Stantec

NEWPORT
Two-Way Feasibility Study

Item No. 6-377
Campbell County, Kentucky

SEPTEMBER 2024

TEAM KENTUCKY®
TRANSPORTATION CABINET

FINAL REPORT

Newport Two-Way Feasibility Study

KYTC Item No. 6-377

TEAM KENTUCKY®
TRANSPORTATION CABINET

Kentucky Transportation Cabinet
Central Office, Division of Planning
Highway District 6, Covington

In partnership with:

Stantec

September 2024

Executive Summary

The City of Newport's 2015 Comprehensive Plan recommended to further evaluate converting Monmouth Street, one half of the US 27 one-way couplet through Newport, to a two-way street in line with trends for successful main streets.[1] The Kentucky Transportation Cabinet (KYTC) and the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) initiated this *Newport Two-Way Feasibility Study*, KYTC Item No. 6-377, to determine the feasibility of converting the one-way couplets of Monmouth / York Streets and 4th / 5th Streets in Newport, Kentucky to two-way operation.

Existing Conditions

The study area, shown in **Figure ES-1**, includes the one-way street couplets of Monmouth / York Streets (between 3rd Street and 11th Street) and 4th / 5th Streets (between the KY 8 roundabout and Washington Avenue). This area encompasses Newport's Central Business District, a major component of the urban core and a focus for redevelopment within northern Kentucky.

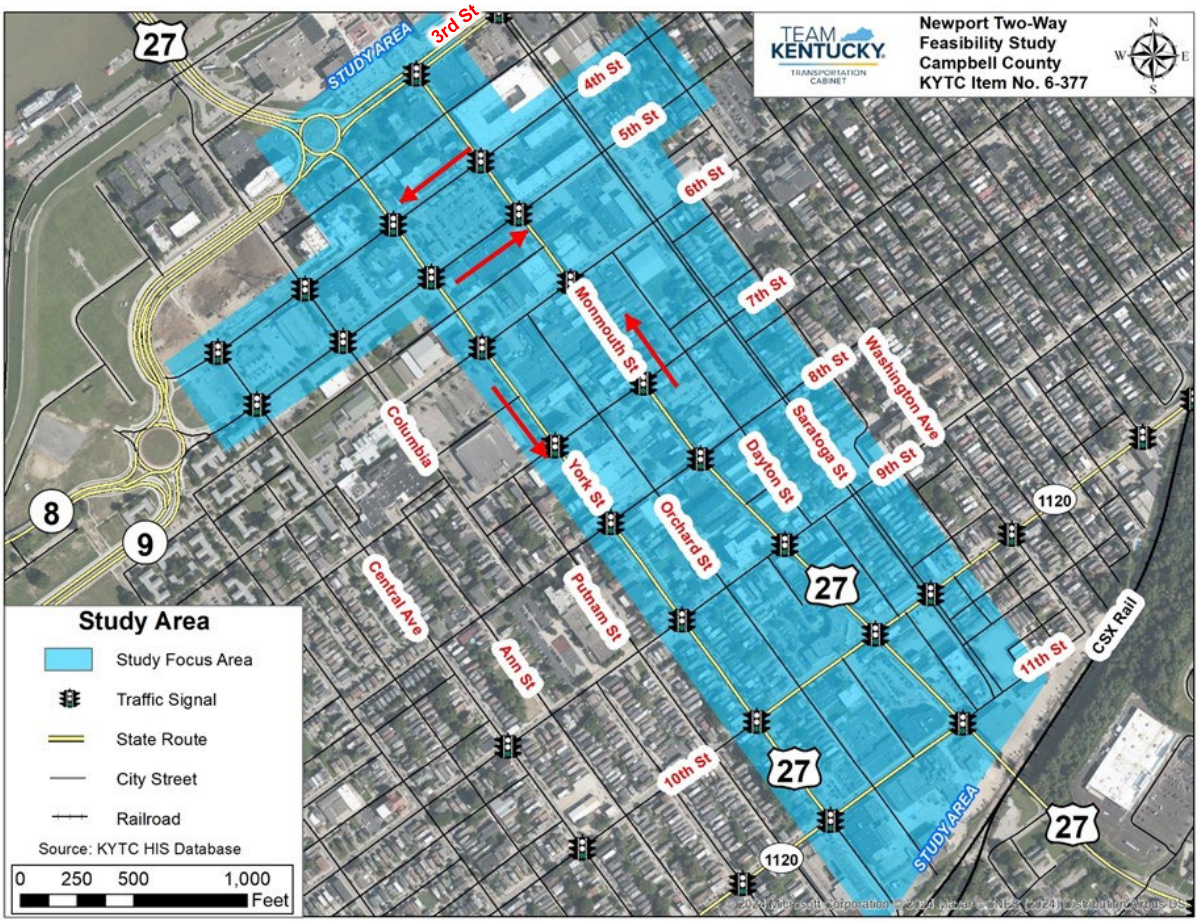

Figure ES-1: Study Area

[1] https://www.newportky.gov/DocumentCenter/View/306/Comprehensive-Plan---2015-Update-PDF

4th and 5th Streets are east-west urban minor arterials, providing access to mostly local businesses and homes in Newport. Monmouth and York Streets comprise US 27, a major north-south arterial between northern Kentucky and Cincinnati, Ohio. Because of this connectivity, Monmouth Street and York Street serve dual roles: they provide access to local businesses / homes and serve as an artery for regional through traffic. Through downtown Newport, York and Monmouth Streets are lined with commercial businesses, with sidewalks and on-street parking on both sides of the roadway. South of 11th Street, the US 27 one-way couplet (via 11th Street) combine to become a two-way, four-lane road serving a mix of residential and commercial areas. To the north, Monmouth and York Streets combine (via 3rd Street) at the Taylor Southgate Bridge to carry US 27 as four lanes across the Ohio River to Cincinnati.

York and Monmouth Streets have posted speed limits of 25 miles per hour (mph) through the study area while 4th and 5th Streets have speed limits ranging from 25 to 30 mph. Monmouth Street carries 7,100 (2021) vehicles per day (VPD) and York Street carries 4,300 (2022) VPD through the study area. 4th Street carries between 2,400 (2022) and 4,300 (2016) VPD and 5th Street carries between 3,400 (2018) and 5,900 (2021) VPD through the study area. Results from a traffic simulation model analysis revealed that these one-way couplets currently operate at an acceptable Level of Service (LOS) during the weekday peak hours of operation.

Anticipated developments in the study area are expected to increase traffic in the future. Additionally, regional traffic between northern Kentucky and Cincinnati is expected to continue to grow on York and Monmouth Streets. Future year (2035) weekday peak hour traffic simulation model scenarios were developed using the forecasted volumes and maintaining the existing traffic operations (i.e. one-way couplets). All intersections are expected to operate at LOS C or better during both the AM and PM peak hours under the 2035 No-Build scenario.

Kentucky State Police Crash data were collected in the study area for the five-year period between 2018 – 2022. Over the course of the five years, a total of 654 crashes were reported in the study area, one of which resulted in a fatality and 41 resulted in an injury, including serious injuries, minor injuries, and potential injuries as categorized by the responding officer. The fatality occurred at the intersection of Monmouth and 5th Streets in 2020 and involved a single vehicle disregarding traffic control and speeding while trying to evade police, resulting in the deaths of two pedestrians sitting at an outdoor dining area. The most common crash type was sideswipe with 234 (36 percent) followed by angle collisions with 167 (26 percent). There were 16 bicycle and / or pedestrian crashes reported in the study area over the five-year period. These crashes generally occurred at intersections but were not concentrated at a particular location.

Local Official / Stakeholder Outreach

Over the course of the study, the project team met with local officials to provide information and to solicit input on transportation concerns and gauge the level of support for two-way conversion. **Overall, feedback from the local officials indicated support for conversion of Monmouth and York Streets to two-way operation**, but they preferred 4th and 5th Streets to remain one-way. The top three concerns identified by local officials were loss of parking, impacts to and need for loading / unloading zones, and increased travel times.

Top 3 Concerns Identified by Local Officials

1. **Loss of Parking**
2. **Loading / Unloading Zones**
3. **Increased Travel Time**

Improvement Concepts

Two-way conversion concepts included:

Two-Way Conversion of 4th Street and 5th Street from KY 8 to Washington Avenue, as shown in **Figure ES-2**.

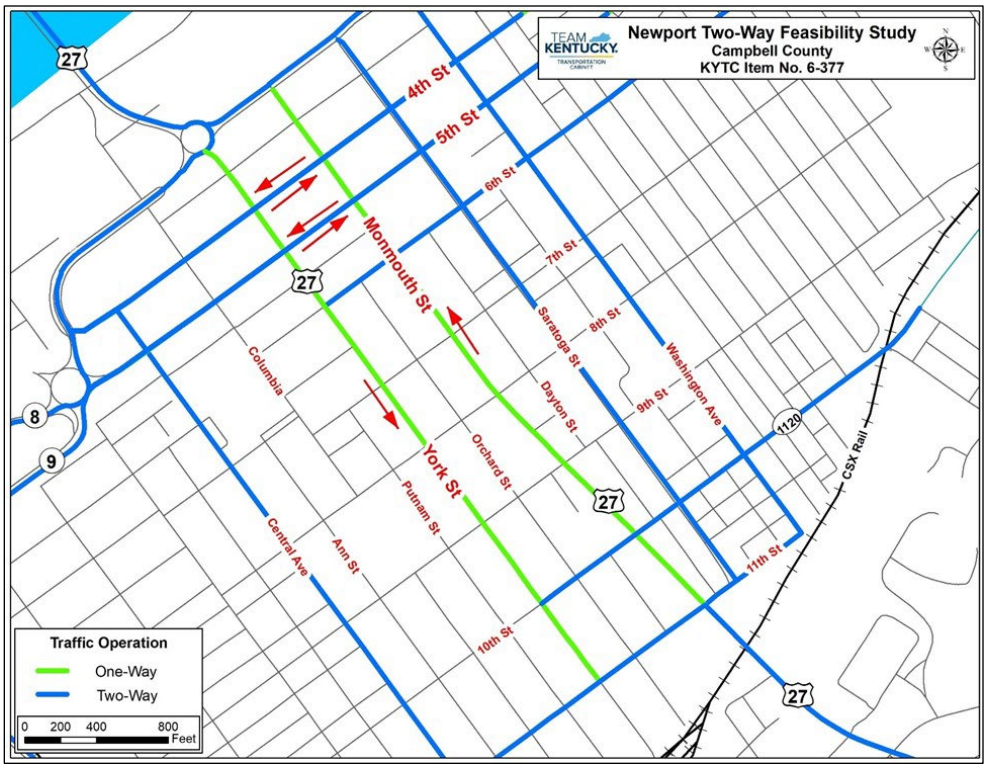

Figure ES-2: Two-Way Conversion of 4th Street and 5th Street

Two-Way Conversion of York Street and Monmouth Street from 3rd Street to 11th Street. This concept includes restriping the existing pavement to include one lane in each direction and left-turn lanes at multiple intersections along each corridor. There are two options for York Street between 3rd and 4th Streets:

A. Two-Way Conversion without a northbound York Street connection to the roundabout. Because this connection would involve a separate project to widen York Street at the roundabout approach to accommodate northbound traffic, it is omitted in this option. Under this scenario, York Street would simply remain one-way between 3rd and 4th Streets, as shown in **Figure ES-3**.

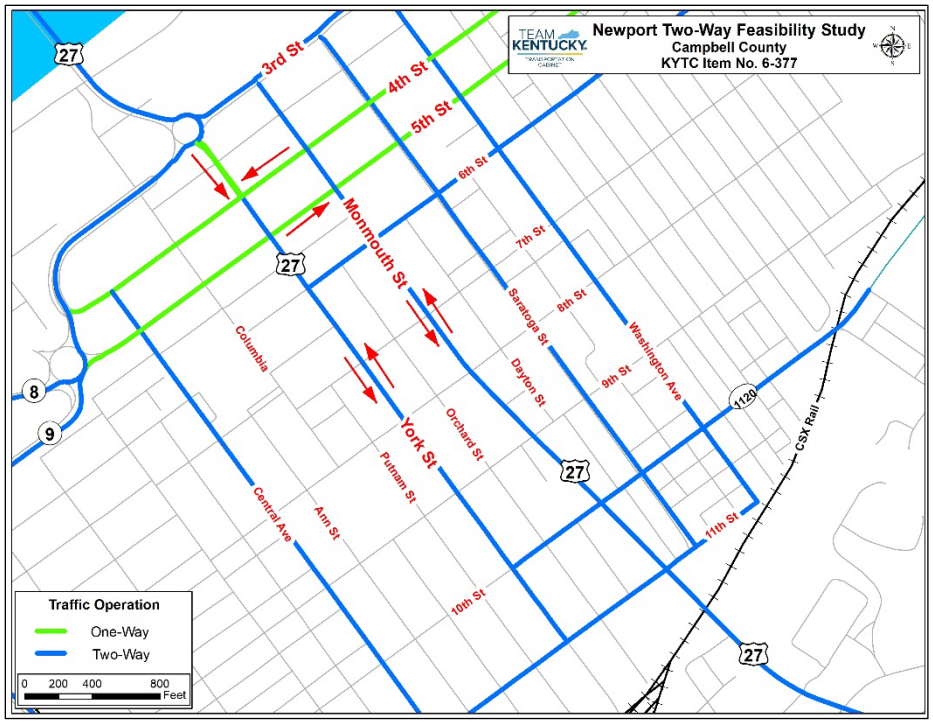

Figure ES-3: Two-Way Conversion of York Street and Monmouth Streets - no northbound York Street connection to roundabout

B. Two-Way Conversion with a northbound York Street connection to the roundabout. Under this scenario, the York Street approach to the 3rd Street roundabout would be widened to two lanes, as shown in **Figure ES-4**.

Figure ES-4: Two-Way Conversion of York Street and Monmouth Street with northbound York Street connection to roundabout

Based on results from the traffic simulation model analysis, all intersections are expected to operate at LOS C or better during the 2035 peak hours if 4th / 5th Streets and York / Monmouth Streets were converted to two-way streets.

Conclusions

The objective of the Newport Two-Way Feasibility Study was to determine the feasibility of converting the one-way couplets of Monmouth Street / York Street (between 3rd Street and 11th Street) and 4th Street / 5th Street (between KY 8 and Washington Avenue) to two-way streets. This study concluded these two-way conversion options are feasible; however, they do present some challenges:

- **Maintenance:** Monmouth Street would remain US 27 and York Street would be converted to a city street and require the City of Newport to perform future maintenance.
- **Parking:** A preliminary survey of on-street parking within the study area showed that 39 of the 368 (11 percent) dedicated parking spaces could be eliminated if Monmouth and York Streets are converted to two-way operation. Most of the loss is due to moving stop bars back at intersections to accommodate turning movements and constructing left-turn lanes.
- **Truck Loading and Unloading:** Currently, delivery trucks double-park in the driving lanes on Monmouth Street to load and unload. This marginally impacts traffic operations because drivers can use the other driving lane to navigate around the truck. Under a two-way conversion scenario, such temporary double-parking would be unacceptable. Zones could be established which permit loading and unloading at certain times of the day when deliveries would be expected, but also allow parking at other times when demand for on-street parking is higher.
- **Traffic Signal Infrastructure:** The traffic signals are routinely attached to existing utility poles on York Street. KYTC prefers dedicated traffic poles. In some cases, this may require utility relocations due to limited right-of-way. Additionally, the condition of the existing mast arm traffic signal poles on Monmouth Street is unknown and would require inspection for structural integrity before additional signal heads could be installed.

Table ES-1 presents cost estimates for each option. The cost estimates assume that the two-way conversions would coincide with a scheduled resurfacing so the striping and pavement markings could be updated to reflect two-way operations. The conversion of York and Monmouth Streets to two-way operation could be implemented with or without converting 4th and 5th Streets to two-way. Local Officials indicated a preference for keeping 4th and 5th Streets one-way. Similarly, the conversion of York and Monmouth Streets could be implemented with or without converting York Street to two-way between 3rd and 4th Streets.

Table ES-1: Cost Estimates (in 2024 $)

Description	2024 Cost Estimates				
	Design [1]	ROW	Utilities [2]	Construction [3]	Total
Two-Way Conversion of Monmouth Street and York Street	$200,000	$0	$100,000	$1,100,000	**$1,400,000**
Two-Way Conversion of 4th Street and 5th Street	$100,000	$0	$100,000	$700,000	**$900,000**
Two-Way Connection to York Steet Roundabout	$100,000	$0	$100,000	$200,000	**$400,000**
Total	**$400,000**	**$0**	**$300,000**	**$2,000,000**	**$2,700,000**

[1] Design cost estimates include: traffic signal plans, signage plans, and striping plans.
[2] It is assumed that some utilities may need to be relocated at the utility company's expense. The utility cost estimate is for utility coordination.
[3] The construction cost does not include costs for resurfacing the road. It is assumed the two-way conversion would coincide with a scheduled resurfacing project.

Next Steps

The next step following this study for any potential improvements would be Phase 1 Design (Preliminary Engineering and Environmental Analysis). Further funding will be necessary to advance an improvement to the design phase as additional phases of this project are not funded in *Kentucky's FY 2024 – FY 2030 Enacted Highway Plan*.

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1.0 INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) initiated the *Newport Two-Way Feasibility Study,* KYTC Item No. 6-377, in Campbell County to determine the feasibility of the conversion from one-way couplets to two-way systems in Newport. The study is located within KYTC District 6, as shown in **Figure 1.**

This study was federally funded with Metropolitan Planning (PL) funds with a local match from the city of Newport. Due to this unique arrangement, it is not listed in *Kentucky's FY 2022 – FY 2028 Enacted Highway Plan* and was assigned KYTC Item No. 6-377.

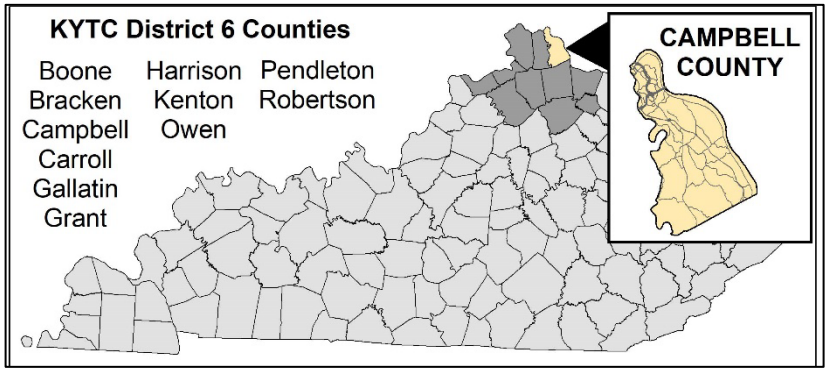

Figure 1: KYTC District 6 Map

1.1 STUDY AREA

The study area, shown in **Figure 2,** includes the couplet of one-way pairs of Monmouth and York Streets (US 27) between 3rd Street and 11th Street and 4th and 5th Streets between the KY 8 roundabout and Washington Avenue in Newport, Kentucky. This area encompasses Newport's Central Business District, a major component of the urban core and a focus for redevelopment within northern Kentucky.

Monmouth and York Streets comprise US 27, a north-south regional connection between northern Kentucky and Cincinnati. These routes are primary arteries through Newport and carry a mix of local and regional traffic. Through downtown Newport, York and Monmouth Streets are lined with commercial businesses, with sidewalks and on-street parking on both sides of the roadways. South of 11th Street, the one-way couplet combines to become a two-way, four-lane road. To the north, the US 27 one-way couplet combine at the Taylor Southgate Bridge to carry four-lanes across the Ohio River to Cincinnati.

With a population of over 93,000, Campbell County is the eighth largest county in Kentucky and has experienced annual population growth of 0.25 percent over the past 20 years. Several traffic-generating developments in various stages of construction have been identified in and around the study area.

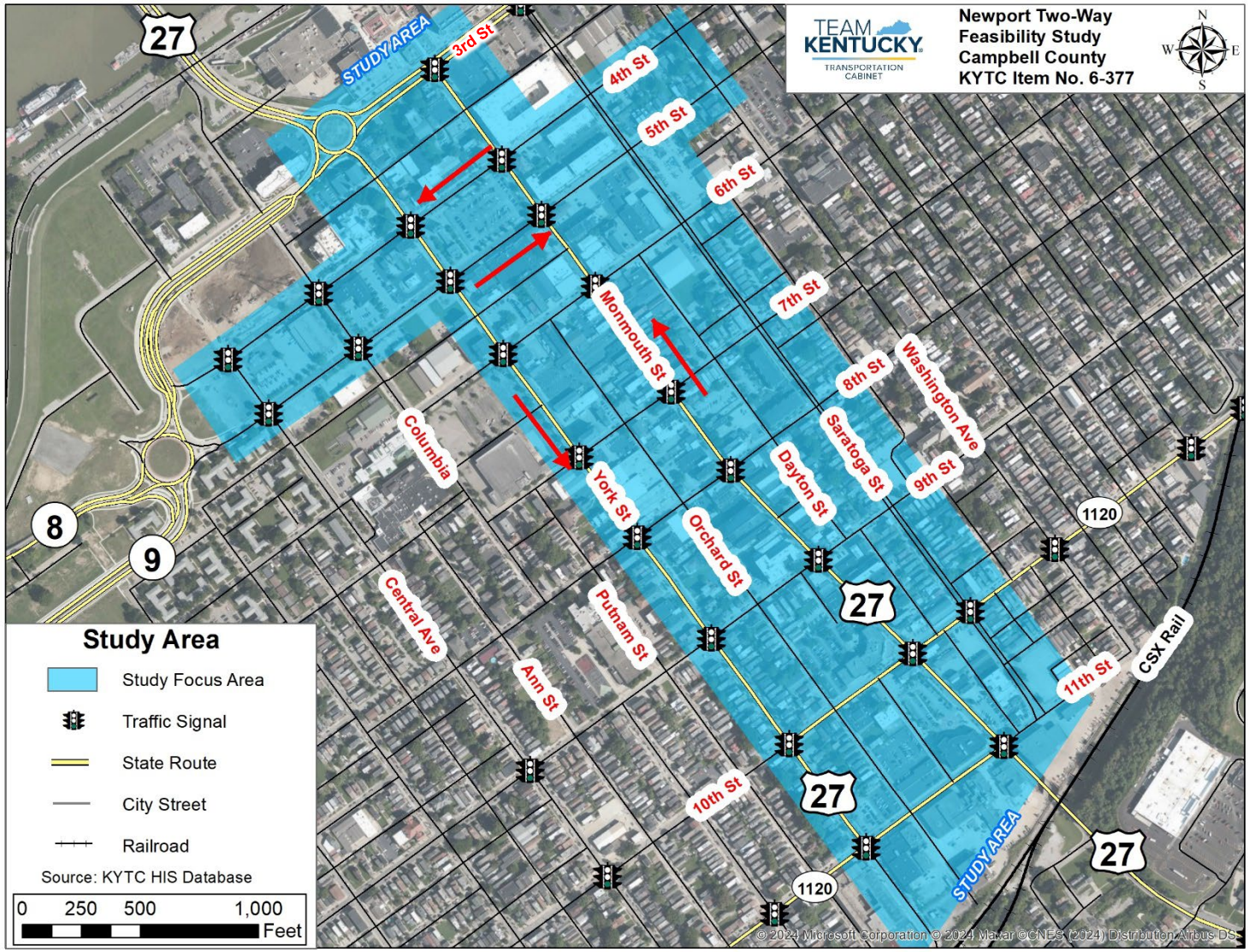

Figure 2: Study Area

1.2 PLANNED AND COMMITTED PROJECTS

There is one project in the vicinity listed in *Kentucky's FY 2024 – 2030 Enacted Highway Plan:*

- KYTC Item No. 6-1086.00: Replace the 4th Street Bridge over the Licking River between Covington and Newport.

The City of Newport Comprehensive Plan was completed in 2015 and includes a transportation strategy to continue to evaluate changing Monmouth Street to two-way configuration in line with trends for successful main streets.[1]

The Monmouth Street Corridor Project is under development to improve safety on US 27 south of 11th Street approximately one mile to the Newport / Southgate boundary.[2]

2.0 EXISTING CONDITIONS

The existing conditions of the transportation network were examined and are shown in the following sections. Data for this section were collected from KYTC's Highway Information System (HIS) database, Kentucky State Police Collision Data, KYTC's Traffic Count Reporting System, the Kentucky State Data Center (KSDC), aerial photography, and field inspection.

2.1 CURRENT TRAFFIC OPERATIONS

As shown in **Figure 3**, Monmouth Street provides one-way traffic operations northbound between 11th Street and 3rd Street while its pair, York Street, runs southbound. At the northern end of the study area, 5th Street provides one-way traffic operations eastbound between Central Avenue and Washington Avenue while 4th Street runs one-way westbound.

2.2 FUNCTIONAL CLASSIFICATION

Functional classification is the process of grouping streets and highways according to the character of travel service they provide. The functional classifications within the study area are shown in **Figure 4**. York and Monmouth Streets are classified as urban principal arterials, or routes that provide a high level of traffic mobility for substantial statewide travel and serve major activity centers and longer trips. Other principal arterials in the study area include KY 8, KY 9, KY 1120, and 3rd Street. 4th and 5th Street are classified as urban minor arterials, or routes that serve trips of moderate length to smaller geographic areas with slightly less mobility than principal arterials. York and Monmouth Streets are federally designated truck routes as US 27 through the study area.

[1] https://www.newportky.gov/DocumentCenter/View/306/Comprehensive-Plan---2015-Update-PDF

[2] https://linknky.com/news/2022/04/18/heres-everything-you-need-to-know-about-the-us-27-monmouth-street-corridor-project/

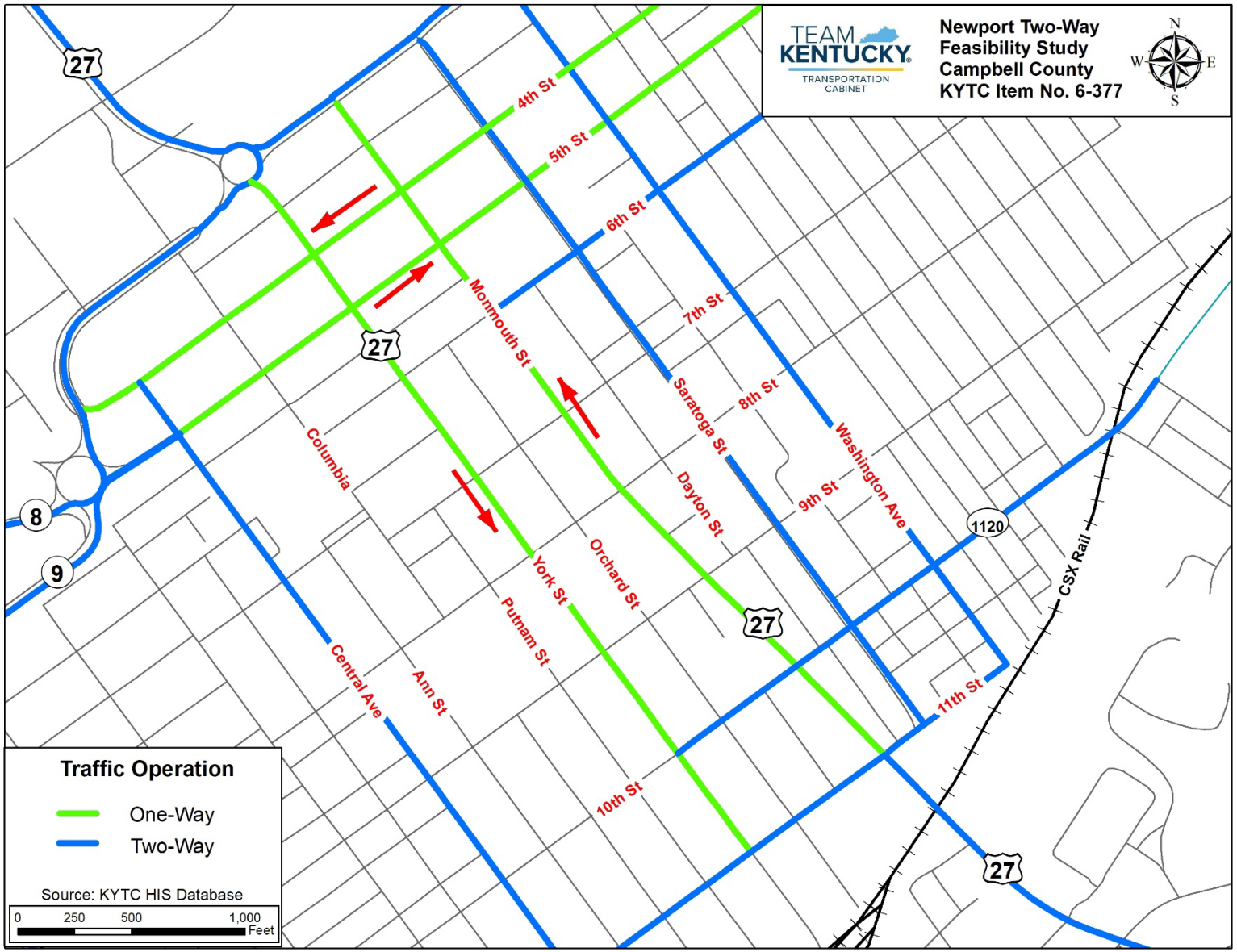

Figure 3: Study Area Traffic Operations

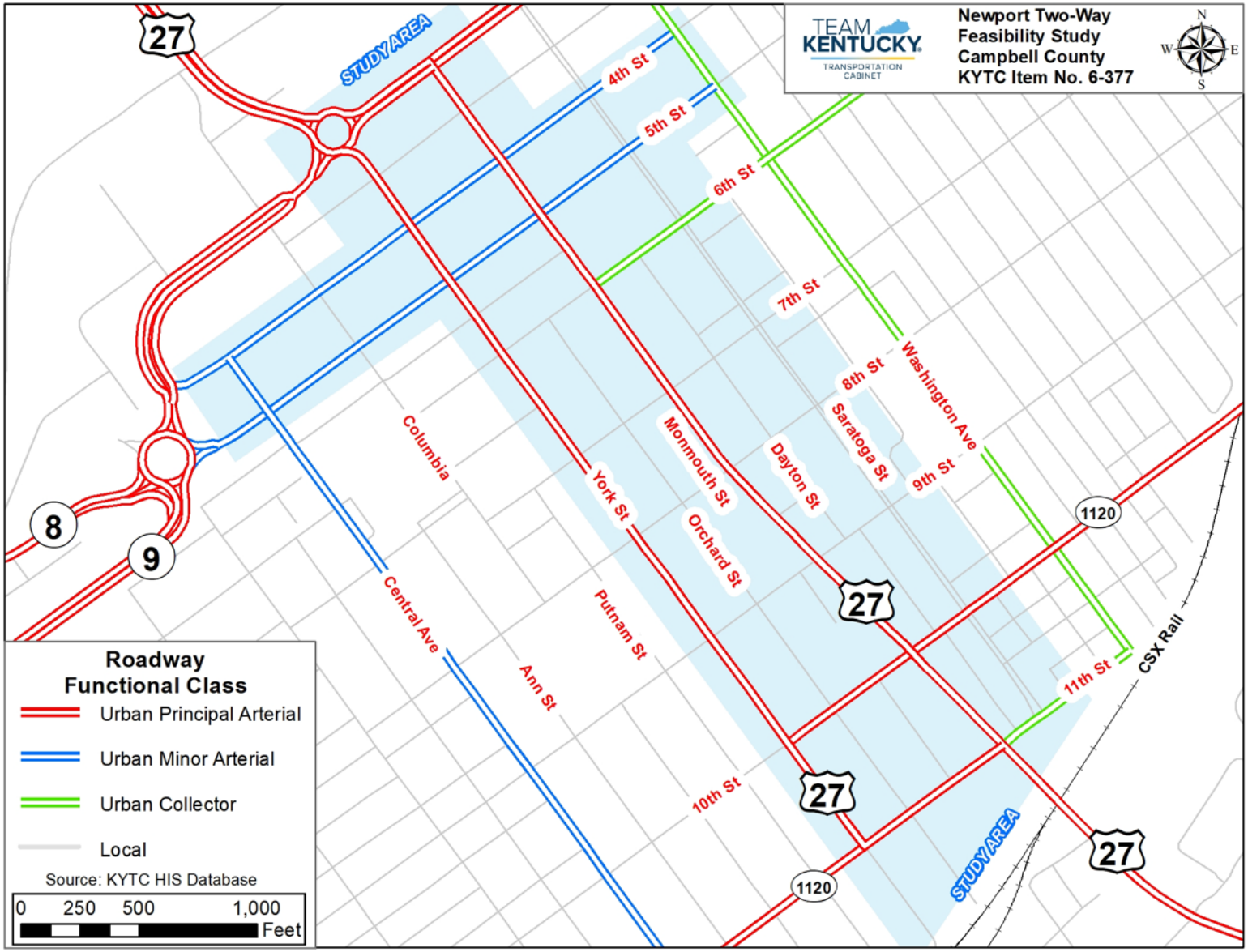

Figure 4: Functional Classification

2.3 ROADWAY GEOMETRY

KYTC's HIS database was used to identify roadway geometry. The current number of lanes for study area roadways are shown in **Figure 5**. York and Monmouth Streets maintain two lanes through the study area, with US 27 to the north and south having four lanes and serving two-way traffic. 5th Street has four lanes west of Columbia Street and two lanes to the east while 4th Street maintains two lanes in the study area.

Figure 6 presents the pavement widths for roadways in the study area, including driving lanes, shoulders, and on-street parking. York and Monmouth Streets maintain 40 feet of pavement, including two 12-foot driving lanes, 8-foot parking on each side of the roadway, and curb and gutter. The pavement on 4th and 5th Streets ranges from 32 feet to 42 feet, including driving lanes ranging between 10 and 12 feet, parking lanes between 7 and 10 feet, and curb and gutter.

York and Monmouth Streets have posted speed limits of 25 mph through the study area while 4th and 5th Streets have posted speed limits ranging from 25 to 30 mph.

2.4 BICYCLE AND PEDESTRIAN FACILITIES

There are currently no dedicated bicycle lanes in the study area. York Street, Monmouth Street, 4th Street, and 5th Street have sidewalks on both sides of the roadways. North of the study area, the Purple People Bridge provides pedestrian and cyclist access to Cincinnati over the Ohio River. The Covington + Newport Bicycle Transportation Plan is currently going through the process to become adopted by the Cities of Covington and Newport.[3] The plan was prepared by Tri-State Trails, an organization that advocates for a better transportation network for all users and recommends a shared-use path or a two-way bicycle track on Saratoga Street as part of a larger northern Kentucky loop trail. The addition of bicycle facilities on 5th Street has been identified as a short-term priority in the plan.

2.5 ON-STREET PARKING

As a vibrant, urban community, the City of Newport has many street-facing businesses with on-street parking**. Figure 7** presents the residential, free, and metered on-street parking along York Street, Monmouth Street, Saratoga Street, 4th Street, and 5th Street. South of 6th Street, most of the on-street parking is free while most of the parking to the north is metered or residential via permit. There are also numerous surface parking lots available for paid parking.

In addition to on-street parking, there is a single loading zone on Monmouth Street and no loading zones on York Street. Loading zones allow the convenient delivery or pick up of goods to restaurants and businesses. This loading zone prohibits parking Monday through Friday between 8:00 AM and 6:00 PM.

[3] https://tristatetrails.org/wp-content/uploads/2024/02/2024-02-13-Covington-Newport-Bicycle-Transportation-Plan-REDUCED.pdf

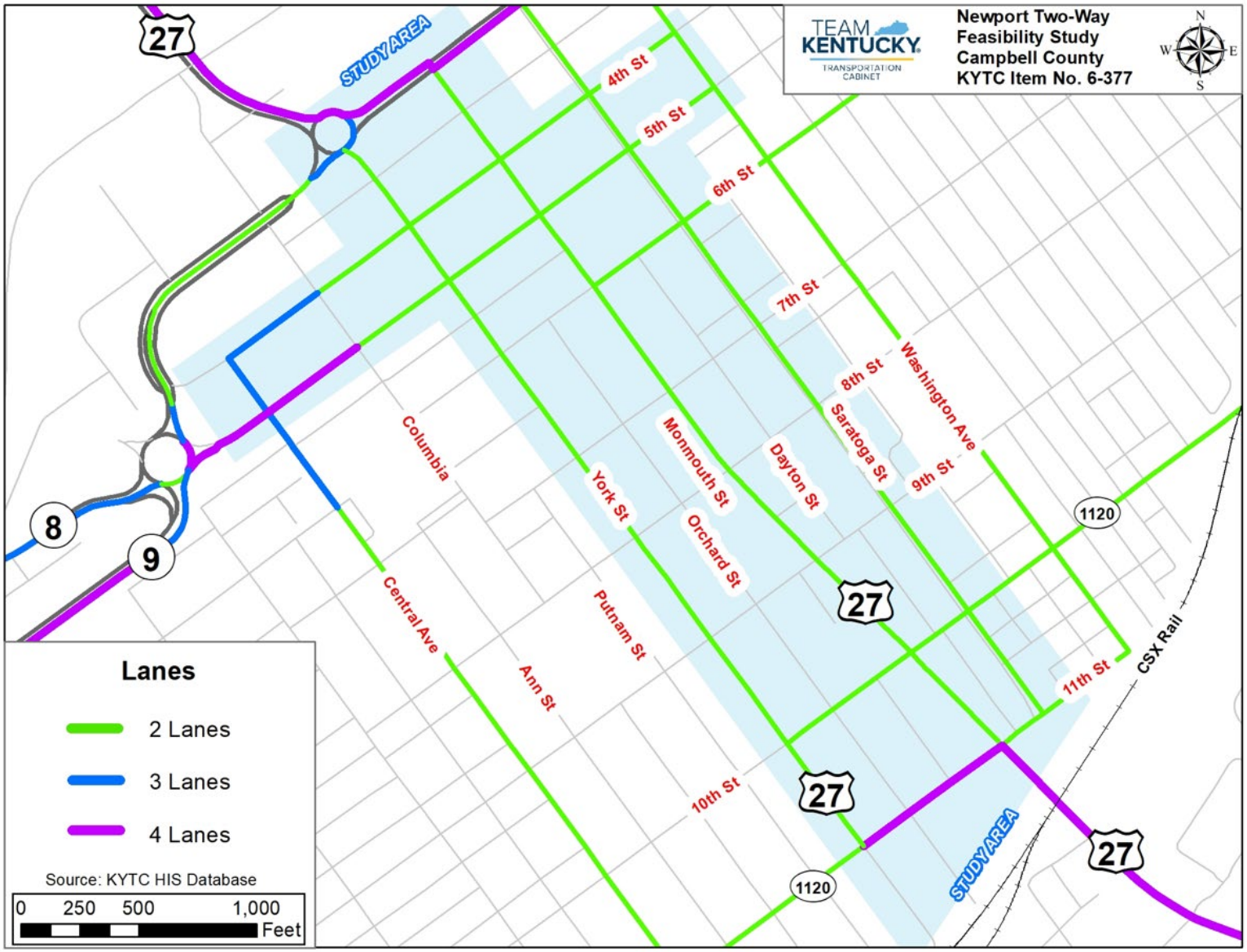

Figure 5: Number of Lanes

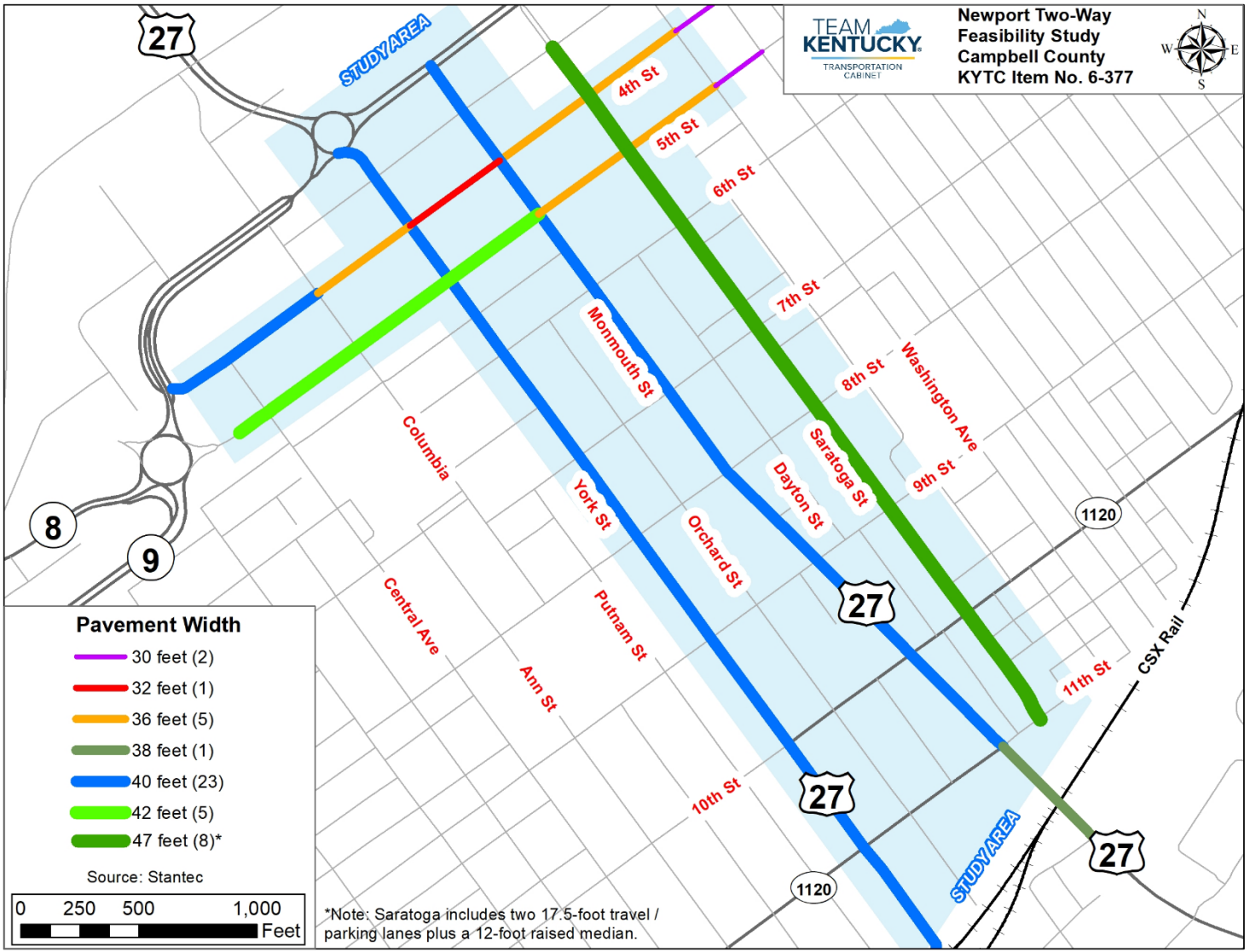

Figure 6: Pavement Width

Figure 7: On-Street Parking

2.6 EXISTING TRAFFIC ANALYSIS

Existing traffic volumes were analyzed for study area roadways. The most current annual average daily traffic (AADT) volumes from KYTC's traffic count stations are shown in **Figure 8**. Through the study area, Monmouth Street carries 7,100 vehicles per day (VPD) and York Street carries 4,200 VPD. South of the study area, US 27 carries 14,800 VPD while to the north it also carries 14.800 VPD

12-hour turning movements were collected on Thursday May 11, 2023, at the following intersections (shown in **Figure 9**):

1) Monmouth Street at 3rd Street
2) York Street at 4th Street
3) Monmouth Street at 4th Street
4) Saratoga Street at 4th Street
5) Washington Street at 4th Street
6) Central Avenue at 5th Street
7) Columbia Street at 5th Street
8) York Street at 5th Street
9) Monmouth Street at 5th Street
10) Saratoga Street at 5th Street
11) Washington Street at 5th Street
12) York Street at 7th Street
13) Monmouth Street at 6th Street
14) Saratoga Street at 7th Street
15) York Street at 8th Street
16) Monmouth Street at 9th Street
17) Saratoga Street at 10th Street
18) York Street at 11th Street
19) Monmouth Street at 11th Street
20) Saratoga Street at 11th Street

Based on a review of the turning movement counts, the AM peak hour was determined to be 7:30 a.m. – 8:30 a.m. and the PM peak hour was determined to be 4:45 p.m. – 5:45 p.m.

2.6.1 Existing (2023) Traffic Microsimulation Model

2023 No-Build AM and PM weekday peak hour microsimulation models were developed to replicate existing conditions in the study area. The No-Build models were developed with turning movement counts collected in May 2023 and traffic signal timings provided by KYTC District 6. The models were calibrated to existing conditions, including volumes, queuing, and speeds using recognized industry standards. A more detailed discussion of microsimulation model development and calibration statistics can be found in **Appendix A.**

Level of service (LOS), a qualitative measure describing operational conditions ranging from A to F, was used to evaluate the adequacy of the existing roadway. In rural areas, LOS C or better is acceptable and, in urban areas, LOS D or better is acceptable. Results from the 2023 No-Build model analysis show all study area intersections operate at LOS C or better during the AM and PM peak hours. Results from the 2023 PM peak hour, which was shown to have higher traffic volumes than the AM peak hour, are shown in **Figure 10**.

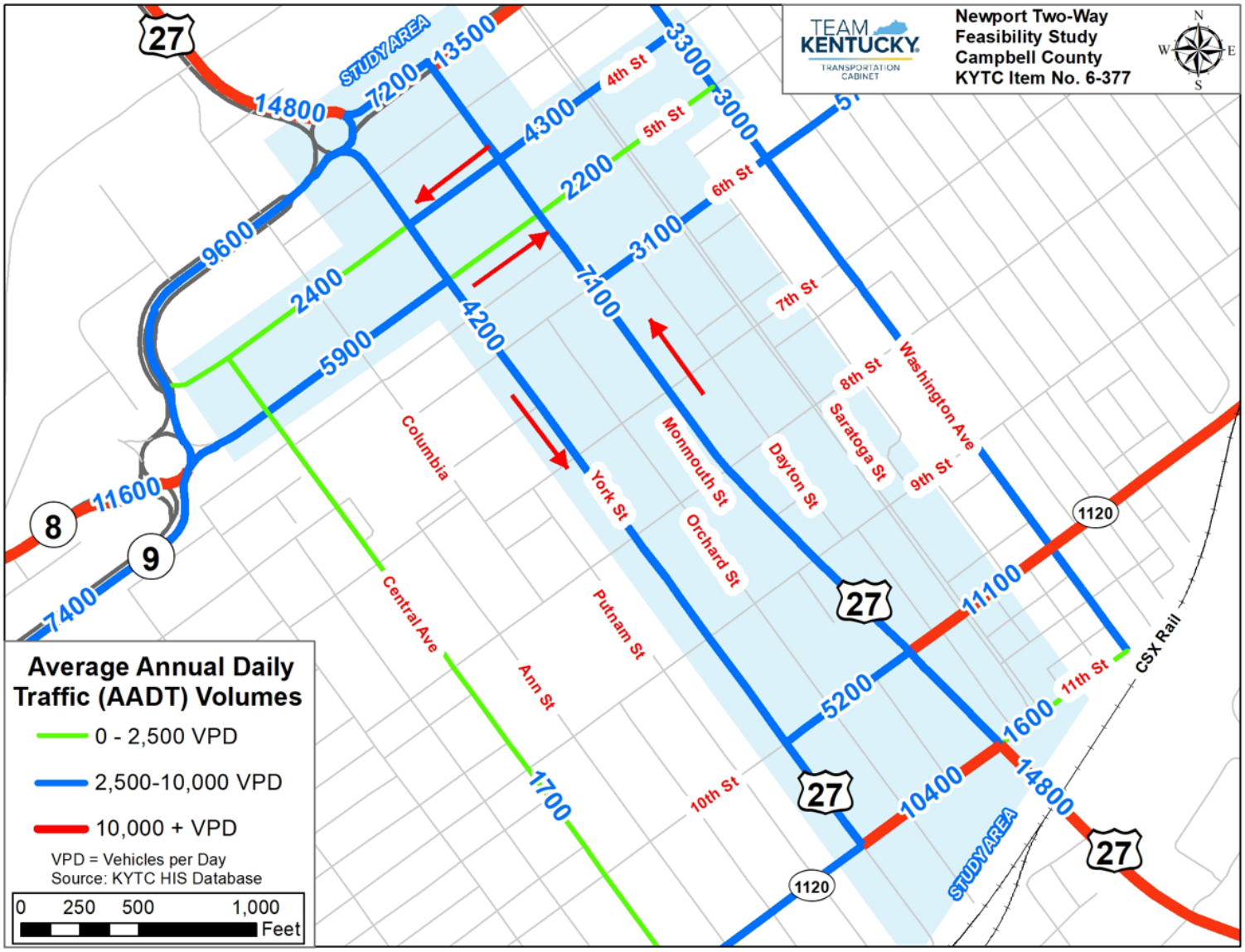

Figure 8: Annual Average Daily Traffic (AADT)

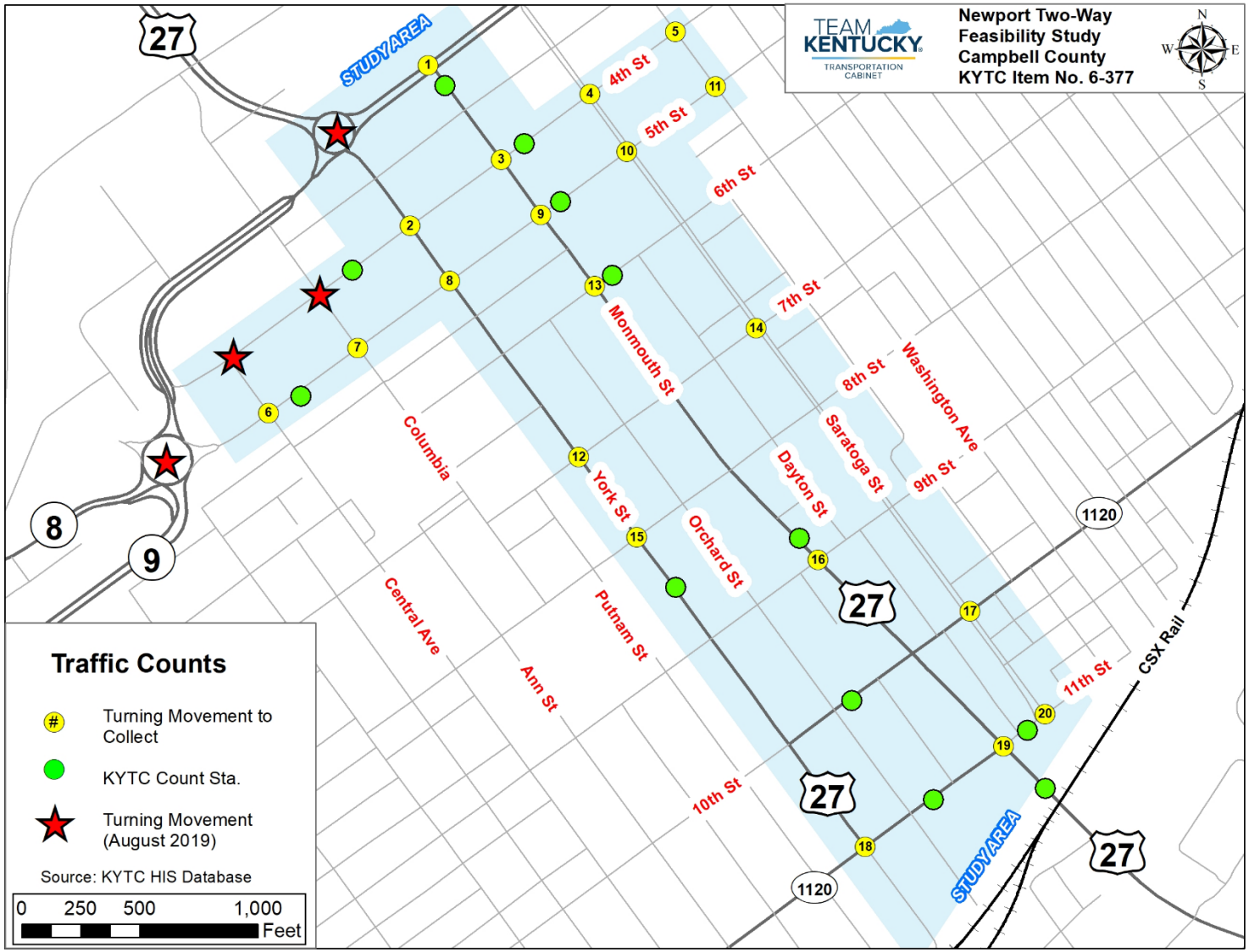

Figure 9: Turning Movement Count Locations

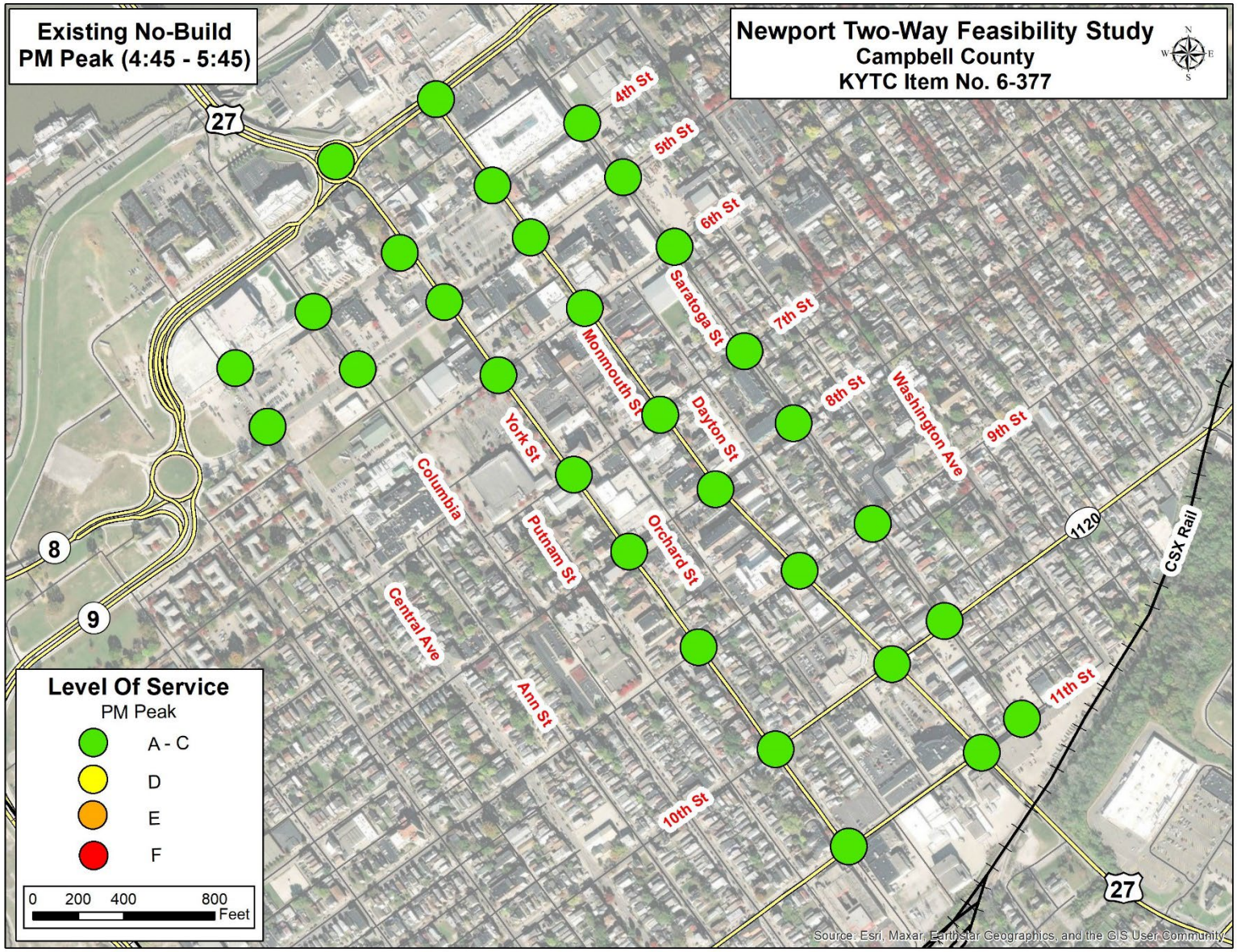

Figure 10: 2023 PM Peak Hour Level of Service

2.7 CRASH HISTORY

Crash data were collected in the study area for a five-year period between January 1, 2018, and December 31, 2022. Over the course of the five-year period, a total of 792 crashes were reported in the study area, not including collisions that occurred in parking lots. The crash records are included in **Appendix B**, and the locations are shown on **Figure 11.**

Of the 792 crashes, one (0.1 percent) resulted in a fatality and 41 (5.2 percent) resulted in an injury, including serious injuries, minor injuries, and potential injuries as categorized by the responding officer. The fatality occurred at the intersection of Monmouth and 5th Streets in 2020 and involved a single vehicle disregarding traffic control and speeding while trying to evade police, resulting in the deaths of two pedestrians sitting at an outdoor dining area.

The most common crash type was sideswipe in the same direction with 331 crashes (42 percent) followed by angle collisions with 208 crashes (26 percent). There is a concentration of crashes near Monmouth Street and 11th Street, which may be due to a lack of sight distance for northbound Monmouth Street due to the railroad overpass. The roadway characteristics change for northbound Monmouth Street from a suburban to downtown environment in this area, as well as a speed limit reduction from 35 mph to 25 mph. The Monmouth Street Corridor Project is already under development to improve safety along this portion of US 27.

Figure 12 presents the 21 bicycle and/or pedestrian crashes reported in the study area over the five-year period. Of the 21 crashes, 16 (76.2 percent) resulted in an injury, including serious injuries, minor injuries, and possible injuries as categorized by the responding officer. These crashes generally occurred at intersections but were not concentrated at a particular location with one exception - there were three crashes with pedestrians at the intersection of 9th Street and York Street.

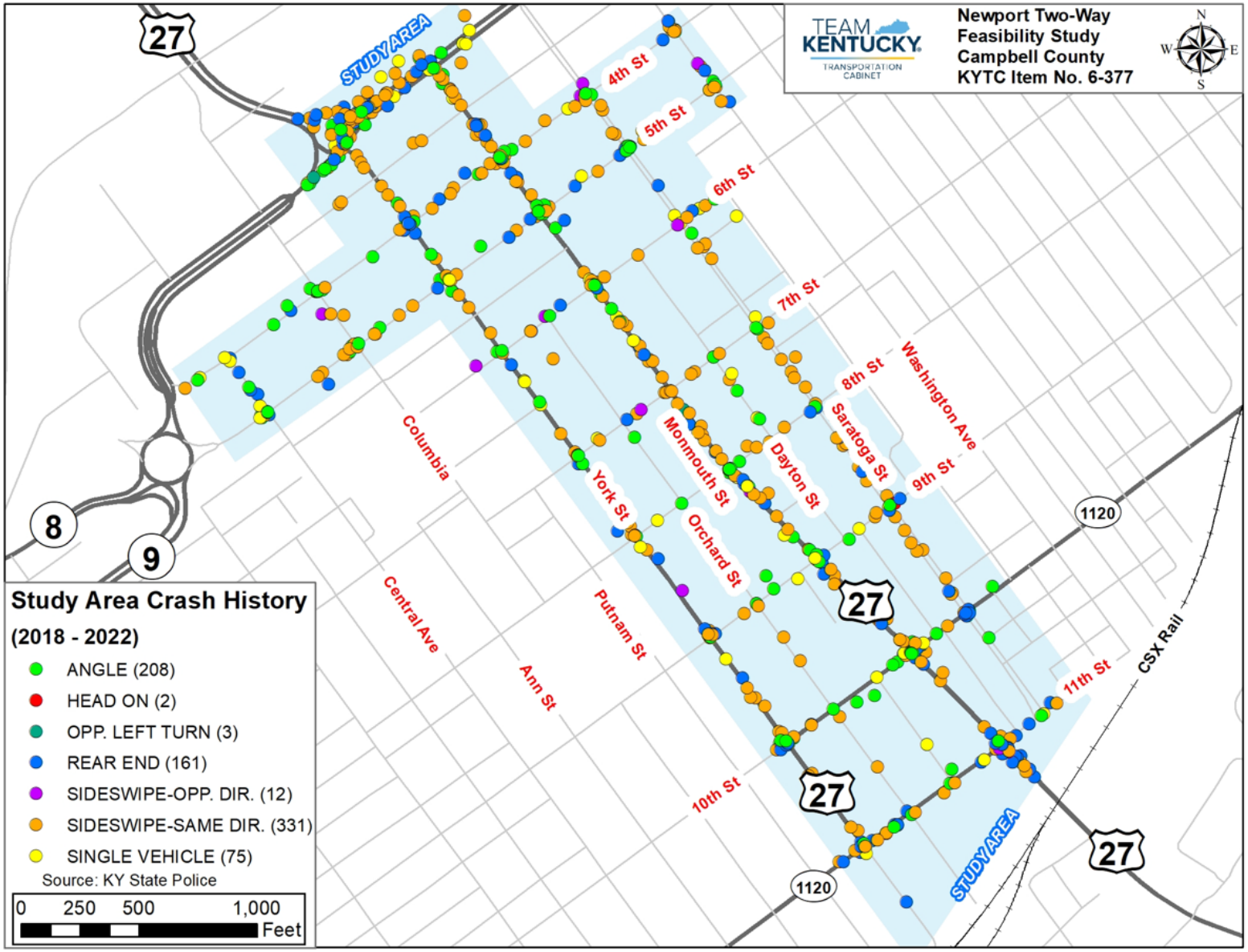

Figure 11: Crash History (2018 - 2022)

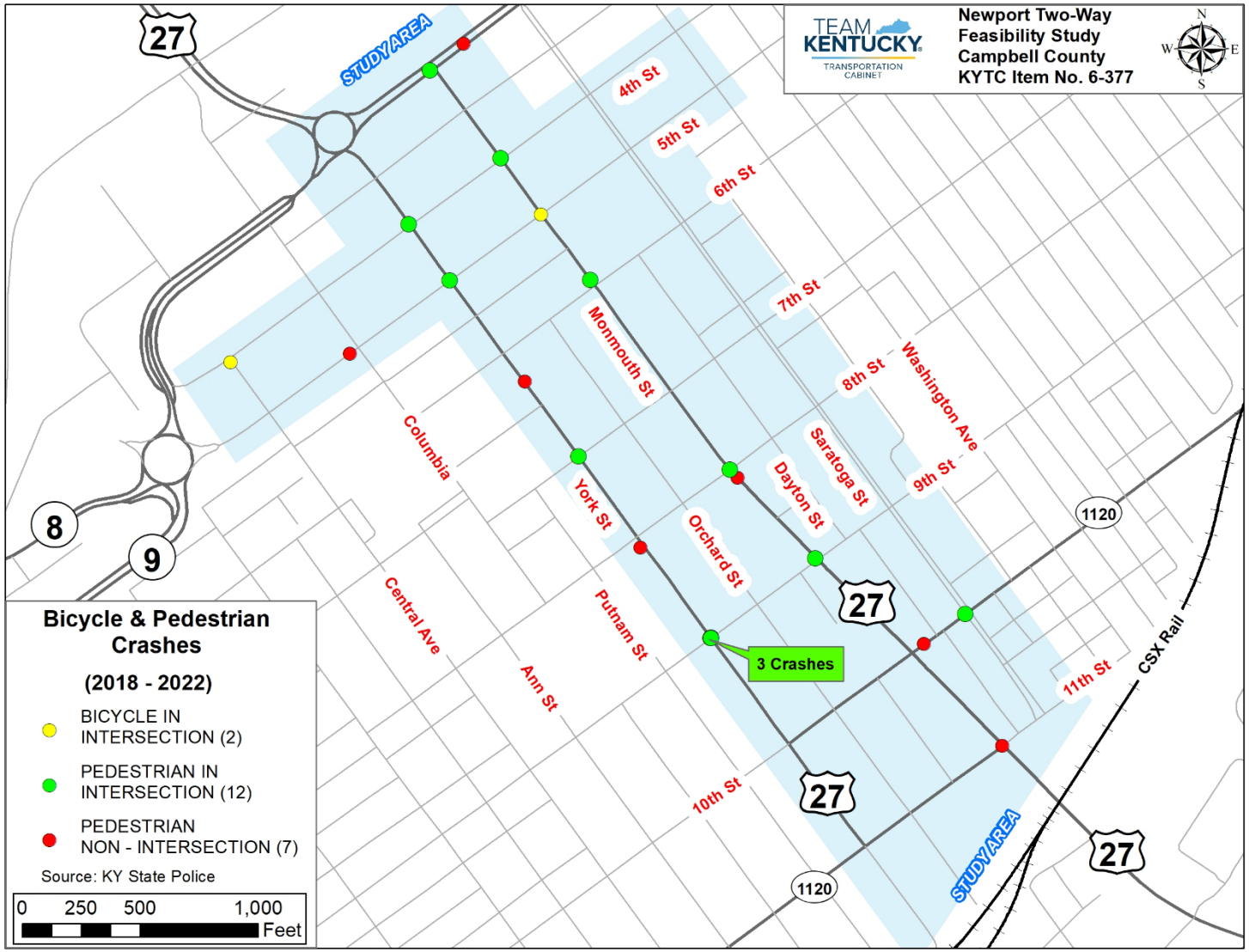

Figure 12: Bicycle and Pedestrian Crashes (2018 - 2022)

3.0 SOCIOECONOMIC STUDY

The Northern Kentucky Area Development District (NKADD) conducted a Socioeconomic Study for the study area. A complete copy of the report is found in **Appendix C**. The information in this report outlines 2017 – 2021 American Community Survey (ACS) statistics in and near the study area using tables, charts, and maps. The data presented in this document is intended to highlight areas of concern that will require additional analysis should any project be advanced to future phases.

This information is intended to aid in making informed and prudent transportation decisions, especially regarding the requirements of *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (signed February 11, 1994). Statistics are provided for minority, elderly, poverty status, limited English proficiency (LEP), and disabled populations for the nation, state, county, and study area, including the 13 study area block groups, in **Table 1**.

Table 1: Socioeconomic Summary

Category	United States	Kentucky	Campbell County	Study Area
Percent Minority	40.6%	16.4%	8.4%	8% - 38%
Percent Below Poverty Line	12.6%	16.3%	12.2%	0% - 68%
Percent of Adults over 65	16.0%	16.4%	16.0%	0% - 33%
Percent of Adults with a Disability	12.6%	17.4%	12.5%	7% - 47%
Percent with Limited English Proficiency	4.2%	1.4%	0.5%	0% - 12%

The census tracts along Monmouth and York Streets in the study area have a significantly higher percent of low-income residents than the statewide average (20 to 30 percent). West of York Street, the area south of the KY 8 roundabout has an even higher percent of low-income residents, up to 68 percent. Maintaining and improving alternative transportation options, including sidewalks and transit, should be considered to provide these communities with equitable access to jobs, healthcare, and shopping.

During future phases of project development, a more detailed and robust analysis would be required for the National Environmental Policy Act (NEPA) documentation when assessing the potential for adverse and disproportionate impacts to those with disabilities, poverty status, and minority populations.

4.0 FUTURE CONDITIONS

To determine the need for and type of potential transportation improvement concepts, it is necessary to estimate future conditions. This chapter summarizes the anticipated future conditions within the study area. A complete summary of the traffic forecasting process can be found in **Appendix D**.

4.1 POPULATION TRENDS

Population data, including data from the 2020 Census, were obtained from the Kentucky State Data Center (KSDC) at the University of Louisville, Kentucky's official clearinghouse for Census data. Population projections for the state of Kentucky, Campbell County, and Newport are summarized in **Table 2**. Between 2000 and 2020 the population of Newport declined, while the population of Campbell County increased at a rate of 0.25 percent. Campbell County is expected to experience a population decline from 2020 through 2050.

Table 2: Population Estimates & Projections

Area	Census Estimates			Annual Growth	2050 Projection	Annual Growth
	2000	2010	2020	2000 - 2020		2020 - 2050
Kentucky	4,041,769	4,339,367	4,505,836	0.54%	4,785,233	0.20%
Campbell County	88,616	90,336	93,076	0.25%	91,848	-0.04%
Newport	17,029	15,273	14,150	-0.92%	N/A	N/A

4.2 HISTORICAL KYTC TRAFFIC COUNTS

Historical KYTC traffic count data on study area roadways were analyzed to determine traffic growth patterns over the past 10-15 years. Compound annual growth rates (CAGR) were calculated to determine historical growth trends in the study area. Historical trends for study area KYTC count stations are presented in **Table 3**. Most of the count stations show slight decline over the past 10-15 years. It should be noted that the drop in traffic on station 019E34, 4th Street, is likely due to the shift in traffic patterns after the KY 8 roundabout / West 3rd Street extension was constructed rather than a significant drop in traffic in the area.

Table 3: KYTC Historical Traffic Counts

Year	Monmouth St. Sta. 019E58	York St. Sta. 019E29	W. 4th St. Sta. 019E34	E 4th St. Sta. 019B10	W. 5th St. Sta. 019E35	E 5th St. Sta. 019E39
2009	7,820				6,420	
2010		6,600	11,700	4,650		
2011						
2012	8,827					4,540
2013		6,455	9,410	4,539	6,815	
2014						4,334
2015	8,501				6,228	
2016		5,721	10,739	4,332		
2017						4,741
2018	7,490		3,555		5,452	3,424
2019		4,199				
2020						
2021	7,109				5,891	
2022		4,229	2,379			
Annual Growth Rate (%)	**-0.79%**	**-3.64%**	**-12.43%**	**-1.17%**	**-0.71%**	**-4.59%**

4.3 ANTICIPATED STUDY AREA DEVELOPMENTS

Based on the latest information from the City of Newport, there are three sites in the vicinity of the study area that are expected to be developed, as shown in **Figure 13**. At the current location of the World Peace Bell site a new development is expected to include the construction of a 207-room hotel, office space, and a 400-space parking structure.

Along the Ohio River, a 264-room Margaritaville Hotel and event venue is expected to be constructed between the Taylor Southgate Bridge and Newport on the Levee. This development will include restaurants, bars, retail, and over 10,000 square feet of meeting and event space.

The final development, Ovation, is currently under construction between 3rd Street and the Ohio River. The Ovation site includes a 449-room hotel, residential units, office spaces, entertainment, retail, and dining. The ITE Trip Generation Manual, 11th Edition, was used to determine the number of trips attracted and produced to/from these developments.

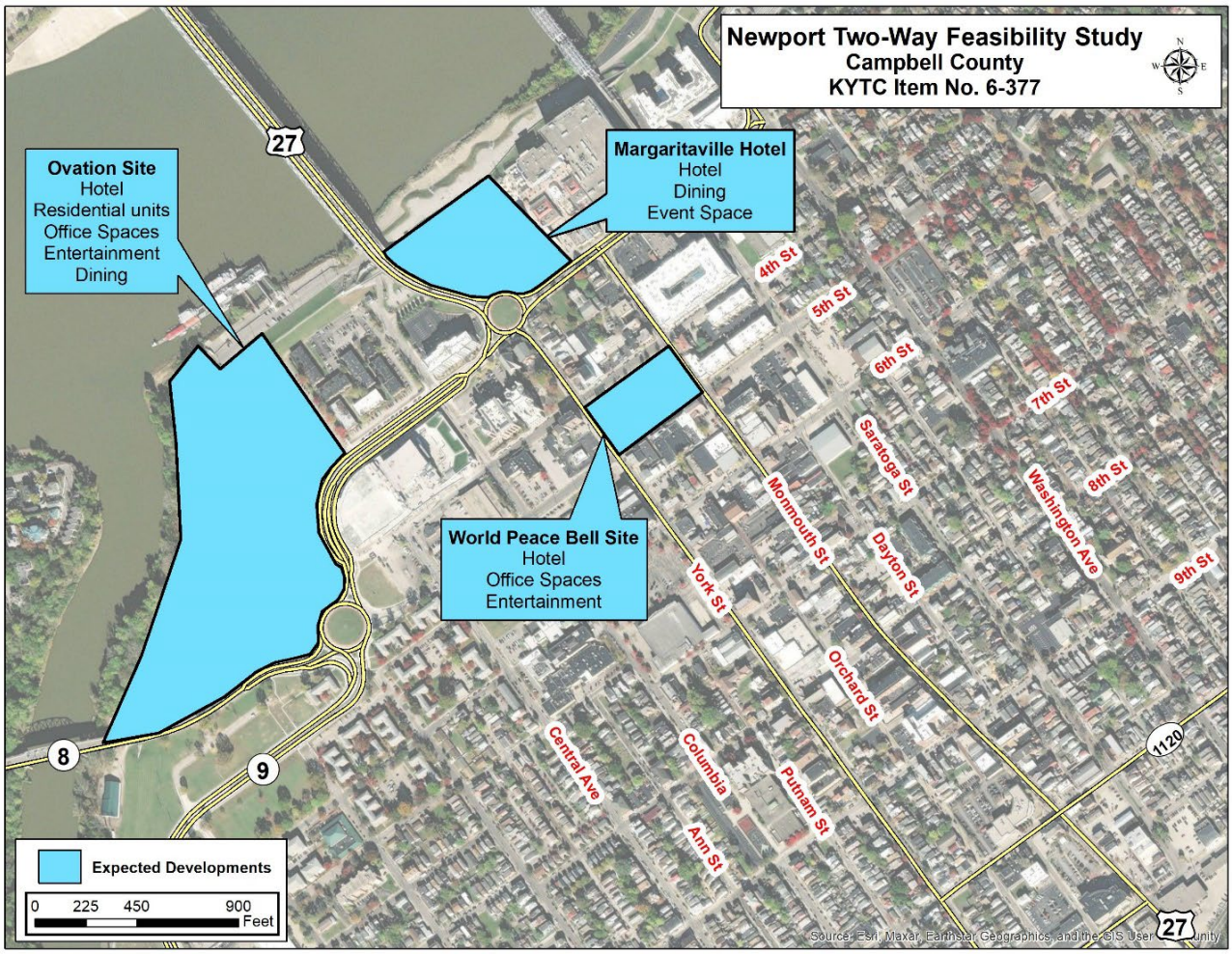

Figure 13: Anticipated Study Area Developments

4.4 OKI TRAVEL DEMAND MODEL

Study area growth rates from the OKI regional travel demand model were reviewed. Annual growth rates in the study area, between 2020 and 2040, are expected to range between -0.1 and 0.68 percent per year. Daily traffic on York and Monmouth Streets is expected to grow around half a percent per year.

4.5 DAILY TRAFFIC FORECASTS

While traffic and population in the study area have declined over the past 20 years, the three developments anticipated in the study area are expected to increase traffic in Newport. Additionally, the one-way couplet of Monmouth and York Streets currently comprise US 27, a north-south regional connection between northern Kentucky and Cincinnati, that will continue to grow regardless of local population trends. Based on results from the OKI model, these routes are expected to experience growth over the next 20 years. For these reasons, an annual growth rate of 0.5 percent was selected to forecast traffic.

Daily traffic forecasts were developed by applying the 0.5 percent per year growth rate to the most recent KYTC traffic counts and adding anticipated development trips based on the ITE estimates. 2050 daily forecasts are shown in **Figure 14**.

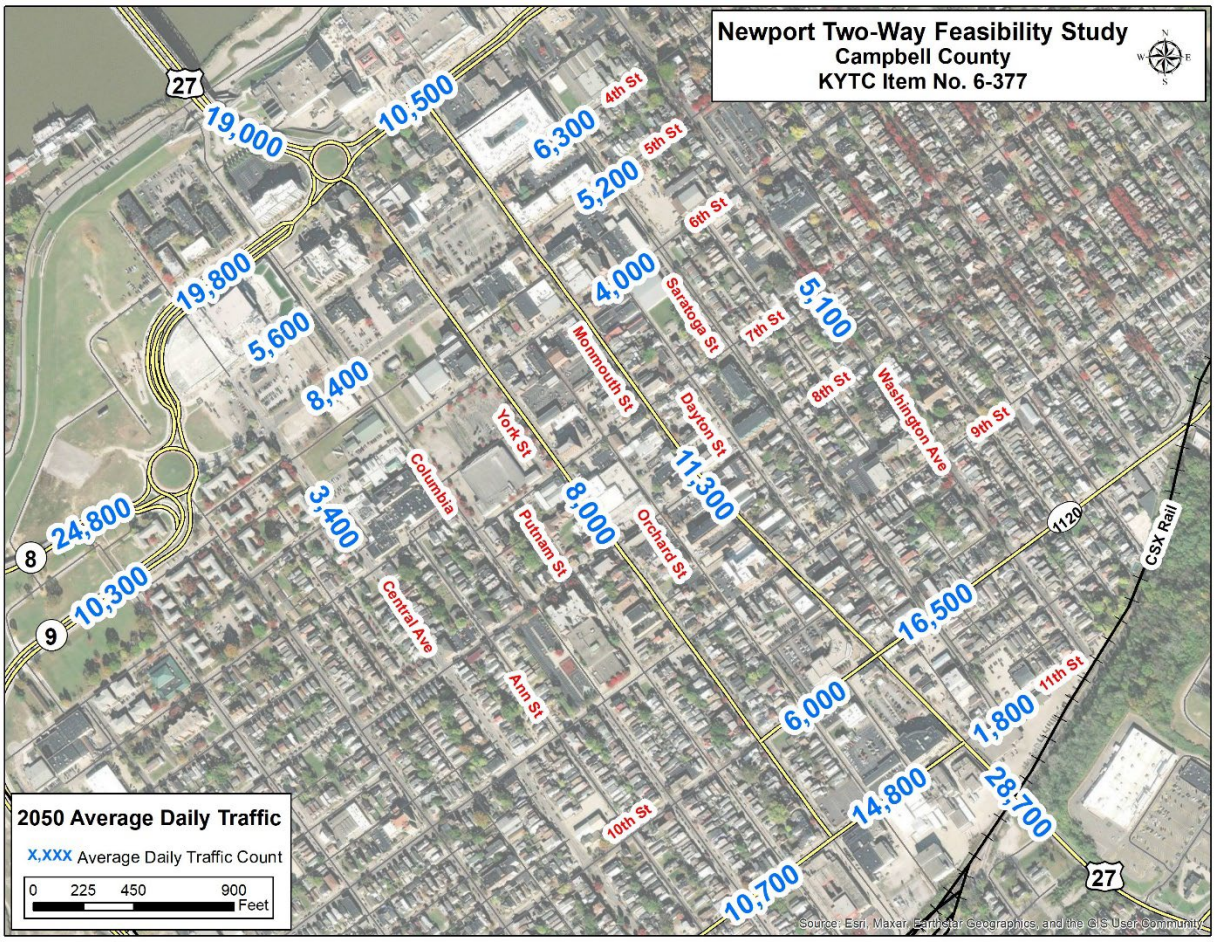

Figure 14: 2050 Daily Traffic Forecasts

4.6 2035 NO-BUILD SIMULATION MODEL

Future year (2035) No-Build weekday peak hour microsimulation model scenarios were developed using the existing simulation model network and maintaining the existing traffic operations (i.e. one-way couplets). All intersections are expected to operate at LOS C or better during both the AM and PM peak hours under the No-Build scenario.

5.0 STUDY GOALS

Within Newport's Central Business District, York and Monmouth Streets provide critical mobility between northern Kentucky and the Taylor Southgate Bridge, which crosses the Ohio River to Cincinnati. This one-way couplet, along with the one-way couplet of 4th and 5th Streets, carry a mix of local and regional traffic and are lined with commercial businesses, with sidewalks and on-street parking on both sides of the roadways. Newport is currently experiencing growth, with several traffic-generating developments in various stages of construction in and around the study area.

The objective of the Newport Two-Way Feasibility Study is to determine the feasibility of the conversion from one-way couplets to two-way systems in Newport. The couplets are Monmouth Street and York Street (between 3rd Street and 11th Street) and 4th Street and 5th Street (between KY 8 and Washington Avenue). The basic goals of the study are as follows:

- Evaluate existing conditions, crash history, and geometry and obtain local input to identify transportation concerns in the study area.
- Estimate future traffic volumes on state-maintained and other major routes within the study area to evaluate capacity needs of the transportation network.
- Evaluate possible conversion concepts and strategies for Monmouth Street, York Street, 4th Street, and 5th Streets and estimate potential impacts and costs for the conversion options.

6.0 INITIAL PROJECT TEAM AND LOCAL OFFICIAL / STAKEHOLDER COORDINATION

Over the course of the study, the project team held three meetings to coordinate on key issues. The project team included representatives from KYTC Central Office, KYTC District 6, the City of Newport, Ohio-Kentucky-Indiana Regional Council of Governments (OKI), Northern Kentucky Area Development District (NKADD), and the consultant, Stantec. Detailed summaries of each meeting are presented in **Appendix E**.

6.1 PROJECT TEAM MEETING NO. 1

The first Project Team Meeting was held at the Newport City Hall Building and via Microsoft Teams on September 28, 2023. The purpose of the meeting was to present the results from the existing conditions analysis and to get feedback from the project team on transportation issues in the study area. Key discussion items included the following:

- Heat maps from STRAVA, an athletic tracking app, indicate high bicycle and pedestrian usage in the study area. Saratoga Street and the Purple People Bridge were shown to be heavily utilized by bicyclists.
- A two-way scenario that includes the conversion of York / Monmouth Streets and 4th / 5th Streets to two-way traffic will be considered.
- A concept to convert Saratoga Street to one-way traffic with a bicycle lane was discussed. Unless the median was removed, vehicles would have to drive on the bike lane to access the on-street parking. This concept was not moved forward.
- Existing traffic signal arm mast poles are approximately 20 years old and will need to be inspected.

6.2 LOCAL OFFICIALS MEETING NO. 1

The first Local Officials meeting was held at the Newport City Hall Building and virtually with Microsoft Teams on September 28, 2023. In addition to the project team, the Mayor of Newport and individuals/representatives from the Kentucky State Legislature were in attendance. The purpose of the meeting was to present the results from the existing conditions analysis and to solicit feedback from the local officials on transportation issues in the study area. Key discussion items from the meeting include:

- It was noted that the number of on-street parking spaces impacted should be taken into consideration for each concept.
- KYTC will provide programming level cost estimates before the next legislative session.
- It was noted that the raised median on Saratoga used to be a rail line.

6.2.1 Local Officials Survey No. 1

At the end of the Local Officials Meeting, a survey was disseminated to solicit feedback on preliminary two-way conversion concepts.

When asked how they feel about converting Monmouth and York Streets from one-way operation to two-way operation, three respondents indicated they support the idea but have concerns, one strongly supports the idea, and one was not sure, as shown in **Figure 15**.

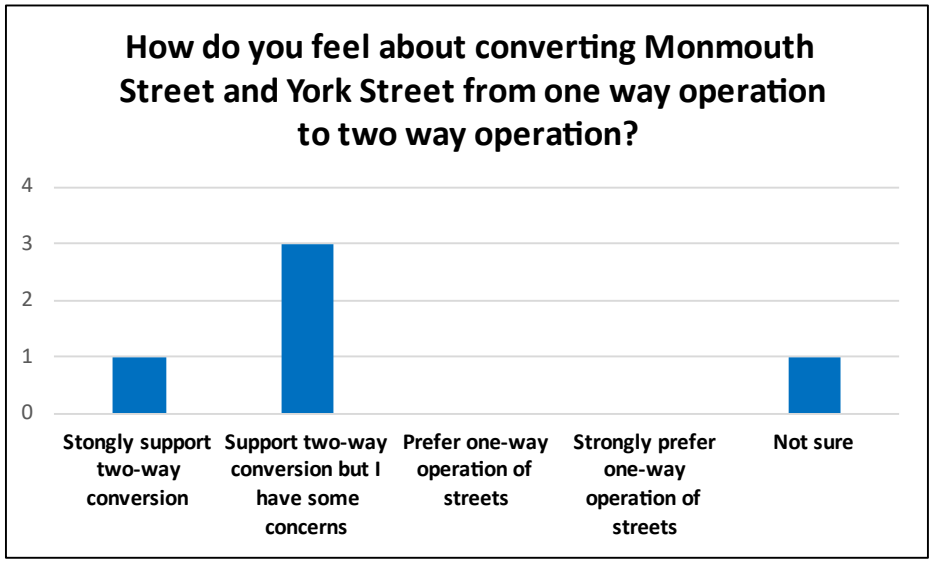

Figure 15: Local Official Survey No. 1 – Conversion of Monmouth and York Streets

Respondents were then asked how they feel about converting 4th and 5th Streets from one-way operation to two-way operation. Two respondents indicated they support the idea but have some concerns, one strongly supports the idea, one prefers one-way operations, and one was not sure, as shown in **Figure 16**.

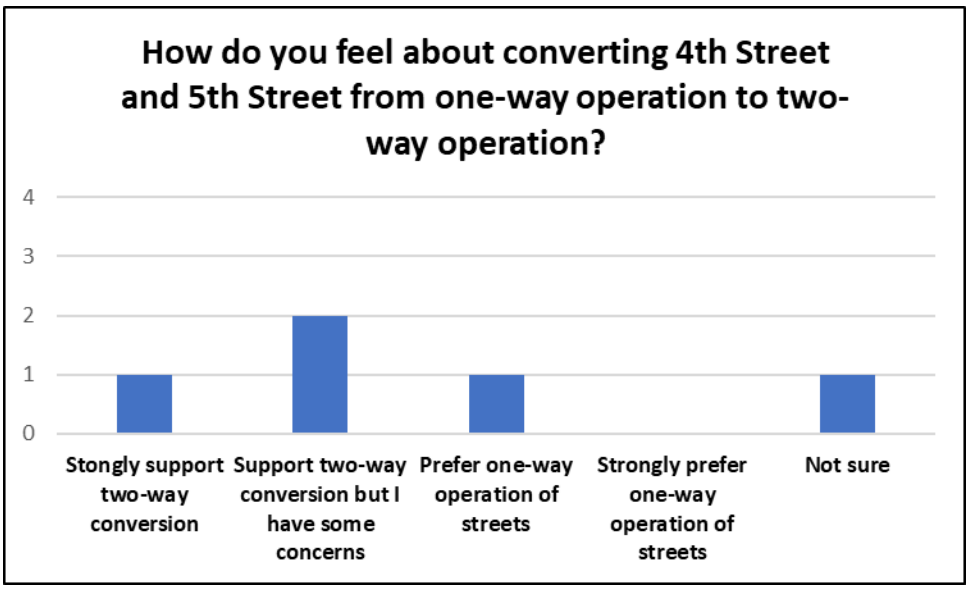

Figure 16: Local Official Survey No. 1 – Conversion of 4th and 5th Streets

When asked to rank their top three concerns about two-way conversion, the most common responses were the potential loss of on-street parking, loading and unloading zones, increased travel times, and bicycle accommodations, as shown in **Figure 17**.

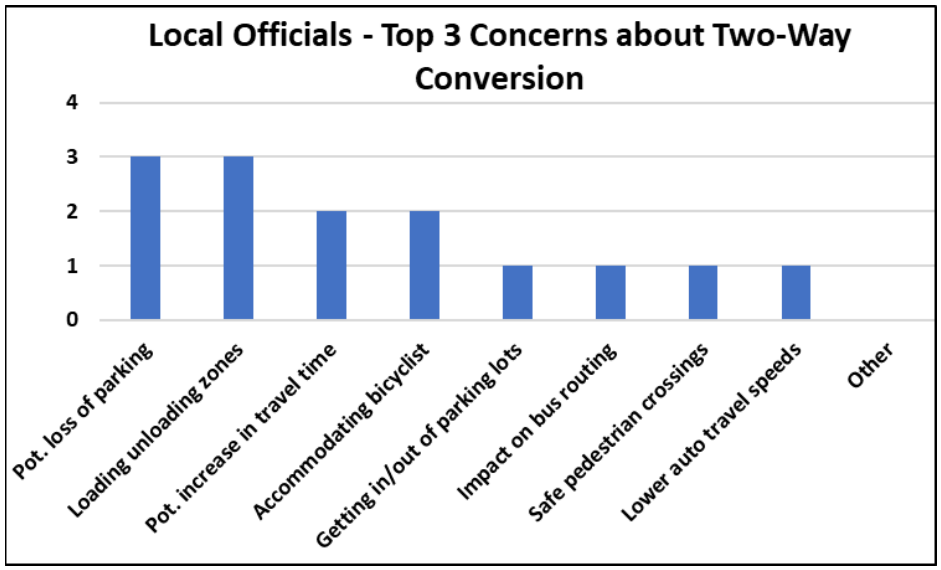

Figure 17: Local Official Survey No. 1 – Two-Way Conversion Concerns

With limited curb-to-curb width, respondents were asked to rank their priorities for competing roadway uses with the highest priority receiving a score of four and the lowest priority receiving a score of one. As shown in **Figure 18**, turn lanes at intersections and on-street parking were ranked as the highest priorities.

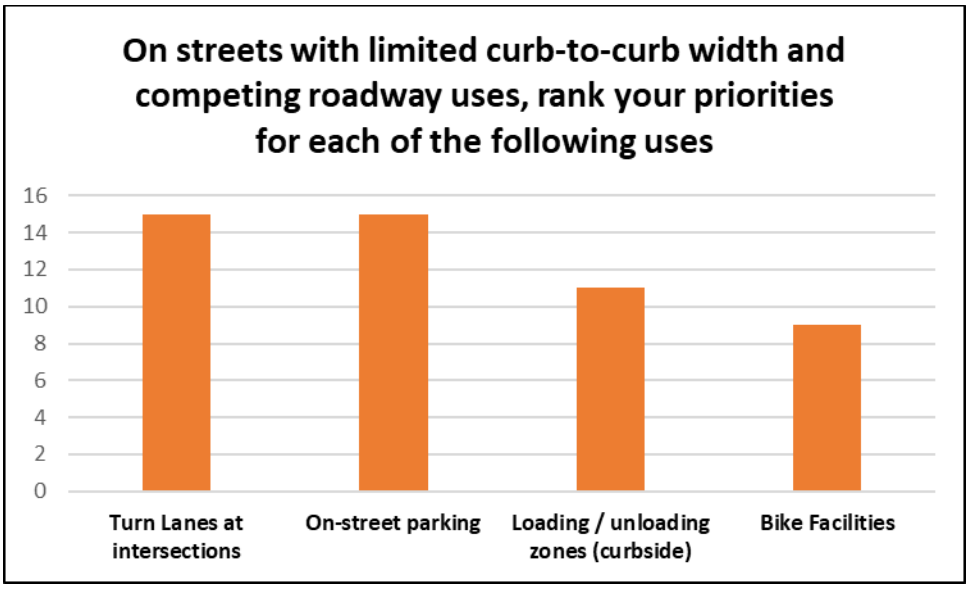

Figure 18: Local Official Survey No. 1 – Roadway Use Priorities

7.0 IMPROVEMENT CONCEPT DEVELOPMENT

Potential two-way conversion options were developed based on results from the existing conditions analysis, results from the microsimulation model and feedback from the local officials.

7.1 TWO-WAY CONVERSION

Two-way conversion concepts include the conversion of one-way couplets to two-way operation, including:

- **Two-Way Conversion of York Street and Monmouth Street** from 3rd Street to 11th Street. This concept includes restriping the existing pavement to include one lane in each direction and would require adding short left-turn lanes at the approaches for the York Street intersections with 4th Street and 5th Street. Short left-turn lanes would be added for the approaches at the Monmouth Streets intersections with 4th Street, 5th Street, 9th Street, and 10th Street. Additionally, the signal phasing at the Monmouth Street intersection with 11th Street will be modified to 1) provide protected/permissive phasing for northbound Monmouth Street and 2) allow the 11th Street approaches to operate concurrently. There are two options for York Street between 3rd and 4th Streets.
    - Two-Way Conversion without a northbound York Street connection to the roundabout. Because this connection would involve a separate project to widen York Street at the roundabout approach to accommodate northbound traffic, it is omitted in this option. Under this scenario, York Street would simply remain one-way between 3rd and 4th Streets, as shown in **Figure 19**.
    - Two-Way Conversion with a northbound York Street connection to the roundabout. Under this scenario, the York Street approach to the 3rd Street roundabout would be widened to two lanes, as shown in **Figure 20**.

  Based on results from the microsimulation model, all intersections are expected to operate at LOS C or better in 2035 with these conversions.
- **Two-Way Conversion of 4th Street and 5th Street** from KY 8 to Washington Avenue, as shown in **Figure 21**. Based on results from the microsimulation model, all intersections along 4th and 5th Streets are expected to operate at LOS C or better during the peak hours in 2035.

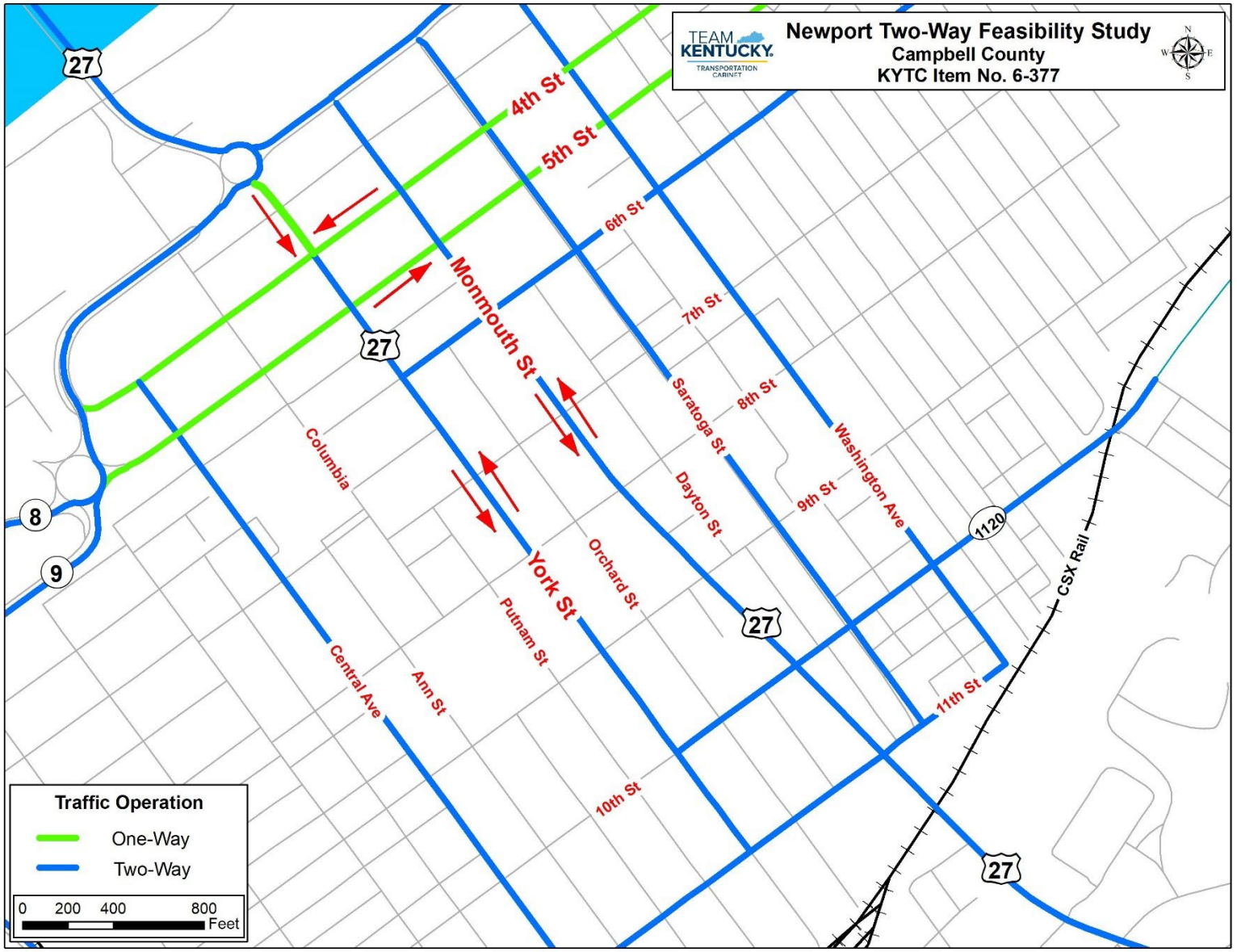

Figure 19: York St./Monmouth St. Two-Way Conversion without Northbound York St. Connection to Roundabout

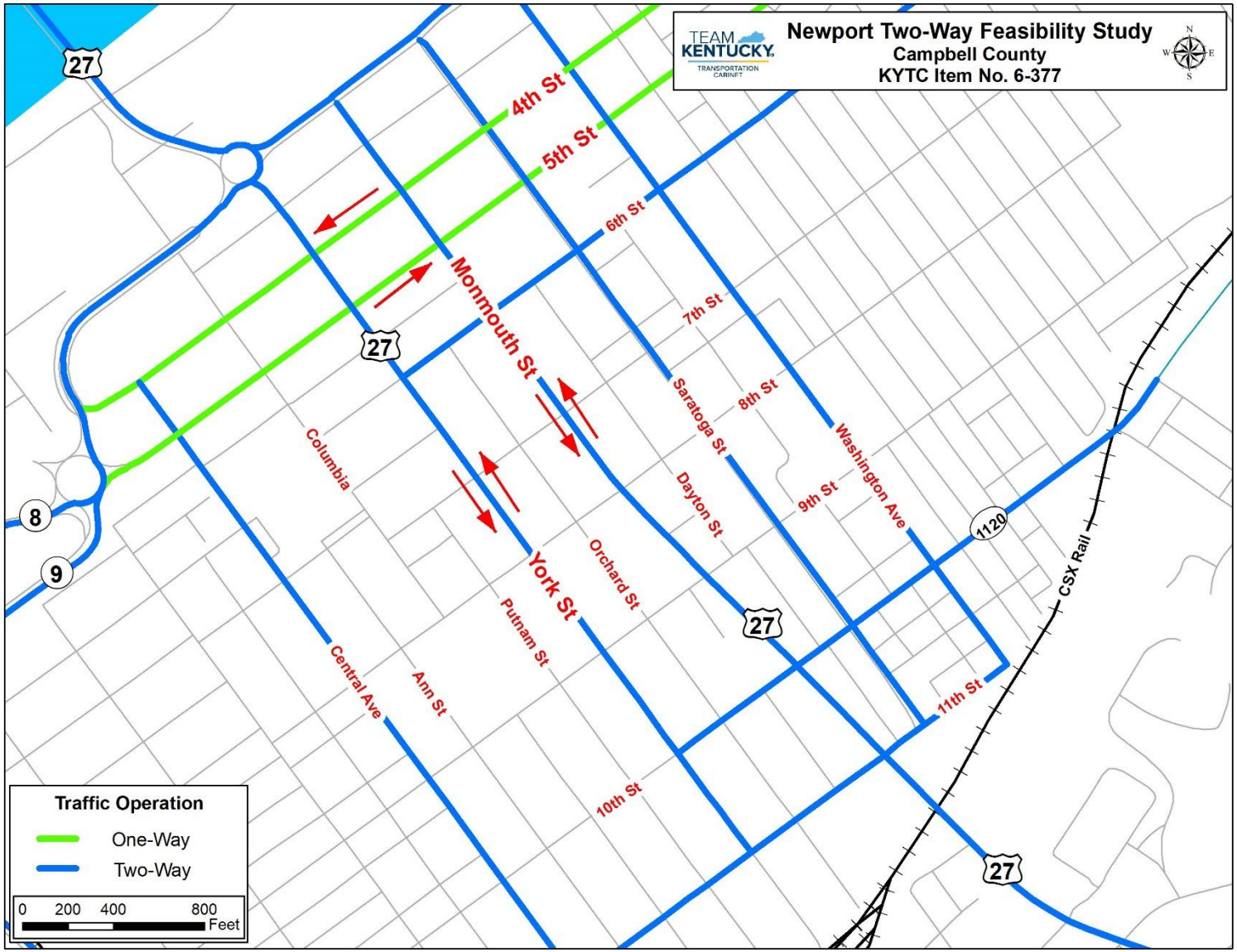

Figure 20: York St./Monmouth St. Two-Way Conversion with Northbound York St. Connection to Roundabout

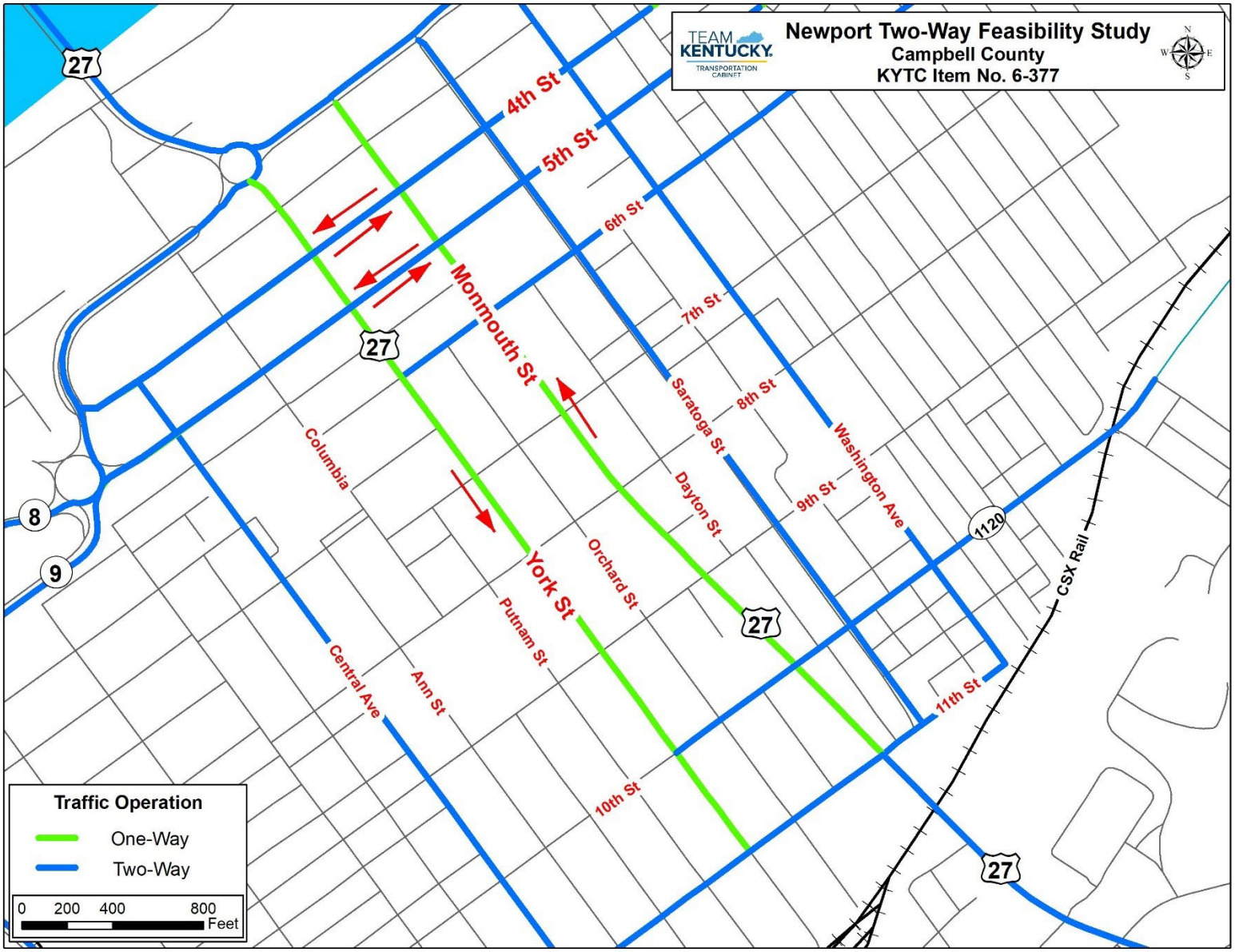

Figure 21: 4th St./5th St. Two-Way Conversion

7.1.1 Benefits

Converting one-way couplets to two-way operation has the following benefits:

- **Safety** – While the posted speed limit on York and Monmouth Streets are 25 MPH, traffic likely travels faster outside of the peak hours. Conversion to two-way traffic promotes slower speeds and in turn, promotes safer pedestrian activity.
- **Economic Growth** – Increased pedestrian activity promotes economic revitalization. Conversion to two-way traffic has the potential to make Newport a destination rather than a pass through during peak hour traffic.
- **Direct Access** – Drivers looking to access destinations via one-way couplets may not have direct access to these locations and are forced to circle the block. Two-way conversion provides direct access to all destinations.

7.1.2 Challenges

Converting one-way pairs to two-way operation have the following challenges:

- **Loss of Parking** – Conversion to two-way traffic would require wider turning radii and in turn, loss of on-street parking. It is expected that 39 of the 368 (11 percent) dedicated spaces would be eliminated.
- **Truck Loading and Unloading** – Monmouth Street is occasionally used to load and unload goods for the businesses in Newport. While there is one loading zone, trucks typically stop in traffic during non-peak hours. Vehicles are currently able to go around the trucks in the second through lane.
- **Traffic Signal Infrastructure** – While there are already mast arm poles facing the southbound direction on Monmouth Street (the opposite direction of traffic), the condition of the traffic signal poles is unknown and would need to be inspected for structural integrity. Additionally, the signal spans on York Street are routinely attached to existing utility poles. KYTC now prefers to avoid using utility poles and would rather install their own poles. However, installing new poles may be a challenge due to limited right-of-way.
- **Northbound York Street Connection to Roundabout** – The York Street approach to the 3rd Street roundabout is comprised of one southbound lane. Converting this approach to two-way traffic would require reconfiguration of the roundabout, including widening the York Street approach. This would likely require utility relocations, and it is assumed that all work would occur within the existing right-of-way.

8.0 SECOND PROJECT TEAM MEETING

Following the development of the initial improvement concepts, the project team met for a second time. During the meeting, improvement concepts were presented, and attendees were asked to provide feedback regarding their concerns and priorities. Summaries for all meetings are found in **Appendix E**.

8.1 PROJECT TEAM MEETING NO. 2

The second Project Team Meeting was held at the Newport City Hall Building and via Microsoft Teams on January 30, 2024. The purpose of the meeting was to review simulation model results and to discuss improvement concepts. Key discussion items included the following:

- A new development at the World Peace Bell site was discussed. It was included in traffic forecasts.
- The initial two-way conversion option did not include the conversion of York Street between Fourth Street and the roundabout because the current York Street approach for the roundabout has one lane. A scenario was developed to include the conversion of this section of York Street.
- Although the lane reduction on US 27 to the south could potentially reduce traffic in the future, this study will not consider the potential reduction in order to ensure the two-way conversion scenarios will operate under the highest potential traffic scenario.
- There was a question about whether this study would include discussing parking and loading needs with local businesses. It was noted that determining parking and loading needs would be part of the design phase, if this project were to move forward.

8.2 LOCAL OFFICIALS MEETING NO. 2

The second Local Officials meeting was held at the Newport City Hall Building and virtually with Microsoft Teams on May 1, 2024. In addition to the project team, the Mayor of Newport and the Kentucky State Representative for the study area were in attendance. The purpose of the meeting was to discuss two-way conversion options. Key discussion items from the meeting include:

- It was noted that under the two-way conversion scenarios, Monmouth Street would remain US 27 and York Street would be converted to a city street and require the City of Newport to take over any future roadway maintenance needs.
- Converting the signalized intersections on York and Monmouth Streets to roundabouts or stop-controlled intersections was not considered as part of this study.
- One local official requested left turns be permitted from 4th Street to the KY 8 roundabout. It was determined that this movement would cause additional turning conflicts to the 3rd Street approach and would not be permitted.

8.2.1 Local Officials Survey No. 2

At the end of the second Local Officials Meeting, a survey was disseminated to solicit feedback on preliminary two-way conversion concepts. Two local officials completed the survey.

When asked if they support converting York and Monmouth Streets from one-way to two-way operation, both respondents indicated that they support the conversion. One commented that safety and community were their reasons for support.

When asked if they support converting 4th and 5th Streets from one-way to two-way operation, both indicated they prefer the streets remaining one-way. One respondent indicated their preference was due to bicycle and pedestrian considerations.

The final question asked which York and Monmouth Streets conversion they prefer – with or without converting the northern section of York Street to two-way at the roundabout. One respondent chose the option with converting the section of York Street to two-way and the other respondent chose without.

9.0 FINAL COORDINATION

A third and final Project Team Meeting was held at the Newport City Hall Building and via Microsoft Teams on May 1, 2024. The purpose of the meeting was to discuss results from the second local officials survey and to determine study conclusions. Summaries for all meetings are found in **Appendix E**. Key discussion items included the following:

- The City of Newport currently maintains the poles along York and Monmouth Streets.
- It was noted that some of the businesses have basements under the sidewalks. This could pose an issue if new traffic signal pole foundations were installed.
- OKI would welcome an application for funding. However, federal funding through OKI would require a longer, more scrutinized process along with a 20 percent match from the City of Newport.
- A cost estimate will be developed for a scenario where all traffic signal poles are replaced.

10.0 CONCLUSIONS

The objective of the Newport Two-Way Feasibility Study was to determine the feasibility of the conversion from one-way couplets to two-way systems of Monmouth Street / York Street (between 3rd Street and 11th Street) and 4th Street / 5th Street (between KY 8 and Washington Avenue) in Newport. Based on a combination of input from the project team, a review of existing conditions, results from the traffic analysis, local officials' input, and field reconnaissance, it was determined these conversion options are feasible. **Table 4** presents cost estimates for these options. The cost estimate assumes that the two-way conversions would coincide with the next scheduled resurfacing of the couplets when the striping and pavement markings would be updated to reflect two-way operations as per plans developed in the Design phase. The conversion of York and Monmouth Streets to two-way operation can be implemented with or without converting 4th and 5th Streets to two-way. Similarly, the conversion of York and Monmouth Streets can be implemented with or without converting York Street to two-way between 3rd and 4th Streets.

Table 4: 2024 Cost Estimates

Description	2024 Cost Estimates				
	Design [1]	ROW	Utilities [2]	Construction [3]	Total
Two-Way Conversion of Monmouth Street and York Street	$200,000	$0	$100,000	$1,100,000	**$1,400,000**
Two-Way Conversion of 4th Street and 5th Street	$100,000	$0	$100,000	$700,000	**$900,000**
Two-Way Connection to York Steet Roundabout	$100,000	$0	$100,000	$200,000	**$400,000**
Total	**$400,000**	**$0**	**$300,000**	**$2,000,000**	**$2,700,000**

[1] Design cost estimates include: traffic signal plans, signage plans, and striping plans.
[2] It is assumed that some utilities may need to be relocated at the utility company's expense. The utility cost estimate is for utility coordination.
[3] The construction cost does not include costs for resurfacing the road. It is assumed the two-way conversion would coincide with the next scheduled resurfacing.

10.1 EVALUATION MATRIX

An evaluation matrix was developed to summarize the improvement concepts' ability to satisfy the study objectives. **Table 5** presents the evaluation matrix, which includes estimated cost and whether the concept accommodates future traffic, improves safety, promotes pedestrian activity, provides direct access to destinations, preserves parking, and accommodates loading and unloading. Both two-way conversion options include the conversion of York / Monmouth Streets and 4th / 5th Streets to two-way and address or somewhat address all study goals.

Table 5: Evaluation Matrix

Study Outcomes	One-Way (No Build)	Two-Way Conversion wo/connection to roundabout	Two-Way Conversion with connection to roundabout
Estimated Total Cost	N/A	$1,800,000[1]	$2,000,000[1,4]
Accommodates Future Traffic	✓	✓	✓
Improves Safety	✗	✓	✓
Promotes Additional Pedestrian Activity	✗	✓	✓
Provides Direct Access to Destinations	✗	✓	✓
Preserves Parking	✓	● [2]	● [2]
Accommodates Loading / Unloading	✓	● [3]	● [3]

Note 1: Assumes existing traffic signal infrastructure must be replaced for modifications.
Note 2: Assumes loss of 39 of 368 dedicated parking spaces.
Note 3: Establish time-of-day loading zones near businesses requiring large deliveries.
Note 4: Assumes all work will occur within existing ROW. Includes utility relocations.

Key:
✗ Not addressed
● Somewhat addressed
✓ Addressed

10.2 NEXT STEPS

The next step following this study for any potential improvements would be Phase 1 Design (Preliminary Engineering and Environmental Analysis). Further funding will be necessary to advance an improvement to the design phase as additional phases of this project are not funded in *Kentucky's FY 2024 – FY 2030 Enacted Highway Plan*.

11.0 CONTACTS/ADDITIONAL INFORMATION

Written requests for additional information should be sent to Mikael Pelfrey, Director, KYTC Division of Planning, 200 Mero Street, Frankfort, KY 40622. Additional information regarding this study can also be obtained from the KYTC District 6 Project Manager, Dane Blackburn, at (859) 341-2700 (email at Dane.Blackburn@ky.gov).