



**TRANSPORTATION COMMISSION  
& MPO BICYCLE ADVISORY COMMITTEE  
JOINT STUDY SESSION  
Wednesday, November 28, 2018 3:30 PM  
City Commission Room, City Hall, 6 E. 6th Street**

**STUDY SESSION AGENDA**

Public comment related to work session topics will be allowed at the end of each discussion item. Each person will be limited to three (3) minutes. Individuals are asked to come to the microphone, sign in, and state their name and address.

**1. Bikeway Plan Update**

Discussion and feedback on the Bikeway Plan development

A. What we heard?

Scope Input (attached)

Bike Plan Update Scope (<https://assets.lawrenceks.org/assets/mpo/bicycle/planscope.pdf>)

Survey 1 Results (<http://assets.lawrenceks.org/assets/mpo/bicycle/Lawrence-Phase1.pdf>)

Survey 2 – Open until December 1<sup>st</sup> (<http://lawrenceks.org/mpo/tellus>)

Open House 2 Boards (<http://assets.lawrenceks.org/assets/mpo/bicycle/BikePlanOpenHouse2.pdf>)

B. Education, Encouragement, Enforcement Policies and Programs Toolbox Draft (attached)

**Are there other tools that should be included? Or Prioritized?**

**What should be the role of non-government stakeholders?**

C. Progress to Date

Plan and Policy Review Draft (attached)

Updated Bikeway Demand Map (attached)

Draft Network – included in Survey

(<http://assets.lawrenceks.org/assets/mpo/bicycle/LawrenceNetworkExistingPlanned-DRAFT.pdf>)

(<http://assets.lawrenceks.org/assets/mpo/bicycle/LawrenceNetworkPriorities-DRAFT.pdf>)

Level of Comfort Model (attached) **Updated on 11.27.18**

**What should be the Level of Comfort goal for the bikeway network?**

D. Evaluation

T2040 Bicycle Performance Measures (attached)

**What other measures should be included in evaluation?**

E. Next Steps and Timeline

## **Bike Plan Update Scope What we heard from MPO BAC, Multimodal staff team, Transportation Commission and previous engagement with stakeholders**

- Rectify differences between Countywide Bikeway Plan and Bike Ped Issues Task Force (PBITF) Report
- Include New Built Environment Engineering Options (ex: bicycle boulevard)
- Criteria/warrants for proposed bikeway types: Speed & Volume (AADT)
- Design/Engineering considerations for when warrants to remove parking and reverse Angle parking on bikeways
- Prioritization of network
- Assign agency/departments responsibilities to recommendations
- The plan development Steering Committee should have a liaison from Transportation Commission
- Plan should consider 5 yr focus , integration into City of Lawrence Capital Improvement Program (CIP)
- Consider Bicycle Friendly Community (BFC)-> Goals/Targets
- Realistic bikeway plan recommendations
  - Short term/long term
  - Consider Maintenance/Reconstruction
- Performance Measures to track and evaluate progress
- Plan development should include public engagement

## Policy and Program Toolbox

Becoming a truly bicycle friendly community requires more than engineering. Non-infrastructure policies and programs are necessary to achieve the goal of becoming more bicycle friendly. Checkmarks are included with the item if the tool is already occurring in Lawrence.

These tools are not prioritized (or in any particular order) and responsibilities are assigned based off the best information available to MPO staff. Additional considerations will need to be given to programs that are recommended in the Action Plan that will be drafted following the analysis of Survey 2.

### Education and Encouragement

#### Bicycle Registration

The Lawrence Police Department operates a bicycle registration program which seeks to alleviate any concerns regarding theft or vandalism by creating a system which identify and links stolen bikes to the proper owner. Residents who know their bikes serial number can register them with the Lawrence Police Department at the Law Enforcement Center on 11<sup>th</sup> Street and New Hampshire.

**Responsibility:** Lawrence Police Department

#### Travel with Care Campaign

In the summer of 2016, the Lawrence-Douglas County Health Department adopted a new and creative ad campaign to encourage physical activity and safety. The campaign, Travel with Care, is a national initiative through People for Bikes and coincides with the Health Department's Be Active Safe Routes initiative. The campaign not only encourages pedestrian-bicycle safety, but it also highlights everyday people who are bicycle riders, making it relatable and encouraging more local residents to bicycle.

**Responsibility:** Lawrence-Douglas County Health Department

#### Helmet & Safety Fair

Helmet fairs can be used to create awareness around bicycling and allows leaders and ambassadors to establish a presence in the community. A helmet fair is an event designed to distribute helmets to children that do not already own one, while providing accurate information on how to properly adjust the straps to fit accordingly. There is often simple safety instruction involved with the helmet distribution.

**Responsibility:** Lawrence-Douglas County Fire and Medical Department



**Mileage Clubs**

Online or community-based mileage club programs encourage bicycling and provide incentives for reaching mileage goals either individually or in groups. The National Bicycle Challenge is one example of a mileage club that has been successful, but there are many options available which can be custom tailored to suit anyone. Residents can either compete as part of a teams or independently.

**Adopt-A-Park/Trail**

Local clubs and organizations provide great volunteer services for maintaining and patrolling trails. This idea could be extended to follow tour routes or specified streets/sidewalks. A sign to recognize the club or organization could be posted as an incentive to sustain high quality volunteer service.

**Bike-to-Work Day (Third Friday in May)**

Bike-to-Work Day is an annual event held on the third Friday of May across the United States that promotes the bicycle as an option for commuting to work. Leading up to Bike-to-Work Day, national, regional, and local bicycle advocacy groups encourage people to try bicycle commuting as a healthy and safe alternative to driving by providing route information and tips for new bicycle commuters. On Bike-to-Work Day, these groups often organize bicycle-related events, and in some areas, pit stops along bicycle routes with snacks.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Responsibility:**

**Safe Routes to School (2015 – ongoing)**

The Lawrence Safe Routes to School (SRTS) initiative is a collaborative effort between the Lawrence-Douglas County Health Department, Lawrence Public Schools, the City of Lawrence, and the Lawrence-Douglas County Metropolitan Planning Organization to improve the health and wellbeing of children by enabling and encouraging them to safely walk and bicycle to school. The SRTS program includes regular data collection regarding student travel patterns and parent concerns, identification of safe routes to school for all 18 public elementary and middle schools in Lawrence, supporting annual walk and bike to school celebrations, creating pedestrian and bicycle safety curriculum, and revising the school crossing policy.

**Responsibility:** Lawrence-Douglas County Health Department, Lawrence Public Schools, Lawrence Municipal Services and Operations Department, and the MPO

**Car Free Day**

Car free days are when communities close a road or portion of road to vehicular traffic for a specified day and utilize the space for bicycle and pedestrian activities. In addition to walking and bicycling, various events and workshops can be integrated into the day's activities. Such a program should be designed to encourage residents to think differently about their city streets, to improve physical activity, or to highlight the cultural and physical amenities of the city. In communities that don't have enough support to run a communitywide car free day, slight variations have been employed to generate similar outcomes. Instead of closing a roadway, car free days can consist of pledges for residents to find creative transportation solutions on one specific day of the week, repeated each week throughout the year. Rather than having a single day of communitywide events, communities can encourage people to leave the car at home on the specified day of week.

**Earth Day**

Earth Day is a national awareness day on April 22<sup>nd</sup> each year and offers a discussion opportunity to focus on helping the environment. Efforts can be made to encourage people to help the environment by bicycling to destinations and staying out of their automobiles.

**Responsibility:** Lawrence Municipal Services and Operations Department

**Community Challenge**

Community challenges acknowledge that many residents simply cannot commute without a car, so the emphasis is shifted towards more broad, positive goals beyond simply "not to drive" and instead encourages residents to reach beyond their comfort zones and try active transportation options whenever possible. A community challenge should ask residents to track bike, walk, bus, and carpool miles throughout a specified timeframe. Participants can compete with one another throughout the duration of the challenge, and prizes can be made available for the most successful residents.

**Bicycle Friendly Business Program**

The League of American Bicyclists provides criteria for local businesses to participate in the Bicycle Friendly Business program. Businesses are recognized for their efforts to encourage a more bicycle friendly efforts.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Bicycle Train**

Bike trains enable students to get to school while enjoying the outdoors and the company of other bicycle riders. Best suited for children in upper elementary and middle school grades, bike trains are led by adults - one at the front and one at the rear of the train - that accompany students

**Level of Support:**  
[insert survey % yes response] = Sidebar

as they bike to and from school. Bike trains can be a great way to instill a love of bicycling while developing life-long safety skills.<sup>1</sup> More information about developing a bike train can be found at [http://www.walkbiketoschool.org/wp-content/uploads/2017/01/SRTS\\_BikeTrain\\_final.pdf](http://www.walkbiketoschool.org/wp-content/uploads/2017/01/SRTS_BikeTrain_final.pdf)

### □ **Wayfinding System**

Create wayfinding standards to direct bicycle riders to routes and/or depicting time and distance information. A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes – typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes. There are three general types of wayfinding signs:

**Level of Support:**  
[insert survey % yes response] = Sidebar

- Confirmation – Indicates on a designated bikeway informing bicycle riders and drivers.
- Turn Signs – Indicates where a bikeway turns from one street onto another.
- Decision Signs – Marks the junction of two or more bikeways informing of key destinations along the routes.<sup>2</sup>

### □ **Non-Competitive Bicycle-Themed Events**

Develop a variety of fun, family friendly, social and non-competitive bicycle-themed events year-round, such as a bike-in movie festival, 4<sup>th</sup> of July bike parade, Halloween bike decoration competition, or a bike to the arts event. To be successful these events should be coordinated with schools, bicycle clubs, bike shops, and local bicycle advocacy groups. Appropriate safety measures such as road closures or police escorts need to be provided.

**Level of Support:**  
[insert survey % yes response] = Sidebar

### □ **End-of-trip Amenities**

Develop long-term bicycle parking standards and promote end-of-trip amenities, like locker rooms and showers to boost bike commuting in all weather. Providing end-of-trip facilities improves employee health as physical activity is incorporated into their routines, reduces parking costs, and creates a positive image for the business/organization.

**Level of Support:**  
[insert survey % yes response] = Sidebar

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<sup>1</sup> National Center for Safe Routes to School. (n.d.). Bicycling to School Together: A Bike Train Planning Guide. Retrieved November 12, 2018, from [http://www.walkbiketoschool.org/wp-content/uploads/2017/01/SRTS\\_BikeTrain\\_final.pdf](http://www.walkbiketoschool.org/wp-content/uploads/2017/01/SRTS_BikeTrain_final.pdf)

<sup>2</sup> Urban Bikeway Design Guide. (2014). National Association of City Transportation Officials. Bike Route Wayfinding Signage and Markings System. Retrieved November 12, 2018, from <https://nacto.org/publication/urban-bikeway-design-guide/bikeway-signing-marking/bike-route-wayfinding-signage-and-markings-system>

**Reward Safe Bicycling**

Start a program to reward safe bicycling (by giving out gift certificates to bicycle riders that are “caught” following the law). Typically these programs are targeted towards kids wearing helmets. If a child is not wearing a helmet they are provided one, but if they are wearing a helmet they receive a reward.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Partner with KU and HINU on Bicycle Related Programming**

Two universities are located in Lawrence - University of Kansas (KU) and Haskell Indian Nations University (HINU). Lack of parking and congestion issues on the KU campus could shift students, faculty, and staff to bicycling to and across campus. Bicycle related programming should be created in partnership with various community organizations, KU, HINU, and the City to promote bicycling as a form of transportation.

**Develop a Create a Commuter Program**

A Create a Commuter program provides low income individuals with a sturdy bicycle made for commuting, which includes fenders and a cargo rack. Bicycles are provided at no charge to recipients. In addition to the bicycle, program participants receive safety equipment, including a helmet, lock, air pump, and patch kit. Training is provided to teach the basics of safe riding, how to fix a flat, how to plan a safe route, safety checks, and basic diagnostics. The Portland, Oregon Create a Commuter program requires participants to be at least 18 years old, not own a car, demonstrate financial need, and show a need for transportation. Participants are recruited, screened, and referred to the program from human service agencies.<sup>3</sup>

**Develop a Trips for Kids Local Chapter**

The Trips for Kids program is an international nonprofit which aims to provide the opportunity for kids of all walks of life to have the opportunity to know the joy of riding a bike and the freedom to explore the natural world on two wheels. Kids are typically given the chance to trail ride for the first time and learn basic bicycle maintenance.

**Share the Road: Rules of the Road**

On its website, the City of Lawrence provides detailed information for drivers, bicycle riders, and pedestrians about how to safely interact along the shared roadway. The resources provided can be used as a guide for residents to more confidently understand the rules of the road and reach

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<sup>3</sup> Create A Commuter. (n.d.). Retrieved November 12, 2018, from [http://web1.ctaa.org/webmodules/webarticles/articlefiles/Portland\\_TriMet.pdf](http://web1.ctaa.org/webmodules/webarticles/articlefiles/Portland_TriMet.pdf)



the intended destination more safely. The webpage includes links to instructional videos, basic bike repair and maintenance tips, and information on how to use a bicycles as safely as possible.

**Responsibility:** City of Lawrence

**Association of Pedestrian and Bicycle Professionals Webinars (APBP)**

The APBP publishes a range of webinars related to bicycle and pedestrian planning. The webinars are hosted by the Lawrence-Douglas County Metropolitan Planning Organization and can only be viewed on-site.

**Responsibility:** MPO

**Bicycle Rideability Map**

A bicycle rideability map is a tool to help residents determine the best route for your skill level. The map varies from the future and existing bicycle facilities map, which is a comprehensive map used as a system planning tool. A new rideability map will be created as part of the ongoing bikeway plan update process. The maps are developed by the MPO Bicycle Advisory Committee (BAC).

**Responsibility:** MPO BAC

**Bike Lesson and Safety Training Program (BLAST)**

Lawrence Public Schools offers the Bicycle Lesson and Safety Training program to all fourth and fifth grade students as part of the physical education curriculum. In four classes, students learn about proper helmet fit, rules of the road, bicycle safety checks, road hazards and how to safely navigate through an intersection. Some students learn how to ride a bike.

**Responsibility:** Lawrence Public Schools and League Certified Instructors

**League of American Bicyclists, League Certified Instructors**

The League of American Bicyclists (LAB) has a national bicycle education program (Bike ED) that includes training to become certified League Cycling Instructors (LCI's). The training seminar focuses on teaching and demonstration techniques to use when instructing a Smart Cycling class, which LCI's are ideally equipped to host after becoming certified. The seminar emphasizes how to teach bicycle safety and skills to provide increased comfort and confidence for new and returning bicycle riders and youth. League instructors should be used to teach bicycle classes and support bicycle education throughout the community.

**Responsibility:** Lawrence Parks and Recreation Department



☑ **Confident, Capable, Commuters Bike Class**

This class is taught by instructors certified by the League of American Bicyclists, and is designed to be beneficial to all levels of riders. Participants will learn how to ride safely in traffic and on the sidewalk, basic bike maintenance, and group riding skills. This course consists of two class room sessions in the evenings and a Saturday morning outdoor on-bike session.

**Responsibility:** Lawrence Parks and Recreation Department

☑ **Pre Drivers Education Camp**

This camp introduces the rules of the road and teaches participants the skills needed to safely and effectively use their bike as a form of transportation. Each day kids learn and practice new skills before going on a group ride to a popular destination. Participants ride on sidewalks as well as roads and must provide their own bike and helmet.

**Responsibility:** Lawrence Parks and Recreation Department

☑ **Bicycle Friendly Driver Program**

The Bicycle Friendly Driver program, presented by the Lawrence Bicycle Club, is quick class designed to expand awareness on the ways in which motor vehicles are supposed to interact with bicycles. Topics include sharing the road/taking the lane, infrastructure, bicycle laws, common points of conflict/crashes. A short wrap-up exam is used to ensure that the messages are being relayed.

The City of Lawrence is creating a series of Bicycle Friendly Driver Videos. It would be beneficial to present this information to City of Lawrence staff, Lawrence Transit drivers, taxi drivers, school bus drivers, delivery drivers, and other groups. This information should also be incorporated into new driver education programs and for older drivers. AARP offers AARP Smart Driver Course, which is designed especially for drivers age 50 and older to refresh people on the rules of the road.<sup>4</sup>

**Responsibility:** Lawrence Bicycle Club



**Level of Support:**  
[insert survey % yes response] = Sidebar

<sup>4</sup> AARP Smart Driver Course: Lawrence Library. (n.d.). Retrieved November 12, 2018, from <https://local.aarp.org/driver-safety/lawrence-library-lawrence-ks-b49642.html>

**Bicycle Ambassador/Mentorship Program**

A bicycle ambassadors/mentorship program is an important bicycle outreach and education component of a bicycle plan, as it promotes bicycle safety and awareness. City staff and other groups may volunteer to be ambassadors as well as recruiting community members to be ambassadors. Ambassadors host and attend programs, demonstrations, and activities at events, summer camps, and schools. Ambassadors also teach individuals about the best route for their needs. The most successful ambassador programs typically include adult and junior ambassador programs to reach the largest amount of users. Local bicycle shops are often involved.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Education Campaign**

Create an education campaign for drivers and bicycle riders about sharing the road, interacting safely, and the 3-foot passing law. Utilize the Lawrence in Gear videos prepared by the City of Lawrence.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Bicycling Lunch and Learn**

Lunch and learn educational sessions can be offered quarterly or more or less often depending on needs. Lunch and learn topics can be focused on bicycle maintenance, bicycle skills, bicycle laws, or any other bicycle related topic. It may be a good venue to show the Bicycle Friendly Driver videos.

**How to Ride Classes and Bike Clinics/Rodeos**

Classes teaching children and adults how to ride a bicycle safely on road and on trails is necessary to encourage safe bicycling. Teaching families with toddlers and young children how to together also fosters a culture of bicycling. These classes could include basic "how to ride" information, as well as more detailed in-traffic, on-bike instruction and experiences sharing the road with motor vehicles. This course could be shared with City of Lawrence employees to promote commuting by bike.

**Youth Bike Clubs and Teams**

Biking clubs can come in many forms. They can be part of an afterschool program or a separate clubs kids join. The Tulsa Bike Club meets weekly afterschool from late September to early May. Students who complete the program earn a bicycle and helmet. Each club is made up of roughly 20 students and five volunteers — this number includes faculty member(s). Equipment needed to run club activities, such as bicycles, helmets, safety vests, curriculum, drill supplies, maps, etc., along with adult-size bicycles, are provided to each participating school.

In the fall, students and adult volunteers meet weekly after school to ride bikes and work on cycling skills, life skills (confidence, respect, following rules, etc.) and other activities (for instance,

STEM learning). And the spring semester is focused more on off-campus rides and experiences — for example, students may ride to a fire station, museum, park, restaurant or other nearby place of interest. <sup>5</sup>

Youth bike teams can be road/cross racing, mountain bike racing, or velodrome teams. Both clubs and teams are to create a foundation of safe bicycling while instilling a love of bicycling in kids.

**Beginner Bicycle Rides**

The Beginners Ride is offered during the summer months (first Monday after Memorial Day through last Monday in August) for individuals new to cycling. This is approximately a 10-mile, 10-12 mph ride intended to promote safe riding in Lawrence area streets. The purpose of this ride is to help participants develop confident road cycling habits through brief (15-20 min.) instruction and a supportive weekly group ride. This Lawrence Bicycle Club ride is supported by local League of American Bicyclists Certified Instructors. Cyclists need to bring a bike, helmet and a water bottle. For more details, see the Beginners Ride Facebook page - <https://www.facebook.com/groups/BeginnersRide>.<sup>6</sup>

**Responsibility:** Lawrence Bicycle Club

## Enforcement

**Police Enforcement (Bicycle)**

The Lawrence Police Department is primarily responsible for the enforcement of local bicycle ordinances, which are described in Chapter 17 Article 7 of the Code of the City of Lawrence. Proper interpretation of specific circumstances and events is critical for proper enforcement and respect between drivers and bicycle riders. The Lawrence Police Department has a bicycle patrol unit which aims to make police officers more approachable throughout the community, while allowing for maximum mobility when engaging residents.

There is public support to provide more police enforcement to ensure bicycle riders and drivers are following the rules of the road and interacting properly.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Responsibility:** Lawrence Police Department

**Crossing Guard Program**

Adult crossing guards can lead to more parents feeling comfortable about their children walking or bicycling to school, and allow for expanded independence for children. The City of Lawrence funds and locates crossing guards at locations that fit the criteria outlined in the City of Lawrence

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<sup>5</sup> Bike Club. (n.d.). Retrieved November 13, 2018, from [www.bikeclubtulsa.com](http://www.bikeclubtulsa.com)

<sup>6</sup> Lawrence Bike Club (n.d.). Weekly Rides. Retrieved November 13, 2018, from <https://lawrencebicycleclub.org/index.php/weekly-rides>

School Crossing Control Policy.<sup>7</sup> Crossing guards can be a quick solution to improve crossing conditions for difficult roads or intersections where engineering solutions may be out of the discussion.

**Responsibility:** Lawrence Parking Control

**Speed Monitoring Program**

A radar speed unit is placed in neighborhoods to alert drivers to their speed and allow City staff to collect speed data. Speed monitoring programs often have a limited long-term effectiveness in changing driver behavior but it can be useful for short-term behavior change.

**Level of Support:**

[insert survey % yes response] = Sidebar

**Lower Residential Speed Limit**

Lower residential street speed limit from 30 mph to 20 mph. Lowering the speed limit of residential streets will greatly improve the safety of neighborhoods. The faster you drive the smaller field of vision you have and therefore see less. When you drive slower you have more time to see bicycle riders, pedestrians, and side road activity. Furthermore, when vehicles strike pedestrians and bicycle riders at higher speeds, they are more likely to be killed.<sup>8</sup>

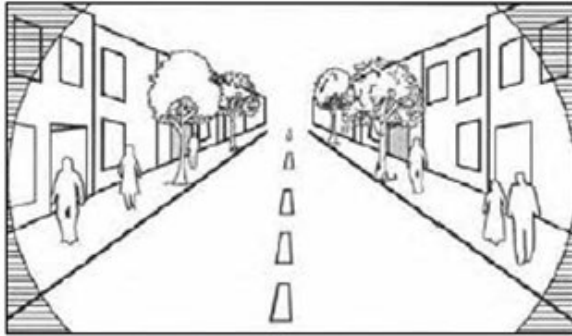
**Level of Support:**

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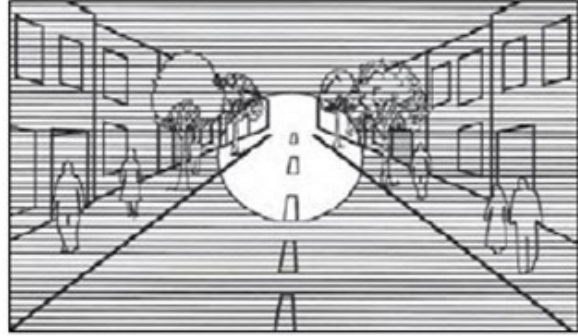
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<sup>7</sup> [https://assets.lawrenceks.org/assets/public-works/pdf/school\\_crossing\\_control\\_policy.pdf](https://assets.lawrenceks.org/assets/public-works/pdf/school_crossing_control_policy.pdf)

<sup>8</sup> Dwyer, E. (2015, September 08). Does Speed Matter? Retrieved November 12, 2018, from <http://sdotblog.seattle.gov/2015/09/08/does-speed-matter>

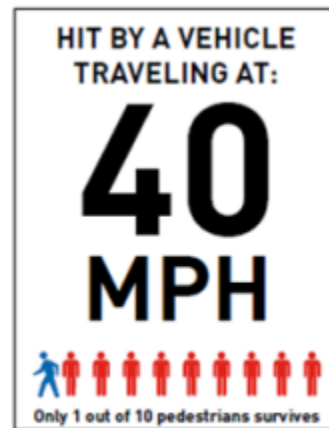
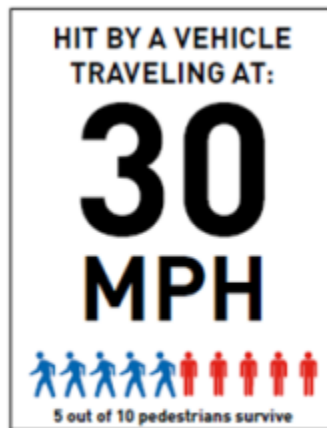


Field of vision at 15 MPH



Field of vision at 30 to 40 MPH

A driver's field of vision increases as speed decreases. At lower speeds, drivers can see more of their surroundings and have more time to see and react to potential hazards.



Speed is especially lethal for vulnerable users like pedestrians and people biking. The risk of injury and death increases as speed increases.

**Traffic Concern Reporting Website**

A web-site for citizen traffic concerns helps paint a picture of problematic segments of the road network. It allows police to coordinate their responses and concentrate on those areas where there are numerous complaints. Residents need to provide information on the time of day and day of week when the violations are most prevalent to allow the police to better focus their resources.

**Responsibility:** Lawrence Municipal Services and Operations Department and Lawrence Police Department

**3 Foot Passing Enforcement Device (BSMART)**

Three-foot passing laws require drivers to give people on bikes at least that much clearance when passing them on the road, however such laws are extremely difficult to enforce. A new device (BSMART) helps give the law some teeth by allowing police officers to easily measure the distance that a driver provides when passing. With the device, a police officer rides along the roadway, constantly checking the passing distance of each vehicle. Another officer is located down the road, ready to pull over the driver and issue either a warning or a citation to the driver who does not obey the three foot passing law. This scenario allows for a high contact rate between residents and local law enforcement, which helps establish a more respected police presence.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Pace-Car Campaigns**

Resident pace-car drivers agree to drive courteously, at or below the speed limit, and follow other traffic laws. Programs usually require interested residents to register as a pace car driver, sign a pledge to abide by the rules, and display a sticker on their vehicle.

**Level of Support:**  
[insert survey % yes response] = Sidebar

**Traffic Ticket Diversion Program**

Create a traffic ticket diversion program. Road users given citations are offered an opportunity to waive violation fees by attending a bicycling education course.

**Level of Support:**  
[insert survey % yes response] = Sidebar

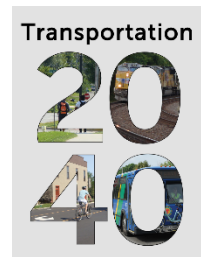
## Plan & Policy Review

Since the last Bikeway Plan was completed in 2014 several planning efforts have been completed relating to bicycling.

### Metropolitan Transportation Plan

<http://assets.lawrenceks.org/assets/mpo/T2040/T2040.pdf>

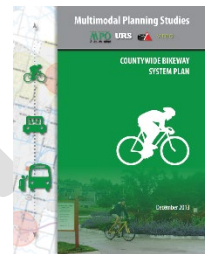
Transportation 2040 identifies future transportation needs, investments, and improvement strategies for all forms of transportation (automobile, public transit, bicycle, pedestrian, etc.) necessary to meet the needs of the region through 2040. Transportation 2040 was approved in March 2018.



### Lawrence – Douglas Countywide Bikeway System Plan

<https://assets.lawrenceks.org/assets/mpo/study/reports/bike.pdf>

The Countywide Bikeway System Plan was approved in March 2014. The Plan details the existing and planned countywide bikeway network. The plan lacks design options, established metrics, project prioritization, and needs stronger E's. The new plan will address all of these.



### KU Bike Plan

<https://sustain.ku.edu/sites/sustain.ku.edu/files/docs/KU%20Bike%20Plan.pdf>

The KU Bike plan was completed in the fall of 2016. The plan includes a toolbox of policy, program, and infrastructure ideas, and feasible strategies the university could take to improve the bicycling environment at KU. The plan is designed to address the following goals:



- Enhance the bikeway network linking residential, academic, and recreational destinations on campus and in the community.
- Promote a safe, healthy campus environment
- Increase the percentage of bicycle and pedestrian users on campus through the implementation of new policies, programs, and infrastructure
- Improve coordination with the City of Lawrence and create seamless transitions between university and city bike infrastructure and routes
- Create movement uphill by identifying policy, program, and infrastructure solutions that encourage people to overcome the real and perceived barrier of steep routes to campus



## Parks and Recreation Master Plan

<https://assets.lawrenceks.org/assets/lprd/lprdmasterplan17-draftupdate-01-18-17.pdf>

The Parks and Recreation Master Plan was completed in the winter of 2017 and includes a goal to provide new or improved facilities and amenities. This includes the Lawrence Loop Trail improving connectivity and additional trail network amenities.



A survey process identified walking and bicycling as highly valued recreational activities because they require little equipment or financial investment to get started, and are open to participation by nearly all segments of the population. The design of a community's infrastructure is directly linked to physical activity - where environments are built with bicycle riders and pedestrians in mind, more people bike and walk.

## Downtown Parking Study

[https://assets.lawrenceks.org/assets/agendas/cc/2017/07-18-17/cm\\_strategic\\_parking\\_plan\\_report.pdf](https://assets.lawrenceks.org/assets/agendas/cc/2017/07-18-17/cm_strategic_parking_plan_report.pdf)

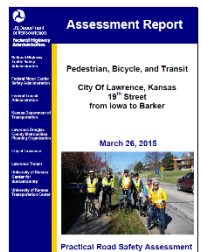
The Downtown Parking Study was completed in June 2017 and recommended implementation of demand management strategies such as bicycle parking, infrastructure, amenities, a bike share program, and encouraging "walk there or bike there" campaigns.



## 19th Street Safety Assessment

<https://assets.lawrenceks.org/assets/mpo/corridor/19thStRSA.pdf>

The 19th Street Safety Assessment was completed in March 2015 and found the 19th Street corridor between Iowa Street and Barker Avenue is an ideal location for road improvements that improve the important east-west connection near the University of Kansas campus for all vehicle types.



## Complete Streets Policy

<https://assets.lawrenceks.org/assets/pds/planning/documents/CSPolicy.pdf>

Lawrence first adopted a Complete Streets Policy in March 2012. The policy establishes guiding principles and practices to create an equitable, balanced, and effective transportation system that encourages walking, bicycling, and transit use, to improve health and reduce environmental impacts, while simultaneously promoting safety for all users of the streets. A revised policy was adopted on XXXXX and it XXXX.



**Pedestrian-Bicycle Task Force (2016)**

<https://assets.lawrenceks.org/assets/mpo/pedbike/pbitf-draft-report-01-25-16.pdf>

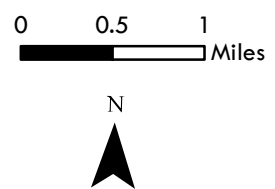
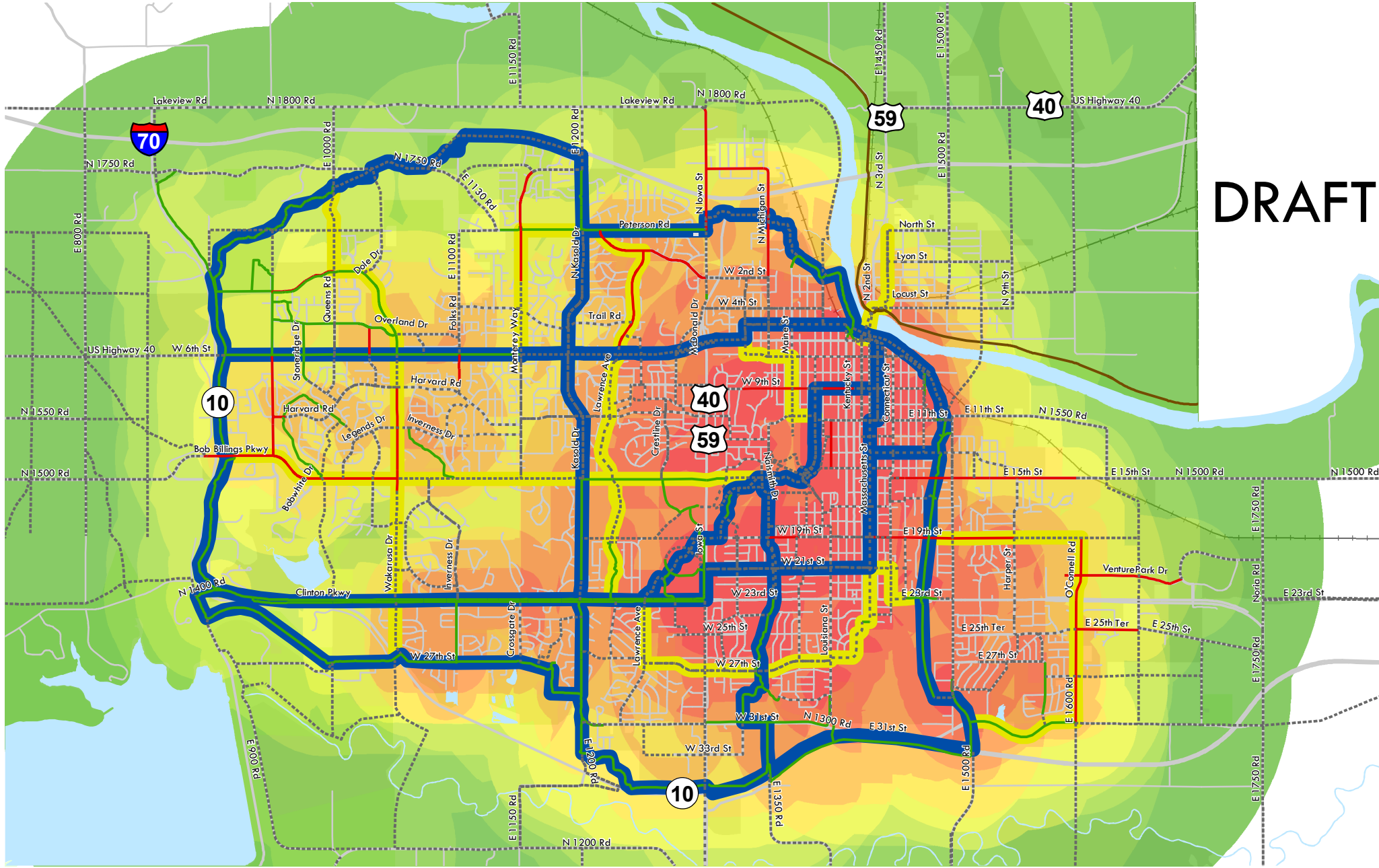
The Lawrence City Commission created the Pedestrian-Bicycle Issues Task Force to develop built environment and programming recommendations to improve the City’s pedestrian and bicycle networks by 2030. The report completed in January 2016 recommends completing the Lawrence Loop, improving safety on roads with the highest bicycle crash rates, and developing a highly visible network of bicycle boulevards.

Lawrence Pedestrian Bicycle Issues  
Task Force Report  
2016

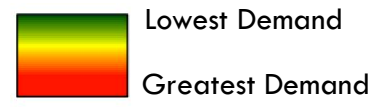


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**Latent Bicycle Demand**



- Bike Lane
- Shared Use Path
- Unpaved Trail
- Future Bikeway
- Proposed Priority Bike Network
- Proposed Secondary Bike Network

\*Bike Routes & Shared Lane Markings are not included in existing bikeways and are shown as a future bikeway

# Latent Bicycle Demand

**DISCLAIMER NOTICE**  
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Produced: Lawrence-Douglas County MPO (2018) Date: 10/25/2018

# Bicycle Level of Comfort Model

## Background and Data

Bike Level of Comfort (BLOC) is used to analyze the safety and comfort of bicycle riders in an area. This method of analysis uses objective data (e.g., daily traffic averages, speed limits, lanes to cross, bike facility type, etc.) rather than subjective data (e.g. how bike riders feel riding on a street). This analysis is not intended to reflect every bicycle rider’s experience, but instead provide a baseline of current levels of comfort for the general population based on analytical data. The City of Lawrence developed a Bicycle Level of Comfort model patterned on a model developed for the City of Cambridge, Massachusetts.<sup>1</sup>

The City of Lawrence BLOC model classifies road segments by bikeway facility type and varying levels of speed and volume thresholds that are assigned comfort scores shown in Table 1.

Existing Facility Type		0 (most comfortable)	1	2	3	4	5 (least comfortable)
major separation	shared use path	not side path	side path, <13,000 vehicles, <45 mph	side path, <20,000 vehicles, <45 mph	side path, >= 20,000 vehicles OR >= 45 mph		
	protected bike lane/cycle track		<13,000 vehicles, <45 mph	<20,000 vehicles, <45 mph	>20,000 vehicles OR >45 mph		
minor separation	buffered bike lanes		<4,000 vehicles, <30 mph	<6,000 vehicles, <30 mph	<13,000 vehicles, <30 mph	<20,000 vehicles, <45 mph	>=20,000 vehicles OR >=45 mph
	bike lanes		<4,000 vehicles, <25 mph	<8,000 vehicles, <25 mph	<13,000 vehicles, <30 mph	<20,000 vehicles, <30 mph	>=20,000 vehicles OR >=30 mph
shared street	bicycle boulevards		<1,500 vehicles, <25 mph	<3,000 vehicles, <25 mph			
	sharrows		<1,500 vehicles, <25 mph	<5,000 vehicles, <25 mph	<8,000 vehicles, <30 mph	<13,000 vehicles, <30 mph	>=13,000 vehicles OR >=30 mph
	no facility type			<3,000 vehicles, <25 mph	<6,000 vehicles, <30 mph	<13,000 vehicles, <45 mph	>=13,000 vehicles OR >=45 mph

**Table 1.** Parameters for each level of comfort, determined by the City of Lawrence.

## Data Sources

Bikeway facility type is the existing built bikeway type on each road segment. The City of Lawrence recognizes several types of bikeways facility types: shared use paths, protected bike lanes/cycle tracks, buffered bike lanes, conventional bike lanes, bicycle boulevards, and roads with sharrows.<sup>2</sup> Roads without designated bikeways are classified as no facility type.

Traffic volume, from the travel demand model, estimated flow for each segment of the modelled road network in Lawrence and Douglas County. The model is statistically valid;

<sup>1</sup> A PDF of the Level of Comfort for Cambridge, MA can be found at: [https://www.cambridgema.gov/~media/Files/CDD/Transportation/Bike/bikeplan/BicycleLevelofComfort\\_20141205.ashx](https://www.cambridgema.gov/~media/Files/CDD/Transportation/Bike/bikeplan/BicycleLevelofComfort_20141205.ashx)

<sup>2</sup> View definitions of these bikeway types on page XX in the full plan.

Traffic volume, from the travel demand model, estimated flow for each segment of the modelled road network in Lawrence and Douglas County. The model is statistically valid; however the accuracy and precision of this dataset vary across the network. Review and adjustments were made based on traffic counts collected by the Kansas Department of Transportation (KDOT) and the City of Lawrence. Official posted speed limits for each road segment were used for the speed portion of the model.

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## Performance Measures

In T2040, performance measures are used to assess progress toward meeting goals and objectives, and are integral to implementing a performance-based plan. The results of the performance measures advise the outcomes of the implemented projects and strategies. The bicycle related performance measures are tracked using Kansas Department of Transportation (KDOT) crash data, which is collected in the event of a traffic crash that occurs on public roadways and involves property damage of at least \$1000 or an injury or fatality. Metrics are used to track performance trends on an annual basis. Existing performance measures from T2040 that relate to bicycling include:

PM1: Percentage of people who have access within a ¼ mile to the bikeway network

	2015 Population Estimate	Bike Boulevard	Bike Lane	Protected Bike Lane	Shared Use Path	Total Bikeway Network Access
<b>Lawrence</b>	95,096	0%	35%	0%	23%	53%
<b>EJ Zone</b>	50,627	0%	37%	0%	18%	52%

Note: EJ zone percentage includes only the EJ zone, not all of Lawrence

Source: 2015 Population Estimate and Bikeway Network (2017)

PM3: Percentage of public streets with bikeway network

	Bike Boulevard	Bike Lane	Protected Bike Lane	Shared Use Path	Total Bikeway Network Access
<b>Lawrence</b>	-	4%	-	10%	19%
<b>EJ Zone</b>	-	2%	-	4%	9%

Note: EJ zone percentage includes only the EJ zone, not all of Lawrence

Source: Lawrence-Douglas County MPO (2017)

Lawrence Bikeway Plan

PM13: Number of non-motorized fatalities & serious injuries

Rolling Averages	Lawrence
2007-2011	6.2
2008-2012	6.4
2009-2013	6.8
2010-2014	6.2
2011-2015	6.0
2012-2016	6.6

Source: KDOT (2017)

PM26: Percentage of mode choice

Lawrence

	Drove Alone	Carpooled	Bus	Walked	Biked	Taxicab, Motorcycle or Other
2013	74.6%	10.7%	2.3%	6.0%	1.6%	0.8%
2014	74.3%	10.9%	2.4%	6.1%	1.3%	0.8%
2015	75.4%	10.7%	2.4%	5.7%	1.0%	0.8%

Source: ACS 5-year estimates (S0801)