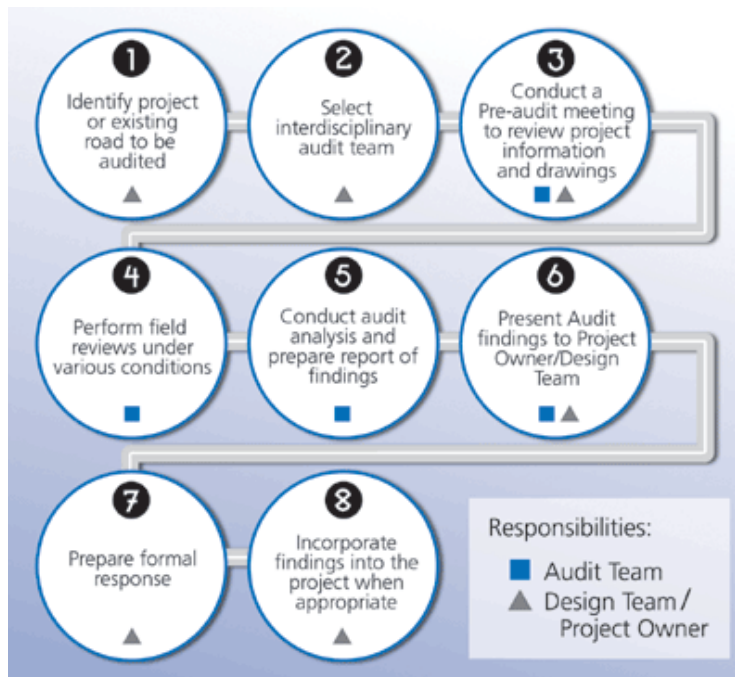


Considering around 7% of crashes in the Planning and Zoning area were on County routes, the county could benefit from coordination with MoDOT. MoDOT currently has a RSA program based on FHWA's formal program that could be expanded and altered slightly for the Lake Area roadways. Some of the benefits of a RSA program are:

- May help produce designs that reduce the number and severity of crashes
- May reduce costs by identifying and correcting safety issues before projects are built
- Promote awareness of safe design practices
- Integrate multimodal safety concerns
- Consider human factors in all facets of design

Below is a FHWA flowchart showing the steps to take in a RSA program.



Multimodal

NON-MOTORIZED PLAN

The Lake Area would benefit from enhanced pedestrian and cycling accommodations. Especially during the summer months, having bike lanes or better pedestrian crossings in the high traffic tourist areas could help mitigate traffic, slow vehicles down, reduce congestion, and offer another form of recreation for visitors. Year round residents to the Lake Area would benefit from bike lanes and paths as another form of transportation. During our field visits we saw numerous instances of pedestrians and bicycles on narrow county roadways. Residents could have better access to parks, commercial areas, and their homes to move around the Lake Area better. From a pure tourism standpoint, promoting, building and advertising a Lake-wide path network could attract a larger group of people from around the country.

There are some specific locations that could especially benefit by having some sort of bicycle and/or pedestrian accommodations. On a regional level, a multi-use path around the lake, mostly for biking, would promote another recreational benefit in the Lake Area. Other paths could be built or connected off of this one to connect cities like Camdenton and Osage Beach to the local state parks. Lake of the Ozarks State Park already has trails throughout the park, so connecting with those trails would open up a huge biking and walking connection in the Lake Area. A large number of visitors to the lake stay around MO-54 in Osage Beach. With all the restaurants and shopping and attractions there, MO-54 would really benefit by having sidewalks on both sides with adequate pedestrian crossings strategically located near some of the local traffic generators. This area on MO-54 might actually benefit from some traffic calming for pedestrian safety. Camdenton would also benefit from pedestrian accommodations on MO-54 and MO-5 in the downtown area, especially to cross the busy traffic corridors. These corridors are all state routes, so coordination would need to occur with MoDOT, the county, and local businesses.

There is an organization that reviews and rates bicycle communities around the country, the League of American Bicyclists¹⁴. This program offers awards and ratings for cities and communities throughout the US; gold, silver, and bronze. If the Lake Area wanted to become more nationally known and recognized, they could strive to become a 'Bicycle Friendly America' community.

Bicycling Non-Profit Groups

Camden County could not implement a regional system of bike paths, trails, and sidewalks on its own. A regional effort would be required. Moreover, a regional not-for-profit advocacy group like Great Rivers Greenway from the St Louis region or PedNet from Columbia might help to facilitate regional cooperation toward this goal.

GRG was established by the passage of the Clean Water, Safe Parks, and Community Trails Initiative in St Louis City, St Louis County, and St Charles County¹⁵. This organization is funded by a 1/10th of a one cent sales tax. The mission of GRG is to get a clean, green, well connected region and enhance the quality of life for residents and visitors. They have developed The River Ring, an interconnected system of greenways, parks, and trails the will encircle the St Louis region. This River Ring is intended to create a web around the region and connect at all different points, as well as connect up with the Illinois trails and pathways. The Ring is the outcome of a detailed, time-consuming public involvement process that GRG put together. The board for the organization is all picked through public votes.

PedNet consists of more than 6,000 children and adults, businesses, and non-profits, schools, University departments, and government agencies dedicated to creating and promoting the use of a pedestrian and pedaling network throughout Columbia¹⁶. PedNet encourages and helps create better facilities for walking and cycling and organizes educational programs to help people shift to non-motorized transportation.

PedNet does work with active transportation programs and events like:

- [Safe Routes to School](#)—Encourage your child to walk to school with these special school based programs.
- [Way to Go to Work](#)—A new program aimed at helping car commuters become bike or walking commuters.
- [Bike Walk and Wheel Week](#)—The event that started it all! A week of activities, education, t-shirts and of course, breakfast stations day!

PedNet works with community programs:

¹⁴ <http://www.bikeleague.org/programs/bicyclefriendlyamerica/.php>

¹⁵ <http://www.greatrivers.com>

¹⁶ <http://www.pednet.org/>

- [Errand Bikes](#)—Saving local businesses time and money.
- [Guided Rides](#)—Go on a community bike ride with a certified bike instructor.
- [The "No Car Diet" Challenge](#)—Can you go car free for a month?
- [Cycle Recycle](#)—Donate a used bike to a good cause.

PedNet also offers many education programs:

- [Walk Safe Bike Safe](#)—Columbia Public School children in grades K-3 learn some basic bike and walking safety in their physical education class.
- [Bike Pro](#)—Bike Safety Education for children ages 10 to 14.
- [Confident City Cycling](#)—Learn how to ride safely and confidently on city streets.
- [Commuting](#)—Take it to the next level and become a dedicated bike commuter.
- [Bike Buddy](#)—Team up with a certified bike expert to learn the ins and outs of riding in Columbia.
- [Earn a Bike](#)—Local kids can use some sweat equity to earn a bike.

Safe Routes to School

Federal funding is available through the Highway Safety Division and MoDOT for safe routes to school¹⁷. This program strives to provide safer biking and walking for children in grades kindergarten through eighth. Funding for both behavioral and infrastructure are included in this program. Behavioral funding covers public awareness, outreach programs, traffic education, and enforcement efforts. Infrastructure funding covers engineering and construction for, but not limited to, sidewalk improvements, traffic calming, speed reduction, pedestrian and bicycle crossing improvements and facilities, bicycle parking facilities, and traffic diversion. State, local, and regional agencies, schools, and non-profit organizations can submit applications to MoDOT for funding.

The Master Plan recommends that Camden County work to create a local not-for-profit bicycle/pedestrian group. This group could coordinate the installation of facilities as are discussed in the following section.

BICYCLE AND PEDESTRIAN FACILITIES

A bicycle/pedestrian-friendly community provides safe accommodations for cycling and pedestrians and encourages its residents to bike for transportation and recreation. There are numerous benefits to those who walk or bike; but most importantly, it is a simple way to improve public health. Community wide, bicycling and walking helps reduce traffic demands, improves air quality and offers a free form of physical fitness. Many experts view bicycle-friendly towns to have a high quality of life, which can lead to increased property values, business growth, and increase in tourism.

Pedestrian Friendly Communities

There are five categories that communities should address to become a bicycle-pedestrian friendly community: engineering, education, encouragement, enforcement, and evaluation and planning:

1) Engineering:

Looks at the physical trails and accommodations on the roads. A bicycle master plan is the best tool to assist in the addition of trails or bike lanes on roadways. Public roads should be

¹⁷ <http://www.modot.mo.gov/saferoutestoschool>

strategically looked at for accommodations for both bike lanes and pedestrian lanes and crossings. Bike paths and multi-use paths should be well-designed throughout a community. Bike parking and the conditions of connectivity of both the off-road and on-road network should be taken into consideration during engineering.

2) Education

Should include teaching cyclists, pedestrians, and motorists how to ride safely in an area for multi-roadway-uses. City and rural streets should be explained to determine who has the right-of-way, how to share the road, and safety precautions. Some cities benefit from having education levels, children versus adults. Maps should be given to show what streets have bicycle and pedestrian accommodations. Tip sheets for tourists should include maps of trails, bike lanes along major roads, and major pedestrian crossings in high traffic generated areas.

3) Encouragement

A community, county, and city all need to make an effort to promote safe non-motorized plans. This can be done by promoting and educating citizens on bicycle and pedestrian accommodations, as well as having a promoted Bike Month or Bike to Work Week (as many cities, communities, and workplaces do). Route finding signage offers good encouragement for tourist. Community bike rides and safe routes to school programs help to encourage users as well. More encouragement for recreational uses include off-road facilities, like BMX parks and both road and mountain bicycling trails and clubs.

4) Enforcement

Law enforcement officials need to be aware and probably work close with communities and the cycling/walking community to encourage and enforce public safety. Communities have used targeted enforcement to encourage cyclists, pedestrians, and motorists to share the road safely; education can also be used with enforcement so drivers understand what 'share the road' signs mean. Enforcement laws relating to bicycle helmets or the use of sidepaths needs to be properly enforced and explained to the community.

5) Evaluation and Planning

Constant evaluation and future planning needs to be done for any pedestrian and bicycle plans or paths. Safety of users should be evaluated and path usage needs to be measured so future improvements can benefit what users use and like.

Multi-use Paths

Multi-use pathway is one in which motor vehicles are physically separated from the path. These can occur along highway right-of-way or independent right-of-way. Multi-use paths are mostly designed for bicycles and pedestrian uses. These paths are safer for novice and child bicyclists and need to have adequate width for two-directional use by both cyclists and pedestrians. Good sight distance is important, steep grades need to be avoided, tight curves should be avoided that might force bicyclists to make awkward movements, and minimum cross-flow motor vehicular traffic should be avoided.

Multi-use paths can be used in terms of recreation and transportation. When planning on using a multi-use path in terms of transportation, a well-defined origin and destination should be defined. Right-of-way issues can occur between motorists and bicyclists, so these pathways should not be located immediately adjacent to any roadways.

Sidewalks should never be designated as multi-use paths. Multi-use paths are generally more expensive to build because they require a completely separate facility than other cycling and pedestrian options; however, these paths offer great tourism. Multi-use paths that connect communities, run along rivers or lakes, or connect parks are great forms of recreation for tourists and residents alike. The multi-use path should function as a form of transportation as well between schools, residential subdivisions, parks, and shopping centers.

Figure 6: Multi-use path in Forest Park (St. Louis, Missouri)



Bike Lane

Bike lanes are generally a portion of roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles. Typically bike lanes require additional pavement to separate bicycle lanes from the vehicle lanes. Bike lanes are typically provided by the use of paved shoulders or wide outside vehicular traffic lanes. Bike lanes have many benefits¹⁸:

- Support and encourage bicycling as a means of transportation;
- Help define road space;
- Promote a more orderly flow of traffic;
- Encourage bicyclists to ride in the correct direction, with the flow of traffic;
- Give bicyclists a clear place to be so they are not tempted to ride on the sidewalk;
- Remind motorists to look for cyclists when turning or opening car doors;
- Signal motorists that cyclists have a right to the road;
- Reduce the chance that motorists will stray into cyclists' path of travel;
- Make it less likely that passing motorists swerve toward opposing traffic; and
- Decrease the stress level of bicyclists riding in traffic.

¹⁸ http://www.cambridgema.gov/bike_safety.html

Figure 7: Bike Lane in St Louis, MO

Bike Routes

Bike routes are considered segments of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without a specific bike route number. It is preferred that the roadways designated as bike routes have wider than normal lanes and/or low traffic volumes, but not mandatory. Bike routes typically are designated by means of signage with little or no used of striping to indicate that the corridor is designated as a bicycle route. A bike route is not separated from vehicular traffic by pavement markings.

Figure 8: Bike Route Sign¹⁹

¹⁹ <http://richmondva/bike-routes.jpg>

Sidewalks

A sidewalk is a path for pedestrians alongside a road. Sidewalks are usually paved and also referred to as a footpath or a walkway because that is their intended use. Sidewalks commonly have green space between them and the street. These parkways allow for safer and more comfortable pedestrian accommodations. Sidewalks often are connected across streets via pedestrian signal crossings or crosswalks. Sidewalks on both sides of busy streets ensure proper and sufficient pedestrian use of the adjacent property facilities. Sidewalks should be built to ADA standards and service children and elderly peoples.

Planned Sidewalk Projects

There are some planned sidewalk projects. The City of Camdenton is working with MoDOT on some sidewalk updates along MO-5 in the downtown area. They are working through a federal enhancement grant program to improve pedestrian accommodations on the west side of MO-5 between Benne Boulevard and Ha Ha Tonka Cut Thru (will tie in with the sidewalks in front of the courthouse) and on the east side of MO-5 between Kansas Street and Laker Drive (will tie in with a connection to the school). The City also commented that many residents have expressed some type of concern or suggestion for a future sidewalk between the square, also known as State MO-54 and MO-5, and the Walmart located about 1.5 miles north along MO-54 just south of Route V. There is a desire for a lot of pedestrian traffic along this section of highway and sidewalks or a multi-use trail would prove to be beneficial.

TRANSIT

Many communities around the country have started to use private shuttles to move people around to and from their destinations. Summer tourism in the Lake Area provides a constant flow of people to the resorts, condos, hotels, and houses along the Lake. The streets are constantly busy because each person must use their vehicle to get from point a to point b, whether that means their hotel, grocery store, retail, restaurants, shopping, marina, waterpark, etc. Other towns with similar tourism draws, like Wisconsin Dells and Pigeon Forge, Tennessee offer private shuttles for visitors as park n' ride services or through the local resorts and condos. Some resorts in Wisconsin Dells offer a shuttle service via a bus and/or a boat around the lake there for all of its guests and park attendees. They offer it free to guests who stay in the resort and charge a price for all others who are using the shuttle services to get to and from their parks and restaurants. This is similar to the service mentioned previously through Leisure Lake Charters. Any initiative the county or cities adjacent to the Lake Area could help promote or create could help relieve some of the congested corridors.

It might be beneficial to have more advertisement or look into a park-n-ride lot for a shuttle through the busy stretch of the City of Osage Beach. Coordination with some of the big resorts, the Chamber of Commerce, and the official www.funlake.com website would help get the word out to travelers of the new amenities that the area is offering in terms of public transportation.

The closest Greyhound Bus stations or limited bus stops near the Lake Area are one hour to one hour thirty minutes away, in Lebanon, Columbia, Bolivar, Osceola, Rolla, and Springfield. Greyhound buses stated that they usually only provide stations off of interstates or highly traveled highways. They would consider putting a station in the Lake Area if they could show that the usage for travelers was high. The county could consider contacting and working with Greyhound to get a Bus station built in the Lake Area.