### Broadway All the Way

Planning Grant Application | RAISE FY 2022

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# Project at a Glance

The Broadway All the Way corridor is the backbone of Louisville, Kentucky's public transportation system. The corridor includes three roadways, Broadway (5.5-miles), Baxter Avenue (0.25-miles) and Bardstown Road (4.25-miles). Broadway is bordered by over a dozen neighborhoods-many of which face the City's greatest racial inequities, climate change impacts, and systemic economic challenges. As identified in the U.S. Department of Transportation's mapping tool, over 75% of the census tracts along Broadway qualify as Areas of Persistent Poverty and Historically Disadvantaged Communities. In addition, over 30% of the Transit Authority of River City's (TARC) routes run along or intersect Broadway, making Broadway's main bus line, Route 23 a vital public transit connection. Those routes include critical connections to Louisville's major employment hubs and other high frequency transit corridors, like the Dixie Highway Bus Rapid Transit service—a successfully implemented USDOT TIGER Grant project.

Connecting Louisville's workforce to some of its most important employment centers, the 10-mile Broadway All the Way Corridor begins in the west at Shawnee Park and runs east along Broadway, then continues via Baxter Avenue and Bardstown Road, with a terminus at the Bashford Manor regional center. The employment connections that rely on the Corridor include the Central Business District, the Louisville Medical District, Kindred Healthcare (Fortune 500 company), Muhammad Ali International Airport, UPS Worldport, two Ford Assembly Plants, and several major service industries. Additionally, Broadway connects dozens of major industrial freight generators to regional distribution routes, including internationally recognized companies like Heaven Hill and Brown-Forman Distilleries. Broadway connects these industries to Kentucky's Tier 1 and Tier 2 Highway Freight Network along I-65, I-64, and I-264.

However, these connections also play a central role in creating systemic disadvantages for Louisville's most at-risk communities. The existing transit service is inefficient and unreliable; the environment created by mid-century, auto-centric infrastructure is unhealthy; and the roadways are unsafe for vehicles, pedestrians and cyclists, especially for those users who rely on them the most.

With these opportunities and challenges in mind, Louisville Metro Government (LMG) is requesting \$5,000,000 in FY 2022 RAISE Planning Grant assistance funds. These funds, alongside a 20% local match, will advance three related planning components to advance the recently completed **Broadway Master Plan** under the umbrella of the proposed Broadway All the Way planning project:

- 1. Create a Unified Vison for Premium Transit
- 2. Provide Shovel Ready Plans to Implement the **Broadway Complete Street Vision**
- 3. Provide Shovel Ready Plans for Transit Enhancements along Baxter Avenue and Bardstown Road



### **Key Project** Information

**Project Type** 

Transit - Bus Rapid Transit

**Project Location** Louisville, KY

Urban/Rural Area Urban

**Project Length** 10 miles

**Project Website** www.louisvilleky.gov/raise-broadway

FY 2022 Funding Amount Requested \$5,000,000

**RAISE Grant FY 2022 Funds Obligation Date** November 2022

Right-of-Way Phase Funding Not Applicable

**Project Completion Date** August 2025

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Figure 1. Proposed Typical Complete Street along Broadway Corridor (Broadway Master Plan)

Each of these coordinated studies prioritize disadvantaged workforce opportunities and transformational transportation improvements that will positively impact the region. Each component will set the stage for infrastructure investments that will create "ladders of opportunity" and build generational wealth for Areas of Persistent Poverty and Historically Disadvantaged Communities.

### Safety

Broadway is one of Louisville's most dangerous roadways and is home to Kentucky's most dangerous intersection, at Second and Broadway. The *National* Roadway Safety Strategy (NRSS) identifies Kentucky in the highest 25% of roadway fatality rates in the country. According to the Kentuckiana Regional Planning and Development Agency (KIPDA), regional MPO, the corridor has 9 of the top 10 worst road segment crash rates and 10 of the top 40 worst intersections regionally. In line with goals of the NRSS, Broadway All the Way will result in detailed plans that prioritize safety and slower speeds by utilizing proven and federally recognized strategies from the Safe Transportation for Every Pedestrian (STEP) program. This project will include countermeasures such as road diets, pedestrian refuges, crosswalk improvements, and more-all built around nationally recognized complete street best practices.

### **Environmental Sustainability**

The 2019 Resilient Louisville Study identifies greenhouse gas emissions, increased heat, increased precipitation, and drought as the key climate change risks facing Louisville. Similarly, the *Louisville Urban Heat* Management Study (2016) identifies every community along Broadway as facing "Very High and High Risk" from the effects of urban heat island, which correlates with health equity issues, such as high levels of asthma hospitalization in these communities. Areas along this corridor also face flooding challenges, including relatively flat areas of low elevations with high levels of impervious area serviced by an outdated combined sewer. To address these issues, Broadway All the Way will focus on the reduction of vehicle miles traveled (VMT) and include extensive opportunities for enhanced tree canopy and high-performance green infrastructure, aimed at improving health outcomes for at-risk communities and populations.

### Quality of Life

In the 2017 Louisville Metro Health Equity Report, it was found that life expectancy in the predominantly Black neighborhoods around Broadway can be up to 12.6 years less than more affluent parts of the city. This stark difference in life expectancy is related to the root cause issues cited in the 2017 study in relevant focus areas like transportation, the built environment, environmental quality, and housing. Many of these issues are related to or were exacerbated by past policy decisions including but not limited to practices of red lining and the results of urban renewal. The plans

developed as part of *Broadway All the Way* will address many of these root causes by planning for equitable transit oriented development (TOD) to encourage greater access to housing, goods and services and by providing complete streets and premium public transportation facilities. Combined these approaches will increase accessibility and safety through universal design, increase connectivity to jobs, reduce vehicle miles travelled, reduce transportation cost burden and create a public realm that improves health outcomes through air quality improvements, improved access to parks and by providing greater access to active mobility options.

### Improves Mobility and Community Connectivity

Broadway connects the region to Louisville's downtown, connects major freight generators to the federal highway system, and connects Louisville's workforce, especially those who rely on public transportation, to major employment hubs. Locally, the corridor connects students and employees to multiple universities, numerous K-12 schools, and the Louisville Medical District. Broadway All the Way plans for both dedicated and arterial bus rapid transit (BRT) improvements and dedicated facilities for bikes, scooters and pedestrians—all of which will dramatically improve regional and local connectivity.

### Economic Competitiveness and Opportunity

Unreliable infrastructure severely impacts economic vitality-personally, regionally, and nationally. Along Broadway, inconsistent or delayed public transportation can result in lost wages and lost employment. The envisioned BRT improvements from the *Broadway* Master Plan have positive anticipated results: a user who boards a Route 23 bus at 35th and Broadway will wait nearly half the time and see a dramatic increase in access to jobs within a 30-minute ride. The corridor also experiences major bottlenecks at key locations, like 7th-9th Streets in the Central Business District. which suffers from a Level of Service (LOS) F. This delay in traffic at peak hours keeps people from jobs and prevents to the efficient movement of goods to the national highway system. Broadway All the Way will also prioritize workforce development. Rather than wait until implementation begins, the plan calls for early and focused workforce development strategies to prepare for success.

### State of Good Repair

Broadway All the Way will allow the Kentucky Transportation Cabinet (KYTC) and Louisville Metro Government (LMG) to better maintain and more efficiently operate vital infrastructure. The proposed project makes a transformative investment in this corridor and improves the overall condition of regional infrastructure, enabling the transportation system to better serve all users. Included in this effort will be planning for the resilience of utilities on the corridor, as well as strategic maintenance planning that will build innovative partnerships to prepare this corridor for a dynamic future.

### Partnership and Collaboration

This project demonstrates support from leaders at the national, state, regional and local levels, as well as advocacy groups and stakeholders (see Appendix A). LMG, TARC, KYTC, and KIPDA (the region's MPO) have made a commitment to this project through years of collaborations on related planning and design studies such as *Move Louisville*, the *Broadway Master Plan*, the *Bardstown Road Safety Study* among others to address these critical transportation needs. The requested 2022 RAISE Planning Grant assistance funds along with \$1.25M of non-federal matching funds, which includes a \$500k commitment from KYTC and \$750k from Louisville Metro Government in the FY 2023 Budget.

#### Innovation

The proposed *Broadway All the Way* planning project will evaluate and plan for many of the innovations that have been promoted by FHWA through the "Every Day Counts" program. Innovations such as Crowdsourcing for Advancing Operations (already in use by KYTC), Strategic Workforce Development, Virtual Public Engagement, the Safety Transportation for Every Pedestrian (STEP) program, evaluation of infrastructure for vehicle electrification, and more will be evaluated and incorporated throughout the delivery of the project.

In addition, the plans will prioritize the inclusion of innovative green infrastructure such as pervious paving, bioswales, and structural soil systems to maximize the long term social, ecological, and economic benefits of the project.

# I. Project Description

### History

The Broadway All the Way corridor has played a central role in the movement of people and goods in Louisville for nearly 200-years. Union Station was built on Broadway in 1889, as passenger rail increased in national importance, and was once the largest railroad station in the southern U.S. As transportation systems evolved, Broadway became a vital streetcar line and subsequent bus line. However, after a regionally devastating flood in 1937, and as major industries left the city's central core, Broadway shifted from a vibrant community asset to an underutilized and dangerous corridor. These characteristics were amplified through the racially discriminatory practices of redlining and urban renewal, as Broadway transformed from a community corridor with thriving businesses to surface parking lots and vacant industrial buildings. The Baxter Avenue/ Bardstown Road section has also experienced notable change over the years. While the surrounding areas have remained relatively affluent, what once was a key streetcar connection between downtown and dense residential areas has become a high-speed, auto-dominated thoroughfare that negatively affects the vibrancy, accessibility, and safety of one of Louisville's most important cultural destinations.

Because of these challenges, Louisville Metro Government (LMG) created <u>Move Louisville</u>, the city's 20-year multi-modal transportation plan. <u>Move Louisville</u> identified Broadway as a priority complete street and premium transit investment. Since <u>Move Louisville</u>, five additional related studies have been initiated by LMG, TARC and collaborating agencies to address major transportation and land use issues on Broadway and many critical intersecting corridors. Those studies include:

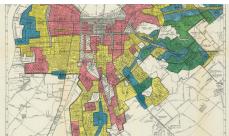
- Reimagine 9th Street
- · One-Way to Two-Way Conversions
- Preston Corridor Plan
- Transforming Dixie Highway Bus Rapid Transit Project 2015 TIGER Grant
- Broadway Master Plan

"Broadway is central to all forms of transportation, and, as one of Louisville's busiest roadways, it also includes some of our city's most dangerous intersections. This RAISE grant would provide tremendous support as we look to transform Broadway into a transitfocused, multimodal corridor that provides safe and efficient transportation for

— Greg Fischer, Mayor of Louisville

Left: 1928 Trolly System along Broadway Below: Historical Redline Map of Louisville Below: 1913 Flood on East Broadway







### **Key Challenges**

The corridor faces many distinct challenges along its 10-mile stretch with the unifying challenge of safety, especially for pedestrians and cyclists. The Broadway All the Way corridor has had 8 fatalities, 3 involving vehicle-bike/ped incidents. from 2014-2018.

Portions of the Broadway All the Way corridor face additional challenges, including:

- · Large areas of vacant and underutilized property
- · Wide right-of-way that encourages high speeds and increased crash severity
- Inefficient transit performance, with commute times often over 60 minutes
- · Traffic flow bottlenecks at key locations
- · Lack of transit amenities, especially at major transfer nodes
- · Limited access to jobs, services, and amenities, with up to \$217M in retail sales leakage as documented by **OneWest**.
- No safe or dedicated facilities for bikes/scooters
- Deteriorating pedestrian facilities, little pedestrian lighting, and numerous accessibility issues
- **Environmental Justice** issues like flood risks, poor air quality, and negative urban heat island impacts
- Disjointed and underutilized land uses











Photos of existing site conditions along the Broadway and Baxter Corridor











### **Proposed Project**

The Broadway All the Way planning process will simultaneously address safety, equity, climate change, and economic outcomes along this 10-mile corridor.

Louisville Metro Government and collaborating agencies will implement a planning and design process focused on three components described on the following pages. While each planning component is integral to the overall project, should only partial funding be available each component can be implemented independently, and has a scope that can be adjusted based on available funds.

### **Planning Component 1:** Creating A Unified Vision for Premium Transit

Broadway connects 30% of the transit routes in Louisville including the corridor's main line, Route 23 which carried 1.2 million people in 2019. To maximize Louisville's potential as an equitable, multimodal city, this plan will identify opportunities to improve transit reliability and catalyze transit-oriented economic development.

Planning Component 1 will include the following elements:

**Project Management:** The primary management task is to direct the work of the planning/design teams, from project conception to completion. Management also involves reporting to USDOT/FHWA and KYTC, and

includes coordination of required permits as planning and design documents take shape.

Master Plan Validation Through Engagement: The validation component will be a focused and robust engagement strategy to validate the **Broadway Master** Plan that was completed in Spring 2022, informing detailed design decisions.

Vision, Policy, and Plans for Transit Nodes and **Transit-oriented Development:** This component will identify locations along Broadway, Baxter Avenue, and Bardstown Road that are logical public transportation nodes or transit transfer points. Locations would also be identified as potential transit-oriented development (TOD) locations. TOD planning will include the evaluation of multiple underutilized and vacant brownfields sites along the corridor. This component will explore potential for the transit nodes and TODs to be co-located, which would increase access to housing, jobs, goods, and services, and reduce vehicle miles traveled. It will also examine potential zoning issues, urban design, innovative financing mechanisms for TODs, and best practices in other communities.

Transit Facilities: This plan component will examine TARC's facility requirements and the sites along the corridor that can serve their future needs. This element would be highly coordinated with the transit nodes and TOD element.

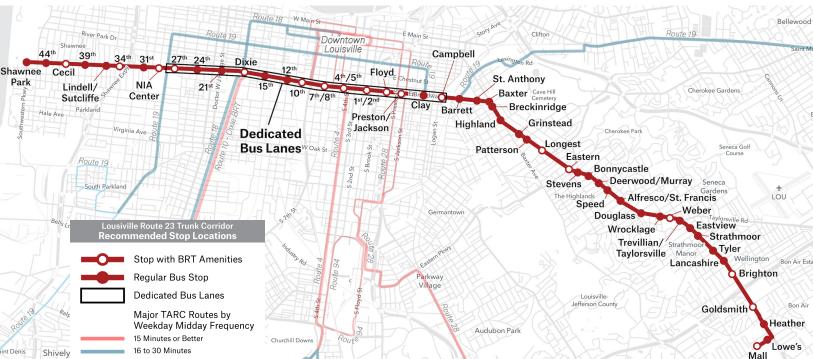


Figure 2. Map of Existing Transit Lines and Proposed Transit Stop Location along Broadway Corridor (Broadway Master Plan)



Figure 3. Proposed Typical Complete Street along Broadway Corridor (Broadway Master Plan)

Future Transit Connections: This component will explore future bus rapid transit (BRT) connections for the Broadway All the Way corridor. This would include the evaluation of a circulator, streetcar, or other potential transit connections between Broadway and the Central Business District. This component will also evaluate how the Broadway All the Way corridor connects to other major destinations, with a focus on high-frequency transit lines like Preston Street, Fourth Street, and the Dixie Highway BRT.

**Transit Technology:** There will be two primary aspects of this plan element. First, this element will determine ITS needs along the Broadway All the Way corridor examining fiber needs and signal system upgrades, including transit signal prioritization and/or queue jumps. The second aspect will consider the potential for transit traveler information, like estimated bus arrival times and travel times to destinations, to be provided via video screens at bus stations.

Disadvantaged Workforce Plan: This plan is building a foundation for implementation by intentionally preparing for disadvantaged workforce training. Using Accelerator for America's Gold Standard Playbook for Workforce Development guidelines, this plan will engage the community, business owners, and local agencies to prime the workforce pipeline, with a focus on creating economic opportunity for those who need it the most.

### **Planning Component 2:** Shovel Ready Plans to Implement the Broadway Complete Street Vision

Every dollar invested in Broadway will be an investment in those who face systemic safety, economic, and environmental justice challenges. With the Broadway Master Plan vision as the framework, this 5.5-mile project will implement community-based, quick-build pilot projects; technical research; and detailed design and engineering documents to make Broadway shovel ready. Planning level cost estimates from the master plan have indicated a probable construction budget in the \$65M-\$75M range, which will be evaluated and refined through this planning and design process.

Planning Component 2 will include the following elements:

Preliminary Plans: Element 1 for creating a shovel ready Broadway will be informed by the Broadway Master Plan and master plan validation process, resulting in the creation of preliminary design plans for the Broadway segment of the corridor, at a 30% construction document level. These plans would identify Quick Build Priority locations and extents, and they will inform the first complete cost estimates. Included in this element will be detailed site surveys and subsurface utility engineering (SUE) locates. These surveys are a risk mitigation tool, allowing the project team to understand the complexity of surface and subsurface utilities in historic urban environments.

Quick Build Implementation Plans: Utilizing the guickbuild plans from Element 1, Louisville Metro Government is committed to implementing short-term safety and placemaking solutions that address key challenges along Broadway. These solutions will also act as an opportunity to test long-term strategies, engage the community and gather data to inform final implementation.

Final Design: With updated cost estimates preliminary plans and quick build implementation plans will advance detailed construction plans. These detailed plans will include, but not be limited to, the following elements:

- · Technology: ITS, fiber, and communications infrastructure upgrades; traffic signal design; transit signal priority; and realtime bus information amenities.
- · Complete Street features: dedicated bus rapid transit and associated amenities, dedicated bike/scooter facilities, green infrastructure, and public space improvements.
- Transit Nodes elements: potential transit hubs that accommodate major transfer locations and associated amenities.
- · Utility Resilience: Resilience plans in partnership with utility service providers to identify opportunities for protection and maintenance of assets.
- Transit Electrification: Potential electrification of transit services in collaboration with TARC.

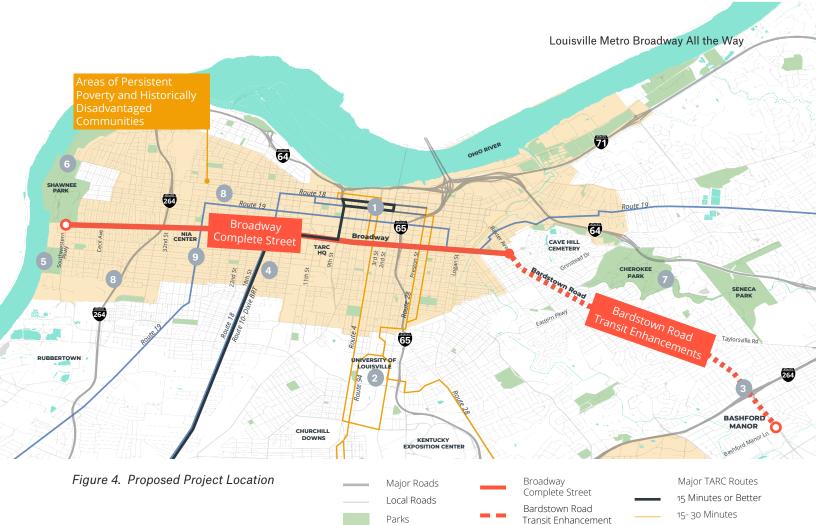
### Planning Component 3:

Strategic Transit Enhancements along Baxter Avenue and Bardstown Road

Following TARC Route 23 from Broadway to Bashford Manor, this plan will work to leverage the existing economic success and cultural character of Baxter Avenue/Bardstown Road. This plan will work to solve documented safety issues and improve transit access to major employment hubs in the eastern parts of the city. This will create far-reaching benefits for those with the most limited mobility options, such as those in downtown and West Louisville.

The Strategic Transit Enhancements will be completed in two phases: Preliminary and Final Design. The plans will have an emphasis on improvements to transit service and transit-related amenities/technology. These improvements would focus on enhanced bus stations: technical upgrades to traffic signals, fiber, and realtime bus information; and improvements to lighting, crosswalks, and other pedestrian safety concerns. The plans will also evaluate possible premium transit, such as BRT facilities, including dedicated bus lanes and arterial BRT, with an emphasis on transit signal prioritization and queue jumps.





Water Bodies

# II. Project Location

The proposed planning project encompasses a 10-mile corridor, comprised of Broadway/US 150, Baxter Avenue, and Bardstown Road/US 31E in Jefferson County, Kentucky. The beginning of project is located at the intersection of West Broadway and Southwestern Parkway (38°15'02.3"N 85°49'45.4"W) and extends approximately 10 miles to the terminus of the project at the intersection of Bardstown Road/US 31E and Bashford Manor Lane (38°12'10.4"N 85°39'52.5"W). The project is located within the Louisville, KY-Southern, IN Urbanized Area in Kentucky's 3rd Congressional District.

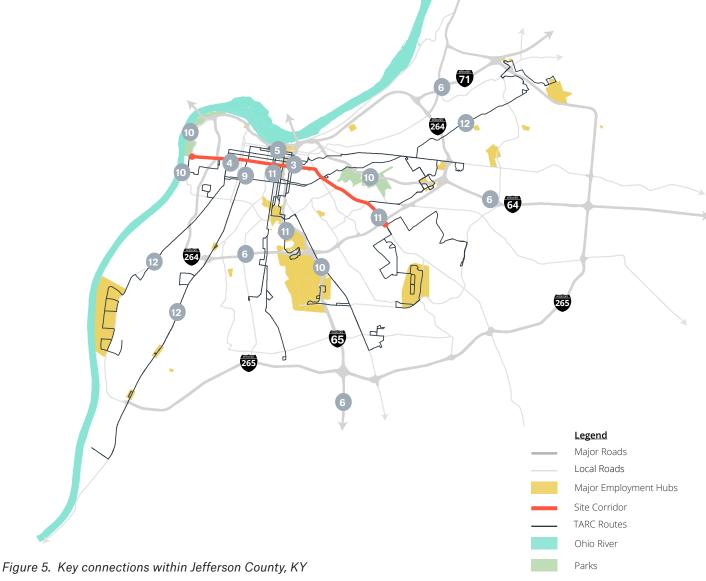
### Locations

Areas of Persistent

Communities

Poverty and Historically Disadvantaged

- Central Business District
- University of Louisville
- Sullivan University
- Distillery District
- Chickasaw Park
- Shawnee Park
- Cherokee Park
- Hope VI and Choice Neighborhood communities
- Opportunity Campus by Goodwill Industries and Norton Healthcare



### **Key Connections**

The Broadway All the Way corridor is a major arterial and is part of federally-designated route US150 and US31E. This corridor plays a central role in mobility for Louisville and the larger region. The corridor serves and is adjacent to:

- 1. 24 census districts that qualify as Historically Disadvantaged and/or Areas of Persistent Poverty
- 2. 23 individual neighborhoods
- 3. The Louisville Medical District
- 4. Recently announced \$100M "Opportunity Campus" investment by Goodwill Industries and Norton Healthcare
- 5. Louisville's Central Business District, which attracts 3.1M annual visits to cultural destinations and had over \$575M in planned or announced developments and investments in 2021.
- 6. Connections to the Interstate Highway System: I-65, I-64, I-71, I-264

- Louisville's most densely populated residential areas
- 8. Four federally funded affordable and mixed income communities (funded through HOPE VI and Choice Neighborhood programs)
- Key industrial freight generators, including Brown-Forman and Heaven Hill distilleries
- 10. Three Olmsted Parks-Chickasaw, Shawnee and Cherokee Parks-and more than 10 significant neighborhood parks
- 11. Five colleges and universities—University of Louisville, Spalding University, Jefferson Community and Technical College, and Simmons College (Louisville's only accredited HBCU)
- 12. 16 Transit routes 7 of which connect to Louisville's major employment hubs

# III. Grant Funds, Sources and Uses of Project Funds

Louisville Metro Government (LMG) and the Kentucky Transportation Cabinet (KYTC) have agreed to allocate available State and Local program funds in addition to the requested RAISE grant funds for the planning phase of the project. A summary of the proposed future cost allocations is provided in Table 1 and a further breakdown of the funds per component in Table 2. It should be noted that the listed State funding is only being counted as the matching requirement for the additional Federal program funding budgeted for the project. While not anticipated, LMG understands it will be responsible for any cost overruns.

#### **Planning Component 1: Create A Unified Vision for Premium Transit**

Louisville Metro Government and KYTC have already completed a preliminary master planning effort for the Broadway corridor through the **Broadway Master Plan**, which was completed in March 2022. In addition to the Broadway Master Plan, a preliminary safety study and recommendations were developed for the Baxter/ Bardstown Road in December 2018. Component One will validate the initial planning study efforts and recommendations and will work toward creating a unified vision for the entire Broadway, Baxter, and Bardstown Road corridor.

#### **Planning Component 2: Shovel Ready Plans to** Implement the Broadway Complete Street Vision

Shovel Ready Plans will be developed for the implementation of the Broadway Complete Street Vision. These plans will include preliminary plans to a 30% construction document level. The second element within Planning Component Two will be quick build implementation plans and final construction documents for Broadway Complete Street.

#### Planning Component 3: Strategic Transit **Enhancements along Baxter Avenue and Bardstown** Road

Planning Component Three will work to address safety issues and improve transit access to major employment hubs in the eastern parts of the city. This component will be completed in two phases, preliminary and final design.

Table 1. Source of Funds

Funding Type	Description	Amount	Percentage
Non-Federal			
Local Match from LMG	Local Funds in FY 2023	\$750,000	12%
State Funds from KYTC	State Funds in FY 2023	\$500,000	8%
Total Non-Federal	LMG and KYTC funds combined	\$1,250,000	20%
Federal			
RAISE Grant	2022 RAISE Grant	\$5,000,000	80%
	Total	\$6,250,000	100%

Table 2. Project Costs and Funding Allocations by Source

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		Non-Federal	Federal	
		Louisville Metro Government & KYTC	RAISE	
Project Components	Total Cost	Amount	Amount	
Project Management	\$ 300,000	\$ 300,000	\$ -	
Planning Component 1:				
Creating A Unified Vision for Premium Transit	\$ 850,000	\$ 250,000	\$ 600,000	
Planning Component 2:				
Shovel Ready Broadway Complete Street	\$ 4,300,000	\$ 700,000	\$ 3,600,000	
Planning Component 3:				
Strategic Transit Enhancements along Baxter Avenue and Bardstown Road	\$ 800,000	\$ -	\$ 800,000	
TOTAL	\$ 6,250,000	\$1,250,000	\$5,000,000	

### IV. Merit Criteria

### Safety

### **Existing Safety Challenges**

According to Smart Growth America and the National Complete Streets Coalition, Kentucky ranks as the 20th most dangerous state for pedestrians. Of the top 100 Metropolitan Statistical Areas (MSA), the Louisville/Jefferson County, KY-IN MSA ranks as the 32nd most dangerous for pedestrians. The Louisville MSA has a Pedestrian Danger Index of 130.7 - more than twice as high as the national average of 63.3. In 2018, TIME Magazine reviewed National Highway Traffic Safety Administration data over a 10-year timeframe, measuring traffic accidents involving automobiles and pedestrians, and named the intersection of Second Street and Broadway as the most dangerous intersection in the state of Kentucky<sup>1</sup>. According to KIPDA the Broadway All the Way corridor has 10 of the top 40 worst crash intersection locations, 9 of the top 20 worst pedestrian road segments crash sections, and 2 of the top 20 worst bicycle road segment crash sections in the KIPDA region.

From 2014-2018, the Kentucky State Police Collision Analysis Tool identifies 2,733 reported crashes on Broadway, including 8 fatalities and 571 injuries. Of those 2,733 crashes, 109 involved a vehicle and a bike/pedestrian, 3 of which were fatal and 87 of which resulted in injury. On Baxter Avenue and Bardstown

1 WHAS. 28, July 2019. https://www.whas11.com/article/news/lo-cal/kentuckys-most-dangerous-intersection-is-right-here-in-louisville/417-43187ebb-2c20-4bb3-b189-09d3b1562c26

Table 3. KIPDA Crash Rankings

Kentucky Intersection Crashes Top 40 Rank		Number of Crashes
Bardstown Road @ Grinstead Drive	2	134
Bardstown Road @ Eastern Parkway	6	167
Bardstown Road @ Baxter Avenue	11	98
Broadway @ South 26th Street	12	87
East Broadway @ South 1st Street	16	150
East Broadway @ South Brook Street	23	107
West Broadway @ South 2nd Street	33	127

Pedestrian Road Segment Crashes Top 20		
Baxter Ave. from Cherokee Rd. to Bardstown Rd.	3	32
Bardstown Rd. from Grinstead Dr. to Cherokee Pkwy.	4	28
Bardstown Rd. from Eastern Pkwy. to Speed Ave.	6	25
Bardstown Rd. from Trevilian Way to Gardiner Ln.	12	20
Broadway from S. 1st St. to S. 2nd St.	13	18
E. Broadway from S. Clay St. to S. Jackson St.	14	18
W. Broadway from S. 9th St. to S. 15th St.	16	17
W. Broadway from S. 34th St. to S. 41st St.	19	16
Bardstown Rd. from Douglass Blvd. to Trevilian Way/Taylorsville Rd.	21	16

Bicycle Road Segment Crashes Top 20		
Bardstown Rd. from Grinstead Dr. to Cherokee Pkwy.	2	13
W. Broadway from S. 9th St. to S. 15th St.	5	11
Bardstown Rd. from Speed Ave. to Douglass Blvd.	8	10

Figure 6. Map of Vehicular Crash Sites along Corridor (2014-2018) (Kentucky State Police Collision Analysis Tool)



Road, from 2014-2018, there were 3,334 reported crashes—435 resulting in injury, with 50 injury crashes between vehicles and bikes/pedestrians.

Additionally, there are 11 intersections on Broadway with a high number of transit boardings and a concentration of pedestrian related traffic incidents, indicating elevated risk in Broadway's most important pedestrian areas. From August 2018 – July 2019, over 30,000 scooter trips touched Broadway. With no existing dedicated infrastructure for vulnerable roadway users, this project presents an opportunity to respond to existing demand and improve safety through universal design strategies.

### Safety Improvements

One of the explicit goals of *Broadway All the Way* is to create shovel ready plans that will reduce both crash frequency and crash severity throughout the project area, specifically for the corridor's most vulnerable users. This project component will incorporate actions and activities identified in USDOT's <u>National Roadway Safety Strategy</u>, including proven safety countermeasures like high-

visibility crosswalk markings; pedestrian refuge islands; enhanced road and intersection lighting; road diets and lane reductions, and protected bicycle/scooter lanes.

The Federal Highway Administration's (FHWA) documentation shows up to a 42% reduction in pedestrian crashes when high-visibility markings and enhanced illumination are implemented at crossings and transit stops. For pedestrian refuge islands the reduction can be up to 56%.

Where feasible, road diets are another countermeasure offering potential benefits to operations and safety performance. FHWA documentation suggests that the treatment "can improve safety, calm traffic, provide better mobility and access for all road users, and enhance overall quality of life." Before-and-After studies of reconfigurations have found a 19-47% reduction in total crashes. For vulnerable road users, dedicated bicycle/scooter lanes and a decrease in crossing distance provide infrastructure that creates a community-focused environment.

Figure 7. Proposed Typical Safety Improvement and Amenity Areas within Residential Neighborhood (Broadway Master Plan)



### **Environmental Sustainability**

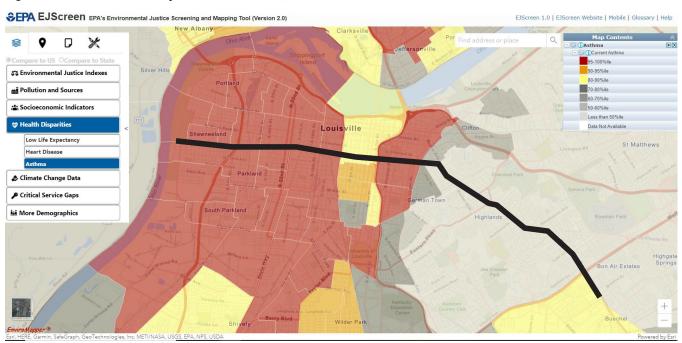
### **Environmental Impacts on Health Equity**

Broadway All the Way specifically seeks to address the disproportionate negative environmental impacts of transportation on disadvantaged communities. According to the Environmental Protection Agency's Environmental Justice Screening and Mapping Tool Version 2.0 (EJ Screen), the Broadway corridor faces some of the largest environmental challenges in the state and in the country. Broadway ranks above the 94th percentile in all 12 of the EJ Screen Environmental Justice Index Variables, when compared to the state of Kentucky. On a larger scale, Broadway ranks above the 82nd percentile in 11 of the 12 categories when compared to the United States. The EJ Screen tool also indicates negative impacts from particulate matter, ground-level ozone, and other air toxics, which correlates with findings in Louisville Metro's Health Equity Report. More specifically, the Louisville MSA is currently in nonattainment status for the recently strengthened 8-hour Ozone National Ambient Air Quality Standard, a direct impact of emissions from freight and automobiles. These findings identify systemic air quality issues, as evidenced by disproportionate rates of asthma in Louisville's Black communities. From 2011-2015, Black individuals represented over 62% of all inpatient admissions for asthma, while representing just over 21% of the total population. The Health Equity Report identifies several root causes that lead to Louisville's systemic health equity issues, including transportation and the built environment.

Table 4. Environmental Justice Index Table (EJ Screen)

Variables	Percentile in State	Percentile in EPA Region	Percentile in USA	
Particulate Matter 2.5	96	84	84	
Ozone	96	84	83	
2017 Diesel Particulate Matter	97	85	86	
2017 Air Toxics Cancer Risk	96	80	82	
2017 Toxics Respiratory HI	97	82	84	
Traffic Proximity	99	96	96	
Lead Paint	98	96	93	
Superfund Proximity	97	<b>97</b> 81		
RMP Facility Proximity	98	96	96	
Hazardous Waste Proximity	98	98	92	
Underground Storage Tanks	98	86	87	
Wastewater Discharge	94	90	85	

Figure 8. Asthma Rates of Project Area (EJ Screen)

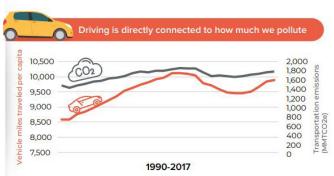


### Multimodal Strategies to Reduce VMT

Broadway All the Way will address environmental sustainability in multiple ways. The project will create a unified vision for premium transit and TOD in alignment with the goals set of *Prepare Louisville*, Louisville's climate adaptation plan. Prepare Louisville identifies the need for a reduction in VMT and increased multimodal transportation as key Louisville's resilience. The 2020 Louisville Greenhouse Gas Emissions Reduction Plan shows that 18.7% of Louisville's GHG emissions were from transportation. By creating a vision for TOD, bus rapid transit, dedicated bike/scooter infrastructure, and pedestrian improvements, the corridor can increase accessibility to jobs, services, and amenities while reducing vehicle miles traveled (VMT)—which has a direct correlation to decreased transportation emissions and improved air quality. These solutions directly align with those outlined in a final report from a 2020 Multipollutant Stakeholder Group convened by LMG's Air Pollution Control District, which provides strategies to decrease ground-level ozone.

Additionally, most of the Broadway corridor, and all of the Baxter/Bardstown corridor are identified as being on KIPDA's CMP Network (Congestion Management Process), which means these corridors are prioritized for the implementation of congestion-reduction strategies. Inducing a mode shift and reducing VMT will reduce vehicular congestion and negative environmental impacts.

Figure 9. Driving Down Emissions (<u>Driving Down Emissions</u>)



Vehicle miles traveled per capita<sup>7</sup> and transportation emissions, 1990-2017<sup>8</sup>

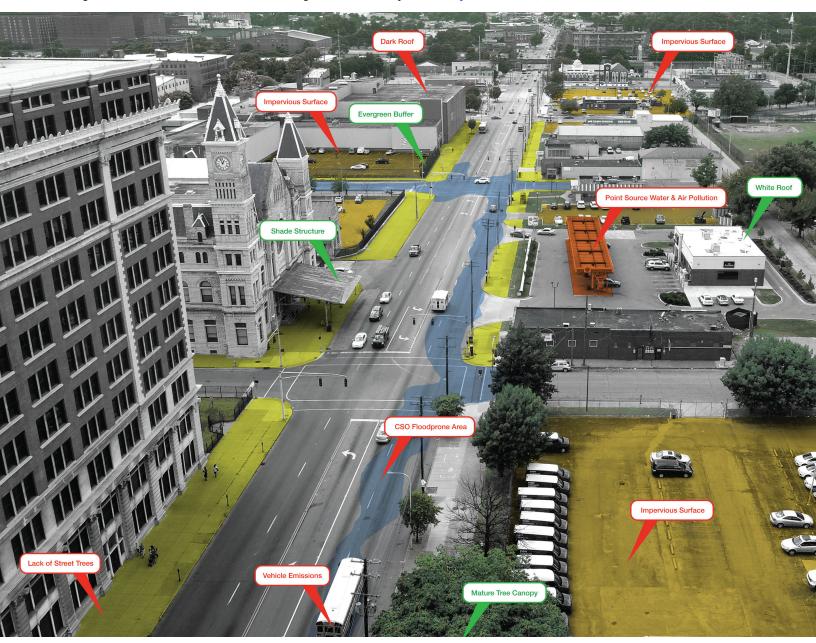


#### Green Infrastructure

The planning process will evaluate construction materials and methods, including the potential for material re-use and recycling, as well as low-carbon and cool pavement technologies that minimize carbon footprint and mitigate the effects of urban heat. Additionally, *Broadway All the Way* will include the design of performative landscapes and green infrastructure, which will address some of the corridor's highest contributors to poor air quality like interstate access points, industrial developments, filling stations, and roadway intersections.<sup>2</sup> It will also prioritize protecting the most sensitive receptors of poor

air quality, like schools, childcare centers, hospitals, and senior housing. These features will be located near both high contributing sites and the corridors most sensitive receptor sites and will be designed to clean the air by reducing ground-level ozone and absorbing and filtering particulate matter. Green infrastructure features will also offer stormwater management by slowing water velocities; decreasing flood risks; and storing and filtering pathogens, sediment, and heavy metals. This is especially important in areas where Louisville faces challenges from combined sewer overflows due to low elevations and large amounts of impervious surface. Finally, the project will also consider the incorporation of electric and/or zero emissions infrastructure, including electrification of the bus fleet.

Figure 10. Environmental Assessment Diagram of Broadway (Broadway Master Plan)



<sup>2. &</sup>lt;u>Benefits of Green Infrastructure.</u> United States Environmental Protection Agency (EPA). 2021. <u>https://www.epa.gov/green-infrastructure/benefits-green-infrastructure</u>

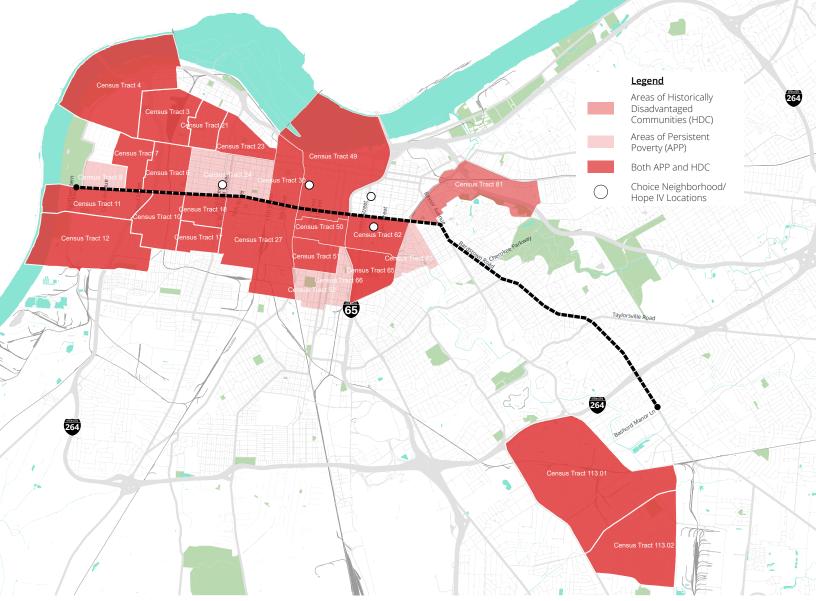


Figure 11. Combined map of Areas of Persistent Poverty, Historically Disadvantaged Communities

### Quality of Life

This project will be explicitly designed to improve the quality of life for people located in the region, specifically in the following areas:

### Reducing Automobile Dependence

Broadway All the Way will provide a premium public transportation system that will directly benefit all Louisville residents and visitors, but especially Louisville's most disadvantaged communities who are more likely to rely on transit as their primary mode of transportation. The concepts explored in this Planning Grant will enable more Louisvillians to utilize non-motorized, sustainable, more cost-effective forms of transportation, thereby reducing automobile dependency. This project will plan for better connections to the medical district, universities, major employment centers, housing opportunities, cultural and tourist attractions, and goods and services.

### Racial Equity and Improved Health Outcomes

In addition to improving transportation, mobility, and access, *Broadway All the Way* is focused on improving racial disparities for the Historically Disadvantaged Communities who continue to face challenges in achieving racial equity. This project will help the community take a major step towards healing past injustices by eliminating physical barriers, making the project corridor a lively public space, creating new economic opportunities, and improving health outcomes. By providing new connections to parks and trails, safe and efficient active mobility options, and new high-performance landscapes, direct health outcomes can be gained through air quality improvements, increased physical activity, and greater access to economic opportunity and healthcare.

### Reducing Cost Burdens

Reducing housing costs burdens and investing in affordable housing is a key priority in Louisville as evidenced by LMG's commitment in late 2021 to use \$100M of American Rescue Plan (ARP) funding for affordable housing. This project will also reduce both housing and transportation cost burdens<sup>3</sup> by envisioning a transportation corridor that dovetails Transit-Oriented Development with increased opportunities for commercial and mixed-income housing within the project area. Therefore, cost burden can be reduced through increased access to dedicated and arterial BRT, dedicated bike/scooter facilities, and an improved public realm for pedestrians. According to the Victoria Transport Policy Institute each of these elements can dramatically reduce transportation costs potentially saving households thousands of dollars or more and support residents who cannot afford to travel by car.

### Removing Physical Barriers

Dangerous roadways and inefficient public transit are two major barriers facing the project corridor, making it difficult and less safe for people to use transit and non-motorized forms of travel. These challenges disproportionately impact Historically Disadvantaged Communities and Areas of Persistent Poverty; Smart Growth America's <u>Dangerous by Design 2021</u>

3. <u>Transportation Affordability; Evaluation and Improvement Stategies.</u>
Victoria Transport Policy Institute. 17 December 2021. <u>https://www.vtpi.org/</u>affordability.pdf



Figure 12. Population Density and Public and Subsidized Housing Locations (EJ Screen)

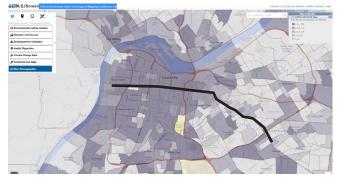


Figure 13. Renter Occupied - No Vehicle (EJ Screen)

report states that traffic fatality rates in low-income communities were three times higher than those of high-income communities. This project prioritizes complete streets and premium transit design elements in order to remove physical barriers and make it easier and safer for people to move about freely within their communities.

### **Authentic Community Characteristics**

Authenticity is one of the themes of *Broadway All the Way* since the corridor runs through some of Louisville's most historic, diverse, and interesting communities. The public realm is planned to include new linear parks, public art, landscapes, and plaza spaces to create new opportunities for the underserved communities along Broadway, encourage visitors to engage and learn more about the community, and provide opportunities to highlight the diverse cultures along the corridor. The project elements will continue the trend of investments in the project area that nurture neighborhoods where people can live, work, and play.

### Improves Mobility and Community Connectivity

As illustrated in the project location maps, the *Broadway All the Way* corridor is central to Louisville's transportation system since it is one of the few major corridors allowing people to travel east-west; therefore, this corridor heavily influences regional and local mobility and connectivity.

### Improved Mobility for Low-Income Residents

Significantly, the corridor connects Louisville's densest residential communities that also rely on public transportation and alternative mobility options the most. The EPA's EJScreen Mapping Tool illustrates that communities along Broadway have some of Louisville's lowest percentages of vehicle ownership in the county. The project corridor also has high rates of renter occupied units, including public housing options. In these locations, the percentage of no vehicle households can jump as high as 60% to 80%. The Louisville Metro Housing Authority provides over 1,000 affordable housing units on sites that are either adjacent to the corridor or are connected by high frequency transit routes to Broadway. In addition, this corridor is a key connector for four federally-funded low- and mixed-income housing developments: the three **HOPE VI** projects (Sheppard Square, Clarksdale, Liberty Green) along with the ongoing Vision Russell Choice Neighborhood Initiative and Beecher Terrace development.

### Direct Connections to Economic Generators and Higher Education

The corridor connects directly to the Louisville Medical and Education District, known as LouMed, which includes four anchor institutions—Jefferson Community and Technical College, two Norton Healthcare hospitals, the University of Louisville Health Science Campus, and the University of Louisville Health which includes two hospitals and the Frazier Rehabilitation Institute. The LouMed district includes 16,000+ employees, 10,000+ students, and hosted 800,000+ patient visits in 2020. Economically, it represents approximately \$1 billion in annual payroll and \$20M in annual occupational taxes, \$12.2M of which goes to Louisville Metro Government. The corridor is also integral to mobility for two universities within a 10-minute walk of the corridor, Spalding University and Simmons College of Kentucky (which is Louisville's only Historically Black College).

### Travel Time Reliability

The *Broadway All the Way* corridor is a critical connection between Louisville's workforce and employment centers. The corridor also provides connections between freight-generating industries and the interstate network. Therefore, improving travel time reliability is critical to ensuring employees can get to work on time and improve supply chain efficiency for ontime delivery of goods. This plan will improve travel time and reliability by leveraging ITS solutions to improve overall traffic flow and implementing BRT to promote modal shift.

#### Transit-Oriented Development

Additionally, this plan will lay the groundwork for both Transit-Oriented Development (TOD) and transit operations that maximize key locations where high frequency, high-ridership routes overlap with key destinations. Simultaneously addressing the overlapping needs will support decreased transportation costs and improve access for all, but especially for transit users. Potential locations for TOD include: the intersection of Broadway and Dixie Highway (where the *Transforming Dixie Highway 2015 TIGER Project* implemented bus rapid transit service), and the Intersection of Broadway and Preston Street, which sits at the front door of the LouMed district.

Broadway All the Way will bring people closer to jobs, services, and goods. Beyond transit, this project will lay the groundwork for protected facilities for bikes/scooters and pedestrians that improve accessibility and last mile connectivity making Louisville's mobility systems more safe, useful, and dignified.

## Economic Competitiveness and Opportunity

Broadway all the Way prioritizes public transportation that makes affordable travel more accessible, reduces the burdens of long commute times, connects to and revitalizes historically disadvantaged communities, and creates an environment favorable to the development of affordable housing and TODs.

### Boosting the Economic Productivity of Land, Capital, and Labor

When evaluating the feasibility of TODs, the project will consider underutilized and vacant land including industrial brownfields and surface parking lots where the economic productivity of land could be increased.

This corridor, with the planned addition of dedicated and arterial bus rapid transit service, will provide improved travel time reliability and quicker access to more jobs, schools, and cultural/tourist attractions to engage with and enjoy the City. For instance, analysis completed during the *Broadway Master Plan* of the proposed BRT facilities along Broadway finds that a bus rider who boards at the intersection of Broadway and 35th Street could expect to see their access to jobs within a 30-minute travel time increase by 132%.

Keeping the transportation infrastructure in a state of good repair is of the upmost importance; therefore, this project will also include plans to improve the overall condition of roadway infrastructure. This will support the reliable movement of goods from downtown freight generators to the region's major logistics hubs and the interstate system. Broadway is also identified as being on the KIPDA Freight Network, further demonstrating the need to ensure ideal travel time reliability for this regional freight corridor.

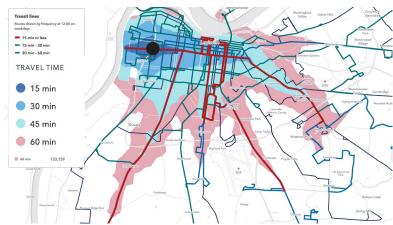


Figure 14. Potential Travel Time and Access to Jobs from 35th Street Transit Stop (<u>Broadway Master Plan</u>)



Figure 15. Map of Opportunity Zones

### Workforce Development

In addition to capital improvements, *Broadway All the Way* proposes to develop a Disadvantaged Work Force Development Plan, setting the stage for new job opportunities as Broadway All the Way is implemented. Often, a barrier to successful workforce development is timing because the job pipeline needs to be primed and ready to deploy. This plan will incorporate the five pillars for comprehensive workforce development that are identified in the *Accelerator for America's Gold Standard Playbook* for workforce development strategies. This playbook recommends that the five key pillars are a critical planning effort that should be used early in the planning process. This work will collaborate with

organizations like Kentuckiana Builds, which is run by the Louisville Urban League whose headquarters is on Broadway. This program was founded in 2016 to build a pipeline of trained construction employees and increase the number of minorities and women going into this sector regionally and has put 328 program graduates into construction trade jobs. This workforce development process will be a key component of the Unified Vision for Premium Transit element to ensure that the City, employers, and those most in need of economic opportunity have an equitable, intentional, and effective roadmap for workforce development.

Table 5. Five Workforce Pillar Descriptions (Accelerator for America's Gold Standard Playbook)

The following table describes key insights for each Pillar provided by this Playbook.

Pillar	Key Insight
Project Planning	Informing the workforce development process early in program or project planning allows project owners ample time and capacity to fill the pipeline with workers who have the required skills.
Stakeholder Engagement	Developing key partnerships with community stakeholders helps workforce development programs directly target the needs of a community and provide a greater range of services.
Contracts and Procurement	It is essential that owners build both quantitative workforce development goals and compliance enforcement into contracts to ensure measurable workforce outcomes.
Support Services	Adding wraparound services or job readiness training to workforce programs can make workplaces more accessible and prepare workers for careers beyond individual projects.
Data Collection and Enforcement	A plan for data collection should be integrated into each stage of the project and used to coordinate all Pillars. The data should inform changes to the workforce development program, creating an iterative approach to the process.

### State of Good Repair

The *Broadway All the Way* corridor faces numerous challenges regarding the current state of infrastructure assets. This project will devise plans to restore and modernize core infrastructure assets while also addressing the need to maintain those assets in a state of good repair for their expected lifespan.

### Restore Infrastructure for Non-Motorized Travelers

Conditions of pedestrian facilities along the corridor—based on numerous field visits and data collection—illustrates an extensive need for improvements to accessibility, transit facilities, and pedestrian safety. Based on mapped field data, there is a direct relationship between lack of accessibility, high risk of severe crashes, poor condition of pedestrian infrastructure, and access management conflicts. Broadway especially faces many challenges with aging sidewalks and degrading curb cuts that negatively impact the experience of using pedestrian facilities.

Additionally, street furnishings, like seating and bike racks, are typically found in very limited locations. On the entire 5.5 mile stretch of Broadway there are only nine locations with seating and bike racks are only located consistently through the downtown core. This plan will ensure that amenities for pedestrians and bicyclists are located throughout the corridor at appropriate intervals.

Regarding transit facilities, bus stop infrastructure is a key determinant in the functionality, accessibility, and comfort of using public transportation. 40% of the bus stops along the Broadway corridor consist of just a sign on a post with no seating or shelter. This project will analyze which bus stops should have what type of robust amenities in order to attract more riders to the services provided.

### Improve Lighting

The entire corridor needs improved lighting, especially at the pedestrian scale. While standard cobra head roadway lighting is present, it is at times in disrepair and insufficient for pedestrians. This contributes to both traffic safety due to poor visibility and overall public safety throughout the project area. For instance, along Bardstown Road—where pedestrian activity is heavily driven by restaurant and bar land uses at night—there were a high number of night-time crashes involving pedestrians.







Photos of existing site conditions along the Broadway and Baxter Corridor

Along Broadway it was documented that pedestrianspecific lighting only exists consistently between 2nd and 6th streets, leaving nearly 90% of the corridor without adequate pedestrian lighting. This project will ensure that appropriate levels of lighting are included throughout the plans.

### Modernize Core Assets and Plan for Longterm Sustainability

Broadway All the Way will modernize core assets throughout the corridor by evaluating the creation of more resilient infrastructure, roadway improvements, and Complete Streets including dedicated bus lanes, new bus stop amenities, ADA-accessible pedestrian infrastructure, lighting, and dedicated bike/scooter facilities that make the corridor more intuitive and comfortable for everyone. Included in project components 2 (Broadway Complete Street) and 3 (Baxter Avenue/Bardstown Road) will be the evaluation and planning for long-term maintenance of the transportation infrastructure. This includes identification of collaborative partnerships with non-public entities and the eventual creation of innovative maintenance agreements prior to implementation.

All assets that will be considered during this planning study are either assets that already exist within Louisville and are maintained by LMG, or they are concepts that LMG is currently evaluating for implementation.

As part of their asset management programs, KYTC and LMG collaborate under two maintenance agreements, one for general roadway infrastructure and the other for traffic engineering systems. These long-standing agreements regarding asset management allow funding to be allocated strategically in a data driven, performance-based program.

For the <u>Transforming Dixie Highway 2015 TIGER Project</u>, a maintenance agreement was executed by KYTC, TARC, and LMG to address ownership and maintenance responsibilities upon project completion. Prior to the completion of final design, a similar agreement will be developed for *Broadway All the Way*. Ongoing maintenance cost will be ascertained and each agency that will have a maintenance responsibility will be involved in the development of the operations and maintenance plan.







Photos of the completed Dixie Highway Corridor: Transforming Dixie Highway

### Partnership and Collaboration

The vision for *Broadway All the Way* began by meeting people on the street, with the project team literally showing up at bus stops for events called "Breakfast on Broadway." These events allowed the project team to talk to the people who rely on this corridor and public transportation the most and begin to develop a long-term vision. This is just one example of how Louisville Metro Government has already engaged the community about their vision for the corridor.

### Meaningfully Sought Public Engagement

This project will build upon past efforts of robust and inclusive engagement and specifically engage disadvantaged communities who have historically been left out of visioning discussions. Future public engagement will be meaningfully sought and will center around the details of future physical infrastructure improvements while also including collaborative and intentional discussions around the Disadvantaged Workforce Development planning element.

### Support from Partner Agencies

The *Broadway All the Way* project has strong support from a number of civic leaders at the national, state, regional, and local levels as well as advocacy groups and stakeholders (See Appendix A).



"Breakfast on Broadway" Event

The project management team who supported and informed the vision of the initial *Broadway Master Plan* included representatives from two key Louisville Metro Government departments, Advanced Planning and Sustainability and Public Works, the Louisville Downtown Partnership, the Kentucky Transportation Cabinet (KYTC), and the Transit Authority of River City (TARC). In addition to the requested 2022 RAISE Planning Grant to advance this project's planning phase, there has been a strong initial investment by each of the collaborating agencies through the use of local, State, and Federal program funds on preliminary studies, visioning, and public engagement to date.

Table 6. Prior Plans and Investments in Louisville, Kentucky

	Date of Study	Type of Study/Plan	Investment	Agencies Involved
Vision Phase 1 &2	November 2012 and December 2013	Vision Plan	\$1,100,000	Louisville Metro Economic Growth and Innovation
Move Louisville: 2035 Transportation Plan	2016	Regional Transportation Plan	\$750,000	Louisville Metro Government and the Transit Authority of River City (TARC)
Bardstown Road Safety Study	December 17, 2018	Safety Planning Study	\$90,000	Develop Louisville: Louisville Forward, Louisville Public Works, Kentucky Department of Transportation (KYTC)
Broadway Master Plan	Ongoing	Transportation Plan	\$450,000	Louisville Metro Government, TARC, KYTC, Louisville Downtown Partnership
TARC COA & LRP	Ongoing	Transportation Plan	\$1,000,000	TARC, Louisville Metro Governement, KYTC, KIPDA
Dixie Highway Corridor: Transforming Dixie Highway (Original Planning Process)	2015	Transportation Plan	\$145,000	Louisville Metro Government
Butchertown, Phoenix Hill, and Nulu Area Plan	2021	Neighborhood Plan	\$50,000	Louisville Metro Government
Vision Russell (HUD Choice Planning Grant)	Ongoing	Housing Plan	\$163,000	Louisville Metro Government

### Innovation

Broadway All the Way will integrate multiple innovations into the planning process, including those that have been promoted by the FHWA through the "Every Day Counts" program. These innovative tools/methods will be both evaluated and incorporated throughout the delivery of the project.

### Innovative Technology

Innovative technologies that are already being planned for or that will be evaluated include:

**Expansion of Fiber Backbone:** Evaluation of deploying broadband throughout the project area to lay the foundation for smart traffic signals, Connected and Automated Vehicles (CAV), Vehicle-to Vehicle (V2V), and Vehicle-to-Infrastructure (V2I), and other ITS systems. These innovations have the potential to eliminate 80% of unimpaired crash scenarios, improve travel time reliability, and can lower greenhouse gas (GHG) emissions.

Smart LED streetlights: For consideration with the project are Smart LED streetlights that can turn themselves on and/or illuminate brighter if a car, cyclist, or pedestrian enters the vicinity. Smart LED streetlights use less energy, which lowers overall operations and maintenance costs compared to traditional streetlights. In addition, they use innovation detection and LED technologies to focus lighting where and when it is needed most, reducing glare and extraneous light pollution.

Crowd Sourcing for Advancing Operations: The Kentucky Transportation Cabinet (KYTC) is already utilizing these tools to improve operations and maintenance. This plan will consider evaluating the role these tools may play to monitor and improve operations of both Dedicated and Arterial Bus Rapid Transit systems.

Safe Transportation for Every Pedestrian (STEP) Countermeasures: Improving pedestrian safety is a priority for Broadway All the Way. A number of STEP countermeasures—including road diets, pedestrian refuges, and crosswalk visibility enhancements—are considered innovative within the region, and have already been proposed along the corridor and will continue to be evaluated alongside other options.

**Green Infrastructure:** In addition to "Every Day Counts" innovations, the plans will prioritize the inclusion of innovative green infrastructure such as pervious paving, bioswales, and structural soil systems to maximize sustainability and resiliency of the corridor while improving the long term social, ecological, and economic benefits of the project.

### Innovative Project Delivery

**Strategic Workforce Development:** As mentioned in the Economic Competitiveness and Opportunity Merit Criteria, setting the table for strategic disadvantaged workforce development will be a focal point of the planning efforts to ensure a workforce pipeline is ready for implementation.

**Virtual Public Engagement:** Broadway All the Way has already utilized and will continue to use innovative public engagement tools including websites, social media, direct text and more.

**Integrating NEPA and Permitting** – Since this project is in its early stages, it will be of the upmost priority for the project team to search for opportunities that streamline the permitting process.

### Innovative Financing

Value Capture: With underutilized properties and numerous development opportunities, especially along the Broadway corridor, within and near the central business district, the plans will explore Value Capture as one potential tool to help fund implementation, operation, and maintenance of the Broadway All the Way corridor.

Figure 16. Potential Innovative Strategies along the Corridor (Broadway Master Plan)



# V. Project Readiness

Louisville Metro Government (LMG) has decades of experience administering federally-funded transportation projects and is well positioned to successfully administer the proposed RAISE Planning Grant.

### **Project Schedule**

The schedule shown in Table 7 is based on a projected award date of the requested RAISE planning grant funds no later than November 2022. The project is expected to be completed in August 2025. The project could be programmed in KIPDA's TIP with STBG funds in order to begin phasing in construction shortly thereafter.

### **Project Readiness**

The scope of work for both the RAISE Planning Grant and the future implementation of construction is within the range routinely handled by LMG and its partners at the Kentucky Transportation Cabinet (KYTC) and the Transit Authority of River City (TARC). LMG has a long history of receiving at least 80% of the federal funds allocated by the regional MPO (KIPDA) each year. Due to LMG's success at delivering projects, including the 2015 TIGER Grant-funded *Transforming Dixie Highway*, the likelihood of successful delivery of both this RAISE Planning Grant and the eventual construction implementation are high.

### Required Approvals

As a planning study, no approvals are expected to be required at this time; however, the planning and design process will identify permits needed for the implementation phases. The project team will coordinate directly with permitting agencies/representatives throughout the planning process. It is anticipated that for both planning components 2 and 3 permitting

# Engagement to Date:

- Dozens of community meetings and workshops
- •Hundreds of community conversations on the street.
- •Thousands of social media interactions

outlines will be developed to fully understand the need, timing, and potential impacts of each.

This project is currently programmed in KIPDA's Metropolitan Transportation Plan (MTP), Connecting Kentuckiana 2040, listed as Project #2751 under the name "Broadway Complete Street." The project is not currently programmed in KIPDA's TIP or KYTC's STIP. Once funding is awarded, the necessary modifications will be made to both the TIP and STIP to include this project. If selected for the RAISE Planning Grant, LMG could also begin the process of applying for other federal funds, such as STBG, in order to program the future phases to construct the concepts of this Planning Grant.

Table 7. Project Schedule

	2022	2023	2024	2025
Planning Component 1: Creating A Unified Vision for Premium Transit				
Planning Component 2: Shovel Ready Broadway Complete Street				
Planning Component 3: Strategic Transit Enhancements along Baxter Avenue and Bardstown Road				

### Past Planning Efforts

As mentioned in the Partnership and Collaboration Merit Criteria, Louisville Metro Government and other stakeholders have performed numerous planning evaluations and studies related to these transportation needs. Each study concluded that the proposed Broadway All the Way and these types of transportation improvements are critical for equitable transportation, the future mobility and safety of people, and climate risks faced throughout the region. These studies were listed in the Partnerships and Collaboration Merit Criteria.

# Technical Feasibility & Value Engineering

While not yet a construction project, Broadway All the Way will be focused on developing innovative and feasible plans and designs as described in the Project Description. It is expected that project components 2 and 3 will include preliminary design cost estimating with a 30% contingency and will incorporate risk controls and consider value engineering opportunities as the plans are developed.

# Assessment of Project Risks and Mitigation Strategies

Since this proposal is still at a planning level, the risks and mitigation strategies will continue to be assessed according to standard risk categories as the Planning Grant progresses. At the current time, the risks associated with this project are minimal and conventional for a project of this size, and include: schedule and budget overruns, delays due to right-of-way acquisition and permitting.

A potential risk for any project is schedule overruns. Louisville Metro Government has purposefully designed this study to be completed well in advance of the deadlines to obligate funds and LMG is committed to completing the project in a timely manner. Furthermore, while not anticipated, LMG understands that it is responsible for any potential cost overruns.

While not a construction project, a potential risk to future implementation is right-of-way acquisition. Louisville Metro Government and the Kentucky Transportation Cabinet own all of the right-of-way for the planning corridor, therefore minimal right-of-way impacts or delays are expected.

Lastly, lack of coordination amongst permitting agencies is a risk for transportation projects. Louisville Metro Government has proactively engaged relevant stakeholders and permitting agencies and will continue to do so through the duration of the planning process.

### Conclusion

Louisville last received a USDOT discretionary grant seven years ago in 2015. The TIGER project, Transforming Dixie Highway has been extremely successful. Through a complete streets approach, safety and quality of life has been greatly improved. Implementation of Kentucky's first BRT service and ITS improvements have provided transit reliability and improved mobility throughout the southwest end of Louisville. Private investment in the Dixie corridor has followed this public investment in infrastructure. Partnerships between state, regional, and local agencies have been galvanized. It is time to build upon that foundation of success. LMG has partnered with TARC, KYTC and other stakeholders to develop a master plan for the Broadway All the Way corridors. We need USDOT's assistance to help correct past infrastructure inequities and reconnect our community. There is no doubt that USDOT's assistance with this planning grant would provide a tremendous return on investment, not only in measurable ways, but in social impact was well.

# Index of Supporting Information On Website

The primary web address for the Broadway All the Way is

www.louisvilleky.gov/raise-broadway.

The appendices to the application narrative are located on the website as follows:

Appendix A: Letters of Support

Appendix B: Documentation of Non-Federal Funds

Appendix C: Broadway Master Plan (2022), prepared by Gresham Smith

Appendix D: Broadway Master Plan (2022) Technical Memo