maintain parking on the south (right) side. Option 1 maintains parking on the south side opposite of the shared-use trail where the majority of the vehicles park. Option 2 includes enhanced sidewalks along both sides with shared lane markings. A separated bicycle facility was not shown due to the limited typical section width. With the additional 5 feet of existing ROW width, ROW impact is minimal.

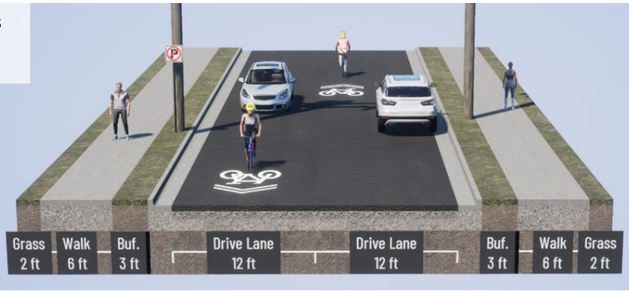
Interim Option–Signing and Marking for Shared Lane Markings



Option 1–Path Option with Parking on One Side



Option 2–Shared Lane Markings with Improved Sidewalks and Parking on One Side



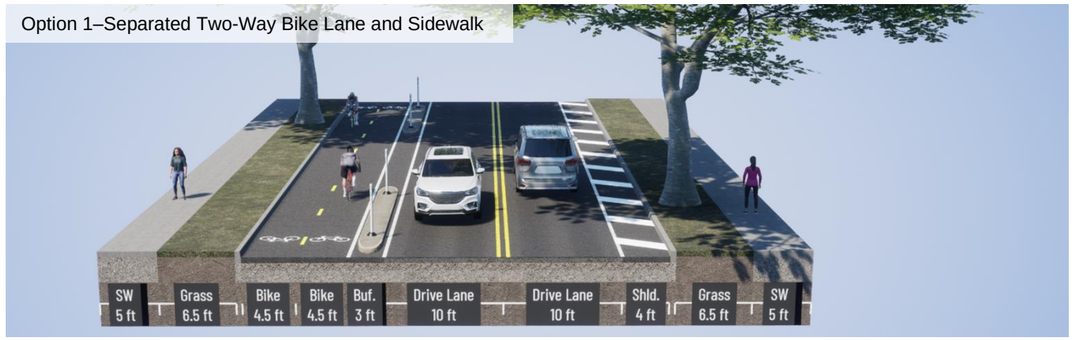
NEIGHBORHOOD ROUTE–SEGMENT 5: HENRY CLAY BLVD. FROM MENIFEE AVE. TO RAILROAD

Segment Length	1,490 ft
Classification	Major Collector
Adjacent Land Use	Residential
AADT	7,975 (2017)
Posted Speed Limit	25 mph
Public ROW Width	60 ft
On-Street Parking (LT)	Avg = 3, Max = 5
On-Street Parking (RT)	Avg = 2.1, Max = 4
Street Crossings (LT)	0
Street Crossings (RT)	1
Driveways (LT)	23
Driveways (RT)	18

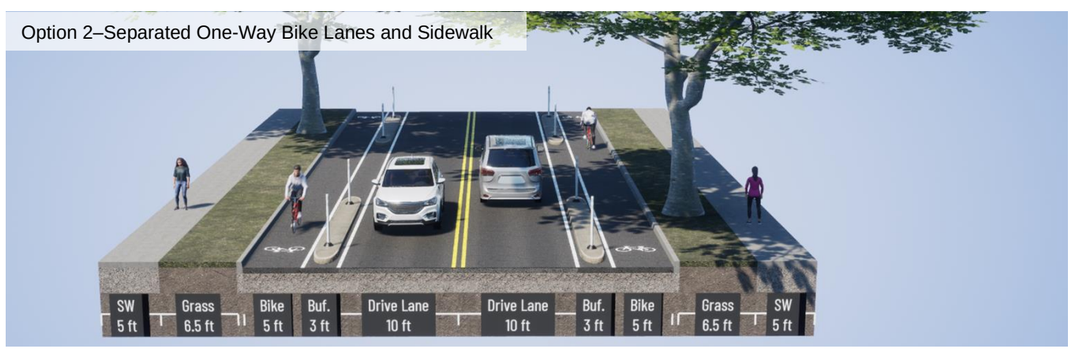
Henry Clay Boulevard is a major collector street with a posted speed limit of 25 mph with approximately 8,000 vpd and is maintained by LFUCG. This street is classified as a major collector because it provides connectivity between Liberty and Richmond Roads and serving a larger segment of the neighborhood. LFUCG has installed enhanced traffic signage to increase the visibility of the speed limit signs along both sides of the corridor. South of Menifee Avenue, the only parking allowed is in front of the former elementary school, which is now occupied by The Hearing and Speech Center. The adjacent land use along this 0.30-mile segment is residential. The 60-foot public ROW includes a travel lane in each direction, on-street parking, grass buffer with mature trees, and 4-foot sidewalks. The trees along this section are a significant asset to the corridor. Each residential property has a driveway, resulting in 23 driveway crossings on the west (left) side and 18 driveway crossings on the east (right) side. The maximum number of parked vehicles observed was seven.

Two options using the existing 36-foot curb-to-curb width were reviewed. These options reallocate the existing on-street parking areas to accommodate separated bike lanes along this higher volume and speed roadway. Option 1 provides a two-way separated bike lane on the west (left) side and a 4-foot striped shoulder on the east (right) side that maintains an offset to the trees along the roadway. Parking bays within the planting strip may be constructed along the east (right) side where existing trees are not located to allow up to six on-street parking spaces to be accommodated. These spaces would be primarily along the Menifee Avenue end of the block. Option 2 provides a one-way separated bike lane along both sides of the street. With this option additional on-street parking areas are not able to be added and vehicles would have to park in the driveway or an adjacent side street similar to the section of Henry Clay Boulevard south of Menifee Avenue. The type of physical barrier between the travel lane and separated bike lane in either option will be limited to areas between the existing driveways. The existing mature trees will remain undisturbed providing shade for bicyclists and pedestrians.

Option 1–Separated Two-Way Bike Lane and Sidewalk

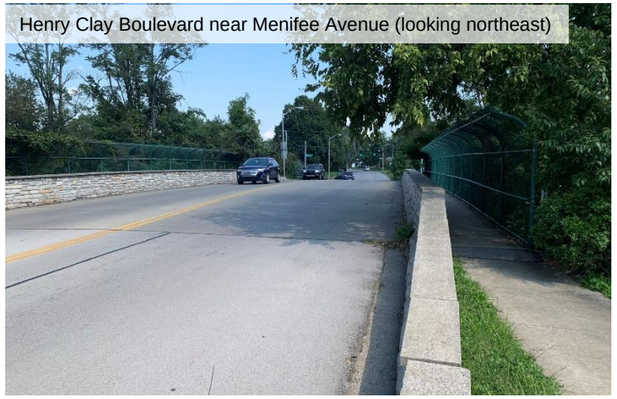


Option 2–Separated One-Way Bike Lanes and Sidewalk



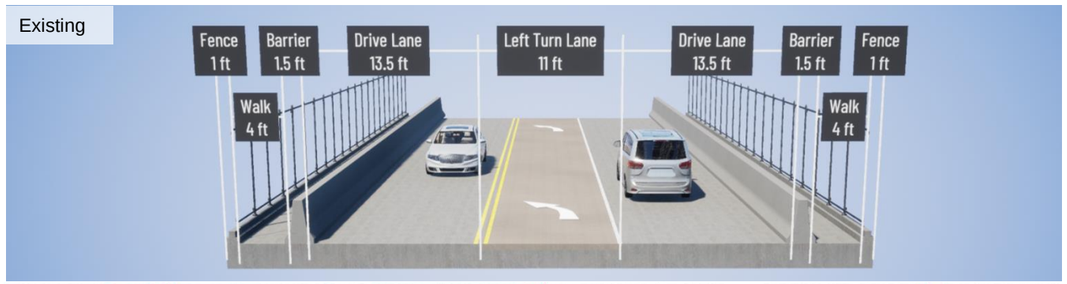
NEIGHBORHOOD ROUTE–SEGMENT 6: ROADWAY BRIDGE OVER THE RAILROAD

Henry Clay Boulevard near Menifee Avenue (looking northeast)



Segment Length	110 ft
Classification	Major Collector
Adjacent Land Use	Residential
AADT	7,975 (2017)
Posted Speed Limit	25 mph
Public ROW Width	60 ft
On-Street Parking (LT)	N/A
On-Street Parking (RT)	N/A
Street Crossings (LT)	N/A
Street Crossings (RT)	N/A
Driveways (LT)	N/A
Driveways (RT)	N/A

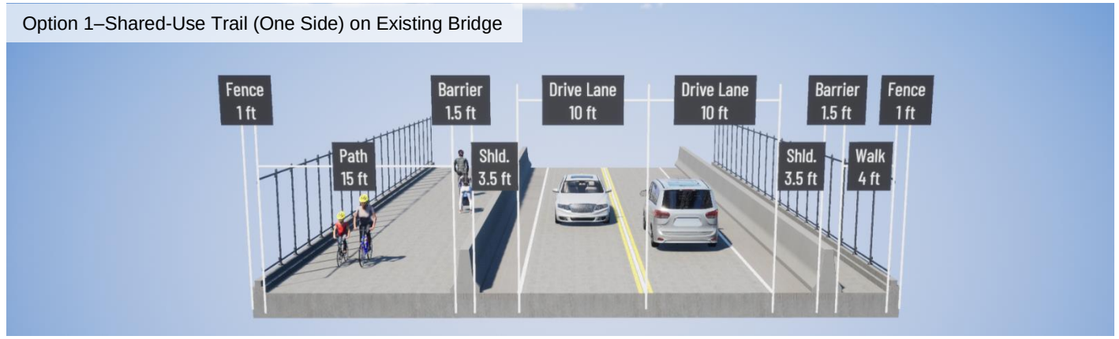
Existing



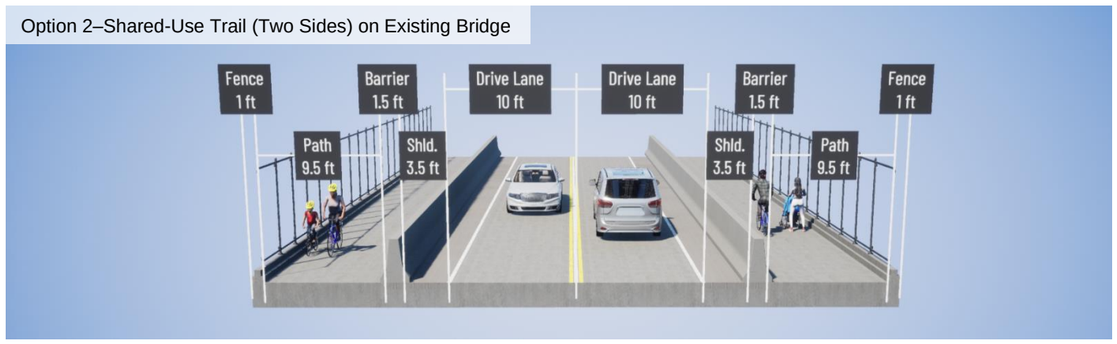
This bridge was constructed in 2001, within a 120-foot permanent easement from the railroad. The 110-foot long three-span box beam bridge has an overall width of 51 feet. The existing typical section includes less than 5-foot sidewalks separated from the roadway by concrete barriers and 38-feet of roadway that transitions from a two-lane to a three-lane roadway to accommodate a dedicated left-turn lane for northbound Henry Clay Boulevard onto Delaware Avenue.

To accommodate a separated bicycle facility on the existing bridge, the dedicated left-turn lane onto Delaware Avenue would need to be removed. The original design drawings show 220 feet of available sight distance exceeding the 155-foot minimum for the 25-mph design speed. The existing 11-foot left turn lane and taper can be reallocated to provide a separated bicycle facility. Option 1 would be chosen if a two-way facility is selected for the adjoining segments of Henry Clay Boulevard. This option provides 15 feet for a shared-use trail between the existing fence and relocated vehicular barrier on the west (left) side. This option requires one of the vehicular barriers to be reconstructed along with modifications to approximately 40 percent of the bridge deck. Option 2 would be chosen if one-way facilities are selected along both sides of the roadway. This option requires both vehicular barriers to be reconstructed along with modifications to approximately 60 percent of the bridge deck.

Option 1–Shared-Use Trail (One Side) on Existing Bridge

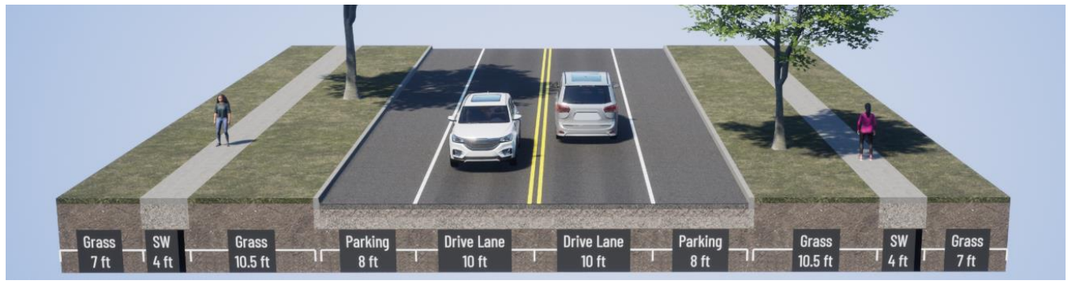


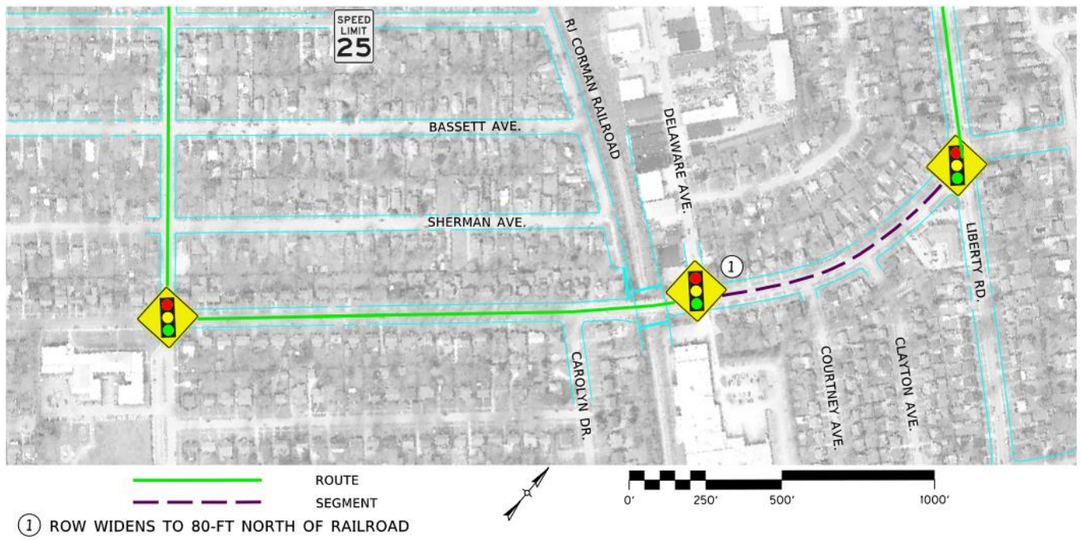
Option 2–Shared-Use Trail (Two Sides) on Existing Bridge



NEIGHBORHOOD ROUTE–SEGMENT 7: HENRY CLAY BLVD. FROM BRIDGE TO LIBERTY RD.

Segment Length	910 ft
Classification	Major Collector
Adjacent Land Use	Residential
AADT	7,975 (2017)
Posted Speed Limit	25 mph
Public ROW Width	80 ft
On-Street Parking (LT)	Avg = 0.3, Max = 2
On-Street Parking (RT)	None
Street Crossings (LT)	1
Street Crossings (RT)	2
Driveways (LT)	16
Driveways (RT)	7 (Residential) 2 (Commercial)

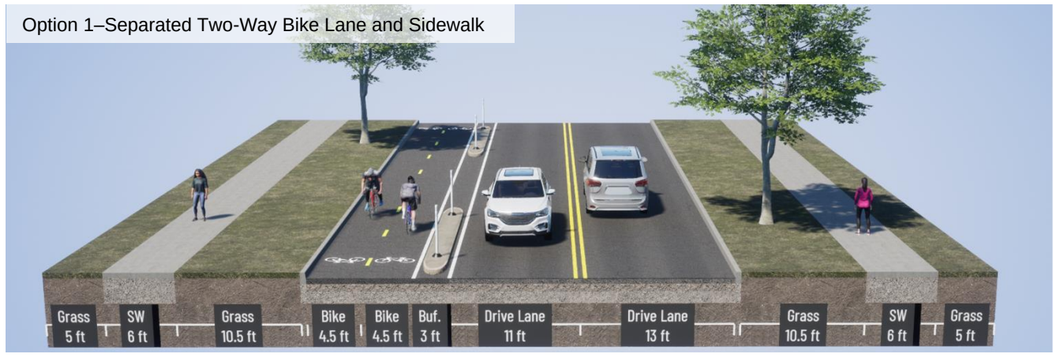




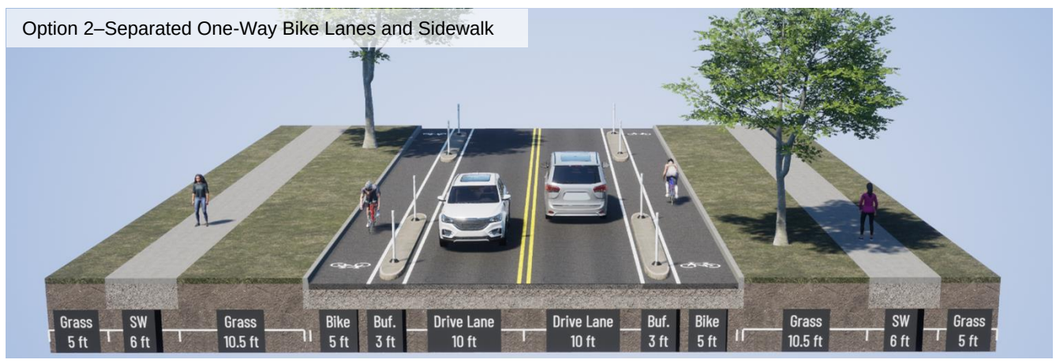
Henry Clay Boulevard is a major collector street with a posted speed limit of 25 mph with approximately 8,000 vpd and is maintained by LFUCG. This street is classified as a major collector because it provides connectivity between Liberty and Richmond Roads and is serving a larger segment of the neighborhood. LFUCG has installed enhanced traffic signage to increase the visibility of the speed limit signs along both sides of the corridor. The adjacent land use along this 0.17-mile segment is primarily residential with two commercial parcels. The 80-foot public ROW includes a travel lane in each direction, on-street parking, grass buffer with trees, and 4-foot sidewalks. Each residential property has a driveway, resulting in 16 driveway crossings on the west side and nine driveway crossings on the east side. The maximum number of parked vehicles observed was two.

Two options using the existing 36-foot curb-to-curb width were reviewed. These options reallocate the existing on-street parking areas to accommodate separated bike lanes along this higher volume and speed roadway. Option 1 provides a two-way separated bike lane on the west (left) side and a wider travel lane on the east (right) side. Parking bays within the planting strip may be constructed along the east (right) side where existing trees are not located to allow up to three on-street parking spaces to be accommodated. These spaces would be near the Clayton Avenue intersection. Option 2 provides a one-way separated bike lane along both sides of the street. With this option additional on-street parking areas are not able to be added and vehicles would have to park in the driveway or an adjacent side street. The type of physical barrier between the travel lane and separated bike lane will be limited to areas between the existing driveways.

Option 1–Separated Two-Way Bike Lane and Sidewalk

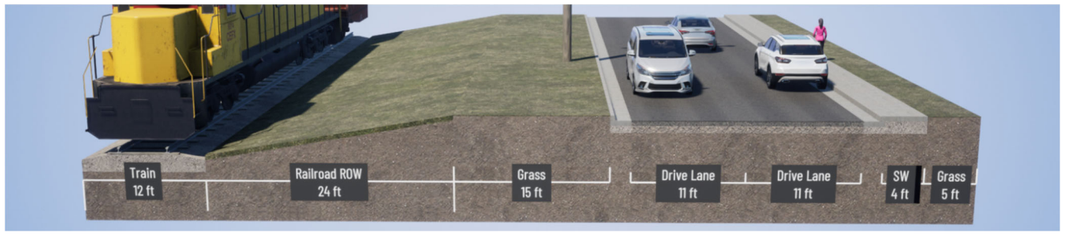


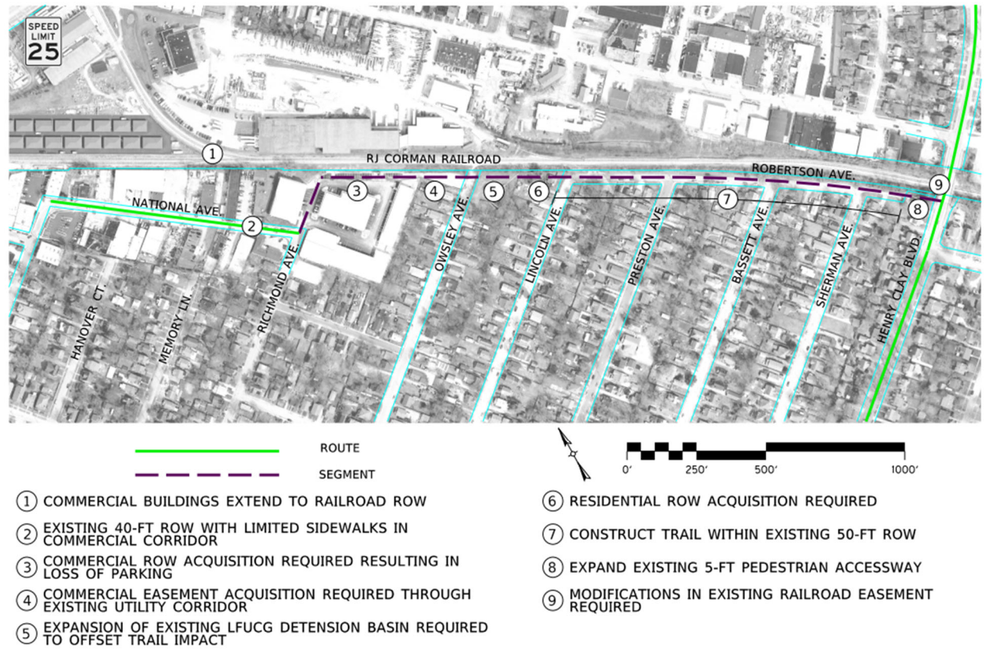
Option 2–Separated One-Way Bike Lanes and Sidewalk



NATIONAL AVENUE CONNECTOR (NATIONAL AVE. TO HENRY CLAY BLVD.)

Segment Length	2,400 ft
Classification	Minor Collector
Adjacent Land Use	Residential
AADT	Unknown
Posted Speed Limit	25 mph
Public ROW Width	50 ft
On-Street Parking (LT)	Unrestricted
On-Street Parking (RT)	Unrestricted
Street Crossings (LT)	None
Street Crossings (RT)	4
Driveways (LT)	None
Driveways (RT)	5

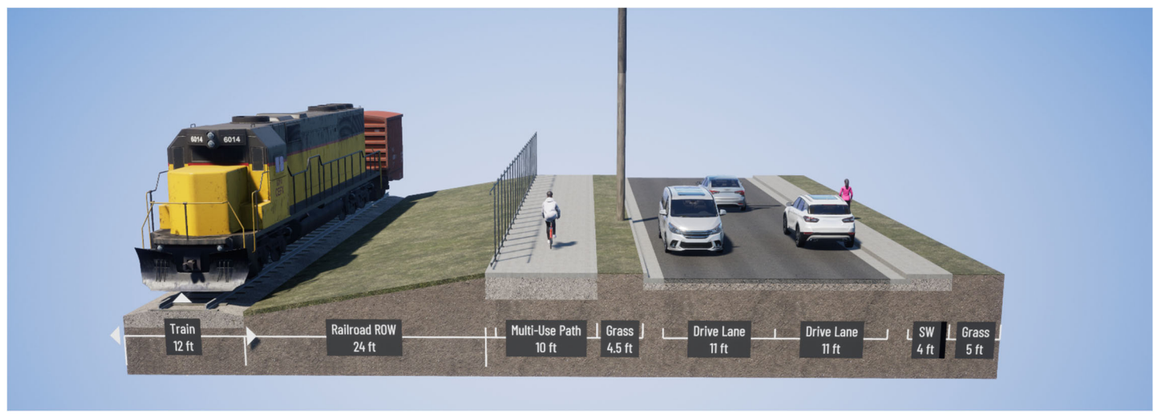




The National Avenue Connector addressed the public comments expressed for the trail route to parallel the railroad. The railroad continues to remain active and is operated by RJ Corman Railroad Company, while the land is owned by CSX Transportation. Because CSX's policy does not permit trails that parallel active railroads, the National Avenue Connector would have to remain off railroad property and extend from Henry Clay Boulevard and tie to National Avenue at Richmond Avenue. National Avenue from Given to Richmond Avenues has a 40-foot public ROW with no dedicated bicycle and pedestrian facilities. Many land uses along this segment of National Avenue are still active commercial uses with back-out parking and continuous paved access points. Some commercial buildings extend to the railroad ROW, limiting the feasibility of a dedicated bicycle facility on the street or parallel to railroad ROW. If the National Avenue Connector is constructed, street modifications will be necessary to provide accessible pedestrian facilities. Driveways and parking spaces should be defined and consolidated, where possible. Continuous paved access points should be defined. If these areas redevelop, there is potential for a streetscape project that would include dedicated bicycle facilities and pedestrian accommodations, or ROW dedicated for a future public project along this corridor to complete this connection.

A 0.45-mile connector route was reviewed extending from the intersection of National and Richmond Avenues to Henry Clay Boulevard. The trail could be routed along an existing access easement and through a commercial parcel to connect multiple tenants to the trail. The parking lot would need to be reconfigured for the trail, resulting in some loss of parking.

East of Owsley Avenue, LFUCG has an existing detention basin that was installed before LFUCG's current stormwater requirements, and loss of volume would need to be evaluated. East of the detention basin, the connector would likely require acquisition of one residential parcel to connect to the 50-foot public ROW of Robertson Avenue. Once along Robertson Avenue, the connector would fit within the existing ROW. Connecting from Sherman Avenue to Henry Clay Boulevard would require a 5-percent slope the entire way, with retaining walls paralleling the railroad ROW. The easternmost parcel along this corridor has a 5-foot public access easement extending to a set of stairs off the Henry Clay bridge. Based on the design drawings for the bridge, up to 10 feet of space between the southern edge of access easement and railroad ROW exists for the connector. This would require a strip of ROW to be acquired, but is anticipated to avoid major impact to the existing duplex property.



APPENDIX C
PUBLIC MEETING EXHIBITS

INTERSECTION ALTERNATIVE KEY NOTES

1. LENGTH OF RIGHT TURN LANE TO BE DETERMINED
2. NO CHANGES TO EXISTING RADIUS
3. ADD LANDSCAPE MEDIAN
4. MINIMIZE CONFLICTS WITH MAJOR BIKEWAY CROSSING WITH EXISTING THIRD STREET RIGHT TURN RESTRICTION
5. CONSTRUCT SHARED USE PATH ON SOUTH SIDE
6. CONSTRUCT 8-FT WIDE SIDEWALK ON NORTH SIDE

EXHIBIT 1
US 60 AND THIRD STREET INTERSECTION

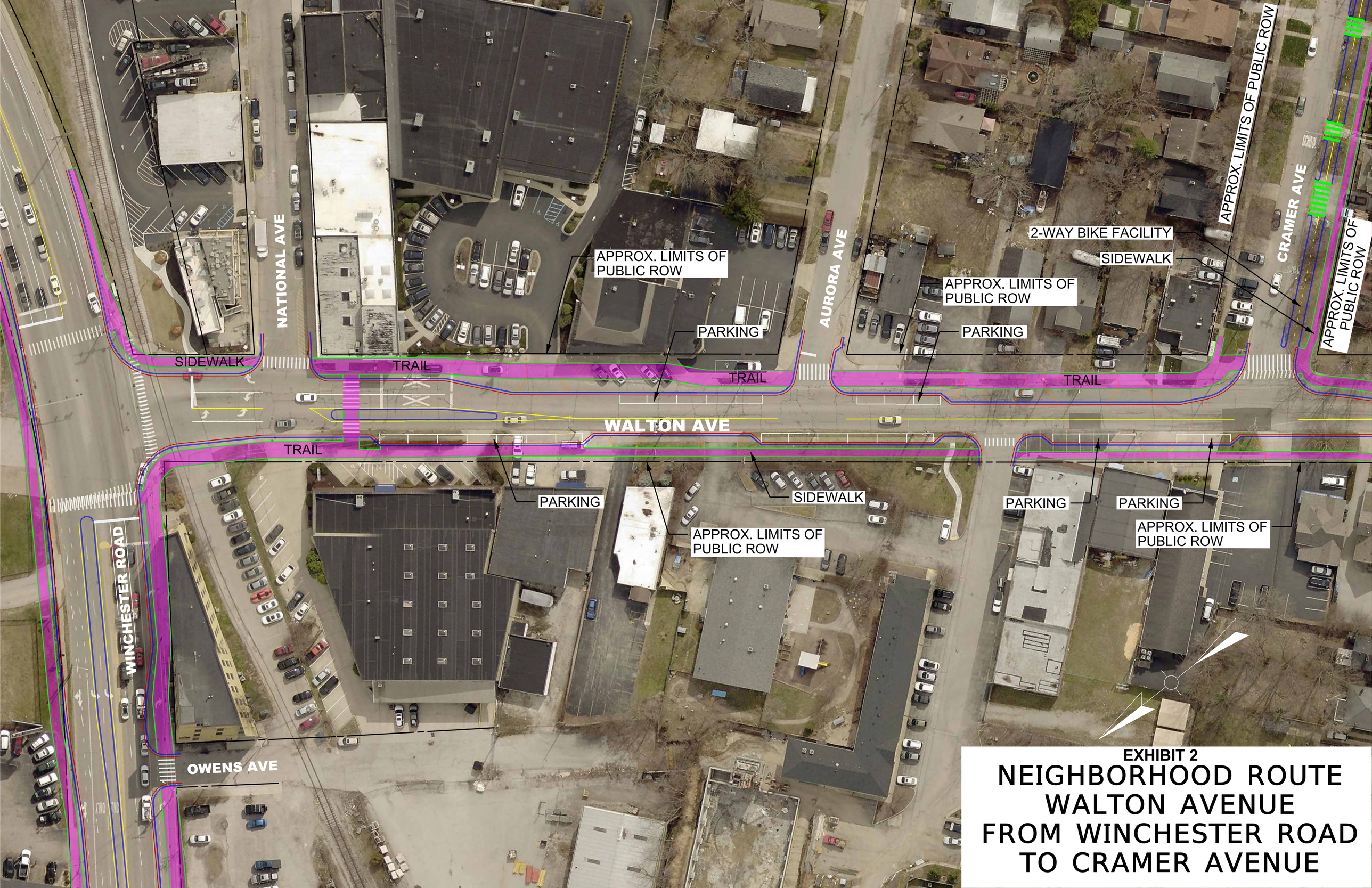


EXHIBIT 2

NEIGHBORHOOD ROUTE
WALTON AVENUE
FROM WINCHESTER ROAD TO CRAMER AVENUE

2-WAY BIKE FACILITY

APPROX. LIMITS OF PUBLIC ROW

PARKING

PARKING

CRAMER AVE

RICHMOND AVE

SIDEWALK

APPROX. LIMITS OF PUBLIC ROW

SIDEWALK

APPROX. LIMITS OF PUBLIC ROW

SIDEWALK

OWSLEY AVE

TRAIL

TRAIL

APPROX. LIMITS OF PUBLIC ROW

TRAIL

APPROX. LIMITS OF PUBLIC ROW

MENTELLE PARK

SIDEWALK

PARKING

PARKING

VICTORY AVE

EXHIBIT 3

NEIGHBORHOOD ROUTE CRAMER AVENUE FROM MENTELLE PARK TO OWSLEY AVENUE

APPROX. LIMITS OF PUBLIC ROW

SIDEWALK

2-WAY BIKE FACILITY

TO MENIFEE AVE

HENRY CLAY BLVD

TO LIBERTY ROAD

PARKING

PARKING

APPROX. LIMITS OF PUBLIC ROW

EXHIBIT 4

NEIGHBORHOOD ROUTE
HENRY CLAY BLVD.
FROM MENIFEE AVENUE
TO LIBERTY ROAD

ARTERIAL ROUTE: WINCHESTER ROAD FROM MIDLAND AVE TO WALTON AVE

MKSK

VIGNETTE 1 - WINCHESTER RD

THE COMMONS EXTENDED | NEIGHBORHOOD | NEIGHBORHOOD CONNECTOR | HILLS AND VALLEYS | THE FLATS | GREENWAY

LOCATION MAP

EXISTING CONDITION

ARTERIAL ROUTE: WINCHESTER ROAD FROM WALTON AVE TO LIBERTY RD

MKSK

VIGNETTE 2 - WINCHESTER RD

THE COMMONS EXTENDED | NEIGHBORHOOD | NEIGHBORHOOD CONNECTOR | HILLS AND VALLEYS | THE FLATS | GREENWAY

LOCATION MAP

EXISTING CONDITION

NEIGHBORHOOD ROUTE: CRAMER AVE FROM WALTON AVE TO OWSLEY AVE

MKSK

VIGNETTE 3 - CRAMER AVE

THE COMMONS EXTENDED | NEIGHBORHOOD | NEIGHBORHOOD CONNECTOR | HILLS AND VALLEYS | THE FLATS | GREENWAY

LOCATION MAP

EXISTING CONDITION

NEIGHBORHOOD ROUTE: OWSLEY AVE FROM CRAMER AVE TO MENIFEE AVE

MKSK

VIGNETTE 4 - OWSLEY AVE

THE COMMONS EXTENDED | NEIGHBORHOOD | NEIGHBORHOOD CONNECTOR | HILLS AND VALLEYS | THE FLATS | GREENWAY

LOCATION MAP

EXISTING CONDITION

NEIGHBORHOOD ROUTE: HENRY CLAY BLVD FROM MENIFEE AVE TO LIBERTY RD

MKSK

VIGNETTE 5 - HENRY CLAY BLVD

THE COMMONS EXTENDED | NEIGHBORHOOD | NEIGHBORHOOD CONNECTOR | HILLS AND VALLEYS | THE FLATS | GREENWAY

LOCATION MAP

EXISTING CONDITION

APPENDIX D
PUBLIC OUTREACH SUMMARY OF QUESTIONNAIRE FEEDBACK

QUESTIONNAIRE NO. 1 SUMMARY OF FEEDBACK

The following section summarizes feedback received on the initial Connect East Lexington Trail Questionnaire, where 1,068 responses were received between May 13, and July 31, 2022.

Main Themes

A. Facility Type

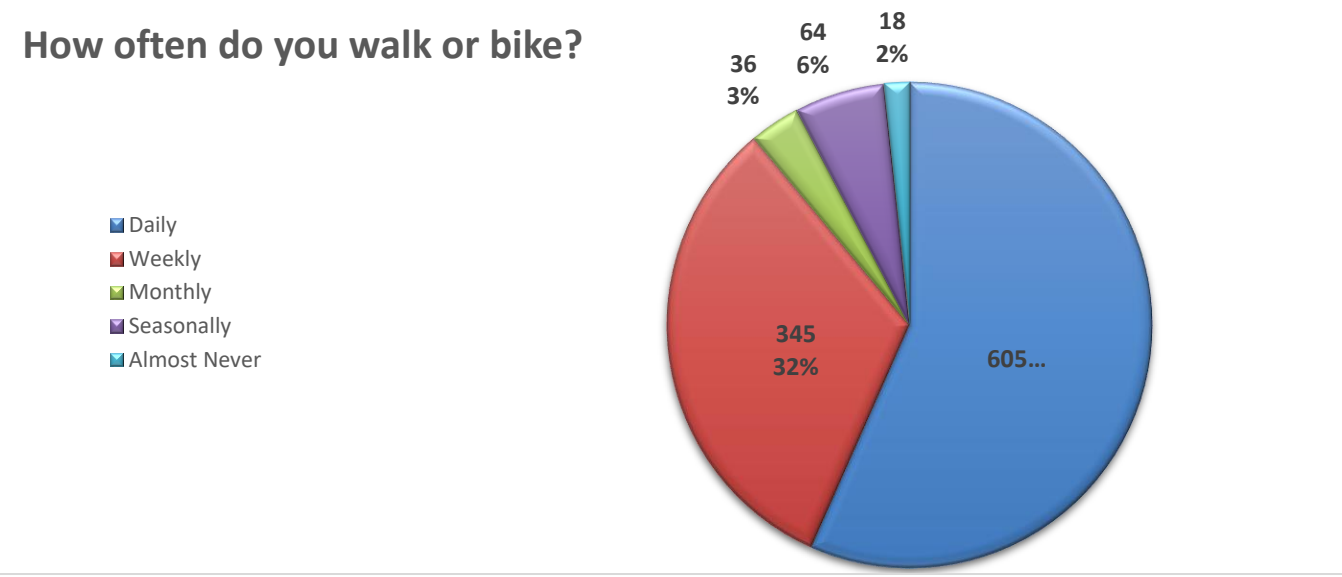
1. A physically separated facility was overwhelmingly preferred to traditional or buffered bike lanes.
2. Riders that identify as somewhat confident or confident prefer protected bike lanes and sidewalks to shared-use facilities. Several respondents noted concerns with the speed of bicyclists on the shared-use facilities.
3. Riders that identify as interested, but concerned, prefer shared-use facilities.
4. Several respondents noted separate alignments from the roadways were preferred with three responses, specifically mentioning the use of the active RJ Corman Railroad line.

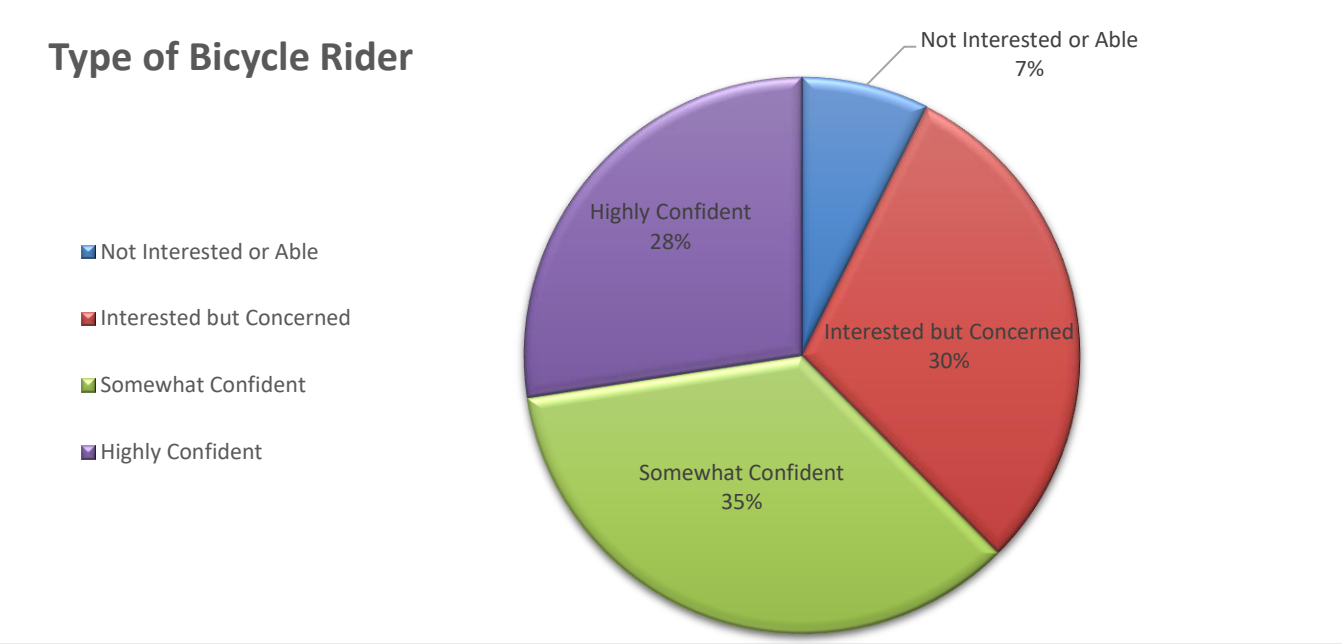
B. Desired Features

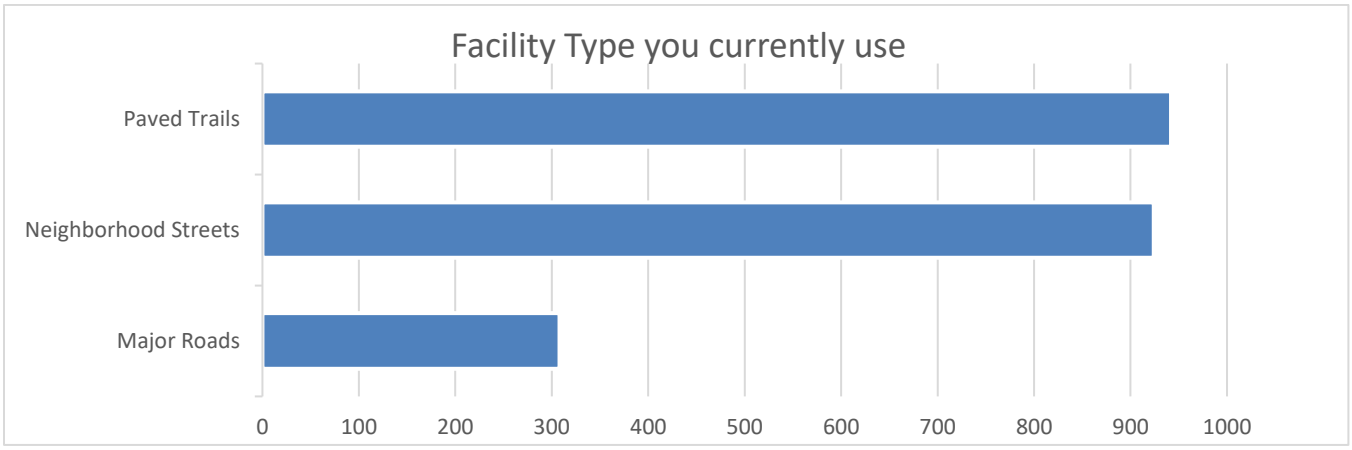
1. Connections to places like the café at Liberty Road and Henry Clay Boulevard, Pasts Garage and Pivot Brewing; Kenwick Table, and National Avenue establishments.
2. Signage
3. Water filling stations
4. Restrooms
5. Trash cans

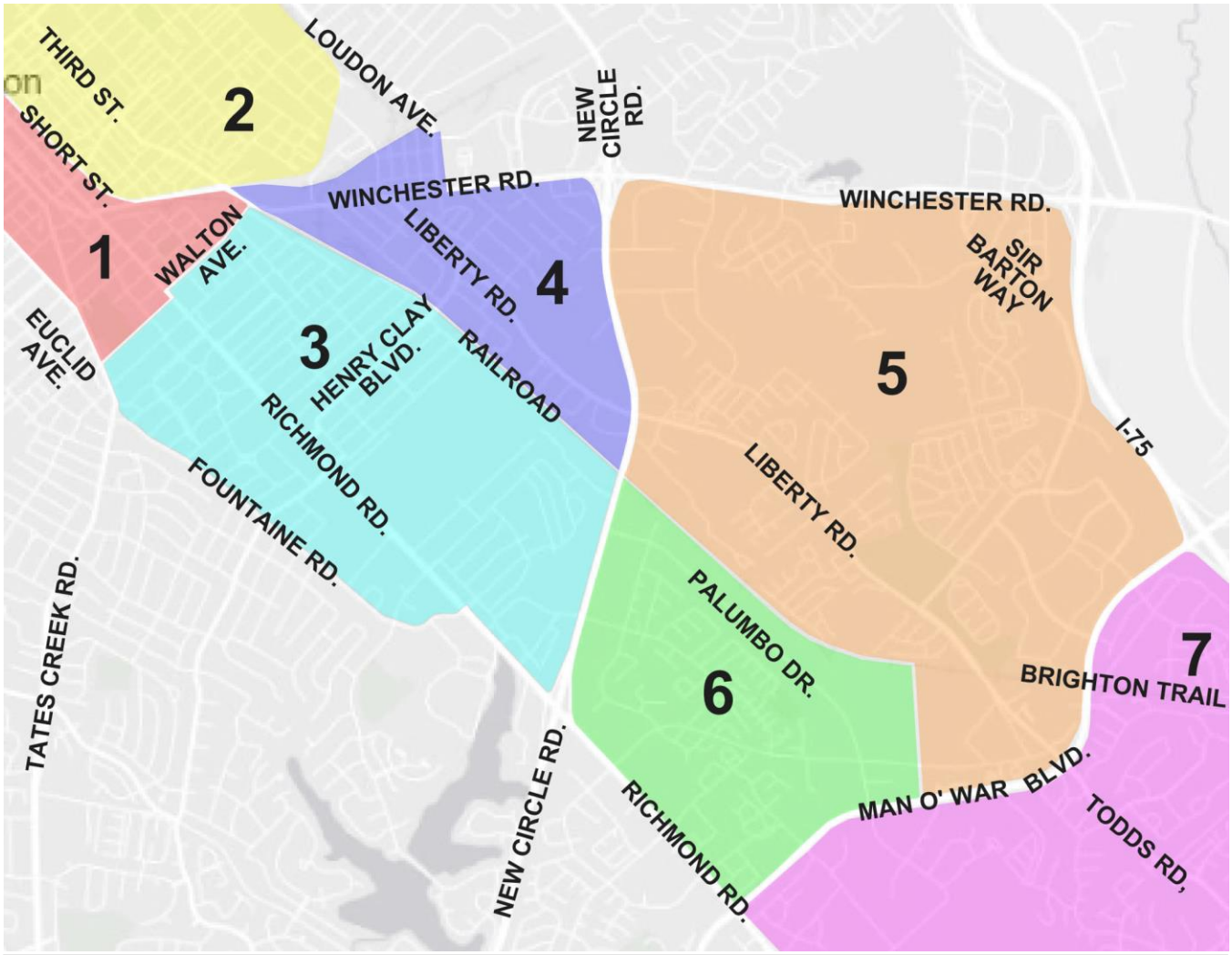
C. Concerns

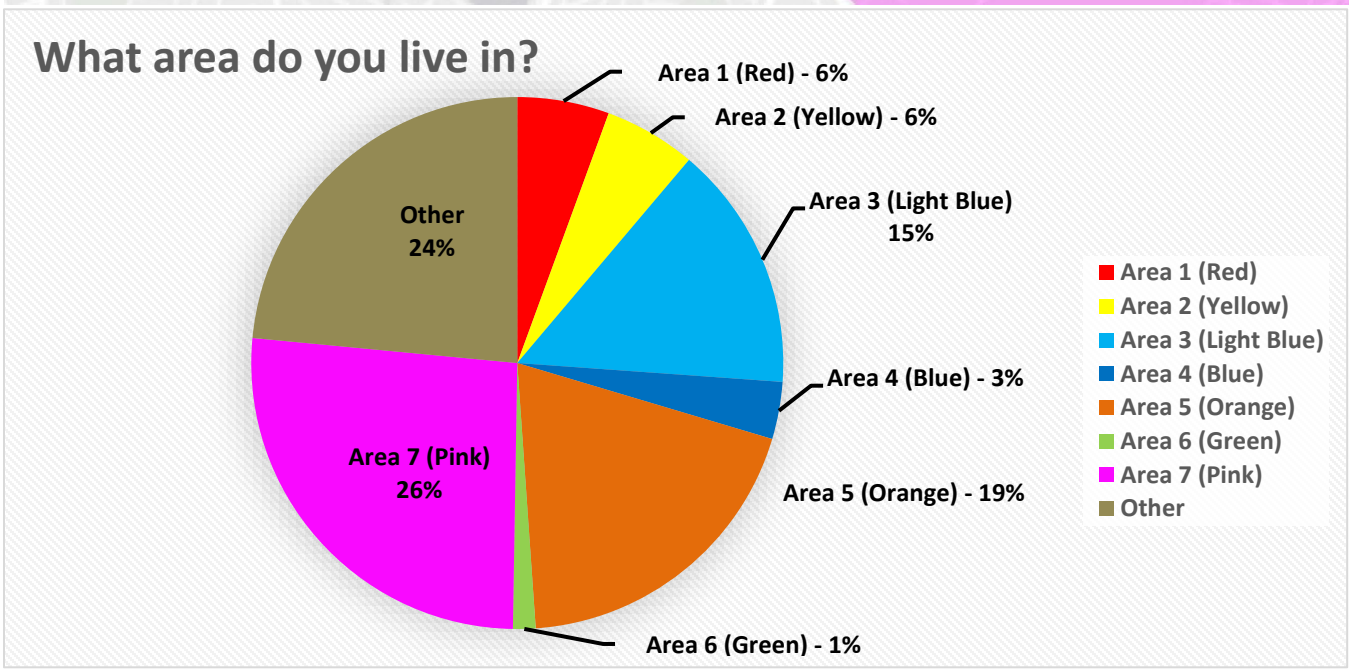
1. Major road crossings such as New Circle and Winchester Roads
2. Conflicts between bike and vehicular traffic
3. Conflicts between bike and pedestrian traffic
4. Lack of shade
5. Lack of maintenance
6. Existing landscape restricting visibility
7. Storm grates in bike lanes
8. Parked cars in bike lanes
9. Need to consider disabled users more in the design of facilities

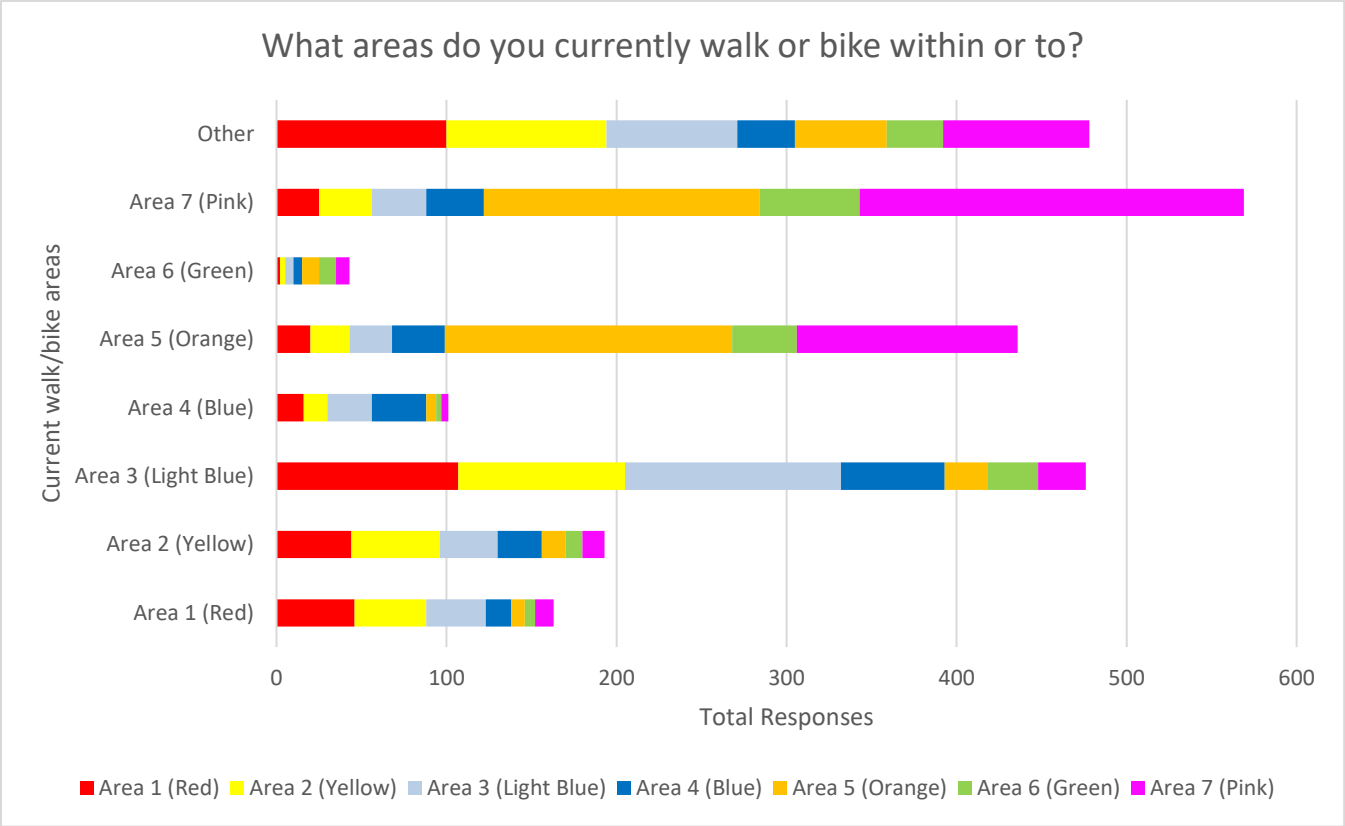

How often do you walk or bike?
Daily
Weekly
Monthly
Seasonally
Almost Never
605…
345
32%
36
3%
64
6%
18
2%

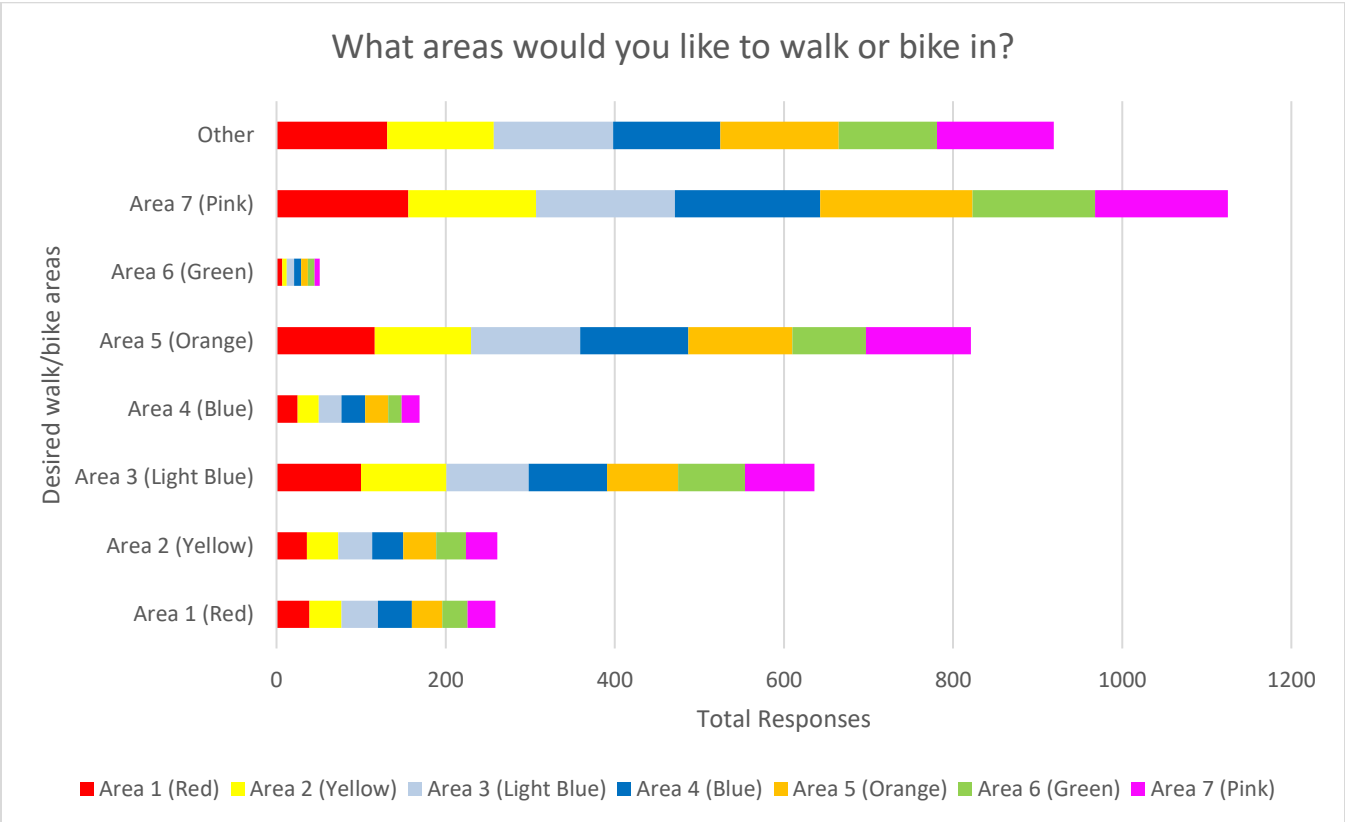

Type of Bicycle Rider
Not Interested or Able
Interested but Concerned
Somewhat Confident
Highly Confident
Not Interested or Able
7%
Interested but Concerned
30%
Somewhat Confident
35%
Highly Confident
28%

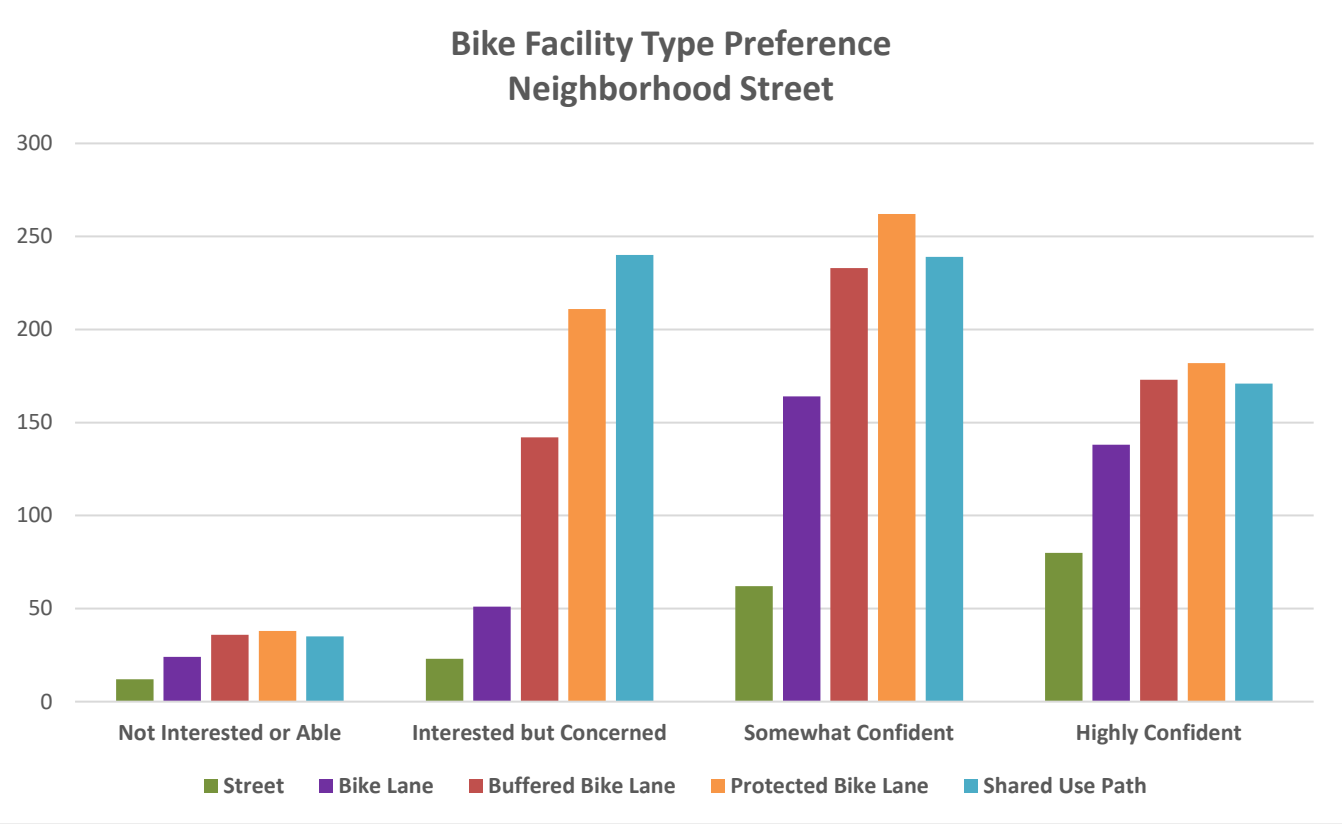

Facility Type you currently use
Paved Trails
Neighborhood Streets
Major Roads
0
100
200
300
400
500
600
700
800
900
1000

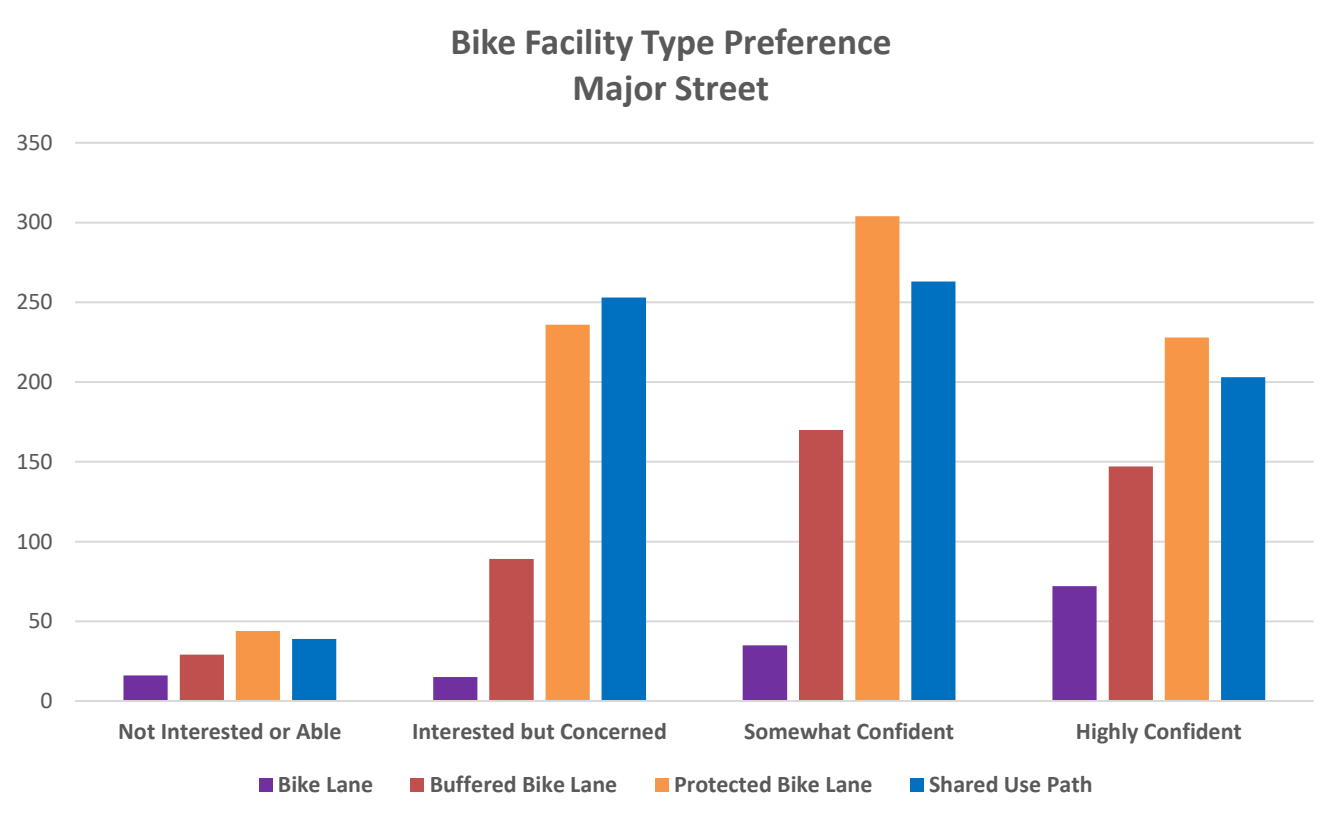

THIRD ST.
LOUDON AVE.
NEW CIRCLE RD.
SHORT ST.
2
WINCHESTER RD.
WINCHESTER RD.
1
WALTON AVE.
LIBERTY RD.
4
SIR BARTON WAY
EUCLID AVE.
3
HENRY CLAY BLVD.
RAILROAD
5
I-75
RICHMOND RD.
FOUNTAINE RD.
LIBERTY RD.
PALUMBO DR.
7
6
BRIGHTON TRAIL
TATES CREEK RD.
NEW CIRCLE RD.
RICHMOND RD.
MAN O' WAR BLVD.
TODDS RD.


What area do you live in?
Area 1 (Red) - 6%
Area 2 (Yellow) - 6%
Area 3 (Light Blue) 15%
Area 4 (Blue) - 3%
Area 5 (Orange) - 19%
Area 6 (Green) - 1%
Area 7 (Pink) 26%
Other 24%
Area 1 (Red)
Area 2 (Yellow)
Area 3 (Light Blue)
Area 4 (Blue)
Area 5 (Orange)
Area 6 (Green)
Area 7 (Pink)
Other


What areas do you currently walk or bike within or to?
Other
Area 7 (Pink)
Area 6 (Green)
Area 5 (Orange)
Area 4 (Blue)
Area 3 (Light Blue)
Area 2 (Yellow)
Area 1 (Red)
Current walk/bike areas
0
100
200
300
400
500
600
Total Responses
Area 1 (Red)
Area 2 (Yellow)
Area 3 (Light Blue)
Area 4 (Blue)
Area 5 (Orange)
Area 6 (Green)
Area 7 (Pink)


What areas would you like to walk or bike in?
Other
Area 7 (Pink)
Area 6 (Green)
Area 5 (Orange)
Area 4 (Blue)
Area 3 (Light Blue)
Area 2 (Yellow)
Area 1 (Red)
Desired walk/bike areas
0
200
400
600
800
1000
1200
Total Responses
Area 1 (Red)
Area 2 (Yellow)
Area 3 (Light Blue)
Area 4 (Blue)
Area 5 (Orange)
Area 6 (Green)
Area 7 (Pink)


Bike Facility Type Preference
Neighborhood Street
300
250
200
150
100
50
0
Not Interested or Able
Interested but Concerned
Somewhat Confident
Highly Confident
Street
Bike Lane
Buffered Bike Lane
Protected Bike Lane
Shared Use Path


Bike Facility Type Preference
Major Street
350
300
250
200
150
100
50
0
Not Interested or Able
Interested but Concerned
Somewhat Confident
Highly Confident
Bike Lane
Buffered Bike Lane
Protected Bike Lane
Shared Use Path

QUESTIONNAIRE NO. 2 SUMMARY OF FEEDBACK

The following section summarizes feedback received on the second Connect East Lexington Trail Questionnaire, where 182 responses were received between May 25, and June 20, 2023.

A. Respondent Demographics

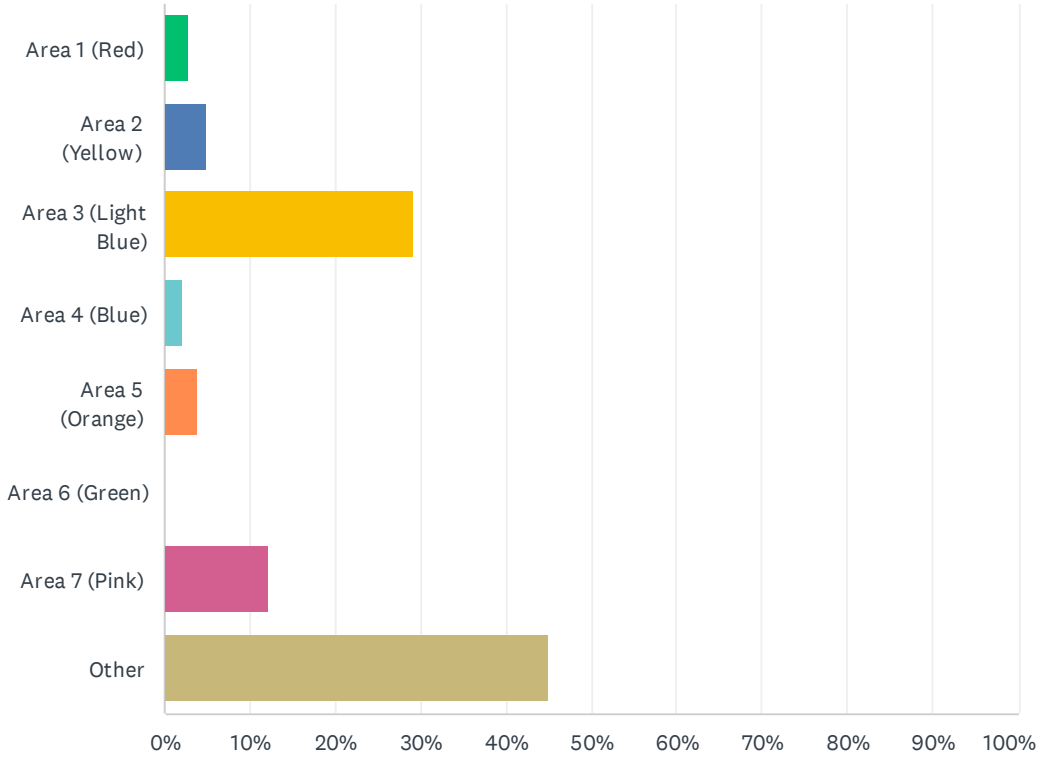
1. Sixty-six percent of the respondents identify themselves as highly confident riders, which was significantly higher than the first questionnaire that had 28 percent. The preferences of somewhat conflict and confident riders for separated bike lanes and sidewalks over shared-use facilities was evident in the responses.
2. Ninety percent of the respondents do not live or work along either the neighborhood or arterial route.

B. Observations

1. Question No. 4–Sixty-six percent of respondents felt very comfortable riding on a shared-use trail on the section of US 60 from Third Street to Walton Avenue.
2. Question No. 5–The number of respondents that felt very comfortable riding on the separated bike lanes along the Arterial Route on US 60 from Walton Avenue to Liberty Road dropped to 51 percent.
3. Question No. 6–The number of respondents that felt very comfortable riding on the two-way separated bike lanes on Cramer Avenue was 84 percent, with 95 percent either being somewhat comfortable or very comfortable.
4. Question No. 7–The number of respondents that felt very comfortable on a shared-use trail along Owsley and Menifee Avenues was 49 percent, with 78 percent either being somewhat comfortable or very comfortable.
5. Question No. 10–Sixty-two percent of respondents were either very satisfied or somewhat satisfied with the changes along Walton Avenue, compared with 15 percent of respondents who were either very unsatisfied or somewhat unsatisfied.
6. Question No. 11–Seventy-two percent of respondents were either very satisfied or somewhat satisfied when the separated bike lane and sidewalk combined to a shared-use trail for constrained sections on Cramer Avenue. Only 7 percent of respondents were either very unsatisfied or somewhat unsatisfied.
7. Question No. 12–Seventy-seven percent of respondents were either very satisfied or somewhat satisfied with a two-way separated bike lane on Henry Clay Boulevard, compared to 6 percent that were either very unsatisfied or somewhat unsatisfied. The questionnaire and public meeting feedback received only a limited number of responses from residents along Henry Clay Boulevard.

Q1 What area do you live in?

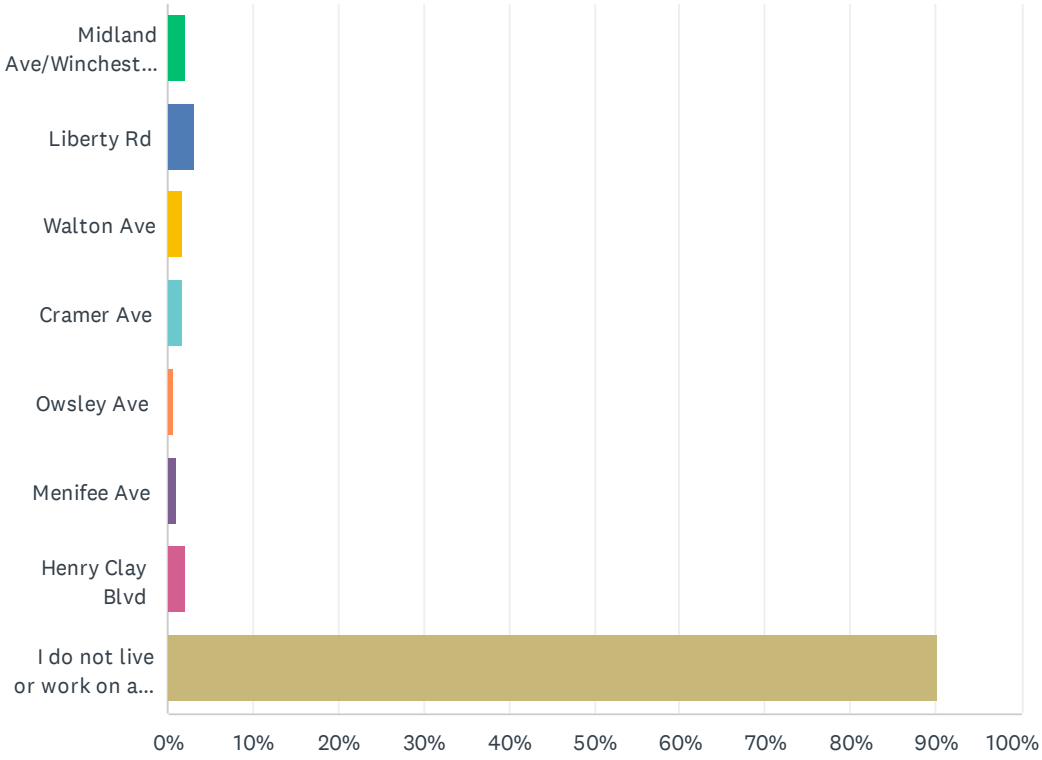
Answered: 182 Skipped: 2



ANSWER CHOICES	RESPONSES	
Area 1 (Red)	2.75%	5
Area 2 (Yellow)	4.95%	9
Area 3 (Light Blue)	29.12%	53
Area 4 (Blue)	2.20%	4
Area 5 (Orange)	3.85%	7
Area 6 (Green)	0.00%	0
Area 7 (Pink)	12.09%	22
Other	45.05%	82
TOTAL		182

Q2 Please tell us if you live and/or work directly on one of these streets:

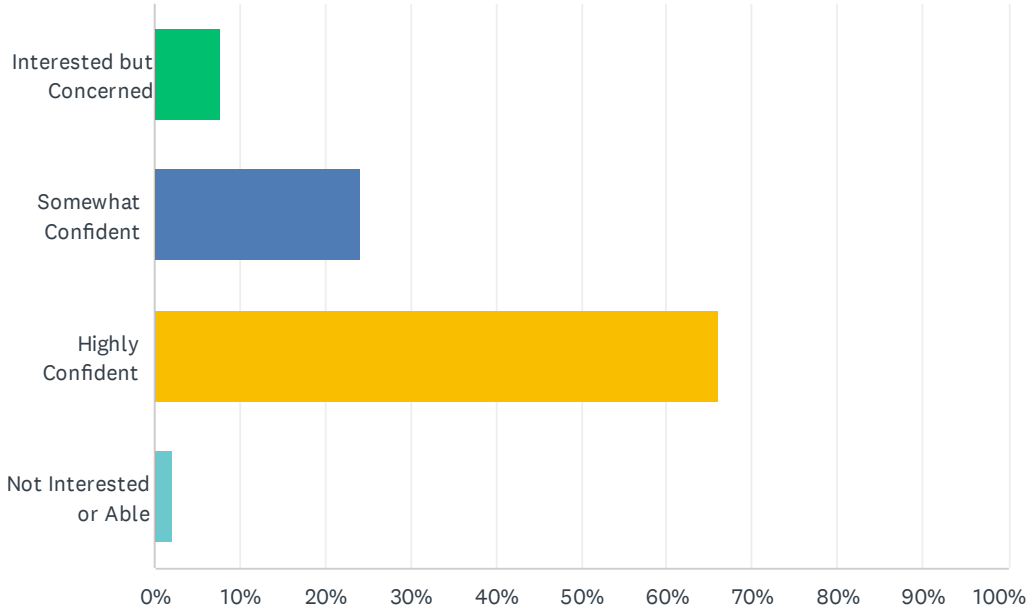
Answered: 182 Skipped: 2



ANSWER CHOICES	RESPONSES	
Midland Ave/Winchester Rd	2.20%	4
Liberty Rd	3.30%	6
Walton Ave	1.65%	3
Cramer Ave	1.65%	3
Owsley Ave	0.55%	1
Menifee Ave	1.10%	2
Henry Clay Blvd	2.20%	4
I do not live or work on any of these streets	90.11%	164
Total Respondents: 182		

Q3 What type of bicycle rider are you?

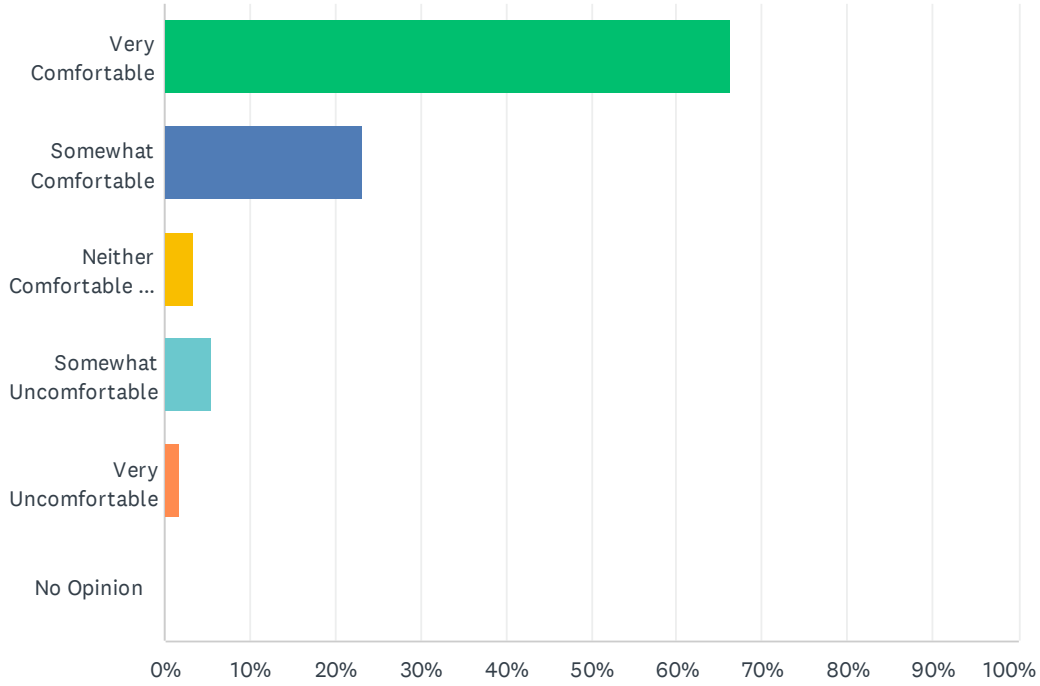
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
Interested but Concerned	7.65%	14
Somewhat Confident	24.04%	44
Highly Confident	66.12%	121
Not Interested or Able	2.19%	4
TOTAL		183

Q4 How comfortable would you be bicycling or walking along this route?

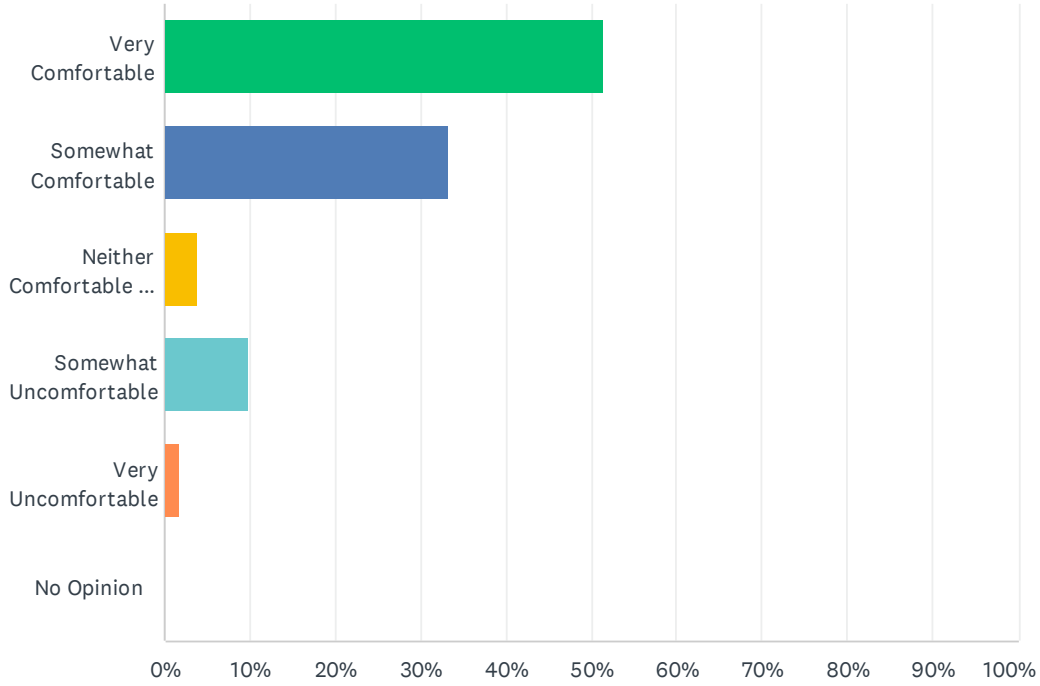
Answered: 181 Skipped: 3



ANSWER CHOICES	RESPONSES	
Very Comfortable	66.30%	120
Somewhat Comfortable	23.20%	42
Neither Comfortable or Uncomfortable	3.31%	6
Somewhat Uncomfortable	5.52%	10
Very Uncomfortable	1.66%	3
No Opinion	0.00%	0
TOTAL		181

Q5 How comfortable would you be bicycling or walking along this route?

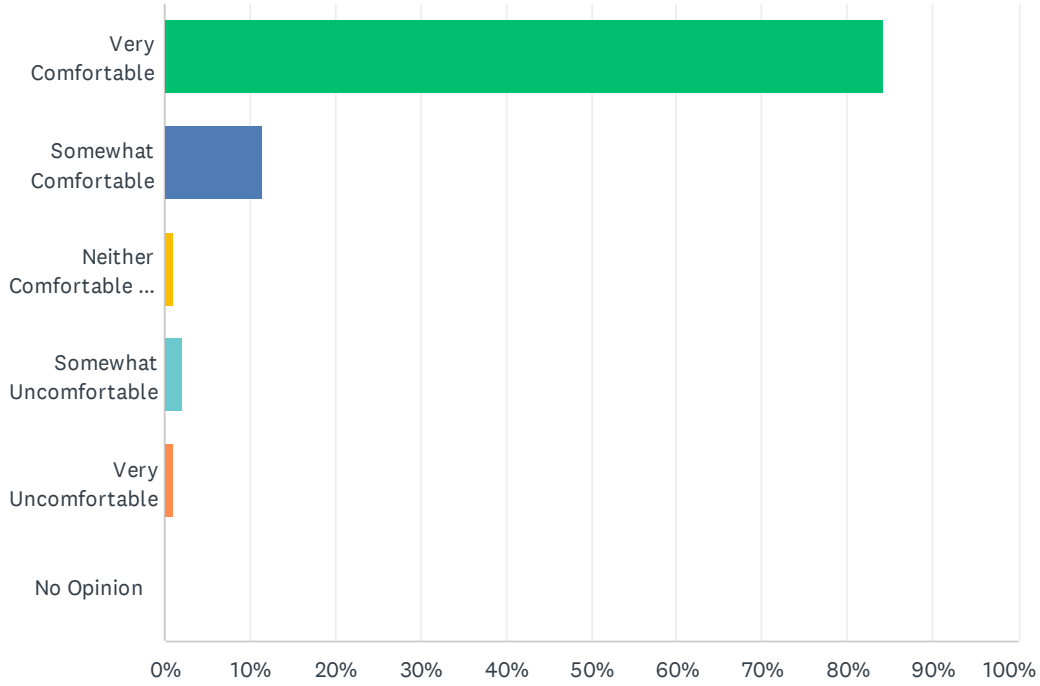
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very Comfortable	51.37%	94
Somewhat Comfortable	33.33%	61
Neither Comfortable or Uncomfortable	3.83%	7
Somewhat Uncomfortable	9.84%	18
Very Uncomfortable	1.64%	3
No Opinion	0.00%	0
TOTAL		183

Q6 How comfortable would you be bicycling or walking along this route?

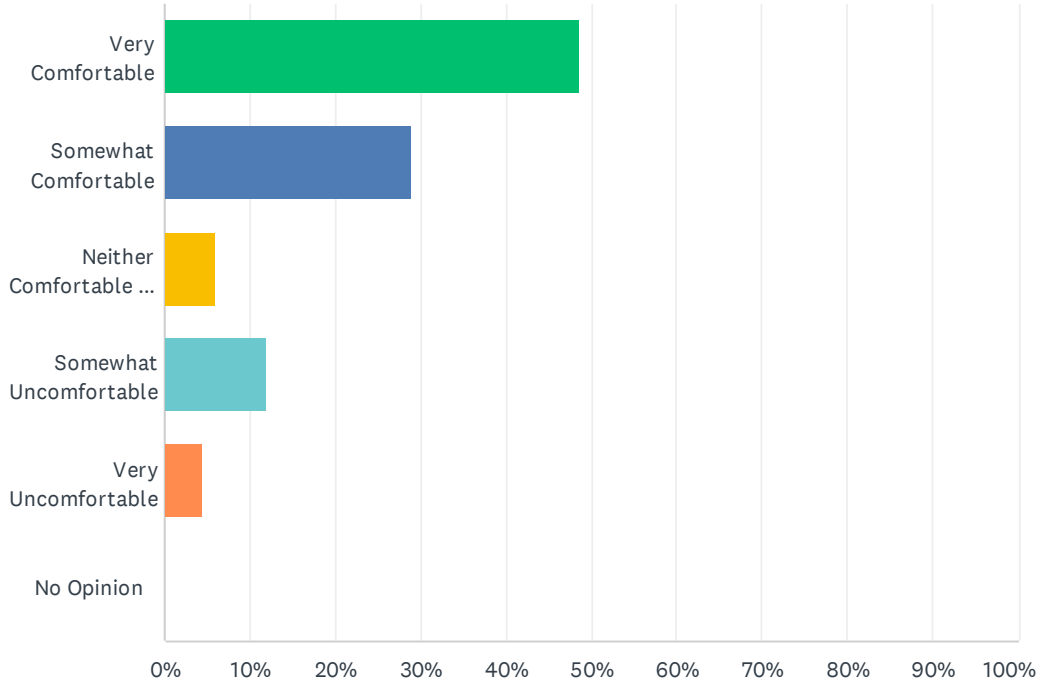
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very Comfortable	84.15%	154
Somewhat Comfortable	11.48%	21
Neither Comfortable or Uncomfortable	1.09%	2
Somewhat Uncomfortable	2.19%	4
Very Uncomfortable	1.09%	2
No Opinion	0.00%	0
TOTAL		183

Q7 How comfortable would you be bicycling or walking along this route?

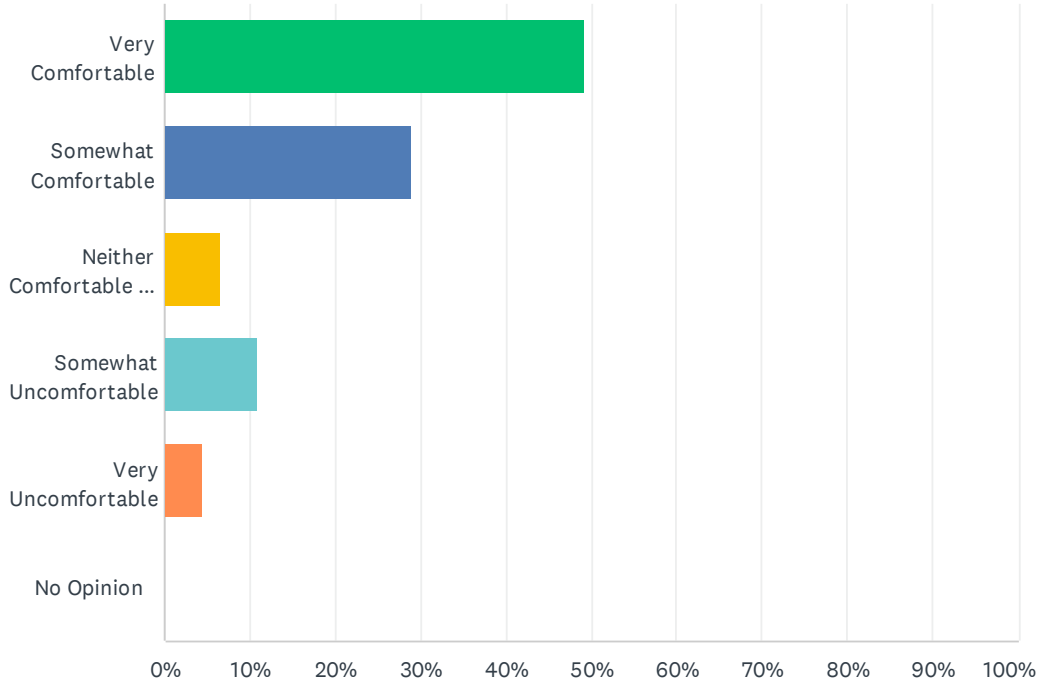
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very Comfortable	48.63%	89
Somewhat Comfortable	28.96%	53
Neither Comfortable or Uncomfortable	6.01%	11
Somewhat Uncomfortable	12.02%	22
Very Uncomfortable	4.37%	8
No Opinion	0.00%	0
TOTAL		183

Q8 How comfortable would you be bicycling or walking along this route?

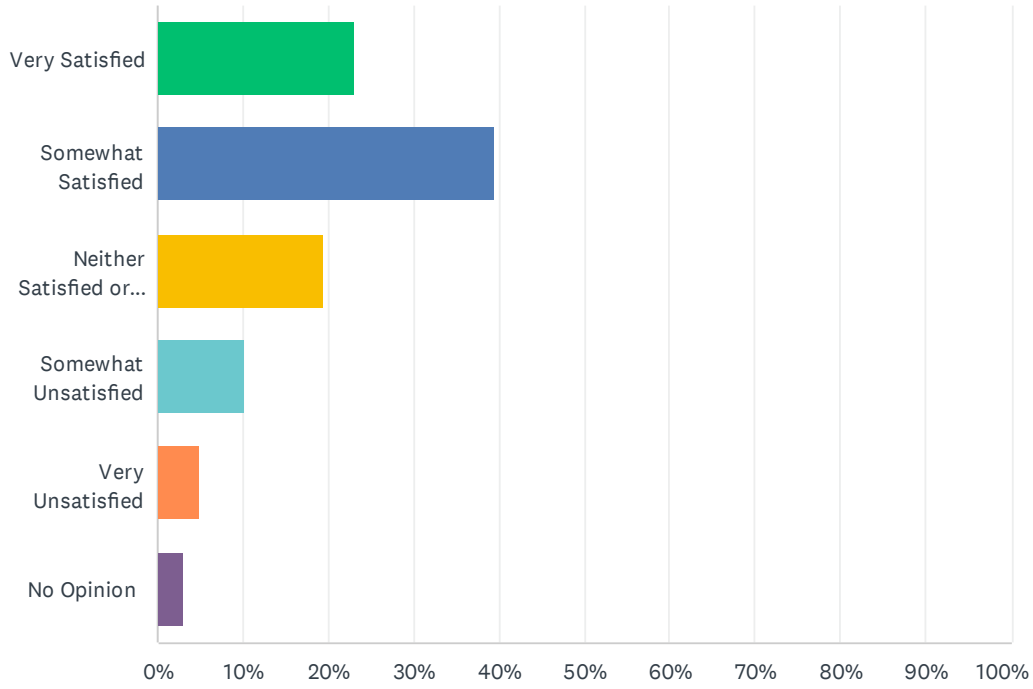
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very Comfortable	49.18%	90
Somewhat Comfortable	28.96%	53
Neither Comfortable or Uncomfortable	6.56%	12
Somewhat Uncomfortable	10.93%	20
Very Uncomfortable	4.37%	8
No Opinion	0.00%	0
TOTAL		183

Q10 For the neighborhood route option, the trail would turn off Winchester Rd onto Walton Ave. Trail users would cross Walton Ave near National Ave and then continue on the east side of the street to Cramer Ave. How satisfied are you with this route option, including the possible changes to the public right-of-way in this area?

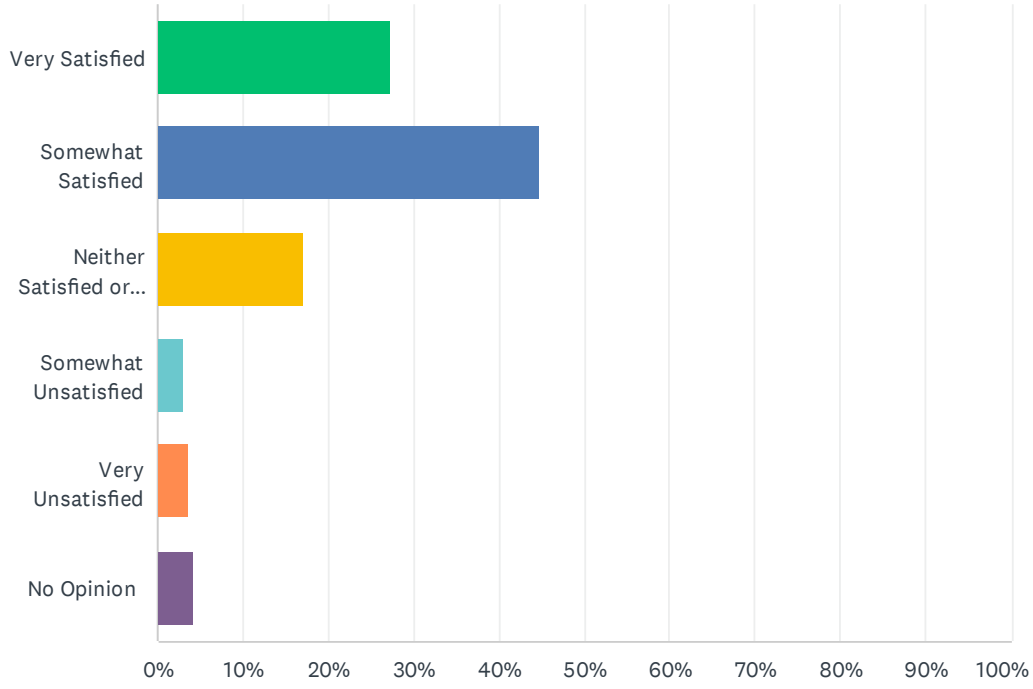
Answered: 165 Skipped: 19



ANSWER CHOICES	RESPONSES	
Very Satisfied	23.03%	38
Somewhat Satisfied	39.39%	65
Neither Satisfied or Unsatisfied	19.39%	32
Somewhat Unsatisfied	10.30%	17
Very Unsatisfied	4.85%	8
No Opinion	3.03%	5
TOTAL		165

Q11 Because there are fewer driveways – and therefore less opportunities for collisions – it would be preferable to put a potential trail along the south side of Cramer Ave (the Ashland Elementary side). However, this presents two challenges: (1) the width of the public right of way along Cramer Ave narrows between Mentelle Ave and Owsley Ave and (2) there are two locations using “back-out” parking (an apartment building and one neighborhood grocery). This possible improvement idea would help address these challenges by merging the bikeway and sidewalk into a trail for several blocks and providing on-street parking. How satisfied are you with this route option, including the possible changes to the public right-of-way in this area?

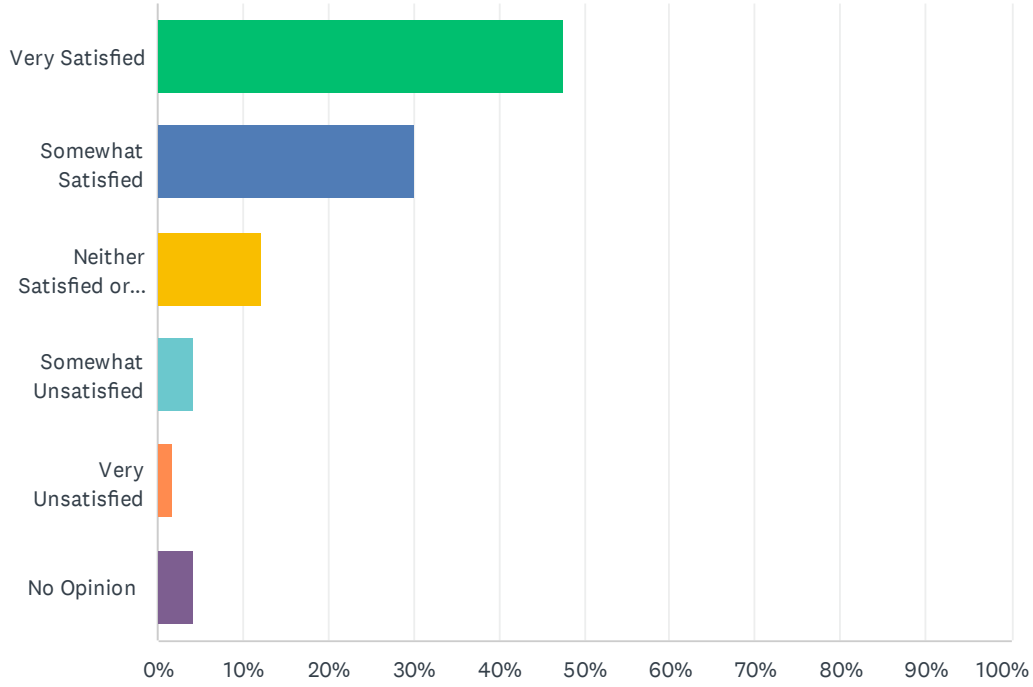
Answered: 165 Skipped: 19



ANSWER CHOICES	RESPONSES	
Very Satisfied	27.27%	45
Somewhat Satisfied	44.85%	74
Neither Satisfied or Unsatisfied	16.97%	28
Somewhat Unsatisfied	3.03%	5
Very Unsatisfied	3.64%	6
No Opinion	4.24%	7
TOTAL		165

Q12 A barrier-separated trail within the roadway on the west side of Henry Clay Blvd would make sure the large trees aren't impacted. However, on-street parking between Menifee Ave and Liberty Rd would need to be limited to designated parking areas created along the east side of the road between some driveways. How satisfied are you with this route option, including the possible changes to the public right-of-way in this area?

Answered: 166 Skipped: 18



ANSWER CHOICES	RESPONSES	
Very Satisfied	47.59%	79
Somewhat Satisfied	30.12%	50
Neither Satisfied or Unsatisfied	12.05%	20
Somewhat Unsatisfied	4.22%	7
Very Unsatisfied	1.81%	3
No Opinion	4.22%	7
TOTAL		166

APPENDIX E
SIGNAGE AND WAYFINDING

EDUCATIONAL SIGNAGE

FRONT VIEW

SIDE VIEW

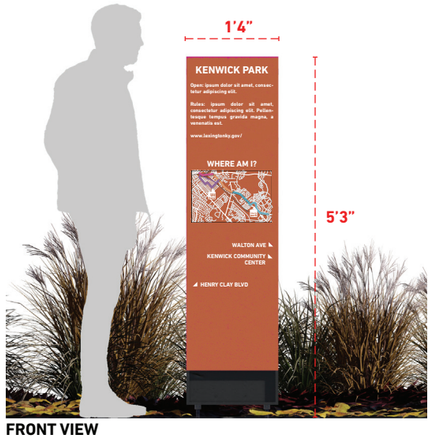
PAINTED ALUMINUM
VINYL CUT/ PRINTED GRAPHICS
HARDWOOD TIMBER
PAINTED STEEL BASE

ANGLED VIEW

COLOR: SUNSHINE

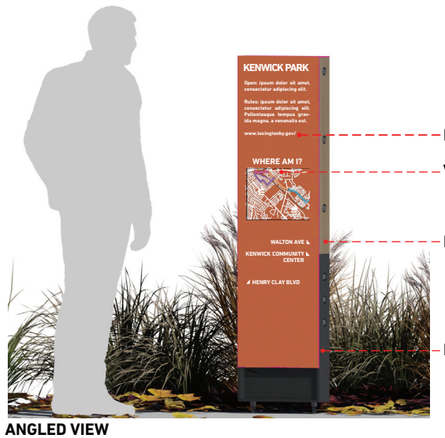
ISOMETRIC VIEW
(GRAPHICS & TEXT NOT SHOWN FOR CLARITY)

DIRECTIONAL SIGNAGE



FRONT VIEW

SIDE VIEW



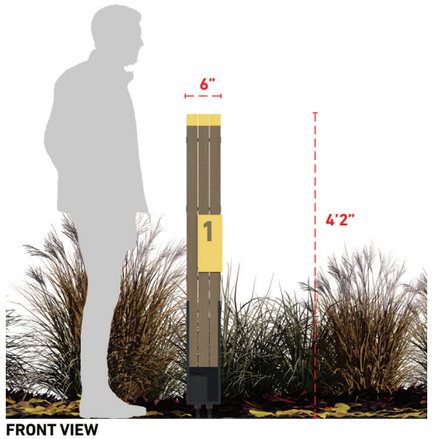
PAINTED ALUMINUM
VINYL CUT/ PRINTED GRAPHICS
HARDWOOD TIMBER
PAINTED STEEL BASE

ANGLED VIEW

COLOR: RED CLAY

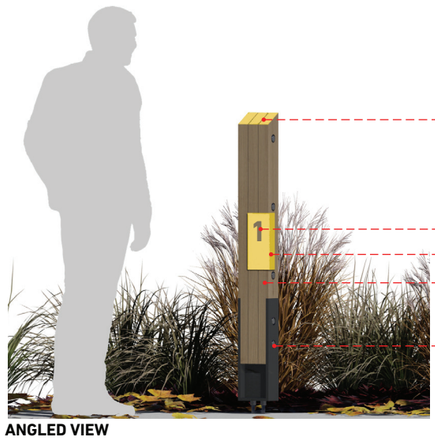
ISOMETRIC VIEW
(GRAPHICS & TEXT NOT SHOWN FOR CLARITY)

TRAIL MARKERS



FRONT VIEW

SIDE VIEW



PAINTED TOPS
LASER CUT GRAPHICS
PAINTED ALUMINUM
HARDWOOD TIMBER
PAINTED STEEL BASE

ANGLED VIEW

COLOR: SUNSHINE

ISOMETRIC VIEW

EDUCATIONAL SIGNAGE

FRONT VIEW

SIDE VIEW

PAINTED ALUMINUM
VINYL CUT/ PRINTED GRAPHICS
HARDWOOD TIMBER
PAINTED STEEL BASE

ANGLED VIEW

COLOR: LIGHT LIMESTONE

ISOMETRIC VIEW
(GRAPHICS & TEXT NOT SHOWN FOR CLARITY)

DIRECTIONAL SIGNAGE

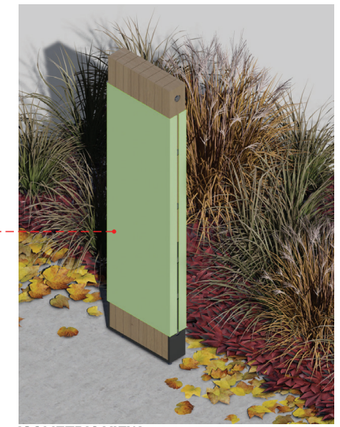
FRONT VIEW

SIDE VIEW

PAINTED ALUMINUM
VINYL CUT/ PRINTED GRAPHICS
HARDWOOD TIMBER
PAINTED STEEL BASE

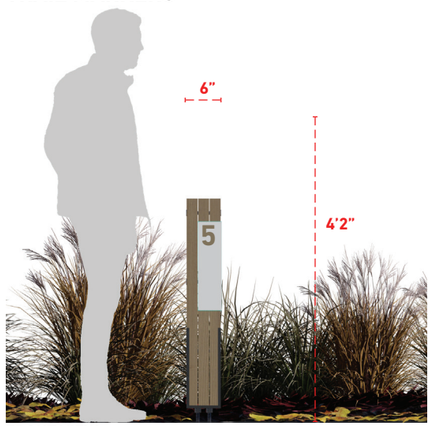
ANGLED VIEW

COLOR: GRASS



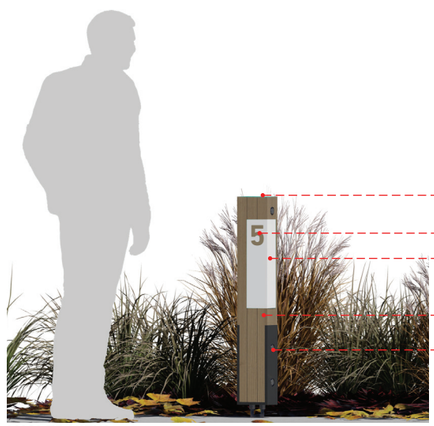
ISOMETRIC VIEW
(GRAPHICS & TEXT NOT SHOWN FOR CLARITY)

TRAIL MARKERS



FRONT VIEW

SIDE VIEW



PAINTED TOPS
LASER CUT GRAPHICS
PAINTED ALUMINUM
HARDWOOD TIMBER
PAINTED STEEL BASE

ANGLED VIEW

COLOR: SPRING WATER

ISOMETRIC VIEW

EDUCATIONAL SIGNAGE

DIRECTIONAL SIGNAGE

TRAIL MARKERS

1.SIGNAGE AND WAYFINDING STRATEGY

The strategy developed for the East Lexington Trail Connectivity Study project is intended to provide guidance and design intent for the future development and implementation of a comprehensive signage package that unifies and enhances the user experience. This strategy also understands the strategies and applications implemented throughout Town Branch Commons as well as the Town Branch Phase 6 project that weaves through the Distillery District connecting downtown to the larger Legacy Trail.

The East Lexington Connectivity Study recommends three different types of signs for the overall project that embody subtle design cues from the broader network of signage found throughout the Town Branch Commons, Town Branch Phase 6, and the Legacy Trail while offering a unique aesthetic for this segment of the trail. A combination of Directional Signs, Educational Signs, and Trail Markers provide a common thread throughout the trail and offer meaningful communication to the future users of the trail.

It is recommended that the signs are constructed with suitable robust materials. Proposed materials include painted steel bases and frames with a hardwood structure. Signage surfaces would be made from aluminum sheets, with the graphics laser cut/etched or vinyl cut.

2.DIRECTIONAL SIGNAGE (LOCATION)

The series of Directional Signage for the trail will be placed in designated locations throughout the trail where there may be trailheads or decision points for trail users. These signs will provide information pertaining to the specific location along the trail and distances to destinations along the trail corridor as well as other destinations found within the neighborhoods and districts that the trail connects and weaves through. Example destinations may be F&B establishments, local grocery stores like Wilson's Grocery in the Kenwick Neighborhood, the Warehouse Block along National Avenue, Liberty and Ashland Elementary Schools, and other destinations to be identified.

3.EDUCATIONAL SIGNAGE

Designed using similar materials and scale, Educational Signs could be located in areas where specific educational opportunities exist and should be highlighted along the trail. These signs could have a combination of text, images, and QR codes that convey important and meaningful information to convey to users of the trail. Example educational opportunities could include the Warehouse Block, neighborhood history, railroad industry, local businesses, and historic community leaders.

4.TRAIL MARKERS

Designed using similar materials, the Trail Markers are designed to be smaller in scale and identify distances along the trail that correspond to distance markers identified on the Directional Signs. This strategy will provide trail users an opportunity to better understand the distances to destinations as well as understanding their location and distance of travel throughout the trail.