4.2 MOBILITY

Louisville Skyline and Bridges

Introduction

The Mobility plan element carries forward the multi-modal policies pioneered by *Cornerstone 2020* to effectively connect the community through a safe and accessible transportation system. Through sound planning practices, *Plan 2040* aligns with the goals of Move Louisville, the city's 20-year transportation plan, to increase investment in the transportation network, promote freight movement, and enhance access to the Louisville International Airport. Other mobility issues addressed in this plan element include promoting nodal density, encouraging transit-oriented development, and reinforcing strategies that encourage "complete streets."

The Mobility plan element contains three overarching goals, supported by a series of objectives and action-oriented policies to achieve the community's vision for a safer, healthier, more livable city.

GOAL 1 Implement an accessible, system of alternative transportation modes.

GOAL 2 Plan, build and maintain a safe, accessible and efficient transportation system.

GOAL 3 Encourage land use and transportation patterns that connect Louisville Metro and support future growth.

MOBILITY

GOAL 1 Implement an accessible system of alternative transportation modes.

Objectives

a. Transportation options efficiently connect people to jobs, education, services and neighborhoods via a coordinated street network.

b. Provide safe mobility options for all users by promoting Complete Streets.

c. Encourage improvements to public transit and promote access for all.

d. Transportation facilities promote economic growth and community prosperity.

e. Major streets and corridors facilitate efficient movement of goods and services.

f. Promote and expand accessible greenways and multi-use trails.

South Fourth Street

Policies

Land Use & Development

1. To promote healthy lifestyles and reduce congestion, new development and redevelopment should provide for the movement of pedestrians, bicyclists and transit users, where appropriate, by including:

   1.1. bicycle and pedestrian facilities between closely related land uses (e.g., from residential areas to neighborhood centers, recreation areas, greenways, schools, shopping facilities and from office/industrial and retail employment centers to retail/service uses);

   1.2. pedestrian facilities between retail land uses and major concentrations of pedestrian activity, particularly in the Louisville Central Business District and other activity centers;

   1.3. street-level pedestrian connections between all principal buildings within a unified development site including commercial to office and residential to commercial uses;

   1.4. sidewalks along the streets of all developments;

   1.5. walkways between residential areas and nearby neighborhoods, schools, public recreation facilities, parks, office/industrial and retail/service uses;

   1.6. direct, accessible walkways to public transportation stops; and

   1.7. retail and office uses, especially in the Urban Center Neighborhood, Traditional Neighborhood, Village, Traditional Marketplace Corridor, Traditional Workplace Form Districts that are located close to the roadway to minimize the distance pedestrians and transit users have to travel.

2. Develop criteria for the type of appropriate bicycle facilities as part of a Complete Streets Design Manual. Bicycle facility type (e.g., shared roadway, bike lane, or bike path) will depend on the current and anticipated volume of bicycle traffic, the nature of the connections between residential areas and employment/activity centers, and the magnitude of vehicle or pedestrian conflict as indicated by vehicle speeds and volumes. Planned bicycle facilities should be interconnected, direct, and continuous. Separate connections to greenway systems are encouraged. Facilities should be designed in accordance with nationally recognized standards.
3. Encourage new development and redevelopment to supply adequate and user-friendly bicycle parking at parks, activity centers, and schools to encourage bicycle use.
4. Encourage higher densities and intensities within or near existing marketplace corridors and existing and future activity and employment centers to support transit-oriented development and an efficient public transportation system.
5. Plan for new transit centers by incentivizing equitable transit-oriented development at key nodes. The design of transit centers should consider the following:

   5.1. Direct, short, and simple connections for all transportation modes;

   5.2. Priority traffic management techniques that make it easier to enter and exit from the station area;

   5.3. Site design that provides safe and efficient bus movements by including adequate turning radii, parking areas, boarding/alighting areas, drop-off areas, etc.;

   5.4. Provisions for market-based services that enhance ridership; and

   5.5. Secure, convenient, and user-friendly bicycle parking facilities.
6. For developments meeting established thresholds, provide facilities that support an efficient public transportation system such as convenient access to and across pedestrian, bicycle and roadway facilities. Provide transit amenities such as boarding areas, benches, shelters, park and ride facilities, and lighting in accordance with the Transit Design Standards Manual.

Programmatic

7. Review local transportation facility design guidelines to ensure regulations support accessibility.
8. Embrace smart mobility advances in technology to ease traffic congestion and move people.
9. Complete a comprehensive operational analysis for the transit network to provide a plan for streamlining and improving transit service on key service corridors and enhancing connectivity between housing and employment centers.
10. Encourage implementation of innovative transit modes such as Bus Rapid Transit or rail networks to enhance service and ridership.
11. Develop an implementation plan for the conversion of one-way streets to two-way circulation, where appropriate, to improve mobility and safety.

MOBILITY

GOAL 1 Implement an accessible system of alternative transportation modes.

12. Develop policies to achieve and maintain National Ambient Air Quality Standards (NAAQS).

13. Develop a policy and design standards for preferred truck/freight routes.

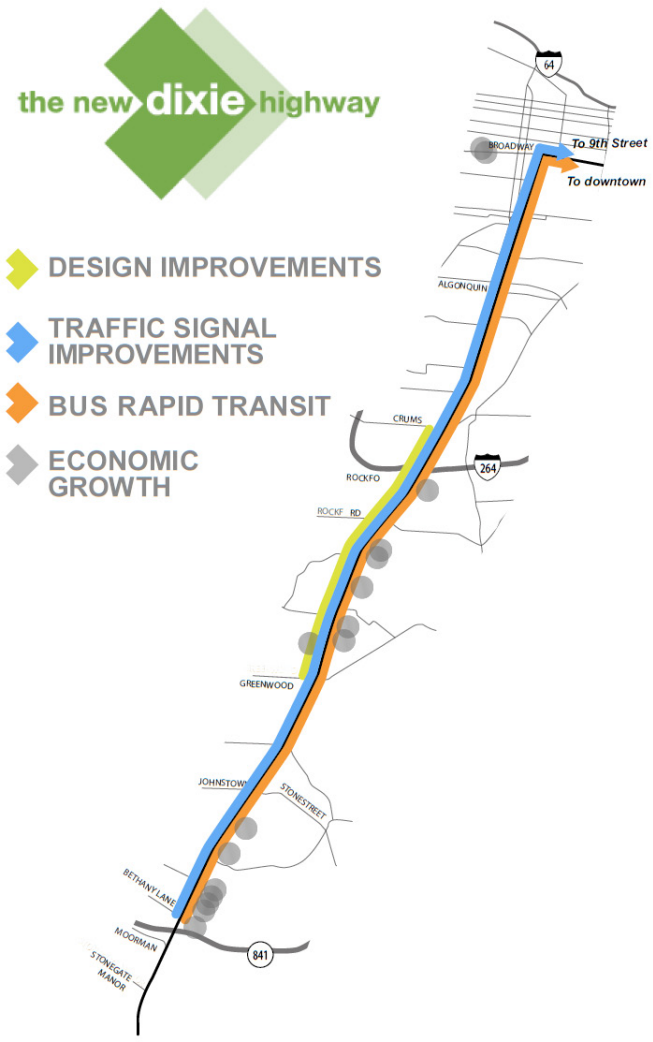
14. Promote the use of bicycle and pedestrian facilities as both a means of transportation and as a form of recreation.

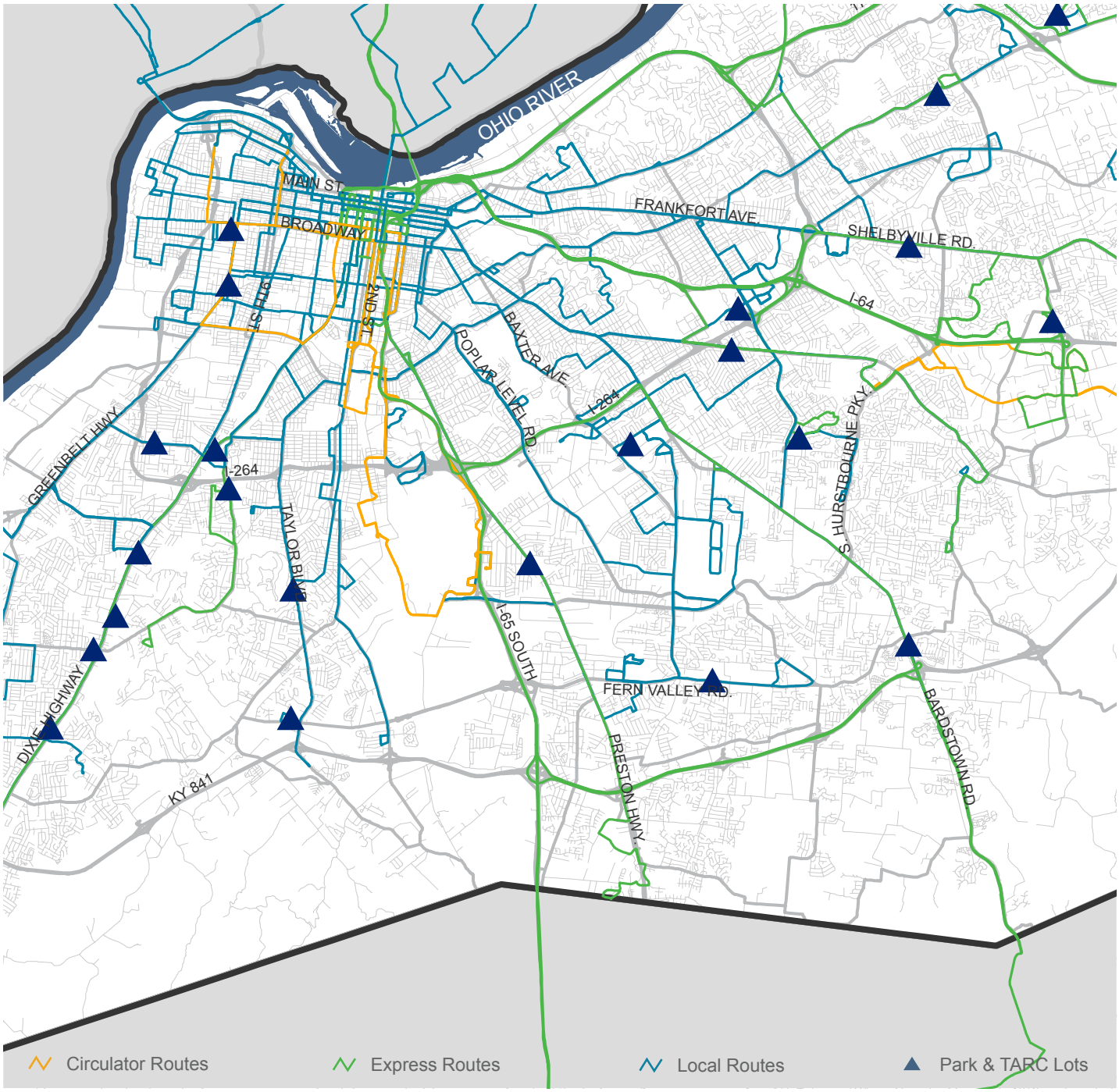
15. Develop a plan to efficiently manage parking supply in Downtown Louisville and other major activity centers to reduce demand and avoid oversupplying parking.

Polcies in Action: Bus Rapid Transit

The Transforming Dixie Highway Project, which emerged from the Dixie Highway Corridor Master Plan, will result in a number of improvements that will bring about positive change to the Dixie Highway corridor. One of the more significant improvements will be the introduction of Bus Rapid Transit (BRT) to the corridor and to Louisville Metro. BRT is an increasingly popular strategy for improving transit by making stations highly visible and easily accessible, branding vehicles and the line itself to make it more understandable and approachable, and installing intelligent transportation systems to decrease travel times. These upgrades will not only improve the experience of current riders but will hopefully attract new riders to the Transit Authority of River City (TARC) system. BRT has the potential to help redefine transit in Louisville Metro. Depending on the success and lessons learned from the Dixie BRT project, future expansions of this upgraded bus service may be extended to other corridors.

The proposed BRT service will begin in downtown Louisville and generally follow the alignment of TARC's existing Route 18 along Main Street and Market Street. Other upgrades include 36 new, highly visible and easily accessible stations, and the use of new vehicles that will be unique to the Dixie Highway BRT. Intelligent transportation systems and strategies including enhanced real-time access to information for transit customers will be deployed along the corridor. It is anticipated that the existing Route 18 would continue to provide local service with more frequent stops along the corridor, supplementing the higher speed BRT.





TARC Routes & Park and Ride Lots Map, Reference Appendices for Full Map

MOBILITY

GOAL 2 Plan, build and maintain a safe, accessible and efficient transportation system.

Objectives

a. Maintenance of existing transportation infrastructure is prioritized.

b. Transportation infrastructure accommodates all users to manage demand for travel.

c. Multi-modal transportation infrastructure is promoted to reduce vehicle miles traveled and improve mobility and air quality.

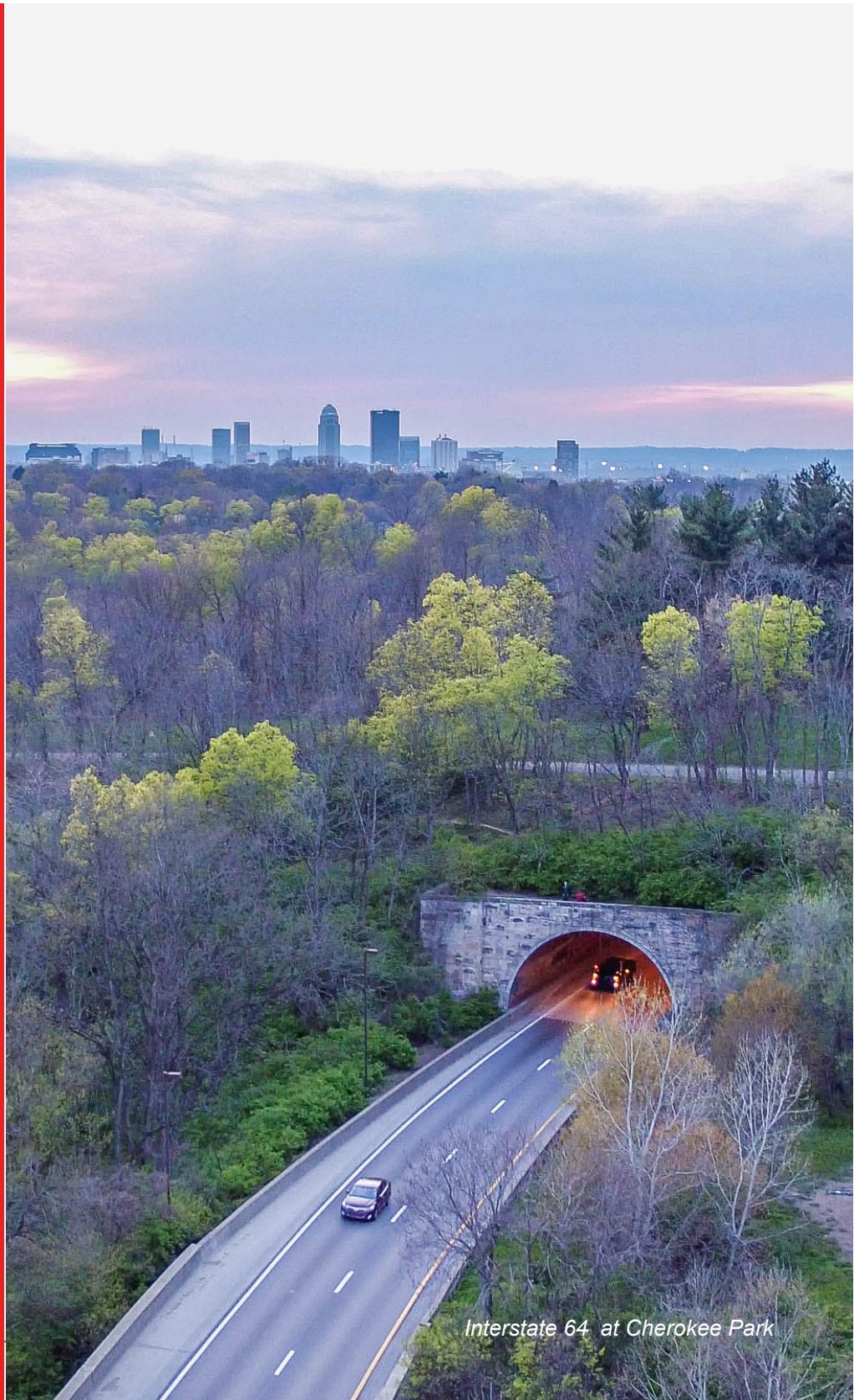
d. Land use and transportation policies are adaptable to anticipated technological advances and new transportation options.

e. Transportation facilities enhance community sustainability.

f. Long-term, coordinated and sustainable funding strategies for transportation facilities are implemented.

g. New and expanded transportation facilities include Complete Streets components.

h. Transportation facilities are designed to complement the character of surrounding neighborhoods.



Interstate 64 at Cherokee Park

Policies

Land Use & Development

1. Provide transportation facilities and systems that accommodate all users and allow for context-sensitive solutions that recognize the distinguishing characteristics of each of the Form Districts.
2. Coordinate use of rights-of-way with community design policies. Ensure accessible rights-of-way to accommodate mobility needs of all transportation network users.
3. Provide adequate street stubs for future roadway connections in new development and redevelopment that support access and contribute to appropriate development of adjacent lands.
4. Avoid access to development through areas of significantly lower intensity or density development if such access would create significant nuisances.
5. Provide sight distances consistent with probable traffic speed, terrain, alignments and climatic extremes in road design.
6. Ensure that the internal circulation pattern for streets within a development be designed with an appropriate functional hierarchy of streets and appropriate linkages with existing and future development.
7. The design of all new and improved transportation facilities should be accessible and:

   7.1. Review and consider Complete Streets principles and the most current version of the Complete Streets Design Manual;

   7.2. Be context sensitive by ensuring that proposals are compatible with the surrounding development and provide an aesthetically pleasing visual experience to the user and to adjacent areas;

   7.3. Encourage the acquisition or dedication of whole parcels if the residual not used for the transportation facility would create a nuisance; and

   7.4. Ensure that adequate measures will be taken to reduce glare, vibration, air pollution, odor, and visual intrusion.
8. Protect and/or enhance environmentally sensitive areas through responsible and sustainable best practices in the planning and design of transportation network projects.
9. Develop, preserve, and maintain an interconnected system of scenic corridors and parkways. Encourage the preservation of important cultural resources, landscapes and scenic vistas in the design, maintenance and development of major thoroughfares and parkways.

Programmatic

10. Increase funding to maintain the existing infrastructure and build a multi-modal transportation network that supports the needs of the entire community.
11. Encourage the establishment of comprehensive and innovative long-term financing programs for transportation investment to increase the cost-effectiveness of future investments while considering cost to future users.
12. Pursue opportunities for passenger rail service to and within the Louisville Metro region.
13. Maintain integration with the regional mobility planning process that is coordinated by KIPDA.
14. Expand the traffic signal coordination program to limit idling and protect public health while increasing the safety and capacity of the current road network.
15. Encourage mobility system planning and improvements to be consistent with and support the innovative, multi-purpose use of innovative locations such as easements, stream corridors and abandoned railroad rights-of-way for bicycle and pedestrian facilities while providing for the preservation of important natural resources.
16. Develop a Complete Streets Design Manual for consideration during the development and redevelopment of roads in accordance with roadway classification and street character that provide for safe, healthy and accessible streets. Such a manual should include:

    16.1. standards and guidelines to determine appropriate improvements based on existing and anticipated volume of street users;

    16.2. a method for determining street typology and typical cross-sections;

    16.3. streetscape design standards that consider planting of trees and green infrastructure;

    16.4. safe, efficient movement of freight;

    16.5. scenic, historic, and parkway designations;

MOBILITY

GOAL 2 Plan, build and maintain a safe, accessible and efficient transportation system.

16.6. tree preservation and enhancement;

16.7. landscaping, lighting, and street furniture;

16.8. bicycle and pedestrian facilities;

16.9. transit facilities and operations;

16.10. encouragement of on-street parking in appropriate areas to buffer pedestrians from traffic; and

16.11. traffic calming techniques including the implementation of reconfigurations, where existing and future traffic volumes support them, to improve safety and mobility for all users.

17. When redesigning and redeveloping streets, consider converting unused paved areas to green space or public plazas.

18. Encourage the use of electric vehicles and other clean-fuel technologies.

TARC Zero Bus

Policies in Action: Move Louisville

Move Louisville represents a vision and action plan for transportation policy and investment for Louisville Metro. The plan was completed in 2016 and is a foundation for a connected and sustainable transportation network that will help maintain and expand our city's quality of life and encourage investment, growth and prosperity.

Move Louisville recommends projects and policies to address the needs and desires of our community aligned with local trends and national best practices. Together the policies, practices and priorities contained in Move Louisville strive to keep Louisville Metro 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 future projects are identified in the plan by mode type and categorized by recommended time line -- priority, mid-term and long-term. The priority projects outlined in Move Louisville have been selected to catalyze Louisville's economy, transform the built environment and reduce vehicle miles traveled (VMT).

In addition to priority projects, Move Louisville established policy priorities that allow 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 in Move Louisville are intended to be reviewed and evaluated on a periodic basis.

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 Metro 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.

Move Louisville Project Goals:

- Provide connectivity
- Improve safety & health
- Maintain fiscal responsibility
- Promote economic growth
- Assure equity for all system users
- Assure environmental sustainability
- Enhance neighborhoods

MOBILITY

GOAL 3

Encourage land use and transportation patterns that connect Louisville Metro and support future growth.

Objectives

a. Development in existing and emerging mixed-use centers is encouraged.

b. Walkable neighborhoods are promoted.

c. Land use and transportation policies promote access and ensure adequate capacity and mobility.

d. Transportation facilities support and enhance neighborhood character.

e. Land use policies support transit to improve mobility and air quality.

f. Land use policies and transportation infrastructure facilitate efficient movement of people, goods and services to and from Louisville's airports.

LouVelo Bikeshare

Policies

Land Use & Development

1. Provide transportation services and facilities to promote and accommodate growth and change in activity centers through improved access management. Provide walking and bicycling opportunities to enable activity centers to minimize single-occupant vehicle travel. Encourage a mix of complementary neighborhood serving businesses and services in neighborhood and village centers to encourage short trips easily made by walking or bicycling.
2. To improve mobility, and reduce vehicle miles traveled and congestion, encourage a mixture of compatible land uses that are easily accessible by bicycle, car, transit, pedestrians and people with disabilities. Housing should be encouraged near employment centers.
3. Evaluate developments for their ability to promote public transit and pedestrian use. Encourage higher density mixed-use developments that reduce the need for multiple automobile trips as a means of achieving air quality standards and providing transportation and housing choices.
4. Encourage development of walkable centers to connect different modes of travel. Siting of these multi-modal centers shall consider the effects of the following:

   4.1. nodal connections identified by Move Louisville;

   4.2. impact on freight routes;

   4.3. time of operation of facilities;

   4.4. safety;

   4.5. appropriate linkages between neighborhoods and employment; and

   4.6. the potential for reducing travel times and vehicle miles traveled.
5. Evaluate developments for their impact on the transportation network (including the street, pedestrian, transit, freight movement and bike facilities and services) and air quality.
6. Ensure that those who propose new developments bear or share in rough proportionality the costs of transportation facilities and services made necessary by development.
7. All new and substantially improved development should be consistent with applicable standards for rights-of-way and designed to reserve these rights-of-way for further dedication and/or acquisition.
8. The Planning Commission or legislative body may require the developer to dedicate rights-of-way for street, transit corridors, bikeway and walkway facilities within or abutting the development as set forth in the Land Development Code. Dedication of street rights-of-way should ensure that transit service can be provided where appropriate.
9. When existing transportation facilities and services are inadequate and public funds are not available to rectify the situation, the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, to eliminate present inadequacies if such improvements would be the only means by which the development would be considered appropriate at the proposed location.
10. Ensure that necessary improvements occur in accordance with long-range transportation plans and level of mobility criteria for all modes of travel.
11. Provide street improvements and/or transit solutions to mitigate the impacts of development and redevelopment. Improvements may include, but not be limited to, the following:

    11.1. on-site road system construction;

    11.2. off-site shoulder improvements and pavement widening;

    11.3. addition of acceleration and deceleration lanes;

    11.4. addition of turn lanes or traffic signals on streets bordering the site to street;

    11.5. intersection widening completely off-site;

    11.6. right-of-way donation;

    11.7. addition and/or widening of on-site or off-site sidewalks;

    11.8. installation of bicycle facilities;

    11.9. installation of new transit stops and amenities; and

    11.10. improvement of existing transit stops and amenities.
12. Ensure that transportation facilities of new developments are compatible with and support access to surrounding land uses, and contribute to the appropriate development of adjacent lands. Where appropriate, provide at least one continuous

GOAL 3

Encourage land use and transportation patterns that connect Louisville Metro and support future growth.

roadway through the development to tie all local access roads or parking areas to the arterial street system. Adequate stub streets and pedestrian connections should be provided by developments.

13. Allow cul-de-sacs as short side streets or where natural features limit development of "through" roads.
14. Parking requirements should take into account:
    - the density and relative proximity of residences to businesses in the market area;
    - the availability and use (both current and potential) of multimodal transportation options;
    - the character and pattern of the Form District; and
    - advances in technology.

    Additional considerations including hours of operation and opportunities for shared parking may be factored on a site-by-site basis. On-site parking standards should reflect the availability of on-street, shared, and public parking spaces. Parking standards should include the minimum and maximum number of spaces required based on the land use and pattern of development in the area. Consider reducing parking minimums where appropriate.
15. Develop and review corner clearance standards to reduce or restrict new driveways or other connections in the functional area of an intersection or interchange in order to promote safety and traffic flow.
16. Develop and assign access classifications for roadway segments based upon the current condition of the roadway and any planned improvements. Standards will address access control, driveway and curb cut spacing, median spacing, and signal spacing.
17. Require cross access easements according to standards set forth in the Land Development Code to reduce traffic on major thoroughfares and to reduce safety hazards.
18. Minimize access points, connections and median openings within 1/4 mile of an interchange area to reduce safety hazards and improve flow of traffic onto and off the interchange.
19. Encourage design standards that address design issues such as the minimum and maximum length and width and the gradient of driveways to ensure that the driveway or curb cut functions properly and is safe for all users.
20. Promote joint access and circulation systems for development sites comprised of more than one building site or lot.
21. Prevent safety hazards caused by direct residential access to high speed roadways.
22. Review and update dimensional standards for new lots to ensure proper access to and circulation along public streets.

Programmatic

23. Review and update the Land Development Code to make it consistent with changes to road classifications, access management regulations, Complete Streets guidelines, advancements in technology, transportation system management, parking requirements and transit measures.
24. Develop appropriate level of mobility criteria that recognizes the distinguishing characteristics of each of the Form Districts. Level of mobility criteria will recognize differences in travel demand characteristics between Form Districts and the mix and capacity of travel modes available.
25. Encourage the adoption of trip reduction and travel demand management strategies to reduce vehicular use of roadways.
26. Use transportation system management program strategies to enhance roadway performance and capacity with non-capital investment strategies such as high occupancy vehicle lanes and parking restrictions.
27. Identify infill development opportunities to support biking, walking, and transit service. Encourage the use of, and provide incentives to incorporate, transportation demand management by new development and redevelopment such as:
    - off-peak workplace scheduling
    - ridesharing
    - transit promotion
    - transit user fare subsidy
    - preferential parking for high occupancy vehicles
    - participation in Transportation Management Associations (TMA)
    - parking space cash out programs

Policies in Action: Road Diet Reorganizations

Making Louisville's transportation system safer is a continuous, iterative process. To that end, Metro has begun reorganizing some roads to dramatically improve safety at low overall capital costs. A road reorganization, often known as a "road diet," is a national best practice that has been thoroughly vetted and endorsed by a wide array of practitioners and experts, including those at the Federal Highway Administration and the Kentucky Transportation Cabinet. Reorganizations, as the name suggests, better organize our streets and roadways by better planning for everyone who travels along or uses a corridor. Reorganized roads more safely move more people while supporting the communities and business around them. A classic example is the conversion of a road with two vehicle travel lanes in each direction into a three-lane roadway consisting of one travel lane in each direction and a center, two-way left-turn lane. This intervention often maintains the road's ability to process the same number of vehicles while eliminating any perceived benefits to dangerous driving behavior. Sometimes the additional road space enables transportation planners to provide dedicated space to cyclists, pedestrians, or transit riders, which in turn can increase the throughput of people along a corridor.

Prior to its conversion, Grinstead Drive from Cherokee Road to Cherokee Parkway averaged more than 100 annual collisions. Since the space has been reorganized, crash rates have plummeted 67% with injury crashes being reduced even more by 78%. The success of this project has positively demonstrated the benefits of better organizing our roadways to prioritize safety as Metro's first goal in transportation planning. Other road reconfigurations have taken place on Grinstead Drive from I-64 to Stilz Avenue, Brownsboro Road from Ewing Avenue to Drescher Bridge Avenue, West Hill Street from 6th Street to 17th Street, and Lexington Road from Grinstead Drive to Liberty Street.


Lexington Road

Road reorganizations are just one tool in transportation planners' toolboxes that can quickly and affordably deliver substantial safety improvements. Metro's roads, like roads in other cities, were historically designed with speed and capacity in mind–not safety. However, that is changing. Pedestrian refuge islands, better sidewalks, bus shelters, parking, landscaping, bike lanes, and perhaps even bus lanes all have a role to play in strengthening Metro's transportation network.

Surveys and citywide planning efforts, such as Move Louisville, show that residents desire ever more livable spaces and communities. Road reorganizations deliver on those desires representing a rare win-win for quality of life.