WHAT IS KATS MOVES?

Like many metropolitan regions in the United States, the Kalamazoo Area Transportation Study (KATS) Region has made advances in installing dedicated bicycle and pedestrian facilities throughout the area and is working toward constructing a larger network. The KATS Moves Pedestrian, Greenways and Transit Plan was initiated to identify new linkages between the region’s transit and non-motorized network. KATS Moves is intended to be a continuation of the 2045 Metropolitan Transportation Plan and meets the following goals:

- Increase the use of transit, bicycles and walking as everyday transportation modes by planning for an integrated network of facilities
- Identify greenway corridors that can protect natural resources while providing regional transportation connections
- Define and prioritize greenway projects while determining their financial feasibility

This plan recommends a network of both on-street and off-road bicycle and pedestrian facilities and lays out a prioritization and implementation guide that KATS can use to track the completion of projects. The public can use this plan to understand where and when new non-motorized projects will be constructed in the future.

Currently, the Region has about 250 miles of trails and on-street bicycle facilities. The Region has over 70 miles of off-road, shared-use paths, like the Kalamazoo River Valley Trail (KRVT), the Eliason Nature Reserve Trail and the trails through Portage Creek Park. Nearly 55 miles of bike lanes currently exist in the KATS Region.

An additional 275 miles of new bicycle facilities throughout the Region have been recommended as a part of KATS Moves. Many of these are in the form of shared-use paths and dedicated on-street facilities that link to existing trails, bike lanes, and transit routes. If all planning efforts of KATS Moves come to fruition, the Region could have nearly 525 miles of non-motorized infrastructure.

IDENTIFICATION PROCESS

KATS Moves focused on identifying new non-motorized corridors to help connect and enhance the existing and planned bicycle, pedestrian and transit network. The process started with the existing facility network as a base and additional connections, both previously planned for and unplanned, were added, with the goal of creating seamless connections between the non-motorized and transit networks. A three step process, shown below, was used to identify improvements to the network; greenway identification, on-street connections, and safety focus areas.

The study encompasses a large geographic area and it was important to keep recommendations high level and focus on regional needs. For this reason, a framework was developed using the project goals to simplify the identification process. The first step was to identify appropriate greenway corridors and connect them to the existing non-motorized and transit networks. On-street facilities were then identified and used to fill in shorter gaps in the network.

Areas with high amounts of bicycle and pedestrian crashes were located using crash data from 2010 - 2015. Specific improvements were recommended for these “Safety Focus Areas” that will help improve safety outcomes for pedestrians and bicyclists in those areas.

- **STEP 1: GREENWAY IDENTIFICATION**
  - Connect greenways to transit
  - Increase access to community destinations
  - Extend regional greenway connections
  - Utilize public assets for greenways
  - Preserve and protect natural resources
  - Provide comfortable facilities for all users
  - Encourage bike commuting
  - Connect dense areas to transit and greenways

- **STEP 2: ON-STREET CONNECTIONS**
  - Extend regional greenway connections
  - Utilize public assets for greenways
  - Use local streets and dedicated facilities
  - Provide comfortable facilities for all users
  - Enhance bike/ped facilities at bus stops

- **STEP 3: SAFETY FOCUS AREAS**
  - Address areas with safety issues
  - Promote safety on all streets
  - Improve safety in high-crash areas
  - Provide safe facilities for all users
  - Encourage bike commuting
  - Promote dedicated bike facilities
RECOMMENDED FACILITIES

KATS Moves is recommending a number of non-motorized facilities for the region, some of which have not been implemented before in the area. Most of the existing facilities are either shared-use paths and trails, standard bike lanes, paved shoulders, or sharrow lanes. A conscious choice was made for this plan to recommend projects that would provide the most possible comfort and safety for the bicyclists in the region. For this reason, sharrows, paved shoulders, and bike routes were not recommended since they do not provide a dedicated space for riders. The five facility types recommended as part of this study are detailed below.

**SHARED USE PATH**
- Fully grade separated
- Can be used by bikes and pedestrians
- Safest and most comfortable for cyclists

**BIKE LANE**
- Painted on-street
- 4’ to 6’ wide
- Least amount of protection and comfort of facilities recommended

**BUFFERED BIKE LANE**
- Painted on-street with 3’ - 4’ buffer between lanes
- More comfortable for cyclists
- No protection

**PROTECTED BIKE LANE**
- Use a barrier to protect cyclists from vehicles
- Safest and most comfortable of on-street facilities

**BICYCLE BOULEVARD**
- Use low traffic streets for bike connections
- Use wayfinding, pavement markings, and traffic deterrents to reduce car traffic

PUBLIC INVOLVEMENT

KATS Moves incorporated three rounds of in-person public involvement and ongoing online public engagement to better understand the needs of citizens in the KMetro region. Public meetings were held on the following dates:
- February 7th, 2017
- April 24th, 2017
- September 12th, 2017

At each meeting, attendees were asked to provide input on specific aspects of the plan that were relevant at the time of the meeting. For example, at the first public meeting, participants gave input on the project goals and objectives, their travel patterns, and other concerns. The public’s concern about safety in the second public meeting led to the addition of the “Safety Focus Area” recommendations to the plan. At the final meeting, attendees gave input on the Final Plan and scoring methodology.

Overall, 75 people attended the public meetings and nearly 520 people interacted with the project using the online engagement tool, Community Remarks. The project website and Facebook page also had good engagement. The comments and feedback received from the public was incorporated into the final recommendations for the KATS Moves Plan.

Top 3 concerns regarding...

**Walkability**
1. Health, safety, and security
2. Easy access to locations
3. Effective connections to destinations

**Bikeability**
1. Health, safety, and security
2. Effective connections to destinations
3. Easy access to locations

**Transit**
1. Effective connections to destinations
2. Reliability and consistency
3. Health, safety, and security

Primary reason you would...

- Walk
  - Health and exercise: 22%
  - Recreation: 49%
  - Commute: 27%
  - Transportation to daily services: 11%

- Bike
  - Health and exercise: 19%
  - Recreation: 19%
  - Commute: 38%
  - Transportation to daily services: 22%

- Take Transit
  - Health and exercise: 48%
  - Recreation: 50%
  - Commute: 11%
  - Transportation to daily services: 3%

A sample of comments received from the first public meeting
The recommended greenways were identified as logical connections between or extensions from the existing greenway network. The identification process started with the greenways that had previously been identified in the KATS 2045 Metropolitan Transportation Plan (MTP) and other local planning documents. Further brainstorming yielded a number of new corridors which provide additional mobility options for bicyclists and pedestrians.

In the more densely populated areas of the KATS region, where greenways are harder to implement, on-street facilities were recommended to fill in the non-motorized network. These areas lack contiguous open spaces that are needed for dedicated, off-street non-motorized infrastructure. In most cases, there is less road right-of-way and buildings are spaced closer together. Many of the on-street connections identified take advantage of low traffic corridors to provide network connections using bike boulevards and standard bike lanes. Along busier, more stressful roads, buffered and protected facilities are recommended.

The different infrastructure types recommended result in varying cost levels for implementation. Bicycle boulevards, traditional and buffered bike lanes require the least amount of investment because few infrastructure components are required. Protected bike lanes are more costly because they require the most road space, and in many cases have design and infrastructure components associated with them. Shared use paths tend to cost the most due to increased costs associated with property acquisition and the construction of the path.

The recommended facilities identified are conceptual and represent a corridor level view of bicycle and pedestrian facilities. These projects fill in gaps between the greenway network and the transit system and may have not been identified previously. The facilities not identified in a previous planning study were developed using the public’s input and have not been evaluated for technical feasibility or potential installation. Those not identified in an existing plan would be subject to additional technical and fiscal review and approval by the local jurisdiction(s).
An overarching goal of the KATS Moves project was to better connect and integrate the KMetro transit system with the non-motorized network. Currently there is little overlap between the two networks and last mile connections can be difficult for riders on foot or on bikes. KMetro buses have bike racks, making a transition between cycling trips and transit trips fairly easy.

Many of the proposed non-motorized facilities connect to the nearest transit route while also connecting transit routes to each other. As a result, the highest ridership routes (those serving over 175,000 annual riders) and 90% of the high ridership transit stops would be connected to one or more non-motorized facility.

Better integrating the non-motorized and transit network serves the following purposes:

- Additional and more comfortable last mile connections for KMetro riders
- More non-motorized routes to and from transit stops for a greater share of the regional population
- More connections between the transit and non-motorized networks may encourage residents to commute via an alternative travel mode
- The integration of the two networks will help all users feel more comfortable
- Commuters will have additional options when traveling to and from work

In order to further increase the connectivity between the bicyclists, pedestrians, and transit riders, KATS and KMetro should install wayfinding signage at the intersection points of bike facilities and high ridership bus routes to direct users to destinations in the area. These signs can also alert cyclists and pedestrians to nearby bus stops. Bicycle racks, bike storage lockers, and repair stands can be installed at specific transit stops to encourage trip-making via both modes. A new system map should also be created showing the KMetro transit system with the non-motorized network and updated as conditions change.
SAFETY FOCUS AREAS

Advancing projects that address existing safety issues emerged as the highest priority from the initial public engagement efforts for KATS Moves, and while completing a network of trail and shared-use paths would provide safer options for many, they will not necessarily improve safety in the high-activity, high-incident zones that currently exist. Bicycle and pedestrian crash patterns from 2010 to 2015 show pockets of high crash locations throughout the KATS Region that deserve priority for facility improvements.

Using the pedestrian and bicyclist crash data from the Michigan Traffic Crash Facts website, the densest crash areas were identified as "Safety Focus Areas". All 14 are listed below:

- **A** - Michigan Avenue & Drake Road
- **B** - Michigan Avenue & Howard Street
- **C** - Paterson Street and Burdick Road
- **D** - Downtown Kalamazoo
- **E** - Westnedge Avenue from Cedar Street to Maple Street
- **F** - Stockbridge Avenue to Vine Street
- **G** - Gull Road from Riverview Drive to Inverness Lane
- **H** - Gull Road & Sprinkle Road
- **I** - Riverview Drive & Michigan Avenue
- **J** - 9th Street & I-94
- **K** - Westnedge Avenue from Kilgore Road to Milham Avenue
- **L** - Westnedge Avenue & Romence Road
- **M** - N Grand Street & Eliza Street
- **N** - Portage Road & I-94

The majority of bicyclist and pedestrian crashes occurred in the City of Kalamazoo and the City of Portage on smaller, lower speed roads in those cities. Overall, high bicycle and pedestrian crash areas tend to be located in areas where cycling and walking are more popular, like Downtown Kalamazoo and near Western Michigan University.

Recommendations for improving safety outcomes in these areas include intersection treatments to reduce crossing distances and slow down vehicles, more visible crossing areas, traffic calming, wider sidewalks, prominent signage and markings, and non-motorized focused roadway design.
To determine the likely phasing of the recommended improvements, each project was scored based on its overall priority and the cost and feasibility of implementation. The Project Priority ranking and the Cost/Feasibility rankings were utilized, along with a scoring matrix, to categorize each project into one of three timelines; Short-Term (1-6 years), Mid-Term (7-15 years), and Long-Term (16-25 years). The categorization of projects reflects that more complex and costly projects, even if they are high priorities, are likely to take a longer time to implement due to funding and design issues.

Most of the 33 projects on the short-term project list are located in the core of the region where more people will be able to take advantage of them. There are 72 projects listed in the mid-term list spread throughout the Region, which tend to be longer, more expensive, and more complex than the short-term projects, but have high prioritization scores. The 32 remaining long-term projects are the most expensive, hardest to implement, and lowest priority of the recommended facilities. They are expected to be completed in 16-25 years. In total, nearly $53 million in non-motorized projects have been recommended as part of the plan.

**KATS Moves Short Term Project List**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Facility Type</th>
<th>From</th>
<th>To</th>
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<tbody>
<tr>
<td>Patterson St</td>
<td>Bike Lane</td>
<td>Douglas</td>
<td>Riverview</td>
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<td>Bike Lane</td>
<td>Howard</td>
<td>Stadium</td>
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<td>Kilgore</td>
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<td>Bike Lane</td>
<td>Larch</td>
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<td>Bike Lane</td>
<td>Gull</td>
<td>Douglas</td>
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<td>Mills</td>
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<td>Edwards</td>
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<td>Burdick</td>
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<td>Mills</td>
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<td>South</td>
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<td>Elberd</td>
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<td>Howard</td>
<td>Drake</td>
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<td>Bike Lane</td>
<td>North</td>
<td>Riverview</td>
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<td>9th</td>
<td>Drake</td>
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<tr>
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<td>Shared Use Path</td>
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<td>Main</td>
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<td>Main/Michigan</td>
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<td>W Main</td>
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