

EXECUTIVE SUMMARY

Like most American cities, Louisville must reduce vehicle miles traveled. Cars will remain the dominate mode of transport, but there is opportunity to shift short trips away from cars. Shifting these trips can have broad impacts on our health, air quality, built environment and connectivity. Move Louisville represents a vision and action plan for transportation policy and investment for Louisville Metro. The Plan provides a path to a healthy, connected and sustainable transportation network that encourages investment, growth and prosperity.



MOVE LOUISVILLE COMMUNITY GOALS

▶ Provide Connectivity Choices

Create a transportation system that provides users with multiple options.

▶ Improve Safety and Health

Ensure that all future growth contributes to healthy living and good quality of life for all.

▶ Promote Economic Growth

Projects should help to promote economic opportunity and community prosperity.

▶ Maintain Fiscal Responsibility

Build a transportation system that future generations can afford to maintain.

▶ Assure Environmental Sustainability

Transportation projects and policies will seek to improve air and water quality.

▶ Assure Equity for All System Users

The transportation system of the future must address the needs of all potential users.

▶ Enhance Neighborhoods

All future growth should contribute to the creation of vibrant communities.



From Vision to Move

Vision Louisville is a creative initiative to inspire big ideas for reimagining our city's built environment. It provides a framework for accelerating transformative investment in the community's built environment. The initiative envisions a city of engaged citizens that is connected, creative, competitive and compassionate.

Vision created a vehicle to think big and to accelerate transformative investment in Louisville's built environment. Building upon Vision, Move Louisville is a community-driven, more technically-oriented plan that was developed after 2 years of community conversations.

Move Louisville recommends specific policy and project-based actions that together will reduce vehicle miles traveled and begin to create the future articulated in Vision Louisville. The goals of the Move Louisville plan are based on the seven community goals defined in Vision Louisville.

Why Move Louisville?

Move Louisville recommends policies and projects that will create a more innovative, connected transportation network that, while continuing to facilitate normal traffic, will allow and encourage those who want to live “car-lite” or even car-free. The overall objective is to reduce vehicle miles traveled by providing options for commuting, recreation and short trips using transit and active modes like walking and biking.

FIX IT FIRST/SYSTEM PRESERVATION

Louisville’s transportation infrastructure affects all residents and businesses. The streets, sidewalks and buses are used daily by commuters going to work, children going to school, businesses moving freight and citizens shopping for their daily needs. Maintaining a high-quality infrastructure is imperative for Louisville to thrive. Citizens are voicing their concern for the condition of our roads and sidewalks. A 2011 survey indicated only 37% of citizens were satisfied with the condition of Louisville’s streets and sidewalks.

The Transportation Improvement Plan (TIP) is the guiding document for the public sector’s investment in transportation. When looking at the region’s current TIP, the majority of the Surface Transportation Program (SLO) dollars are allocated to roadway capacity, with an inadequate amount allotted for system preservation. This is the case, despite the fact that our transportation assets, such as pavement, bridges, sidewalks, and signs and signals are deteriorating. Historically, federal funds used for roadway capacity projects were considered guaranteed. However, a new stark reality is becoming clearer, where spending of the region’s limited federal dollars must be targeted to critical needs in the transportation network. We have learned that if we build it we have to take care of it.

In reviewing federal and local best practices, one element rose to the top again and again; system preservation is an issue of national concern, and one that is experienced on a daily basis in every locality. Metropolitan areas around the country are recognizing the need for system preservation and are adopting budgets that reflect those needs. For example, in

2012, pavement and bridge preservation allocations accounted for 43% of the total funds administered by Indianapolis. By comparison, 15% of the funds programmed in Louisville’s TIP are devoted to system preservation. Nationally, the U.S. Department of Transportation has promoted State of Good Repair as a national performance goal within Moving Ahead for Progress in the 21st Century Act (MAP21).

REDUCE VMT IMPROVE CONNECTIVITY

One clear and distinct message from the Vision Louisville process was that Louisville aspires to be a community of choice – both in terms of mobility and life style. Today, almost 82% of commuters in Louisville drive to work alone, and 89% of households have access to one or more cars.

In comparison to our regional peer cities and the nation, Louisville’s percentage of residents driving to work alone is high: for example, 72% of Cincinnati’s residents drive alone, while Nashville’s and the nation’s rates stand at 80% and 76%, respectively.

LOCATION	DRIVE ALONE	CAR POOL	TRANSIT	WALKING	OTHER	TOTAL WORKERS
Seattle	52%	9%	19%	9%	11%	355,454
Portland	59%	9%	12%	6%	14%	302,410
Cincinnati	72%	9%	8%	6%	5%	130,608
United States	76%	10%	5%	3%	6%	139,786,639
Charlotte (Merged)	77%	10%	4%	2%	7%	460,885
Nashville (Merged)	80%	10%	2%	2%	6%	315,310
Kansas City	81%	9%	3%	2%	5%	220,334
Columbus	81%	8%	3%	3%	5%	390,170
Indianapolis (Merged)	82%	10%	2%	2%	4%	416,825
Louisville (Merged)	82%	9%	3%	2%	4%	344,183

Data Source: US Census Bureau 2013 ACS 5-year estimates

Clearly, moving by car dominates today’s landscape and will for the near term. Nationally, however, vehicle miles traveled (VMT) – the statistical measure of total vehicular usage on our streets and highways – is decreasing. Data shows that VMT peaked in 2005 and declined by 8.75% by 2013. Local VMT also decreased during this time period, although at a slower rate. Reductions in VMT result in fewer daily and weekly trips, reduced fossil fuel consumption, reduced congestion and improved air quality. While in the short-term, VMT fluctuations are closely tied to gas prices, long-term decreases in VMT reflect a growing trend, especially in our younger and older population cohorts, to drive less and live closer to where they work. Short trips (3 miles or less) account for a full half of all trips and 28% of trips are one mile or less. Converting some of these short car trips to other low to non-polluting modes, such as bicycling and walking,



can have a positive impact on the environment. Population estimates over the last five years show Louisville Metro's population growing at a modest rate. The region's unique quality of life and competitive cost of doing business, along with the growing sector of knowledge-driven jobs, continues to attract new employers and a new workforce – primarily in the following sectors: advanced manufacturing, lifelong wellness and aging care, business services, logistics and eCommerce and food and beverage. Louisville Metro's economic development strategy is centered upon these specific business clusters and the talent that these companies attract. Surveys have shown that the workforce attracted to Louisville for these jobs expect more transportation options. The "sharing economy" that is emerging will reflect these growing options, from shared auto services such as Car Share and Uber to the city's planned bike share system.

The more compact growth scenario recommended by Move Louisville could result in a decrease of over 500,000 VMT per day on the region's road network. This scenario will help make households, especially lower income households, more mobile and provide more viable options for connecting to jobs. This recommended growth scenario will facilitate removing short trips from our local roads by shifting them to alternative modes. Ideally, the projects and policies of Move Louisville will work together with the city's land use policies to create walkable, mixed-use places that have transit supportable densities. With transit oriented development along key corridors, there will be more opportunities for environmental improvements, better land use planning and for shorter commute times – a key desire of millennials entering the workforce, according to a 2015 Urban Land Institute report on millennial/gen Y housing preferences.

To truly shorten commute times and decrease VMT, Metro needs to link the activity centers through premium transit. Premium transit is fast, frequent and reliable. This mode of travel can take a number of forms including bus rapid transit (BRT), light rail,

modern streetcars and commuter rail. These forms of transit were desired by the community during Vision Louisville and Move Louisville and serve to move people to jobs and services in a low impact manner.

Many cities, including mid-sized cities, are pursuing light rail premium transit. Louisville explored light rail transit in the early 2000s, but was unable to achieve the political and financial support to execute the system. Today, Louisville must both increase density within its centers and address sustainable funding to support fixed-guideway transit. Move Louisville's policies and priority projects aim to address these challenges over the next 20 years so that fixed-guideway service becomes feasible. Given today's constraints, Move Louisville recommends Bus Rapid Transit be the mode to achieve premium transit service.

To achieve connectivity choice, it is critical that Louisville's different travel options are linked and coordinated. Given the county's size and historic development patterns, it is important that bicycle and pedestrian networks connect to transit to make transit the easy choice.

MOVEMENT OF GOODS

Maintaining efficient movement of goods, a key component of the region's strong logistics and distribution sector, is an essential component of the plan. While the Louisville-Southern Indiana Ohio River Bridges Project (currently under construction) is the needed lynchpin of the region's freight network, increasing freight movement around major logistics hubs such as the airport and Riverport will require that the network not become congested with single occupant vehicles. A comprehensive program of travel demand management is recommended in this document to assure that, even with growth in the region, traffic flow is maintained.

VISION ZERO HEALTHY AND SAFE

Louisville's citizens expect and deserve a safe, healthy and environmentally sustainable city of neighborhoods. Louisville's rate of pedestrian fatalities exceeds the national average. Move Louisville recommends that the city follow the lead of many U.S. cities in adopting a Vision Zero concept – where we strive to have zero fatal pedestrian collisions. What this means in practice is that people make mistakes and the system should be designed to protect users by tactics such as evaluating speed limits, enhancing enforcement and redesign where appropriate. Move's pedestrian accessibility strategy creates a program of investments and projects that provide active transportation options to form a safer, healthier and more walkable community.

AIR QUALITY

In Jefferson County, on road sources – cars, trucks, buses, etc. – are responsible for up to 35% of the emissions of NOx and roughly 20% of the emissions of VOCs (the two compounds that combine to produce ground-level ozone). The projects within Move Louisville provide non-driving alternatives, while the policies incentivize infill growth that will result in shorter trips. The cumulative effect of these investments and strategies will reduce per capita vehicle miles traveled, allowing the region to make substantive progress in improving its air quality.

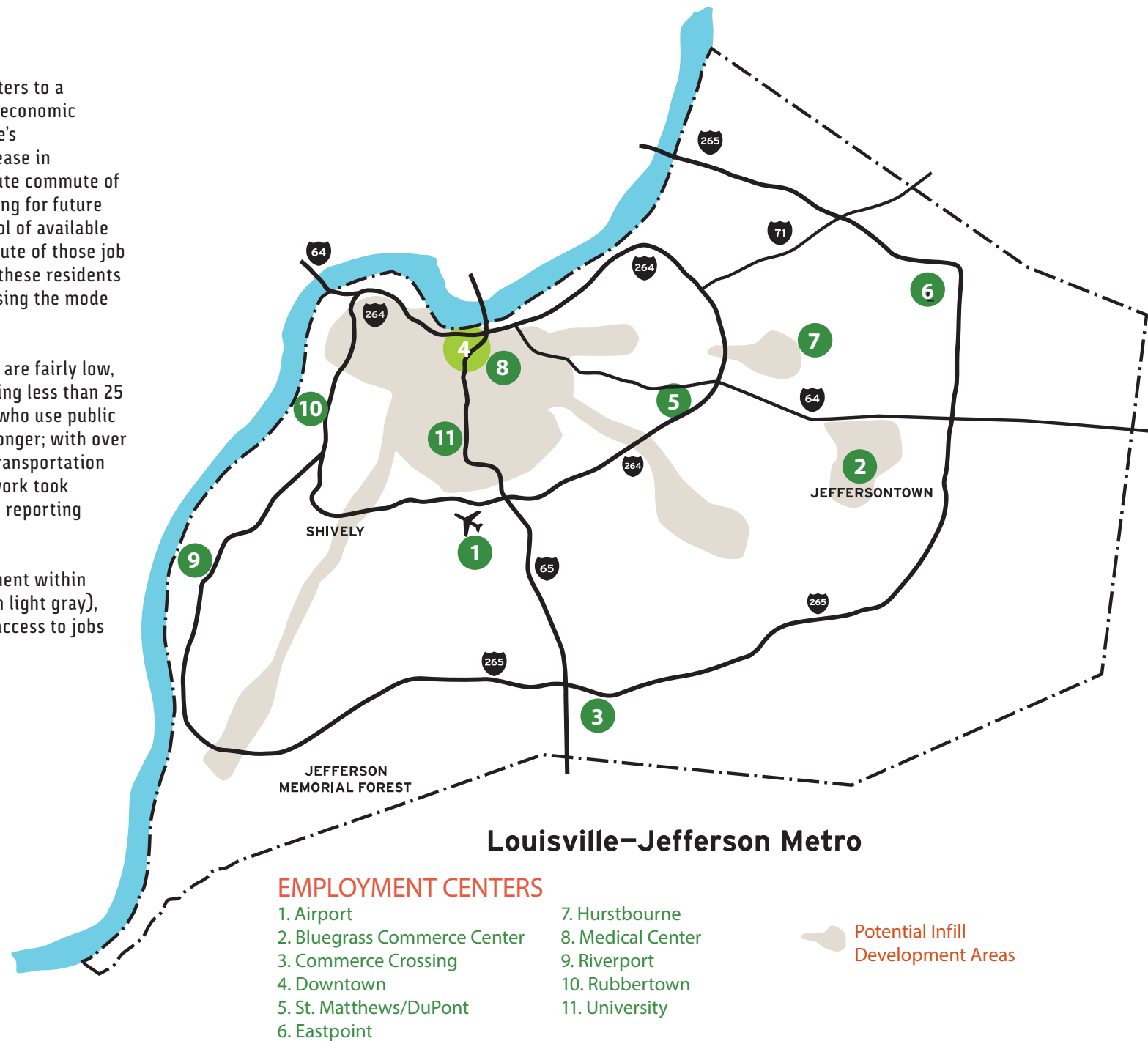
Poor air quality in our urban areas is linked to increases in asthma and other illnesses. Yet if each resident in a community of 100,000 replaced one car trip with one bike trip just once a month, it would cut carbon dioxide (CO2) emissions by 3,764 tons per year in the community. Move Louisville's projects and policies seek to make alternative travel modes for short trips the easier choice.

ACCESS TO JOBS

Connecting Louisville's many job centers to a qualified workforce is critical to the economic success of the region. Move Louisville's recommendations create a 10% increase in population that live within a 20 minute commute of the city's major job centers. Accounting for future growth, this would mean that the pool of available employees within a 20 minute commute of those job centers would increase. In addition, these residents also will have more options for choosing the mode of their commutes.

Average commute times in Louisville are fairly low, with nearly 67% of the workforce using less than 25 minutes to travel to work. For those who use public transportation, commute times are longer; with over half of the workforce taking public transportation reporting that their travel times to work took 45 minutes or longer and nearly 36% reporting commute times of over one hour.

By encouraging residential development within the infill nodes (shown on the map in light gray), commute times can be reduced and access to jobs can be increased.





Projects & Policies

Move Louisville recommends projects and policies designed to address the needs and desires of our community and align those aspirations to national best practices and local trends. Together the policies, practices and priorities embodied in the pages that follow aim to keep Louisville moving toward a more connected, competitive and compassionate city. Throughout the Move Louisville planning process, numerous transportation projects were identified and evaluated against the plan's goals.

Specific lists of future projects are identified by mode type in the appendices of this plan. The projects additionally are categorized by recommended time line -- priority, mid-term and long-term. With a limited horizon and a constrained budget, Move Louisville outlines a set of priority projects that will serve to catalyze Louisville's economy, transform the built environment and reduce VMT.

The priority projects assume that the improvements programmed in the region's Transportation Improvement Program (TIP) will be built and become part of the city's transportation network. The priority projects also assume that congestion and safety improvements on the region's interstate highway

system will be accomplished with state and federal funds. As capacity is added to the interstate system, operational and design improvements should include managed lane technologies, such as High Occupancy Vehicles and transit lanes, as well as other evolving intelligent transportation systems.

In addition to the priority projects, Move Louisville's policy priorities build a process that allows for enhancement and expansion projects to be brought on board as funding allows. These include small road capacity or major streetscape projects that support economic development such as the West Market and University Corridor projects. The project and policy priorities should be reviewed and evaluated on a periodic basis. Move Louisville recommends that these reviews occur every two years.

Move Louisville prioritizes system preservation over roadway expansion and takes a complete streets approach to build the framework for the priority projects. By taking a complete streets approach to road planning and design, Louisville can begin to rethink how streets move people and balance the demands of all users. The end result should be a well-maintained transportation network and a reduction in VMT.

PRIORITY PROJECTS

- ▶ **East/West Transit Corridors** connecting Dixie Highway to Westport Road
- ▶ **Transforming Dixie Highway** for traffic and pedestrian safety, efficiency and rapid transit
- ▶ **Rebuild Broadway and Preston Highway** as complete streets and premium transit corridors
- ▶ **Oxmoor Farms Bridges and Access**
- ▶ **Urton Lane Corridor**
- ▶ **Improve access and connectivity in East Louisville** especially around the Parklands of Floyds Fork
- ▶ **Improve the transportation system and connectivity to, from and within West Louisville**
- ▶ **Implement two-way traffic conversions** in Downtown and Edge Neighborhoods
- ▶ **Extend and reconfigure River Road as a complete street** to create a safer corridor from end to end and reconnect West Louisville to Downtown
- ▶ **Implement a complete street treatment for Lexington Road**
- ▶ **Reimagine the 9th Street corridor**
- ▶ **Complete a low-stress central bicycle network**
- ▶ **Fund the sidewalk program to ensure pedestrian connectivity**
- ▶ **Complete the Louisville Loop**



Priority Projects

In the immediate term, these projects offer transformative potential for the city. Each of these projects will be added to the Metropolitan Transportation Plan, the region's transportation investment program.

PREMIUM TRANSIT CORRIDORS/COMPLETE STREETS

East/West Transit Corridor

A clear east-west/cross-town transit connection was a top request during the Move Louisville process. A cross-town route has the potential to connect major work places around the city, allowing easier and faster access from residential neighborhoods to job centers. The Renaissance South Business Park, near the Louisville International Airport, is a prime example of a growing job center that will benefit from an east/west transit connection. Two major routes are proposed for examination, one just inside the Watterson Expressway and one just inside the Snyder Freeway.

Transforming Dixie Highway

Dixie Highway is one of Louisville's major economic corridors and one of the most densely-traveled. The Dixie/Preston transit route carries the highest number of riders in the system. The corridor also is one of Louisville's most dysfunctional and dangerous, with a large number of accidents and fatalities. This high transportation demand results in low speeds and long delays at critical locations throughout the corridor – affecting all users including transit riders. The Dixie corridor experiences

more than double the number of total and injury-collisions when compared to similar roadways statewide. These crashes also include a high rate of fatalities. Between the years 2010-2014, Dixie Highway experienced 34 traffic-related fatalities within the project limits. ***This results in a fatal crash rate that is over 3 times the rate of similar roadways.*** A redesign and rebuild is necessary to create a safe, efficient and economically successful multi-modal corridor.

Broadway Complete Street

No other street in Louisville links the city's eastern and western neighborhoods to the extent that Broadway does. Redesigning this connector in its entirety – from Baxter Avenue to Shawnee Park – as a multi-modal “complete street” including bus rapid transit (BRT) and bike facilities, would be instrumental in the revitalization of this historically significant commercial corridor. To truly create a functional BRT line, it would need to extend southeast on Bardstown Road to serve the already established walkable communities. An operational plan is necessary to determine actual costs and operating characteristics.

Preston Corridor Premium Transit

While the land uses along Preston are not yet fully supportive of premium

transit, much of the Preston corridor has the fundamentals for infill development that could allow it to transform over time into a true premium transit corridor. In the short term, improving frequency and improving running time through approaches such as limited peak hour bus lanes and consolidated stops, will help to maximize transit ridership and improve choice along the corridor.

REGIONAL ECONOMIC DEVELOPMENT PROJECTS

Oxmoor Farms Bridges and Access

Planned transportation infrastructure is the key to unlocking this ideally situated undeveloped parcel of land. Additional bridges and access points will create needed alternative routes to Shelbyville Road and Hurstbourne Parkway. With multi-modal streets and a planned, dense, mixed-use, multi-generational development, this site – one of the county's largest infill development sites – could be transformed into a district with high quality new jobs and superior urban quality, livability and accessibility.

Urton Lane Corridor

Completing the planned extension of Urton Lane from Middletown to

Taylorsville Road will provide a long-needed north/south thoroughfare expediting the movement of goods and services and facilitating shorter and more efficient commutes for residents living and doing business in the area.

East Louisville Connectivity

The rapidly-developing area around the newly opened Parklands of Floyds Fork will bring network connectivity issues. Transportation should be addressed holistically to accommodate new development and all modes of travel where appropriate. It is anticipated that many of the larger projects will be focused on interstate improvements. For example, a new interchange and connector road from KY 148 to US 60 (Shelbyville Road) on I-64, will greatly increase accessibility. Strategically improving existing rights of way and building a limited number of new connector roads will accommodate access to the Parklands of Floyds Fork and adjacent areas.

West Louisville Connectivity

Conversion of one-way streets to two-way streets and improved maintenance of the street, bicycle and pedestrian networks will support reinvestment throughout West Louisville and improve east-west connectivity.

DOWNTOWN AND EDGE NEIGHBORHOOD ACCESS

Downtown/Edge Neighborhood Two-Way Streets

Louisville's downtown street network should be converted from one-way to two-way to increase the livability of the affected neighborhoods for both residents and visitors. Studies show that regardless of the size of the city, a one-way to two-way street conversion increases the safety and efficiency of downtown networks, enhances economic activity and creates more walkable neighborhoods. The related conversion to two-way movement of Mellwood Avenue/Story Avenue in downtown and of 15th St./16th St. – each made one way decades ago during construction of I-64 – will further support revitalization in the edge neighborhoods of Butchertown, Portland and Russell.

Main/Story Intersection Redesign

The reconstruction of the intersection at Story Avenue, Main Street and Baxter Avenue will improve safety and support the two-way operation of downtown streets. The project also supports economic development in the Butchertown, Phoenix Hill and NuLu areas.

River Road Complete Street

Extending River Road westward from its current terminus at 7th Street will provide connections from the East End and downtown to the Portland and Russell neighborhoods and to the future Waterfront Park Phase IV. Reconfiguring the existing portions of River Road from end to end to improve safety for motorists and better accommodate pedestrians and bicyclists, allows the street to be safe and provides better access to waterfront amenities including the Big 4 Bridge and Waterfront Park.

Lexington Road Complete Street

Reconfiguring Lexington Road as a complete street to address safety issues will improve efficiency and enhance future redevelopment opportunities.

Reimagine 9th Street

Ninth Street and the I-64/Ninth Street Interchange create a wall between downtown and West Louisville neighborhoods. Reimagining the Ninth Street corridor as a true urban boulevard will preserve access to downtown Louisville and West Louisville while potentially creating nearly 10 blocks of development opportunities within and near the over-dimensioned footprint of the existing interchange and open redevelopment opportunities throughout the corridor.

BICYCLE/PEDESTRIAN NETWORK

Central Bicycle Network

Reducing VMT, increasing use of alternative transportation modes and achieving the corresponding health improvements requires providing more options for short trips. Added to the goal of reduced VMT, Louisville residents expressed a desire to get around the city by bike. A network of extensive yet inexpensive and relatively easy-to-implement bike facilities - connected to transit - in the downtown and the central neighborhoods is a logical first step. A strong, connected core network also will support the success of the city's bike share program.

Sidewalk Connectivity

In 2010, the Metro Council took responsibility for construction and maintenance of the city's sidewalks, a responsibility that had previously fallen to the adjacent property owners. However, at the time, recessionary constraints on the city's capital budget limited funding of the program. Louisville Metro's FY2015 and 2016 budgets have taken steps to formalize annual funding for sidewalk repair and construction, but additional funding is necessary.

Louisville Loop

While the Louisville Loop is well on its way, taking it to the finish line will provide a huge boost to the health and vitality of Louisville's citizens. Increasing connectivity to the Loop from neighborhoods throughout the city is essential to ensuring that residents can access all the Loop has to offer.



Frankfort Avenue today



Vision of Frankfort Avenue as a complete street



STRATEGIC POLICY APPROACHES

- ▶ Shift funding allocations and increase funding to build and maintain a city-wide transportation system that supports the mobility needs of the entire community
- ▶ Make complete street design principles the norm
- ▶ Focus decision making on high-capacity, people-moving corridors
- ▶ Consider transit a catalyst for infill development
- ▶ Streamline transit service on key corridors
- ▶ Set policy on preferred truck/freight routes
- ▶ Manage parking
- ▶ Embrace smart mobility



Indianapolis Cultural Trail
Image source Visit Indy

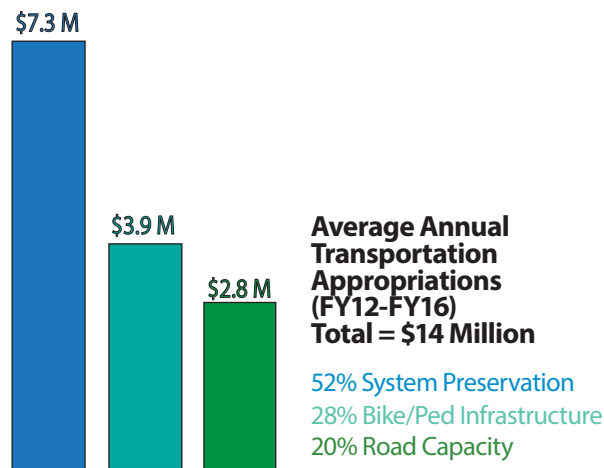
Policy Priorities

In addition to the projects, strategic policy approaches are needed for Louisville to achieve the robust transportation it desires.

SHIFT CURRENT FUNDING ALLOCATIONS AND INCREASE FUNDING

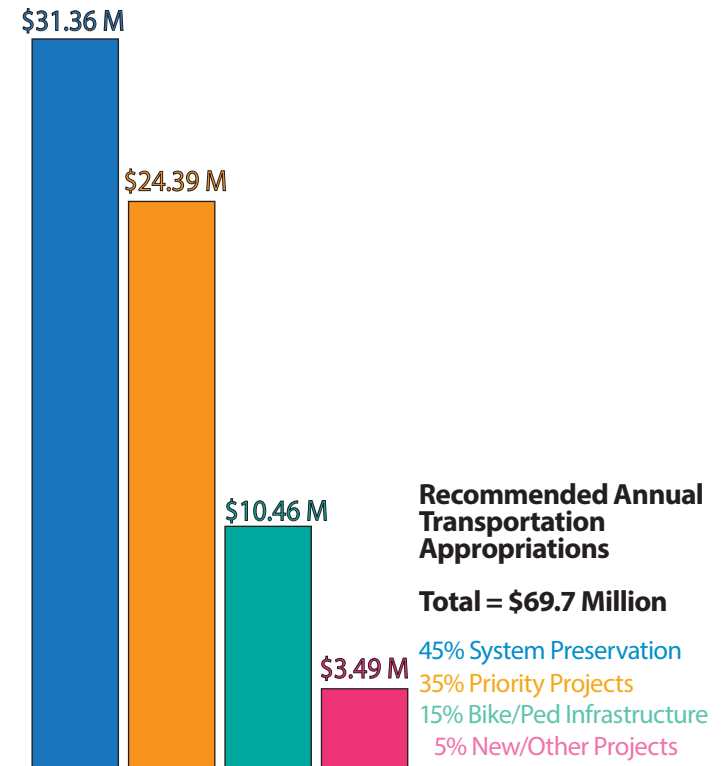
To achieve the community's goals and best practices in transportation and to address the priority/transformational projects identified in the planning process, new funding must be realized. Move Louisville recommends two strategies: identify new funding streams and shift local and regional transportation spending to prioritize system preservation. The new funding model seeks to balance transportation needs with our local quality of life-centered economic development strategy. Although the shift in allocations will be gradual over the next 5 to 10 years, the change will have a profound result when investments are made according to the plan.

The majority of the region's transportation dollars are currently allocated to roadway capacity projects. However, expanding the system increases our current and future maintenance costs. Meeting the Move Louisville goals requires a substantial investment in maintaining the operational functions and physical infrastructure of the system. Move Louisville recommends a funding allocation model that tackles the region's current maintenance deficit (estimated backlog of \$288 million and on going maintenance obligations) over the next 20 years, builds the priority/transformational projects in the same time period, and allows for enhancement and expansion projects to be brought on board as funding allows. This model, on average, would cost \$69.7 million annually over the 20-year period for capital improvements. In addition, it is



recommended that Metro provide an annual \$1.9 million operational enhancement for project management and delivery capabilities. These recommendations represent a significant shift away from road capacity projects and seek to enhance system preservation, improve road operations, implement complete streets and enhance transit and active transportation modes.

Annually, Louisville Metro appropriations including federal and state formula funds (Community Development Block Grant, Municipal Aid and County Road Aid) average \$14 million for capital transportation projects and initiatives. This appropriation excludes project-related bond issuances and does not reflect the pending large road capacity projects in the



region's Transportation Improvement Program. For planning purposes, it is assumed that \$14 million will be the annual allocation going forward for capital transportation projects if no changes are made.

Assuming the \$71.6 million annual total cost of the Move Louisville recommendations and average appropriation, there would be an average yearly gap of \$57.6 million. Four strategies are recommended to address this gap:

- Streamline internal project development and design processes to decrease project delivery time;
- Increase share of federal program funds through KIPDA and KYTC by at least \$10 million



annually;

- Use competitive grants to complete priority projects (e.g. TIGER, FTA New Starts, CMAQ);
- Find new/enhanced revenue sources.

The picture for Louisville is clear - real improvement to the city's transportation infrastructure requires significant changes in how transportation funding is allocated and executed. The funding gap indicates that additional revenue streams are necessary to provide the outcomes that the citizens desire and economic growth requires.

Assuming the gap can be addressed, Move Louisville recommends the following allocation model for infrastructure spending:

- 45% of funds should be dedicated to system preservation and maintenance;
- 35% of funds should be dedicated to priority road capacity and enhancement projects with an emphasis on complete street improvements;
- 15% of funds should be dedicated to priority bicycle and pedestrian facilities including shared use paths;
- 5% of funds should be dedicated to new and other projects to be complemented by outside funding sources such as federal grants, private investment and local philanthropy.

These allocations assume annual funding of \$69.7 million for capital transportation projects and \$1.9 million for operational enhancements (project management staffing and contracts) to streamline project completion - a total of \$71.6 million. If only a portion of this necessary funding is received, the majority should be allocated to system preservation, with the remainder addressing the priority projects.

Today, most Louisvillians get around by car, and that is expected to be the case for the foreseeable future. It therefore follows that the majority of capital spending should target maintaining Louisville's existing transportation infrastructure.

By contrast, it takes relatively few dollars to make significant progress in establishing robust bike and pedestrian infrastructure. Today, Louisville Metro's overall spending on bike infrastructure is substantial. Current spending levels on bike and pedestrian facilities are due mostly to the design and construction of the Louisville Loop and emerging shared use path system. It is recommended that substantial funding on bike and pedestrian infrastructure continue, even after the Loop is completed, to develop a connected shared use path network.

TRANSIT OPERATIONS

Transit in Louisville is underfunded for a city that desires real transit options. Additionally, transit enhancements are required to support the workforce needs of employers. It is important to note that the current level of funding for transit operations does not support the current level of service, as each year transit operations are partially supported through non-renewable sources such as federal and state grants. Move Louisville's recommendations for premium, high frequency transit corridors cannot be constructed or operated at current funding levels. If Louisville is to take the next step and remain competitive with its peer cities - such as Nashville, Indianapolis and Charlotte - that are realizing premium transit corridors, a new and sustainable source of funding for transit operations must be secured.

Better transit service was one of the most common desires expressed by Louisville residents during the Vision and Move Louisville processes. Louisville employers are making frequent requests for better transit service to job centers. Improved bus service, rapid bus corridors and even light rail investment are on the minds of Louisvillians. These improvements require new funding, since the existing funds generated by the local community for transit (primarily the Jefferson County employment occupational tax), do not even cover the service currently provided. Each year TARC resourcefully finds roughly \$10 million in grants or subsidies to continue providing current levels of service. To add the new services, additional and sustainable revenue is essential. To implement the important premium transit recommendations, at

minimum, an additional \$20 million in operating funds per year would be required.

Move Louisville proposes that the operational and capital transit improvements be implemented over a 15 to 20 year period, with funding needs ramping up over the same amount of time. Move recommends that the Dixie Highway premium transit service line and new east-west transit connections are put in service over the next 3 to 5 years. While today there is a \$10 million shortfall in needed operating funds, it is estimated these two priority changes will grow this shortfall to at least \$18 million. Move Louisville recommends that premium transit service on Broadway/Bardstown Road and Preston Highway is added in the next 5 to 10 years, and that the Frankfort/Shelbyville Road premium service is added in the next 10 to 20 years. Premium service on Preston Highway and Frankfort/Shelbyville Road will require more activity centers and additional residential density at key transit stops, changes that will require time and market shifts.

Interest in a street car in Louisville has grown. Many cities around the United States have constructed street car lines in or near their downtowns. Due to the concentration of destinations, employees, and a growing residential market, Main and Market Streets in downtown Louisville may hold the potential for a new fixed-guide way service, such as a street car. The street car could supplement and be integrated with the Zero Bus circulator service now in place. Additional analysis is needed to determine if the land uses along the corridor can support a street car, and if its benefits exceed the capital and operational cost of the service.

The community expressed interest in exploring modern street cars or other premium transit service to connect downtown to the University of Louisville and the Louisville International Airport. TARC's existing Fourth Street service is one of its frequent service lines and carries almost 4,500 passengers daily. The existing width and historic development along Fourth Street make it an unlikely candidate for premium transit

service. Other north/south streets may hold potential for a premium transit connection, but more analysis is needed.

ADDITIONAL FUNDING SOURCES

Given the gap it is clear that additional funding sources will be necessary to execute all of the transportation needs and enhancements recommended by Move Louisville. It is important to make a distinction between funding sources (a revenue stream) and financing mechanisms. A financing mechanism, such as a bond, generates money in the short term which must be paid back with interest. The tools cities use to create dedicated revenue streams fall into two basic categories: taxes (ex: sales tax) and user fees (ex: parking surcharge). The community desires articulated during the Move Louisville process will require financing mechanisms and new revenue streams.

MAKE COMPLETE STREET DESIGN PRINCIPLES THE NORM

Complete Streets are streets that work for everyone in the community, regardless of how they get around. This does not mean that every street requires bike lanes, transit lanes and elaborate streetscapes. It means that the multiple ways people get around are safe, comfortable and integrated. Streets that do not meet these criteria typically result from a complicated and uncoordinated system of processes and siloed decision-making. Since the city does not have the opportunity to redesign all of its thousands of miles of existing streets, it requires a Complete Streets Implementation Strategy to fix the design process for new streets and to retrofit existing streets.

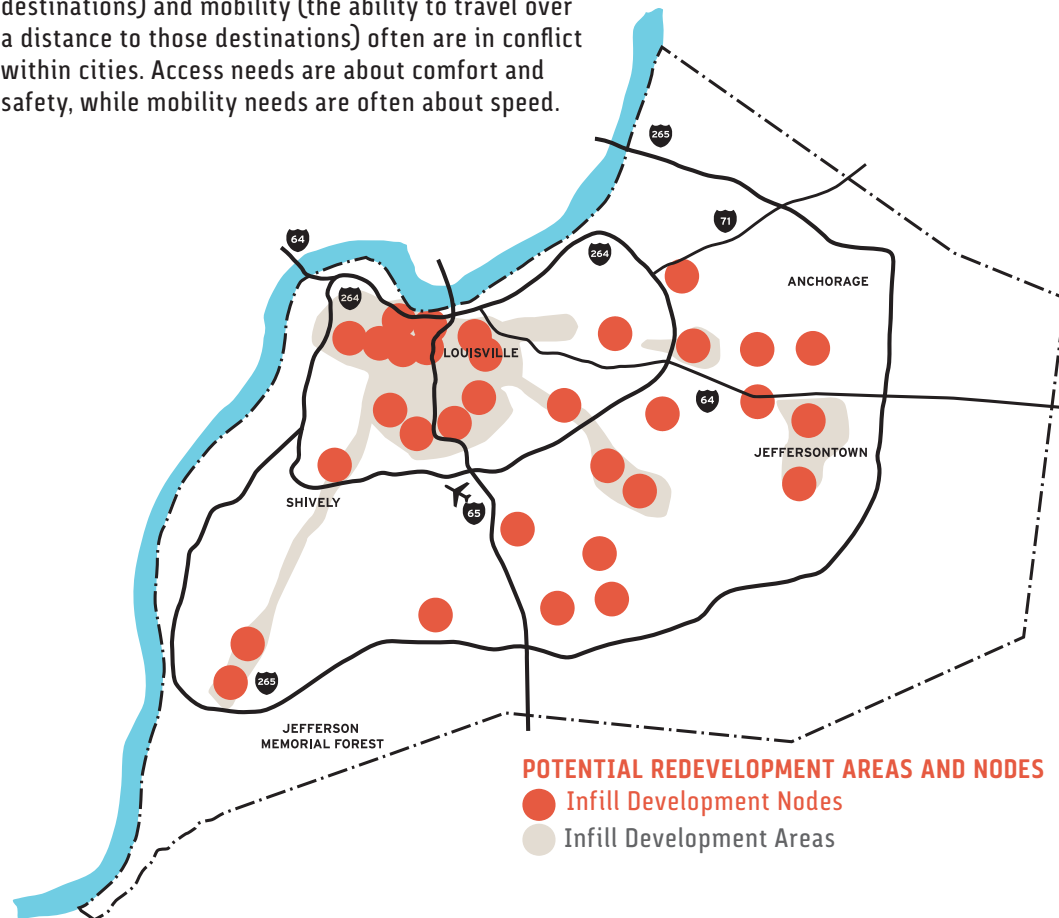
In 2008, the Louisville Metro Council passed Ordinance No. 15, Series 2008, known as the Complete Streets ordinance, which directs all transportation and development projects to design streets for drivers, pedestrians, bicyclists, transit riders and persons of

all abilities, while promoting safe operation for all users, including freight. The impact of the ordinance has not been robust both because the Louisville Land Development Code was not updated to include complete streets requirements for private development and new innovations in bicycle facility design have occurred since the ordinance's passage. The next steps are to update the street design standards and the Louisville Development Code to implement the desired complete streets outcomes. These steps should be part of a formal Complete Streets Implementation Strategy.

MOVE PEOPLE— PRIORITIZE HIGH CAPACITY CORRIDORS

Access (the ability to conveniently arrive at destinations) and mobility (the ability to travel over a distance to those destinations) often are in conflict within cities. Access needs are about comfort and safety, while mobility needs are often about speed.

In Louisville the mix of higher speeds and pedestrian activity is most prevalent along the larger arterial streets that lead from the suburban communities into downtown (Dixie Highway, Preston Highway, etc.). These arterial thoroughfares have been designed for high speeds and traffic volumes. As the context of these thoroughfares change over time, such as to walkable, compact mixed-use areas, the speed encouraged by the design becomes a matter of concern. Higher speeds result in a higher percentage of injury and fatality crashes. By reducing speeds through enforcement, design and technology, and adding enhancements for the comfort and safety of all users, a balance can be achieved between *moving cars and moving people*.



USE TRANSIT AS A CATALYST FOR INFILL DEVELOPMENT

Transportation and land use are inextricably linked. Transportation shapes urban form, and the type and nature of development can greatly influence the effectiveness of the transportation system. The best systems of streets and transit are nearly worthless if users are confronted with an environment in which they cannot walk safely and comfortably to their destination. It is imperative that Louisville Metro adopt an integrated transportation and land use framework. There are two core concepts regarding this interrelationship that are critical to policy and investment going forward:

Place-Appropriate Density – The residents and employers of Louisville Metro have expressed a strong preference for premium transit service. The viability of such service depends on nodes with medium to high density development, walkability and a mix of uses. There are many areas in Louisville where these characteristics are present, possible or appropriate, as outlined in detail in Chapter 4 and illustrated on the map on page 18. Policies in those areas must be geared to assuring that density, walkability and mixed use occur.

Infill – Shorter trips place a lower burden on the transportation system and environment than longer trips. Land use policies and subsidies should be designed to reward the development of housing and retail that is close to substantial jobs centers, which encourages alternative modes of travel. Move Louisville has proposed a series of redevelopment nodes based on current land use characteristics, propensity for redevelopment (as determined by property values), and regional access by way of transportation thoroughfares. These development areas are used for planning purposes here and may be reshaped by policy, or through the insertion of transit investment. These infill nodes offer a way to

organize redevelopment efforts and, when viewed in a Metro-wide context, lay a foundation for supporting premium transit and other multi-modal investment along major corridors. In order to take advantage of the benefits arising out of encouraging a more compact development pattern, the following next steps are recommended: map compact growth nodes, update land use and zoning regulations, change development incentive structures, and prioritize the development of affordable housing near jobs and transit.

The more compact growth scenario showed a VMT reduction of over 1/2 million miles per day on the region's road network. Such a reduction results in better air quality and less congestion. In Jefferson County alone, annual VMT totaled over 7 billion in 2014. The associated transit options would be well used - the modeling suggested around a 40% increase in transit ridership for the more compact growth scenario. Many of the infill nodes themselves also showed the potential for more than 10% of commute trips to be on bicycle.

Defining nodes and centers for compact growth and transit oriented development will be a key component of the comprehensive plan update. Developing policies to encourage development of these nodes and areas is crucial to implement Move Louisville's compact growth scenario.



STREAMLINE TRANSIT SERVICE ON KEY CORRIDORS

Move Louisville's review of the local transit system found significant opportunity for improvements to rider efficiency and convenience. Move recommends the following transit service changes be fully vetted with the community and TARC:

A more understandable, frequent and accessible system.

Streamline the high ridership, most efficient routes (i.e., cut out some time-consuming diversions into neighborhoods).

Build premium transit on key corridors to include frequent service, traffic bypasses and quality stops/stations. Identified premium transit corridors: Dixie Highway, Broadway/Bardstown Road, Frankfort Avenue/Shelbyville Road and Preston Highway. Additional operating funds must be allocated to achieve these outcomes.

These recommendations do not represent a complete overhaul. They are common-sense approaches — proven successful in Louisville's peer cities — that will both broaden transit's existing attraction and appeal to potential new riders. However, most changes require new dollars rather than reallocation of existing dollars, as TARC struggles to balance coverage demands with high frequency/high ridership corridors.

SET POLICY ON PREFERRED TRUCK/ FREIGHT ROUTES

Moving goods to market is vital to the regional economy. While the region is addressing the backbone of the over-the-road system through the construction of the Louisville-Southern Indiana Ohio River Bridges Project, improved access to that expanded network must be prioritized. Today, the State Route system serves as the base for local truck routes. The current system sometimes causes confusion and conflicts due to street and railroad infrastructure and adjacent land uses. Move Louisville, therefore, recommends key steps to identify a set of core freight routes that will provide a clear and reasonable path from major areas of industrial concentration to the freeway system. Conflicting routes in the current system would be replaced with more appropriate and clearly defined truck routes. These steps include:

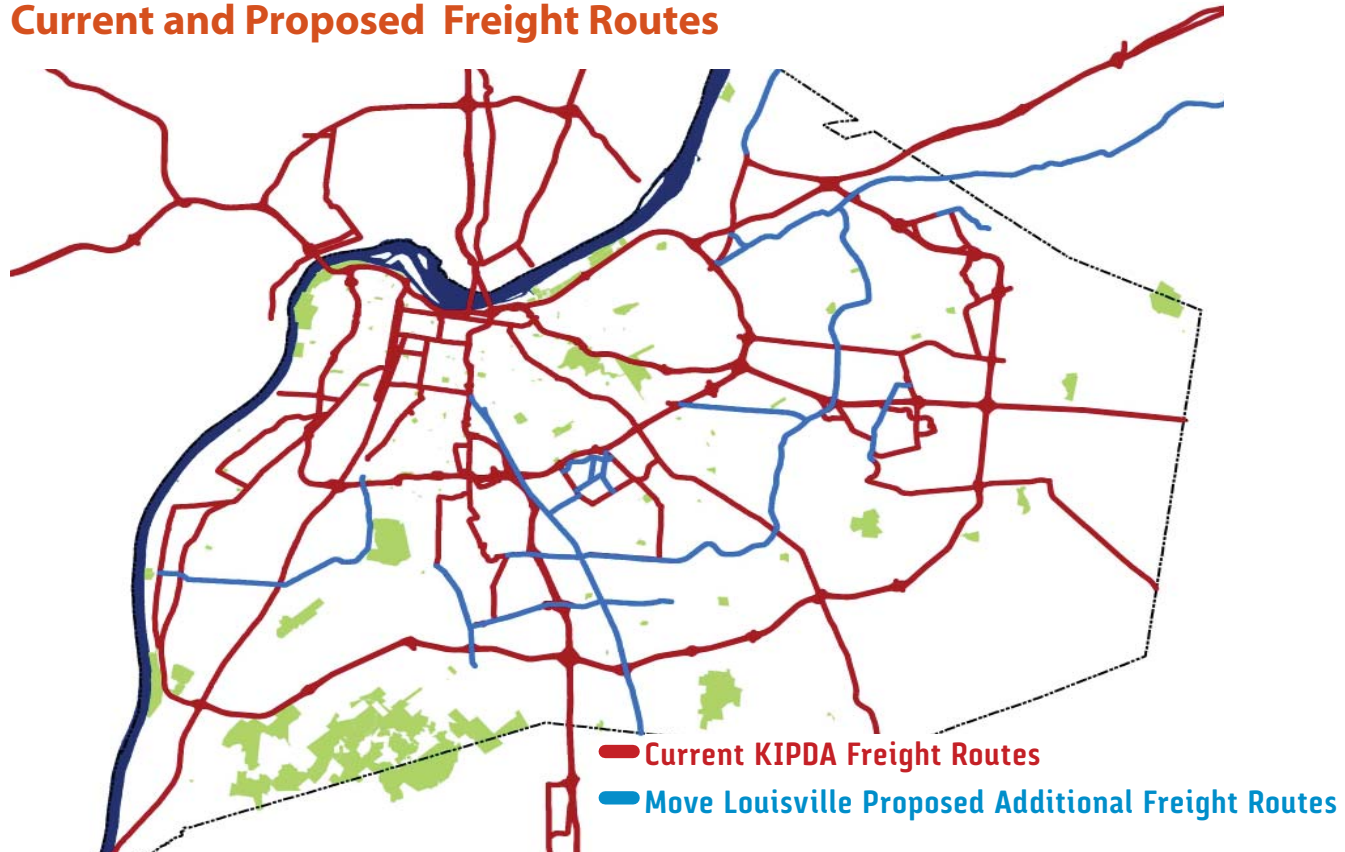
1. Review data on current truck traffic and accidents.
2. Identify limitations and barriers in the existing system.
3. Identify preferred truck/freight routes based on new data.
4. Develop special design standards for identified routes.
5. Adopt a truck/freight route map by ordinance.

These routes will be selected to avoid as many conflicts (such as residential neighborhoods) as possible.

MANAGE PARKING

For residents that can afford an automobile, the two most significant incentives affecting their travel choices are fuel and parking costs. While the city has no influence over the cost of fuel, its parking policy can be used to incentivize less vehicular use. In many cities, the over-supply and underpricing of parking creates an almost irresistible incentive to drive.

Current and Proposed Freight Routes



While inexpensive and abundant parking is popular, the true cost is actually quite high (when the associated costs of road widening, parking lot and garage construction, air pollution and other negative impacts are quantified). Downtown Louisville's parking costs are lower than its peer cities resulting in an abundance of inexpensive parking. Parking is oversupplied because it is inefficiently used. Virtually each new development project (public or private) is accompanied by a dedicated parking supply which sits partially-empty for large periods of the day.

The solution to this market inefficiency is very simple in principle, although difficult in practice:

- ▶ STEP 1 Make investments in the built environment to provide real alternatives to driving by providing better access to downtown through transit, bicycling and walking alternatives.
- ▶ STEP 2 Implement policies and incentives designed to correct parking prices to market rate.
- ▶ STEP 3 Provide incentives for commuting and for last mile strategies, such as bike share and the Zero Bus circulator.



Travel Demand Management (TDM), an example of Step 3, is a program of spending transportation dollars where the most public benefit can be gained. For example, if it costs \$90 per month to build and maintain a parking space, it may be cheaper to offer commuters monthly transit passes. If transit is a real alternative, some people will use it – providing significant peripheral benefits to the community, such as lower congestion, better air quality and better transit financial performance.

EMBRACE SMART MOBILITY

As new business models powered by the sharing economy converge with disruptive technologies in the transportation sector, alternative modes of commuting are changing how people get around in major metropolitan areas across America. Four of these modes hold considerable promise for easing gridlock at a far lower cost than traditional approaches to congestion reduction, and offer large individual and societal savings: real-time ridesharing, bike commuting, car sharing, and on-demand ride services (e.g., the ride services offered by Uber and Lyft).

As with new and alternative ways of commuting, new technologies are also changing how people are using the transportation network. Louisville should begin to consider the potential benefits and implications of automated and connected vehicles. Intelligent transportation technologies and managed lanes, such as High Occupancy Vehicle and High Occupancy Toll lanes, have the potential to improve congestion and expand highway capacity by increasing through-put without adding new lanes.

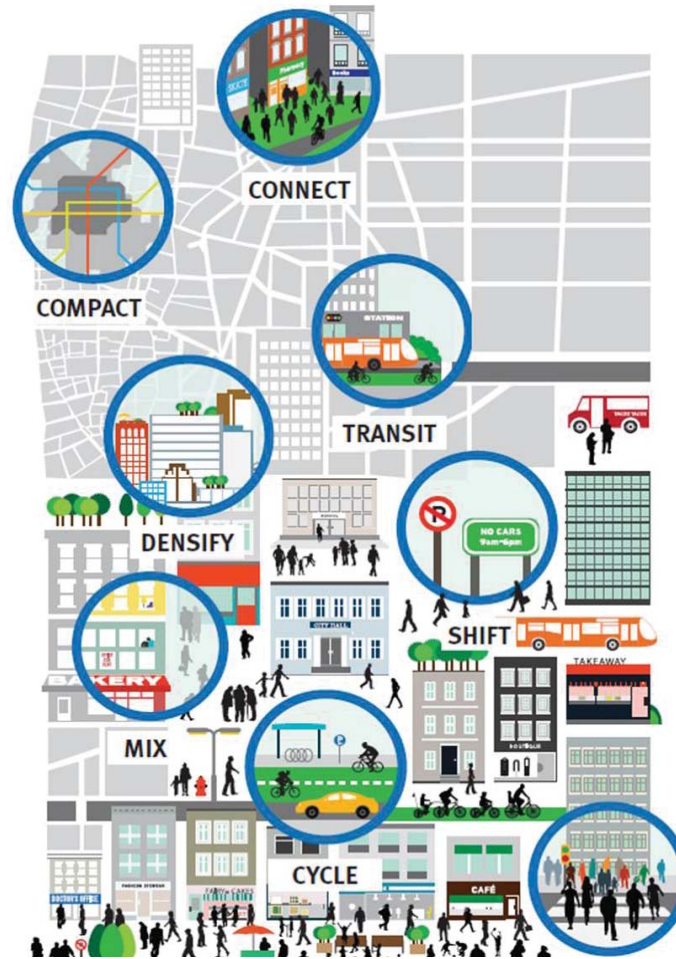


Image source: Institute for Transportation and Development Policy