

Lawrence Pedestrian Bicycle Issues Task Force Report

2/26/16



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On the cover: A family crosses the street in front of New York School

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Executive Summary

Virtually every Lawrence citizen walks, wheels or rides a bike in the course of a week.

“Wheel” means to use a wheelchair, walker or other mobility device.

It may be as simple as walking or wheeling from a car or bus stop to a grocery store or doctor’s office. It may be riding a bike to school, or walking to work, or wheeling to a downtown event. Everybody needs safe ways to move around the community.

Because the need is universal, the City of Lawrence Pedestrian-Bicycle Issues Task Force has taken an inclusive approach to studying our walking, wheeling and bike-riding environment. Our findings and recommendations are geared toward providing additional safety and comfort for all ages and abilities.

The challenge for the city is finding ways to upgrade our pedestrian and bicycle facilities while also working to accommodate increasing volumes of motor vehicle traffic. In the last five years, the city has made notable progress toward this goal, mainly by adding sidewalks and bike facilities during road constructions and reconstructions.

Still, the challenges that remain are daunting.

Lawrence has 72 linear miles of streets with no sidewalks. Our sidewalk maintenance policy is ineffective, resulting in a deteriorating pedestrian network. An unconnected patchwork of bike facilities includes sections that are unwelcoming to anyone who isn’t a confident adult rider. Many sidewalks don’t provide adequate access for people with disabilities or seniors with mobility limitations.

The task force spent eight months studying these problems and listening to citizen input. This report relays our findings and recommends ways for Lawrence to invest in a transportation system that works for everyone.

This much is clear: Citizens want the city to make investing in better walking, wheeling and bicycling facilities a priority.

In view of this, the task force has outlined six recommendations that will continuously improve the city’s pedestrian and bicycle networks between now and 2030:

1. Recognize that facilities for walking, wheeling and biking are vital parts of a safe transportation system requiring annual public investment through the city’s capital improvement plan.
2. Fund these vital improvements by reallocating \$1M per year in 2017-2019, earmarking 0.05% in the prospective 2019 renewal of the infrastructure sales tax to fund standalone bicycle and pedestrian projects, and continuing to invest through the capital improvement plan in high quality pedestrian and bicycle facilities built during new road construction and existing road reconstruction projects.
3. Commit to establishing an equitable and practical sidewalk repair program by 2017 that will bring all sidewalks and curb ramps up to code by 2030.
4. Assign and develop staff, and invest in tools needed to provide a coordinated approach to pedestrian-bicycle planning, engineering, community education, encouragement, enforcement and evaluation.
5. Actively pursue nationally accepted Walk-Friendly and higher Bicycle-Friendly Community designations as roadmaps to progress and points of pride.

6. Create a consolidated transportation commission to advise the city commission and staff on transportation matters.

The task force has also identified implementation priorities for the city to consider.

For the pedestrian environment, they are:

1. Provide safe routes to school (SRTS) by filling gaps, repairing and maintaining sidewalks within the designated SRTS network.
2. Connect residents to neighborhood destinations by filling sidewalk gaps on arterial and collector streets.
3. Invest in facilities that provide safer conditions and access for seniors and people with disabilities.

For the bicycling environment, they are:

1. Complete the Lawrence Loop.
2. Improve safety on roads with the highest bicycling crash rates.
3. Develop a highly visible network of bicycle boulevards--existing streets that have been optimized for bicycle traffic. They are a low-cost way to create a connected network of streets with good bicyclist safety.

The task force is very conscious of the many demands and potential limitations imposed on the city's budget. We also understand the city commission's desire to make progress on affordable housing and mental health care.

Affordable housing and affordable transportation go hand in hand. Mental health is undisputedly connected to routine physical activity. By making improvements to our pedestrian and bicycle environments a well funded priority, the city commission will support its existing stated goals.

Ultimately, the city's most important role is to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The city's expressed commitment to develop sustainably, most recently confirmed by adopting the STAR Community Rating System, shows that leaders understand that everyday choices about how to travel to work, school, shopping, and other destinations have tremendous implications on community sustainability.

Improving transportation options to support walking, wheeling, bicycling, and transit use, results in the three pillars of sustainability development:

- Environmental quality is improved as emissions and pollution from single-occupancy vehicles decrease.
- Social equity benefits, as transportation is more affordable and accessible to all citizens.
- Economic growth is supported by affordable transportation options for citizens, and reduced costs for cities.

The recommendations in this report are a step forward given the city's current economic constraints. At the proposed rate of investment, it will take time to build a fully walk-, bike- and wheel-friendly community.

The most important things are to make a meaningful start and invest annually.

Introduction



Providing bike facilities that are safe and comfortable for people of all ages and abilities will increase ridership.

The city commission created the [Pedestrian-Bicycle Issues Task Force on March 24, 2015 \(Resolution 7106\)](#) in response to growing citizen demand for a transportation system that works well for all of us when we drive, walk, wheel or ride a bike to everyday destinations. “Wheel” means to use a wheelchair, walker or other mobility device.

Because all of us need to get around the community, the conditions of our pedestrian facilities are of interest to every citizen. And city surveys show that bikeways are of interest to a majority of citizens.¹

This includes a dad pushing his newborn in a stroller. It includes the college student who uses a wheelchair and the faculty member who routinely rides a bike to campus. It includes thousands of employed citizens who can't afford cars and need to get to work. And it includes the retiree who wants to age in place and stay socially engaged even when she develops functional limitations.

Increasing local demand for accessible, connected sidewalks, crosswalks, trails and safe bike-riding facilities reflects a national trend. Cities in all regions of the country and a dozen Kansas communities are responding to citizens' desires for more affordable and accessible ways to get to everyday destinations. Some want to integrate more physical activity into daily lives for personal and community health reasons. Some strive for sustainable lifestyles, and want to drive less—or not at all. Leading cities are finding that providing welcoming facilities for walkers, wheelers and bike riders attracts economic activity while reducing auto congestion. College towns, in particular, are experiencing strong citizen demand for investing in active transportation.

According to the [US Department of Transportation](#)²:

Lawrence is in the top 6% of cities nationwide when it comes to the percent of our population that commutes on foot or by bike.

Representatives of the Lawrence Pedestrian Coalition, LiveWell Lawrence and the Sustainability Action Network joined members of the Lawrence – Douglas County Bicycle Advisory Committee and the city's Sustainability Advisory Board in calling for the city to consider a variety of measures to improve facilities so that people of all ages and abilities can walk, bike or wheel safely and comfortably. Their interests included establishing regular funding for projects and giving citizens a more inclusive voice in determining project priorities.

The task force was made up of [eleven members](#)³ (ten after a resignation) selected by the mayor and vice-mayor. It represent the diverse ages, abilities and interests of Lawrence residents who walk, bike, or wheel. Of the eleven, four are retirees/seniors, one of whom uses a walker and another who commutes year-round by bike to her job. Several are parents or grandparents with school-aged children in their homes. Two are millennials (ages 18-34), representing taxpayers with the greatest interest in our transportation system's long-term future.

¹ <http://lawrenceks.org/assets/pds/planning/h2020/Lawrence-Douglas-County-Final-Report-June-19th-2014.pdf>

² <https://www.transportation.gov/transportation-health-tool/indicators/detail/ks/msa/lawrence#indicators>

³ <https://www.lawrenceks.org/boards/pedestrian-bicycle-issues-task-force/roster>

Task Force Mission Statement

One of the task force's first activities was to develop a mission statement that reflected a common understanding of our purpose and goals. This is the statement:

The Pedestrian-Bicycle Issues Task Force uses community input and research to recommend ways to create a healthier, safer, greener, more prosperous Lawrence by making it easier for residents and visitors of all ages, abilities, and incomes to walk, ride a bike, or use a wheelchair or other mobility device for everyday transportation and recreation.



Mom struggles with stroller in Old West Lawrence.

Survey Data and Community Input



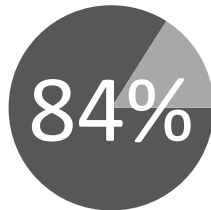
Citizens share their hopes for a better walking, wheeling and bike-riding environment with the task force at the East Lawrence Recreation Center, September 26, 2015.

ETC Institute Surveys

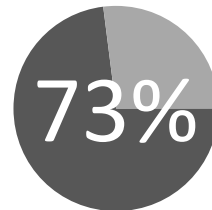
Two recent surveys conducted by the ETC Institute informed the task force's work. Both have a 95% level of confidence with at least a +/- 3% precision rate.

Strong Demand for Better Walking, Wheeling and Bike Riding Conditions

The 2014 ETC Institute survey⁴ of Douglas County households conducted as part of the Horizon 2020 update revealed that:

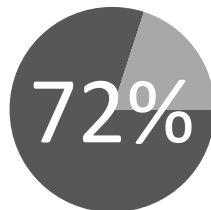


rated providing walking and biking trails as important.

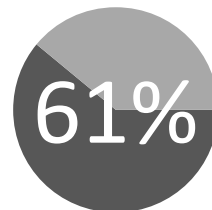


rated providing transportation alternatives to the car as important.

When asked to describe their community vision of the future:



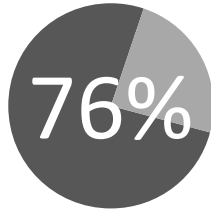
agreed their vision includes more sidewalks, walking paths and trails.



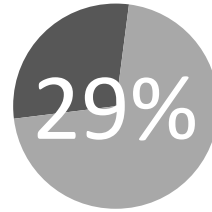
agreed that their vision includes more bicycle paths and routes.

⁴ <http://lawrenceks.org/assets/pds/planning/h2020/Lawrence-Douglas-County-Final-Report-June-19th-2014.pdf>

The 2015 ETC Institute Citizen Survey⁵ revealed that:



of Lawrence residents used a walking/biking trail or path in the last 12 months.



used a bicycle lane in the last twelve months.

+ TRAILS

Citizens think the top priority of Lawrence Parks and Recreation should be adding trails.



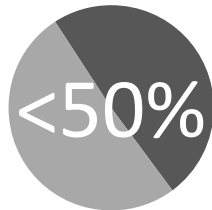
Dad and son enjoy the Burroughs Creek Trail,

⁵ http://lawrenceks.org/assets/agendas/cc/2015/07-28-15/citizen_survey.pdf

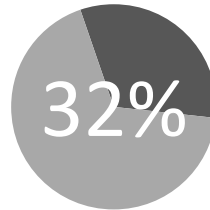
Perceptions of Safety

Resident interest in improving conditions for those who walk, ride a bike or wheel is also reflected in current perceptions of safety.

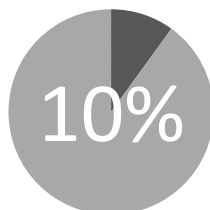
The 2015 ETC Institute Citizen Survey⁶ noted that:



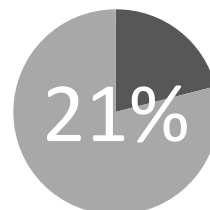
Less than half of residents are satisfied with the condition of sidewalks in their neighborhood.



Only 32% are satisfied with availability of safe routes for children to walk or bicycle to school.



Only 10% of residents feel very safe riding a bicycle in Lawrence.



Only 21% are satisfied with the connectivity of bicycle lanes.

These numbers reveal major gaps between what citizens want from their city and what is currently available.

⁶ http://lawrenceks.org/assets/agendas/cc/2015/07-28-15/citizen_survey.pdf

Community Input

The task force sought and received community input through the city's online Lawrence Listens forum, through two public meetings, and by taking public comment at all of its meetings.

Lawrence Listens

When the Pedestrian/Bicycle Issues Task Force began its work, the city created a Lawrence Listens question to gain input from the public to guide the work of the task force. [96 citizens provided statements⁷](#), and 326 people visited the site.

Question:

What would you like to see the City of Lawrence do to encourage and support safe and accessible walking and bicycling for people of all ages and abilities?

Pedestrian Comments

The need to repair upheaved, cracked and overgrown sidewalks in Lawrence was the most common comment regarding pedestrian issues posted to the forum. Other common comments included the need for safe pedestrian access to schools and the need for the redesign of intersections to prevent conflicts between pedestrians and vehicles.

Bicycle Comments

A majority of the public that commented regarding bicycle issues commented on safety, and their perception that they are not safe on bicycle facilities within the city including bike lanes and roads with sharrow markings. Sharrows or shared lane markings are road markings used to indicate a shared lane environment for bicycles and automobiles.

There was also high demand for a complete connected network of bike routes that include facilities such as protected bike lanes, and education to motorists on how to safely drive near cyclists.

September 26th 2015 Public Meeting

As a part of a work session held on September 26th facilitated by Shockey Consulting Services, the public was invited to respond to a series of questions to guide the decision making of the task force. The following are summaries of attendee responses:

Overall

When asked what was most important to Lawrence residents regarding pedestrian and bike issues, safety rose to the top. Attendees wanted the city to improve safety to reduce the number and severity of crashes through infrastructure design along and across roadways, and by promoting safe driving, walking, and bicycling behaviors through education and enforcement. Close behind the importance of safety to the public was the importance of connectivity and land use and design. This includes creating networks that connect neighborhoods to employment, retail,

⁷ <https://www.lawrenceks.org/lawrence-listens>

community services, schools, and recreational and cultural amenities and to employ land use planning and site design requirements that are conducive to pedestrian travel and actively seeks to discourage car use by making local trips easier and more pleasant by foot than by car.

Sidewalk Construction

Attendees agreed that it was most important to build new sidewalks in Safe Routes to Schools locations, high pedestrian demand locations and high pedestrian crash locations. When asked about the importance of providing sidewalks on both or one side of a street a majority of responders felt that it was most important for sidewalks to be built on both sides of major streets, and for sidewalks to be required on at least one side of every new street built.

Sidewalk Maintenance

Almost 90% of respondents agreed that the city should proactively manage sidewalk maintenance in the same way it manages street maintenance. 53% thought funding to repair sidewalks should come from reallocating existing funding or a new revenue source. 47% believed that property owners should be required to repair their sidewalks, but the city should budget funds for those who can't afford to pay.

Pedestrian and Bicycle Safety for School Aged Children

Attendees were asked what would encourage a pedestrian/bicyclist-friendly environment for school aged children. A majority of respondents selected the installation of sidewalks, crosswalks, and school zone flashers.

Bike Facility Construction and Reconstruction

When asked what was most important to improve the cities bicycle network, attendees agreed that continuing the implementation of the Complete Streets Policy when building new or reconstructing streets is most important. They also favored reducing speed limits on residential streets to 25mph or lower, and by providing a well-connected street network.

A majority of attendees felt that developers should fund trails and on-street bicycle facilities in newly developed areas. In other areas, funding should be reallocated from other city functions.

Promoting Walking, Wheeling and Bicycling

Attendees were asked how they thought the number of people walking, wheeling and bicycling could be increased in Lawrence. Their comments follow:

How to Promote People Walking and Wheeling?

- Slow down cars – street design/physical infrastructure
- Better sidewalk condition and connectivity
- Enforcement at intersections
- Wayfinding signs (A signage system that provides directions and distance to popular locations)
- Traffic speed
- Maintain crosswalks and signals
- Enforce the snow removal ordinance
- Better sidewalks

How to Promote People Bicycling?

- Infrastructure, education, and enforcement
- Implement bike share program like Topeka Transit
- Make driving less convenient

- Traffic speed
- Parking on streets policy with cyclists in mind
- Bike lockers downtown
- Build protected bicycle lanes
- Dedicated street sweeper machines for bicycle lanes

February 3, 2016 Public Meeting

The public was invited to provide comment on the task force's draft report. Attendees made the following suggestions that the task force deemed appropriate for further discussion:

- Address the impact that land use planning has on supporting all means of travel.
- Consider the Englewood, CO model for opting-in to a sidewalk maintenance fund.
- Consider making safe routes to the KU and Haskell campuses, and hospital/health services hub between 2nd and 4th and Maine priorities for pedestrian improvements.



Mom shares her love of riding bikes with her daughter at the Lawrence Community Bike Ride.

Findings



Stepping down off of a curb in downtown Lawrence

The task force's research, deliberations, and analysis of the walk, wheel and bike riding issues led to the following findings:

1 The sidewalk maintenance policy isn't working. There is no plan to fix broken sidewalks and curb ramps.

The city policy requiring property owners to maintain sidewalks is complaint driven, labor-intensive and politically unenforceable on a community-wide scale. City leaders have been reluctant to take actions that appear to place a burden on some residents and not others. Because the policy is rarely enforced, all sidewalks, especially in older neighborhoods, are deteriorating. Some are in poor condition and present safety hazards. This discourages walking, and creates barriers for wheelchair users and others with mobility limitations. Each year, the backlog of sidewalks in need of repairs grows. No plan exists for addressing this important infrastructure need.

The estimated costs for repairing broken or damaged sidewalks based on the 2014 Sidewalk Inventory:⁸

Repair of all public sidewalks to city standards \$6,200,000

Repair of all sidewalk ramps to ADA compliance \$3,300,000

Total cost of sidewalk maintenance: \$9,500,000

2 12.4 million dollars of sidewalk gaps exist⁹. There is no plan to fill them.

There are currently 72 linear miles (382K linear feet) of streets in Lawrence that do not have sidewalks on either side of the street. A map showing all of the missing sidewalk links can be found online at: <http://lawrenceks.org/assets/boards/pedestrian-bicycle/MissingSidewalkMap.pdf>. Pedestrians of all ages and abilities must resort to walking or wheeling in the street or not at all.

12.4 million dollars is the total estimated cost to provide needed sidewalks on the most important routes in Lawrence. Here is a breakdown of the overall cost of maintenance and missing sidewalk gap fill:

⁸ http://lawrenceks.org/assets/agendas/cc/2015/06-09-15/cc_workplan_sidewalk_memo_attach_c.html

⁹ 12.4million dollars of sidewalk gap estimates the cost to install sidewalks on at least one side of every Lawrence street.

Missing Sidewalk and Maintenance Cost estimates

	Maintenance	Estimated cost to install missing sidewalk	
		One	Both
SRTS Route	\$1,650,000	\$200,000	\$4,600,000
Arterial	\$1,177,890	\$700,000	\$2,900,000
Collector	\$1,480,440	\$1,000,000	\$4,800,000
Residential	\$3,901,620	\$10,500,000	\$118,700,000

** \$1,000,000 additional is planned in 16-18 CIP
** \$500,000 additional is planned in 16-18 CIP

Notes:
Maintenance costs for SRTS are not removed from the other maintenance costs
These costs do not include ADA curb ramps
Cost (residential only) based on 5' width and \$6/sqft
Cost (arterial and collector only) based on planning-level cost estimate

	Estimated cost to maintain existing sidewalk/ramps
Maintenance	\$6,559,950
Ramps	\$3,300,000

In the 2016-2018 Capital Improvement Plan, there are 1.5 million dollars of missing sidewalk gap planned for construction. However, the only funding currently available to fill sidewalk gaps that aren't constructed with adjacent street reconstruction projects is from federally-sourced Community Development Block Grant (CBDG) funds. Funding has averaged \$144,000/year over the last several years. This funding isn't guaranteed, can only be used in low- and modest-income neighborhoods, and is wholly inadequate to provide basic pedestrian facilities citywide. The funding and burden of sidewalk maintenance currently falls on the property owner.

3 On-street bike facilities are an unconnected mixed bag that inhibits residents from riding as much as they would like.

In recent years, the city has been installing bike lanes and shared use paths as new streets are constructed or current streets are reconstructed. Today, with a few noteworthy exceptions, these streets and street sections are a patchwork of unconnected pieces, making it difficult for all but experienced adult bike riders to make cross-town trips with confidence. The 2015 ETC Institute Citizen Survey¹⁰ noted that:

- Only 10% of residents feel very safe riding a bicycle in Lawrence.
- Only 21% are satisfied with the connectivity of bicycle lanes.
- Only 32% are satisfied with availability of safe routes for children to walk or bicycle to school.

These numbers reveal major gaps between what citizens want from their city and what is currently available.

¹⁰ http://lawrenceks.org/assets/agendas/cc/2015/07-28-15/citizen_survey.pdf

4 Current funding is inadequate to meet citizen demand for safer walking, wheeling and bike riding conditions.

While citizen demand for safer conditions in which to walk, wheel and ride is high, the Public Works department currently only allocates funding for projects when they can be linked to road reconstruction projects. Areas of town that have not had road reconstructions do not get new walk, wheel or bike riding facilities.

The city is occasionally awarded trail grants that require a local match. When this happens, the city allocates funds from the Sales Tax Reserve Fund or other funds to come up with the match. This practice has helped create some recreational trails that have transportation value, such as the Burcham Park Trail. But it is one-off funding rather than regular, ongoing investment.

The task force was unable to identify immediate ways to raise new revenue for walk, wheel and bike riding facilities. We studied revenue-generating practices that have worked in other communities such as:

- utility taxes – against Kansas statute
- benefit districts – place too much burden on low- income residents of older neighborhoods
- property tax increases – regressive and burdensome for some property owners
- cost-sharing plans – still place a burden on low- to modest- income property owners

For various legal and political reasons, none of these was judged to be feasible for Lawrence at this time. We concluded that the most realistic option for addressing unmet need in the short term is through reallocation of city resources. The most feasible long-term funding option may be renewing the infrastructure sales tax and earmarking some of the new revenue to meet pedestrian-bicycle facility goals.

5 Crash data indicates problem areas.

There were 328 crashes involving pedestrians or bike riders in Lawrence from 2007-2011¹¹ (KDOT). The crash sites tend to be concentrated along 6th Street, 23rd Street and Massachusetts Street. Speed, turning vehicles and street designs expose walkers, wheelers and bike riders to hazardous conditions. Injuries sustained in crashes are sometimes serious, and occasionally fatal. Crash data can be used to identify safety issues that need to be corrected.

¹¹ 2007-2011 Pedestrian & Bicyclists Crash Table <http://lawrenceks.org/assets/mpo/T2040/Ch5.pdf>

6 Staff capacity is strong in some areas, weak in others.

The city has excellent staff members with the planning, engineering and management expertise to continue to improve our pedestrian and bicycling environments if given the resources and support. The city is not currently allocating staff capacity to the following, which are widely recognized as essential practices in a walk, wheel and bike friendly community:

- **Enforcement:** Targeted enforcement of pedestrian and bicycling related traffic laws shows motorists, walkers, wheelers and bike riders that obeying the rules of the road applies to everyone, all of the time. In the past, the Police Department reorganized and eliminated traffic patrol as a specialized unit.
- **Education:** Safety education targeting various populations is important. City staff may delegate some of this work to schools and community groups, but should coordinate efforts.
- **Encouragement:** Walk, wheel and bike events, helmet fairs and related activities are key to achieving the goal of increasing the percentage of trips citizens make on foot, with a wheeled-device or on a bike. Again, staff can play a coordinating and reporting role.

7 The current citizen advisory structure is fragmented and does not offer the city commission optimal decision support.

No single advisory board considers all aspects of the transportation system and its relationship to community issues. While regional transportation planning is consolidated within the structure of the MPO, transportation decision-making on an operations level (parking changes, street design, maintenance, etc.) is not addressed in a holistic, strategic or coordinated manner.

Currently there are numerous commissions, advisory committees and groups that provide input to the city on pedestrian and bicycling systems. The following city-appointed commissions and advisory boards are involved in reviewing, recommending and/or providing community input on some aspect of walk, wheel and bike facility development and accommodation:

- Community Development Advisory Committee
- Historic Resources Commission
- Lawrence Douglas County Metropolitan Planning Organization Policy Board
- Lawrence-Douglas County Bicycle Advisory Committee
- Lawrence-Douglas County Metropolitan Planning Commission
- Parks & Recreation Advisory Board
- Public Transit Advisory Committee
- Sustainability Advisory Board
- Traffic Safety Commission

The fragmentation of the citizen advisory committee system, as it relates to all modes of transportation but especially the pedestrian and bicycle issues, does not serve the best interests of the city commission, the public and staff. Fragmentation leads to misaligned and sometimes conflicting recommendations to the city commission. Fragmentation also does a disservice to members of the public, who face challenges navigating the complexity of the citizen advisory system to seek resolution to their concerns about walking, wheeling and biking. Finally, fragmentation impacts the use of staff resources, causing inefficiency and gaps in addressing the mobility needs of residents and visitor of all ages and abilities.

Vision and Recommendations



Boy gets ready to start the Lawrence Community Bike Ride.

Vision for a More Walk, Bike and Wheel Friendly Lawrence

The task force created a long-term vision for a city that welcomes, encourages and supports all means of travel. The elements of the vision are:

Zero Fatalities or Serious Injuries

All of us need to move around the community safely, no matter where we are going, how we get there, or our age or ability. Safety is first, and safety will create a lively, vibrant Lawrence that works for everyone.

In this belief, we identify with the multi-national road traffic safety movement called Vision Zero. It aims to achieve transportation systems with **no fatalities or serious injuries** in road traffic. The Vision Zero concept is bigger than pedestrian and bicycle facilities. For this reason we are not recommending that the city adopt it entirely. Rather, we recommend that city set zero deaths or serious injuries as a goal when investing in our pedestrian and bicycling networks.

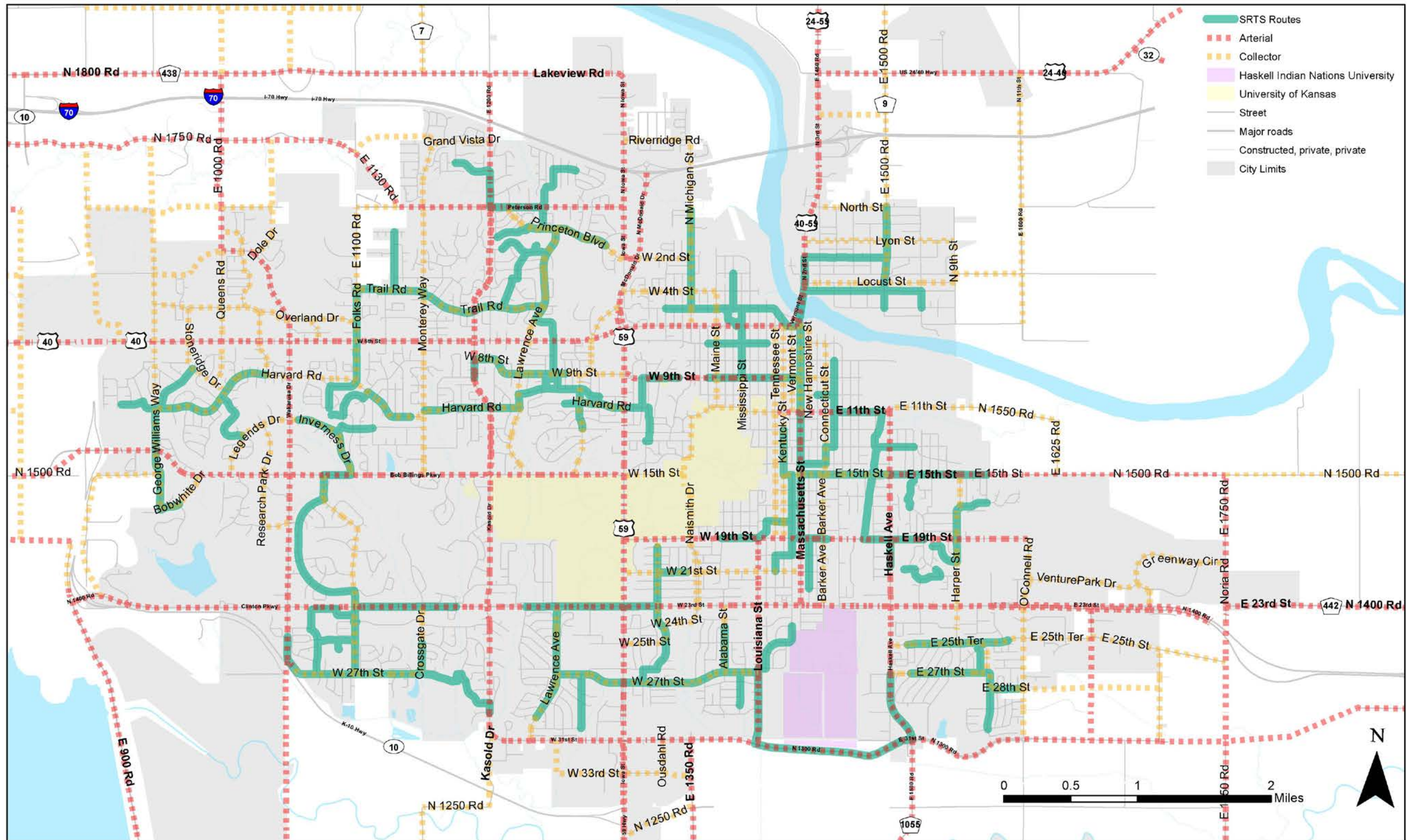
Pedestrian Facilities on at Least One Side of Priority Routes

The map on page 22 presents the task force's long-term pedestrian vision. Every route designated as a safe route to school has a sidewalk on at least one side of the street. Every collector street, which connects residents within their neighborhood, has a sidewalk on at least one side of the street. And every arterial street, which connects the neighborhood to the wider community, has sidewalks on both sides of the street. When this vision is realized, every street will have a minimum level of service.

A Bikeway Network that Supports Safe and Comfortable Riding for All

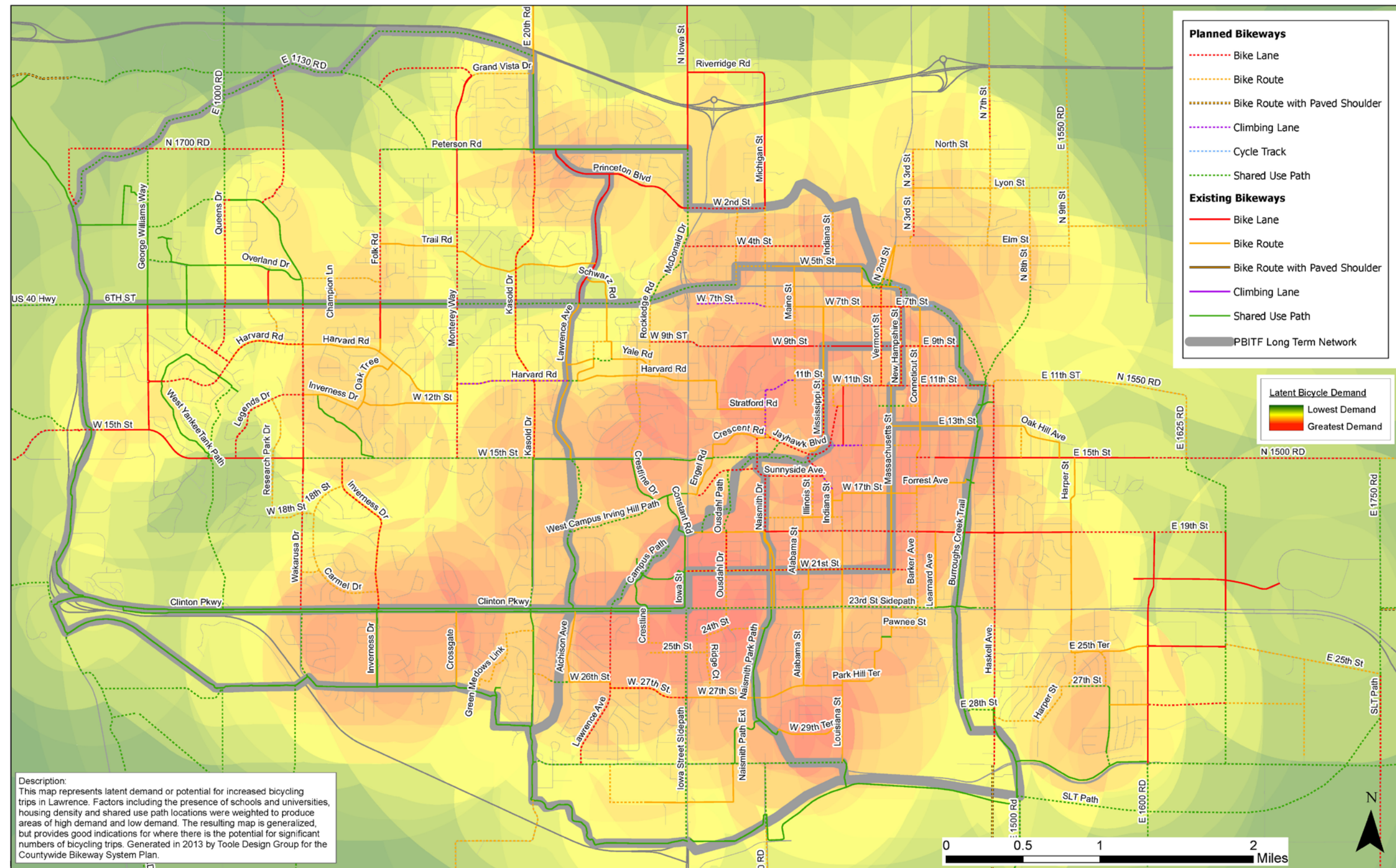
The map on page 23 presents the task force's long-term vision for accommodating people who ride bikes. It is made up of a system of connecting bikeways that make it easy to travel east to west, north to south and around the city. The system features a variety of facilities for people on bikes, including shared use paths, bicycle boulevards and buffered bike lanes, all offering the greatest safety within funding constraints.

PBITF Pedestrian Vision- Pedestrian Facilities on at Least One Side of Priority Routes



Data compiled by the Lawrence -Douglas County MPO and the City of Lawrence. SRTS Routes identified in the SRTS Planning process. Arterials and Collectors identified from the T-2040 Major Thoroughfares Map Plot date 01/15/2015.

PBITF Bikeway Vision - A Bikeway Network that Supports Safe and Comfortable Riding for All



Description:
 This map represents latent demand or potential for increased bicycling trips in Lawrence. Factors including the presence of schools and universities, housing density and shared use path locations were weighted to produce areas of high demand and low demand. The resulting map is generalized, but provides good indications for where there is the potential for significant numbers of bicycling trips. Generated in 2013 by Toole Design Group for the Countywide Bikeway System Plan.

The map is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the map, including the fact that the map is dynamic and is in a constant state of maintenance, correction and update. Plot date 01/12/2015.

Recommendations

1 Recognize that facilities for walking, wheeling and biking are vital parts of a safe transportation system requiring annual public investment through the city's capital improvement plan.

Increasing the percentage trips residents make on foot or using an assistive device begins with shifting the way we think about sidewalks. Until now, the city has considered sidewalks to be a property owner amenity. As such, the owner is said to be responsible for maintaining the sidewalk up to city code. In fact, owners are not maintaining sidewalks, and the city is generally not enforcing the code. The result is a continuously deteriorating network with no plan to address it.

Likewise, increasing the percentage of trips made by bike begins with shifting the way we think about people who ride bikes and why they use them. Some important things to consider are:

- While many people own bikes, only a small fraction of individuals are experienced or highly skilled cyclists who feel comfortable and safe using current on-road facilities.
- There are individuals in our community who, by choice or necessity, use bicycles as a primary form of transportation to priority destinations like work, school, shopping, and recreation.
- Parents and other adults are concerned about the safety of children riding bikes in neighborhoods throughout the community.

Providing safe and comfortable networks for residents who need or want to walk, wheel or ride a bike is as much a city responsibility as providing transit and facilities for motorists. These vital facilities link residents to jobs, education, groceries and other retail, community services, recreation, entertainment and worship. Like streets, they require routine public investment and public maintenance.

The task force calls on the city to:

1. Recognize pedestrian and bicycling facilities as a vital part of the city's transportation infrastructure.
2. Make provision of pedestrian and bicycle facilities built to modern design standards in all Lawrence neighborhoods a funded priority in future city budgets.
3. Invest in these facilities systematically through the city's capital improvement plan.
4. Provide funding for standalone projects not connected to new road constructions or reconstructions.

2 Fund these vital improvements by:

Reallocating \$1M per year in 2017-2019

Allocate \$500,000 to filling gaps in the safe routes to school sidewalk network and other high priority routes. See page 35 and the accompanying map for an illustration of what could be accomplished.

Allocate \$500,000 to standalone bikeway projects. See page 40 and the accompanying map for an illustration of what could be accomplished.

The proposed transportation commission would make final recommendations to the city commission on projects.

Earmarking 0.05% in the prospective 2019 renewal of the infrastructure sales tax to fund standalone bicycle and pedestrian projects

Provide an annual allocation of 0.05% of the existing 0.30% (if renewed in 2019) to fund standalone projects, including bicycle and pedestrian improvements and traffic calming projects that enhance safety and mobility of all users of the transportation system.

A sales tax of 0.05% would generate approximately \$850,000/year or \$8,500,000 over 10 years. These funds would be split 50/50 between bicycle and pedestrian projects.

Continuing to invest in high quality pedestrian and bicycle facilities built during new road construction and existing road reconstruction projects.

This practice is vital to achieving a connected system that works for all. Every new road and road reconstruction should include the highest possible quality of walk, wheel and bike facilities. This is consistent with the Lawrence Complete Streets Policy.

3 Commit to establishing an equitable and practical sidewalk repair program by 2017 that will bring all sidewalks and curb ramps up to code by 2030.

Establishing a plan to address sidewalk repair is achievable. The following table summarizes approaches taken by some communities. City staff and the transportation commission can create an approach that will work here.

City	Funding Method	How Established	How Much	Criteria for Repair	Notes
Lenexa, KS	Mill levy Gas Tax General Funds City council injected additional funding in 2015 budget year		\$750,000 in 2016 including trails Johnson Co. provides 50% match on trails and associated parking lots.	Deteriorated, uneven, ponding	Sidewalks considered a means of public conveyance by city council. Inspected at same time as streets inspected Repairs made anytime street is touched, including chip seal, micro surfacing, mill and overlay
Englewood, CO	Property owner opt-in fee paid into a "concrete utility fund"	1997 city ordinance	\$0.123 per square foot of concrete in the public right-of-way charged to property owner's water bill	Needed repairs are rated 1-6, with 6 being a critical need for repair work	95% of property owners with sidewalks participate. Active enforcement
Ann Arbor, MI	Five year mill levy	Approved by voters in 2011	1/8 mill	City employees proactively seek sidewalk problems, mark them, and hire contractors to repair	Scheduled completion of repairs expected in 2016. Funds from a street millage also pay for sidewalk cost overages.

Ithaca, NY	Annual maintenance fee charged to residents based on lot type, determined by the amount of foot traffic	2013 city ordinance subject to permissive referendum	\$70/year for low traffic lots. Other lots pay a \$140 maintenance fee plus \$0.015 per sq foot of buildings on lot and \$30 per 55 feet of lot frontage	Five Sidewalk Improvement Districts were established. City council approves funding as part of budget for each district.	
Madison, WI		Ordinance	50-50% cost share with property owner. The property owner has option of paying in installments over five years	Sidewalk defects including broken, offset, settled, ponding.	

4 Assign and develop staff, and invest in tools needed to provide a coordinated approach to pedestrian-bicycle planning, engineering, community education, encouragement, enforcement and evaluation.

Establish a staffing structure that supports a systemic approach to the 5 E's of supporting walk, wheel and bike transportation: engineering, education, encouragement, enforcement and evaluation.

- Designate a single staff member to serve as a public point of contact on all walk, wheel and bike-related issues.
- Create an interdepartmental city staff team for facilities planning, budgeting, construction, routine maintenance, community education, encouragement, enforcement and evaluation.
- Regularly budget for and provide tools and professional development opportunities to expand staff members' knowledge.

5 Actively pursue nationally accepted Walk-Friendly and higher Bicycle-Friendly Community designations as roadmaps to progress and points of pride.

Walk-Friendly Community

[Walk Friendly Community](http://www.walkfriendly.org/)¹² is a national recognition program sponsored by the Federal Highway Administration and FedEx. The program, managed by the UNC Highway Safety Research Center's [Pedestrian and Bicycle Information Center](http://www.pedbikeinfo.org/)¹³, recognizes communities that are working to improve conditions related to walking: safety, mobility, access, and comfort. It is structured around the 5Es: Engineering, Education, Encouragement, Enforcement, and Evaluation/Planning. Recognition levels include Platinum, Gold, Silver, Bronze and Honorable Mention. There is one Platinum level community (Seattle), 15 Gold level, 14 Silver level, and 27 Bronze level communities.

[Application](#)¹⁴ to the program will provide the City with specific feedback on ways to make needed changes in pedestrian safety. The next open time to apply is May 1, 2016.

Bicycle Friendly Community (BFC)

[The Bicycle-Friendly Community Program](http://www.bikeleague.org/)¹⁵, managed by the League of American Bicyclists, provides a nationally accepted "roadmap" for communities to improve conditions for bike riding. Rankings include Bronze, Silver, Gold, Platinum and Honorable Mention. There are four communities in the country designated as "Platinum," 21 as "Gold," 73 as "Silver," and approximately 252 as "Bronze," including Lawrence.

The League has developed a [checklist](#)¹⁶ of the attributes of a BFC. Criteria are structured around the 5Es: Engineering, Education, Encouragement, Enforcement, and Evaluation/Planning. There is no single path to moving from one level of the recognition program to the next, but this [infographic](#)¹⁷ provides excellent guidance on how Lawrence could move from Bronze to Gold or Platinum status.

The program provides a non-biased external measurement of progress against criteria that have developed to denote a community that is safe and comfortable for all ages to bicycle. An application to the program each year produces a detailed analysis of progress, and recommendations on which to base action. Lawrence was designated a Bronze-level bicycle-friendly community in 2012, with feedback provided in the following report:

¹² <http://www.walkfriendly.org/>

¹³ <http://www.pedbikeinfo.org/>

¹⁴ http://www.walkfriendly.org/WFC_Assessment_Tool_Sept2012.pdf.

¹⁵ <http://www.bikeleague.org/>

¹⁶ http://www.bikeleague.org/sites/default/files/Attributes_of_BFC.pdf

¹⁷ <http://bikeleague.org/sites/default/files/BFC%20infographic.pdf>

<http://www.lawrenceks.org/assets/pds/planning/documents/BikeFeedback.pdf>. The Lawrence - Douglas County Bicycle Advisory Committee plans to submit an updated application in 2016.

The League also sponsors a Bicycle-Friendly University and a Bicycle-Friendly Business designation. The KU Bicycle Advisory Committee is planning to submit an application in 2016 to recognize KU as a Bicycle-Friendly University.

6 Create a consolidated transportation commission.

Address the fragmentation of the citizen advisory committee system by creating a consolidated commission to advise the city commission and staff on transportation matters. The consolidated commission should approach transportation decision-making in a holistic, strategic, and coordinated manner.

Among the existing system of citizen advisory committees that address pedestrian and bicycle matters, the following committees could be considered in the formation and coordination of a consolidated transportation commission: the Traffic Safety Commission, the Lawrence-Douglas County Bicycle Advisory Committee and the Public Transit Advisory Committee.

In developing a consolidated transportation commission, consideration should be given to the capacity of the appointed members to represent and understand the diverse needs, interests and potential conflicts between different users, including those who walk, use wheelchairs, bike, drive and take the bus.

The following additional characteristics should be considered in developing a consolidated commission:

- Have a clear purpose and scope that integrates the advisory function into routine operations of transportation decision-making by staff and the city commission, including decisions such as those related to implementation of the Complete Streets policy, transportation planning, street design and capital projects, transportation infrastructure maintenance, traffic operations and enforcement, traffic safety, and vehicular and bicycle parking.
- Advise and assist staff and the city commission regarding operating and capital funding for transportation-related projects, programs and policies.
- Provide a mechanism for responding to issues or complaints identified by the city commission or brought by the public.
- Have coordinated support from a broad range of staff with expertise in planning, constructing and maintaining an interconnected system of streets, walkways, bikeways, trails and public transit opportunities.
- Ensure coordination with other appropriate citizen advisory committees as needed to provide an integrated review of transportation issues as they relate to other policy areas such as air quality, natural resources and land use.
- Ensure coordination with regional efforts related to transportation and recreational trails. Consider making the consolidated transportation commission a city-county body to foster coordination and mutual support among cities.

- Be proactive in their work and seek to ensure transportation projects make the street and trail network safer and more accessible for the whole community and for all transportation modes, including drivers and non-drivers, people in wheelchairs and parents pushing strollers, kids biking and walking to school, and people who can't afford or don't want cars.
- Encourage and support the development and implementation of education and encouragement strategies for motorists, pedestrians, and bicycles on safely sharing the road, including increasing understanding of applicable traffic laws and use of safe bicycling and pedestrian practices.
- Encourage and support the city's participation in programs that designate, reward or recognize the city's support, progress and accomplishments regarding livable streets. This includes seeking higher national designation as a Bicycle-Friendly Community and applying for the Walk-Friendly Community national designation.
- Support efforts to develop, implement and evaluate the community's Metropolitan Transportation Plan (currently titled Transportation 2040), the Regional Pedestrian Plan, the Countywide Bikeway System Plan, the Lawrence Complete Streets Policy, the recreational trails component of the Lawrence Parks and Recreation Master Plan, and others.



Sidewalk gaps inhibit walking and wheeling.

Implementation Priorities for the Pedestrian Environment

The following implementation priorities have been created in response to community feedback and the task force's findings. They should be used to guide commissioners and staff in the selection of projects to be funded first to have the greatest impact on the walking and wheeling environment in Lawrence.

1 Provide safe routes to schools (SRTS) by filling gaps, repairing and maintaining sidewalks within the designated SRTS network.

The total length of the current proposed safe routes to schools (SRTS) routes is 51 miles. There are sections of missing sidewalk along the SRTS routes. There are 42,275 ft. of existing sidewalk (about 8 miles) that have defects and need maintenance. There are 1,201 ramps that need improvements to meet ADA standards and 55 instances where there are no ramps at all. The estimated cost to construct sidewalks on one side of all SRTS routes, repair and maintain existing defects and install ADA compliant ramps is \$2.8 million.

Consider starting with neighborhoods where residents rely most on walking, wheeling and bike riding as primary forms of transportation. Some of these areas have sidewalks in greatest need of repair.

Eventually, children need safe sidewalks from all homes to schools. Establishing a plan for completing adequate pedestrian facilities on all residential streets would be an appropriate long-term goal.

2 Connect residents to neighborhood destinations by filling gaps in the arterial and collector street sidewalk network.

Provide sidewalks and other pedestrian safety features to support walking and wheeling to neighborhood destinations such as grocery stores and activity centers. A map showing all of the missing sidewalk links and the SRTS Routes can be found online at: <http://lawrenceks.org/assets/boards/pedestrian-bicycle/MissingSidewalkMapandSRTS.pdf>

3 Invest in facilities that provide safer conditions and access for seniors and people with disabilities.

Consider adopting an annual plan for investing in ADA compliant ramps, longer crossing times, pedestrian refuges and traffic calming features that specifically provide greater safety for people with disabilities and seniors who wish to age in place.

The senior population is growing, and with it, the percentage of people who have some degree of mobility limitation. Providing a pedestrian environment that welcomes all ages and abilities is essential if the city wishes to attract retirees as well as retain existing residents who want to age in place. Many retirees want to walk, ride bikes and engage in other active pursuits. Older seniors, especially those who can no longer drive, need ways to get outdoors and interact with neighbors. A short walk, wheelchair or scooter ride reduces isolation and contributes to good mental health.



Safe crossings with adequate crossing times are essential for seniors and people with disabilities.

Pedestrian Funding Illustrations

The following illustrations were created to demonstrate the impact two different levels of funding may have on the walking and wheeling environment in the next five years. The selected projects are based on the implementation strategies.

Illustration 1

Funding Commitment: \$500,000/year

Identified Projects	2017	2018	2019	2020	2021
<i>Safe Routes to School</i>					
Install missing sidewalk on SRTS	\$230,000				
Sidewalk maintenance on SRTS	\$150,000	\$150,000	\$150,000	\$250,000	\$150,000
ADA compliant curb ramps on SRTS	\$70,000	\$100,000	\$100,000	\$120,000	\$100,000
<i>Gap sidewalk - on single side of streets with no sidewalks on either side of street</i>					
Princeton - Iowa St. to Yorkshire Dr.	\$50,000				
Kasold - 5th Terrace to Peterson Rd.		\$250,000			
McDonald Dr. - Princeton Blvd to Bluffs Dr			\$150,000		
<i>Gap sidewalk - on single side of streets with no sidewalks on one side of street</i>					
23rd St - Ohio St. to Vermont St.			\$75,000		
Crescent Rd - Strong Ave. to Naismith Dr			\$25,000		
Naismith Dr. - 19th St. to 23rd St.				\$80,000	
Fambrough Dr. (11th St) - Missouri to Mississippi St.				\$50,000	
Sidewalk Maintenance on Mass. St. - 6th to 23rd St.					\$250,000
TOTAL	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000

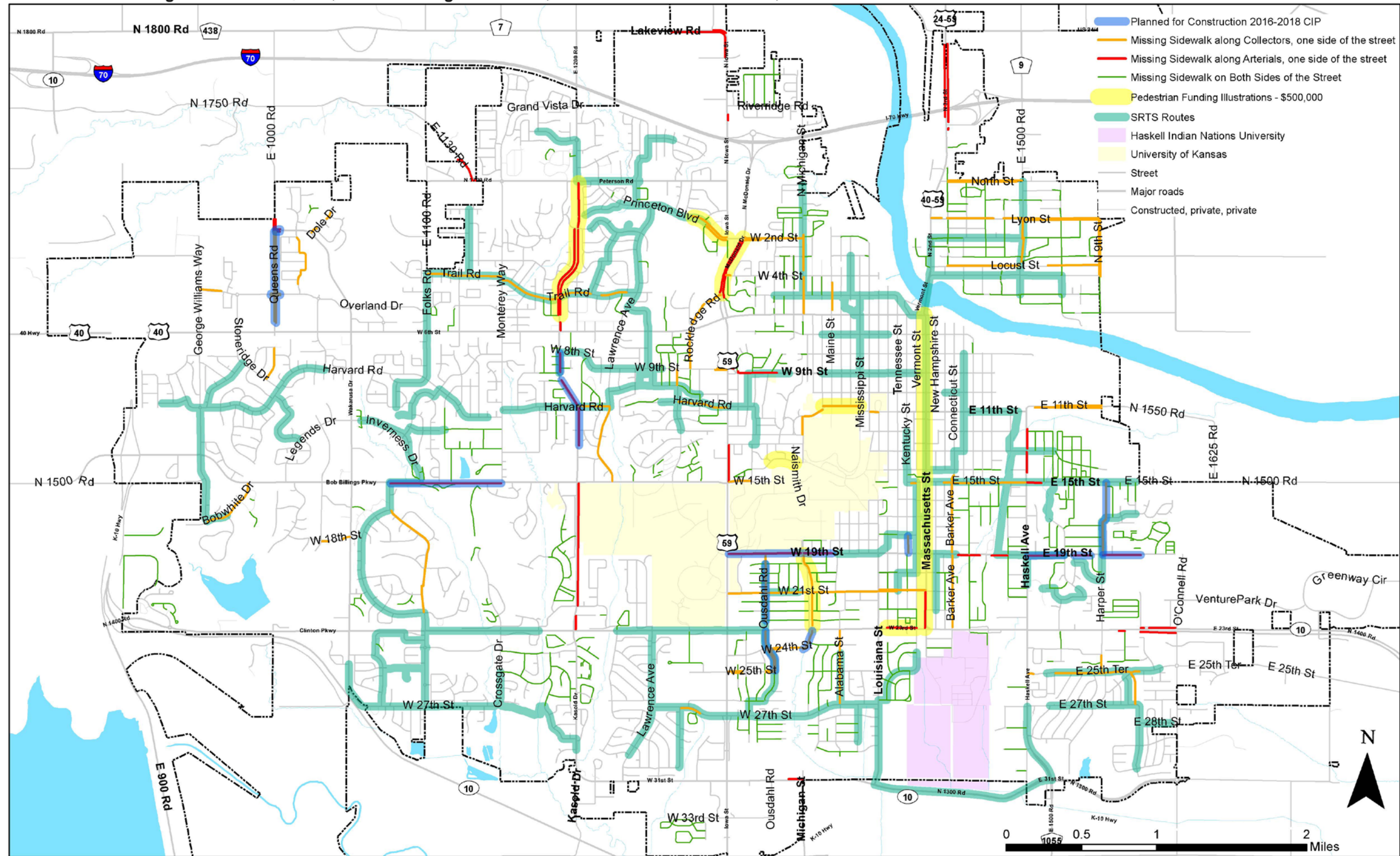
Illustration 2

Funding Commitment: \$250,000/year

Identified Projects	2017	2018	2019	2020	2021
<i>Safe Routes to School</i>					
Install missing sidewalk on SRTS	\$230,000				
Sidewalk maintenance on SRTS	\$20,000	\$125,000		\$75,000	\$150,000
ADA compliant curb ramps on SRTS		\$75,000		\$25,000	\$100,000
<i>Gap sidewalk - on single side of streets with no sidewalks on either side of street</i>					
Princeton - Iowa St. to Yorkshire Dr.		\$50,000			
Kasold - 5th Terrace to Peterson Rd.			\$250,000		
McDonald Dr. - Princeton Blvd to Bluffs Dr				\$150,000	
TOTAL	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000

The map on the following page shows work that could be completed based on these illustrations.

Pedestrian Funding Illustrations- \$500,000 > Missing Sidewalks, Planned CIP Construction, and SRTS Routes



Data compiled as a point in time analysis for the Pedestrian-Bicycle Issues Task Force by the Lawrence -Douglas County MPO and the City of Lawrence. Plot date 1.22.16

Implementation Priorities for the Bicycling Environment

The task force offers the following implementation priorities to create a bicycling environment that is safe, comfortable and welcoming to people of all ages and abilities who ride bikes, or would like to ride bikes, for everyday transportation and recreation.

1 Complete the Lawrence Loop.

The Lawrence Loop is a 22.4 mile 10' wide shared-use path around the city. Construction of the loop began more than 20 years ago with completion of the west-leg of the South Lawrence Trafficway, and segments have continued to be added using a combination of KDOT, foundation, private and city funds. The loop will be 75% complete when the east-leg of the South Lawrence Trafficway segment is opened in 2016.

Finish the loop by building key segments over the next five years. The estimated cost for completion of the loop is \$2,867,400. Among the highest priority segments are those identified in the 2015 KDOT Transportation Alternative grant that connect the Burroughs Creek Trail through east and downtown Lawrence to City Hall and Constant and Burcham parks. Additional high priority segments include the Woody Park Trail, which extends the trails through Burcham Park and the newly created Sandra Shaw Community Health Park to the west, and the Rock Chalk Trail segment that connects the west-leg of the South Lawrence Trafficway trail to the Baldwin Creek trail, which is currently under construction.

When complete, the Lawrence Loop will provide residents and visitors of all ages and abilities a beautiful, active and safe way to circle around part or all of the city. It will be built with slopes and surfaces that accommodate people who are walking, people on bikes, and people using assistive devices.

2 Improve safety on roads with the highest bicycling crash rates.

Review of historical bicycling crash data indicates concentrations of crashes along 6th Street, 23rd Street and Massachusetts Street. This may be in part due to high speeds of traffic, high numbers of vehicles on the road and lack of facilities that separate bicyclists from motorized vehicles.

For example, on 6th Street between Monterey and Wisconsin, four lanes of traffic accommodate high vehicular traffic at speeds of 35mph. This intimidates most cyclists so they often ride on a narrow adjacent sidewalk that is statistically more dangerous than riding in the road. There are similar limitations for people riding bikes on 23rd Street east of Iowa and South Massachusetts Street, from the intersection at 23rd Street to downtown.

Address safety along 6th Street by installing a shared use path, and directing people to ride on the 5th Street bike route east of Wisconsin. A shared use path, estimated to cost \$700,000, should be installed on the north side of 6th Street between Monterey and Wisconsin. At Wisconsin, pavement markings and signage should be installed to direct people riding bikes from 6th Street onto the 5th Street bike route. The 5th Street bike route should be optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments.

Safety on 23rd Street should be addressed by directing people to ride on the 21st Street bike route, which should be optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments.

For improving safety for people riding bikes on Massachusetts Street, a protected bikeway should be built between 11th Street and 23rd Street. This could be done during the next mill and overlay of South Massachusetts Street, expected in four to five years.

3 Develop a highly visible network of bicycle boulevards.

Bicycle boulevards, also called neighborhood greenways, are residential streets with low volumes of motor vehicle traffic and low speeds where bicycles and pedestrians are given priority. Using a bicycle boulevard signage system and a package of traffic tools, bicycle boulevards transform residential streets into quiet, neighborhood, bicycle-friendly streets while also accommodating local motor vehicle traffic. Bicycle boulevards are more comfortable and welcoming than traditional bike routes, particularly for vulnerable or less confident bicyclists such as children, seniors and families.

Given the high number of residents and university students that ride bikes to downtown Lawrence, the City of Lawrence should prioritize development of bicycle boulevards that lead to downtown, including the following:

- 21st Street between Iowa and Massachusetts
- 5th Street and/or 7th Street east of Iowa
- 13th Street bike boulevard between Haskell and Massachusetts
- Forrest Avenue/17th Street between Burroughs Creek Trail and Massachusetts

In addition to these priority bicycle boulevards, the City should consider developing a community-wide network of bicycle boulevards that connect neighborhoods to priority destinations, such as the University of Kansas and Haskell Indian Nations University, the Lawrence Loop, neighborhood schools, parks and recreation centers, as well as areas for dining and shopping.

Bicycle Network Funding Illustrations

The following illustrations were created to demonstrate the impact two different levels of funding may have on the bicycle environment in the next five years. The selected projects are based on the implementation strategies.

Illustration 1

Funding Commitment: \$500,000/year

Identified Projects	2017	2018	2019	2020	2021
21st St bike boulevard between Iowa and Massachusetts	\$120,000				
Install shared use path on the north side of 6th St between Monterey and Wisconsin	\$135,500	\$98,000	\$208,000	\$136,500	\$122,000
Pavement markings and signage	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
5th St bike boulevard between Wisconsin and Constant Park Trail		\$104,000			
13th St bike boulevard between Haskell and Massachusetts					\$136,000
Lawrence Loop - Santa Fe Depot - City Hall segment			\$106,000		
Lawrence Loop - Woody Park Trail segment	\$224,500				
Lawrence Loop - Rock Chalk Park segment		\$278,000			
Lawrence Loop - W 2nd Street segment			\$166,000		
Lawrence Loop - McDonald Dr - Peterson Park segment					\$150,000
Forrest Ave/17th St bike boulevard between Burroughs Creek Trail and Massachusetts					\$72,000
South Massachusetts protected bikeway				\$343,500	
TOTAL	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000

Illustration 2

Funding Commitment: \$250,000/year

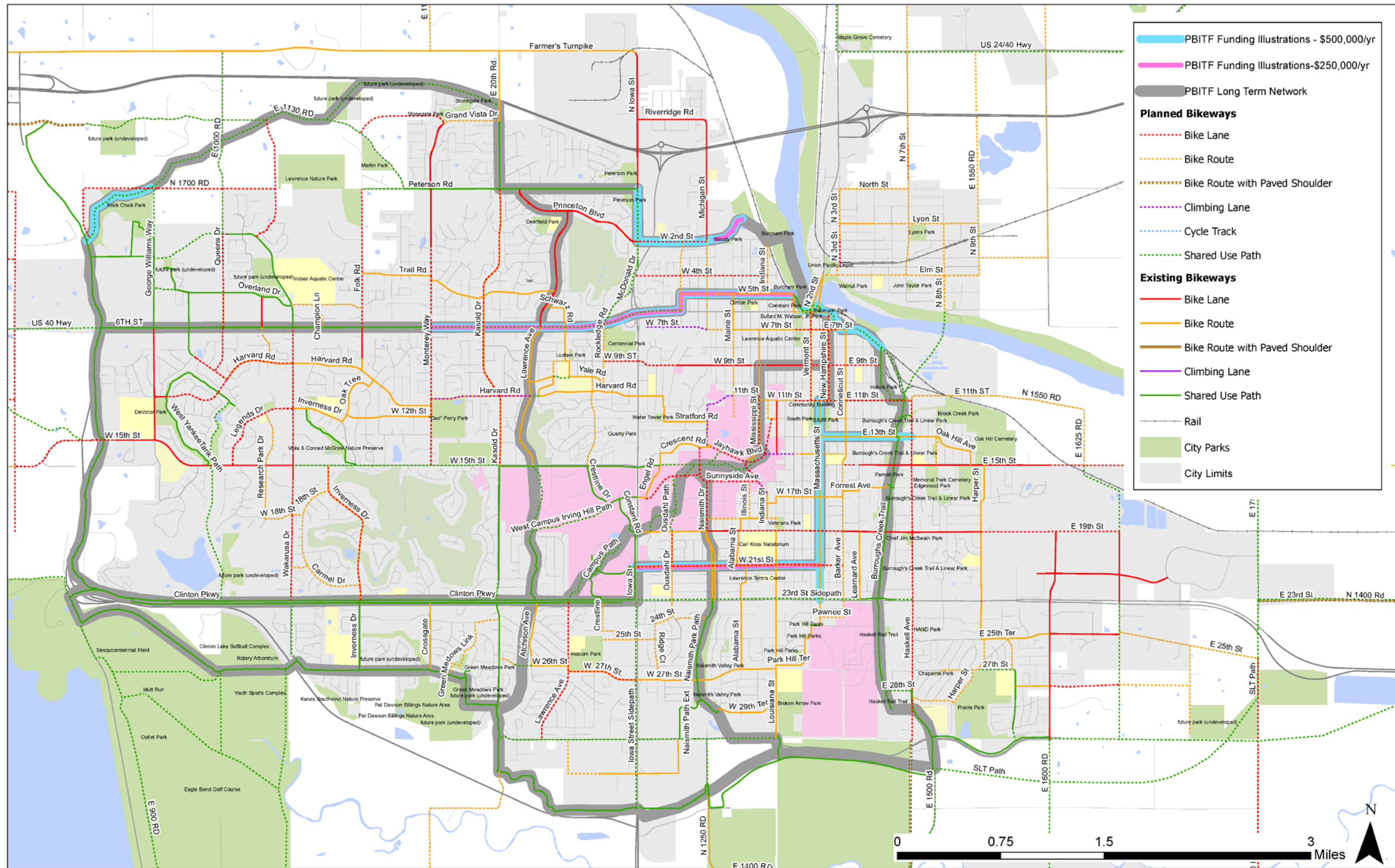
Identified Projects	2017	2018	2019	2020	2021
21st St bike boulevard between Iowa and Massachusetts		\$120,000			
Install shared use path on the north side of 6th St between Monterey and Wisconsin		\$110,000	\$230,000	\$230,000	\$130,000
Pavement markings and signage	\$25,500	\$20,000	\$20,000	\$20,000	\$16,000
5th St bike boulevard between Wisconsin and Constant Park Trail					\$104,000
Lawrence Loop - Woody Park Trail segment	\$224,500				
TOTAL	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000



Crossing Ninth Street at Vermont.

The map on the following page illustrates projects that could be completed at \$500,000 per year and \$250,000 per year.

Bicycle Network Funding Illustrations - \$250,000 and \$500,000 Per Year



Data provided by the Lawrence - Douglas County MPO. This map is originally produced for the Countywide Bikeway System Plan and has been updated to fix mapping errors and as built facilities.

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