Lexington Area 2050 Metropolitan Transportation Plan

Lexington Area
Metropolitan Planning Organization

CHAPTER 1: INTRO

"We coordinate resources and planning to ensure transportation works well for everyone."
Lexington Area Metropolitan Planning Organization

A word from the Lexington Area MPO Director

The world we live in today is very different from the world prior to the global pandemic. Many of us no longer physically commute to work every day, or if we do, it's only for a portion of our workweek. Inflation and the cost of housing and transportation has increased significantly both nationally and in the Bluegrass, leading many of us to make difficult choices about our household budget, where we live, and how we chose to travel on a day to day basis. For many, the cost of buying and maintaining a car is either out of reach, or a major financial strain. Approximately one-third of people living in our community cannot drive because they are either too young, too old, or physically unable. Yet our transportation system remains primarily focused on moving more and more cars,

We envision a thriving community made possible by a sustainable, resilient, and accessible transportation system.

often at deadly speeds. We also know that vehicles add significant amounts of pollutants like ozone and particulate matter to our air, as well as carbon emissions, which are a threat to our health and the growing climate change crisis.

For these reasons, the MPO has heard from more and more Fayette and Jessamine County residents that want more options to get where they need to go without feeling forced to drive a car. In survey after survey, more people list the ability to safely walk, ride a bike, ride a bus, or even take a train as a preference in order to get to their destination. Our regional leaders heard that message and have adopted a set of goals for the Lexington Area Metropolitan Transportation Plan to accomplish a more balanced transportation system that offers everyone more transportation choices by 2050.

This 2050 Metropolitan Transportation Plan responds to our community's call to create a network of complete streets, where all of our roadways are safe and comfortable for everyone using the street, whether they are a bicyclist, pedestrian, transit rider or driver. The ultimate goal is to move towards a community where most, if not all, of the important destinations of life are within a 15 to 20 minute walk, bike ride or transit ride from where you live. We are also working to prepare for and implement emerging technologies that will allow our transportation system to operate cleaner and more efficiently to help us address the climate and air quality challenges that our region faces.

Finally, although this plan receives an official 'adoption' by our Transportation Policy Committee,

this plan is also a living and breathing document that can adapt to changing desires, circumstances and needs. The conversation about how to best meet our regional transportation needs is continuous and we invite you to reach out to share your preferences and your ideas with both the MPO staff and our TPC leadership.

Disclaimer

The Lexington Area Metropolitan Planning Organization has prepared this plan in compliance with the Infrastructure Investment and Jobs Act (IIJA) also known as the Bipartisan Infrastructure Law (BIL). The preparation of this plan has been funded in part through grants by the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Kentucky Transportation Cabinet (KYTC).

The contents of this report reflect the views and opinions of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the FHWA, the FTA, or KYTC. For more information regarding this plan update, the Lexington Area MPO and its activities, or for a copy of this plan, please contact:

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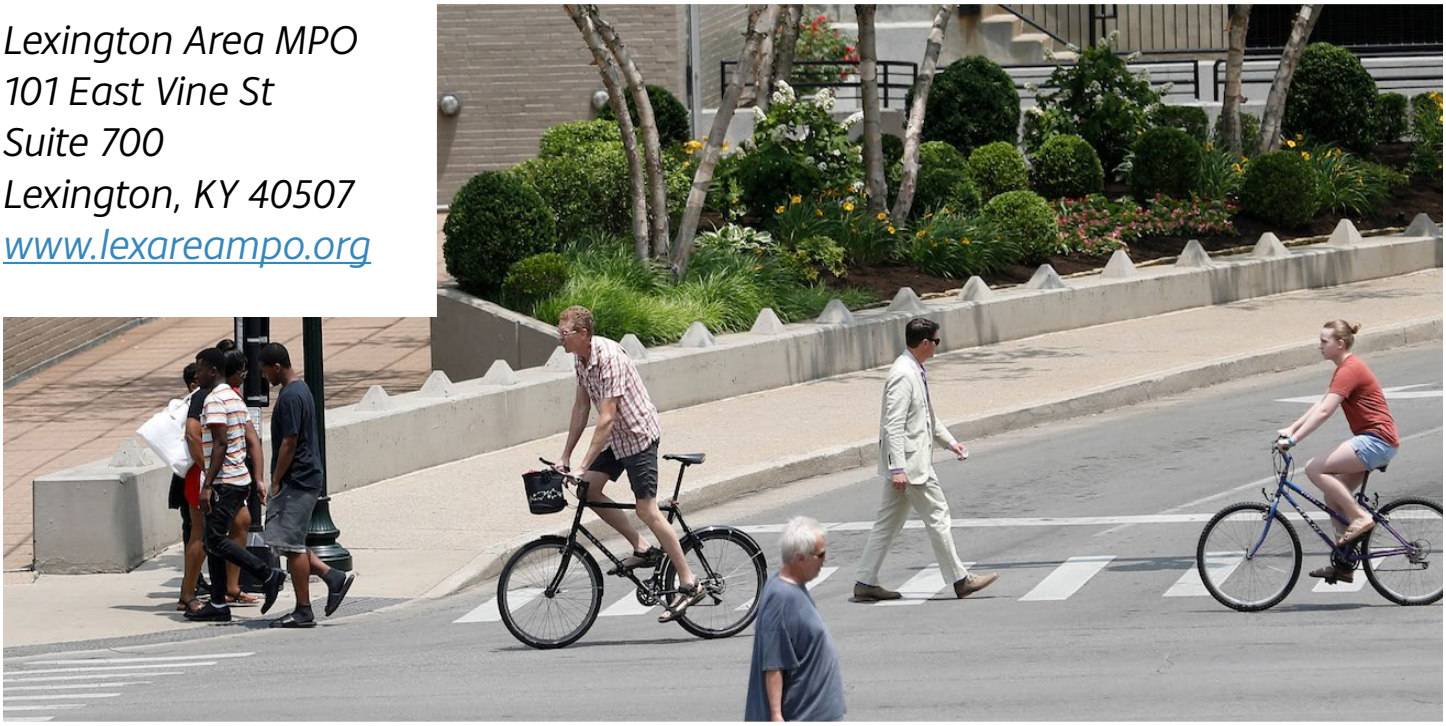


What is an MPO, and What Do We Do?

A Metropolitan Planning Organization (MPO) is a federal program that focuses on all things transportation: how people and things get from A to B. There are 420 MPOs all across the United States representing Census Defined urban areas with populations greater than 50,000. The purpose of MPOs is to identify the long-range transportation needs of the region and to provide local input into decisions involving federal highway and public transportation funding as well as anything impacting transportation facilities or services for which there is a federal interest, such as the Interstate Highway System. The Lexington region covers the entirety of Fayette and Jessamine Counties and a ½ square mile section of Scott County and also includes the combined city/county of Lexington/Fayette County and the municipalities of Nicholasville and Wilmore. The MPO land area consists of 458 square miles and has a population of 375,561 as of the 2020 Census. Since the Lexington Area MPO population exceeds a federally defined threshold of 200,000, the MPO is classified as a Transportation Management Area or TMA. TMAs have additional responsibilities such as having a "congestion management" process. But TMAs also receive direct suballocations of federal funding from the Surface Transportation Block Grant Program (STPBG), Transportation Alternatives Program (TAP) and Carbon Reduction Program (CARB).

The Lexington Area MPO includes a full-time staff of 9, a Transportation Policy Committee for governance, 3 advisory committees, and several partner organizations. Together, we focus on the three Ps: plans, projects, and policy. The MPO sets goals, make useful improvements, and work to provide good mobility choices for everyone. As a team, we gather and analyze data and listen to the community to:

Guide spending

Better understand and respond to present challenges

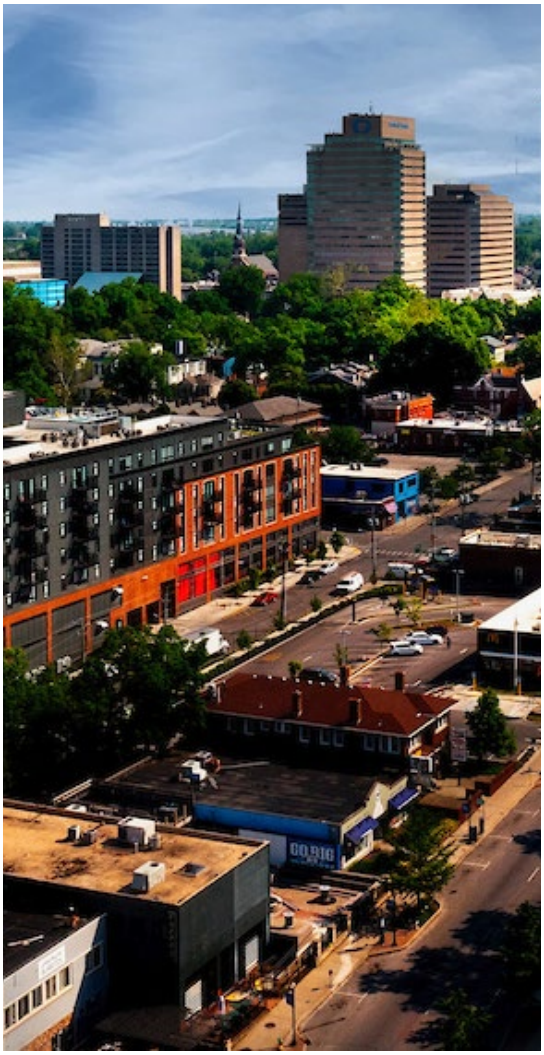
Estimate future opportunities

When our community considers how federal money is to be utilized – as well as other dollars from state or local sources – we work with residents, community stakeholders and local elected leaders to rank and choose how that money ought to be spent on transportation projects and services. We strive to make sure all projects and programs for transportation are grounded in local priorities and shared goals.

When it comes to moving around our community, there are lots of different needs and interests. As your local MPO, our goal is to provide for multiple viewpoints to be discussed at the same table. We gather the latest information and solicit input from the public regarding future priorities. That input is then shared with local elected leaders to help guide their decision-making.

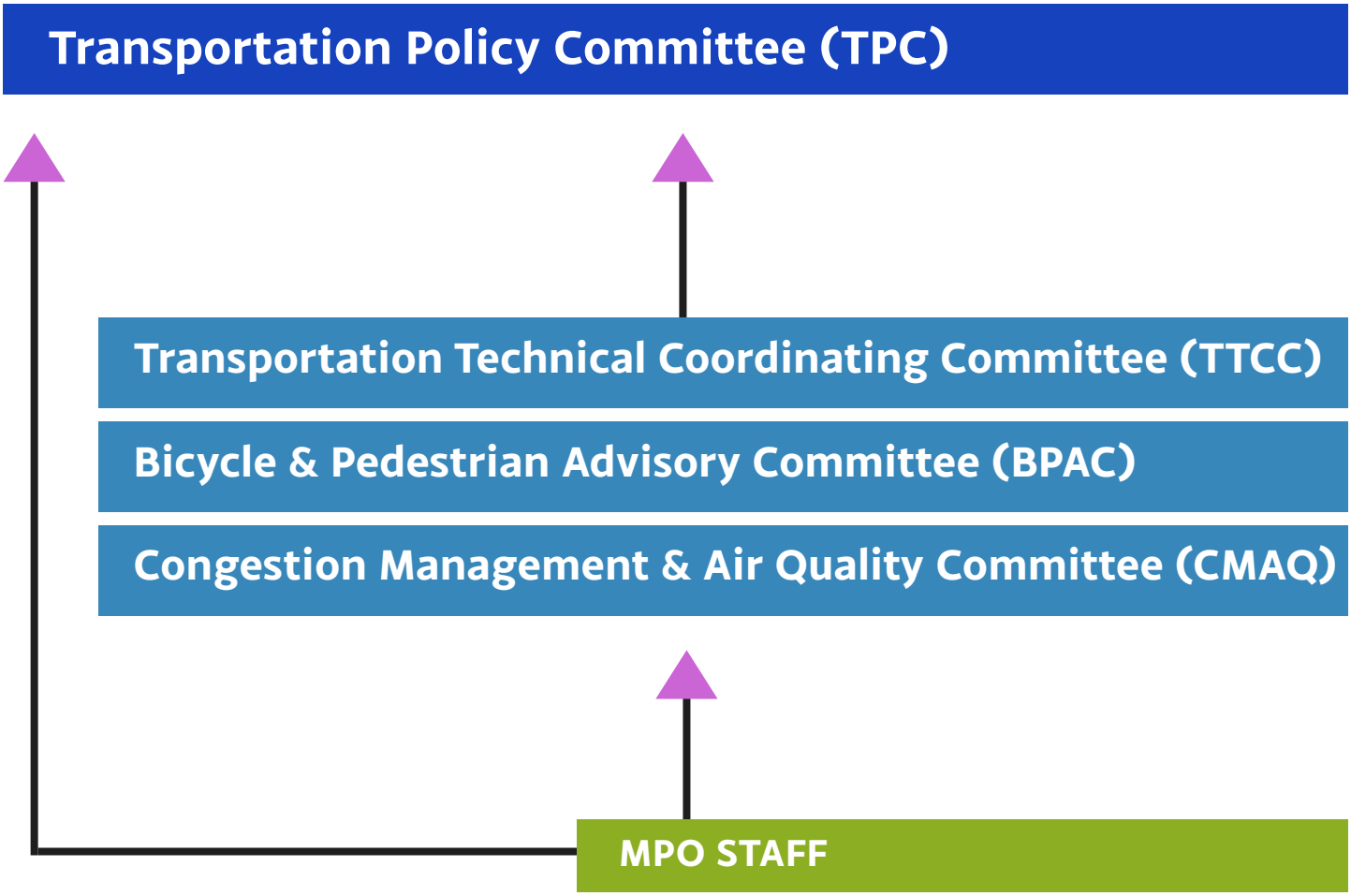
What is the planning process?

To accomplish federal transportation planning requirements for the Lexington Region, the Governor of Kentucky, in cooperation with local elected leaders, designated the Lexington Fayette Urban County Government as the responsible lead agency for implementing the MPO program. LFUCG staff then organizes, researches and coordinates activities between the Kentucky Transportation Cabinet (KYTC), Lextran, BGCAP transit, the Federated Transportation Services of the Bluegrass (FTSB) and the Lexington Area MPO Transportation Policy Committee.



The MPO has one decision-making body and three specialized advisory committees. The Transportation Policy Committee (TPC) meets regularly and is made up of local elected officials and transportation professionals. The TPC is the policy decision making committee

and governs the operations of the MPO. Appendix B identifies the members of the TPC for Calendar Year 2024.



The TPC is advised by 3 advisory committees: The Transportation Technical Coordinating Committee (TTCC), the Congestion Management Air Quality Committee (CMAQ) and the Bicycle Pedestrian Advisory Committee (BPAC).

The TTCC is composed of subject matter experts and regional transportation stakeholders as well as the municipalities and counties represented by the MPO. The TTCC provides recommendations to the TPC regarding project level decisions and adoption of MPO plans and programs. Appendix B identifies the stakeholders represented on the TTCC.

The CMAQ is a subset of the TTCC committee and focuses on the issues of regional air quality and overseeing development and implementation of the regional congestion management plan. Members of the CMAQ committee

are subject matter experts in the fields of air quality and traffic management. BPAQ is a resident and grassroots level committee to provide advice and recommendations regarding bicycle and pedestrian projects and strategies to make these modes viable, safe and comfortable mobility options. The recommendations of the BPAC are forwarded directly to the TPC for their consideration when adopting MPO plans and programs.

The MTP: Our Plan for the Future

The Metropolitan Transportation Plan (MTP) is one of the core required documents MPOs must develop per federal statute. The MTP is the 25-year plan that outlines the mobility needs for the Lexington Region and serves as the blueprint from which future mobility projects are developed. The MTP also reflects the long-term transportation policies and priorities of the MPO Transportation Policy Committee (TPC).

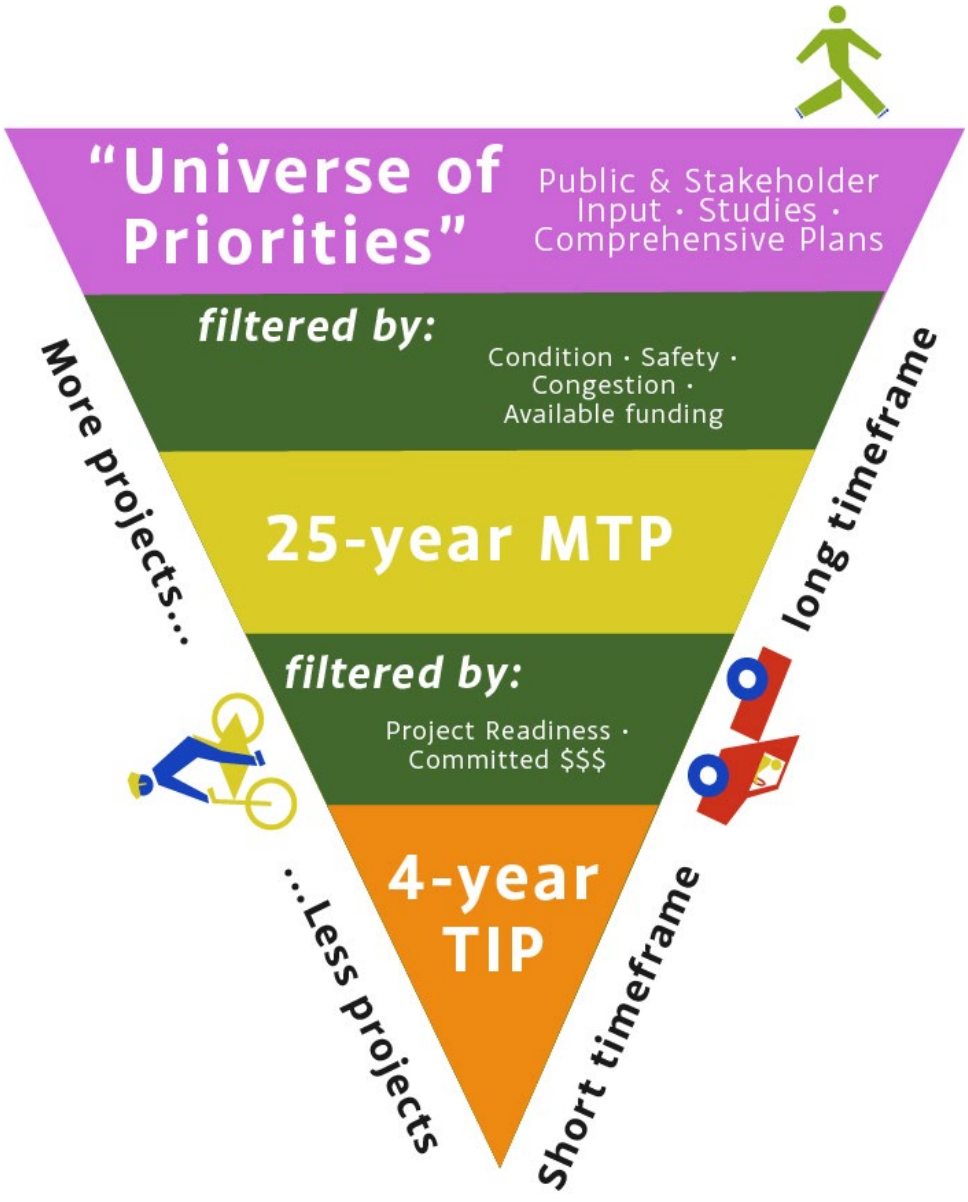
The MTP is required by federal law to include all projects which intend to utilize federal highway or public transportation dollars during the 25-year planning period as well as all other regionally significant transportation projects, regardless of their source of funding. The MTP, however, must also be constrained against a realistic estimate of available resources. Only those projects that can be realistically funded during the 25-year planning period may be included in the MTP. The MTP is a critical part of how the MPO works to improve mobility, safety, and access for everyone – however they choose to move around our community. It has big-picture goals along with strategies to achieve them.

The MTP is developed through a transportation planning process that is data-driven, goal-oriented and considers the input of residents and transportation stakeholders. Prior to developing the MTP, MPO staff solicits project ideas and identifies regional transportation needs using a variety of methods. Those methods include meetings with regional stakeholders such as KYTC or Lextran, the TPC and other elected officials, public surveys and other outreach activities as well as various corridor and modal studies. In addition to these efforts, MPO staff also uses analyses performed for the adoption of various federally required transportation performance measures to identify

projects that may be effective in helping the Lexington region achieve related performance targets.

Because trends and needs change, MPO staff review and refresh the MTP every five years. This keeps the long-term plan updated and relevant. After adoption, the MTP may be amended or modified by the TPC. Amendments are major revisions that include adding or deleting a significant project or major changes to a project (e.g., design or scope). Amendments require public review and re-demonstration of fiscal constraint. Modifications are minor changes that do not require formal public review. These changes can affect phasing, costs, funding sources, or estimated project completion dates.

Once the MTP has been adopted by the TPC, projects may then move to various phases of implementation based on their readiness to proceed and if there is a formal commitment of funding for that phase of work. When these two criteria have been met, the project can be included in the next document: the Transportation Improvement Program or TIP. The TIP covers 4 years andany project phase using federal funds must be included in this document before work can proceed. The following graphic provides a generalized overview of the MPO transportation planning process.



Federal Law & Planning Emphasis Areas

Federal authorization for transportation programs and the transportation planning process is currently provided through the Infrastructure Investment and Jobs Act (IIJA) which is also known as the Bipartisan Infrastructure Law (BIL). The IIJA, passed in 2021, is the most recent surface transportation act which Congress passes semi-regularly – previous versions were passed in 2015, 2012, and 2007. The purpose is to update and identify the amount of federal funding available for transportation, establish priorities for that funding, and identify specific programs through which that funding will be distributed.

The IIJA is a major national investment in infrastructure funding, totaling $550 billion over fiscal years 2022 through 2026. The federal funding in the BIL is split into two main areas – formula funding, where states and regions receive specific amounts of funding based on population and other factors (approximately 2/3 of available funds); and discretionary funding, where entities apply for grants in a variety of specific programs (approximately 1/3 of available funds). Two key changes may impact the region:

Increased funding: Overall funding levels are much higher than in the previous transportation reauthorization act (2015's FAST Act). Nationwide, average annual Federal Highway Administration (FHWA - where most federal roadway funding comes from) authorization levels for the full fiscal years covered by each legislation increased by 33% with the BIL. Average annual funding levels for the Federal Transit Administration (FTA - where federal support for local transit comes from) increased by 73% with the BIL. However, transportation project costs have increased with inflation, so it is unclear if those increased funding levels will enable regional jurisdictions to identify additional projects or simply keep pace with inflation.

New priorities and programs: The IIJA updated priorities and established new programs, meaning there may be significantly more federal funding available for projects that best match federal priorities. Examples include:

Safety: The IIJA created a new program – the Safe Streets and Roads for All

program – which offers $1 billion annually in competitive grants for planning and implementation activities around comprehensive roadway safety improvement. The BIL also increased funding for existing formula safety programs like the Highway Safety Improvement Program (HSIP).

Reducing carbon emissions: Climate change mitigation is an increasingly important priority in the IIJA, with several new programs, including the Carbon Reduction Program, intended to reduce overall carbon emissions from the transportation sector, and the National Electric Vehicle Infrastructure (NEVI) program, intended to build out a publicly accessible nationwide network of alternative fueling stations. Funding for competitive grants for low or no emission buses and bus facilities also substantially increased with the passage of the IIJA.

Equity/Environmental justice: Equity is an increasingly important priority in the IIJA, with the Justice40 Initiative calling for at least 40% of the investments in key programs to benefit disadvantaged communities.

Maintenance: Overall, the BIL increases funding for road repair and maintenance by $110 billion.

Planning Emphasis Areas (PEAs):
National Areas of focus (jointly issued nationally by FHWA and FTA)

- Tackling the Climate Crisis: Transition to Clean Energy, Resilient Future
- Equity and Justice 40 in Transportation Planning
- Complete Streets
- Public Involvement
- Strategic Highway Network (STRAHNET)/US DOD Coordination
- Federal Land Management Agency (FLMA) Coordination
- Planning and Environmental Linkages (PEL)
- Data in Transportation Planning

CHAPTER 2: OUR AREA PROFILE

By 2050, there will be an estimated 460,000 people living in our area.

Examining our region today and anticipating future needs helps inform the MPO and decision-makers on how transportation investments should be made over the coming years. When developing the MTP, we ask ourselves lots of questions:

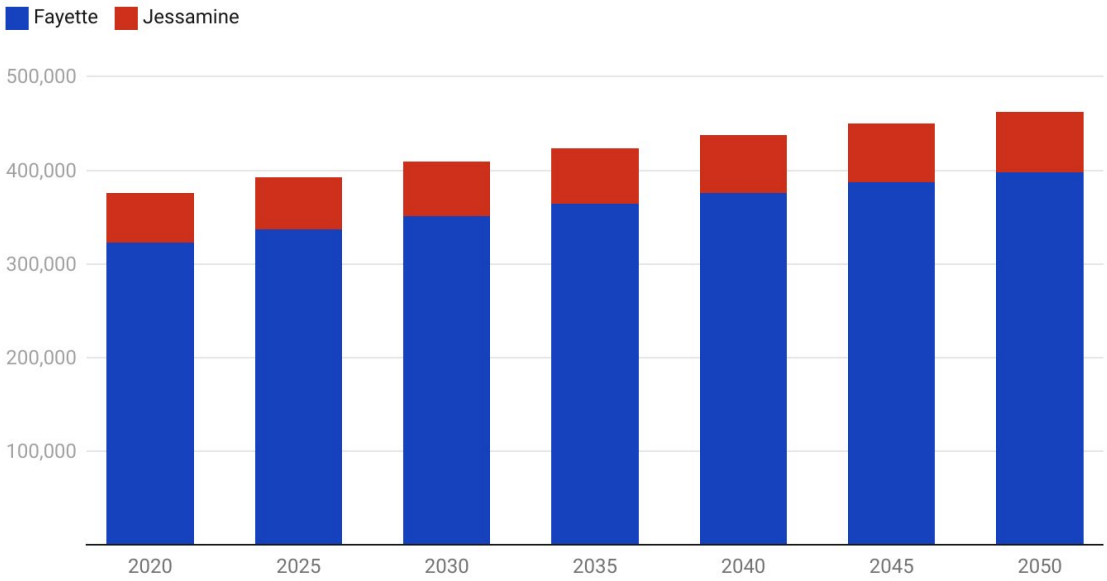
Where *growth has occurred in the past and where it is expected it in the future?*
What *are the current population trends and how will they change over time?*
How *and where do people travel now and how might travel patterns differ in the future?*
What *is the current condition of our transportation infrastructure?*
Where *do we have or expect deficiencies?*
What *are the needs of the region and the transportation network both now and in the future?*
How *does the transportation system impact our environment and our region's safety and security?*

About Our Population

Travel demand correlates to how many people live in a region, their employment status, age, household size, and income. Examining our population trends can help us better understand current travel patterns and also predict changes to travel demand or preferences in the future.

The current population for the MPO area is about 374,600. Eighty-six percent (86%) live in Fayette County and 14% live in Jessamine County. Between 2010 and 2020, the MPO's population increased by just over 30,000 people. That change is a smaller increase than the growth we saw during the two previous census periods (2000 and 2010) when the average population increase was 44,250.

MPO Population Growth 2020 - 2050



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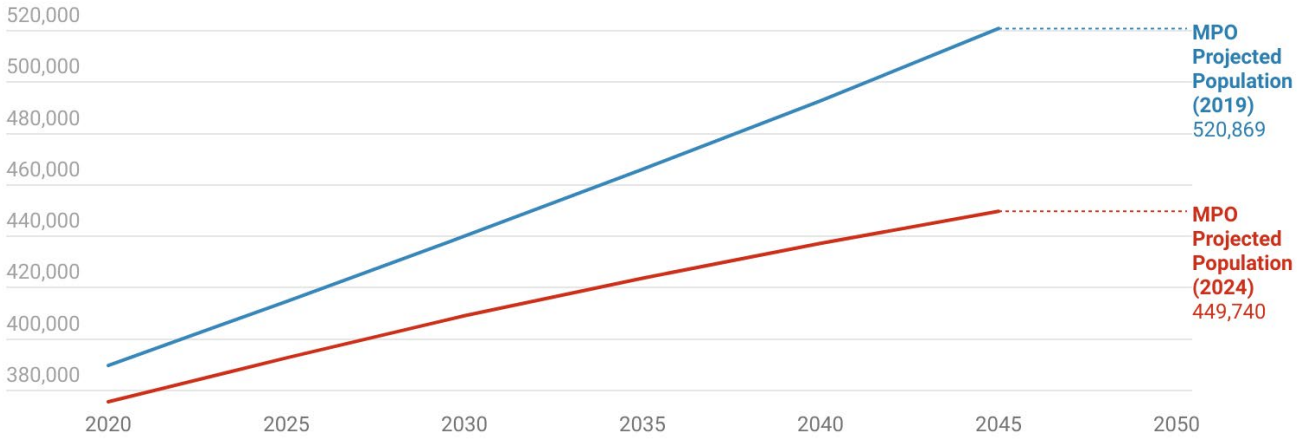
This decline in growth has also affected population projections. The last MTP estimated that by 2045 over 500,000 people would be living in the two-county region. Under the revised estimate, over 460,000 people (23% more than today) are expected to live within our two-county region by 2050.

Projected Population Growth (Vintage 2022 vs Vintage 2016)



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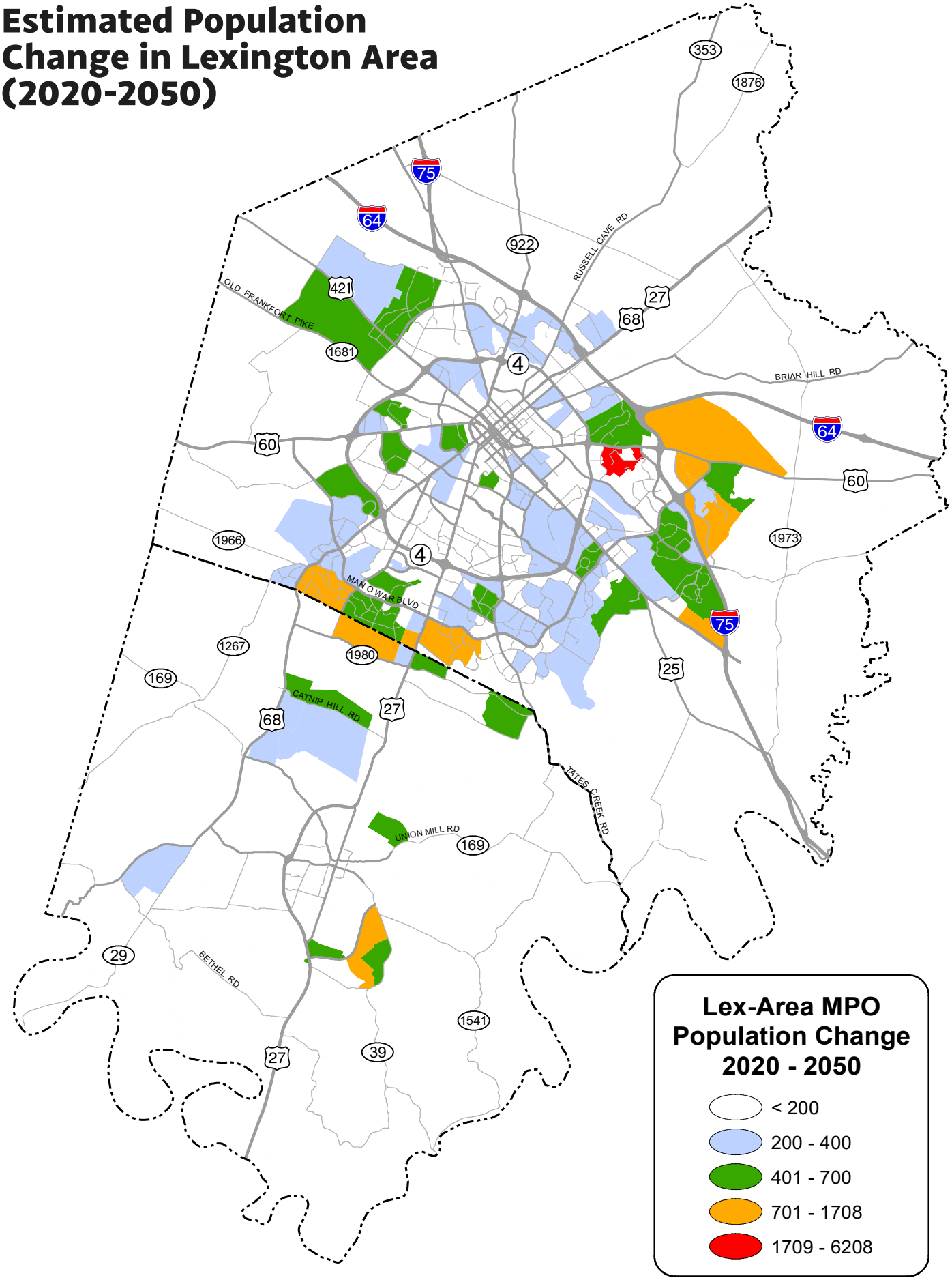
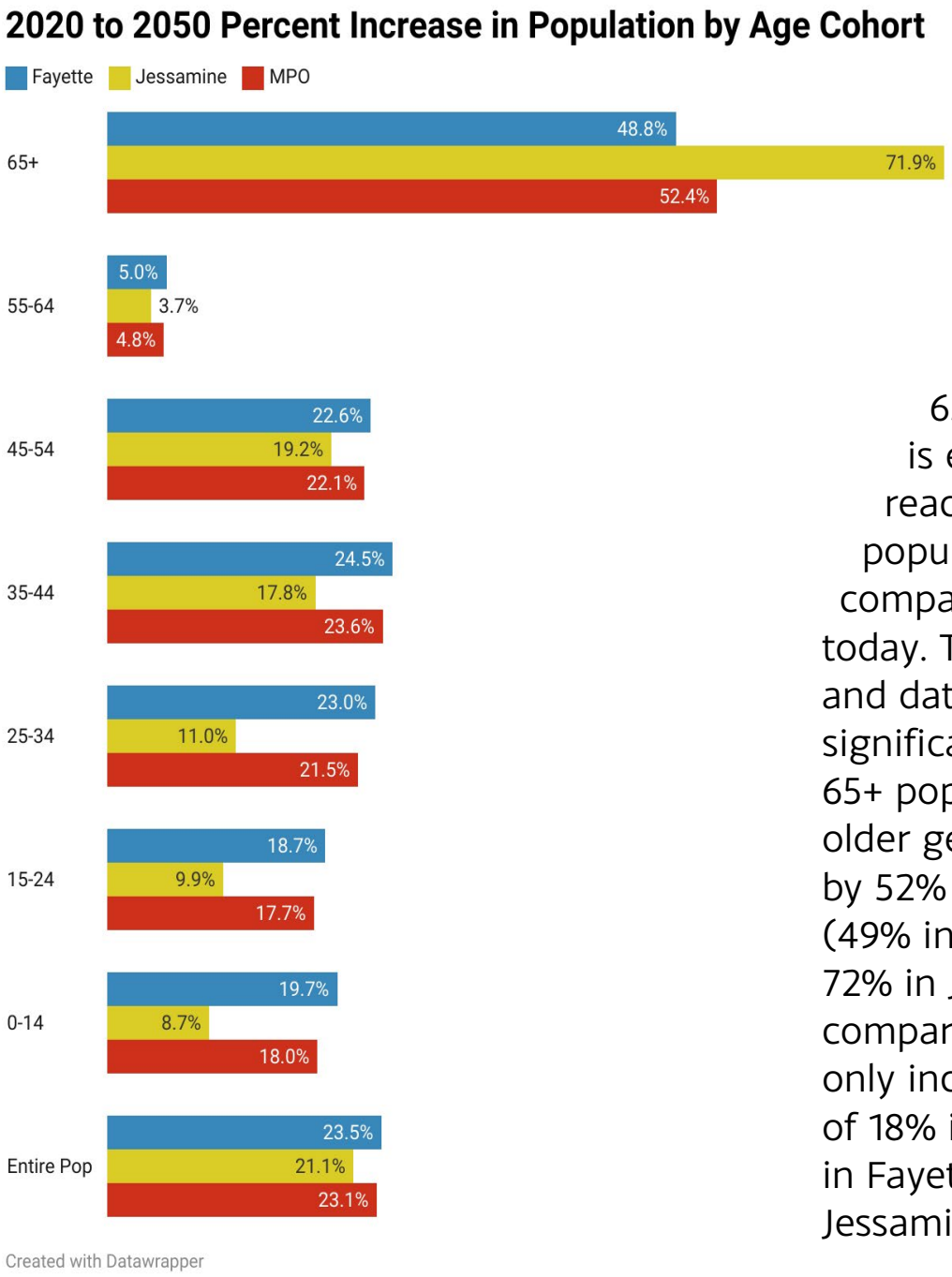
Estimated Population Change in Lexington Area (2020-2050)



Aging and Population Growth

A person's age and their stage of life affect how many daily trips they take. Busy professionals with children living at home tend to run more errands, while college students or retirees generally make fewer trips. Historically, the 35-44 age group, known for their peak travel and driving years, made up a significant portion of the population (23%). However, as of the 2020 census, this group has dropped to just under 13%, and is projected to stay near this level through 2050. Moreover, younger generations entering their peak travel years are experiencing minimal growth or even decline. Conversely, the 65+ demographic is expected to boom, reaching 18% of the population in 2050 compared to 14.5% today. The following chart and data table shows significant growth in the 65+ population. By 2050, the older generation will increase by 52% in the MPO area (49% in Fayette County and 72% in Jessamine County). By comparison, the younger will only increase by an average of 18% in the MPO area (19% in Fayette County and 12% in Jessamine County).



Employment & Density

The size of the labor force and the number of people employed is a strong predictor of travel rates. In the MPO region, between 2010 and 2022, the eligible labor force (residents over the age of 16) increased from 270,328 to 304,562. Over the same period, labor force participation (the number of eligible residents who are employed) increased from 187,506 to 204,546.

Between 2010 and 2022, the share of the eligible labor force from each MPO county stayed close to an average of 86% in Fayette County and 14% in Jessamine County. Similarly, the percent of eligible workers participating in the labor force has stayed around 68% since 2010.

In addition to the labor force residing in the MPO area, it is estimated that nearly 210,000 people work in the MPO region (either living in the MPO area or commuting into the MPO area).

Travel Modes

In the 2022 American Community Survey, 76% of Fayette County and 77% of Jessamine County workers reported driving alone as their primary means of commuting. This is higher than the national average of 70% for workers in urbanized areas, but slightly lower than Kentucky's statewide average of 79%. In each of these geographic areas, this rate has started to trend down since 2019.

Workers in Fayette and Jessamine County who do not drive alone report walking, bicycling, public transit, carpooling and working from home. While carpoolers currently make up the largest percentage of this group, there has been a consistent drop in carpooling since 2000. Working from home has increased significantly in both counties, especially since the pandemic. Despite the pandemic, transit use in both counties has seen a slight increase since 2010, but walking and bicycling to work has declined since 2010.

While the data reported in the American Community Survey is useful for anticipating

Travel Mode to Work

Travel Mode to Work	2010	2020	2022	% Change (2010-2022)
Walk				
Fayette	3.7%	3.7%	3.3%	-12.0%
Jessamine	3.2%	3.1%	2.7%	-19.0%
Bike				
Fayette	0.7%	0.5%	0.5%	-40.0%
Jessamine	0.0%	0.0%	0.0%	0.0%
Transit				
Fayette	1.4%	1.8%	1.5%	7.0%
Jessamine	0.0%	0.1%	0.1%	100.0%
Carpool				
Fayette	10.5%	8.2%	8.3%	-27.0%
Jessamine	12.2%	12.3%	10.7%	-14.0%
Work From Home				
Fayette	3.0%	6.7%	9.6%	69.0%
Jessamine	5.6%	6.7%	9.6%	42.0%

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peak hour travel demand and congestion, it is not the best indicator of overall alternative mode usage. First, it only reports the primary mode for commuting travel, not other utilitarian or recreational trips, which outnumber commuting trips four to one. Second, it does not capture occasional commuting trips taken by other modes.

The 2022 National Household Travel Survey reports travel modes for non-commuting trips. Data for the Lexington area is not available; however, the national average for daily trips taken by each mode is 86.6% by driving, 7.8% by walking and biking, 1.5% by public transit and 4.1% by other modes.

Commute Patterns

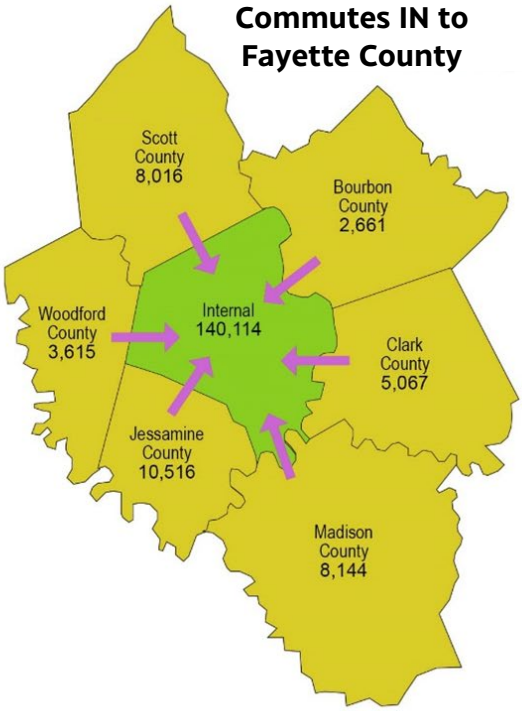
Lexington is a major employment hub for the Bluegrass area with nearly 520,000 people living the 6 county Metropolitan Statistical Area (MSA). There are just over 140,000 people who both live and work in Fayette County. Another 38,000 people that work in Lexington live outside Fayette County within the MSA. Of those, the largest number live in Jessamine County, followed closely by Scott and Madison County.

Jessamine County and Nicholasville are a fast growing county/city within that area experiencing steady growth. There are 12,200 people that both live and work in Jessamine County. Just over 11,000 Jessamine County residents work in the immediately surrounding counties, primarily in Fayette County (10,500). For those that travel to their workplace (do not telework), their commutes are primarily served along US 27 (Nicholasville/Lexington Road) and US 68 (Harrodsburg Road) and to a lesser degree Tates Creek Rd.

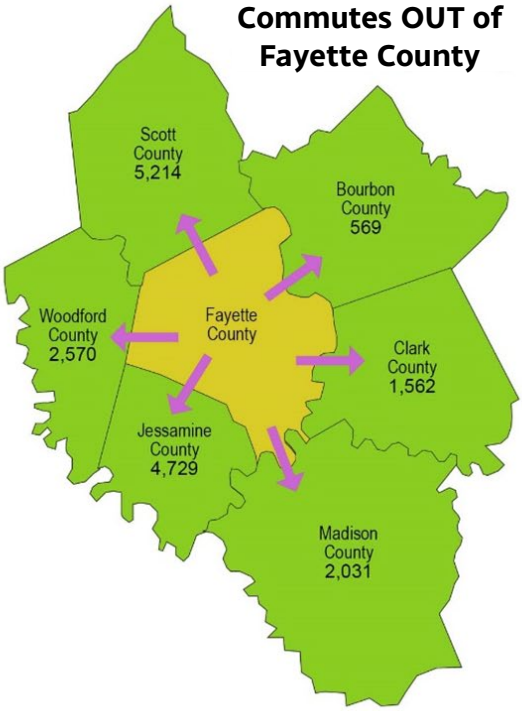
The most significant change in regional commuting patterns has been the work from home trend which increased substantially during the COVID-19 pandemic (from 2020 to 2022). While work from home has leveled off from the social isolation spike in 2020, the number of people working from home all the time increased 69% (Fayette) and 42% (Jessamine) when comparing pre-pandemic to post-pandemic. This statistic does not take into account

Commute Flow Patterns for Fayette & Jessamine

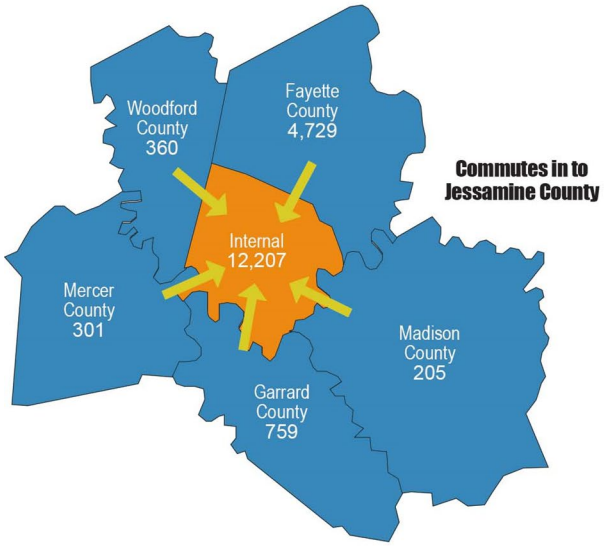
Commutes IN to Fayette County



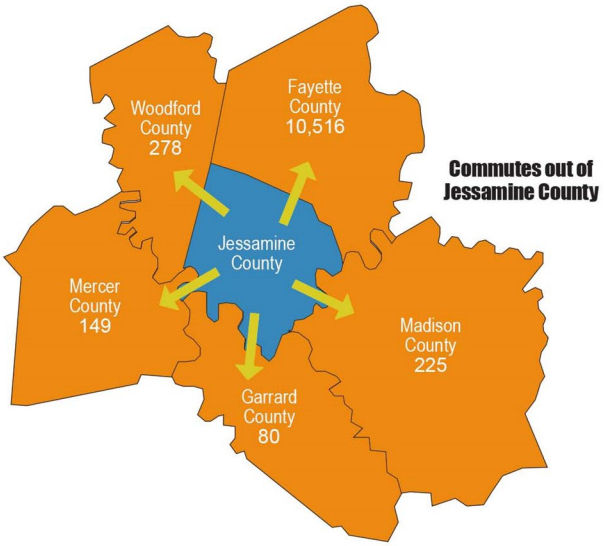
Commutes OUT of Fayette County



Commutes IN to Jessamine County



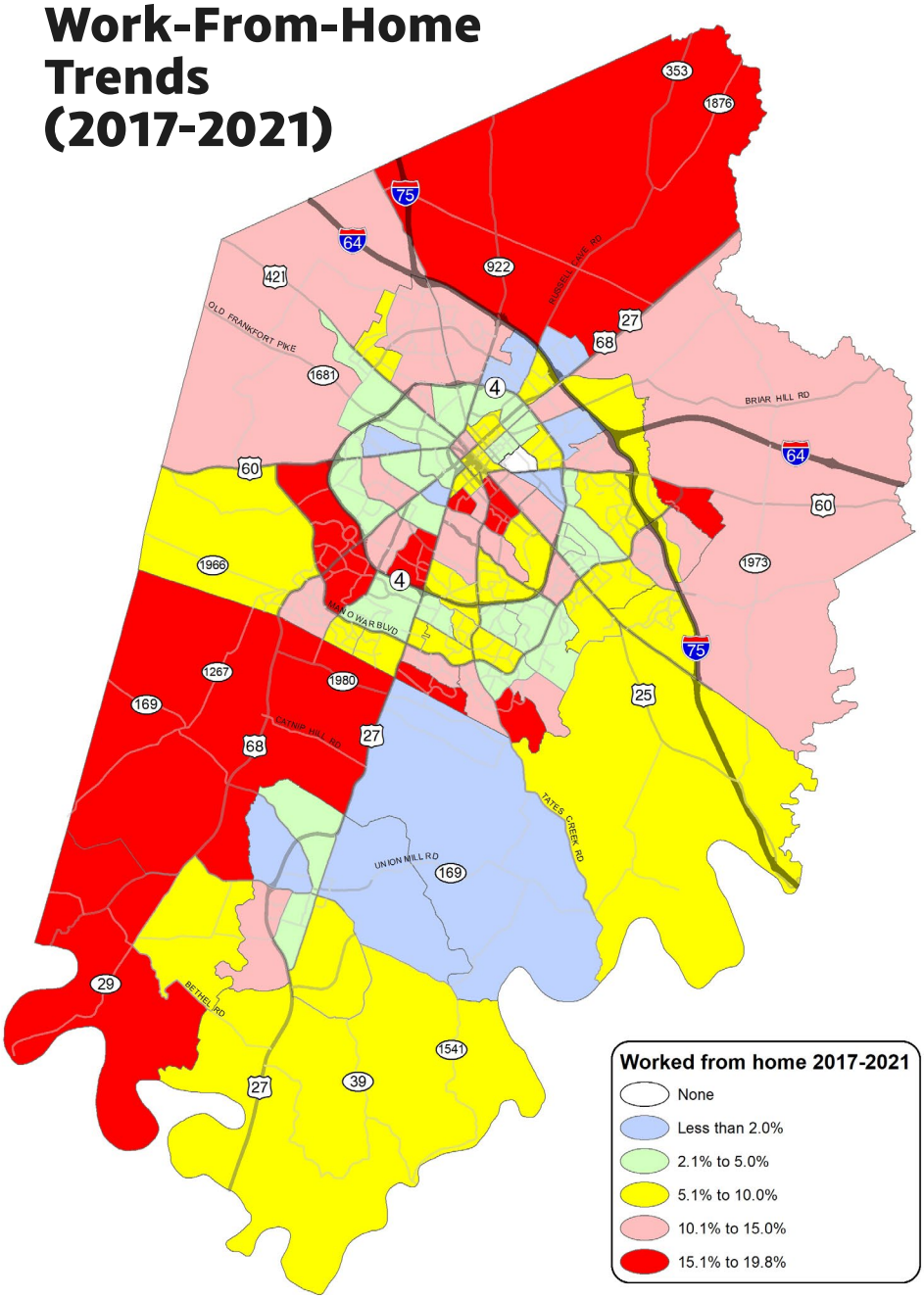
Commutes OUT of Jessamine County



those that work from home part time. Surveys conducted by the MPO suggest that as many as 1 in 3 persons within the region currently work from home at least 1 day per week.

People working from home are not equally distributed across the region, however. According to Census data people working from home are more likely to have white collar or professional jobs, more likely to have higher incomes and more likely to reside in suburban areas. While the long-term impact of work from home continues to evolve, it is anticipated that this trend will decrease the AM and PM peak period traffic volumes relative to pre-pandemic levels as well as commuting volumes on Mondays and Fridays. Traffic volumes during other times, however, may increase such as the midday period and weekends.

Work-From-Home Trends (2017-2021)



Physical Condition of Our System

Transportation System

The transportation system provides social and economic connections. Transportation gives people access to tangible goods like jobs, education, and services, and it also connects people to friends and family. By facilitating the movement of goods and services at the local, regional, and national levels, transportation is the foundation for economic growth. To support a thriving economy, the transportation system must be comprehensive. It must serve all modes of travel: people and goods should be able to flow by bike, bus, car, plane, on foot and by train.

Roadway Network

There are just over 1,800 miles of roadways in the MPO Region. Approximately 74% of the total road mileage is located in Fayette County and 26% is located in Jessamine County. Both counties have about 300 miles of rural roadways. Fayette County has over 1,000 miles of urban roads. Jessamine County has only 183 miles. Local streets and roads make up about 54% of the total road system; 46% of roadways are classified as collectors and arterials. The MTP addresses roadways classified as a collector or arterial because federal funds may not be spent on local roads.

	Fayette County		Jessamine County	
	Miles	% of Total	Miles	% of Total
Rural				
Interstate	21.7	1.2%	0.0	0.0%
Freeway & Expressway	0	0%	0	0%
Principal Arterial	7.7	0.4%	5.3	0.3%
Minor Arterial	8.1	0.4%	17.1	0.9%
Major Collector	74.4	4.1%	19.4	1.1%
Minor Collector	28.6	1.6%	53.6	2.9%
Local	143.5	7.8%	186.1	10.2%
Subtotal = 566	284.1	15.5%	281.6	15.4%
Urban				
Interstate	13.5	0.7%	0.0	0.0%
Freeway & Expressway	13.8	0.8%	0.0	0.0%
Principal Arterial	72.2	3.9%	10.0	0.5%
Minor Arterial	71.3	3.9%	14.7	0.8%
Major Collector	106.1	5.8%	18.5	1.0%
Minor Collector	73.3	4.0%	1.0	0.1%
Local	720	39%	150	8%
Subtotal = 1265	1,070	59%	194	11%
MPO Total = 1,831 Miles	1,355	74%	476	26%

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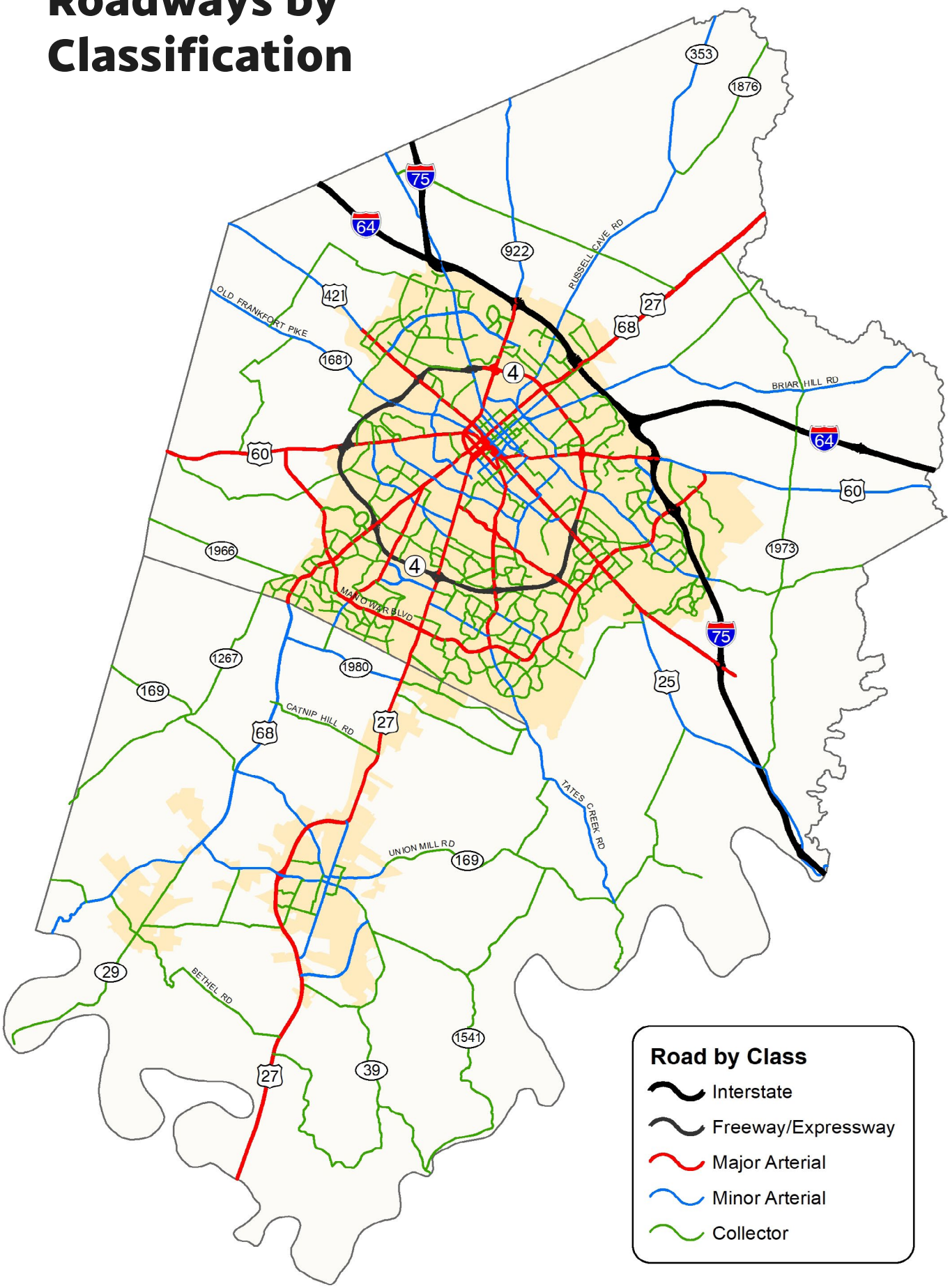
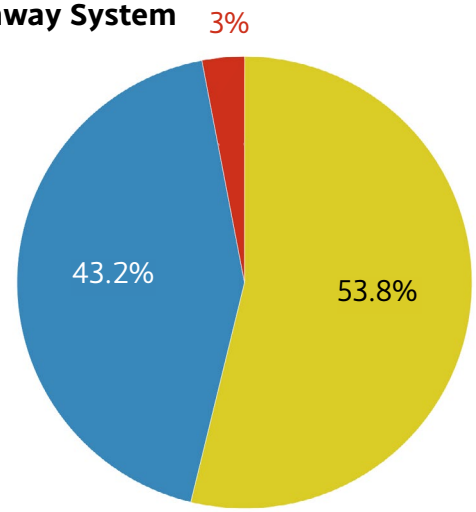
Roadways by Classification



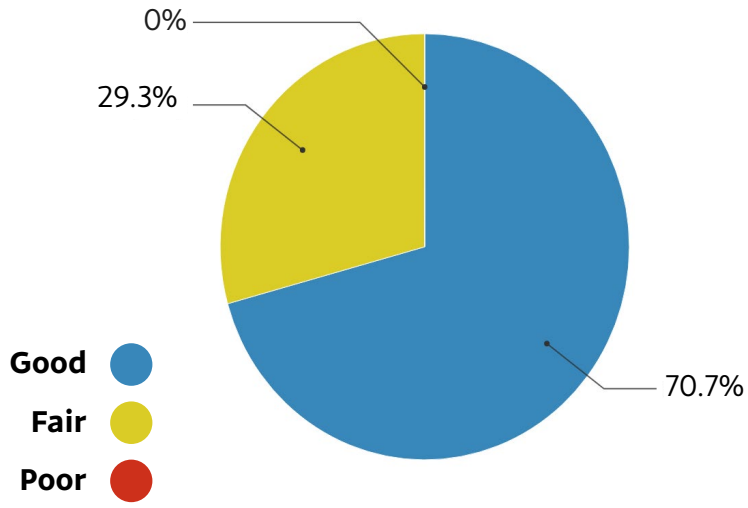
Roadway and Bridge Conditions

Keeping roadways and bridges in a state of good repair is important to the public and a primary goal of transportation agencies. Poor pavement and bridge quality can degrade user experience, reduce safety, increase fuel consumption and operating costs, and cause damage to vehicles. When roadway conditions are evaluated, they are given a condition of good, fair, or poor. Overall, the roadways in the MPO region are in reasonably good condition, as only 3 percent of roadways not in the National Highway System (NHS) are considered in poor condition. The majority of roadways in the NHS are considered in good condition, while the majority of roads in the non-NHS system are considered fair. Of concern are the roadways closer to Downtown Lexington, which are generally older and are more likely to be considered in poor or approaching poor conditions.

Pavement Condition: Non-National Highway System

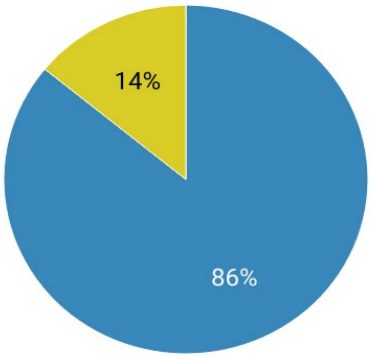


Pavement Condition: National Highway System



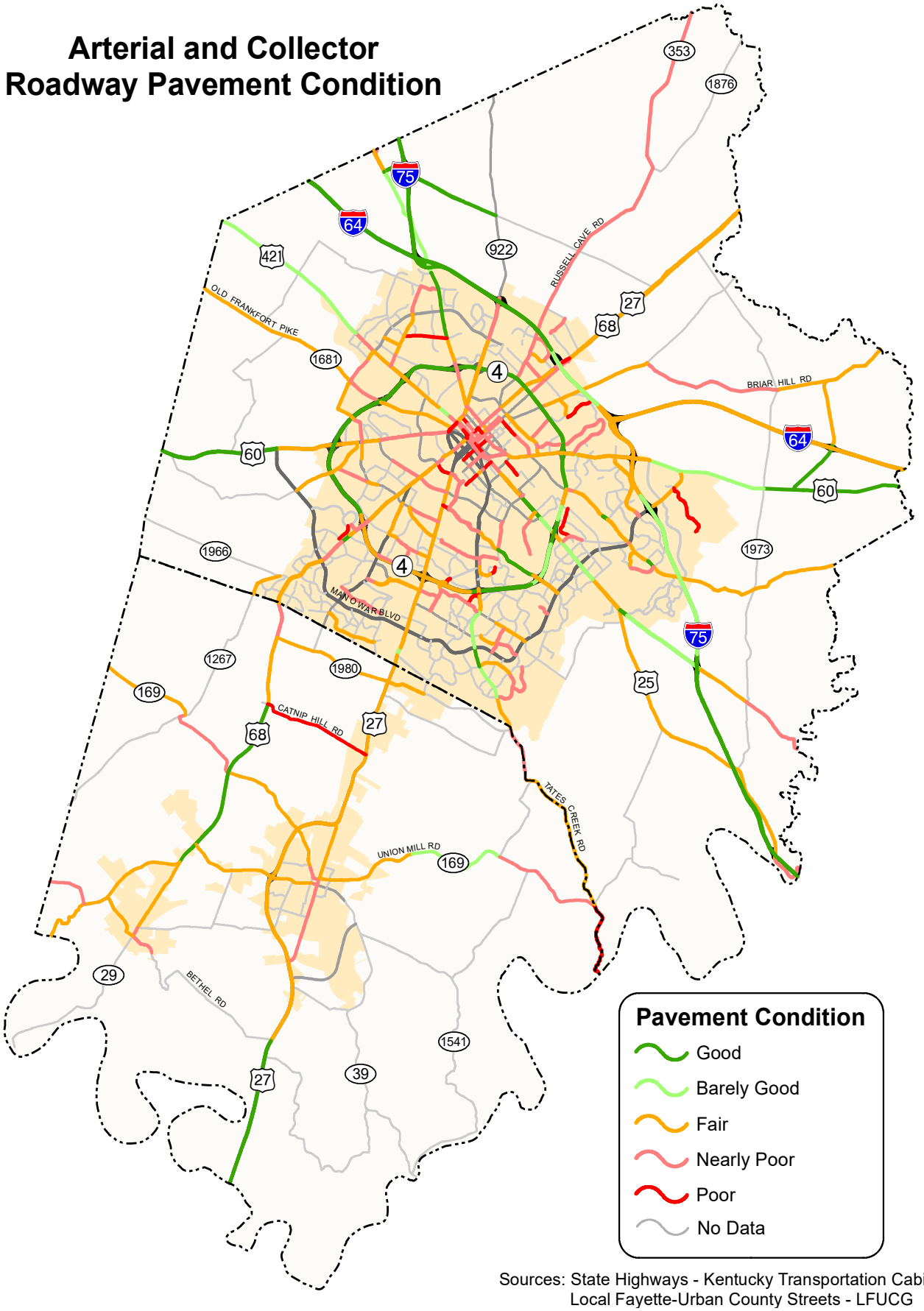
Bridges are also given a condition of good, fair, or poor depending on the bridge deck, the superstructure, and the substructure. In 2022, when the bridges were evaluated most recently, the vast majority of bridges were in fair condition while the remaining were in good condition. When projecting future needs, the majority of bridges will remain in fair condition with a very small percentage falling into poor condition.

Lexington Area BHS Bridge Condition



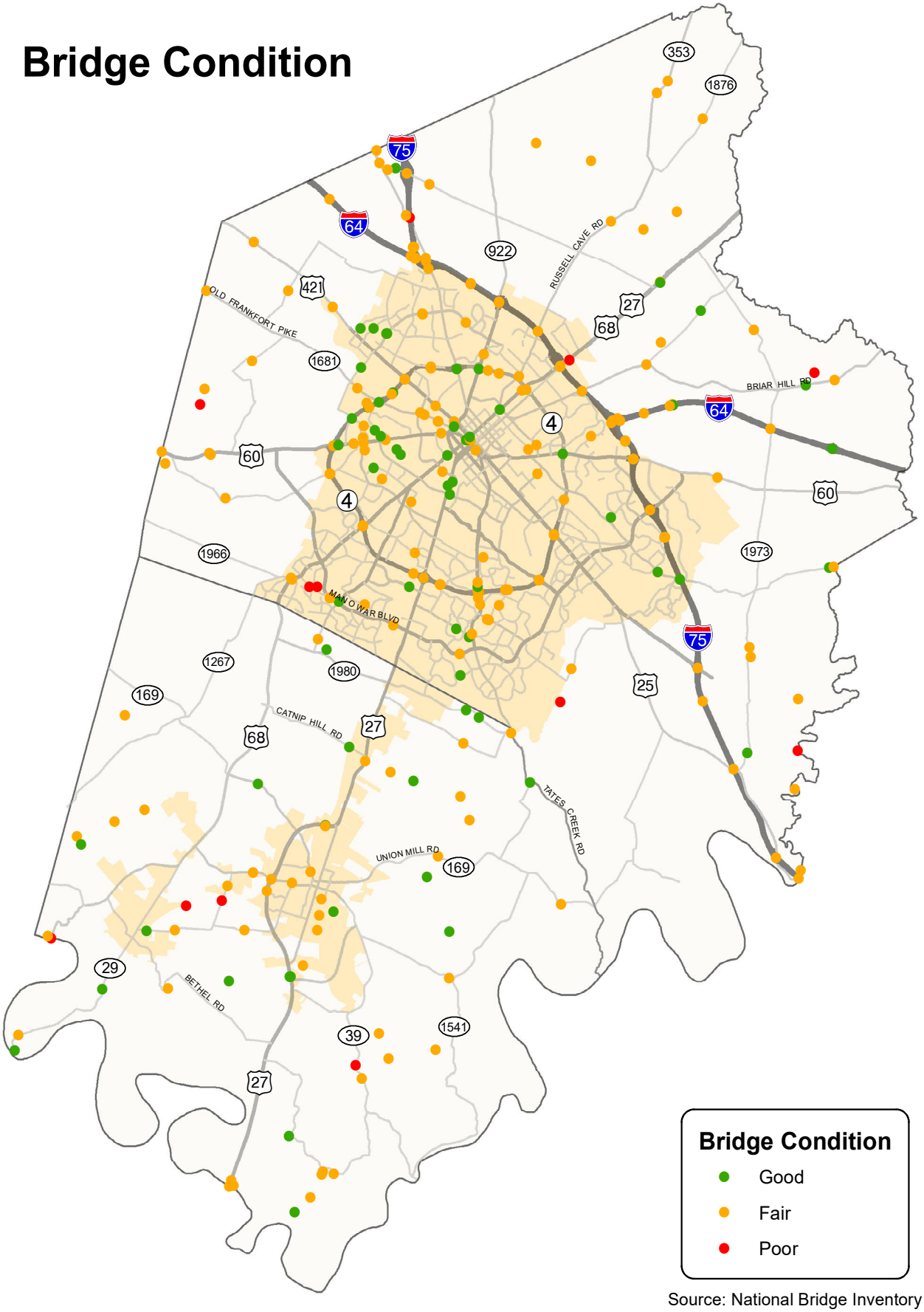
2022

Arterial and Collector Roadway Pavement Condition



Sources: State Highways - Kentucky Transportation Cabine
Local Fayette-Urban County Streets - LFUCG

Bridge Condition



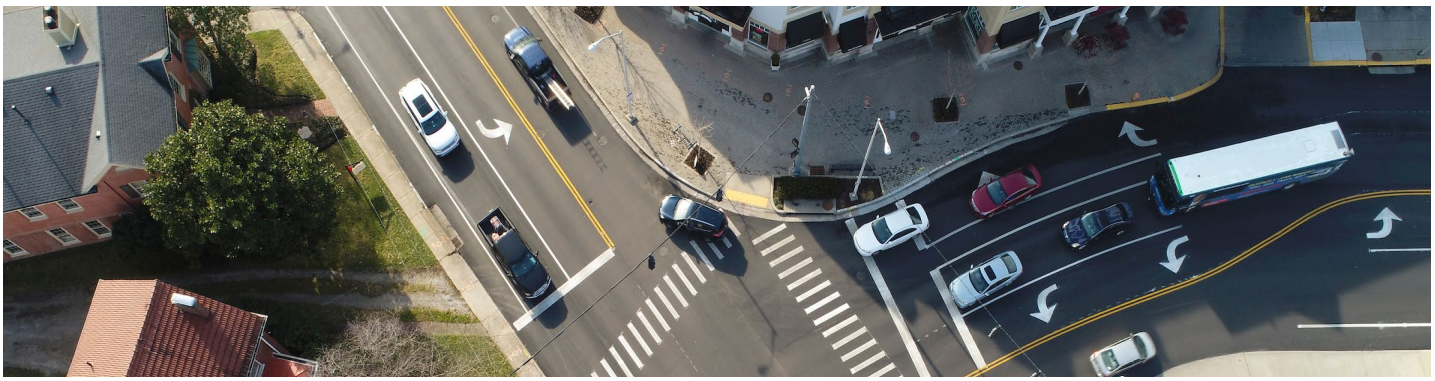
Source: National Bridge Inventory

Traveling on Our Roadways

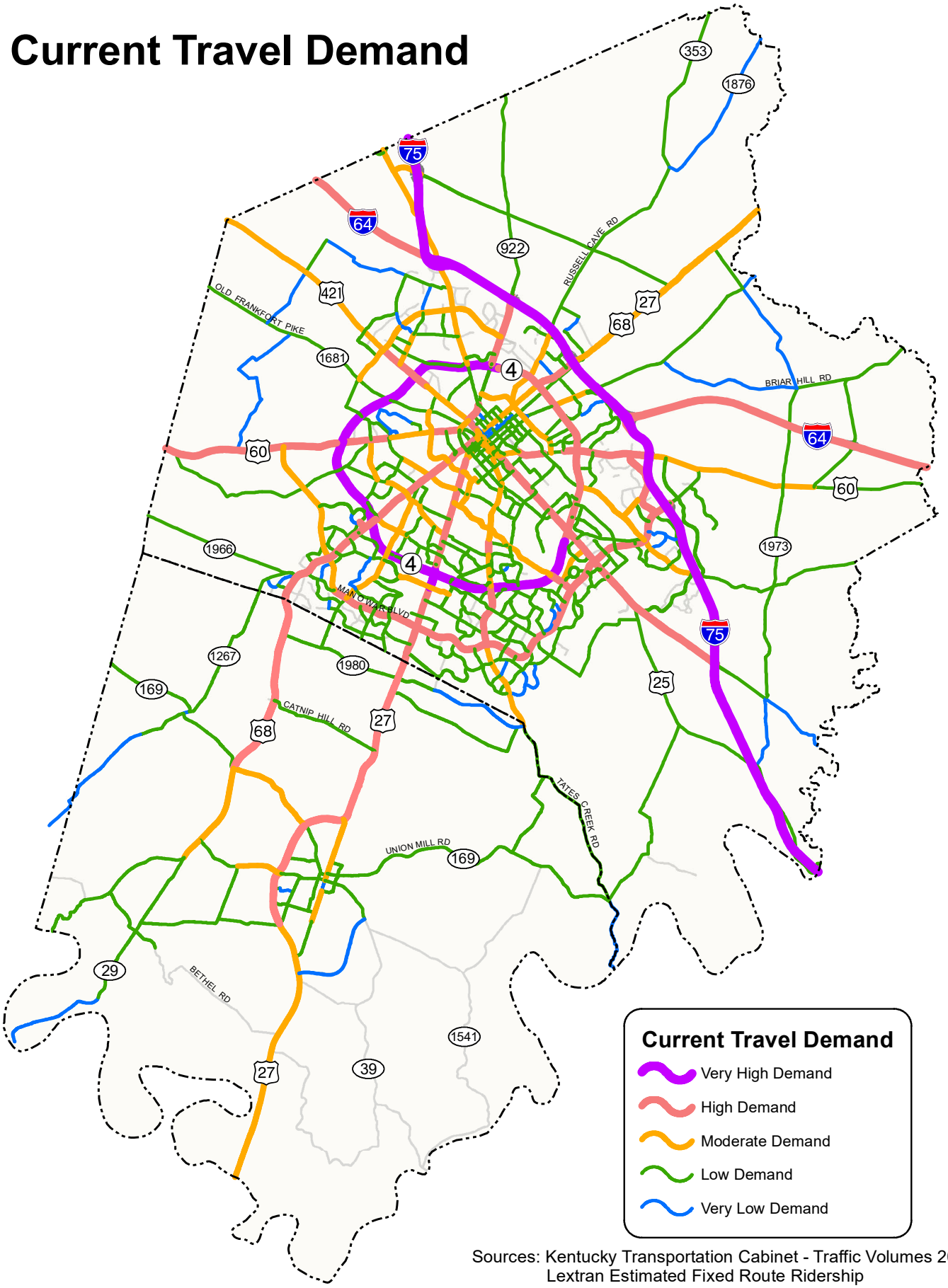
Travel Demand

Lexington's major roadway network primarily consists of freeways, arterial, and collector roads. Originally designed for horses and pedestrians, this system struggles to accommodate modern automobile traffic. Despite retrofitting, the consequences are evident: narrow streets, confusing intersections, seemingly arbitrary street name changes, and one-way pairs are common. Suburban development after 1950, as supported by earlier planning practices, further exacerbated the issue. Communities built during this time often isolated different land uses, prioritized ample parking, and necessitated driving for every trip. Additionally, these areas frequently use cul-de-sacs and lack connectivity between subdivisions, deliberately discouraging through-traffic in neighborhoods. The combination of these factors places a heavy burden on Lexington's arterial and collector network, resulting in greater traffic volume and less efficient traffic management compared to similarly-sized cities.

The following map shows the heavy reliance on automobiles for travel along the regional arterial and collector network. Currently, 90-100% of trips on these roadways are made by cars, with the majority being single-occupant vehicles. Most of this demand occurs during peak periods in the morning and evening. While peak hours are traditionally 7:00-9:00 AM and 4:00-6:00 PM, Lexington's main rush hour traffic is concentrated between 7:30-8:30 AM and 4:30-5:30 PM. These peak periods are evolving due to post-COVID-19 pandemic trends, which was discussed in the section on commuting patterns.



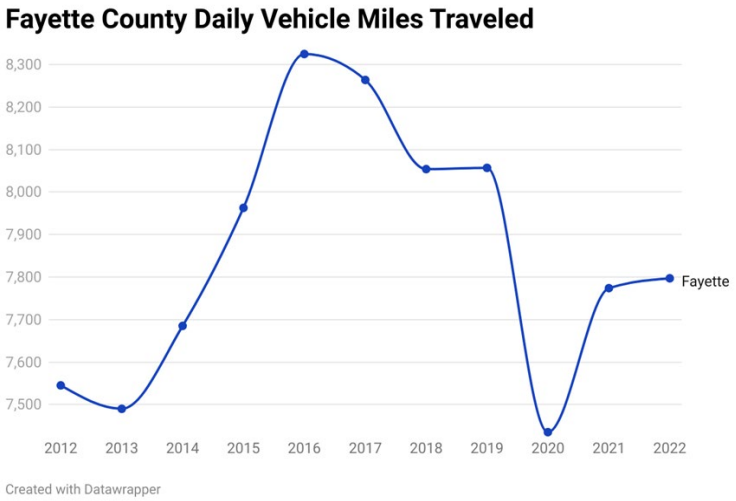
Current Travel Demand

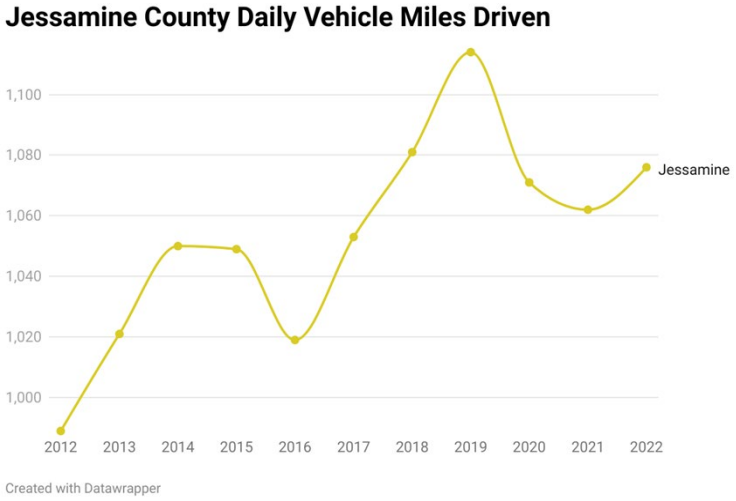


Sources: Kentucky Transportation Cabinet - Traffic Volumes 2022
Lextran Estimated Fixed Route Ridership
Estimated Bike/Ped Trips from Streetlight

Vehicle Miles of Travel

The amount of overall travel on our roadway network is estimated by the KY Transportation Cabinet. Vehicle Miles of Travel (VMT) is a measure of all vehicles that traveled on roadways within an area, multiplied by how many miles they traveled. It is an imprecise measure based primarily on traffic counts performed at the same location over time. VMT includes personal travel and travel associated with the delivery of goods and services within a region. It also includes freight and people passing through a region, including on interstates. Because of this, fluctuations in VMT often follow economic trends. VMT is helpful for monitoring and estimating air quality trends since vehicles are a primary source of air pollution, however, it is not the best estimate of overall travel demand as it does not estimate the number of trips being made by bicycling, walking or on public transit.





In the last ten years, VMT in the Lexington area has fluctuated. Generally, it was increasing to record highs in Fayette County (through 2016) and in Jessamine County (through 2019), totally nearly 9,000 miles per day. The global pandemic resulted in an approximate 10% decrease in VMT in our area, which has yet to fully rebound to pre-pandemic levels. This is likely due to people continuing to work from home. At this time we anticipate that this trend will continue, although it's impact will vary across the region and across different corridors (see page 20 regarding commuting patterns).

Addressing Impacts of Unmanaged Travel Demand

Heavy reliance on individual vehicles for transportation leads to longer trip times, traffic backups, and negative consequences for the economy and environment. Lost productivity due to delays in goods and services, wasted time for individuals, increased fuel consumption, and heightened vehicle emissions are all significant problems stemming from unmanaged travel demand. Addressing these challenges requires managing both congestion and travel demand.

Congestion management is a short-term, reactive approach, which seeks to optimize the existing transportation network by responding to existing congestion problems. It employs strategies such as adding roadway capacity, traffic signal synchronization, incident management (clearing accidents quickly) and providing real-time traffic information for drivers. Congestion management also involves managing driver expectations by convincing the public to accept a certain level of degraded performance or increased travel time during peak periods.

Travel demand management offers a more long-term, proactive approach. It focuses on strategies to reduce the number of single-occupancy vehicle trips such as promoting public transit, biking, and walking and implementing flexible work arrangements like telecommuting. Travel demand management also relies on land-use planning that encourages mixed-use development and reduces the need to travel long distances.

These strategies work best in tandem. Travel demand management reduces the overall strain on the system, while congestion management helps the remaining traffic flow smoothly. Congestion management often provides quicker results, while travel demand management addresses the root causes of congestion for a more sustainable solution. Congestion management alone can sometimes worsen traffic in the long run due to induced demand (more roads = more drivers). Combining it with travel demand management mitigates this effect.

Congestion Management Process

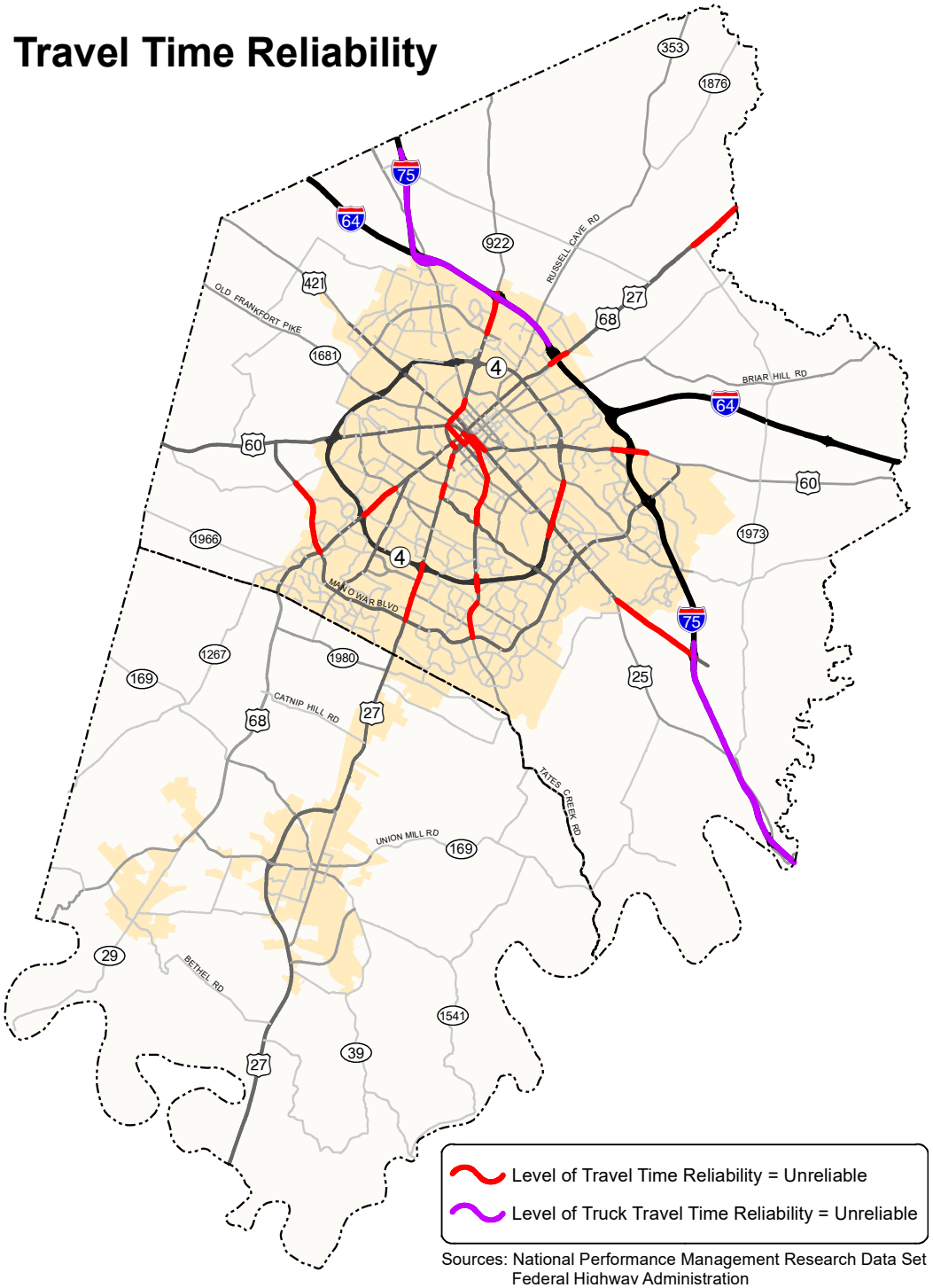
Federal law mandates that Metropolitan Planning Organizations (MPOs) implement a Congestion Management Process (CMP). This process involves monitoring congestion levels, system performance, and reliability. Using data, reports, and studies, the CMP identifies problem areas and potential solutions. It incorporates performance measures to guide improvement strategies, which can include approaches from both a congestion management and travel demand management perspective. Projects selected for the MPO's Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP) reflect the CMP's findings and prioritize solutions that address congestion.

Travel Time Reliability

Level of Travel Time Reliability (LOTTR) is one measure that is used to monitor how well our roadway network is performing. Travel time reliability indicates whether the length of time it takes to make a certain trip is relatively consistent from day to day. If it takes you approximately the same amount of time to travel a certain route, at the same time each day, the roadway segments are considered to be reliable. If your travel time is inconsistent, it is considered unreliable. Travel time reliability acknowledges that some level of congestion is expected during peak travel times, but that travelers can plan accordingly if the travel time is consistent and predictable. Reliability thus refers to the magnitude and frequency of unexpected delay.

LOTTR is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS). A roadway segment would meet travel time expectations when the calculated value of the travel time reliability is less than 1.50. The LOTTR metric then provides a percentage of the person-miles of travel operating on 'reliable' roadway links relative to the entire system. The goal is to reduce the number of routes that are classified as unreliable over time and maintain reliability for currently reliable routes.

Truck Travel Time Reliability (TTTR) is federally required to be monitored only on the Interstate System. It is a comparison of the 95th percentile travel time to average travel time. Unlike LOTTR, this metric is not a percentage, but rather a value measuring whether the entire system is operating reliably or not. A value greater than 1.5 is considered unreliable. The TTTR of the interstates within the MPO are currently 100% reliable. However, TTTR is also very sensitive to temporary conditions, such as a major construction projects, which are currently underway on segments of I-64 & I-75 in Fayette County.



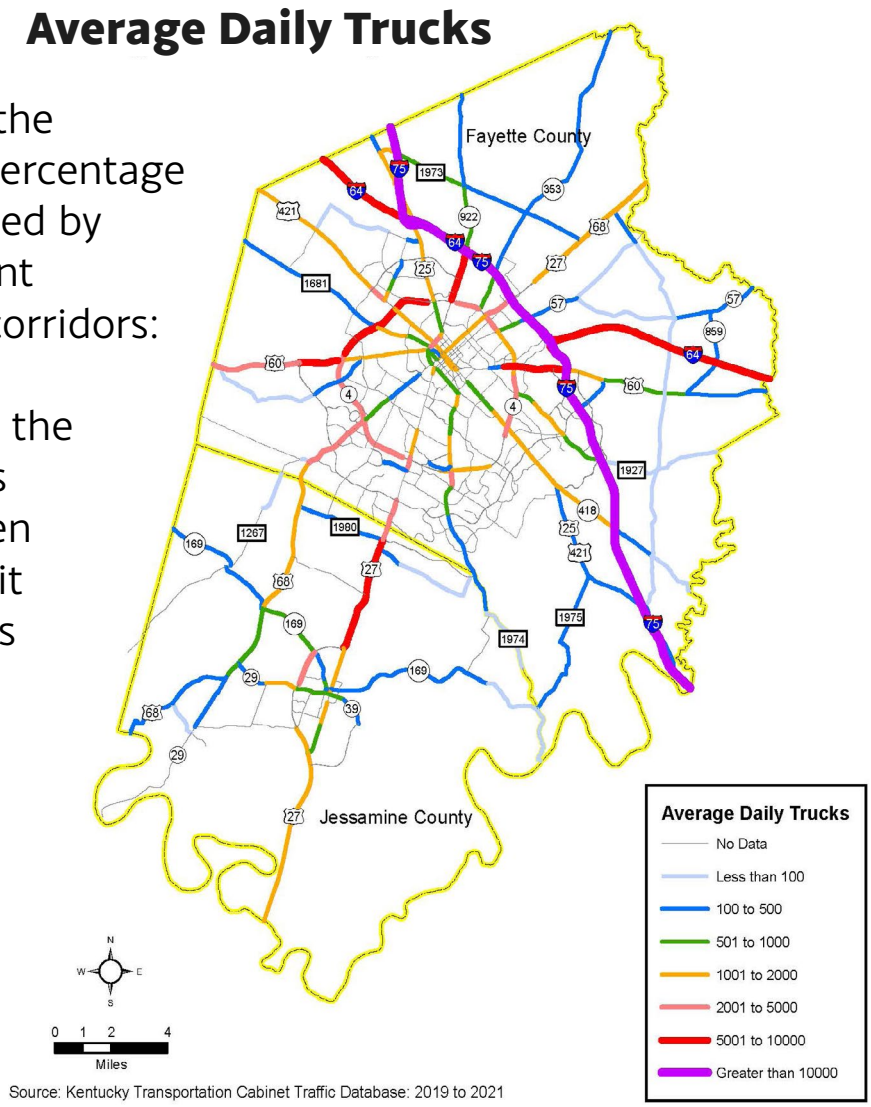
Sources: National Performance Management Research Data Set
Federal Highway Administration

Freight Network

Goods movement within and across a region is vital to local communities and economies. Many industries rely significantly on freight movement including manufacturers, distributors, retailers and agriculture. The FHWA has identified freight movements as one of the fastest growing and rapidly changing transportation issues. Public and private sectors play a role in freight movement and coordination is necessary at the regional, state and national level across many freight modes including rail, air, water and highways.

Freight by Truck

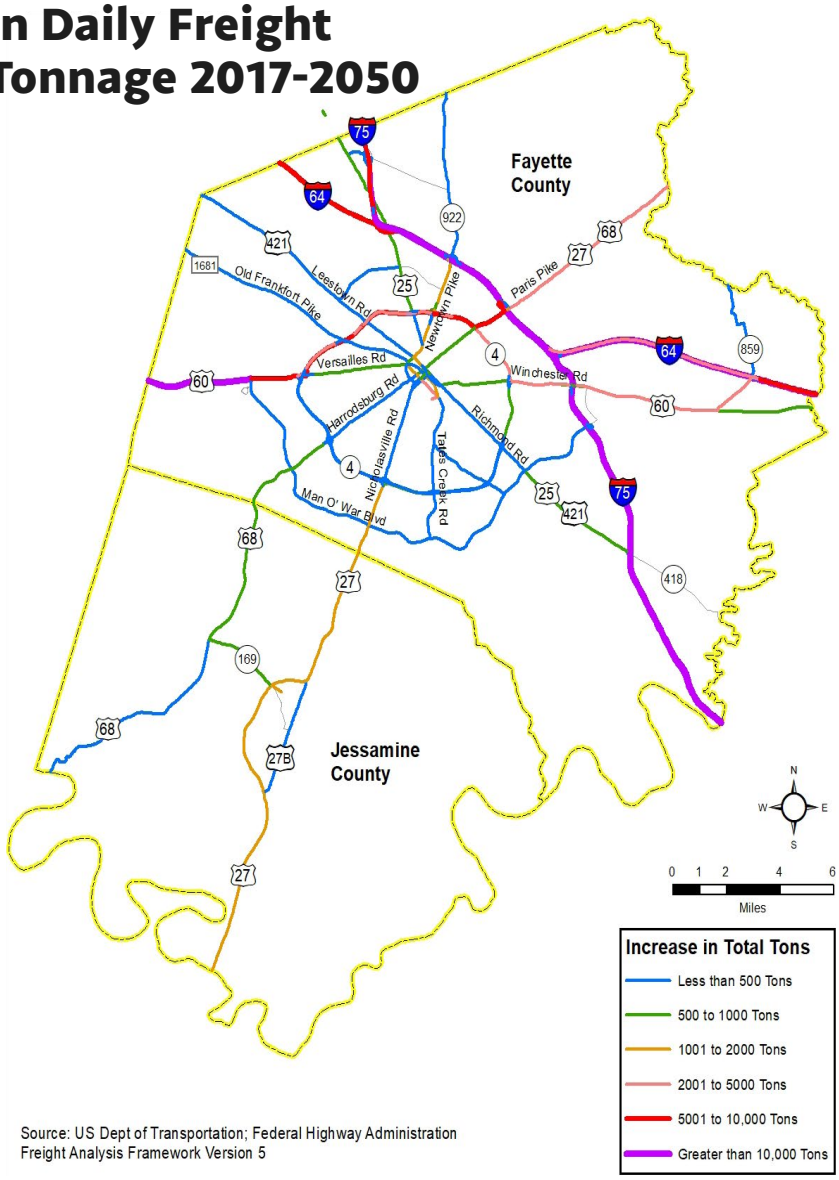
In Kentucky, and especially in the Lexington Area, a significant percentage of freight shipments are handled by truck. Lexington is an important crossroads of 3 major freight corridors: Interstates 64 and 75 and the Bluegrass Parkway. As a result, the highest regional truck volumes are found on I-64/75 in between the northern and southern split where more than 18,000 trucks travel daily. Other roadways with significant truck volumes include other parts of I-75 & I-64, Versailles Rd (US 60), northwestern portion of New Circle Rd, Nicholasville Rd (US 27) and Winchester Rd (US 60). Additionally, a large amount of freight moves from I-75 to the Bluegrass Parkway, traveling along Newtown Pike to New Circle Rd then continuing along Versailles Road. Many industries with major trucking terminals are located on



Source: Kentucky Transportation Cabinet Traffic Database: 2019 to 2021

the north side of Lexington near the northwest portion of New Circle Rd which provides quick access to both the Interstate Highways and to the Bluegrass Pkwy. In addition, the Bluegrass Pkwy connection is utilized by many trucks as a bypass around the traffic and congestion of Louisville destined for places as far away as Ohio, Michigan, Louisiana and Texas.

Forecast Increase in Daily Freight Tonnage 2017-2050



Source: US Dept of Transportation; Federal Highway Administration
Freight Analysis Framework Version 5

In Jessamine County, significant freight volumes are generally only found on US 27. The challenge for freight movement is that northbound traffic has little choice but to travel into Fayette County and navigate through Lexington traffic to access either the Interstate system or the Bluegrass Pkwy. While access to the Bluegrass Pkwy can be made using KY 169 (Keene Rd), this road is narrow with no shoulders and is less than ideal for heavy freight operations. Currently there is no connection to the east out of Jessamine County due to no crossings of the Kentucky River. As a result, there is only one major freight operator in Jessamine County, McLane Trucking located on US 27 just north of the Nicholasville bypass.

In 2022, the MPO conducted an analysis of the current and future expected truck volumes, freight tonnage and freight value for various commodities moving through our region. The analysis was based on FHWA's Freight Analysis Framework (FAF 5) which integrates data from many sources,

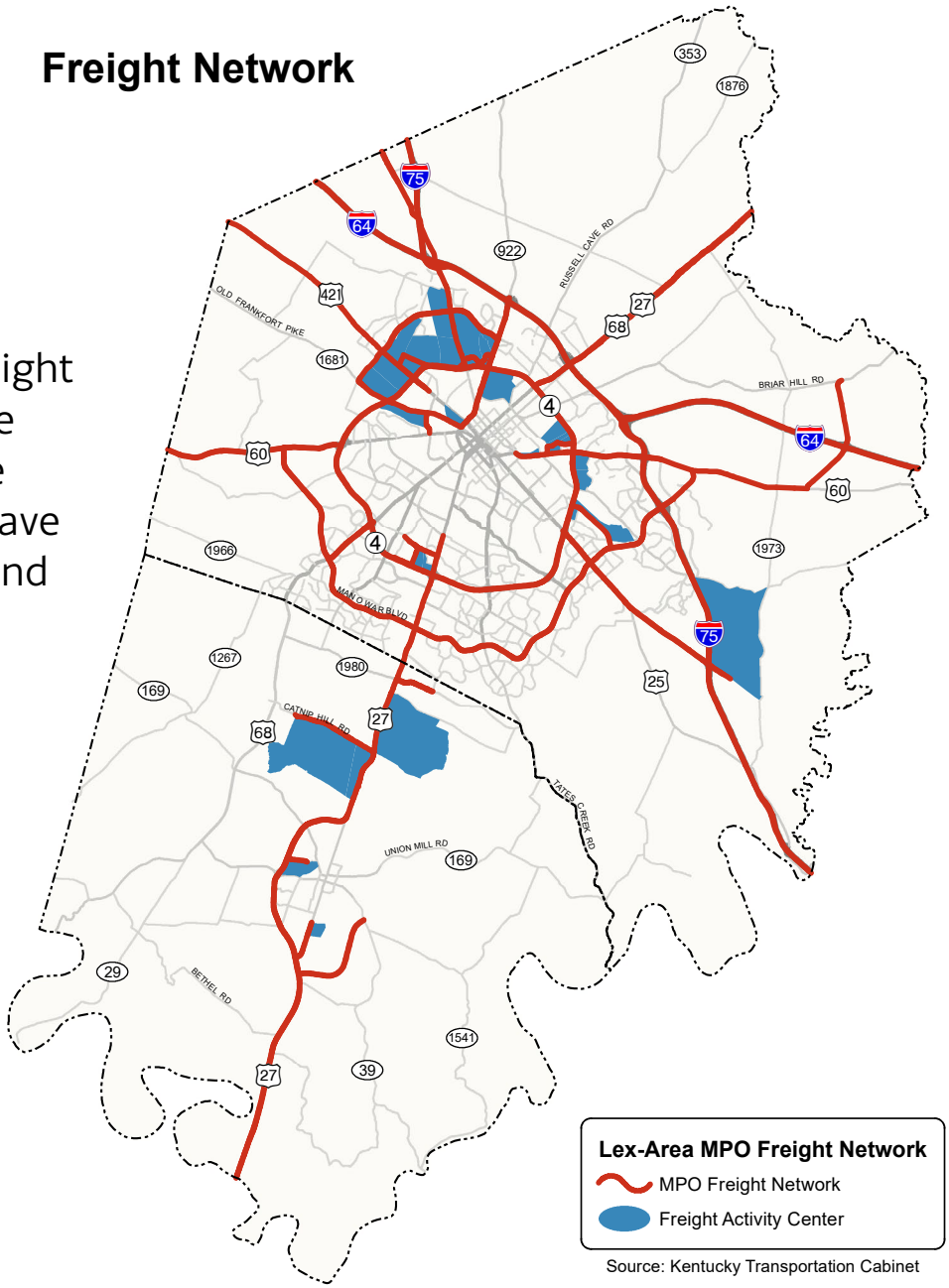
including the Commodity Flow Survey (CFS). Per the FAF5 model, there were approximately 1.34 million tons of commodities with a total value of $2.87 trillion moving through and within the LAMPO freight network as of 2017. According to the Bureau of Transportation Statistics freight tonnage nationally is expected to increase 50% more than the rate of population through 2050.

Regionally the most significant freight corridors are forecasted to experience an increase in freight tonnage between 70% and 90% through 2050. This includes both Interstates 64 and 75 as well as the roadways connecting the Bluegrass Parkway to the Interstate System: Versailles Rd, NW New Circle Rd and Newtown Pike.

Freight Network

The Lexington Regional freight network is created with the 2050 MTP to identify those highway corridors which have significant truck volumes and provide access to areas of significant freight activity. Areas of significant freight activity are generally those with manufacturing or service commercial type land use zoning or activity.
The definition of the network is composed of 2 tiers as described below:

Freight Network



Source: Kentucky Transportation Cabinet

Tier 1: *All roads on the National Highway Freight Network or Kentucky Highway Freight Network.*

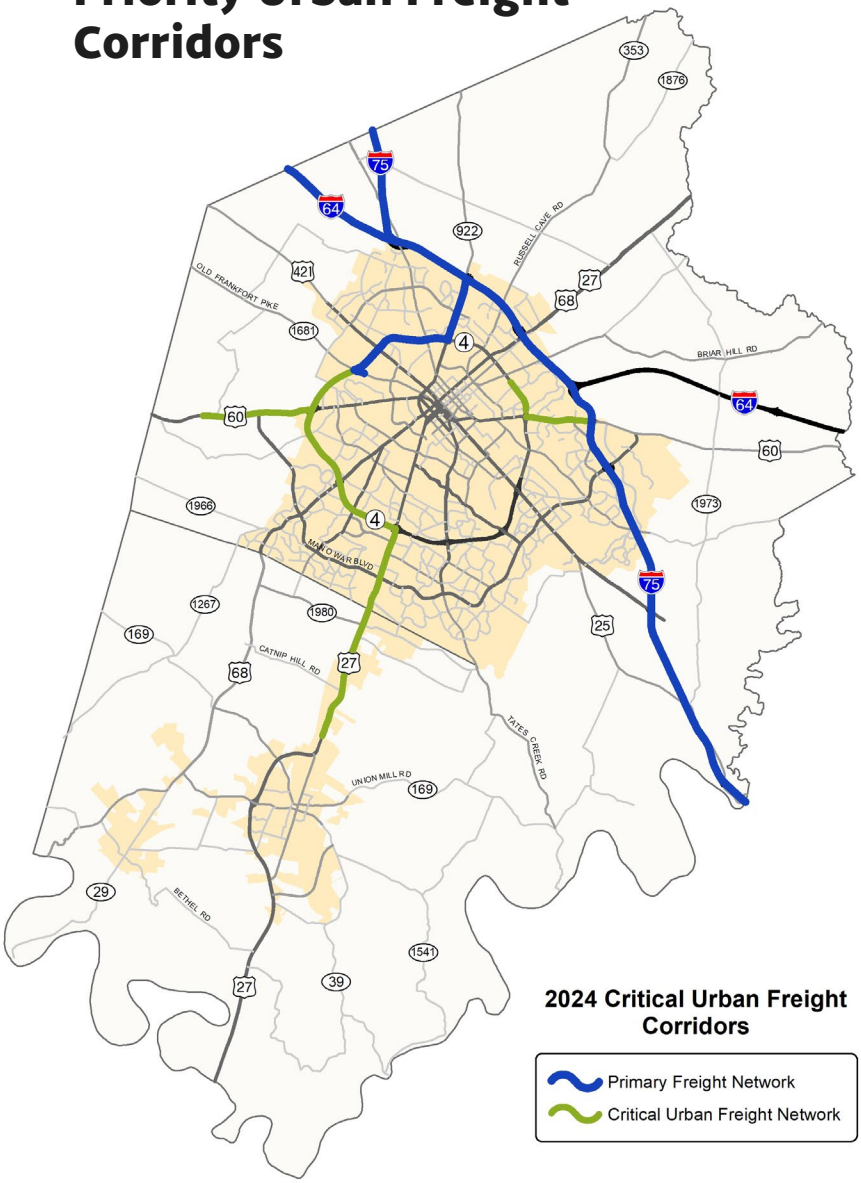
Tier 2: *Arterial or Major Collector roadways that provide either direct access to a freight activity center or are necessary to provide network connectivity.*

Roadways included within the freight network will be more closely evaluated for pavement and bridge condition, roadway design to ensure accommodation of heavy trucks and for purposes of identifying freight priority projects within our region.

Critical Urban Freight Corridors

KYTC has also designated 18.5 miles of Critical Urban Freight Corridors (CUFC) within Fayette and Jessamine counties. These corridors are eligible for freight-specific funding that is made available to help achieve national goals to support freight movement and economic vitality at the regional, state and national level. CUFC corridors are intended to be the most important portions of the Lexington Freight Network which would benefit from additional federal investment to ensure a state of good repair and adequate roadway capacity.

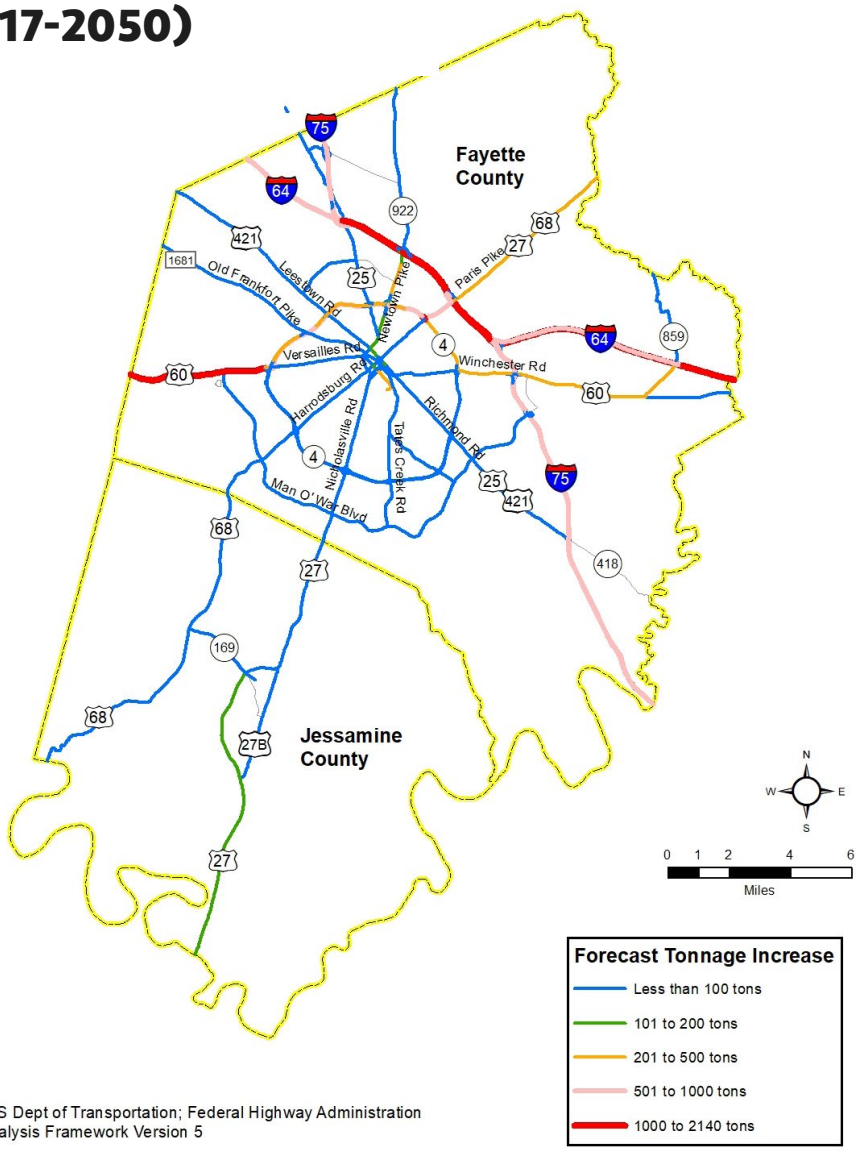
Priority Urban Freight Corridors



Chemical Freight/ Hazardous Materials

The freight analysis framework has as one of the 12 commodity classes the category of 'Chemicals'. For planning purposes, this provides an approximation of desire lines for current and future flows of potentially hazardous materials within the region. Important note that not all chemicals are considered or defined as hazardous, thus the actual flow of potentially hazardous materials will be less.

Forecast Increase in Chemical Freight Tonnage (2017-2050)



Source: US Dept of Transportation; Federal Highway Administration Freight Analysis Framework Version 5

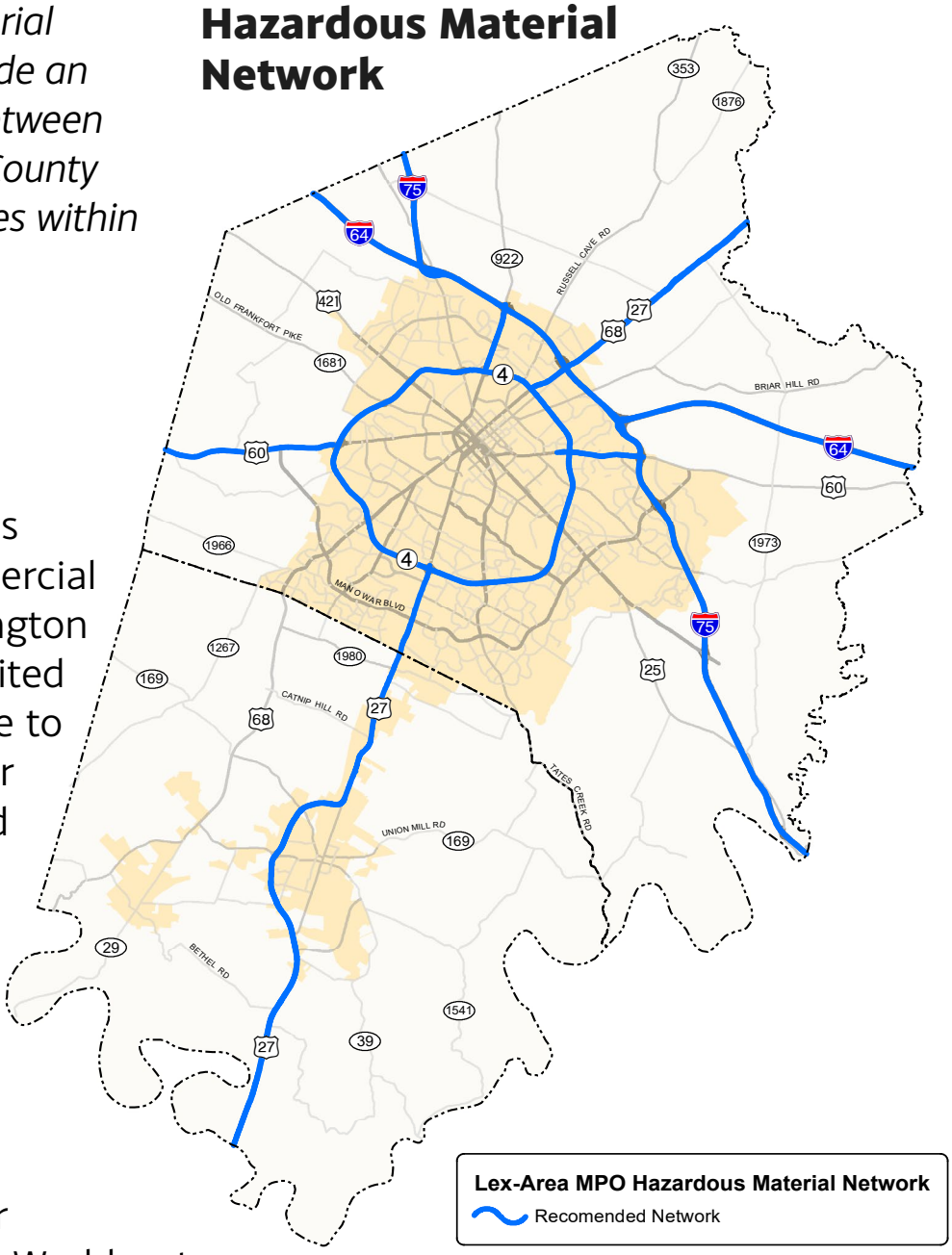
While the flow of most freight is regulated by the federal government and is beyond the purview of the state or local governments, the through movement of hazardous cargo, on the other hand, can be restricted by the state to certain corridors within a metropolitan area. As a result, the MPO has established a recommended Hazardous Material Network which through-movements of hazardous cargo are intended to utilize. While other corridors are still available for use to pick-up or deliver such cargoes, through movements are to utilize the HazMat network. The HazMat network is composed of:

Either freeway or principal arterial roadways that also have an estimated 1,000 tons of chemical freight per day or greater

Freeway or principal arterial roadways that also provide an important connection between Lexington or Jessamine County and other significant cities within Kentucky.

Freight by Air

There is no longer any significant air cargo operations at Blue Grass Airport, the only commercial airport within the Lexington Region. Air cargo is limited in Lexington mostly due to the fact that 2 major air freight hubs are located within a 90 minute drive of the region. Louisville Muhammad Ali International Airport is home to the United Parcel Service Worldport which is the world's largest air freight facility. The UPS Worldport is approximately 60 minutes west of Lexington via Interstate 64. The Greater Cincinnati / Northern Kentucky International Airport is home to their 'Cargo Village' which handles air freight for both DHL and Amazon Prime Air and some limited operations by FedEx. CVG air freight is the 6th largest air freight airport in the world and is approximately 90 minutes north of Lexington via Interstate 75. As a result nearly all air cargo is shipped into Lexington by truck from one of these facilities. In additional US Mail services for the Lexington Region are now processed in Louisville, thus there are no longer any air mail operations at Blue Grass Airport.



Freight by Rail

The Lexington Region is served by two Class-I rail freight operators, CSX Transportation and Norfolk Southern Corporation and one Class-III rail operator, the RJ Corman Railroad Group. Norfolk Southern operates on a north-south line that runs from Cincinnati, through Lexington and Jessamine County and connects with a NS rail hub in Chattanooga, TN. The NS operations are the most significant within the Lexington Region with approximately 35 daily freight trains. Of these trains, 31 of the 35 or 89% are through trains not directly servicing industries within the Lexington Region.

RJ Corman operates along the former L&N line which runs east-west across Fayette County connecting to Louisville on the west and Winchester on the east. Unlike NS, RJ Corman provides most of the direct service for industries within Fayette County. The RJ Corman tracks generally average between 4 and 6 trains daily within Fayette County. CSX also has maintained trackage rights along the RJ Corman line and thus also provides service to Fayette County. The CSX main line, however, runs through Winchester approximately 15 miles to the east of Lexington and does not run through any portion of Fayette or Jessamine Counties. Thus the CSX service utilizes the RJ Corman line to connect regional industries to the CSX main line.

Freight by Water

There are no major navigable waterways in the Lexington Area that serve as freight corridors, nor are there any water ports in the Lexington Area. The closest water freight facilities to Lexington are located along the Ohio River in either Louisville or Covington / Newport as part of the Greater Cincinnati Area. Similar to air freight, water freight destined to the Lexington Region is offloaded in one of the aforementioned ports and then shipped by either truck or rail.

Freight by Pipeline

While Kentucky has over 41,000 miles of pipelines crisscrossing the Commonwealth, most of that network bypasses the Lexington Region.

Lexington instead has approximately 70 miles of transmission pipelines that primarily deliver natural gas and a handful of hazardous liquids for various industries to the region.

Transportation Systems Management Operations

Mobility and Transportation System Management & Operations (TSMO) initiatives are strategies aimed at getting the most efficiency out of our transportation system, particularly during peak periods. Managing mobility involves efforts to relieve congestion by reducing the number of and length of single-occupant automobile trips. TSMO involves using technology to improve and maximize the efficiency and safety of the transportation system.

The primary advantage of TSMO strategies are that for a relatively low cost, they can help arterial and freeway facilities operate at their most efficient. As a result TSMO strategies can allow for the accommodation of future increases in traffic volumes but also either postpone or replace the need for much more costly capacity expansion projects.

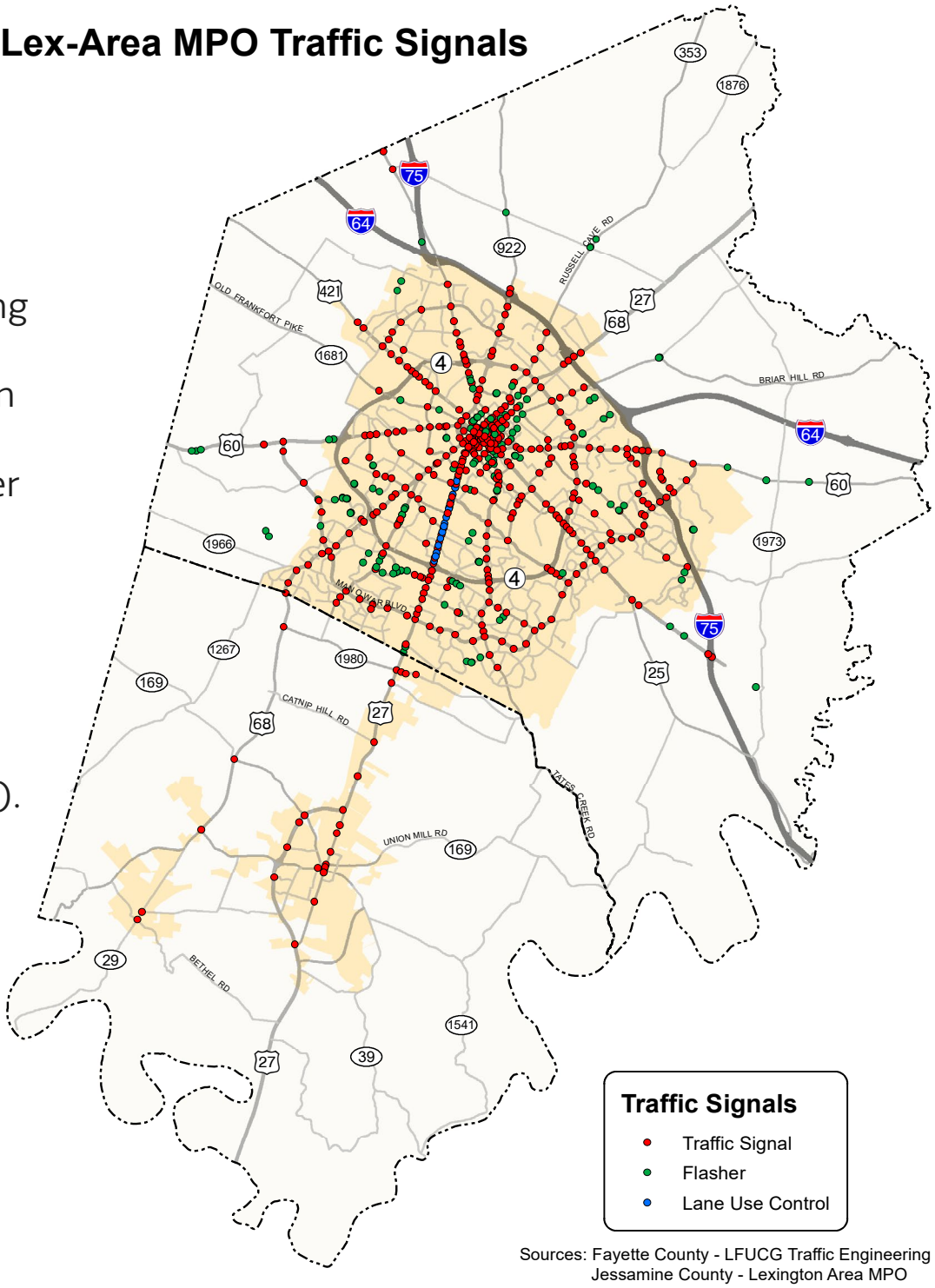
Traffic Signal Operations

Traffic operations on the arterial network within the Lexington Region are primarily controlled through traffic signals at major intersections. Within the region there are 342 and 30 traffic signals within Fayette and Jessamine Counties respectively. Currently there are only 4 intersection types that would be considered innovative on the arterial network which would either be used to reduce severe crashes, improve traffic flow or both. One additional innovate interchange began construction early in 2024. Those locations and their design are indicated below:

- *Old Frankfort Pike (KY 1681) at Alexandria Drive - Roundabout*
- *Harrodsburg Rd (US 68) at New Circle Rd (KY 4) - Diverging Diamond*
- *Alumni Dr at University Dr - Roundabout*
- *Alumni Dr at College Way - Roundabout*
- *Leestown Rd (US 421) at New Circle Rd (KY 4) - Diverging Diamond (under construction)*

Due to the volume of traffic and an arterial roadway network configuration originating in 1775, signals in Fayette County are often set to a maximum cycle length as well as a split phasing for direction of travel during the AM & PM peaks to maximize the number of vehicles moving through an intersections during a given cycle. There are also a very significant number of signals partly due to an overall lack of connectivity between subdivisions, retail developments, offset intersections along arterials and a large number of cul-de-sac type developments. This results in a very complex signal timing system managed by the LFUCG Traffic Engineering Division. While this signal pattern allows for the maximum number of vehicles to travel through an intersection, this also creates a potentially very long wait time (2 to 3 minutes plus).

Lex-Area MPO Traffic Signals



Sources: Fayette County - LFUCG Traffic Engineering
Jessamine County - Lexington Area MPO

Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) include electronics, communications, or information processing used singly or in combination to improve the efficiency and safety of transportation systems. ITS technologies enhance transportation system operations, especially during peak travel periods. ITS elements, which fall under the broad category of TSMO strategies, can include:

- *Vehicle detection devices that report traffic counts, speed and travel time*
- *Video surveillance equipment that monitors roadways for congestion and incidents*
- *Roadway sensors that monitor weather and road conditions*
- *Communication services and facilities that transmit information*
- *Traffic control centers that serve as central location for traffic management, communication, and collection and coordination of information*
- *Variable message signs that display traffic information to motorists*
- *Roadway service patrols that respond to incidents in a timely manner.*

Lexington Area ITS Architecture

ITS programs work most effectively when integrated into an interconnected network or architecture. ITS Architecture is "A regional framework for ensuring institutional agreement and technical integration for implementation of ITS projects." ITS Architecture creates a common framework of interoperability at the national, regional or local level and helps ensure that ITS deployments:

- *can be planned in a logical manner*
- *integrate successfully with other systems*
- *meet the desired performance levels*

- *has the desired behavior*
- *is easy to manage*
- *is easy to maintain*
- *is easy to extend*
- *satisfies the expectations of the users*

In 2015, the ITS Architecture was developed for the Lexington MPO area to provide a roadmap for the deployment and integration of transportation systems in the region over a 10 year period (2015-2025). The architecture was developed through a cooperative effort by the transportation, transit, law enforcement, emergency management, commercial vehicle and freight management agencies. It represents a shared vision of how each agency's systems work together by sharing information and resources to enhance transportation safety, efficiency, capacity, mobility, reliability, and security. More information can be found on the MPO website.

Lexington's Traffic Management Center

Lexington's Traffic Management Center (TMC) is the nerve center for helping the public have a safe and efficient journey to and from their homes and other destinations. The TMC allows traffic conditions to be monitored and for engineers to identify problem areas and to make signal adjustments in real-time. LFUCG operates four traffic services providing real time information to travelers:

Traffic Ticker, an up-to-the-minute reporter of traffic tie-ups
Live Traffic Cameras, which enables citizens to view high definition traffic cameras located around the city
Valley View Ferry operating status
Up to date roadway construction information

These services are available at LFUCG Traffic Engineering's website.

Real-Time Public Transit Information and Automatic Fare Collection

Lextran uses technology that monitors buses in use with global positioning satellites (GPS). The technology allows Lextran to monitor performance and offer real-time information to passengers on the timing of bus service. Automatic fare collection and accounting systems have also been implemented to save time and money for both Lextran and their passengers.

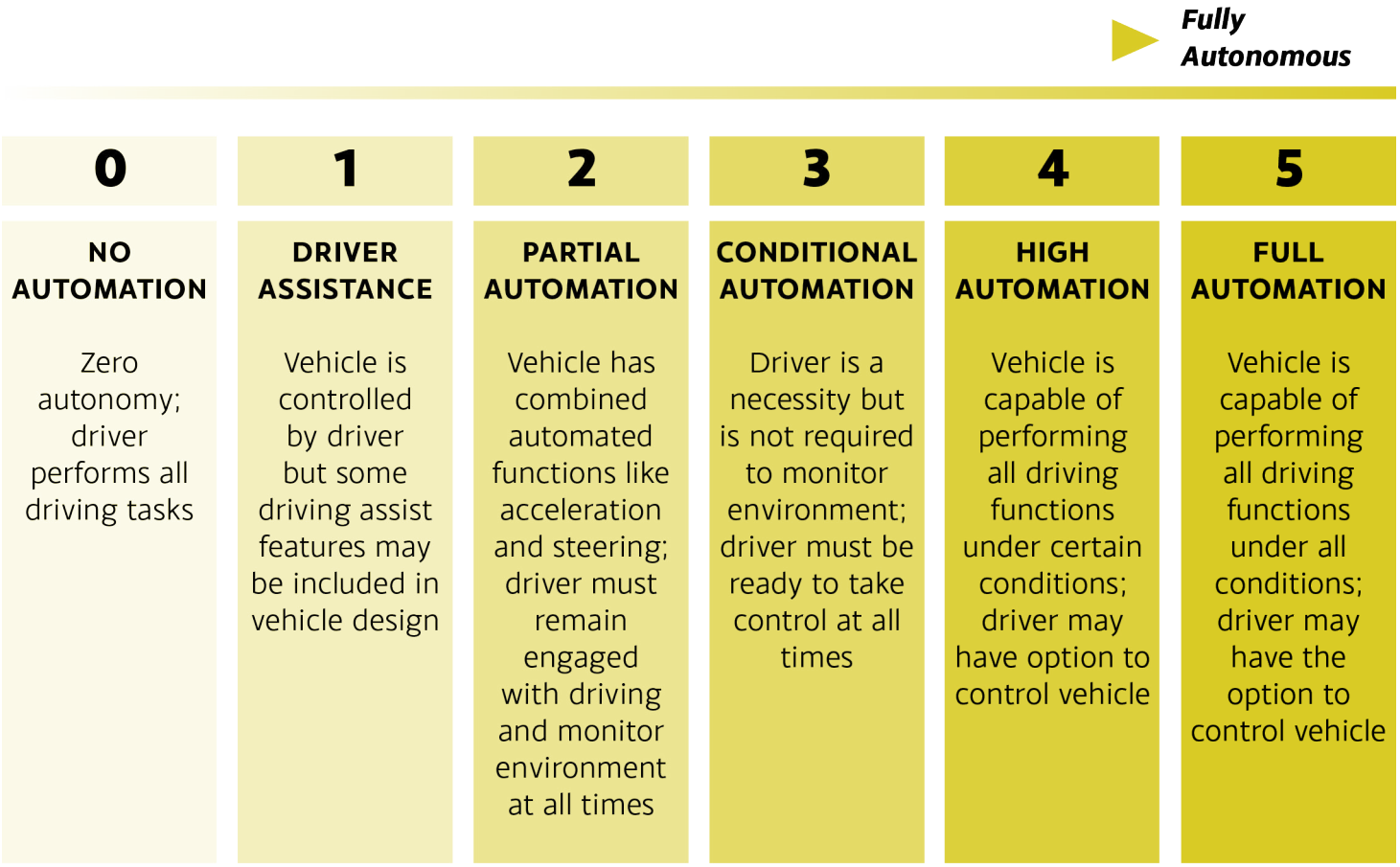
Connected and Autonomous Vehicles

In regards to how we connect point A to point B, nothing stands to alter the landscape more than the prospect of vehicles that drive themselves. The potential from this technology includes a large range of benefits which, if implemented well, could address or improve on many of the more vexing challenges we currently face with existing transportation options. Some of these challenges with which connected and automated vehicles (CAV) technology can assist are:

- *Reducing an unacceptably high number of fatalities or serious injuries*
- *Making transportation more affordable for those on limited incomes*
- *Reducing the cost and improving the reliability of freight deliveries*
- *Providing better mobility options for the very young or elderly or those with some type of physical impairment who cannot operate a motor vehicle*
- *Allow individuals to make more productive use of travel time instead of actively operating a motor vehicle*
- *Reduce the need for massive parking lots or structures making more efficient use of urban land uses*
- *Reduce the negative environmental impacts associated with internal combustion engines by more widespread deployment of electric propulsion systems*

With that said, how and when CAV technology is deployed is still very much an unknown. As of publication of the MTP, widespread implementation of vehicle automation has only been applied to certain functions of vehicle operation. These functions include features such as parallel parking, adaptive cruise control or lane departure assistance. More advanced functions, such as hands free controls have had limited deployment but still require significant monitoring by the human operator who needs to be able to take control of

the vehicle very quickly during complex situations for which the computer cannot adequate assess. The figure below identifies the various levels of vehicle automation and the level of human input required for each level. The most 'automated' vehicle currently available for retail sale, the Tesla Model 'S', generally falls between automation level 2 or 3, depending upon who's definition is used. Fully automated vehicles, or level 5, are currently only in prototype development.



Vehicle Electrification & Clean Fuels

EVs

All-electric vehicles or EVs, also referred to as battery electric vehicles (BEVs), have an electric motor instead of an internal combustion engine operating on some form of fossil fuel. Unlike internal combustion engines, EVs produce no emissions while being driven, thus EV adoption helps reduce nonpoint source air pollution from ozone and particulate matter as well as carbon emissions which have been linked to global climate change. (See

section on Environment.) As the EPA has adopted new lower standards for particulate matter and the USDOT is requiring MPOs to adopt declining greenhouse gas emission targets, increased adoption of EVs can be part of the mix of strategies helping the Lexington Region meet these new federal requirements.

While EVs typically produce lower tailpipe emissions compared to conventional vehicles, their emissions, however, are still associated with the electricity generation needed to power the vehicles from the grid. Accounting for the fuel generation emissions, as well as driving emissions, is known as well-to-wheels and can give a better holistic assessment of true vehicle type emissions comparisons. When measuring well-to-wheel emissions for EVs, the electricity source producing the electricity is important such as whether that source is natural gas, wind, solar or coal. According to the US Energy Information Administration in 2021, approximately 92% of electric generation in Kentucky is from fossil fuels and most of that from coal. The result is that even though EV usage still results in an overall decrease in nonpoint source air pollutants and carbon emissions, the net reduction is reduced by about one-half due to the fuel sources used in Kentucky to charge EVs. The impact on the local air quality, however, may be more or less significant due to where the electricity is produced.

Another important distinction with EVs is that compared to internal combustion engines EVs require a significantly longer period to recharge compared to combustion engine refueling. That recharging time varies based on how depleted the battery is, how much energy it can hold, the type of battery, and the type of charging equipment (charging level and power output). There are three main categories of EV charging infrastructure that vary in power needs,

EV Charging Stations

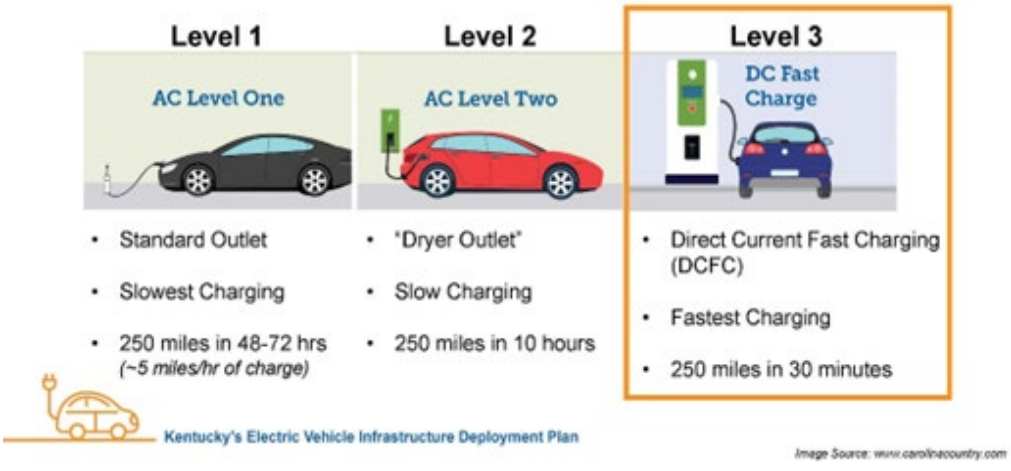


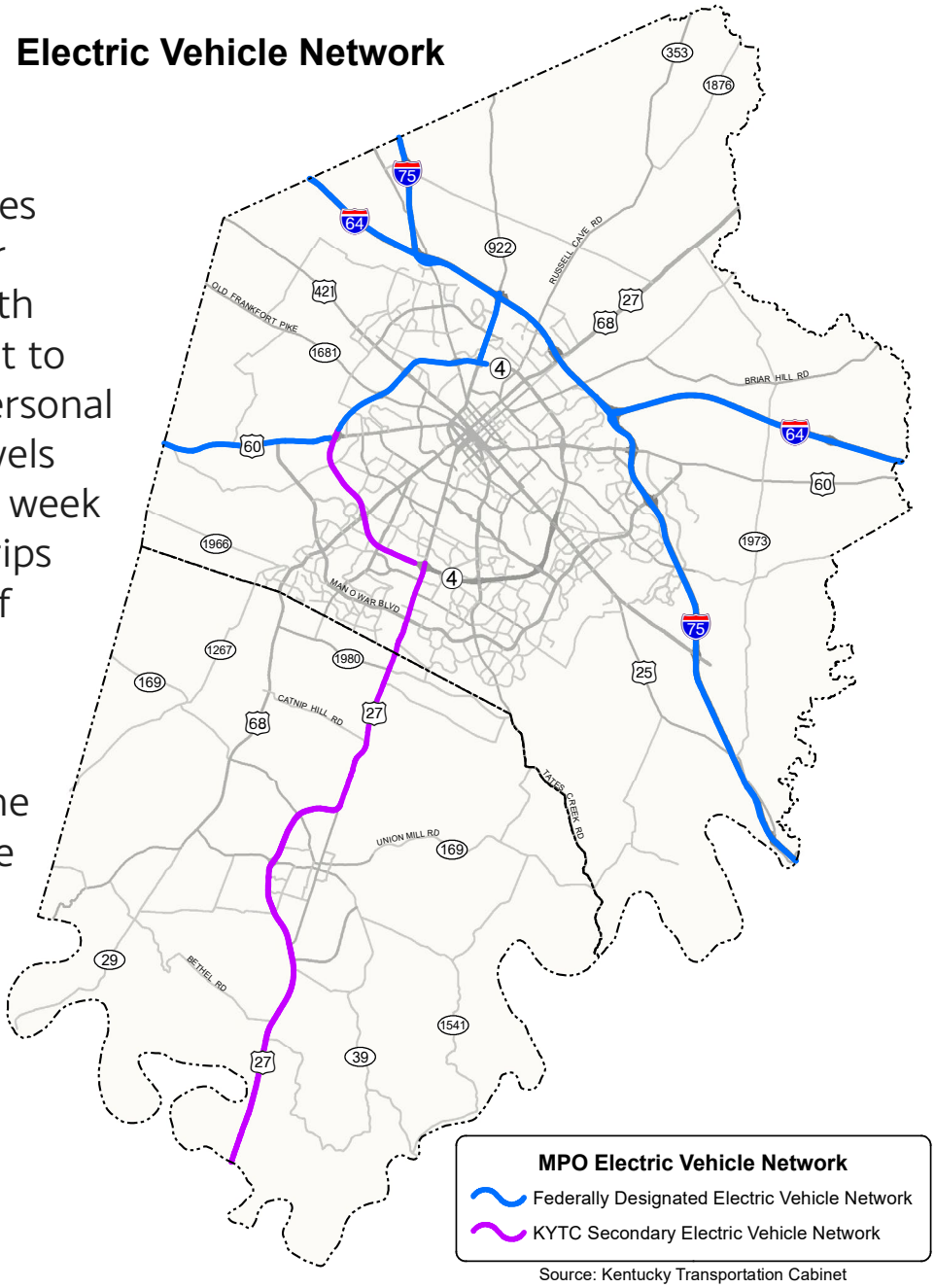
Image Source: www.carolinacountry.com

charging speed, and installation and equipment costs.

Due to the potentially significant recharging time, it is anticipated that most EV recharging would not follow the 'gas station' concept but would instead occur either at a place of residence or place of employment, both places being where the vehicle may sit idle for several hours. Rapid or level 3 recharging, however, can provide a significant charge in as little as 15 to 20 minutes and is considered important in order to address the issue regarding battery range for long distance travel (trips greater than 150 miles). Battery range can vary between 150 to 400 miles depending upon the make of the vehicle, meteorological conditions (such as hot, cold, snowy) and how the vehicle is driven. Due to market constraints, there are currently no publicly available rapid recharging facilities within either Fayette or Jessamine Counties. With that said, it is important to note that the typical personal vehicle in Kentucky travels less than 200 miles per week on average and most trips occur within 25 miles of an individual's place of residence.

To address this issue, the National Electric Vehicle Infrastructure program (NEVI) was established to fund rapid recharging stations every 50 miles along designated corridors. Within the Lexington

Electric Vehicle Network



Source: Kentucky Transportation Cabinet

region, designated NEVI corridors are Interstates 64 and 75 and the connection between the Interstates and the Bluegrass Pkwy (Versailles Rd, NW New Circle Rd and Newtown Pike). KYTC has recently awarded funding under the program and one of the first recipients will be a location along Versailles Rd in Woodford County near the terminus of the Bluegrass Pkwy. A second round of funding is anticipated within the next year to complete the 50 mile requirement for NEVI corridors. Once all NEVI corridors have satisfied the base federal requirements, facilities along other corridors or additional facilities along the NEVI corridors may be considered. KYTC has identified US 27 through Jessamine County as a secondary corridor for rapid recharging facilities.

Clean Fuels

While EVs can provide significant emission reductions, they are unfortunately not a cost feasible option for heavy trucks or construction equipment due to the battery size and weight requirements and resulting battery range for such vehicles. With that said, clean hydrogen is another potential answer to providing a zero emission option for such vehicles. Clean hydrogen is produced through emission free methods such as wind, solar or hydroelectric. Currently market forces at play make it challenging for 'clean' hydrogen to compete with other sources of fuel. The federal government, however, is investing a significant level of funding to make hydrogen technology viable and to establish a national market. It is anticipated that such a market may take years or decades to become viable in Kentucky, but the KY Energy and Environment Cabinet is beginning to explore the possibilities of hydrogen power at least within the 3 largest metro areas: Lexington, Louisville and Northern KY / Cincinnati.

Bicycle and Pedestrian Network

Bicycle and pedestrian projects and programs improve the livability and sustainability of our local area. Biking and walking facilities also ensure a more equitable transportation system. Emphasizing safety, convenience, and reliability in all modes better serves the roughly one-third of our community who do not drive.

The MPO's recent bicycle and pedestrian planning efforts include award-winning corridor studies, Imagine Nicholasville Road and Imagine New Circle Road. The MPO continues to implement the Regional Bicycle and Pedestrian Master Plan, which includes projects like the Jessamine County School Connector Study, East Lexington Trail Study, and Campus to Commons Trail Study.

Bicycle Facilities

MPO projects use a Safe Systems approach that incorporates "8 to 80" design principles. This kind of design accommodates varying ages and skill levels. Roadway speed and volume determine the appropriate bicycle facility design for a given location. Other context considerations include the amount of driveway access, street direction (one-way/two-way), and nearby land use.

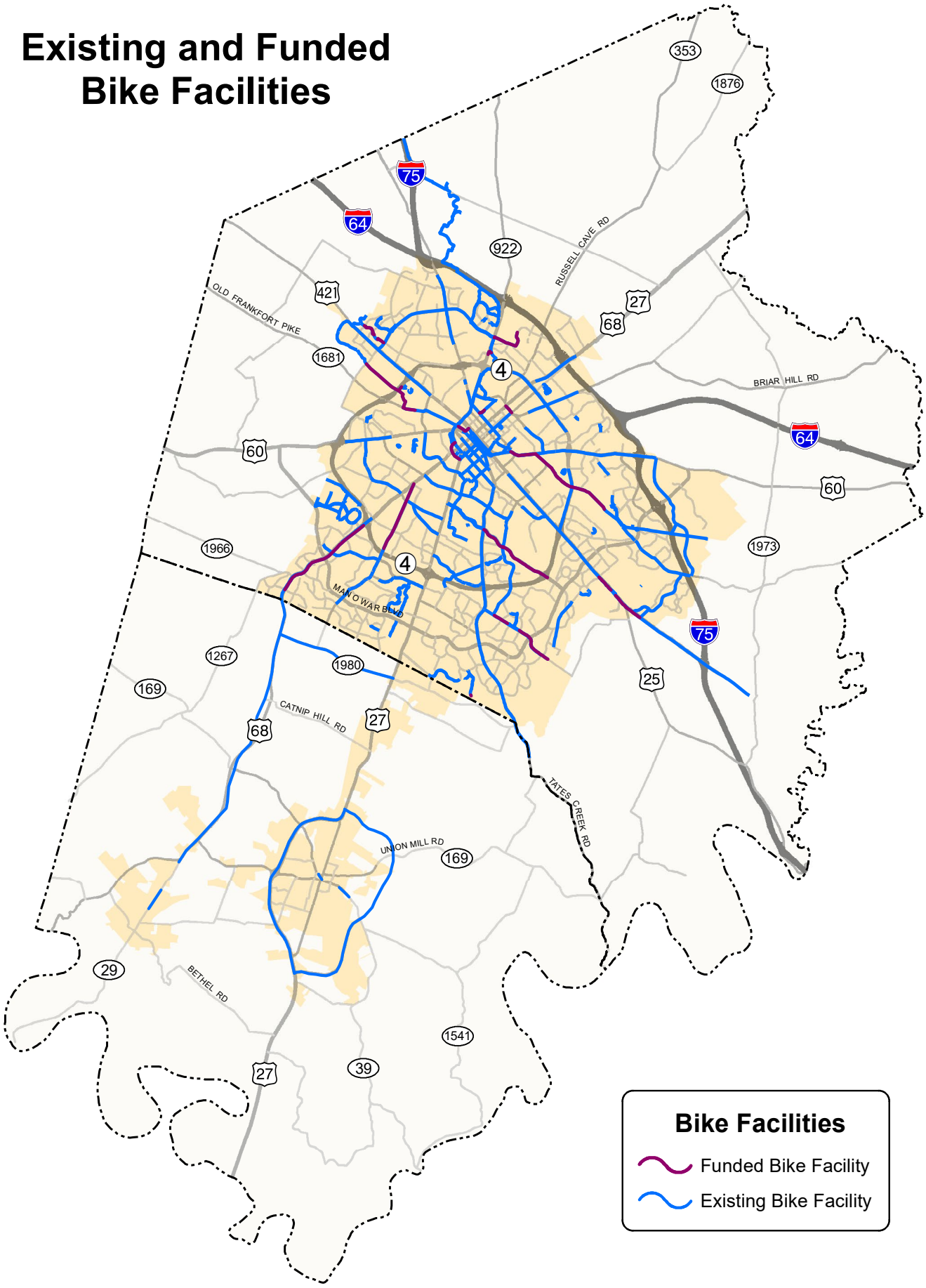
Separated bicycle facilities are shared-use paths and buffered bike lanes. Speed and volume of traffic determine level of separation. Example barriers include paint, plastic delineator posts, grade seperation or curbs. Barriers offer a lower stress environment. Separated facilities appeal to a wider range of ages and abilities. They are proven to encourage new ridership.

On-road bicycle facilities include bike lanes, bicycle boulevards, and wide road shoulder. These are marked on the roadway with striping, signage, and traffic calming features. Bike lanes and road shoulders help separate bicycles and motor vehicles. They also encourage predictable behavior and interactions between people biking and driving.

Shared roadways ("bicycle friendly streets") are quieter low-speed streets. They do not need specific treatments to accommodate bicycle traffic safely. However, signage and traffic-calming features can be added to encourage slow speeds and draw attention to people on bikes.

The MPO area continues to implement on-road bicycle facilities as a part of routine maintenance and paving projects. The MPO also regularly evaluates existing facilities for needed improvements.

Existing and Funded Bike Facilities



Over the last twenty years the local bike network has grown from 10 miles to more than 290 miles.

Pedestrian Facilities

This network includes:
65 miles separated bicycle facilities
94 miles marked on-road bicycle facilities
120 miles bicycle friendly streets

Walkability is more than sidewalks. It is also about how easy and comfortable it is to cross streets and intersections. During maintenance or in new projects, the MPO has worked to improve pedestrian crossings in a number of ways:

adding high-visibility markings at crosswalks

placing crossings more frequently

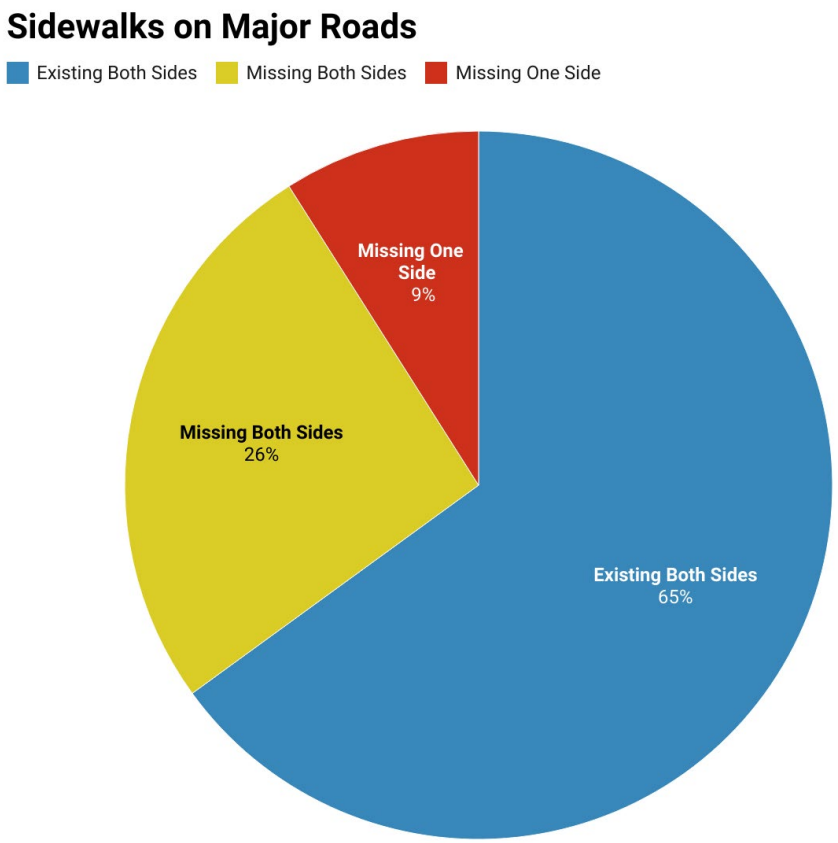
ensuring ADA-compliant signals and curb ramps

installing lead pedestrian interval signal timing (LPIs)

including countdown signals and audible signals

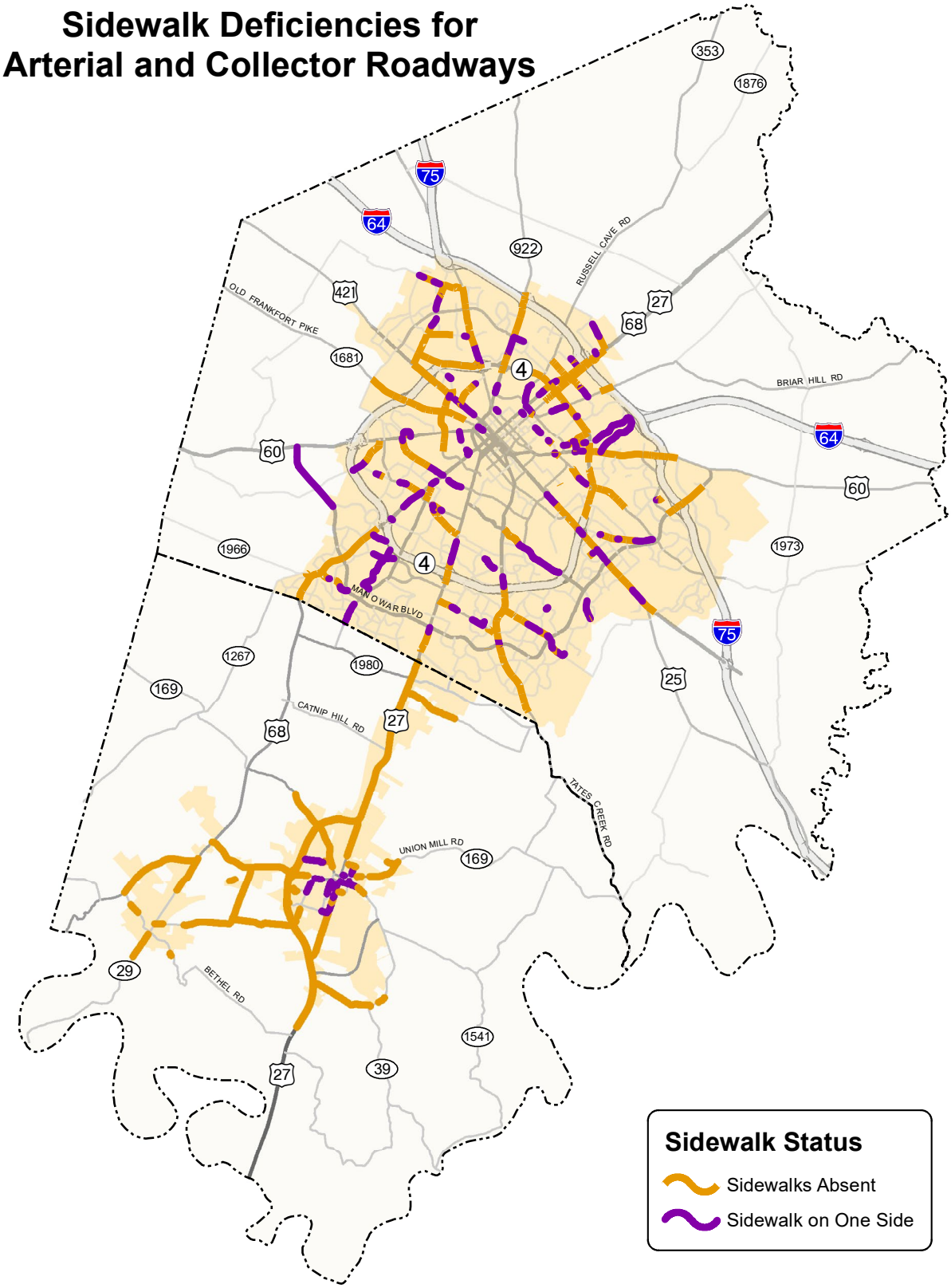
constructing innovative intersection designs

As a whole, the Lexington area has a walkability score of 34 which is within the "car-dependent" range. However, some neighborhoods do score higher on the walkability scale. Data from the US Census shows that far more people walk to work in those higher-score areas. The Complete Street Policy and other coordinated efforts between the MPO and local land use planners continue to improve overall walkability.



Biking & Walking Initiatives

The MPO has a comprehensive biking and walking program that includes funding for projects, program staffing, and educational opportunities. The Bicycle Pedestrian Advisory Committee (BPAC) provides regular guidance on



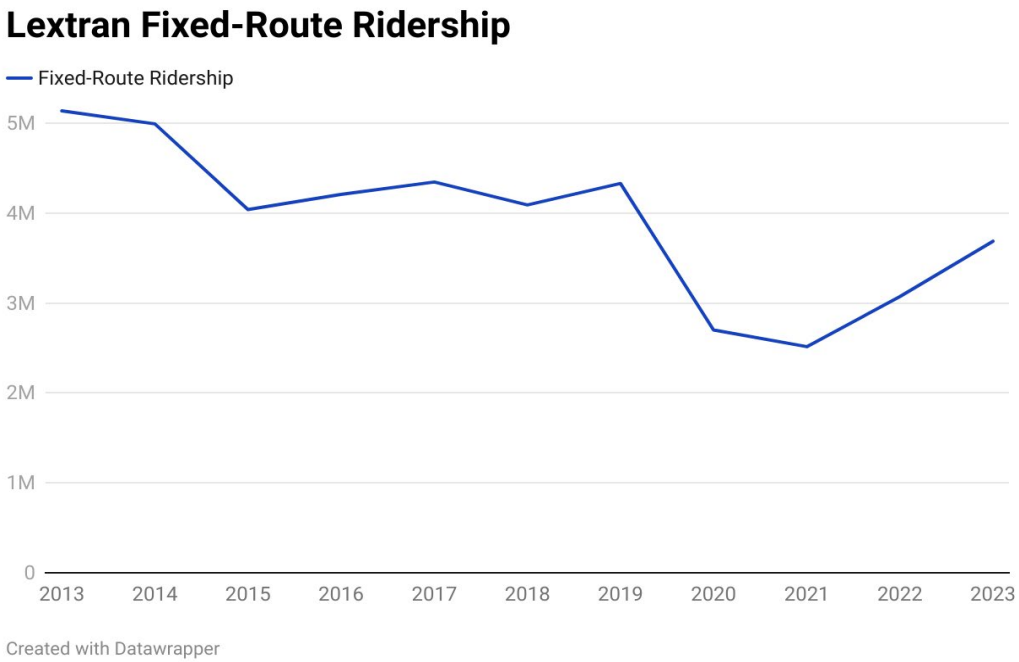
needed bicycle and pedestrian projects in the MPO region. Bicycle and pedestrian facilities are also included in all street improvement projects, and more funding has been allocated for bicycle and pedestrian projects than in the past.

Transportation Services

There are a number of transportation services in the Lexington MPO Area that enhance mobility and access for people who cannot or choose not to drive. These services are available to the general public. They may be privately or publically operated and include fixed-route transportation services (fixed schedules and fixed routes) while others are demand-responsive services (transport that is scheduled and routed upon request). Some services have eligibility requirements.

Lextran Fixed Route Transit Service

Public transit in Lexington is operated by Lextran and is supported through a local annual property tax as well as federal resources. Lextran fixed-route ridership in 2023 was 3,687,238 and has mostly rebounded from low ridership experienced by transit agencies across the country during the global pandemic.



Lextran's fixed-route bus service includes 25 routes, roughly 900 bus stops, and a fleet of 52 buses covering 225 route miles. Over half of the population that lives Fayette County's Urban Service Area (USA) is located within a quarter-mile of a bus stop and more than three-quarters of the population is within a half-mile of a bus stop. Additionally, 68% of Lexington job sites are within a quarter-mile of a bus route and 90% are within a half-mile of a bus stop.

Population in Proximity to Lextran Fixed Route Service (who live within the Lexington Urban Service Boundary)

Lextran Route Service Area	Total Area Served (Total USB = 85 sq. miles)	Percent of Total Population Served (within the USB)
Within 1/4 Mile of Fixed Route	42.8	50%
Within 1/2 Mile of Fixed Route	65.0	76%
Within 3/4 Mile of Fixed Route	78.8	92%

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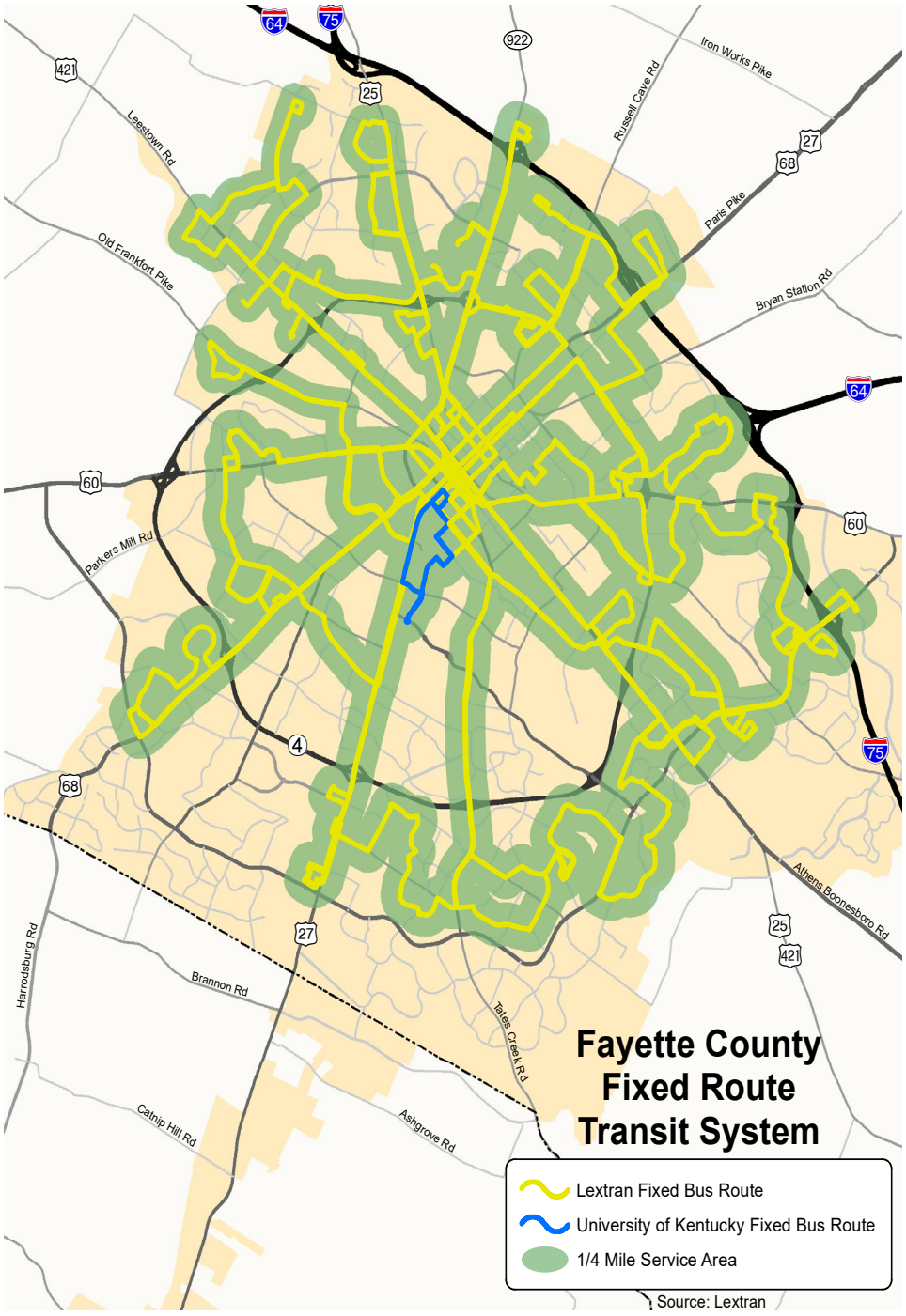
An extensive inventory of transit services in Lexington is available in Lextran's most recent Comprehensive Operational Analysis. This summarizes how well bus service provides transportation to people who rely on public transportation, where we have the greatest demand for transit service, and list of short and medium-range adjustments to Lextran service. It also includes a capital improvement plan for Lextran including for buses, bus support facilities, and rider support facilities including transit stop improvements.



Intercity Transit

There are a number of inter-city bus services available to residents in the Bluegrass Region. These public transportation services provide an alternative way for regional commuters to reach the Lexington MPO Area for employment, retail, medical or other professional service. Some routes run regularly, whereas others require advance notice or a monthly subscription to the service. Several agencies operate these services.

Intercity Transit Routes

Agency	Origin	Regular Service or On-Call	Destinations
Bluegrass Community Action Partnership	Frankfort	On-Call (24 hr)	Transit Center, Bluegrass Airport, Greyhound Station
	Danville		
Bluegrass Community Action Partnership	Nicholasville	Regular	Transit Center, Fayette Mall, Walmart at Nichols Park
	Jessamine Co.	On-call (24 hr)	
KY River Foothills Development Council	Winchester	Regular w/ Monthly Fee & Subscription	KET, Good Samaritan Hospital, VA/UK Hospital Rear Entrance
KY River Foothills Development Council	Madison Co.	On-call (48 hr)	Bluegrass Airport, Transit Center, Greyhound Station
	Clark Co.		
	Estill Co.		
	Montgomery Co.		
	Powell Co.		
Federated Transportation Services of the Bluegrass	Harrison Co.	On-call (24 hr)	Transit Center, Bluegrass Airport, Greyhound Station
	Bourbon Co.		
	Nicholas Co.		
Federated Transportation Services of the Bluegrass	Morehead Co.	Regular	Transit Center, Bluegrass Airport, Greyhound Station

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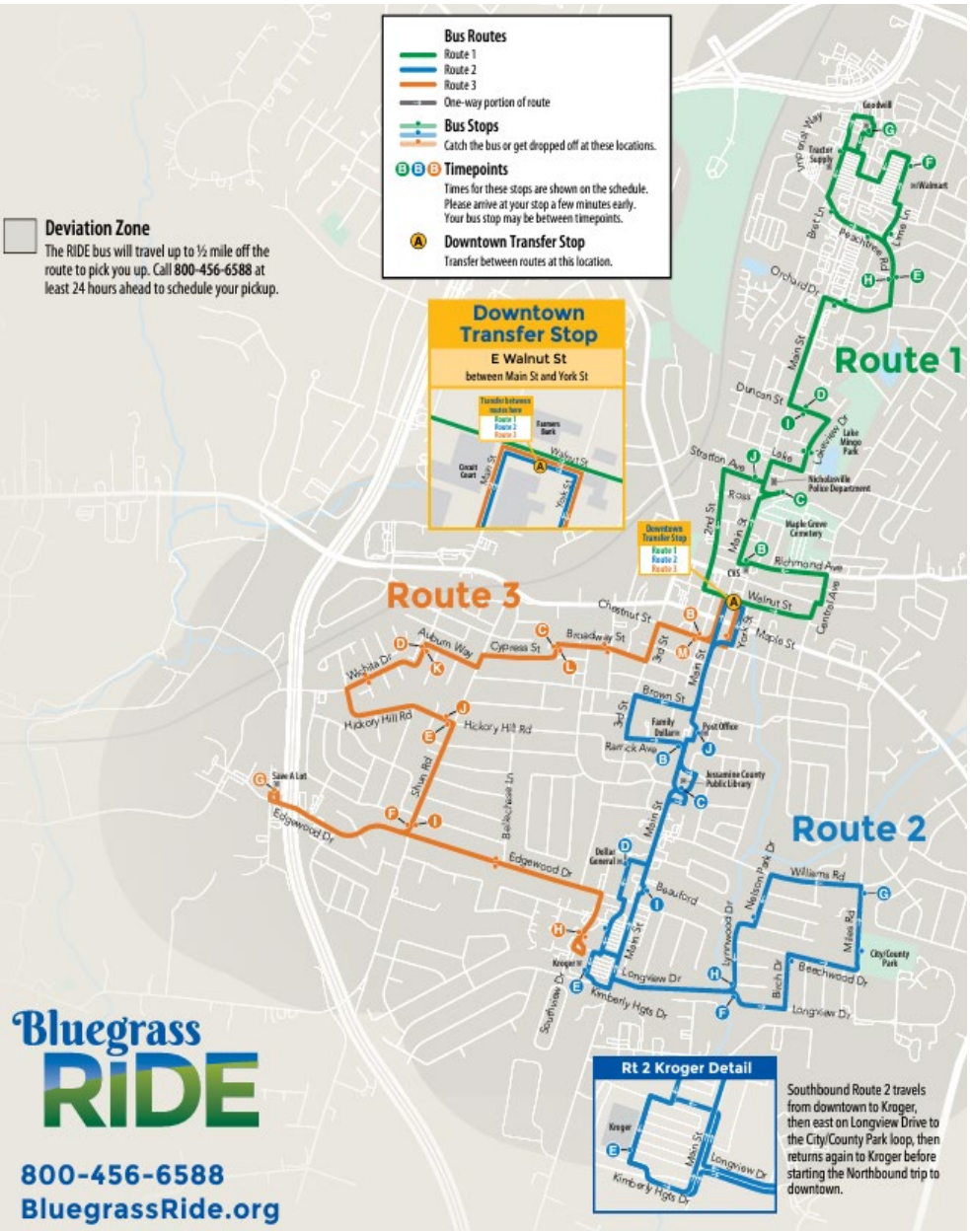
Bluegrass Ride Transit

The Bluegrass Community Action Partnership (BGCAP) administers the Bluegrass Ride service in a number of Bluegrass communities, including within the MPO area. They currently operate a deviated fixed-route public transportation service in the city of Nicholasville. This means the transit service operates on a fixed, regular route but that users can schedule a pick-up or drop off at locations within ½



mile of the normal route; users must call at least 24 hours in advance to schedule a deviated stop. Expanisons to the Bluegrass Ride service occurred early in 2024. Bluegrass Ride now offers an intercity route between Nicholasville and Lexington with stops at the Lextran transit center downtown and Greyhound Lexington. Bluegrass Ride plans to also implement regional routes between Georgetown and Lexington as well as Frankfort to Lexington in 2024.

University of Kentucky (UK) Transit

Like many midsize cities with large universities, the University of Kentucky (UK) is major trip generator, with about 16% of the county's jobs located in and around the campus and adjacent medical center. Through its partnership with UK, Lextran provides campus circulator routes that are free to students and employees of UK. Of Lextran's 18,000 average weekday passengers in Fall 2019, Route 14: UK Blue and White Routes, accounted for nearly a third of the total system ridership. Another circulator route serving UK and neighborhoods housing student populations, Route 15: Red Mile, ranks second and accounts for 10% of system ridership. Lextran's most

frequent and productive core local route - Route 5: Nicholasville Road – also serves UK and the Central Baptist medical center.

Valley View Ferry Service

The Valley View Ferry is located on KY Route 169 at the County line of Fayette and Jessamine Counties. The ferry is a free service operated by the Valley View Ferry Authority and is funded by the Kentucky Transportation Cabinet, the fiscal courts of Madison and Jessamine Counties, and the Lexington-Fayette Urban County Government. Valley View is the last remaining ferry on the Kentucky River and is the oldest year-round ferry service in the United States. Founded in 1785, seven years before Kentucky became a state, the Valley View Ferry is viewed by the community as a historic and cultural resource.

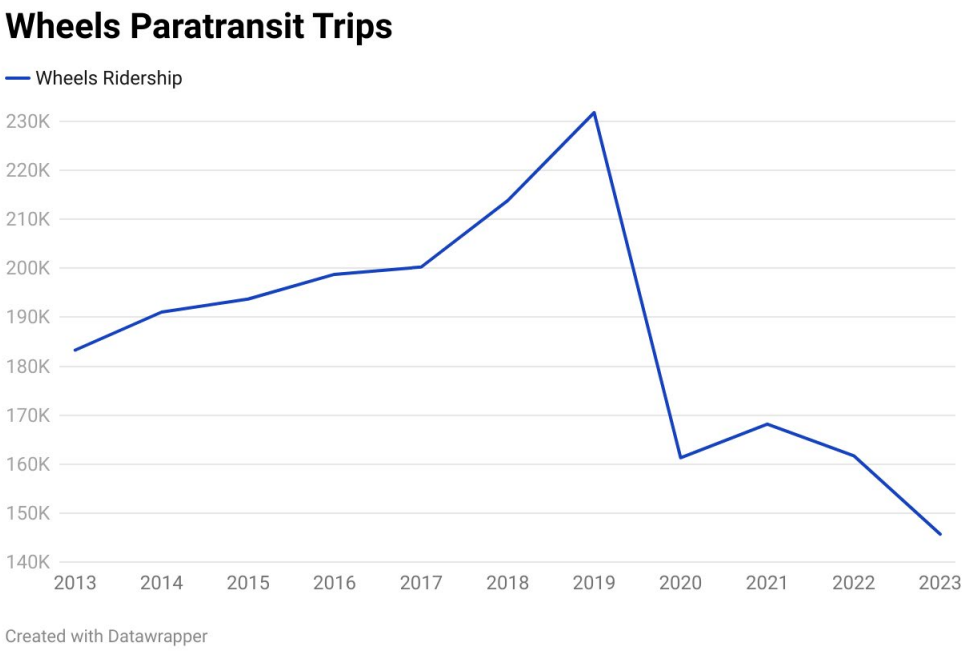
On-Demand Services

"Demand-response" transportation services provide rides to individuals along non-fixed routes and require advanced scheduling by the customer. Public entities, nonprofits, and private providers may provide these services. The following demand-response services are available in the Lexington MPO Area.

Lextran's Paratransit

Lextran's service "Wheels" provides door-to-door transportation for people who live within the Lextran service area, but who cannot use the fixed-route system due to a disability. Wheels is operated in accordance with the Americans with Disabilities Act of 1990 which requires a fully accessible transportation service within ¾ mile of a fixed route bus service. The service is available 365 days a year. The cost to the passenger is $1.60 to $2.00 per ride. The majority of rides are for medical appointments followed by employment, shopping and other errands.

Wheels provided 145,000 trips in 2023. Similar to fixed-route transit, Wheels experienced a drop in ridership during the pandemic and the rates have yet to fully rebound. However, in years leading up to the pandemic, ridership had been steadily increasing and is expected to continue in the future as the overall population in the Lexington area grows older. Since paratransit rides



are more expensive to operate than fixed route services, the cost to provide the service is expected to increase over time as our population ages.

Medical Transportation Services

Door-to-door transportation for non-emergency medical treatment and purposes is provided to people who are eligible for Medicaid, Vocational Rehabilitation and Department of the Blind service recipients. These services are provided by the Federated Transportation Services of the Bluegrass (FTSB) in Fayette County and by the Bluegrass Community Action Partnership in Jessamine County.

Independent Transportation Network

The Independent Transportation Network of the Bluegrass (ITN of the Bluegrass), an affiliate of ITN America, provides rides to people who are 60 years and older as well as to people of any age with visual impairments. ITN is a fee-based membership service that is supported primarily by private resources. It includes a network of volunteer drivers and a dispatch/scheduling system. Rides are available 7 days a week, 24 hours a day for any purpose when the origin and destination is within Fayette County and northern Jessamine County. An emphasis is placed on door-through-door, arm-through-arm service meaning drivers may assist riders, which can be helpful for people who are elderly, not feeling well or need help carrying packages. ITN is a resource for those who do not qualify for Paratransit or Human Service Transportation.

On-Demand Ridesharing

Ridesharing plays an important role in reducing the number of commuters driving alone and providing people with access to rides when they cannot or choose not to drive. Ridesharing and ride-hailing services are considered peer-to-peer services, because it directly connects persons with empty seats in their car to people that need a ride. Sharing services extend beyond automobiles and also include bike share and scooter share programs, connecting people with personal mobility devices when they need them. Two ridesharing services, Uber and Lyft, are available in the Lexington area allowing users to hail a ride, be picked up at their location and taken to their destination, similar to a traditional taxi service. These services continue to be popular ways to provide options for people to fill their mobility needs.

The transportation and ride sharing industry is changing rapidly and in the future it may not look like it does today. The three trends that are driving these rapid changes are autonomous vehicles, on-demand services and electric fleets, all of which, in concert, could make ride-hailing services a dominant force in the future.

Bike and Scooter Service

Bicycle, electric bike (e-bikes) and scooter sharing programs exist in many cities across the United States. There are currently two scooter sharing services In Lexington, much of which is focused on the University of Kentucky and downtown Lexington. There were 140,750 trips logged in 2023 compared to only 25,000 trips logged in 2018.

Regional, State, and National Passenger Services

In today's mobile and global economy, many travelers seek connectivity to regional, statewide and national destinations via public transportation service. Several fare-based passenger options into and out of the Lexington area.

Passenger Bus

There are currently 2 inter-city passenger bus services to and from the

Lexington Region. Greyhound, a fee-based charter service, operates limited services from their station located at 477 E New Circle Rd. As of 2024, Greyhound currently only operates 1 northbound bus, with a connection to Cincinnati, and 1 southbound bus with a connection to Corbin and Knoxville, TN. In February, 2024, BGCAP Transit initiated a intercity bus service connecting Danville, Nicholasville, the UK Chandler Medical Center and the Lextran Downtown Transit Center. BGCAP is currently developing plans for 2 other intercity services.

Passenger Rail

There are currently no passenger rail services operating within the Lexington Region. The closest service is provided by Amtrak in Cincinnati or Maysville via the Cardinal route. The Cardinal provides connections to other Amtrak lines via either Chicago or Washington DC.

Passenger Air

Blue Grass Airport is the primary air service provider for not only central Kentucky, but also for much of eastern and southern Kentucky, serving a 54-county area. There were a total of 1,354,000 passengers that departed or arrived at the Bluegrass airport in 2023. The Blue Grass Airport is served by 4 commercial air carriers, American, Delta, United and Allegiant. Direct and connecting flights to 16 other U.S. cities are currently available from Lexington.

General Aviation

Blue Grass Airport is also the only airport providing general aviation services within the Lexington Region. Blue Grass airport has a full service fixed base operator providing refueling, de-icing, aircraft maintenance, catering and pilot briefing services for general aviation aircraft. Blue Grass airport also has several hangers providing sheltered parking for private general aviation aircraft. Outside of Blue Grass Airport, the next closest general aviation airports are the Georgetown / Scott County Regional Airport and the Frankfort Capital City Airport which are approximately 16 and 31 miles respectively from Downtown Lexington.

Safety for the MPO Area

Safety

Safety Trends

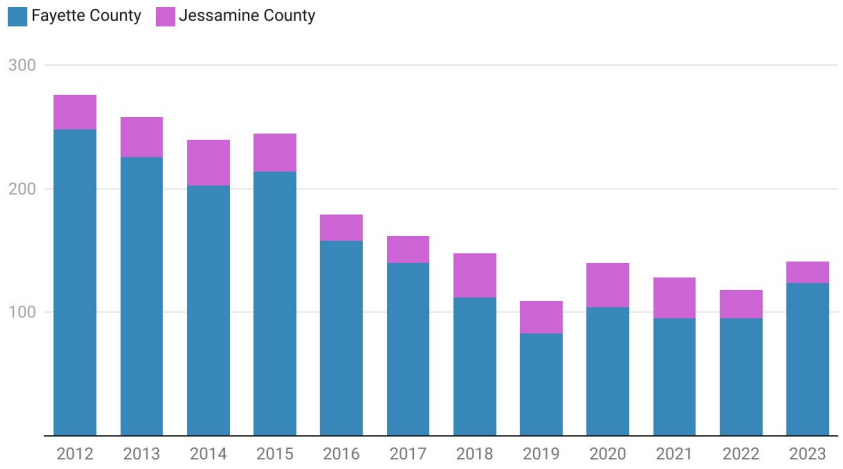
Every year, approximately 38,000 people are killed on our nation's roads and highways, and over 2.5 million people sustain injuries, according to the latest data from the National Highway Traffic Safety Administration (NHTSA) and the Centers for Disease Control and Prevention (CDC). These traffic crashes not only have devastating consequences for the individuals involved but also impact their families, friends, and communities. Societal costs associated with crashes amounts to hundreds of billions of dollars annually, encompassing lost productivity, property damage, medical expenses, emergency services, and increased travel time due to incident-related traffic delays. In Kentucky alone, the estimated comprehensive cost of collisions statewide reached $18 billion per the 2022 Traffic Collision Facts Report by the Kentucky Transportation Center.

Given these staggering figures and the degree of personal and societal harm, the Lexington Area MPO has adopted a Vision Zero goal – to work towards zero fatal and serious injury crashes occurring on our roadways by 2050. Vision Zero is a term that describes traffic safety initiatives that center on the Safe System Approach, recommended by the U.S. Department of Transportation. The premise is that no loss of life or serious injury on our roads is acceptable. The movement has gained support at all levels of government with recent significant emphasis at the national level by USDOT. Vision Zero means implementing safer street designs, including reduced speeds, and focusing efforts on the most problematic locations. It also includes robust education and enforcement strategies.

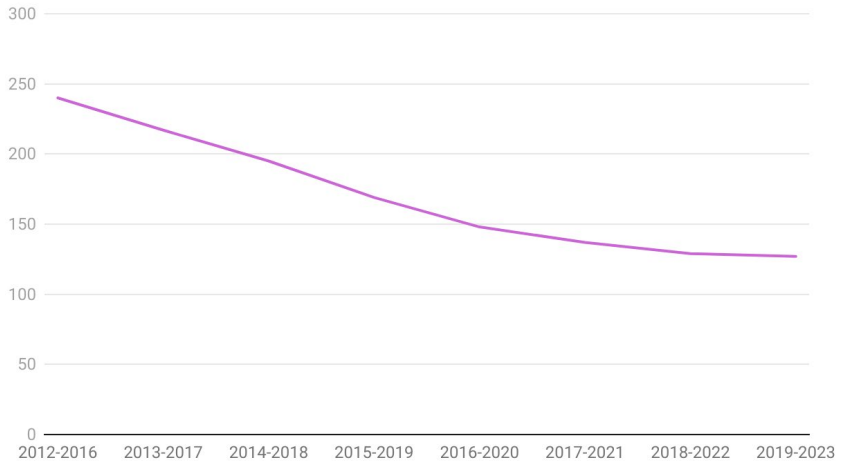
Crash Analysis

In order to gauge progress towards achieving Vision Zero, the MPO analyzes annual crash data and sets targets, or goals, to reduce collisions with a focus on serious injury and fatal crashes. Over the last decade, the incidence of serious injuries has declined, with a recent uptick in 2023.
In contrast, the number of fatal crashes in the MPO area has fluctuated over

Lexington Region: Annual Serious Injuries by County



Lexington Region 5-year Rolling Average: Serious Injuries

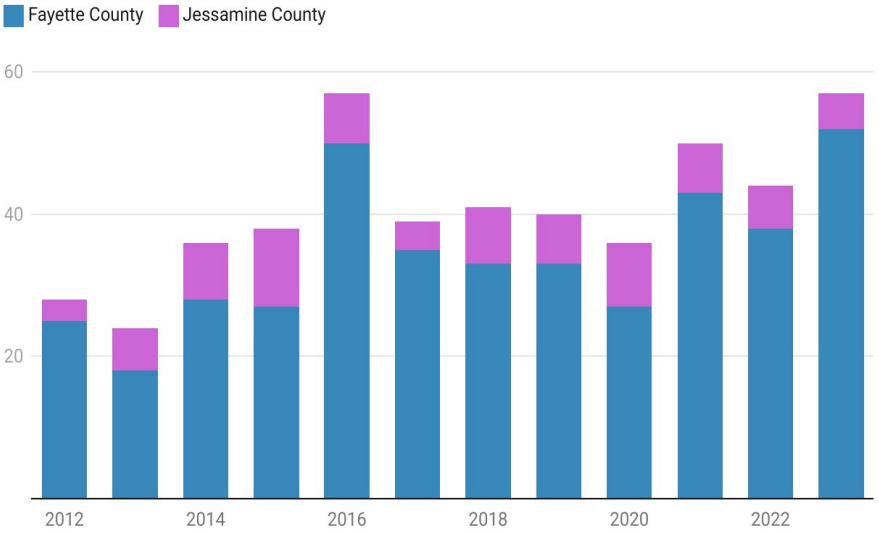


Created with Datawrapper

the last decade. We observe more variability in the number of fatal crashes due to many factors, including changes in road conditions, weather patterns, vehicle safety features, enforcement of traffic laws, and driver behavior. Using a 5-year rolling average helps to smooth out these fluctuations and provides a more stable and reliable measure of trends over time. By averaging data across multiple years, we can better discern long-term patterns and identify significant changes in road safety outcomes. This approach also helps to mitigate the influence of outliers or anomalies in any single year's data, offering a more accurate representation of the overall trend in fatal crashes. In particular, fatal crashes have trended upward in the last several years, increasing by 20-30% and peaking at a total of 57 fatalities in 2023.

One positive trend over the last decade had been the long-term decline in fatal and serious injury crashes with non-motorized modes, including people bicycling or walking. This trend was unique to the MPO,

Lexington Region: Annual Traffic Fatalities by County



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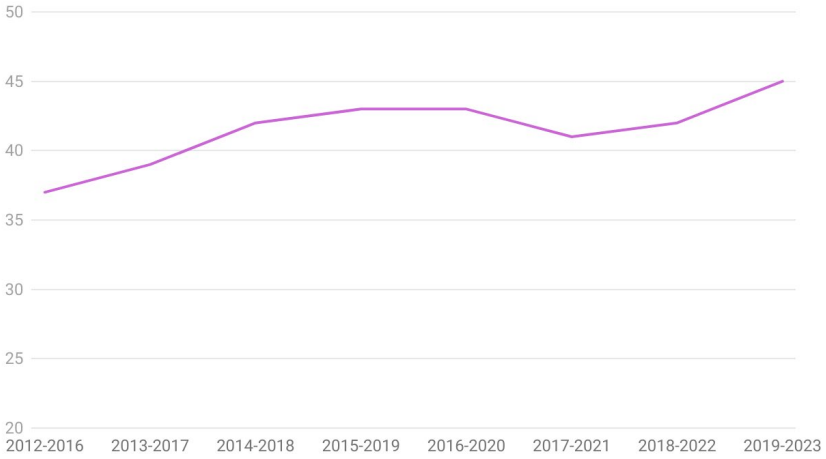
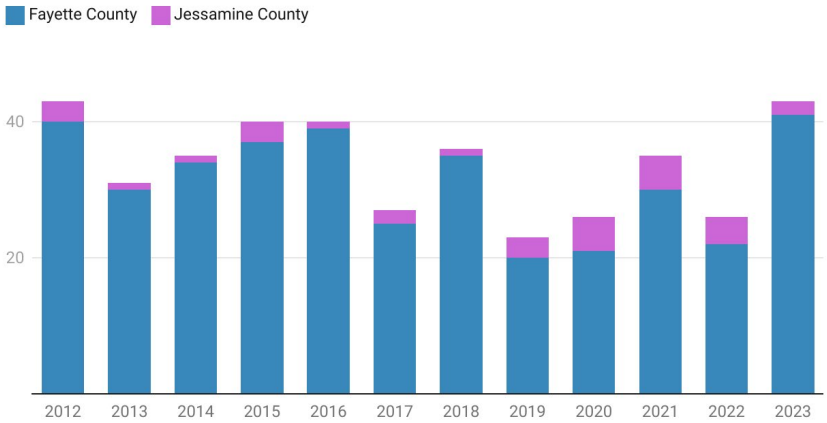
whereas serious crashes involving pedestrians and bicyclists were on the rise in both Kentucky and at the national level. However, 2023 was a particularly poor year with serious crashes with non-motorized modes increasing by a staggering 65% within the MPO area, particularly in Fayette County, and despite total crashes only increasing by slightly more than 2%.

Lexington Region 5-year Rolling Average for Crash Fatalities



Lexington Region Non-Motorized Fatalities & Serious Injuries



Safe Systems Approach

The MPO seeks to embrace a Safe Systems Approach to traffic safety initiatives meaning we 1) accommodate human error in the design and operation of our transportation system, 2) proactively identify and address dangerous roadway conditions, 3) encourage the safe use of the transportation system, and 4) reduce the risk of death through multi-layered safety measures. The five strategies of the Safe System Approach - Safer Roads, Safer Speeds, Safer People, Safer Vehicles, and Post-Crash Care - represent a multi-layered, holistic approach to transportation safety necessary to prevent roadway deaths.

Safety Action Plans

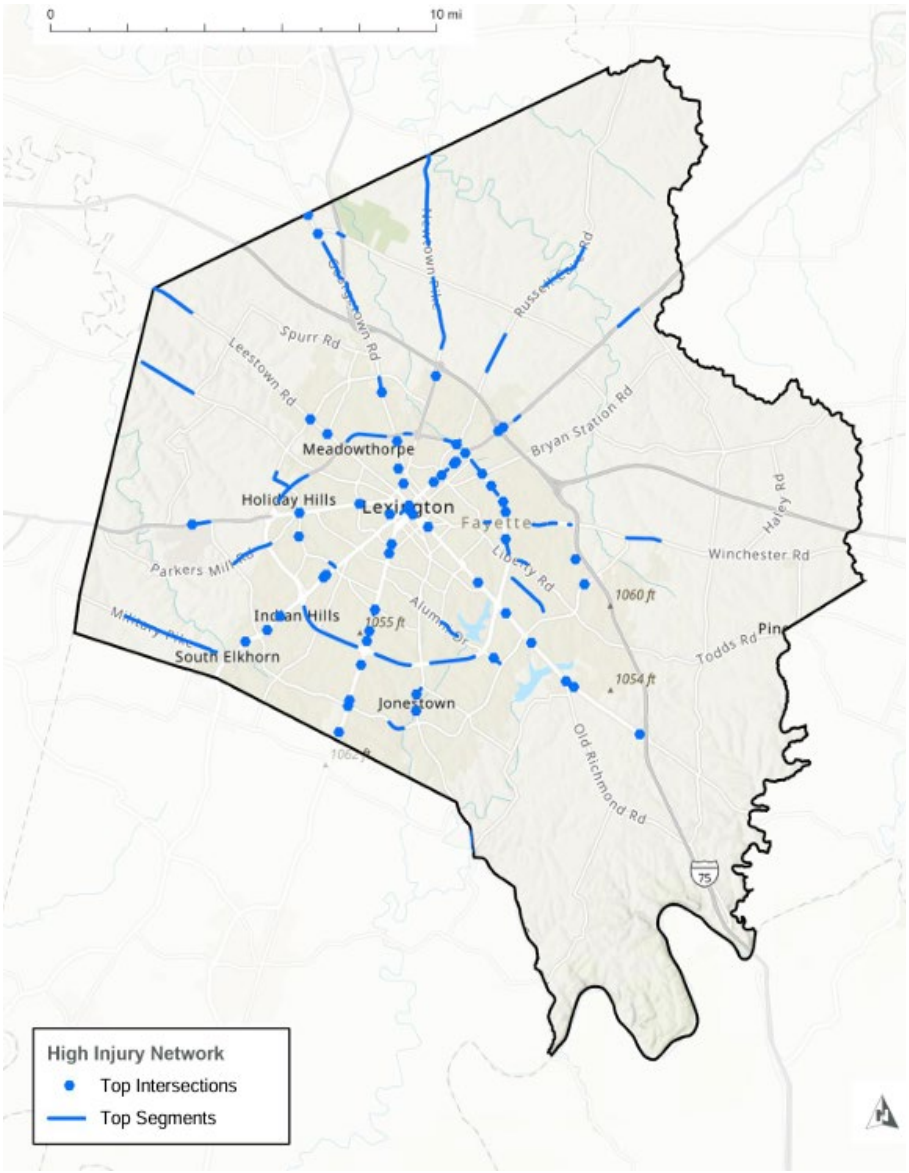
In 2023, the MPO partnered with the KYTC Highway Safety Improvement Program to develop a Safety Action

Plan (SAP) for Lexington. The SAP includes an analysis of existing safety conditions and historical trends and offers projects and direct strategies to tackle safety challenges based on the FHWA Safe Systems Approach.

In 2024, the MPO will coordinate with the Bluegrass Area Development District (BGADD) who is developing a Safety Action Plan for the Bluegrass Region, which will include Jessamine County.

Safety Action Plans use data to identify which roadway intersections and segments have historically exhibited higher severity crashes in order to identify a High Injury Network (HIN) within an area. The plans then identify possible solutions to reduce fatal and serious injuries along those roadways.

High Injury Network



Recommended projects within the Lexington Safety Action Plan were evaluated, ranked and incorporated into the MTP. In addition to crash history, the MTP project evaluation process also considered the extent to which the project is anticipated to address a safety problem and to reduce the incidence of serious crashes. This evaluation was based on FHWA guidance on Proven Safety Countermeasures.

Environment

Environmental Standards

Our transportation policies and infrastructure affect our environment in multiple ways such as water or air quality, wildlife habitats, or natural and cultural resources. Transportation is also significantly linked to climate change, energy consumption, and noise and light pollution. Here we have summarized the status of two air quality pollutants within the MPO area as well as efforts to reduce greenhouse gas emissions. How the MPO reviews and considers the possible environmental impacts of transportation projects when we develop the MTP is described in our project evaluation process.

Air Quality

Vehicles (also referred to as 'mobile sources') are a major source of urban air pollution. Air quality monitoring helps us track whether our air quality is improving or degrading over time. While there is more emphasis being placed on technology to improve air quality (cleaner vehicles and cleaner fuels), as more people live and work in our area limiting pollution by reducing single occupant automobile usage, increasing transit use, bicycling, walking and carpooling become more important.

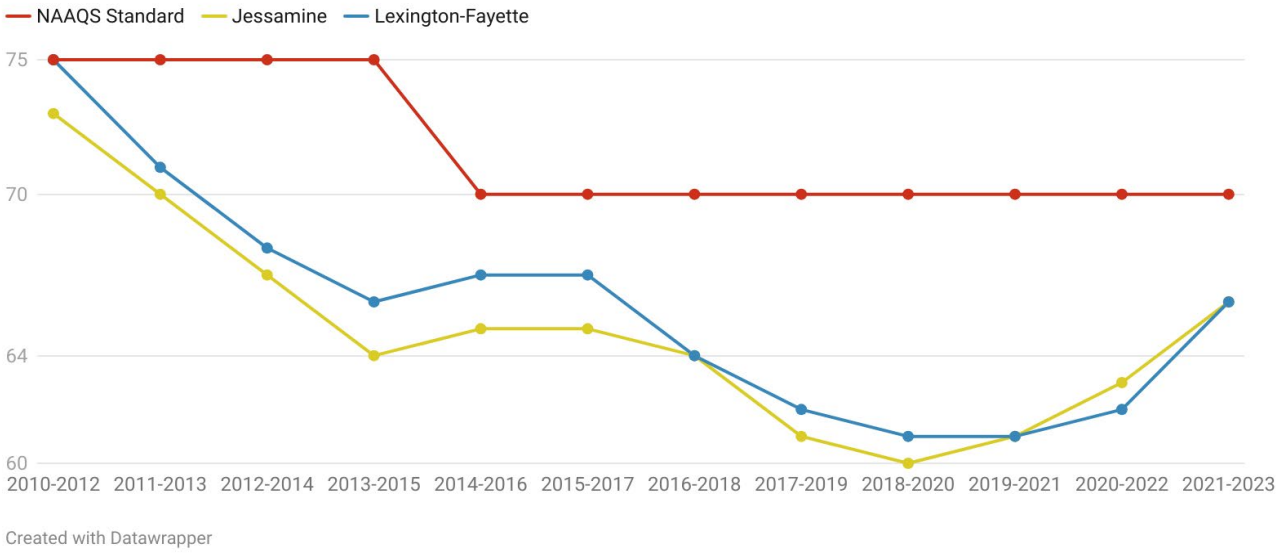
Ozone

Ground level ozone (O3) is a respiratory irritant that can lead to significant health consequences in high concentrations. This is especially so for those with cardiovascular or pulmonary diseases for which exposure to high levels of ozone could be the difference between life, death or extended hospitalization. Ground level ozone, however, is not emitted directly into the air, but is created by chemical reactions between various compounds of nitrogen oxides (NOx) and volatile organic compounds (VOC). This happens when pollutants, such as those emitted by cars and other sources, chemically react in the presence of sunlight. Ozone is most likely to reach unhealthy levels on hot sunny days in urban environments, but can still reach high levels during colder months.

The Lexington Region has been classified by the US EPA as 'attainment'

for ozone since 1995. Attainment designation states that the region is in compliance with emission standards established by EPA to protect human health. The current standard requires an 8 hour average concentration for the previous 3 years to be below 0.07 parts per million (ppm) or sometimes referred to as 70 parts per billion (ppb). The Lexington Region has 2 monitors measuring ozone concentrations, 1 each for Fayette and Jessamine Counties. Preliminary data for the 2021 to 2023 period indicates an 8-hour average concentration of 0.066 ppm or 66 ppb for both monitors. Note that as of publication of this document, the US EPA is considering lowering the standard for ozone to 0.065 ppm or 65 ppb. The figure below shows the long-term trends for ozone concentration within the Lexington Region.

3-year Average 4th Maximum 8 hour Ozone Readings for the Lexington Metropolitan Area (Parts Per Billion)

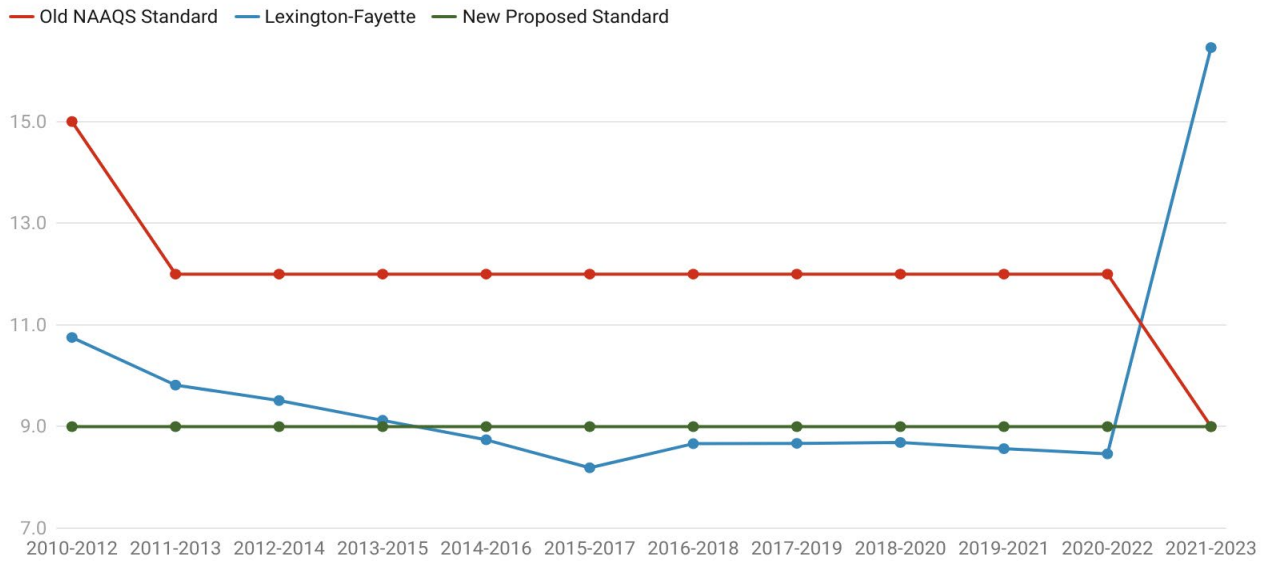


Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. These particles come in a wide range of sizes and can remain suspended in the air for extended periods. Fine particles, under 2.5 microns in diameter (PM2.5), result from fuel combustion by motor vehicles and other sources such as industry, dust from construction sites or wildfires. PM2.5 can be particularly harmful as the particles are so small that they can enter our bloodstream after being inhaled and thus can lead to premature death. Only Fayette County currently has a monitor for PM2.5. In December, 2023 the US EPA revised the standard for PM2.5 to 9 micrograms per cubic meter, down from the previous standard of 12.

Particular matter concentrations in the MPO area have generally decreased over time and were trending at or just below the new standard of 9 micrograms per cubic meter prior to last year. Preliminary 2023 data suggested that the Fayette County concentrations may have exceeded this new standard, but the 2024 designation shows Fayete County still in compliance. However, the MPO will continue to closely monitor conditions. Any new non-attainment areas would have 12 months to perform a transportation conformity determination to show how projects within the MTP and the Transportation Improvement Program are helping the region return to compliance with the new standard. This means we must take additional actions to reduce pollution within our area. The chart below shows the long term trends for PM2.5 concentrations from the Fayette County monitor.

2nd Maximum 24 Hour PM2.5 Readings for the Lexington Metropolitan Area in ug/m3



Jessamine County does not measure PM2 just ozone

Created with Datawrapper

Greenhouse Gas

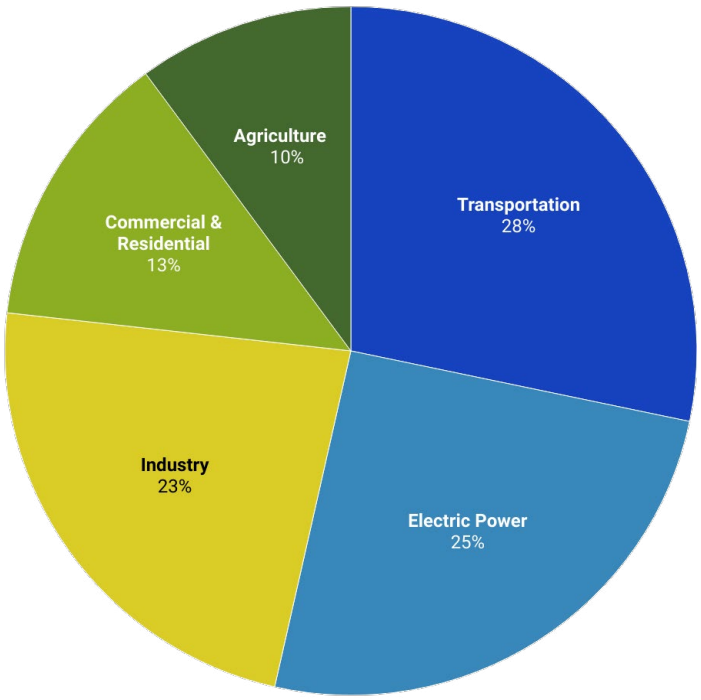
Greenhouse gases trap heat and make the planet warmer leading to significant changes in global climate. These impacts include, but are not limited to, flooding and/or extreme rainfall events, extreme heat and drought, changes to wet/dry seasonal patterns and changes to the frequency and duration of winter weather events. All of these impacts are anticipated within Central Kentucky which can impact human health, add to risks for

life and property as well as provide significant economic and transportation system disruptions. Human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years. In 2021, mobile sources account for about 28% of all the air pollution in the United States and the primary mobile source of air pollution is the automobile, according to the Environmental Protection Agency (EPA). The transportation sector generates the largest share of Greenhouse Gas (GHG) emissions. Greenhouse gas emissions from transportation primarily come from burning fossil fuel for our cars, trucks, ships, trains, and planes. Over 94% of the fuel used for transportation is petroleum based, which is primarily gasoline and diesel.

The EPA tracks total U.S. emissions by publishing the Inventory of U.S. Greenhouse Gas Emissions and Sinks. This annual report estimates the total national greenhouse gas emissions and removals associated with human activities across the United States by source, gas, and economic sector.

The City of Lexington is developing a Climate Pollution Reduction Plan for the greater Lexington Metropolitan Statistical Area (MSA) which in addition to Fayette and Jessamine Counties also includes Bourbon, Clark, Scott and Woodford Counties. The MPO is supporting these efforts to conduct an inventory and analysis of greenhouse gas emissions within our region and to cooperatively identify and act upon priority actions and interventions. The goal is reach net zero greenhouse gas emission by 2050.

Total U.S. Greenhouse Gas Emissions by Economic Sector (2021)



CHAPTER 3: 2050 VISION

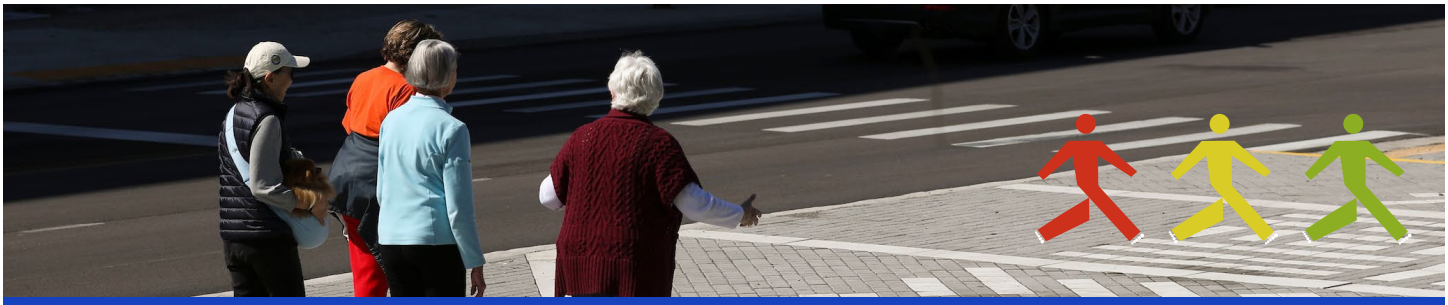
"In general, we've heard people want more reliable, safe, and comfortable choices for getting around."
Lexington Area Metropolitan Planning Organization

The MTP is Our Plan for the Future

The Lexington Area MPO planning process and the MTP must consider certain national goals. The Infrastucture Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), was enacted in 2021. The law authorizes $1.2 trillion for transportation and infrastructure spending with $550 billion of that figure going toward "new" investments and programs. This bipartisan legislation includes funding for things like rebuilding roads, bridges and rails while also mitigating and tackling the climate crisis. The law also includes goals of advancing environmental justice, and investing in communities that have too often been left behind.

> **"Continue to utilize and develop better, more efficient ways into downtown Lexington and out.**
> *public comment*

Using local input - and guided by these larger national goals and priorities - the MPO defined the following goals and objectives for the Lexington area. These goals, objectives, and associated strategies establish a foundation for MTP projects, programs and investments moving forward.



Goals for MTP 2050

What Guides Us

This MTP has a foundational purpose: to invest in a more sustainable transportation system that provides safe travel choices to everyone in our area. Using this foundation, the MTP 2050 is built on a set of goals that will shape our work over the next 25 years. Each of the six goals includes a series of objectives. These objectives provide meaning and articulate a broad task to accomplish. Within each objective are different strategies. These are more specific and can be acted upon over time. By organizing the MTP 2050 around these goals, objectives, and strategies, we can better achieve our foundational purpose.

How did we come up with these goals? By engaging with you! Our transportation system is one of our largest public resources. This means we need to make sure it is being planned, designed, built, and maintained to meet the vision and needs of the community. MPO staff used several different ways to inform and involve the public so that we could create a long-range plan that speaks to what the public wants.

We built the MTP 2050 Goals and Objectives on the conversations, input, and information gathered for other recent plans. Like On the Table and Imagine Lexington 2050, Imagine Nicholasville Road, and Imagine New Circle Road.

In addition to what we learn from you, there are a few different initiatives that have helped us prioritize future improvements. The MPO adopted a Complete Streets policy in early 2023. This signals a shift in how we plan, design, build, and maintain our transportation system. Complete Streets is our commitment to making sure everyone has safe, accessible transportation options no matter how they choose to get around. Lexington-Fayette Urban County Government has also adopted a Complete Streets policy and as of 2024 is in the process of implementing a Complete Streets Action Plan. Additionally, the MPO adopted a Vision Zero policy in April 2022. Vision Zero acknowledges that even one death on our roadways is unacceptable and that road design should encourage safe speeds and reduce the severity of intersection crashes. The policy is our commitment to this approach to safety. In addition to these policies, the Lexington Safety Action Plan came out in 2023 and is part of this Vision Zero initiative.

MTP 2050 TRANSPORTATION GOALS

SAFETY

Our transportation system provides safe travel for all users

ACCESS & EQUITY

Our transportation system provides affordable, equitable transportation options

RESILIENCY

Our transportation system is resilient and well maintained

QUALITY OF LIFE

Our transportation system supports vibrant neighborhoods and resident vitality

ECONOMIC DEVELOPMENT

Our transportation system supports economic vitality and competitiveness by reliably moving people and goods

SUSTAINABILITY

Our transportation system is sustainable and does not significantly contribute to climate change

OBJECTIVES: Safety

Safe travel for all users

- **Elimate** serious injuries and fatalities on our roadways by 2050
- **Implement** the FHWA Safe Systems approach in roadway design and transportation investment
- **Create** a network of Complete Streets that provide safe, comfortable travel for all users
- **Implement** projects and design features that reduce vehicular speeds and conflict points
- **Provide** bicycle and pedestrian facilities on all collector and arterial roadways
- **Modernize** rural roads within urbanized areas and upgrade sagety features along rural roads leading to urbanized areas
- **Foster** compliance with the rules of the road and respect between all roadway users

FROM THE SURVEY

Top three solutions from the survey >

1. Add more sidewalks
2. make crosswalks/ intersections safer
3. add multiuse trails

Access & Equity
objectives

Affordable, equitable options for all

- **Ensure** residents for not spend more than 40% of their income on housing and transportation
- **Provide** access to jobs, education, goods, and services without disparity
- **Increase** access to quality transit
- **Increase** frequency of transit service
- **Reduce** travel times for transit users
- **Provide** well-connected streets, sidewalks, and bikeways

FROM THE SURVEY

89% survey respondents totally agree or somewhat agree with "I want easier access to transit service."

Resiliency
objectives

Resilient, well-maintained transportation choices

Maintain transportation infrastructure and public transit vehicles in a state of good repair

Maximize efficiency of existing infrastructure

Provide redundant infrastructure for all modes to increase system resiliency

Ensure system is responsive to public needs and desires, and to regional and national trends

FROM THE SURVEY

Building 35 miles of buffered bike lanes

=

#1 choice for spending $10 million

Quality of Life
objectives

Vibrant neighborhoods, vitality for all residents

- **Ensure** transportation projects enhance community life
- **Ensure** transportation projects are respectful of historic, natural, and cultural resources
- **Invest** in projects that increase walkability and the connectedness of our neighborhoods
- **Prioritize** slower speeds in pedestrian activity areas
- **Provide** a system that contributes to the health and wellness of our neighborhoodoods

FROM THE SURVEY

Top three options people want on a given day >

Drive (28%)
Walk (25%)
Bike (20%)

Economic Development *objectives*

Economic support, reliable movement of goods & people

- **Maintain** or improve truck travel time reliability on Interstates
- **Improve** freight connectivity to the interstate and parkway system and to major freight destinations
- **Maintain** or improve vehicular travel time reliability on arterial roadways and Interstates
- **Maintain** or improve transit travel time reliability and on-time performance for fixed route and paratransit services
- **Provide** a high quality multimodal system that supports and attracts businesses and a talented workforce

FROM THE SURVEY

80% survey respondents totally agree with "I want improved accessibility around my community."

Sustainability
objectives

Sustainable transportation that doesn't contribute to climate change

- **Achieve** net zero carbon emmissions from the transportation sctor by 2050
- **Invest** in projects that support compact development and mixed land uses
- **Reduce** vehicle miles of travel per capita
- **Reduce** single occupancy vehicle use
- **Increase** mode share for micycling, walking, and public transit
- **Reduce** transportation sector air quality pollutants
- **Increase** electric vehicle charging and alternative fuels infrastructure

FROM THE SURVEY

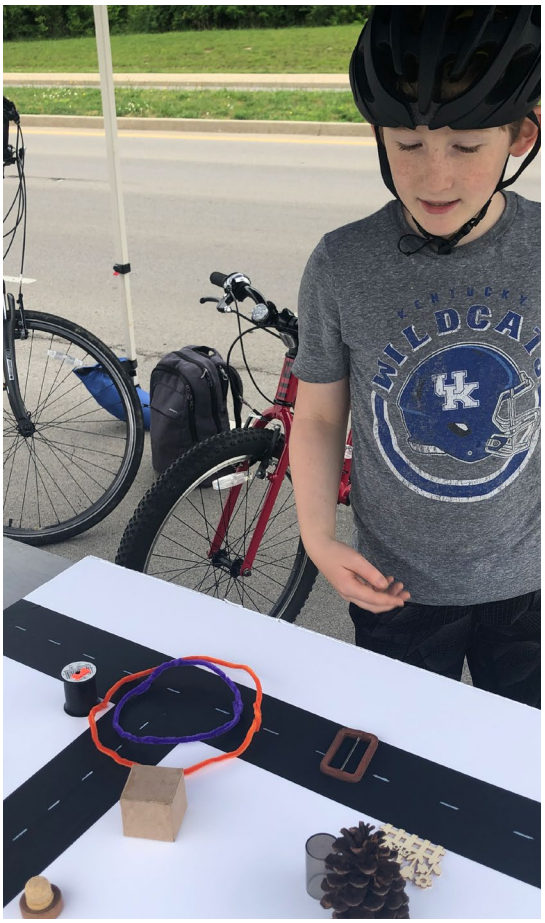
OPPORTUNITY ALERT

People think we are doing the least well when it comes to providing options for traveling without a car

PUBLIC INPUT

Listening to Learn

The transportation system is one of our community's largest public resources. This means we need to make sure it is being planned, designed, built, and maintained to meet the vision and needs of the community. How do we do this? We follow federal and state initiatives, but we also engage with you! MPO staff used several different ways to inform and involve the public. This helped us create a long-range plan that speaks to what the public wants.

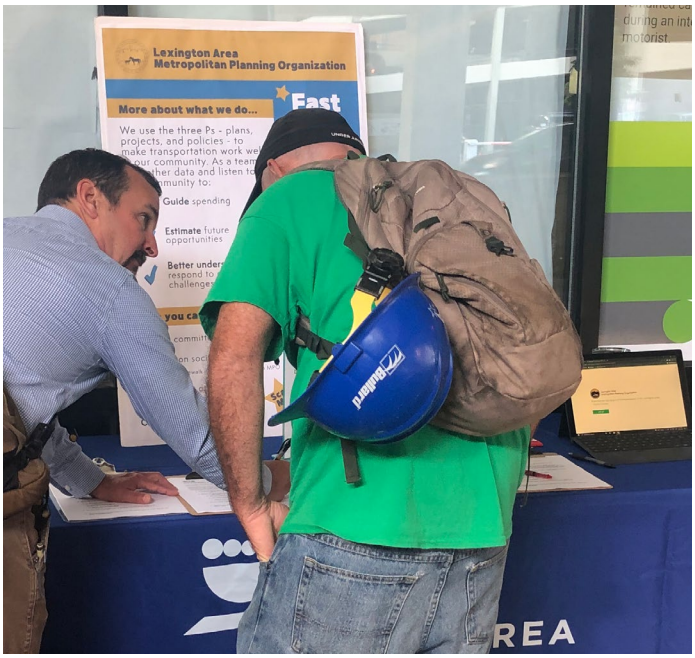


Streetfest May 2023

While the MPO had a foundation of public input gathered from other recent planning efforts, we needed to use digital and in-person methods to further reach the community. We conducted a survey both online and in-person that received 1,500 total responses (1,022 completed). MPO staff visited various locations and events during August and September of 2023 to get on-the-ground information from people in our area. We connected with many partners including LFUCG Council Members, Jessamine County Health Department, Lextran, Bluegrass

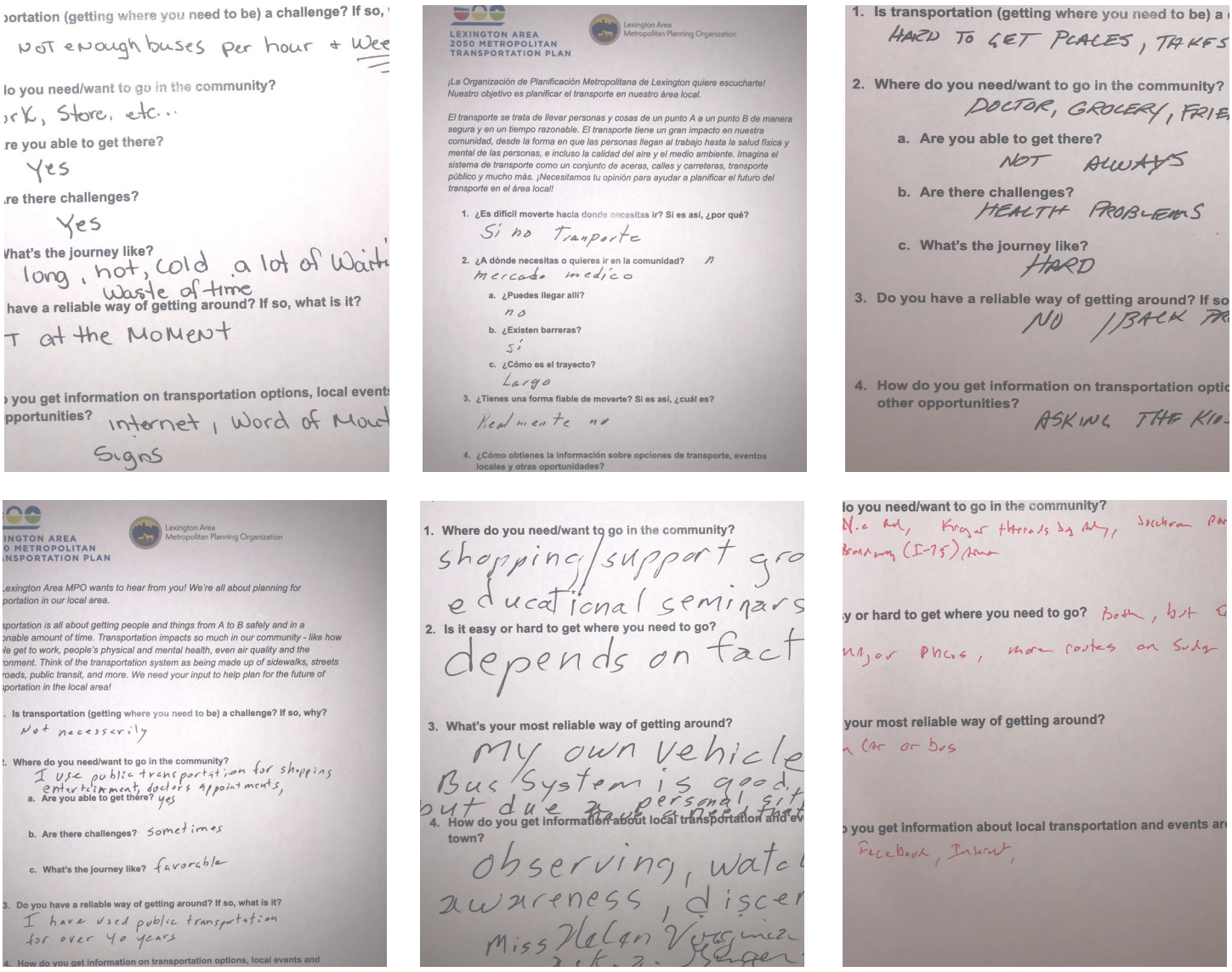
> **"More people will walk and bike when they feel safe enough in an environment to do so.**
>
> *public comment*

Community Technical College, University of Kentucky, and more. These partners helped us spread the word about the plan update and the survey. MPO staff held stakeholder conversations with these partners, as well as regional transportation providers like Bluegrass Airport, RJ Corman Rail, and more. We visited Lextran's Transit center at various times on different days to better make contact with transit users. We tabled at local events like the Woodland Art Fair and Crave Fest. All this outreach helped us gauge our best path forward to update the MTP.



Lextran Outreach August 2023

Streetfest May 2023



Several handwritten surveys from in-person outreach

What Did We Hear?

When asked how well the transportation system is addressing transportation issues today, response distribution was comparable between Fayette, Jessamine, and Other counties. Repaving streets and safety for driving received the most positive responses (68% very well or somewhat well). Providing options for traveling without a car received the least positive responses (81% not that well or not that well at all). Jessamine respondents were more likely to say

Satisfaction by county:

34% Neutral *Fayette*

39% Neutral *Jessamine*

44% Unsatisfied *Other*

Scott, Woodford, Madison, Clark, Mercer

"Not that well," or "Not that well at all."
When asked what policy issues are the most important for transportation, technology ranked far below in priority across all respondents. The top priority across all respondents was corridor studies. The environment, Complete Streets, and connectivity are all closely ranked runner-ups.

We asked participants how they would spend $10 million dollars on transportation improvements (pick top three). Most respondents chose **"build 35 miles of buffered bike lanes,"** even when filtering for responses from only Jessamine, or Fayette, or other counties. The second choice for spending was **"build 15 miles of sidewalk."** The third most popular spending choice was **"construct 5 innovative intersection designs,"** with Jessamine County respondents and those from other counties actually more likely to rank intersection redesign as their second choice.

When asked what specific solutions are needed to improve transportation, the same solutions emerge in the top 5. Jessamine County responses have a similar distribution to the overall results, but more respondents chose "adding multi-use trails," over sidewalks. For respondents from other counties, the top priority is different. More of these respondents prioritized "continuing maintenance and repairs," followed closely by, "designing, building, and maintaining Complete Streets."

Top 5 Specific Solutions

Add more sidewalks
Improve safety at crosswalks & intersections
Add multi-use trails
Continue maintenance & repairs
Design, build, maintain Complete Streets


On the Table 2022

When asked what options they would like to be able to choose from on any given day, "drive" was the top selection but "walk" and "ride a bike" were each selected by nearly the same percentage across all respondents. Of all respondents, 7% selected "Other" and mentioned rail. This response pattern reveals a clear desire for choice and balanced options when it comes to daily travel. From our in-person interactions over the last couple of years, we have heard again and again that people want safe, comfortable ways to get around. Walkability, bikeability, and accessibility was the top topic of discussion during On The Table (OTT) efforts in 2022. Qualitative data from our corridor studies, like Imagine New Circle, let us know that equitable access to good-quality transportation choices is important to most people. Engagement during recent trail studies, like the Campus to Commons Trail Feasibility Study, is underscoring how much interest there is in building a transportation system that serves all users, however they get around.

On the Table 2022

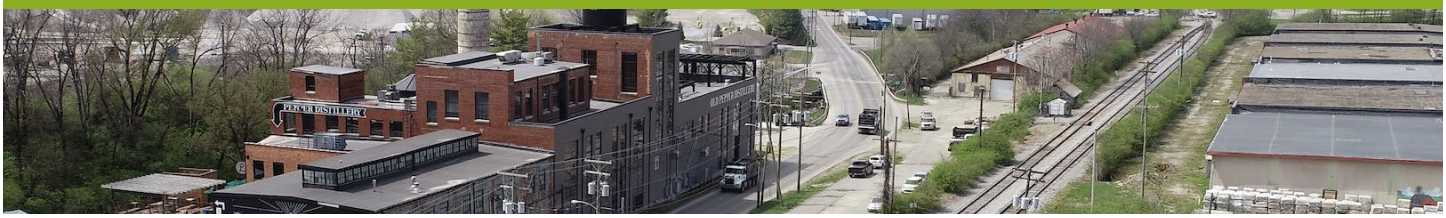
What's next?

Because the MTP is a 25-year plan, we need shorter-term plans for implementation. The Transportation Improvement Program (TIP) is a 4-year plan for transportation spending based on what's described in the MTP. Public input is an essential resource for creating the TIP because the TIP is a prioritized list of projects. While projects in the TIP are usually ready for some phase of implementation, public input helps us determine what locations and types of projects are most important to the community.

For construction projects, like new multi-use trails, implementation phases are: design, acquiring right-of-way, relocating utilities, and construction. The design phase finalizes the layout, appearance, and features of a project. The right-of-way phase is about getting access to the land needed to complete the project. The utility relocation phase ensures water, sewer, and electric lines are still able to service the area surrounding the project. And the construction phase is when the project is actually built. Implementation of non-construction TIP projects, like traffic studies, has fewer and slightly different phases. Whether they involve construction or not, all projects identified in the TIP must have a dedicated source of funding available during the four-year scope of the TIP.

This fiscal constraint goes hand-in-hand with public input. For the MPO to properly plan ahead we have to look at everything we've heard from the community while at the same time determine available funding resources. The following section lays out our financial forecast looking ahead to 2050.

FINANCIAL PROFILE



Funding Now and in the Future

Financial Forecasts

Federal regulations require that MTPs approach funding realistically, to ensure that all projects and programs in the MTP have a strong chance of implementation. This involves a careful analysis of historical transportation revenues and expenditures. While financial predictions are based on the best available data, there's an element of uncertainty due to the plan's long-term nature. This is one of many reasons why the MTP is updated every five years.

In the end, the final costs and feasibility depend on future funding decisions made by local, state, and federal authorities, working together to make the vision of the MTP a reality.

Federal Funding Sources

The Highway Trust Fund (HTF), established by the Federal-Aid Highway Act and Highway Revenue Act of 1956 is the primary source of funding for roadway projects, including the Interstate Highway System. Administered by the Federal Highway Administration and Federal Transit Administration, subsequent highway acts have played a vital role in maintaining and expanding the nation's road network. It should be noted that the HTF is supported by a dedicated tax on motor fuels. As electric vehicles EVs consume no fuel, they currently contribute nothing to this vital revenue stream. As EV adoption increases, new funding mechanisms for the HTF will need to be developed. The Bipartisan Infrastructure Law (BIL), spanning 2022-2026, provides federal funding for various transportation projects within the 2050 MTP. A listing of key BIL programs can be found in Appendix E.

State Funding Sources

In addition to the federal HTF, Kentucky also levies a motor fuels tax to generate revenues. KYTC also generates transportation funds by issuing bonds. These funds are used for construction, maintenance and operations as well as state match for federal funding. KYTC also sub-allocates funds to local governments through the Municipal and County Aid Program and Rural Secondary Program for maintenance and operations.

Local Funding Sources

In addition to the Rural Secondary,

Municipal and County Aid Programs allocated to local governments by the state, local cities and counties may use their General Fund as a source of capital for operational and maintenance needs. Local jurisdictions provide local funding to match federal and state funds as well as to fund local transportation projects directly. Money for major capital investments in streets and highways may also come from the sale of bonds.

The highway element of the financial plan is divided into a short-range and long-range forecast and financing plan to reflect two planning horizons covered within the 2050 MTP. The short-range forecast corresponds with the MPO's Transportation Improvement Program (TIP), a four-year funding and project programming document for the Lexington MPO Area (currently the Lexington Area MPO FY 2021-2024 TIP), and the Kentucky State Highway Plan, a six year programming document for projects statewide (currently the 2024 Kentucky State Highway Plan, covering years 2024-2030). The MTP's long range funding forecast covers the remaining years up to 2050.

Highway Financial Estimate

Short-Range (Committed) | 2025-2029

The funding assumptions for the initial 2025 – 2029 period of the MTP reflect the amounts committed to complete the projects in the current Kentucky State Highway Plan (KSHP) as well as LAMPO's Transportation Improvement Program (TIP), which must be fiscally-constrained and in agreement with the KSHP. Approximately $302.6 million has been committed to fund transportation projects during the first five years of the MTP.

Long-Range (Committed) | 2030-2050

Beyond the years covered by the KSHP and TIP, long-range revenue projections for the MTP were based on federal and state revenue and expenditures for the 20-year period from 2004 to 2023. An analysis of this data revealed that the average annual statewide growth rate and percent MPO share varied, depending on the type of revenue or expenditure, as shown in the following table.

Projected Revenue

Years	KSHP	MPO Suballocated	Discretionary	Available MPO Revenue (millions)
2025 - 2029	$239.5	$27.5	$35.6	$302.6
2030 - 2034	$226.4	$61.2	$26.0	$313.6
2035 - 2039	$289.7	$75.4	$37.0	$402.1
2040 - 2044	$371.4	$92.9	$45.0	$509.3
2045 - 2050	$588.0	$140.4	$52.4	$780.8
	$1,715.0	$397.4	$196.1	$2,308.5

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The basic formula for determining LAMPO's net available revenue is the sum of all revenue minus the costs for maintenance and revenue sharing. The table below shows the committed and projected MPO revenue in millions for each five-year period through 2050 using the growth rates and MPO share percentages shown above in order to account for Year of Expenditure (YOE) dollars.

Revenue Growth Rates

Revenues / Expenditures	Statewide Annual Growth Rate	MPO Percent Share
Federal Revenue Allocated to KYTC used in the LAMPO Area	4	3.76%
Federal Revenue Sub-Allocated to LAMPO + Local Match	4	NA
Federal Revenue from Discretionary Grants	4	NA
State Revenue used in the LAMPO Area	6	3.41%
Maintenance Expenditures	5	2.10%
Revenue Sharing Expenditures	3	1.12%

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Transit Financial Estimate

Prior iterations of the MPO's MTP and Long-Range Transit Plan as well as Fayette County's Comprehensive Plan encouraged increased transit services to manage growing travel demand within the Urban Service Area. The plans emphasized a need to ensure stable revenue sources to enhance mass transit and provide citizens with alternatives to personal vehicles as a means to reduce congestion on roadways, improve air quality, support businesses, employees and employers, and other community benefits.

Lextran's revenue comes from three primary sources: Formula allocations from the Federal Transit Administration (FTA); revenue generated from a local Fayette County property tax; and revenue generated from passenger fares and other minor sources. These funding sources account for an average annual budget of $35 million per year.

The MTP projections maintain this annual estimate over the 26 year period from FY 2025 through FY 2050 with a conservative 1% growth factor. These estimates only account for funding that is generally stable over time and does not include one-time or semi-regular infusions of funding from grants or special state/federal funding allocations for major capital projects. It also assumes fares do not increase and that formula funding remains consistent in the future.

Estimated Transit Revenues (2025 - 2050)

	Funding Years	Revenue (2025 Dollars)	Revenue (Future)
Short Range	2025 - 2029	$171,741	$175,210
Long Range	2030 - 2034	$171,741	$184,147
	2035 - 2039	$171,741	$193,541
	2040 -2044	$171,741	$203,413
	2045 - 2050	$206,089	$257,839

Created with Datawrapper

CHAPTER 4: RECOMMENDATIONS

MTP 2050 is about investing in a more sustainable system, and making sure everyone has choices for getting around.

From goals to action...

The major purpose of the Metropolitan Transportation Plan is to identify the regionally significant projects, policies and strategies necessary to address the goals, needs and concerns identified by our residents and elected leaders for which our region can realistically afford. The next purpose of the MTP is to prioritize these in order of importance to begin the schedule of implementation phases for the 4-year Transportation Improvement Program (TIP). Note that any effort utilizing federal highway or public transportation funds must be included in the MTP and once receiving a formal funding commitment, included in the TIP. Projects under consideration for the MTP were identified via one of the sources highlighted below and from what the MPO refers to as the 'Universe of Need'.

Project Source	Description
2045 MTP	Projects identified in the 2045 Plan that were not implemented and remain relevant
Kentucky State Highway Plan	Projects identified in the KYTC State Highway Plan
KYTC Continuous Highway Analysis Framework (CHAF) database	Projects that have been proposed in the MPO area and are prioritized for possible inclusion in the KYTC State Highway Plan
Local/Regional Plans	Projects identified in Comprehensive Plans, Small Area Plans, Bicycle/Pedestrian Plan, etc.
Corridor/transportation studies	Projects from corridor studies/plans and traffic studies
Safety study or plan	Projects identified through a Local Road Safety Plan (Safety Action Plan) or Vulnerable Road User Safety Assessment.
Congestion management process / Bottleneck study	Projects identified through the MPO's congestion management process and 2021 Bottleneck Study.
Input from staff, citizens and officials	Projects and locations specified by local technical staff, citizen comments and local elected officials

Project Evaluation

Each project within the 'Universe of Need' list were scored through a project scoring criteria established by the MPO TTCC Committee to assess how well each proposed project would accomplish the MTP goals as adopted by the Transportation Policy Committee. The overarching themes for which each project was scored are identified below:

Safety

Assessment of past fatal & serious injury crashes and the extent to which the project is expected to reduce these types of crashes.

Access & Equity

The extent to which the project addresses a transportation barrier and/or will improve biking, walking and transit service within the areas of greatest need.

Resiliency

The extent to which the project reduces system vulnerability and provides redundancy through a well maintained and efficient transportation system.

Economic Development

The extent to which the project supports existing, expanding, or new employment areas and its anticipated impact on the movement of goods and people.

Quality of Life

The extent to which the project supports quality growth and contributes to vibrant neighborhoods and the vitality of people.

Sustainability

The extent to which the project helps achieve a balance between the regions environmental, social and economic needs between the natural and built environments for present and future generations.

MPO Project Evaluation Criteria and Federal Goals

These MPO goals and evaluation criteria take into account national transportation goals established by the federal government, as noted in the following table.

Federal Goal	Performance Measure	Safety	Access & Equity	Resiliency	Economic Development	Quality of Life	Sustainability
Safety: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads	PM 1 Subpart B (Highway Safety)	X				X	
Infrastructure Condition: To maintain the highway infrastructure asset system in a state of good repair	PM 2 Subpart C & D (Pavement & Bridges)	X	X	X			X
Congestion Reduction: To achieve a significant reduction in congestion on the National Highway System	PM 3 Subpart G* (Traffic Congestion)	X	X	X	X	X	X
System Reliability: To improve the efficiency of the surface transportation system	PM 3 Subpart E & F (System Performance)		X	X	X	X	X
Freight Movement and Economic Vitality: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development	PM 3 Subpart F (Freight)		X	X	X		X
Environmental Sustainability: To enhance the performance of the transportation system while protecting and enhancing the natural environment	PM3 Subpart H* (Mobile Source Emissions)			X		X	X
Reduced Project Delivery Delays: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.					X		

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The project scoring was the first process used by MPO staff for developing project priority recommendations. Other considerations included the following:

The project's likelihood of success based upon its history and level of regional support.

Projects with significant design, engineering, right of way or utility relocation phases underway or completed would be identified as a short term committed priority unless very significant changes in conditions have taken place since 2019 such that the project no longer accomplishes the original purpose and need. Projects that have not had a significant public vetting process and have

potentially controversial scope of work may require additional vetting before being recommended as a priority within the MTP.

Since funding is heavily siloed, projects must have sufficient anticipated funding within the appropriate funding category in order to be included as a recommended priority.

Projects scored within the 30th percentile or less are not recommended as an MTP priority, even if sufficient resources are forecasted to be available except for the following circumstances:

- *Projects that are currently under development and which MPO staff have concluded remain viable and accomplish the original purpose and need.*

- *Projects for which the proposed scope of work is forecasted to significantly reduce an observed high number of fatal and/or serious injury crashes.*

Environmental Screening

Federal Environmental Justice Screening Tool

The environmental effects of transportation projects within the MPO area are considered during project planning and design as well as during the required National Environmental Protection Act (NEPA) environmental review process. NEPA requires us to assess, avoid and/or mitigate negative impacts. The goal is to consider possible impacts early in the planning process so that our decision-making is based on an understanding of environmental consequences to help us meet national and regional goals to protect, restore, and enhance the environment. The MPO uses tools including the EPA's NEPA Assist mapping tool and EJ Screen tool to complete a Red Flag screening of potential projects. Project scoring and evaluation criteria for all MTP projects also penalizes projects that may have environmental impacts or impact disadvantaged communities in negative ways. The MPO also consults with agencies that oversee environmental, historical and cultural programs and protection efforts when developing the MTP so that potential issues can be flagged prior to entering more detailed project development phases.

Addressing Inequity & Under-Investment

Justice40 Initiative

The Justice40 Initiative is a national effort to confront and address decades of under-investment in disadvantaged communities. Justice40 is not a one-time investment, nor is it a single pot of money. It is a USDOT policy with the goal that at least 40% of the benefits from federal transportation grants, programs, and initiatives flow to disadvantaged communities.

To that end, the Lexington Area MPO considered three equity-based measures when identifying and prioritizing projects for the MTP. This included an evaluation that identified whether a proposed project would fall within and provide benefits to:

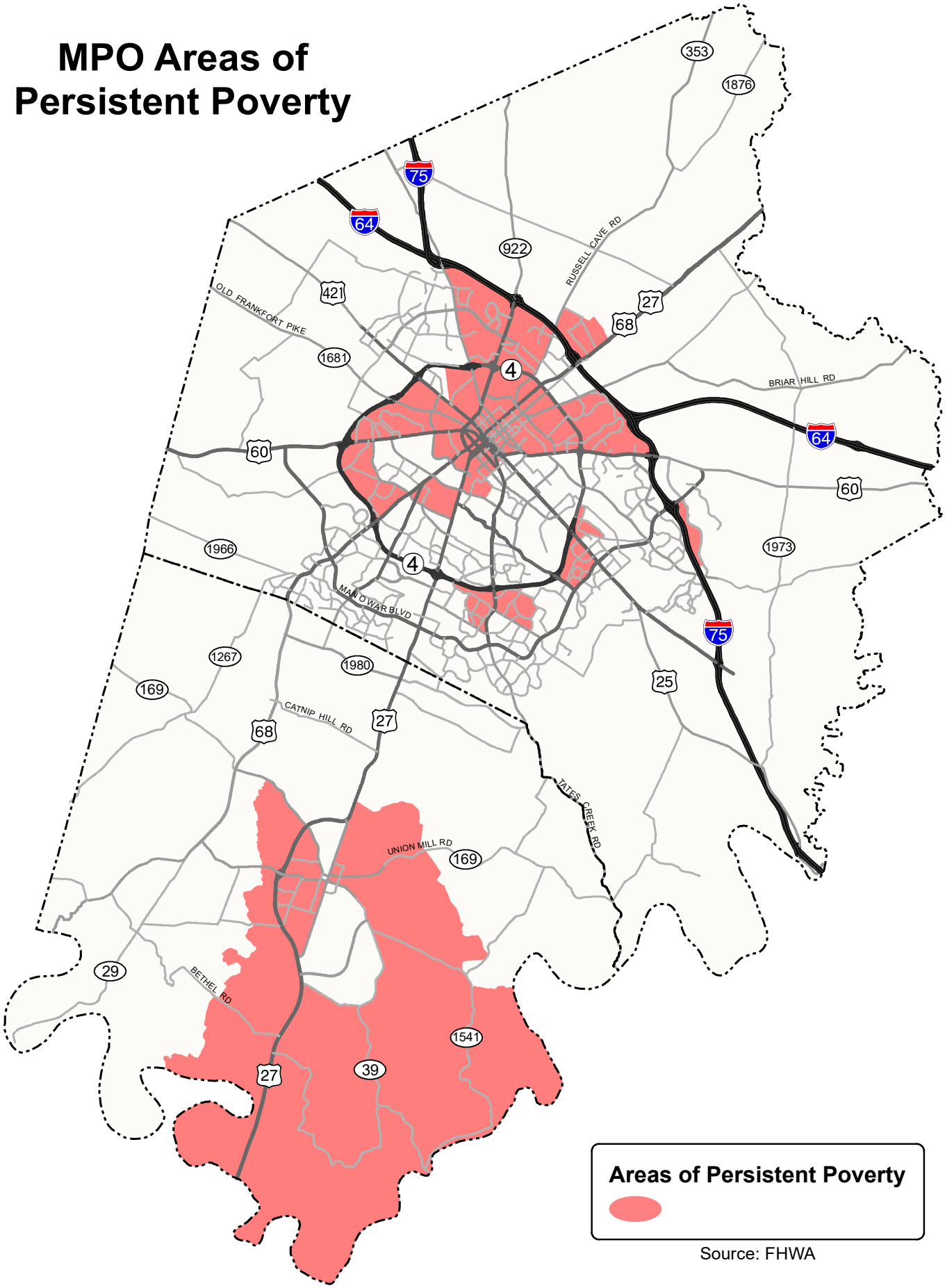
An "Area of Persistent Poverty" (as defined by USDOT and IIJA)

A "Historically Disadvantaged Community" (as defined by USDOT and IIJA)

An "Area of Persistent Poverty or Historically Disadvantaged Community" served by fixed-route public transit (as defined by USDOT and IIJA)

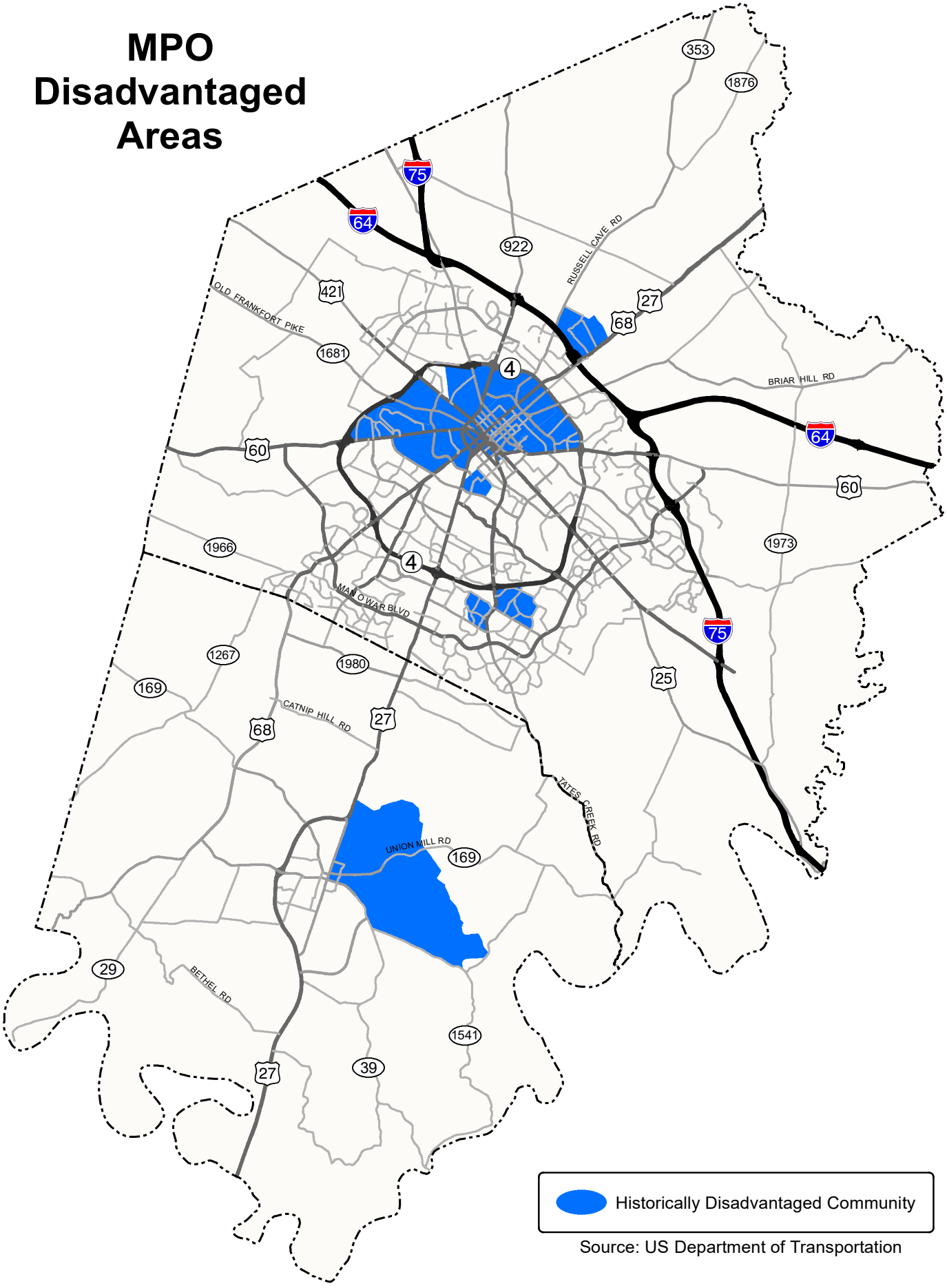
Census tract where residents spend greater than 20% of their income on transportation. (as provided by the Center for Neighborhood Technology's Housing and Transportation Affordability Index)

MPO Areas of Persistent Poverty



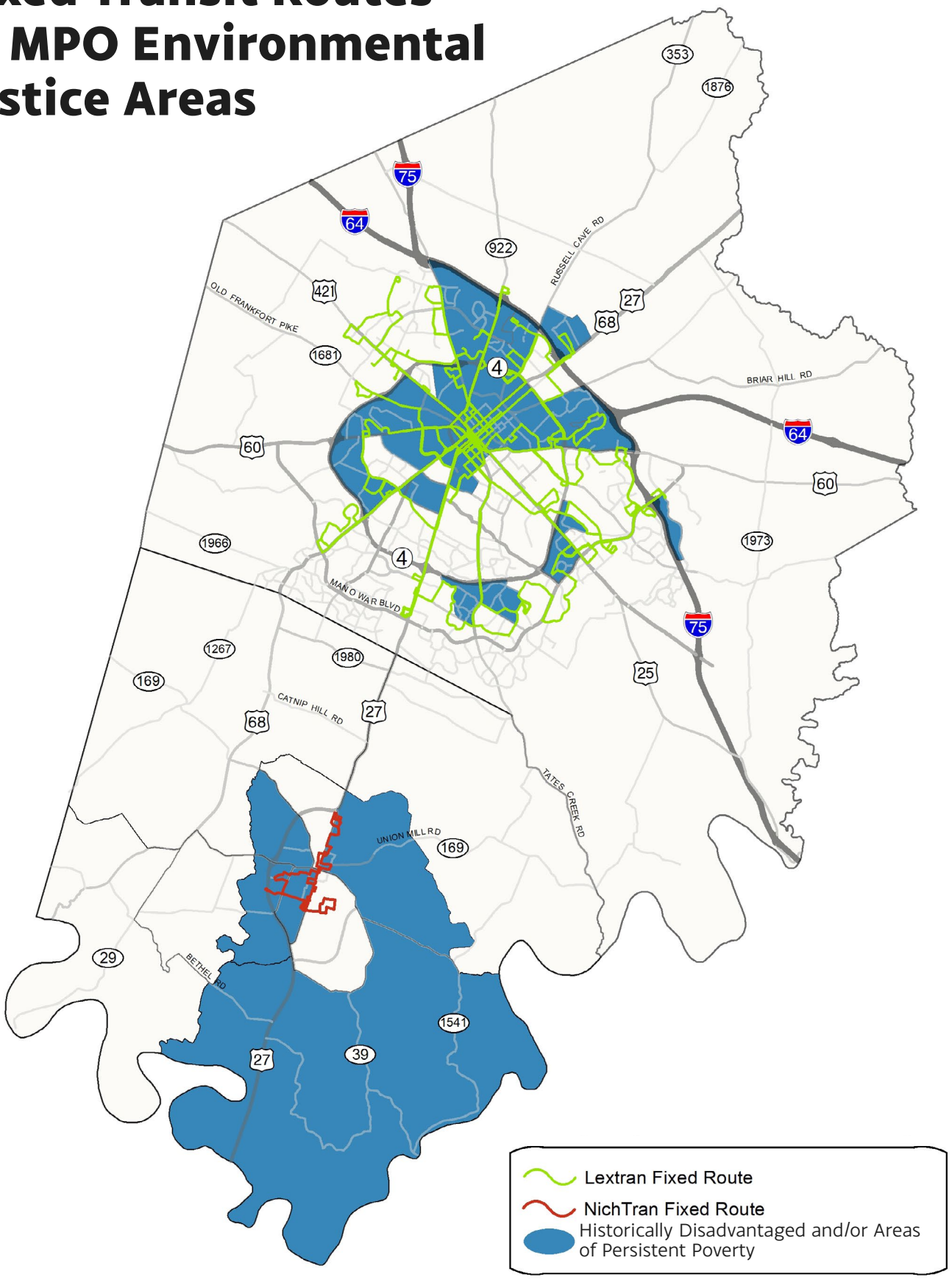
Source: FHWA

MPO Disadvantaged Areas

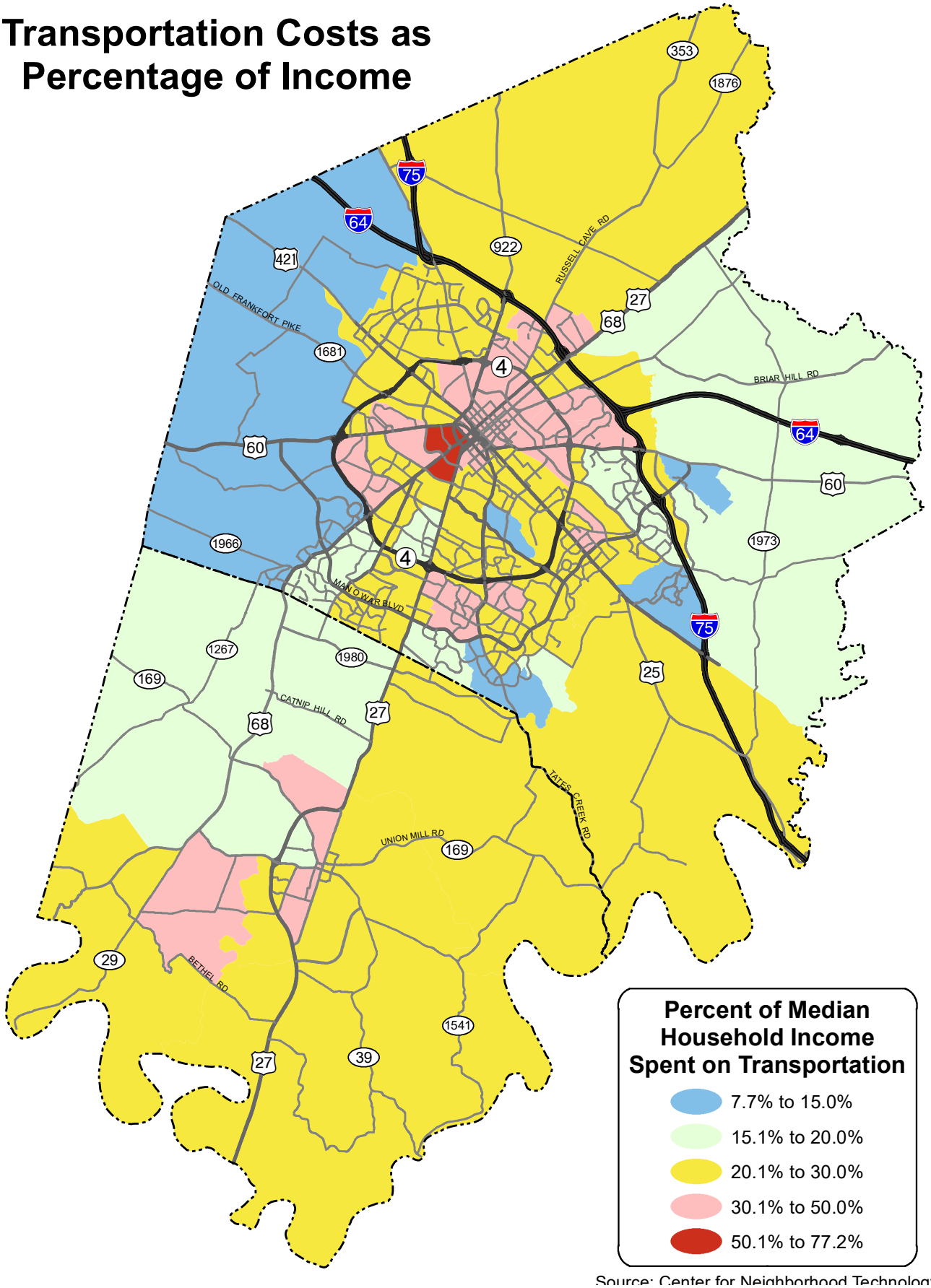


Source: US Department of Transportation

Fixed Transit Routes in MPO Environmental Justice Areas



Transportation Costs as Percentage of Income



Source: Center for Neighborhood Technology

Plan Recommendations

Achieving Our 2050 Vision

This section provides the projects, studies and strategies recommended for implementation in order to accomplish to goals and objectives adopted by the Transportation Policy Committee (See Chapter 3: 2050 Vision). Project priority is indicated by time band for which the project is recommended which also represents the approximate timing for construction or implementation. The total cost for each identified project has been estimated based on its anticipated construction year using a 4% annual rate of inflation. Each recommended project is anticipated to have sufficient funding available for construction or implementation during its identified time band.

Committed Infrastructure Projects

Projects on the Committed Infrastructure list are those which have met either of the first two conditions and the third condition:

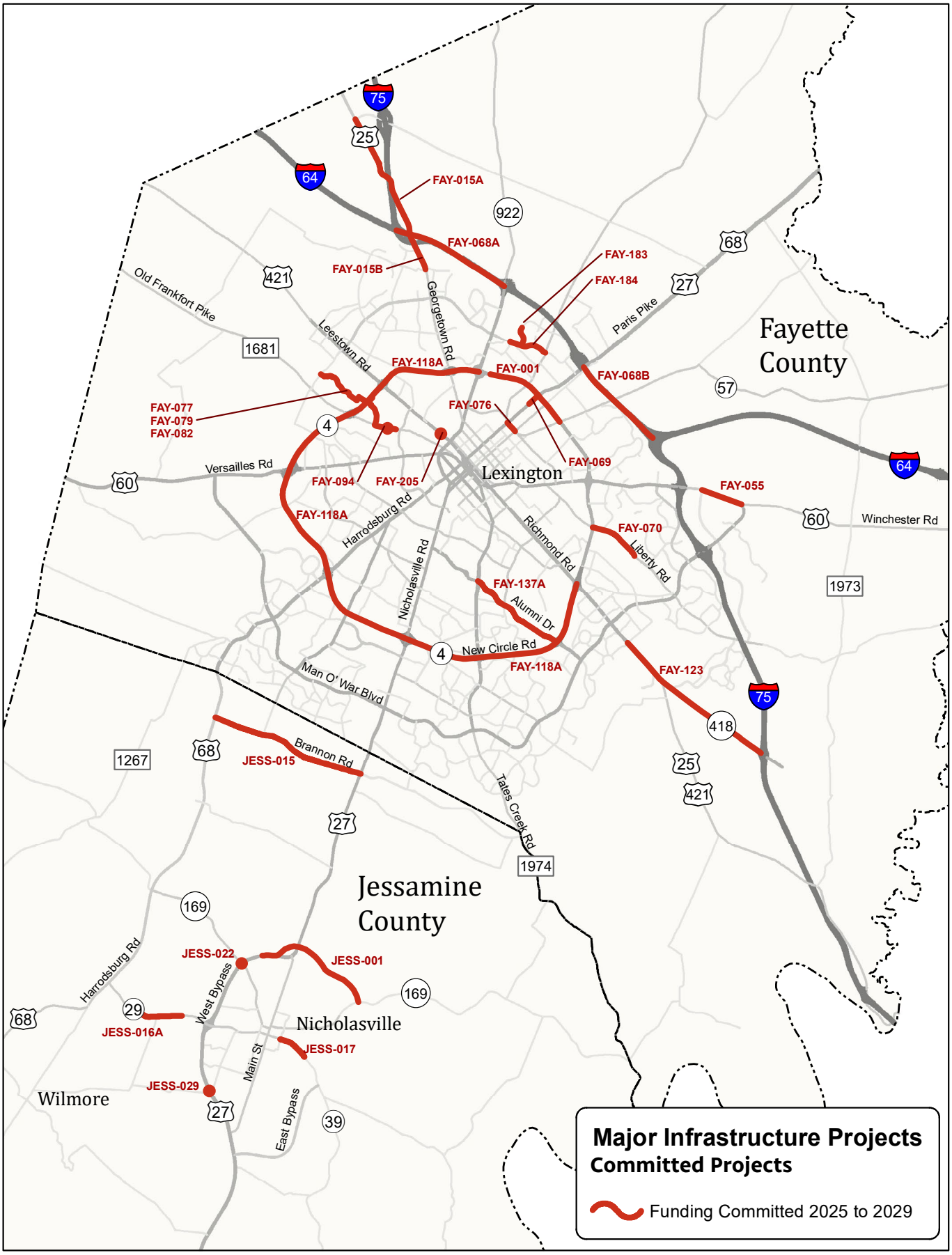
A formal funding commitment has been made for the construction or implementation phase

Or

The project has made significant progress towards being construction or implementation ready and thus a funding commitment is anticipated during the period between 2025 and 2029

MPO staff have evaluated the project and have determined that the project remains viable and continues to significantly accomplish one or more of the MTP goals and objectives

Projects on this list will form the basis of the 2025 to 2028 Transportation Improvement Program which is the implementation program for regionally significant projects. The 2025-2028 TIP is scheduled for adoption in September, 2024.

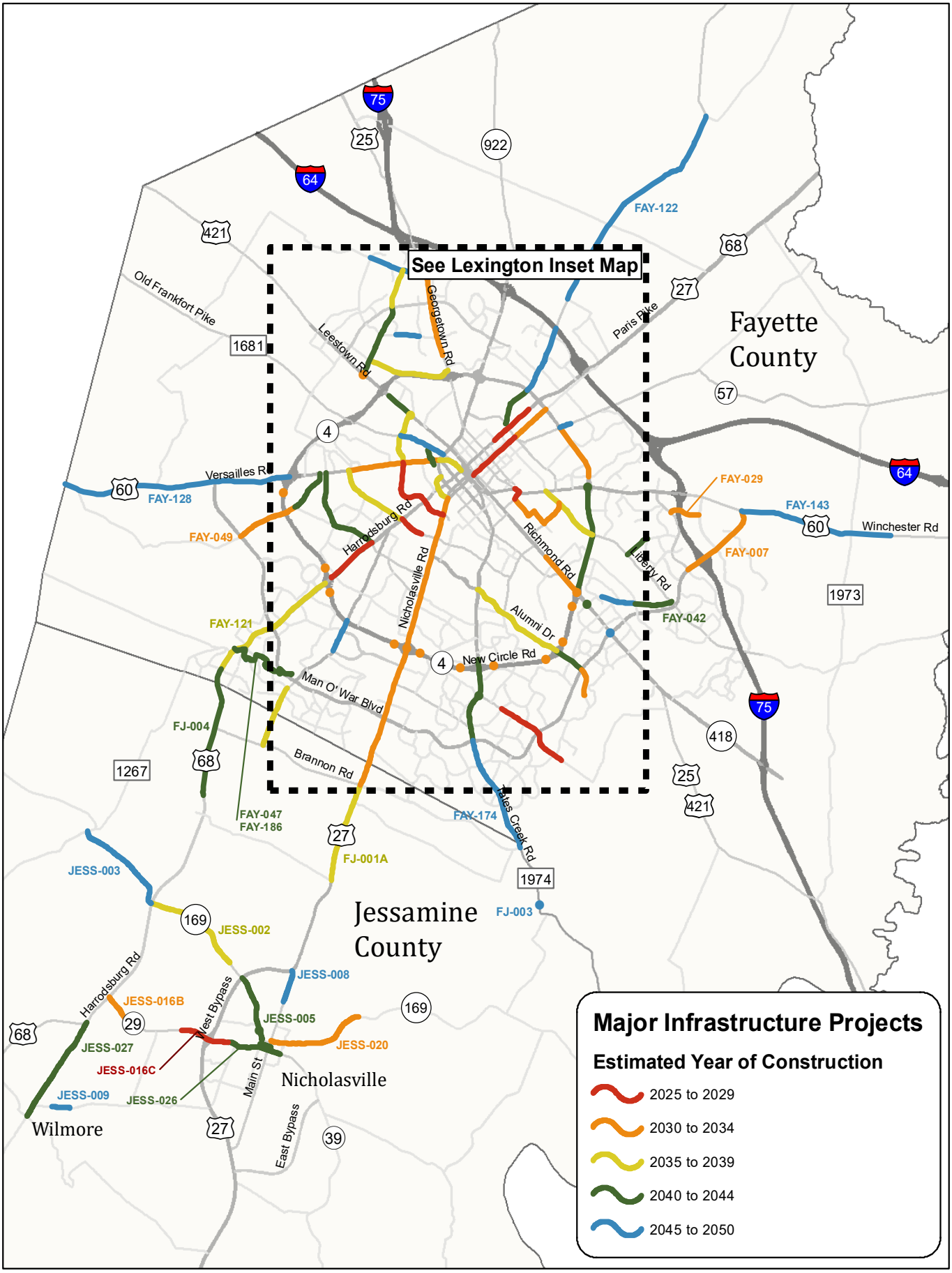

Fayette County
Jessamine County
Lexington
Nicholasville
Wilmore
FAY-015A
FAY-015B
FAY-068A
FAY-068B
FAY-183
FAY-184
FAY-001
FAY-076
FAY-069
FAY-077
FAY-079
FAY-082
FAY-118A
FAY-094
FAY-205
FAY-055
FAY-070
FAY-137A
FAY-123
JESS-015
JESS-022
JESS-001
JESS-016A
JESS-017
JESS-029
Old Frankfort Pike
Leestown Rd
Georgetown Rd
Paris Pike
Versailles Rd
Harrodsburg Rd
Nicholasville Rd
Richmond Rd
Liberty Rd
Alumni Dr
New Circle Rd
Man O' War Blvd
Brannon Rd
Tates Creek Rd
West Bypass
East Bypass
Main St
Winchester Rd
Major Infrastructure Projects
Committed Projects
Funding Committed 2025 to 2029

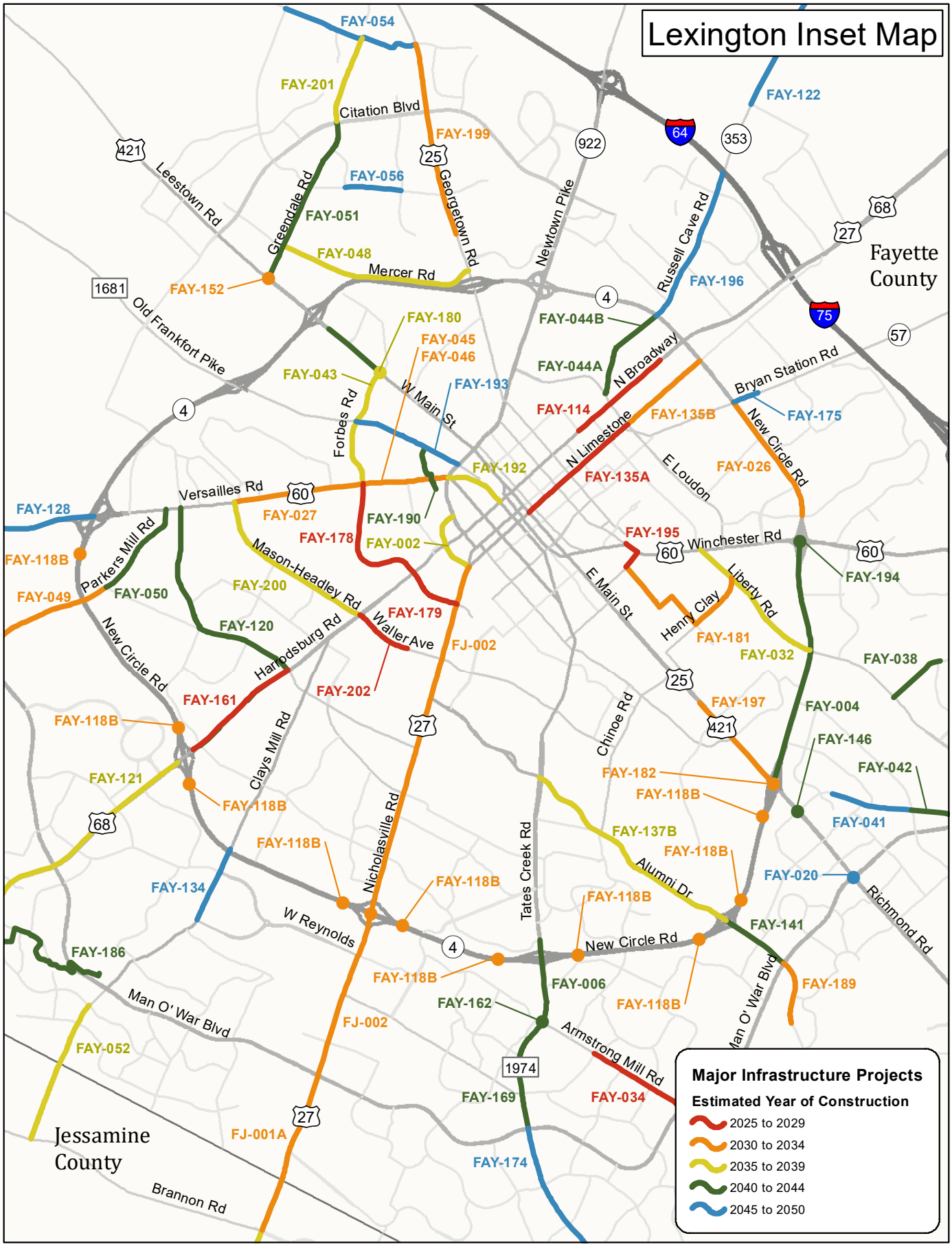
Committed Infrastructure Projects

Project ID	Road Name	State Route	From	To	Project Description	Primary Commitment	Total Cost
FAY-001	E New Circle Rd	KY 4	Development Dr	Bryan Station Rd (KY 57)	Modernize Roadway	Safe Streets & Roads for All	$24.60
FAY-015A	Georgetown Rd	US 25	Ironworks Pike (KY 1973)	Kearney Rd	Major Widening	State Highway Plan	$33.59
FAY-015B	Georgetown Rd	US 25	Kearney Rd	Spurr Rd (KY 1977)	Major Widening	State Highway Plan	$19.76
FAY-055	Winchester Rd	US 60	Polo Club Blvd	Man O' War Blvd	Reduce Congestion	State Highway Plan	$5.57
FAY-068A	Interstate 64/75 Common Route	I-75	Northern Split	Newtown Pike (KY 922)	Reduce Congestion	State Highway Plan	$25.10
FAY-068C	Interstate 64/75 Common Route	I-75	Paris Pike (US 27/68)	Southern Split	Reduce Congestion	State Highway Plan	$37.70
FAY-069	North Broadway	US 27 / 68	New Circle Rd (KY 4)	Northland Ave	Replace Bridge / Multimodal Project	US DOT RAISE Grant	$18.40
FAY-070	Liberty Rd	KY 1927	Graftons Mill Ln	New Circle Rd (KY 4)	Reduce Congestion	State Highway Plan	$11.16
FAY-076	West Loudon Ave	n/a	N Broadway (US 27/68)	N Limestone	Streetscape Improvements	MPO SLX Suballocation	$2.20
FAY-077	Town Branch Trail - Phase III	n/a	Alexandria Dr	Bizzell Dr	Construct Shared Use Path	US DOT TIGER Grant	$1.90
FAY-079	Town Branch Trail - Phase IV	n/a	Bizzell Dr	Townley Shopping Center	Construct Shared Use Path	US DOT TIGER Grant	$0.70
FAY-082	Town Branch Trail - Phase V	n/a	Townley Shopping Center	Terminus of TBT Phase VI	Construct Shared Use Path	US DOT TIGER Grant	$4.00
FAY-094	Town Branch Trail Crossing	KY 1681	Intersection at Old Frankfort Pike (KY 1681)		Construct Shared Use Path	US DOT TIGER Grant	$2.82
FAY-118A	New Circle Rd (Access Controlled)	KY 4	Newtown Pike (KY 922)	Richmond Rd (US 25 / 421)	Address Safety Concerns	Highway Safety Imp Program	$5.50
FAY-123	Richmond Rd / Athens-Boonesboro Rd	US 25/421 & KY 418	Interstate 75	Squires Rd / Yorkshire Blvd	Modernize Roadway / Address Safety Concerns	Highway Safety Imp Program	$10.43
FAY-137A	Alumni Dr	n/a	New Circle Rd (KY 4)	Tates Creek Rd	Construct Shared Use Path	Transp Alternatives Program	$2.99
FAY-183	Winburn Dr / Citation Blvd	n/a	Silver Springs Dr	Current Terminus of Winburn Dr	New Roadway	MPO SLX Suballocation	$5.00
FAY-184	Citation Blvd	n/a	Winburn Dr (Future)	Russell Cave Rd (KY 353)	New Roadway	State Highway Plan	$7.66
FAY-205	W Main St	US 421	Intersection at Buchanan		Intersection Redesign	MPO SLX Suballocation	$1.21
JESS-001	Nicholasville East Bypass	KY 2827	Union Mill Rd (KY 169)	Lexington Rd (US 27)	New Roadway	State Highway Plan	$76.70
JESS-015	Brannon Rd	KY 1980	Harrodsburg Rd (US 68)	Lexington Rd (US 27)	Modernize Roadway	State Highway Plan	$21.27
JESS-016A	West High Trail	KY 29	Cooks Ln	Allie Run	Construct Shared Use Path	Transp Alternatives Program	$2.34
JESS-017	East High Trail	KY 39	Cental Ave	East Jessamine HS Entrance	Construct Shared Use Path	Transp Alternatives Program	$2.20
JESS-022	Nicholasville West Bypass	US 27	Intersection at N 3rd St (KY 169)		Intersection Redesign	Coronavirus Relief	$0.70
JESS-029	W Nicholasville Bypass	US 27	Intersection at Shun Pike		Address Safety Concerns	Highway Safety Imp Program	$3.50
						Total Programmed:	$327.00

Major Infrastructure Recommendations

The Major Infrastructure list identifies regionally significant construction projects for which one or more phases of development have yet to be begun or completed. This includes Engineering Design, Right of Way Acquisition or Utility Relocation. All regionally significant projects require some assessment of environmental impact, for construction projects this generally occurs during the Engineering Design phase. Major Infrastructure projects are also those that are either a new facility on new alignment or make significant changes in either the capacity of the facility, how the facility operates or how specific intersections are configured regardless of which travel mode is being impacted. Major infrastructure projects are also considered more significant than Grouped Projects with construction costs generally in excess of $1.0 million. (See the section on Grouped Projects).


See Lexington Inset Map
Fayette County
Jessamine County
Nicholasville
Wilmore
Old Frankfort Pike
Versailles Rd
Georgetown Rd
Leestown Rd
Paris Pike
Harrodsburg Rd
Nicholasville Rd
Richmond Rd
Liberty Rd
Alumni Dr
New Circle Rd
Man O' War Blvd
Brannon Rd
Tates Creek Rd
Winchester Rd
West Bypass
East Bypass
Main St
FAY-122
FAY-128
FAY-049
FAY-121
FAY-047
FAY-186
FAY-174
FAY-029
FAY-143
FAY-007
FAY-042
FJ-004
FJ-001A
FJ-003
JESS-003
JESS-002
JESS-008
JESS-016B
JESS-005
JESS-020
JESS-027
JESS-016C
JESS-009
JESS-026
1681
1267
1974
1973
Major Infrastructure Projects
Estimated Year of Construction
2025 to 2029
2030 to 2034
2035 to 2039
2040 to 2044
2045 to 2050


Lexington Inset Map
FAY-054
FAY-201
Citation Blvd
FAY-199
FAY-056
FAY-051
FAY-048
Mercer Rd
FAY-152
Leestown Rd
Greendale Rd
Georgetown Rd
Newtown Pike
922
64
353
FAY-122
Russell Cave Rd
FAY-196
68
27
Fayette County
75
57
FAY-044B
FAY-044A
N Broadway
Bryan Station Rd
FAY-175
New Circle Rd
FAY-026
FAY-135B
FAY-114
N Limestone
E Loudon
FAY-135A
FAY-180
FAY-045
FAY-046
FAY-043
FAY-193
W Main St
Forbes Rd
FAY-192
FAY-190
Old Frankfort Pike
Versailles Rd
60
FAY-027
FAY-178
FAY-002
FAY-128
FAY-118B
Parkers Mill Rd
FAY-049
FAY-050
FAY-200
Mason-Headley Rd
FAY-120
Harrodsburg Rd
FAY-179
Waller Ave
FJ-002
FAY-202
FAY-161
New Circle Rd
FAY-195
Winchester Rd
FAY-194
E Main St
Henry Clay
Liberty Rd
FAY-181
FAY-032
FAY-038
FAY-004
FAY-197
421
25
Chinoe Rd
FAY-146
FAY-042
FAY-182
FAY-118B
FAY-041
FAY-137B
FAY-118B
Alumni Dr
FAY-020
Richmond Rd
FAY-141
FAY-121
FAY-118B
68
FAY-134
Clays Mill Rd
Nicholasville Rd
Tates Creek Rd
W Reynolds
FAY-186
FAY-118B
FAY-118B
FAY-118B
New Circle Rd
FAY-006
FAY-162
FAY-118B
FAY-189
Man O' War Blvd
Armstrong Mill Rd
1974
FAY-052
FJ-001A
FAY-169
FAY-034
FAY-174
Jessamine County
Brannon Rd
Major Infrastructure Projects
Estimated Year of Construction
2025 to 2029
2030 to 2034
2035 to 2039
2040 to 2044
2045 to 2050

Major Infrastructure Recommendations

2025-2029

Project ID	Road Name	State Route	From	To	Project Description	Safety	Access and Equity	Resiliency	Economic Development	Quality of Life	Sustainability	Total Percentile Score	2025 Cost	Year of Expenditure Cost	Considerations
FAY-114	North Broadway	US 27 / 68	W 6th Street	Northland Ave	Modernize Roadway	✓✓	✓			✓✓		97	$4.01	$4.01	
FAY-195	Winchester Rd / Walton Ave	US 60	E 3rd St / Midland Ave	Cramer Ave	Modernize Roadway					✓	✓✓	91	$7.93	$7.93	Accelerate: Critical trail connection
FAY-135A	N Limestone	n/a	Main St	Loudon Ave	Modernize Roadway		✓			✓		84	$9.34	$9.34	
FAY-191	Harrodsburg Rd	US 68	New Circle Rd (KY 4)	Lane Allen Rd	Construct Shared Use Path					✓	✓	84	$3.10	$3.10	
JESS-016C	West High Trail	KY 29	Allie Run	W Nicholasville Bypass (US 27)	Construct Shared Use Path							84	$3.05	$3.05	Accelerate: School connection
FAY-179	Virginia Ave	US 27	S Broadway (US 27 / 68)	S Limestone (US 27)	Modernize Roadway		✓			✓	✓✓	75	$2.95	$2.95	Accelerate: UK / Student Housing connection
FAY-178	Red Mile Rd	n/a	Versailles Rd (US 60)	S Broadway (US 27 / 68)	Modernize Roadway		✓				✓✓	65	$8.96	$8.96	Accelerate: UK Connection
FAY-034	Armstrong Mill Rd	n/a	Appian Way	Squires Hill Ln	Construct Shared Use Path			✓✓		✓		65	$4.53	$4.53	
JESS-028	Wilmore Rd	KY 29	Nicholasville West Bypass (US 27)	Hoover Blvd	Intersection Redesign							65	$4.53	$4.53	Accelerate: School X-ing over Bypass
FAY-202	Waller Ave	n/a	Harrodsburg Rd (US 68)	CNOT&P Railroad	Construct Sidewalks						✓✓	59	$2.15	$2.15	Accelerate: UK / Med Center connection

Total Programmed: $50.55

Total Available: $51.00

✓✓ Achieves Goal Exceptionally Well

✓ Achieves Goal Well

Major Infrastructure Recommendations

2030-2034

Project ID	Road Name	State Route	From	To	Project Description	Safety	Access and Equity	Resiliency	Economic Development	Quality of Life	Sustainability	Total Percentile Score	2025 Cost	Year of Expenditure Cost	Considerations
FAY-026	E New Circle Rd	KY 4	Bryan Station Rd (KY 57)	Eastland Parkwy	Modernize Roadway	✓✓	✓✓	✓✓	✓✓	✓✓		99	$26.50	$37.71	
FJ-002	Nicholasville Rd / S Limestone	US 27	Scott St	Brannon Rd (KY 1980)	Modernize Roadway	✓✓	✓	✓✓	✓✓	✓		98	$29.00	$41.27	Note: FTA costs included in transit projects
FAY-027	Versailles Rd	US 60	Mason Headley	Red Mile / Forbes Rd	Modernize Roadway	✓✓	✓					95	$11.31	$16.09	
FAY-029	Hamburg Connector	n/a	Polo Club Blvd	Sir Barton Way	New Roadway	✓			✓✓	✓		93	$29.68	$42.23	
FAY-017	New Circle Rd	KY 4	Intersection at Nicholasville Rd	n/a	Intersection Redesign				✓✓			91	$29.25	$41.62	
FAY-181	East Lex Trail	n/a	Walton Ave	Liberty Rd	Modernize Roadway			✓		✓✓	✓	88	$8.02	$11.41	Delay: Coordination with other trail phases
FAY-152	Leestown Rd	US 421	Intersection at Greendale Rd (KY 1978)		Intersection Redesign	✓			✓			84	$5.13	$7.30	
JESS-016B	West High Trail	KY 29	Harrodsburg Rd (US 68)	Cooks Ln	Construct Shared Use Path							84	$4.25	$6.05	Delay: Coordination with other trail phases
FAY-199	Georgetown Rd	US 25	Briarwood Dr	Spurr Rd (KY 1977)	Construct Shared Use Path							78	$4.78	$6.80	Delay: No concepts or design yet
FAY-135B	N Limestone	n/a	Loudon Ave	New Circle Rd (KY 4)	Modernize Roadway		✓			✓		76	$6.88	$9.79	
FAY-182	Richmond Rd	US 25 / 421	Intersection at New Circle Rd (KY 4)		Intersection Redesign	✓						75	$4.05	$5.76	
JESS-020	Richmond Ave	KY 169	N Main St (US 27X)	Nicholasville East Bypass (KY 2827)	Modernize Roadway				✓✓			59	$14.50	$20.63	Accelerate: School connection
FAY-118B	New Circle Rd	KY 4	On-Ramp Merges at Versailles, Harrodsburg, Nicholasville, Tates Creek, Alumni and Richmond Roads		Modernize Roadway	✓✓						59	$9.00	$12.81	
FAY-045	Versailles Rd	US 60	Red Mile / Forbes Rd	Porter Place	Modernize Roadway		✓			✓✓	✓	49	$2.92	$4.16	
FAY-046	W High St	US 60	Porter Pl	Oliver Lewis Way (KY 922)	Modernize Roadway		✓			✓	✓✓	47	$3.85	$5.48	
FAY-197	Richmond Rd	US 25 / 421	New Circle Rd (KY 4)	Shriners Ln	Modernize Roadway							45	$2.52	$3.59	
FAY-007	Man O' War Blvd	KY 1425	Winchester Rd (US 60)	Sir Barton Way	Major Widening				✓✓			41	$19.02	$27.07	Accelerate: Hospitals / New Development
FAY-049	Parkers Mill Rd	KY 1968	Lane Allen Rd	Man O' War Blvd	Modernize Roadway			✓✓				36	$17.38	$24.73	Accelerate: Urban Boundary / Park Expansion
FAY-189	Alumni Dr	n/a	Man O' War Blvd	Squires Shared Use Path	Construct Shared Use Path						✓✓	32	$1.40	$1.99	

Total Programmed: $326.49

Total Available: $327.67

✓✓ Achieves Goal Exceptionally Well

✓ Achieves Goal Well

Major Infrastructure Recommendations

2035-2039

Project ID	Road Name	State Route	From	To	Project Description	Safety	Access and Equity	Resiliency	Economic Development	Quality of Life	Sustainability	Total Percentile Score	2025 Cost	Year of Expenditure Cost	Considerations
FAY-002	Scott Street Connector	n/a	Oliver Lewis Way (KY 922)	South Limestone	New Roadway	✓	✓✓	✓✓		✓✓		96	$32.76	$56.74	Delay: Complicated design / ROW
FAY-192	W High St	n/a	S Broadway (US 27 / 68)	Oliver Lewis Way (KY 922)	Road Diet	✓					✓✓	88	$35.58	$61.62	
FJ-001A	Lexington Rd	US 27	Catnip Hill Rd (KY 3375)	Fayette / Jessamine County Line	Access Management	✓✓			✓			87	$23.37	$40.48	
FAY-121	Harrodsburg Rd	US 68	Dogwood Trace	New Circle Rd (KY 4)	Modernize Roadway	✓		✓	✓✓			86	$24.52	$42.47	
FAY-043	Forbes Rd	n/a	Leestown Rd (US 421)	Versailles Rd (US 60)	Modernize Roadway				✓	✓		76	$12.39	$21.46	Delay: Complicated design / ROW
FAY-200	Mason-Headley Rd	n/a	Versailles Rd (US 60)	Harrodsburg Rd (US 68)	Construct Shared Use Path				✓		✓	72	$5.60	$9.70	
FAY-048	Mercer Rd	n/a	Greendale Rd (KY 1978)	Georgetown Rd (US 25)	Modernize Roadway				✓✓			68	$18.38	$31.83	
FAY-137B	Alumni Dr	n/a	New Circle Rd (KY 4)	Tates Creek Rd	Modernize Roadway			✓✓				68	$11.25	$19.49	
FAY-180	Leestown Rd	US 421	Intersection at Forbes Rd		Intersection Redesign			✓✓	✓			68	$6.13	$10.62	
FAY-032	Liberty Rd	n/a	New Circle Rd (KY 4)	Winchester Rd (US 60)	Modernize Roadway							59	$17.40	$30.14	
FAY-201	Greendale Rd	KY 1978	Citation Blvd	Spurr Rd (KY 1977)	Modernize Roadway					✓✓		55	$9.84	$17.04	
JESS-002	Keene Rd	KY 169	Harrodsburg Rd (US 68)	Keene Way Dr	Modernize Roadway							53	$21.94	$38.00	
FAY-052	Clays Mill Rd	n/a	Brannon Rd (KY 1980)	Twain Ridge	Modernize Roadway							25	$20.06	$34.74	Accelerate: New Development / Brannon Conn

Total Programmed: $414.33

Total Available: $423.00

✓✓ Achieves Goal Exceptionally Well

✓ Achieves Goal Well

Major Infrastructure Recommendations

2040-2044

Project ID	Road Name	State Route	From	To	Project Description	Safety	Access and Equity	Resiliency	Economic Development	Quality of Life	Sustainability	Total Percentile Score	2025 Cost	Year of Expenditure Cost	Considerations
FAY-044B	Russell Cave Rd	n/a	Lexmark Centre Dr	New Circle Rd (KY 4)	Modernize Roadway		✓				✓✓	92	$1.05	$2.21	Begin road diet focus after 2035
FAY-161	Harrodsburg Rd	US 68	Larkspur Dr	Springhurst Dr	Intersection Redesign	✓			✓			91	$3.90	$8.22	Road currently operating satisfactorialy
FJ-001C	Lexington Rd	US 27	West Nicholasville Bypass (US 27)	Catnip Hill RD (KY 3375)	Access Management	✓✓			✓			87	$19.23	$40.52	Delay: Coordination with other US 27 phases
FAY-169	Tates Creek Rd	KY 1974	Armstrong Mill Rd	Man O' War Blvd	Modernize Roadway				✓			86	$2.69	$5.67	Road currently operating satisfactorialy
JESS-026	Maple St / Wilmore Rd	KY 29 / KY 39	Hoover Blvd	Central Ave	Modernize Roadway					✓✓	✓	84	$8.68	$18.29	
FAY-004	E New Circle Rd	KY 4	Richmond Rd (US 25 / 421)	Winchester Rd (US 60)	Reduce Congestion				✓✓	✓		65	$36.95	$77.85	
FAY-120	Lane Allen Rd / Alexandria Dr	n/a	Harrodsburg Rd (US 68)	Versailles Rd (US 60)	Modernize Roadway				✓			65	$10.99	$23.16	
FAY-162	Tates Creek Rd	KY 1974	Intersection at Redding Rd/Armstrong Mill Rd		Intersection Redesign				✓			65	$5.13	$10.81	
FAY-042	Old Todds Rd	n/a	Palumbo Dr	Liberty Rd (KY 1927)	Modernize Roadway				✓	✓	✓	59	$6.13	$12.92	
FAY-044A	Russell Cave Rd	n/a	West Loudon Ave	Lexmark Centre Dr	Modernize Roadway							55	$10.40	$21.91	
FAY-190	Driscoll St / De Roode St	n/a	Manchester St (KY 1681)	Young Franklin Way	Construct Shared Use Path					✓	✓✓	55	$1.41	$2.97	
JESS-005	N 3rd St	KY 169	Nicholasville West Bypass (US 27)	West Oak Street	Modernize Roadway							53	$14.25	$30.02	
FAY-006	Tates Creek Rd	KY 1974	Malabu Dr	Armstrong Mill Rd	Modernize Roadway				✓			53	$11.85	$24.97	
FAY-038	Old Rosebud Connector	n/a	Existing Old Rosebud	Liberty Rd (KY 1927)	New Roadway			✓✓		✓		53	$9.72	$20.48	Delay: Timing with Liberty Rd project
FAY-194	New Circle Rd	KY 4	Intersection at Winchester Rd (US 60)		Intersection Redesign						✓	49	$6.00	$12.64	
FAY-198	Leestown Rd	US 421	Towne Center Dr	N Forbes Rd	Construct Sidewalks						✓	49	$2.35	$4.95	
FAY-051	Greendale Rd	KY 1978	Leestown Rd (US 421)	Citation Blvd	Modernize Roadway				✓✓			47	$19.95	$42.03	
JESS-019	North 3rd St	KY 169	Bridge over CNOT&P RR		Replace Bridge							47	$3.15	$6.64	
FAY-141	Alumni Dr	n/a	Man O' War Blvd	New Circle Rd (KY 4)	Intersection Redesign			✓✓				44	$6.28	$13.23	
FAY-050	Parkers Mill Rd	KY 1968	Versailles Rd (US 60)	Lane Allen Rd	Modernize Roadway							42	$24.99	$52.65	
FAY-146	Richmond Rd	US 25 / 421	Intersection at Old Todds Rd		Intersection Redesign							41	$7.50	$15.80	
FAY-012	Harrodsburg Rd	US 68	Pasadena Dr	Burbank Rd	Intersection Redesign							41	$4.00	$8.43	
FAY-186	South Elkhorn Trail	n/a	Higbee Mill Rd	Old Harrodsburg Rd	Construct Shared Use Path						✓	37	$7.96	$16.77	Delay: ROW challenge / cost
JESS-027	N Lexington Ave (Wilmore)	KY 29	Harrodsburg Rd (US 68)	Main St (KY 1268)	Construct Shared Use Path							36	$6.18	$13.02	
FJ-004	Harrodsburg Rd	US 68	Dogwood Trace	Burr Oak Dr / Golf Club Dr	Construct Shared Use Path							30	$8.07	$17.00	

Total Programmed: $203.16

Total Available: $533.68

✓✓ Achieves Goal Exceptionally Well

✓ Achieves Goal Well

Major Infrastructure Recommendations

2045-2050

Project ID	Road Name	State Route	From	To	Project Description	Safety	Access and Equity	Resiliency	Economic Development	Quality of Life	Sustainability	Total Percentile Score	2025 Cost	Year of Expenditure Cost	Considerations
FAY-041	Old Todds Rd	n/a	Catera Trace	Palumbo Dr	Modernize Roadway				✓	✓	✓	75	$2.99	$7.97	Road currently operating satisfactorialy
FAY-175	Bryan Station Rd	KY 57	New Circle Rd (KY 4)	Rockwood Pkwy	Modernize Roadway	✓	✓					72	$2.19	$5.84	Begin road diet focus after 2035
JESS-008	Main St (Nicholasville)	US 27X	Orchard Ln	Nicholasville West Bypass (US 27)	Modernize Roadway						✓	70	$7.70	$20.53	Road currently operating satisfactorialy
FAY-196	Russell Cave Rd	KY 353	New Circle Rd (KY 4)	Interstate 75	Road Diet	✓	✓					68	$2.64	$7.04	Begin road diet focus after 2035
FAY-054	Spurr Rd	KY 1977	Georgetown Rd (US 25)	Sandersville Rd	Modernize Roadway							36	$18.32	$48.84	
FAY-020	Richmond Rd	US 25/421	Intersection at Man O' War Blvd	n/a	Intersection Redesign				✓			36	$12.40	$33.06	
FAY-143	Winchester Rd	US 60	Man O' War Blvd	Haley Rd (KY 859)	Reduce Congestion							32	$21.04	$56.09	
FAY-047	Twain Ridge Connector	n/a	Existing Twain Ridge Dr	Harrodsburg Rd (US 68)	New Roadway							32	$3.42	$9.12	
FAY-056	Sandersville Rd	n/a	Calendula Rd	Jaggie Fox Way	Modernize Roadway			✓✓				30	$20.91	$55.75	Delay: Very expensive bridge project
JESS-009	Jessamine Station Rd	KY 3433	Mockingbird Ln	Woodspointe Way	Modernize Roadway							30	$3.62	$9.65	
FJ-003	Tates Creek Rd	KY 1974	Intersection at Delong Rd		Intersection Redesign			✓				28	$3.34	$8.90	Challenging intersection design
FAY-128	Versailles Rd	US 60	New Circle Rd (KY 4)	Bluegrass Pkwy	Modernize Roadway	✓✓						27	$26.92	$71.77	Accerlerate: Safety Concern
FAY-193	Manchester Ave	KY 1681	Oliver Lewis Way (KY 922)	Forbes Rd	Modernize Roadway							27	$22.72	$60.57	Future Safety Concern
FAY-134	Clays Mill Rd	n/a	Keithshire Way	Stone Rd	Modernize Roadway					✓		26	$2.80	$7.46	Safety concern identified within Safety Action Plan
FAY-174	Tates Creek Rd	KY 1974	Man O' War Blvd	Ashgrove Rd (KY 1980)	Modernize Roadway							24	$16.01	$42.68	
FAY-122	Russell Cave Rd	KY 353	Faulkner Ave	KY 1876 (Greenwhich Pike)	Modernize Roadway							21	$24.52	$65.37	Safety concern identified within Safety Action Plan
JESS-003	Keene Rd	KY 169	Harrodsburg Rd (US 68)	Keene-South Elkhorn Rd (KY 1267)	Modernize Roadway							1	$21.38	$57.00	Inadequate design, monitor conditions

Total Programmed: $477.42

Total Available: $809.10

✓✓ Achieves Goal Exceptionally Well

✓ Achieves Goal Well

Transit Priority Recommendations

Transit projects sometimes includes infrastructure construction, the primary difference being that the infrastructure is in support of a new or existing public transportation service. This section separates the capital projects from the operational costs for proposed regionally significant transit services. Similar to other infrastructure projects, transit recommendations are anticipated to have sufficient funding available for implementation during its identified time band. Note that operational costs for each transit service operating within the Lexington Region is considered a Grouped Project. (See the section on Grouped Projects).

Transit Priorities

Public Transportation Capital Project Recommendations: 2025 through 2050

Project ID	Project Name	Project Description	Funding Committed	2025 to 2029	2030 to 2034	2035 to 2039	2040 to 2044	2045 to 2050	2025 Cost	Year of Expenditure Cost	Considerations
T-006	Lextran Transit Center Improvements	Renovate downtown transit center to update and upgrade passenger facilities	X						$2.60	$2.60	
T-001A	Lextran Fixed Route Clean Bus Purchases	Transition fleet to Compressed Natural Gas (CNG) or Battery Electric - 6 vehicles per year		X	X	X	X	X	$150.00	$267.84	Combination annual capital outlays and carbon reduction funds
T-014	Lextran Electric Vehicle Canopy Project	Install canopy and recharging stations to protect and service Battery Electric Buses		X					$10.00	$10.00	
T-005	Lextran Wheels Operations & Maintenance Facility	Construct new facility dedicated to servicing Lextran Wheels vehicles			X				$2.00	$2.84	
T-008	Lextran Farebox Replacement	Update and upgrade farebox equipment on Lextran Buses			X				$0.75	$1.07	
T-001B	Lextran Wheels Cutaway Vehicle Purchases	Transition fleet from leased to owned vehicles - 5 per year			X	X	X	X	$3.00	$5.95	
FJ-002	Nicholasville Rd Bus Rapid Transit or Other Enhanced Service - Capital Expenditures	Implement enhanced transit service between Downtown Lexington and Brannon Crossing based on recommendations from US 27 Feasibility Study			X				$26.67	$37.95	Roadway costs included in major infrastructure recommendations
									Total Programmed:	$328.25	
									Total Available:	$330.00	

Public Transportation New Service Project Recommendations: 2025 through 2050

Project ID	Project Name	Project Description	Funding Committed	2025 to 2029	2030 to 2034	2035 to 2039	2040 to 2044	2045 to 2050	2025 Cost	Year of Expenditure Cost	Considerations
T-012	BGCAP Intercity Bus Service	Peak Period bus service between Georgetown and Downtown Lexington			X	X	X	X	$3.75	$6.70	
T-013	BGCAP Intercity Bus Service	Peak Period bus service between Frankfort and Downtown Lexington			X	X	X	X	$3.75	$6.70	
T-015	Expansion of Lextran Wheels Services	Expand operations to serve between 15,000 and 17,000 trips monthly				X	X	X	$54.00	$110.38	Additional cost above current operations (12,000 trips monthly)
FJ-002	Nicholasville Rd Bus Rapid Transit or Other Enhanced Service - Operations Expenditures	Implement enhanced transit service between Downtown Lexington and Brannon Crossing based on recommendations from US 27 Feasibility Study				X	X	X	$26.25	$56.92	
									Total Programmed:	$180.70	
									Total Available:	$181.00	

Assessing Equity & Environmental Justice

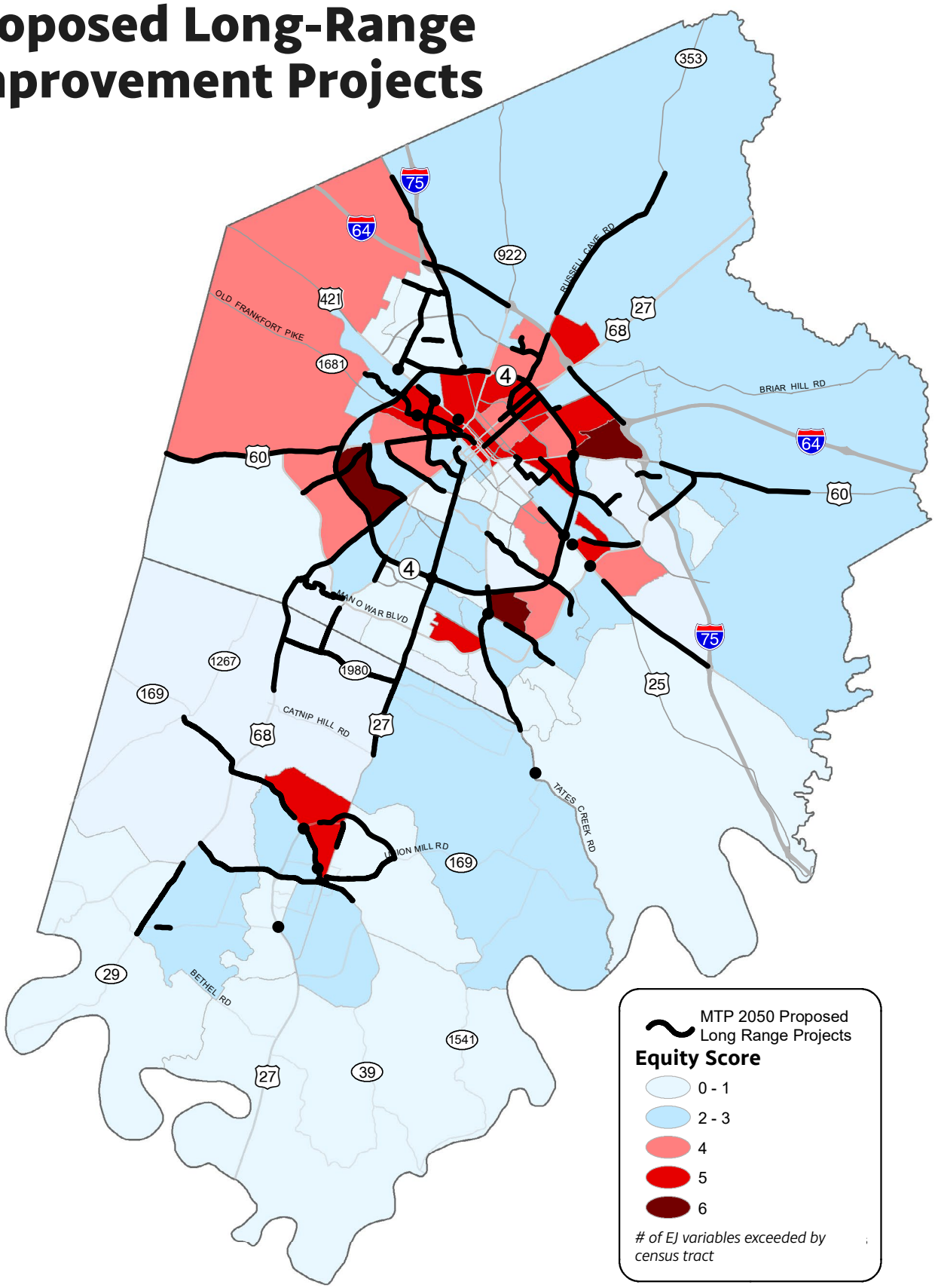
Equity Target Areas

The MPO used US Census Bureau data to develop an Equity Target Area map to identify communities in the Lexington Area MPO that are protected by national non-discrimination acts. Identifying Equity Target Areas helps the MPO make sure that there is an equitable distribution of transportation services, facilities and resources within the community without regard to income, race, age, ability and other socio-economic factors; and to ensure that there are not disproportionate negative impacts or burdens on minority and low-income populations.

To identify these ETAs, a regional average for certain socio-economic demographics was established utilizing the American Community Survey 5 year Estimates. A regional "threshold" was identified and census tracts that exceeded that threshold were identified as a targeted equity area. For example, the average percentage of the population in the Lexington Area that is living below the poverty level is 17%. Census tracts that meet or exceed this threshold were then mapped. A compilation of Equity Target Areas was generated to demonstrate the greatest concentrations of EJ-sensitive populations. Darker areas on the map indicate a greater concentration of various EJ populations.

The MTP projects are overlaid on these Equity Target Areas in order to assess any benefits and burdens on EJ populations and to ensure equitable distribution of federal funds. The presence of EJ populations in the vicinity of proposed projects are also weighted in the project scoring/selection process. The equity assessment map demonstrates equitable distribution of MTP projects.

Equity Assessment of Proposed Long-Range Improvement Projects



Source: United States Census Burreau - 2020 ACS 5-Year Estimates

Pending adoption, this section will include a Travel Demand Impact Assessment for the timespan of the MTP 2050, if the recommended projects are implemented.

Travel Demand Assessment of Proposed Long Range Improvement Projects

Grouped Projects

Grouped Projects are relatively small-scale transportation projects that make important contributions to the region's transportation system and the achievement of Lexington Area MPO goals but are not considered major infrastructure projects. In general, Grouped Projects have a construction cost of less than $1.0 million in 2025 dollars. The Grouped Project designation is used to more efficiently advance projects through the transportation planning process to better serve the residents of the region by delivering projects more quickly. Due to their small size, Grouped Projects are not individually included in the MTP, though the collective costs of Grouped Projects are identified in the MTP financial analysis under estimated maintenance expenditures. Grouped Projects are included in the TIP when funding has been dedicated for their implementation. To further ease implementation, projects classified as an eligible Grouped Project can be administratively modified into the TIP rather than go through the formal and longer amendment process. Grouped Project categories in the TIP are the same as those in the MTP. To be considered a Grouped Project, a project must meet the intent and criteria of one of the ten Grouped Project categories as defined below.

- Bicycle and Pedestrian Facilities
- Highway Preventative Maintenance or Rehabilitation
- Bridge Maintenance, Rehabilitation or Reconstruction
- Highway Safety Improvements
- Intelligent Transportation System (ITS) Projects
- Transportation Enhancements, Streetscaping or Landscaping
- Traffic Signal Maintenance or Installation
- Other Transportation Systems or Operational Projects (TSMO)
- Transit Vehicle Maintenance or Rehabilitation
- Transit Operations

Corridor or Modal Studies

There are a number of corridors or issues where a preferred solution is not immediately apparent, or a concensus on a prefered solution has not yet been reached. In some cases an assessment is needed to determine the long-term viability of a particular transportation concept. The MTP recommends further study for the items below in order to provide clarity on an appropriate course of action. Each study is estimated to cost between $250,000 and $350,000. MPO staff estimate that sufficient resources exist to perform one study per year. This list is not in order of priority. Determing priorities and identifying funding will be addressed in the annual Unified Planning Work Program adoptions by the MPO TPC.

Winchester Road Corridor & Land Use Study

Man O'War Blvd Corridor Study

South Lexington Trail Connectivity Study

North Lexington Trail Connectivity Study

Downtown Master Plan - Including Downtown Circulation

Microtransit Feasibility Study

Lextran Cross-Town Service Study

Long-Range Transit Plan

Electric Vehicle Charging Study

Automated Vehicle Readingess Study

Light Rail / Intercity Readiness Study

Truck Parking Feasibility Study

Street Right-Sizing Opportunity Study

Tolling Feasibility Study - Nicholasville to Richmond Road

Strategies

During the development of the MTP several recommendations were identified that do not fall into the category of infrastructure construction or new service implementation but rather are policy based. These policies would be under the purview of various owners or operators of the regional transportation system such as KYTC, Lextran, LFUCG, the Cities of Nicholasville or Wilmore, Jessamine County. These recommendations address an issue in order to improve performance of the transportation system.

Strategies for SAFETY:

Implement priority projects from the Lexington Safety Action Plan

Develop a Safety Action Plan for Jessamine County and implement priority projects

Establish a Vision Zero Coordinator position

Create a multi-disciplinary committee or work group to implement and track progress of safety projects and initiatives

Use the MPO Complete Streets Policy framework to review safety-based design features for all travel mode for all federally funded projects

Work with local and state agencies to update roadway design standards to align with best practices for Complete Streets, the FHWA Safe Systems Approach, and FHWA Proven Safety Countermeasures

Provide support to develop and implement Speed Management Plans

Expand and support public education, awareness and enforcement campaigns

Work with state and local agencies to modify existing roadway lane configurations during resurfacing projects to improve safety for all users

Work with maintenance agencies to improve pavement marking visibility and reflectivity

Work with state and local agencies to establish a policy and/or design standards whereby roundabouts, restricted crossing U-turn intersections (RCUTs), or other safety-based intersection designs are the primary standard for collector & arterial intersections

Review street lighting standards, policies and needs

Provide training on Complete Streets, the FHWA Safe Systems Approach, and FHWA Proven Safety Countermeasures

Strategies for ACCESS & EQUITY:

Work with local agencies to implement priority projects identified in the MPO's Bicycle & Pedestrian Master Plan

Review and update the MPO's Bicycle & Pedestrian Master Plan prior to the next MTP update

Advance bicycle & pedestrian design phases with MPO-dedicated funds to increase project competitiveness for state and federal grant funding

Develop a Long Range Transit plan and vision for the future of high quality transit service in the Lexington area - help build community consensus and develop funding strategies to achieve that vision

Invest in upgrades to transit facilities including accessible sidewalks and bus stops, benches, shelters and other amenities

Identify, prioritize and fund opportunities to increase transit service frequency on arterials

Identify ways to reduce transit travel times including additional transfer points and/or cross-town routes

Implement traffic signal priority for Lextran buses on priority transit routes
Coordinate affordable housing strategies with bicycle, pedestrian and transit projects

Identify opportunities to increase street, sidewalk and bikeway connectivity where barriers significantly impact travel distances for walking and biking and/or for emergency response and vehicular travel

Strategies for RESILIENCY:

Support local and state agencies in deploying Intelligent Transportation System (ITS) and Transportation System Management and Operations (TSMO) technologies and strategies

Support the deployment of technology that better assesses current road and traffic conditions to disseminate this information to travelers in real time

Maintain and update the regional ITS Architecture

Identify future vulnerabilities and threats to the transportation system and provide recommendations to ensure continued or restored system operations

Work with transit agencies to identify funding opportunities to replace vehicles in poor repair and to reduce the number of vehicles that are beyond their useful life

Work with KYTC and local agencies to identify needs for vehicle-to-infrastructure and vehicle-to-vehicle communications to increase regional Connected and Autonomous Vehicle (CAV)

Support adequate investment in bridge and pavement maintenance activities to ensure that no transportation infrastructure assets rank in poor condition, nor that assets in fair condition fall into poor repair

Strategies for QUALITY of LIFE:

Develop a multidisciplinary review process for evaluating design alternatives, tradeoffs, and how well projects achieve various livability and community-based quality of life goals such as walkability, sense of place, green and healthy streets, etc.

Outline a clear process for developing a community-driven vision, goals and objectives at the outset of roadway projects that includes robust public input to inform and guide project design decision-making

Collaborate with local and state agencies to update roadway design standards to include quality of life elements such as landscaping, street trees, public art, pedestrian-scale lighting & amenities.

Collaborate with local agencies to build bicycle, pedestrian and transit infrastructure through development, zoning and subdivision regulations

Strategies for ECONOMIC DEVELOPMENT:

Identify opportunities to leverage Federal and MPO funding with other public or private sector resources

Continue monitoring regional freight flows and freight connectivity to identify projects that are necessary to provide reliable freight travel times

Continue implementing ITS and targeted bottleneck projects from the Congestion Management Bottleneck study to maximize travel time reliability

Coordinate with local and regional transit agencies to provide and improve transit service to major employment hubs within Fayette and Jessamine County

Coordinate with regional transit agencies to increase the availability and frequency of inter-city routes within the Bluegrass Region

Some strategies for SUSTAINABILITY:

Assess regional electric vehicle and clean fuel needs and develop an action plan to implement recommendations

Seek and/or provide grants to increase the number of publicly available EV chargers

Develop incentive programs, private/public partnerships, and local requirements for EV chargers

Identify opportunities to transition public sector vehicles to EV or clean fuels (i.e. school buses, emergency response vehicles, solid waste trucks, etc.)

Work with the KYTC to complete Phase 1 of the National Electric Vehicle Infrastructure (NEVI) plan for the MPO region

Develop coordinated land use & transportation plans for major arterials

Coordinate with and support local agencies in updating development regulations with respect to land use and urban design that results in compact, walkable, and transit-oriented development

Promote and market alternative transportation options

Work with state and local agencies to incorporate green infrastructure into street design standards and projects.