Texarkana Bicycle and Pedestrian Master Plan

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Executive Summary

This Master Plan for bicycling and walking in Texarkana is designed to provide a comprehensive vision for non-motorized transportation as well as recreation. Having a master plan is a first step towards coordination among the various agencies responsible for transportation and recreation facilities, as well as other interested parties. Bicycling is a popular sport in Texarkana and the area’s relatively mild climate allows for bicycling and walking for much of the year.

Promotion of bicycling and walking supports federal transportation policies to increase the non-motorized mode share to 15% and decrease bicycling and walking injuries and fatalities due to crashes with motor vehicles by 10%.

The consideration of bicyclists and pedestrians is required in the development of comprehensive plans. Except where prohibited, bicycle and pedestrian facilities are required to be considered in all new construction and reconstruction projects. Federal guidance suggests that not including bicycle and pedestrian access in federal projects should be the exception and not the rule. Another important consideration is the safety of bicyclists and pedestrians as commuters. Towards these goals, Metropolitan Transportation Plans (MTPs) are required to address the provision of contiguous routes for bicyclists and pedestrians. They must also consider bicycle transportation facilities and pedestrian walkways for all new construction and reconstruction of transportation facilities, unless bicycle use and walking would not be permitted. It is intended that these facilities are part of an integrated, multi-modal transportation system for the metropolitan planning area.

Local, regional, and national activities/plans suggest increased demand for non-motorized facilities is in the future. At the local level, the City of Texarkana, Texas Parks Department has developed a Parks Master Plan. One goal of the Parks Plan is to link the parks in the city with linear parks. Another goal is to incorporate public art in a variety of public settings. At the regional level, the Northeast Texas Recreational Trail is currently designed to go from Farmersville (on the outskirts of the Dallas metropolitan area) 147 miles through Paris, Texas to New Boston 22 miles to the west of Texarkana.

At the national level, the American Association of State and Highway Transportation Officials (AASHTO) and the American Cycling Association are presently developing a national numbered Bicycle Route System. Current drafts show Route 84 passing through Texarkana. In addition, Texarkana is on a high-speed rail corridor eligible for federal support. Altogether these activities suggest it is time for Texarkana to have a master bicycle and pedestrian plan.

These planned routes suggest the core of the bicycle and pedestrian plan for the Texarkana area is an exclusive-use corridor coming from New Boston and continuing towards Shreveport. If efforts in Arkansas to have a corridor between Texarkana and Little Rock come to fruition, this suggests that Texarkana, like its railroad past, is a transportation junction connecting the three states that make up the ArkLaTex. As the mockingbird is the state bird of both Texas and Arkansas, the backbone of this plan is referred to as Mockingbird Junction (see Figure 1).
Texarkana has many pieces of a bicycle and pedestrian transportation system, but the pieces are scattered and in some cases in serious disrepair. This Plan provides an initial inventory of relevant infrastructure and suggests other inventory activities that need to take place. The Plan then includes specific projects to connect and rebuild the pieces of the bicycle and pedestrian system. In addition, the following recommendations are included:

- Establish a Bicycle and Pedestrian Advisory Panel to continue updating and implementing this plan. This panel should include representation from:
  - Transit
  - Public works/engineer
  - Parks departments
  - School districts
• The disabled community, and
  • Law Enforcement
• Include bicycle and pedestrian infrastructure when rebuilding/rehabilitating roads
• Increase enforcement of traffic laws related to bicyclists and pedestrians
• Include a minimum of 4’ of clear path (i.e., no rumble strip) on designated highway shoulders
• Work with the parks departments on Art in Public Places for bike racks and local branding
• Make easements more inclusive so they include ability for bicycle and pedestrian access (where appropriate)
• Build sidewalks (internal circulation) and connectivity in new subdivisions
• Ensure that traffic calming measures do not extend into bicycle lanes (or to edge of lane in wide curb lanes for mixed use)
• Conduct an inventory of:
  • Utility easements
  • Right-of-Way on streets (for sidewalks) and railroads
  • Roads with wide enough lanes to restripe and add a bike lane
  • Abandoned railroad right-of-way
• Work with the police departments to collect meaningful, easily accessible bicycle and pedestrian crash data (perhaps produce an annual report – perhaps work with a class at TAMU-T or Texarkana College regarding data analysis)
• Install new yellow-green fluorescent (YGF) signs around schools
• Maintain (clean) highway shoulders on bike routes on a regular basis (similarly, provide a mechanism so bicyclists can report debris and other problems)
• Educate the public about bicycles and motor vehicles sharing the road
• Educate the public regarding children bicycling and walking to school
• Conduct a bicycle parking inventory and identify places to include bicycle parking (such as parks, shopping centers, and schools)
• Improve the T-Line bus stop across from the Greyhound Station
• Provide bicycle and pedestrian access at the crossings periodically around the proposed outer loop. The following locations are recommended:
  • Sugar Hill Rd.
  • Sanderson Ln.
  • State Line Ave.
  • FM 1397 (both locations)
  • FM 559
  • Myrtle Springs Rd.
  • I-30
  • US 67
  • US 59
• Add projects and corridors to Metropolitan Transportation Plan
• Restripe Cowhorn Creek Bridge to include bicycle lanes
• Develop Safe Routes to School plan in each school district

Figure 2: U.S. Post Office and Courthouse
1. Origin of the Plan

This Master Plan for bicycling and walking in Texarkana is designed to provide a comprehensive vision for non-motorized transportation as well as recreation. Having a master plan is a first step towards coordination among the various agencies responsible for transportation and recreation facilities, as well as other interested parties. Bicycling is a popular sport in Texarkana and the area’s relatively mild climate allows for bicycling and walking for much of the year.

1.1 Federal and National Guidance

This initial Master Bicycle and Pedestrian Plan for the Texarkana area is being produced by the Texarkana Metropolitan Planning Organization (MPO). MPOs are required in cities with a population of 50,000 or greater to plan and coordinate transportation efforts. As the interstate highway system has been built out, the efforts of MPOs have expanded to include bicycling, walking, freight, transit, and rail. In other words, MPOs are now federally mandated to produce multimodal plans. In recognition of the fact that bicycling and walking are recreational as well as travel modes, this plan is designed to include all these uses although MPO funding is limited to the routes that make up the federal-aid urban system.

These efforts support federal transportation policies to increase the non-motorized mode share to 15% and decrease injuries and fatalities due to crashes between non-motorized travelers (bicyclists and pedestrians) and motor vehicles by 10%. In addition, a policy that targets safe walking and bicycling near schools may lead to increased fitness levels of young people and fewer incidents of overweight and obesity and attendant health issues. A safe and contiguous bicycle and pedestrian system can create an environment supportive of tourists visiting for special events as well as citizens accessing businesses and offices in the central business district. The MPO can facilitate the goal of safe bicycle and pedestrian travel in its study area by:

- considering accommodating bicyclists and pedestrians when constructing and reconstructing facilities,
- filling in gaps,
- preventing the creation of barriers, and
- working with local constituents to create a regional plan.

Figure 3: Sign on Nix Creek Trail, Texarkana, Arkansas
Each physical improvement to streets and highways creates an opportunity to expand or improve bicycle and/or pedestrian facilities.

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) first mandated Metropolitan Planning Organizations (MPOs) to plan multimodal systems – specifically the inclusion of bicycle and pedestrian modes. Subsequent transportation legislation, the 1997 Transportation Equity Act for the 21st Century (TEA-21), and the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), have reinforced this approach to transportation planning for metropolitan areas. At this time, the next six-year transportation bill is being drafted. Early indications are that there will be an increased emphasis on multimodal planning.

The consideration of bicyclists and pedestrians is required in the development of comprehensive plans. Except where prohibited, bicycle and pedestrian facilities are required to be considered in all new construction and reconstruction projects. Federal guidance suggests not including bicycle and pedestrian access in federal projects should be the exception and not the rule. Another important consideration is the safety of bicyclists and pedestrians as commuters. Towards these goals, Metropolitan Transportation Plans (MTPs) are required to address the provision of contiguous routes for bicyclists and pedestrians. They must also consider bicycle transportation facilities and pedestrian walkways for all new construction and reconstruction of transportation facilities, unless bicycle use and walking would not be permitted. It is intended that these facilities be part of an integrated, multimodal transportation system for the metropolitan planning area.

1.2 Local, Regional, and National Influences

Local, regional, and national activities/plans suggest increased demand for non-motorized facilities. At the local level, the City of Texarkana, Texas Parks Department has developed a Parks Master Plan. One goal of the Parks Plan is to link the parks in the city with linear parks. Another goal is to incorporate public art in a variety of public settings. At the regional level, the Northeast Texas Recreational Trail is currently designed to go from Farmersville (on the outskirts of the Dallas metropolitan area) 147 miles through Paris, Texas to New Boston 22 miles to the west of Texarkana. At the state level, Arkansas produced a State Bicycle and Pedestrian Transportation Plan in 1998. The bicycle recommendations from this plan are:

Figure 4: Walkers on the Phillip McDougal Trail in Spring Lake Park, Texarkana, Texas
• Develop a bicycle safety pamphlet to distribute at schools, bicycle rodeos, and points of bicycle purchase outlining state laws, common rules of the road, and safety techniques for cycling including the benefits of wearing helmets.
• Gather bicycle facility design standards from other states and adapt them to serve as standards for the development of such facilities in Arkansas. Until such Arkansas specific (sic) standards are available, utilize existing AASHTO bikeway standards and the FHWA guidance, “Selecting Roadway Design Treatments to Accommodate Bicycles.”
• Determine the suitability and feasibility of developing bicycle facilities for urban and rural road improvements and modifications in the state.
• Appoint an internal AHTD task force to be responsible for developing a process by which local communities can propose state routes traversing their jurisdictions to be signed as bicycle routes and to develop a set of criteria by which other routes would be selected for inclusion on the state’s bicycle suitability map.
• Identify improvements needed to bring routes selected for the bikeway system up to prevailing standards.
• Conduct a statewide personal transportation survey to determine the existing amount of utilitarian and recreational cycling taking place and the potential for increasing the frequency of cycling trips.
• Work with the Department of Parks and Tourism to develop a follow-up survey to determine qualitative analysis of cyclists’ experiences in Arkansas.

The pedestrian recommendations from this plan are:

• Encourage local communities to conduct sidewalk inventories as elements of master street plans. Such inventories will identify gaps in existing pedestrian systems and allow communities to target areas for improvements.
• Cooperate with local communities to develop sidewalks in conjunction with urban highway and street improvements.
• Replace substandard existing pedestrian facilities in conjunction with improvement projects and construct initial pedestrian facilities if local demand exists.
• Develop a pedestrian safety program targeting school aged (sic) children.

At the national level, the American Association of State and Highway Transportation Officials (AASHTO) and the American Cycling Association are presently developing a national numbered Bicycle Route System. Current drafts show Route 84 passing through Texarkana. In addition, taking into consideration national goals of multimodalism, Texarkana is on a high-speed rail corridor eligible for federal support. Altogether, these activities suggest it is time for Texarkana to have a master bicycle and pedestrian plan.

These influences suggest the core of the bicycle and pedestrian plan for the Texarkana area is an exclusive-use corridor coming from New Boston and continuing towards Shreveport, Louisiana. If efforts in Arkansas to have a corridor between Texarkana and Little Rock come to fruition, this suggests that
Texarkana, like its railroad past, is a transportation junction connecting the three states that make up the ArkLaTex. As the mockingbird is the state bird of both Texas and Arkansas, the backbone of this plan is referred to as Mockingbird Junction (see Figure 5).

1.3 Benefits of Having a Plan

Having a master bicycle and pedestrian plan provides many benefits to the community. First, it provides a comprehensive overview of all the elements that make up the non-motorized transportation system. Some elements fall under the jurisdiction of the MPO, AHTD, and TxDOT, while others are under the purview of the cities’ public works or parks departments. And, Texarkana has an active citizen community involved in active living. With everyone working from an integrated plan with consistent design guidelines, the public will find themselves with a seamless system to use and the motoring public will also encounter consistent signs and usage.
A master plan is an essential part of efforts to build the non-motorized system. As agencies and local groups apply for funding for various elements of the plan, they can demonstrate how it fits into a larger picture for the area. This is particularly important on the Arkansas side since it is AHTD policy to accommodate bicyclists and pedestrians on state roads that are part of a bicycle and pedestrian master plan.

Lastly, a master plan shows the area’s commitment to providing an essential ingredient to an improved quality of life. Many businesses that do not face geographical constraints look for other characteristics of an area such as quality of life. Texarkana is well-situated for transportation access with the interstate and several railroad lines going through town. By providing a good quality of life with a city built for active living and recreation, the city can provide a more attractive package to incoming businesses.

1.4 Potential Future Demand

Various segments of the population are more prone to depend on walking and bicycling as means of transportation than the general public and one segment in particular (older adults) is growing quickly. In Texarkana, like in many other cities in the country, there are a number of people who depend almost exclusively on bicycling and walking to arrive to work, school or social activities. These individuals are more than likely a member of a wide range of people who travel by walking or bicycling. These include elderly people who no longer drive a car, young people who are yet to be able to drive a car, people unable to operate a vehicle due to a disability, and those who do not have the economic means to own and operate a vehicle or choose not to use a vehicle for other reasons. The development of the TAMU-Texarkana campus is projected to increase another special population in the community, college students, who often rely on means of transportation other than a personal vehicle. As the Baby Boomers age, the number of people who fall within the first category, elderly who no longer drive, is an increasing segment of the population. This occurs frequently in the 65+ age range and may include a number of aging veterans. Since Texarkana has been designated a Certified Retirement Community by the Texas Department of Agriculture, it is likely to have a disproportionate number of older adults.

A review of the last Census data is helpful in understanding how many people in the community of Texarkana may fall within one of these population groups. The 2000 Census for the Texarkana Metropolitan Statistical Area shows that:

- About 21% of the entire population is under the age of 14 and unable to legally drive a vehicle,
- Over 13.5% of the entire population is over the age of 65 and 52% of them have a disability,
- 10.5% of the population aged 5-15 years has a disability,
- 10,650 families reported a total household income of less than $25,000 per year, about $15,000 less per year than the median family income of Texarkana ($39,704), and
• 22,230 families reported incomes below the 1999 poverty level including over 2,250 families with a head of household over 65 years of age.

In sum, a significant number of people living in the Texarkana area fall into segments of the population which make them more likely to be dependent on non-motorized transportation. Just as important as it is to maintain and develop a safe and efficient road transportation network for the majority of the population who use personal vehicles, it is also important to consider the safety and transportation needs of citizens who are too old, too young or unable to use a vehicle for other reasons. These citizens represent current latent and potential future demand for use of the alternative transportation network including sidewalks, bicycle facilities and mass transportation.

1.5 Priorities from Public Meetings

Between March and June of 2009 six public meetings were held in order to gather input from the citizens of Texarkana. During the first three meetings, citizens were asked how they currently bicycle and walk for recreational and other travel. They were also asked what barriers prevented them from reaching desired destinations, what places they would like to walk or bicycle to, and where they would like to see bicycle and pedestrian-friendly infrastructure.

During the third meeting, citizens were also asked what factors they would use in prioritizing bicycle and pedestrian projects. Participants were given an initial list of prioritization factors (gathered from other bicycle and pedestrian planning projects) and asked to add or delete as they saw fit. A complete list of criteria and their average scores are provided in Appendix A. Appendix B provides information about the public involvement process related to the plan development – including local news coverage.

The Top 10 criteria are:

• Coordinate with other local plans,
• Proximity to park,
• Proximity to school,
• Cost/likelihood of funding,
• Extension of existing path or trail,
• Addresses security issues,
• Located on street with heavy traffic,
• Addresses safety issues,
• Filling in gaps, and
• Provides enhancements such as lighting, signs, and paint.

Discussions during the public meetings indicated a desire to connect existing destinations and connect people to these destinations. Other high scoring criteria were proximity to civic buildings and proximity to shopping. In general, the people of Texarkana want to see a transportation system that connects destinations.
1.6 Vision for the Texarkana Area

This Plan is designed to do the following:

- Meet local, regional, state, and national goals;
- Connect neighborhoods to destinations such as schools, parks, and shopping centers;
- Provide a single design guide for facilities and treatments;
- Connect transit, intercity bus, and rail;

This September 2009 version of the Plan is just the first iteration of a plan that will adapt as circumstances change over the years.

The basis for the Plan is the conceptual plan presented in Figure 6.

Figure 6: Texarkana Non-Motorized Conceptual Plan
1.7 Definitions/Acronyms

Following are definitions and acronyms used in this document.

AASHTO – American Association of State Highway and Transportation Officials – AASHTO is an association that advocates transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods (www.transportation.org).

AHTD – Arkansas State Highway and Transportation Department – the state transportation department in Arkansas (www.arkansashighways.com).

Bike-Sensitive Loop – this is a device embedded in the street at a signalized intersection that is sensitive to bicycles, allowing them to trip a green light at an intersection.

Bikeway – a facility for use by bicyclists. This may be a bike lane, shared lane, or trail. In the Plan, it is an indication of where accommodation for bicycling needs is recommended.

CDBG – Community Development Block Grant - a Federal entitlement grant awarded to cities and counties to enhance the health and welfare of communities through economic development, neighborhood revitalization, and the improvement of community facilities and programs.

FHWA – Federal Highway Administration – an agency within the U.S. Department of Transportation charged with constructing, maintaining, and improving the nation’s highways (www.fhwa.dot.gov). The Bicycle and Pedestrian Program is within the FHWA (www.fhwa.dot.gov/environment/bikeped/).

FTA – Federal Transit Administration – an agency within the U.S. Department of Transportation that supports locally planned and operated mass transit systems throughout the U.S. (www.fta.dot.gov).

MPO – Metropolitan Planning Organization – MPOs are required in all cities of 50,000 or more in order to coordinate transportation planning and implementation. In Texarkana, the Texarkana MPO is the administrative agency for the Texarkana Urban Transportation Study (TUTS). The purpose of the MPO is to provide local citizens and elected officials the opportunity to be involved in the transportation planning process. (www.texarkanampo.org).

MTP – Metropolitan Transportation Plan – a long-range (20-25 year) planning document produced by the MPO delineating transportation improvements based on projections for growth in population, housing, and jobs.

MUTCD - a set of standards established by the Federal Highway Administration to ensure uniformity in the installation and maintenance of traffic control devices on all streets and highways.
Paths – a facility for the use of pedestrians. This may be a sidewalk or a trail. In the Plan, it is an indication of where accommodation for pedestrian needs is recommended.

Pedestrian Corridor of Interest – an area where it is recommended accommodations be made for pedestrians. A specific alignment is not proposed.

Safe Routes to School (SRTS) - a Federal, formula based grant program that is designed to encourage and improve all children’s ability to walk and bike to school and reduce air pollution around school campuses.

STP – Surface Transportation Program - a Federal, formula-based grant program distributed to each state for improvements to roadways that are designated as federal-aid highways.

TCSP - Transportation and Community System Preservation Pilot Program – a Federal grant program that is designed to improve the relationships between transportation, community and system preservation by funding projects that reduce traffic congestion, are consistent with community development patterns, provide access to jobs and services, and reduce adverse impacts on the environment.

TIP – Transportation Improvement Program – a prioritized listing of transportation projects covering a four-year period. This is part of the MPO’s planning process and is required to be consistent with the MTP in order for projects to qualify for certain types of federal transportation funds.

Trail – a facility for the use of pedestrians and/or bicyclists. It may run adjacent to a motor vehicle facility or along another alignment – such as along a creek.

TxDOT – Texas Department of Transportation – the state transportation department in Texas (www.txdot.gov).

Figure 7: Private Sitting Area (to left) Built to Take Advantage of Nix Creek Trail as Amenity
2. Assessment of Current Conditions and Needs

In order to prepare a plan to reach the vision desired by the residents of Texarkana, it is first necessary to ascertain the current situation. Since there are national goals related to mode share (what percentage of trips are by bicycle or walking) and safety, the first portion of this section covers that data. Transportation is closely linked to land use. There are likely to be more students walking or biking near schools. People are likely walking or biking to area parks. Shopping areas are potential attractors for people. Therefore, the second portion of this section presents future and existing land use in the Texarkana area and considers the influence and existence of current policies related to bicycling and walking. Since there are certain places that are more likely to attract pedestrians and bicyclists than others, these are included in the assessment of current conditions. Similarly, there are certain barriers to bicycling and walking that must be taken into consideration. Barriers and attractors are detailed in the third portion of this section. Lastly, this section presents a map (Figure 17) of the existing infrastructure related to bicycling and walking.

2.1 Current Nonmotorized Mode Share and Safety

According to the 2005-2007 American Community Survey (a survey conducted by the U.S. Census Bureau between decennial census years), 2.03% of trips to work in Texarkana were by walking, 0.29% were by bicycle, and 0.35% were by public transportation. Public transportation trips are included here because it is assumed people walk or bicycle to the transit stop. While it is the intention of the federal policy regarding mode share to increase non-motorized trips for all purposes, these are the only data available.

Typically, police departments do not keep crash data related to bicycle and pedestrian crashes that is easily retrievable. There have been a few crashes between motor vehicles and bicyclists or pedestrians in the past several years in the Texarkana area, however, details regarding location and cause are not available.

2.2 Land Use and Zoning in Texarkana

An essential component of facilitating growth and development in the Texarkana region is land use management. Home rule charters from the state provide Texarkana, TX and Texarkana, AR with the authority to manage land use through legal statutes or zoning ordinances. Zoning ordinances regulate what types of land uses, densities, size of structures and lot coverage are permitted and prohibited in specific areas of each city. These regulations are usually developed through a comprehensive planning process, which includes extensive public participation, and is adopted by a municipality’s city council or governing board.
Land Use, Texarkana, TX

In 2007, the city of Texarkana, TX updated their comprehensive plan and provided guidelines for how the city and its residents desire to facilitate growth in the next 20 to 30 years, which is displayed in the Future Land Use Plan Map, Figure 9. The plan defines the city’s goals for growth in the following statements:

- Encourage office park development by defining districts,
- Resolve existing land use conflicts between residential neighborhoods,
- Minimize future land use conflicts by implementing zoning policies, and
- Target future development in strategic locations based upon direction of growth and ability to serve with public utilities.

In addition, the city of Texarkana, Texas’ goals for transportation includes improving the connectivity of streets within the community, and creating alternative transportation options through bikeway and sidewalk networks.

As shown in Figure 9, the primary future land use in Texarkana, TX is low density residential, which is highly concentrated in the northern, central and southwest sections of the city. Higher density residential is sparse, but appears in central, northeast and northwest regions. Large industrial zones occur in southeast and southwest portions of the city and retail is concentrated along major transportation corridors such as Interstate 30, US 59, Stateline Avenue, Richmond Road, Lake Drive, etc. Office and Industrial land uses are located near the new Texas A&M University campus, Texarkana College, and near Summerhill Road at Interstate 30.

![Figure 8: Shaped Signs on State Line Ave.](image)

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1 City of Texarkana, 2001 Comprehensive Plan, 2001
Similarly, Texarkana, AR has facilitated growth and development through its comprehensive plan and zoning regulations. Figure 10 shows the current zoning for the city. Goals of Texarkana, AR’s comprehensive plan include preserving neighborhood character by restricting incompatible uses, encourage an environment that is conducive to the needs of families such as allowing parks, churches,
schools and playgrounds near communities, and facilitate the movement of businesses and industrial uses to regions of the city that are compatible with adjacent uses.²

Figure 10: Texarkana, Arkansas Existing Land Use

As shown in the zoning map, most of the prevailing land use permitted in Texarkana, AR is residential, with only rural residential development allowed on the outer edges of the city. Low and medium density residential zones are dispersed throughout the city. However, industrial zones are concentrated in central east and north central east Texarkana, AR. Small areas of office and quiet business uses are centered in the northwest region and near the central business district. Additionally, open display commercial zones are permitted along major street corridors such as East St., US 67 and Interstate 30.

2.3 Attractors and Barriers to Bicycling and Walking

In developing a bicycle and pedestrian plan, the basis of the plan is where bicyclists and walkers want to go and what is preventing them from getting there. The attractors identified in the Texarkana area include:

- schools (elementary to university),
- parks,
- community centers,
- the library,
- the Boys and Girls Club,
- Central Mall and other shopping centers,
- major medical and rehabilitation centers,
- the movie theatre,
- the bus and train stations,
- bus stops and the transfer center,
- cultural centers, and
- tourist destinations.

Barriers to bicycling and walking include the interstate highway, creeks and railroad tracks. The results of the barriers and attractors inventory are presented in Figure 12.

A complete list of pedestrian and bicycle attractors included in this inventory is provided in Appendix C.

*Figure 11: Pedestrian amenities in downtown Texarkana*
Figure 12: Non-Motorized Barriers and Attractors

Figure 13: A local pedestrian generator - Arkansas High School, Texarkana
2.4 Infrastructure Inventory

Over the years, Texarkana has acquired various pieces of a non-motorized transportation system. However, some elements have deteriorated over time; new standards have been adopted at the national level, and the various pieces are not connected into a comprehensive system. A complete infrastructure inventory should include:

- multi-use trails,
- sidewalks,
- bike lanes,
- shared lanes,
- four-foot wide shoulders,
- crosswalks,
- bike-sensitive loops, and
- pedestrian and bicycle related signs.

Sidewalks in Texarkana have been built sporadically over the past several decades. Many of the existing sidewalks are narrow and some are so heavily broken they may not be safe for someone using a walker or other assistive device. However, their presence does indicate where there is right of way available for non-motorized modes. The only marked bike lanes are where the Nix Creek Trail crosses streets. Many rural highways have four-foot shoulders. Local bicyclists have identified those highways which are the most bicycle-friendly.

The newest additions to the non-motorized transportation system in Texarkana are multi-use trails in several parks and along Nix Creek. An initial inventory of sidewalks was performed using aerial photography that allows one to see objects as small as four inches. A preliminary assessment of the condition of the sidewalks was done in person. While none of the sidewalks that were part of the initial detailed inventory were as wide as currently recommended, they were found to be in varying states of repair. Some lengths are in good shape while others are crumbling and being encroached upon by nearby vegetation (see Figure 14). Detailed inventories will have greater benefit when conducted prior to a specific project’s final cost estimation. This presence/absence of inventory of sidewalks does indicate the presence of right-of-way. The preliminary infrastructure inventory also included identification of roads with a four-foot or wider shoulder. At the time this Plan was being produced, the City of Texarkana, Arkansas was repainting crosswalks, therefore, a preliminary inventory showing which intersections have crosswalks and pedestrian-friendly signals was available. A detailed inventory before design of a specific project will be necessary to determine which specific streets at an intersection have crosswalks. An infrastructure inventory should also
include pedestrian and bicycle related signs. Existing trails, sidewalks, four-foot wide shoulders and intersections with crosswalks are shown in Figure 17.

An inventory of existing and potential infrastructure revealed a bridge over US 59 that has never been used (see Figure 15). This bridge was built along railroad right-of-way that was never developed for its intended purpose. The bridge provides a grade-separated crossing that could be the exclusive use of non-motorized traffic. The railroad right-of-way intended for this bridge is not the only railroad right-of-way that is abandoned or no longer in use. A stretch of rail from the southwest side of downtown and headed towards Shreveport is also potentially available for non-railroad purposes.

Another important part of an inventory is the identification of desire lines. These are paths worn through vegetated areas indicating where people are walking despite a lack in infrastructure, as shown in Figure 16. This could be considered existing or latent demand for infrastructure. A comprehensive inventory was not conducted for this initial plan. Figure 16 shows an example of a desire line.

An assessment of other infrastructure related to bicycles indicates that bicycle racks are available on all T-Line buses. Bicycle parking facilities are not known to be available anywhere in the Texarkana area. Figure 18 shows the multimodal infrastructure in the Texarkana area.

Figure 15: Unused bridge over US 59 in Texarkana, Texas

Figure 16: Desire line in grass to bus stop on E. 4th by Spruce Street
Figure 17: Existing Infrastructure
3. Users of the Non-Motorized Transportation System

Planning for bicyclists and pedestrians requires an understanding of their characteristics. While bicyclists and pedestrians are often considered together, they are actually very different from each other. One thing they share in common is vulnerability in crashes with motor vehicles. In either case, both are susceptible to suffer major, and sometimes fatal, injuries in crashes with motor vehicles – even at relatively low speeds. Bicyclists and pedestrians have different characteristics that guide the design of facilities that are safe and appropriate.

3.1 Characteristics of Pedestrians as Travelers

Besides their vulnerability in crashes with motor vehicles, pedestrians do not have one set of defining characteristics. They can be generally divided into children, teens, adults, and senior adults. Children are still learning the rules of the road. In addition they can be impulsive and act unpredictably. Since they are short, they can be difficult for drivers to see either coming over a hill or when they are standing between parked vehicles.

Older children have increased experience but often have a feeling of invulnerability. They have the physical prowess to walk or bike relatively long distances and teenagers are generally responsible enough to travel by themselves or with other teenagers. They are also using alternative means of transportation such as skates and skateboards.

Adults are active and tend to be more aware than older children of the relevant elements of the transportation system. They have good peripheral vision (which can be poor in both younger and older people).

Senior adults are starting to experience a loss in vision, agility, speed, balance, concentration, and strength. Those who are beginning to suffer from hearing loss may not hear a motor vehicle approaching from outside their field of vision. Low light conditions may make seeing difficult for senior adults.

Users of the pedestrian transportation system may also include the mobility impaired. People who are blind, in wheelchairs, or otherwise impaired in their ability to navigate the environment require certain conditions in order to safely travel.

Good conditions of a pedestrian system include a continuous system that connects people to desired destinations. When pedestrians can travel in a predictable manner (for example, not having to move into the street because the area on the curb is overgrown) there is an increased atmosphere of safety.
3.2 Characteristics of Bicyclists as Travelers

In both Texas and Arkansas, bicycles are considered “vehicles” and they may use the streets and highways unless a particular facility specifically does not allow that. In general, bicyclists travel faster than pedestrians and as quickly as slow motor vehicles. AASHTO divides bicyclists into three categories:

- A – advanced,
- B – basic, and
- C – children.

Advanced bicyclists are skilled riders and prefer a direct route to their destination. They are comfortable riding in traffic. Basic bicyclists are able riders but less confident sharing facilities with motor vehicles. They prefer quiet neighborhood streets or exclusive-use facilities. Children cannot travel as fast as adults and should be directed to facilities away from heavy motor vehicle use. Their key destinations are schools, convenience stores, and recreational facilities.

Texarkana in 1937
4. The Non-Motorized Transportation System: Elements and Design Guidelines

As the motor vehicle system is made up of various pieces such as roads, signals, signs, and markings, so is the non-motorized transportation system. The elements of the motor vehicle system are standardized due to the work of AASHTO and these design guidelines are gathered in a volume known as The Green Book. The size and use of signs and markings are disseminated through the Manual of Uniform Traffic Control Devices (MUTCD). The MUTCD has chapters devoted to bicycle facilities and school areas and subsections of other parts devoted to pedestrian facilities. Standardization allows people to travel throughout the U.S. (and in many parts of the world) knowing that signals, signs, and markings will be uniform. Similarly, AASHTO has produced Green Books for pedestrian and bicycle transportation systems. This section describes the general elements of the bicycle and pedestrian system and presents design guidelines as recommended by AASHTO.

4.1 Elements of the Pedestrian Transportation System

The elements of the pedestrian transportation system are:

- Trails (described in a separate subsection below),
- Sidewalks (including ramps),
- Crossings (including crosswalks, midblock crossings and grade-separated crossings),
- Pedestrian-friendly signals,
- Signs,
- Lighting and other amenities.

Sidewalks

The most important measure of a sidewalk is its utility. Sidewalks should be placed wherever large volumes or target populations of pedestrians are present. Sidewalks operate as continuous surfaces connecting several points in a logical path. Sidewalks should be smooth and level and provide logical connection between user spaces. Near parking lots, the position of sidewalks should complement the orientation of the parking spaces as well as provide the most efficient access. If sidewalks are not placed in a logical fashion, pedestrians carve their own footpaths, independent of the poured concrete. The key elements of sidewalks are width, shy distance, border areas and buffers, grade, pavement surfaces, stairs, corners, and ramps.
Width and Shy Distance - Sidewalks accommodate more than pedestrians. They may also be the appropriate place for lighting, amenities such as benches, trash cans, newspaper boxes, mailboxes, and art. People tend to shy away from fixed objects and buildings. Therefore, AASHTO recommends a shy distance of 2 feet from buildings and shorter distances from less massive objects. The objective is that the effective walkway clear width should be a minimum of 4 feet. Passing segments, with a minimum 5 foot clear width, should be provided at reasonable intervals. See Figure 19.

Border Areas and Buffers – A landscaped buffer between the effective walkway and the street can be an important pedestrian safety element. On-street parking and bike lanes can also be effective buffers. Where there is no on-street parking or bike lane a planting strip is recommended. The recommended width is based on the size of the street as shown in Table X.

![Figure 19: AASHTO recommended sidewalk width](image)

**Table 1: AASHTO Recommendations for Landscaped Buffer Widths**

<table>
<thead>
<tr>
<th>Type of Road</th>
<th>Recommended Buffer Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local or collector</td>
<td>2 -4 feet</td>
</tr>
<tr>
<td>Arterial or major street</td>
<td>5 -6 feet</td>
</tr>
</tbody>
</table>

Grade and Pavement Surface - The surface should be as flat as possible and still drain well. If possible, grades should be limited to no more than 5 percent. Terrain notwithstanding, grades greater than 8 percent should be avoided. If the grade must be greater than 5 percent, special textures and handrails can make navigation easier for citizens. While drainage of surfaces is important, cross slopes should not exceed 2 percent. Similarly, surfaces should drain well and provide good traction. Concrete is a long-lived surface, but sometimes joggers and others prefer the increased traction of asphalt. Surfaces of colorful brick or stone can help define pedestrian areas, special districts, or alert the visually impaired to driveways and other sources of potential hazards.

Stairs – some steep areas may be best served by stairs. AASHTO recommends a minimum width of 42” with a handrail on one side that extend for 12 inches beyond the top and bottom stair. Especially wide stairs can benefit from having a handrail on each side. Stairs should be well-lit and a safety bar at the top that forces people to turn to use the stairs can help prevent skaters from accidentally heading down the stairs.
Corners and Ramps – Corners can be especially desirable places for light poles, newspaper boxes and other amenities. Therefore, special care should be taken that a minimum 4 foot clear path is available for pedestrians. Curb ramps should deposit pedestrians into a marked crossing. Curb ramps should be at least 4 feet wide not including the flared sides. The ramps should end in at least 2 feet of detectable truncated-dome warnings. See Figure 20 for the elements of an AASHTO-recommended curb ramp.

**Crossings**

At intersections, there are several potential conflict points between motor vehicles and non-motorized traffic. Some places have chosen to use roundabouts to handle traffic through the intersection. As shown in Figure 21, a roundabout has fewer potential conflict points between motor vehicles themselves as well as between motor vehicles and non-motorized traffic.
Crosswalks - Crosswalks, parking lot markings, and pedestrian refuge islands (medians placed to hold pedestrians who cannot cross the whole intersection in one Walk cycle) should be located where the majority of travelers seek to cross. While this may seem self-evident, oftentimes the placement of crossings is determined by available space or financial considerations rather than safety. It should be foremost in the mind of the designer that the purpose of marking the crossing is to improve the safety and visibility of the pedestrian.

Secondary consideration should be made to provide the shortest, most logical route from the point of departure to the final destination (i.e. doorways, shelters or entrances). This becomes especially important when slopes and grades are an issue. Erosion and poor landscaping can result as much from unintended foot travel as from poor design.

Figure 23 shows three types of crosswalk markings that are allowed in the Manual of Uniform Control Traffic Devices. It may be appropriate to have guidelines recommending where each type of crosswalk is used. For example, the more highly visible diagonal or longitudinal crosswalk may be preferred for school zones with the transverse used in other applications.

Mid-Block Crossings – It is not always convenient for pedestrians to cross at an intersection. Two destinations may be far away from one intersection and separated by a roadway, for example, a building and a parking garage. To increase pedestrian...
safety, mid-block crossings should be well-lit and highly visible. Nearby traffic calming devices may also contribute to safety at these locations. Appropriate traffic calming devices include a raised crosswalk, curb extensions to shorten the crossing distance, and refuge islands. A mid-block crossing may be an appropriate place for a highly-visible crosswalk such as the diagonal or longitudinal as well as warning signs. In areas with significant nighttime activity or poor visibility, it may be appropriate to install in-roadway warning lights. These are flashing lights installed in the roadway that are activated by the pedestrian.

Grade-separated Crossings – In some instances, there is no safe way for pedestrians to cross traffic at grade. These may be limited access highways, railroads, or high-traffic arterials. Pedestrians may be accommodated by either going over the traffic on a bridge or under the traffic through a tunnel. In either case, these facilities should be appropriately designed for their expected volume and be accessible to all potential users. To maintain security, these facilities should minimize the extent to which users are completely hidden from passing motorists and access and egress should be designed to not allow potential hiding places for would-be attackers.

The minimum width of a bridge should be 8 feet unless it is accessed by a wider sidewalk and then it should be as wide as the sidewalk. An enclosed bridge should be a minimum of 14 feet wide. Bridges intended for both pedestrian and bicyclists should be a minimum of 14 feet wide. For very long bridges, the width should be extended to provide a feeling of security.

In rural environments, tunnels should be at least 12 feet wide. In urban areas, tunnels less than 60 feet long should be at least 14 feet wide and those longer than 60 feet should be at least 16 feet wide. These widths are sufficient for facilities accommodating both pedestrians and bicyclists. Short tunnels should provide at least 8 feet of clearance and longer tunnels should be at least 10 feet high to increase the feeling of security for users. If emergency or maintenance vehicles may use the facility, greater clearances may be necessary.

Figure 24: Grade-separated pedestrian crossing over the Kansas City Southern Line in Texarkana, Texas.
**Pedestrian-Friendly Signals**

Traffic signals with a pedestrian phase are appropriate at intersections where there are insufficient gaps in the traffic for pedestrians to cross safely. Buttons to activate the walk phase of the signal should be placed such that they are reachable by young (short) people as well as the disabled. The buttons should also be placed so that it is clear in which direction they control traffic.

The standard in the U.S. is moving to “countdown” signals where the amount of time left to safely cross is shown numerically counting down on the walk signal itself. The MUTCD provides several conditions (warrants) under which a pedestrian-friendly signal should be installed.

**Signs**

Signs provide timely information to pedestrians and motorists regarding where and when pedestrians may be present. They may indicate crossings or areas with a high concentration of pedestrians (such as schools) or provide a warning for motorists if their sightline is impeded because of a curve or other geometry that prevents them seeing potential pedestrians in a timely manner.

**Lighting and Other Amenities**

Often pedestrian-oriented areas generate discussions about the need for aesthetic elements, such as landscaped park benches, well-lit promenades, awnings/shade, kiosks, water fountains (drinking and aesthetic), and public art.

Adequate lighting and signage is as important to pedestrians as it is to motorists. When placed at the scale of a pedestrian (4-8 feet), signage and lighting become more flexible and detail oriented in design. Unlike billboards and high voltage illumination, streetscape signage and lighting can serve dual purposes: utilitarian and aesthetic.

The logic for aesthetic considerations is more along the lines of functional utility. For example, near the public park, or along a recreational path, park

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*Figure 25: Pedestrian-scale light and signs - Texarkana, Arkansas*
benches are reasonable. In locations where stopping is infrequent or even discouraged, shade trees or wind shelters may be a more appropriate element. In a climate with hot summers, shade and water fountains are important for avoiding ill-health effects.

<table>
<thead>
<tr>
<th>Sidewalks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective width</td>
<td>4 feet, 5 feet periodically for passing</td>
</tr>
<tr>
<td>Shy distance</td>
<td>2 feet from buildings, less for less massive objects</td>
</tr>
<tr>
<td>Buffer width</td>
<td>2-4 feet from local or collector road 5-6 feet from arterial or major street</td>
</tr>
<tr>
<td>Grade</td>
<td>No more than 5%  * Cross slopes should not exceed 2%</td>
</tr>
</tbody>
</table>

| Stairs | Minimum width of 42” with handrail on one side that extends 12” beyond top and bottom stair |

| Ramps | Minimum 4 foot clear path ending in at least 2 feet of tactile warning |

<table>
<thead>
<tr>
<th>Grade-separated Crossings</th>
<th></th>
</tr>
</thead>
</table>
| Bridges | Open bridge for pedestrians only - 8 feet minimum width  
Open bridge for pedestrians and bicyclists – 14 foot minimum width  
Enclosed bridge – 14 feet minimum width |
| Tunnels | Rural tunnels – 12 feet minimum width  
Urban tunnel less than 60 feet long – 14 feet minimum width  
8 feet minimum height  
Urban tunnel longer than 60 feet – 16 feet minimum width  
10 feet minimum height |

| Pedestrian-friendly Signals | Standard is moving to “countdown” signals |

| Signs | Should provide timely information to motorists and pedestrians where and when pedestrians may be present – should not impede clear path for pedestrians |

| Lighting and Other Amenities | All elements should be scaled for pedestrians and not impede the clear path |
4.2 Criteria for Choosing Pedestrian Projects

The first step is deciding what project to implement first. Some projects are new and easily incorporated into a project built on undeveloped land. Sometimes the project may be a change to existing conditions, a retrofit. The AASHTO green book for pedestrians proposes the following criteria for developing priorities on retrofitting streets:

- Existing pedestrian volumes,
- Presence of major pedestrian generators,
- Traffic speed,
- Street classification (with priority for arterial streets),
- Crash data,
- School walking zones,
- Transit routes,
- Urban centers/Neighborhood commercial areas,
- Disadvantaged neighborhoods,
- Missing links,
- Neighborhood priorities,
- Activity type (such as rollerblading, scootering, etc.),
- Transition plan improvements,
- Citizen requests, and
- Street resurfacing programs (taking advantage of planned rebuilding and rehabilitation).

An alternate way to consider the implementation of a sidewalk policy is a phased approach. In this case, an area may specify the setting aside of right-of-way for future sidewalks. The area may then adopt a “trigger” for when the sidewalk must be built. For example, sidewalks may be required when the road is rebuilt from open swales to curb and enclosed drainage. Other triggers include distance from a school, availability of transit, and a certain residential density. Funding for the future sidewalk is also an important element of a sidewalk policy. An area may require developers that are not required to build sidewalks to pay into a future sidewalk fund.

4.3 Elements of the Bicycle Transportation System

The elements of the bicycle transportation system are:

- Trails (described in subsection 4.3 below),
- Bicycle lanes,
- Shared lanes,
- Bicycle-friendly intersections,
- Signs, and
- Parking.
Bicycle Lanes

A bicycle lane is a five-foot wide striped section of roadway with stencils and signage designating it for bicycle use (see Figure 26). The bicycle lane is useful in designating a specific route and location for bicycle traffic. The designation of bicycle lanes along commuter routes may help to raise the awareness of bicycling in the minds of drivers. Bicycle lanes should be measured from the edge of the gutter pan and should be free of grates, rumble strips, and other physical devices. In areas where there is no curb and gutter, bike lanes may be as narrow as four feet free of rumble strips, grates, and other physical devices.

Bike lanes are appropriate on urban arterials and major collectors. They may be appropriate in rural areas where bicycle travel and demand is substantial. Shoulders designated for bicycle use should be a minimum of 4 feet wide. They should be measured from the face of guardrails or other roadside barriers and be free of rumble strips (see Figure 27). On roads with roadside barriers, high traffic volumes, high traffic speeds, or steep grades, the shoulder should be wider. Bike lanes must always be well marked to call driver attention to their use by bicyclists.

If demand for on-street parking is great, and travel patterns predictable, shared access to the bicycle/parking lanes can be managed by means of time restrictions on parking. Many urban areas allow overnight parking in bicycle lanes, but prohibit (and aggressively enforce) parking during daylight hours.
Bicycle lanes may also be marked with signs to remind motorists to watch for these non-motorized vehicles. In addition, cities or other areas may designate bicycle routes that may be numbered as highways are numbered. Routes offer an assurance of continuity, smooth pavement, sufficient width for travel, and possibly bicycle-friendly signalized intersections.

**Shared Lanes**

On a shared roadway, bicyclists and motorists share the travel lanes. Unless the lane is wide enough, a motorist should cross over into the next travel lane to pass a bicyclist. Shared roadways are common on neighborhood streets and on rural roads. Where shoulder bikeways or bike lanes are warranted but cannot be provided due to severe physical constraints, a wide outside lane may be provided to accommodate bicycle travel. A wide lane (14+ feet) usually allows an average size motor vehicle to pass a bicyclist without crossing over into the adjacent lane.

**Bicycle-Friendly Intersections**

While bicyclists, as vehicles, are obliged to follow the rules of the road, they can be at a disadvantage when they approach a signalized intersection and there is not a vehicle to trip the light. Like the loop detectors that allow motor vehicles to trip signals, bike-sensitive loops have been developed that allow bicycles to activate a green light at an intersection. In addition, engineers have created a video-detection system, Video Imaging Vehicle Detection System (VIVDS), that uses a video camera to monitor each intersection approach. They are most often used to detect the presence of an object (motor vehicle or bicycle) in the vicinity of the stop line. While expensive, they must be compared to the cost of installing and maintaining the inductive loop detector.

**Signs**

When marking bicycle facilities, care should be made to direct instruction to both drivers and cyclists. Signs and markings for bicyclists should be done in a manner that provides adequate warning of changes in route, ending of marked facilities, or critical elements (for example access to an over or underpass). In addition, these signs should be placed in the bicyclists’ sightline. Signs for drivers remind them of the potential presence of bicyclists.

**Parking**

Where high volumes of bicyclists are anticipated (or encouraged), such as at schools, public buildings, or recreational areas, resources need to be committed to the installation, maintenance and supervision of bicycle parking areas. If racks become loose or broken through heavy use or vandalism, bicyclists can become discouraged and not use the facility. Likewise, parking areas congested with abandoned bicycles pose a different problem. Whichever agency is responsible for the operation or access to the bicycle parking should also be prepared for the routine maintenance involved.
Several options are available for bicycle parking facilities. Simple inexpensive racks can be placed in front of a building’s main entrances. Alternatively, bicycle parking can be integrated into the design of the entrance. Parking facilities are more attractive when effectively located. Because of its smaller size, the bicycle can be parked closer to the rider’s destination than a car. Racks near entrances should be located so that there are no conflicts with pedestrians. Some sites need two types of bicycle parking: short-term for customers, which should be up front; and long-term for employees, which may be placed farther away.

Bicycle racks also offer the opportunity to provide public art or “branding” of an area. As shown in Figures 28 and 29, bike racks can come in a variety of shapes. An outline of the state of Arkansas may make a good bike rack since it is flat on the top and bottom. Also bike racks in the shape of musical notes to commemorate hometown hero Scott Joplin or as holsters in recognition of the Texarkana Gunslingers.

In the event that public bicycle lockers and changing areas are considered, the related liability and routine maintenance concerns should be carefully evaluated prior to construction. It may prove simpler to encourage developers to provide such amenities during new construction, rather than ‘retrofit’ an existing building.
4.4 Criteria for Choosing Bicycle Transportation System Elements

Table 3 summarizes criteria for selecting bicycle facilities based on traffic counts and type of road. Table 4 summarizes the AASHTO standards for elements of the bicycle transportation system.

**Table 3: Guidelines for selecting bikeway facilities for all new or reconstructed streets**

<table>
<thead>
<tr>
<th>Avg. No. of Vehicles per Day</th>
<th>Transportation Element Traffic Classification</th>
<th>Recommended Bikeway Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤3000</td>
<td>local service street</td>
<td>street as is unless specified as bicycle boulevard or signed connection</td>
</tr>
<tr>
<td>&gt;3000</td>
<td>local service street</td>
<td>bicycle lanes or traffic calming</td>
</tr>
<tr>
<td>≥3000 &lt;10000</td>
<td>neighborhood collector</td>
<td>bicycle lanes or traffic calming</td>
</tr>
<tr>
<td>≥10000 &lt;20000</td>
<td>neighborhood collector and higher classifications</td>
<td>bicycle lanes or traffic calming</td>
</tr>
<tr>
<td>≥20000</td>
<td>neighborhood collector and higher classifications</td>
<td>bicycle lanes or facility parallel to roadway</td>
</tr>
</tbody>
</table>

**Table 4: Summary of AASHTO minimum standards for elements of the bicycle transportation system**

<table>
<thead>
<tr>
<th>Element</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle Lanes</td>
<td>4 feet clear width to lip of gutter pan</td>
</tr>
<tr>
<td>Shared Lanes</td>
<td>14 feet minimum outside lane</td>
</tr>
<tr>
<td>Signs</td>
<td>Should provide timely information to motorists and bicyclists where and when bicyclists may be present – should not impede clear path for bicyclists</td>
</tr>
<tr>
<td>Parking</td>
<td>Bicyclists should be able to secure the frame and front and back tires</td>
</tr>
</tbody>
</table>
4.5 Trails

Trails are open to pedestrians, joggers, and walkers, usually in close proximity to a larger recreational facility, such as a park or athletic field. The anticipated volume of pedestrians using these facilities is low; otherwise, conflict between bicyclists, joggers, and pedestrians may become an issue. One solution regarding access management to mixed-use trails is to institute a standard protocol for the facility. For example, inform pedestrians to yield to bicyclists, or vice versa, and place instructional signs informing users how to announce the intention to pass. Multi-use trails are recommended to be a minimum of 10 feet wide to accommodate both bicyclists and pedestrians. Trails may be paved and suitable for all types of bicycles or unpaved and better suited to wide-tired mountain bikes.

4.6 Intersections/Crossings

A good intersection is essential in order to not deter use by pedestrians and others. AASHTO recommends the following qualities of a good intersection:

- Clarity – easy for motorists and pedestrians to see one another,
- Predictability – crosswalks should be predictable,
- Visibility – the crosswalk should be easily visible to motorists and while in use, the motorist and pedestrian should be easily visible to one another,
- Short wait – studies show after approximately 30 seconds pedestrians will try and cross,
- Adequate crossing time for all users,
- Limited exposure – minimize potential conflict points between motorists and pedestrians, and
- Clear crossing – no barriers or obstacles in the crosswalk.

4.7 Multimodal Connections

Successful multimodal connections take into account accommodations for all modes that may access a facility. Examples of good multimodal connections include sidewalks connecting transit stops to nearby destinations and bicycle parking at the transit center, bus station, and train station. Another good multimodal connection is a city bus stop at the intercity bus station. Figure 30 shows the T-Line stop at the Texarkana Greyhound Station.
behind where this picture was taken is the interstate highway. This is obviously a well-used stop but there is no protection from the sun and elements and no place to safely keep luggage out of the dirt.

4.8 Traffic Calming

Fast-moving traffic can be a deterrent to people walking or biking along a street. The main purpose of traffic calming is to reduce speed and volume on roadways to levels that are compatible with a roadway’s functional class and its adjacent land uses. The functional class of a road refers to the character of traffic that the road serves. At one end, mobility is the higher priority (for example, freeways) and at the other end, land access (for example, neighborhood streets) is the higher priority.

Other purposes include encouraging and fostering the use of alternative modes of transportation, reducing cut through traffic and accidents, improving air quality, urban revitalization and crime prevention. However, traffic calming cannot be effective without defining the problem, examining potential solutions and encouraging and enforcing traffic calming through public policy. Traffic calming measures are designed to make it physically difficult for motorists to speed.

Typically, neighborhoods are concerned about speeding, cut through traffic, noise pollution and air quality within their community. Potential measures to calm traffic issues in neighborhoods include the following:

- Adding bike lanes – reduces the width a roadway;
- Bulb-outs/Neck-downs/Chokers – is an extension of a roadway’s intersection that reduces its width from curb to curb;
- Center Islands – is a raised island in the center of a roadway that reduces its width;
- Closures – is a barrier placed at the end of a roadway to restrict through automobile traffic;
- Roundabouts/traffic circles – is a raised circular island that is generally placed in the center of an intersection and restricts traffic to one direction. Traffic circles are usually larger than roundabouts;
- Textured Pavement/Raised Crossings – are flat textured surfaces that force motorists to slow down; and
- Speed humps – are raised, round surfaces that are placed across roadways to slow down traffic.

*Figure 31: Signs to guide pedestrians and bicyclists through a traffic circle - Santa Fe, NM*
5.0 The Plan Elements and Implementation

The backbone of this plan is a regional bicycle/pedestrian corridor. A Rails-to-Trails project is coming in from the west. Texarkana is also part of a national, non-motorized route, number 84. In addition, there is the potential for a route linking Texarkana to Little Rock and the Presidential Corridor. Therefore, it is recommended that priority be given for this corridor to remain continuous throughout the Texarkana region. Along this corridor, bicycle and pedestrian use should be given the highest consideration. Access points should be available every mile or so.

5.1 Summary of Recommendations

- Establish a Bicycle and Pedestrian Advisory Panel to continue updating and implementing this plan. This panel should include representation from:
  - Transit
  - Public works/engineer
  - Parks departments
  - School districts
  - The disabled community
- Include bicycle and pedestrian infrastructure when rebuilding/rehabilitating roads
- Increase enforcement of traffic laws related to bicyclists and pedestrians
- Include a minimum of 4’ of clear path (i.e., no rumble strip) on designated highway shoulders
- Work with the parks departments on Art in Public Places for bike racks and local branding
- Make easements more inclusive so they include ability for bicycle and pedestrian access (where appropriate)
- Build sidewalks (internal circulation) and connectivity in new subdivisions
- Ensure that traffic calming measures do not extend into bicycle lanes (or to edge of lane in wide curb lanes for mixed use)
- Conduct an inventory of:
  - Utility easements
  - Right-of-Way on streets (for sidewalks) and railroads
  - Roads with wide enough lanes to restripe and add a bike lane
  - Abandoned railroad right-of-way
- Work with the police departments to collect meaningful, easily accessible bicycle and pedestrian crash data (perhaps produce an annual report – perhaps work with a class at TAMU-T or Texarkana College regarding data analysis)
- Install new yellow-green fluorescent (YGF) signs around schools
- Maintain (clean) highway shoulders on bike routes on a regular basis (similarly, provide a mechanism so bicyclists can report debris and other problems)
- Educate the public about bicycles and motor vehicles sharing the road
- Educate the public regarding children bicycling and walking to school
• Conduct a bicycle parking inventory and identify places to include bicycle parking (such as parks, shopping centers, and schools)
• Improve the T-Line bus stop across from the Greyhound Station
• Provide bicycle and pedestrian access at the crossings periodically around the proposed outer loop. The following locations are recommended:
  o Sugar Hill Rd.
  o Sanderson Ln.
  o State Line Ave.
  o FM 1397 (both locations)
  o FM 559
  o Myrtle Springs Rd.
  o I-30
  o US 67
  o US 59
• Add projects and corridors to Metropolitan Transportation Plan
• Restripe Cowhorn Creek Bridge to include bicycle lanes
• Develop Safe Routes to School plan in each school district

5.2 Infrastructure Elements of the Master Bicycle and Pedestrian Plan

Although there are shared facilities for bicyclists and pedestrians, bicyclists can travel much farther and pedestrian infrastructure tends to be at a closer scale. Therefore, the bicycle and pedestrian plans are presented separately in Figures 35 and 36. Following the pedestrian and bicycle plans are individual projects that may be developed soon.

It is recommended that downtown and State Line Ave., north of downtown to north of IH-30, be designated as pedestrian districts. The Cities of Texarkana may also consider including historic districts in this designation.

Pedestrian districts should have sidewalks at least five feet wide and curb ramps that meet ADA standards. Intersections should have painted crosswalks or a contrasting treatment as shown in Figure 32. Signalized intersections should be pedestrian-friendly with push button activation and countdown pedestrian walk signals. In addition, these districts are ideal for amenities such as benches, awnings, trash cans, fountains, and
public art. Figure 33 shows a wide sidewalk in downtown Texarkana with a bench, trash can, and transit stop all out of the main pedestrian path way.

The pedestrian plan presents trails as well as places where specific pedestrian paths are recommended. Corridors of interest are identified where access to a particular destination needs to be accommodated or a gap needs to be filled. Specific paths are not recommended for the Corridors of interest.

Similar to the pedestrian plan, the bicycle plan presents specific facilities as well as recommended bikeways where bicycles may be accommodated any of a number of ways (trail, bike lane, or shared lane).

Aesthetics – Infrastructure improvements offer opportunities for consistent design elements throughout the system as well as branding opportunities. Currently, there are several different signs used to denote pedestrian areas and pedestrian crossings. It may be beneficial to pedestrians and motorists to standardize which types of signs are used in which types of situations. It may be appropriate to adopt different standards for different types of roads or for different uses (for example, having a particular style common to all school areas).

Another use of aesthetics is to enhance the pedestrian environment by the use of murals along walls in interstate underpasses. These can be long, boring walks and murals can enhance the environment for pedestrians as well as providing a sense of place for motorists. For example, the murals might celebrate different eras in Texarkana history.

There are several “brands” in the Texarkana area that could be used in non-motorized infrastructure. Using the example of the bike racks in section 4.3, Texarkana could have bike racks in the following shapes:

- Arkansas (nice and flat on the south side),
- Musical notes - as a tribute to native son, Scott Joplin,
- Gun holsters – for the Texarkana-based Gunslingers, and
- Texas A&M – Texarkana logo.
Pedestrian Districts – One approach to deciding where to locate pedestrian infrastructure and what design standards to follow, is by identifying districts where a unified approach would be desirable. Two examples in Texarkana would be the downtown area and the area along N. State Line Ave. N. State Line Ave. already has a consistent design element with the state flag banners. With its shops and connection between the two states, this is potentially a high tourist area and pedestrian-friendly design could make it a more desirable place for residents and visitors alike.

Downtown Texarkana has the potential to be a major multimodal center. It has an intercity rail terminal and public transit stops. The intercity rails to trails project could possibly come downtown and the Nix Trail currently terminates just east of downtown. Museums, other cultural attractions, and other pedestrian generators are located downtown. A unified and universal pedestrian design plan would make it comfortable for visitors and residents.

Areas near schools might be prioritized for upgrades, especially as nearby roads are rebuilt or rehabilitated. Appendix D provides a list of potential upgrades near schools. Prior to implementation, detailed information regarding non-motorized access to the school should be assessed. However, this is a suggested first list of projects intended to improve non-motorized access to the school.

Proposed Infrastructure – The following section consists of two overall maps: one for bicycle corridors and the other for pedestrian. In both cases, there are recommendations for specific infrastructure (bike lane or sidewalk) as well as corridors of interest. In these areas, it is the intent to show that accommodation for bicyclists and/or pedestrians be made, but since it is possible in some cases to do that with a single solution, such as a trail, a specific infrastructure recommendation is not made.

Following the overall maps is a selection of detailed project drawings and finances. The drawings show every piece of infrastructure for the project: crosswalks, pedestrian-friendly signals, bridges, etc. Financial information is provided in 2009 dollars using TxDOT bid figures for the Atlanta district or the nearest one if the Atlanta District does not have that figure available.

Figure 34: Ramp without sidewalks - Whitaker and MLK, Texarkana, Texas
Figure 35: Proposed Texarkana Bicycle Plan

Legend
- Proposed Access Points
- Ped-Bike Attractors
- Proposed Shoulder
- Existing Trails
- Proposed Trails
- Proposed Bike Zones
- Mockingbird Junction
- Proposed US Bicycle Route No. 84
- MPO Boundary
- Bringle Lake
- Creeks
- Streets
- Railroad Tracks

Project 631
Project 646
Project 632
Project 627
Project 630
Project 633
Project 635
Project 645
Project 644
Project 638
Project 643
Project 648
Project 634
Project 647
Project 640

Richmond Rd
Summerhill Rd
N State Line Ave
W 7th St

Miles
0 0.8 1.6 2.4 3.2 4

September 2009

p. 44
Figure 36: Proposed Texarkana Pedestrian Plan

Legend
- Proposed Pedestrian Paths
- Existing Trails
- Proposed Trails
- Ped-Bike Attractors
- Pedestrian Corridors of Interest
- Mockingbird Junction
- Proposed US Bicycle Route No. 84
- Pedestrian Districts
Figure 37: Project 627 map
## Project 627 Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 miles of trail – hot mix asphalt</td>
<td>$131,413</td>
</tr>
<tr>
<td>5 crosswalks</td>
<td>13,500</td>
</tr>
<tr>
<td>10 curb ramps</td>
<td>720</td>
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<td>4 pedestrian crossing signs</td>
<td>1,093</td>
</tr>
<tr>
<td>2 bridges</td>
<td></td>
</tr>
</tbody>
</table>

*$_______$

**$146,727 – TOTAL**

* Bridges would be part of street rebuilding projects

(all project figures are in 2009 dollars)

### Project Characteristics

- Within ¼ mile of trail – Central Mall, Beverly Park, Theron Jones Early Literacy Center, proposed Rose Hill development
- Within ½ mile of trail – Texas Middle School, Texas High School, Oaklawn Shopping Center, Dunbar Elementary School
Figure 38: Project 623 map
### Project 623 Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
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<tr>
<td>2.4 mile sidewalk</td>
<td>$432,000</td>
</tr>
<tr>
<td>32 curb ramps</td>
<td>43,200</td>
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<tr>
<td>8 ped-heads and buttons</td>
<td>4,400</td>
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<tr>
<td></td>
<td>$479,600</td>
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</table>

### Project Characteristics

Connects Richmond Rd. to Texas Blvd.  
Within ¼ mile – Texas Middle School, Bell Park, Collins Memorial Senior Center, Ferguson Park  
Within ½ mile – Texas High School
Figure 39: Projects 604 & 629 map
Projects 604 & 629 Details

<table>
<thead>
<tr>
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<td>1.37 mile trail</td>
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<td>2 miles sidewalk</td>
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<td>Resurface bridge</td>
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<td>790</td>
</tr>
<tr>
<td>10 curb ramps</td>
<td>13,500</td>
</tr>
<tr>
<td>6 ped-heads and buttons</td>
<td>3,000</td>
</tr>
<tr>
<td>2 Share the Road signs</td>
<td>365</td>
</tr>
</tbody>
</table>

$ 397,001

Project Characteristics

Takes advantage of existing infrastructure, connects Wake Village to inside the loop
Within ¼ mile – Cinemark Theatre, Findley Park, Mockingbird Junction
Figure 40: Project 605 map
**Project 605 Details**

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
</tr>
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<tbody>
<tr>
<td>Leopard Dr. road diet</td>
<td></td>
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<tr>
<td>3.8 miles bike lane</td>
<td>$ 50,000</td>
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<td>0.75 mile sidewalk</td>
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<td>600</td>
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<tr>
<td>10 curb ramps</td>
<td>13,500</td>
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<td>2 ped-head and button</td>
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</tr>
<tr>
<td>2 Pedestrian Crossing signs</td>
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<tr>
<td>2 Share the Road signs</td>
<td>365</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$ 196,930</td>
</tr>
</tbody>
</table>

**Project Characteristics**

Provides safe access from multi-family development to Liberty-Eylau High School, Grady T. Wallace Park, and Liberty-Eylau Middle School
Figure 41: Portion of Pedestrian Corridor PR map
## Portion of Pedestrian Corridor PR Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
</tr>
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<td>790</td>
</tr>
<tr>
<td>10 curb ramps</td>
<td>13,500</td>
</tr>
<tr>
<td>1 ped-head and button</td>
<td>550</td>
</tr>
<tr>
<td></td>
<td>$ 92,840</td>
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</tbody>
</table>

### Project Characteristics

Connects Hobo Jungle Park to transit
Figure 42: Bikeway BW map
Bikeway BW Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 bike-sensitive loops</td>
<td>$ 5,000</td>
</tr>
<tr>
<td>10 Share the Road signs*</td>
<td>2,430</td>
</tr>
<tr>
<td></td>
<td>$ 7,430</td>
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</table>

Alternate Project Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
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</thead>
<tbody>
<tr>
<td>10 video detection cameras**</td>
<td>$ 100,000</td>
</tr>
<tr>
<td>10 Share the Road signs*</td>
<td>2,430</td>
</tr>
<tr>
<td></td>
<td>$ 102,430</td>
</tr>
</tbody>
</table>

* It might be appropriate to also add “sharrow” symbols on the outside lane, although the 2003 MUTCD does not make any recommendations regarding shared lanes – see Figure 43 for an example of a sharrow.

** Video detection cameras would detect motor vehicles as well as bicycles so it might not be appropriate to consider this the cost of a “bicycle project”

Project Characteristics

Provides north-south access for bicyclists
Within ¼ mile – Fairview Elementary School, Sandflat/Glendale Park, W.T. Daniels School, Kline Park
Within ½ mile – Senator Street Park, Highland Park Elementary School, Kilpatrick Elementary School, Temple Memorial Rehabilitation Center, Jefferson Park, Peyton Park

Figure 43: Example of a Sharrow
Figure 44: Texarkana Area Long Distance Bicycle Routes

Legend
- Proposed Share the Road Sign
- Proposed Access Points
- Ped-Bike Attractors
- Area Long Distance Bicycle Routes
- Proposed Highspeed Rail Corridor
- Mockingbird Junction
- Proposed US Bicycle Route No. 84
- Creeks
- Railroad Tracks
- Bringle Lake
- MPO Boundary

Texarkana Bicycle and Pedestrian Master Plan

September 2009
Area Long Distance Bicycle Route Details

<table>
<thead>
<tr>
<th>Project Details</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>41* Share the Road signs</td>
<td>$ 10,000</td>
</tr>
<tr>
<td>14  Share the Road signs</td>
<td>3,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 13,500</strong></td>
</tr>
</tbody>
</table>

* These are the signs inside the MPO boundary area

**Project Characteristics**

These routes are frequently used by area cyclists and these signs would notify motorists to be especially watchful along these roads.
5.3 Education Elements of the Bicycle and Pedestrian Master Plan

The safe use of the non-motorized transportation system depends on more than the physical infrastructure described above. An early step in the education of the citizens of Texarkana regarding bicycle and pedestrian issues could be accomplished through the creation of a Pedestrian and Bicycle Advisory Panel. This could be an advisory panel to the MPO made up of various representatives of the bicycle and pedestrian community, and should include representatives of transit, the disabled community, schools, parks departments, public works departments, the low-income community, TAMU-T, Texarkana College, and perhaps Christus St. Michael.

Educational responsibilities of the panel could work both ways. The panel can provide non-motorized transportation expertise and input to the MPO and other local agencies that may require it. And, the panel can coordinate public education via such routes as a speakers’ bureau, advertisements (see Figure 45 for an example from Salt Lake County, UT), promotion of Walk-to-School Day, and through appearances at local events. The panel may also be the appropriate instrument for working with the police department regarding bicycle and pedestrian crash data. This panel could also be charged with tracking the implementation of this Plan and developing a set of performance measures to track that process.

Another important education task is developing and disseminating a map of bicycle and walking routes. The bicycle routes may be especially important as growth of TAMU-T brings more university students to the area. The students may even take it upon themselves to produce a map with various hints and tricks to bicycle travel in the area – as the university students did in Austin. A map with walking routes can be useful to tourists as well as Texarkana residents looking for scenic routes or a convenient way to get around the city and access desired destinations.

Figure 45: Example of public education advertisement regarding bicycle safety - Salt Lake County, UT
5.4 Enforcement Elements of the Bicycle and Pedestrian Master Plan

Municipal ordinances or legal statutes enacted by towns and cities are critical components to bicycle and pedestrian safety enforcement. Many municipalities have added bicycle and pedestrian regulations to their code of ordinances as a subsection under traffic control, while a small number of cities have dedicated entire chapters to these travel modes. As the demand for alternative methods of travel such as biking and walking becomes greater, municipalities will be required to adapt their existing and new code of ordinances to effectively regulate and enforce bicycle and pedestrian uses and protect the welfare and safety of all surface transportation users. Current bicycle and pedestrian ordinances in both Texarkanas are fairly minimal.

Elements of Effective Ordinances

Similar to other types of public laws, ordinances must be clearly stated and unambiguous. To ensure clarity, bicycle and pedestrian regulations ordinance language must include the following elements:

- Effective in regulating use;
- Applicable to all potentially affected individuals and properties;
- In compliance with state and national transportation laws;
- Just, fair and not adversely affecting or placing an undue hardship on a person or entity\(^3\);

Uniformity is one of the most important aspects of an effective ordinance. Ideally, if an ordinance is general and applicable, then anyone who reads the law should be able to discern what is allowed or prohibited and the potential consequences. The language within the ordinance should be organized and stated in a manner that is direct and definite so that it can effectively regulate bicycle and pedestrian modes. Ordinances should be written clearly so that it is evident who the enforcing authority will be, such as building code inspector or police department. In addition, an ordinance must comply with state and national laws, and cannot adversely impact or place any undue hardships (i.e. economical, environmental, or social) on any individual or entity.

Types of Ordinances

There are several types of ordinances that municipalities use for bicycle and pedestrian travel modes and they can be classified by their purpose. For example, ordinances can be used to regulate where each mode can be used, how motorists interact with each mode, and to promote the use of both methods of travel. The types of ordinance described more fully in Appendix E are:

- Safety regulations for bicycle and pedestrian users;
- Bicyclists’ and pedestrians’ interaction with motorists; and
- Promoting the use of bicycling and walking.

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\(^3\) Lorbertini, Steve, *Ordinance Drafting and Enactment: Issues and Recommendations*, The University of Tennessee, Municipal Technical Advisory Service
5.5 Multimodalism in the Bicycle and Pedestrian Master Plan

This Plan is specifically designed to connect multiple modes in the Texarkana area. A corridor of interest connects the Greyhound Station to the north end of the Nix Creek Trail which ends just south of downtown. In addition, it is highly recommended that the T-Line bus stop near the bus station be upgraded to provide shelter. Several proposed creek trails and corridors of interest connect various parts of the city to downtown, which is anchored at the south end by the Amtrak Station (see Figure 46.)

The T-Line already has bicycle racks on its buses making it a multimodal system. The airport has a plan to realign the entrance and include bicycle and pedestrian-friendly projects. Due to the high-volume traffic on the road to the proposed new entrance to the airport, only a bicycle project is currently proposed to access this facility.

Although it would be preferable to have sidewalks to all transit stops, many of those on major streets are included in proposed projects and corridors of interest.

Figure 46: Texarkana Amtrak Station
6. Evaluation of Progress and Continuing the Plan

This is a 25-year plan. Continued attention will be required to implement, maintain, and evaluate the progress of the Plan.

6.1 Potential Funding Sources for the Plan

Investing in biking and walking facilities is an integral component in completing a multimodal transportation system for the Texarkana region. Investments in these transportation modes often generate a high return on investment. For instance, offering additional transportation modes can help reduce traffic congestion and energy consumption, encourage active living, and provide greater visibility for small businesses. Subsequently, increasing investments in alternative transportation options can improve the quality of life for residents in the Texarkana region.

Sustainable funding resources are essential to implementing and maintaining a seamless bicycle and pedestrian transportation system. Various funding options are available for investing in these alternative transportation modes, which include local, federal, and state grant and formula programs, as well as private resources. An overview of these resources is discussed in the following subsections.

Local Funding Resources

Local jurisdictions have various options for funding bicycle and pedestrian improvements. The first option is for a municipality to dedicate a portion of their general funds to support the costs of upgrading and maintaining a bicycle and pedestrian network. Likewise, local governments can issue general obligation bonds, which require a voter referendum. In addition, a requirement for developers to integrate bicycle and pedestrian facilities into new developments can be implemented.

Community Development Block Grants

Municipalities may also utilize Community Development Block Grants (CDBG) to improve bicycle and pedestrian facilities. Both cities and counties are awarded CDBG’s from the US Department of Housing and Urban Development based on need (i.e., socio demographics and condition of housing stock). Neighborhoods, schools, religious groups, non-profit agencies and other organizations can apply to cities or counties to receive proceeds from this grant for projects that improve the living conditions, and generate the greatest benefit, for households with low to moderate incomes. These projects can include purchasing abandoned property, rehabilitating vacant properties, employment training, creating programs for special populations (i.e. youth, older adults and persons living with disabilities), and improving and maintaining public facilities such as bicycle lanes, sidewalks, sewers, and recreational centers.
US Department of Transportation Funding Resources

There are various federal transportation resources available for funding bicycle and pedestrian projects. The US Department of Transportation (USDOT) channels financial assistance for bicycle and pedestrian facilities through the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Most of these grant programs require an 80% federal share and 20% non-federal match. A general overview of each administration’s bicycle and pedestrian related funding programs are provided in the following sections.

National Highway System

The National Highway System’s (23 USC 103) funding program provides assistance for bicycle and pedestrian improvements along urban and rural roads. National Highway System funds are distributed to state transportation departments and each state is responsible for selecting pedestrian and bicycle projects for funding. Only roads within the National Highway System or streets that serve as “intermodal connectors” are eligible to receive funding from this resource. Potential projects that could be funded through the NHS include the building of bicycle facilities and pedestrian pathways along eligible roadways. In Texarkana this includes roads such as IH-30, SH 93/Summerhill, US 67/Broad St., and US 71/State Line Ave. to name a few.

Surface Transportation Program

The Surface Transportation Program (STP) (23 USC 133) provides financial assistance for an array of bicycle and pedestrian projects. Each state receives assistance from the STP program and is responsible for selecting bicycle and pedestrian projects for funding on all eligible roadways. STP funds support the treatment of highways and bridges to accommodate other travel modes. Projects that are eligible for STP funding include the construction of bicycle facilities, pedestrian pathways and the retrofitting of roadways to meet requirements established in the Americans with Disabilities Act of 1990. All eligible projects must be located along roadways that have been designated as Federal-aid highways.  

Transportation Enhancement Activities

The Transportation Enhancement (S-LU 1113, 1112, 6003) program is another resource that can be used to fund bicycle and pedestrian facilities. Transportation Enhancement funding is designed to assist states with enhancing the aesthetics, diversity, and environmental condition of the nation’s multimodal transportation system. Each state is required to dedicate 10% of their STP funds to transportation enhancement activities. Eligible projects for Transportation Enhancement funding include the construction of sidewalks, striping of bike lanes, and promotion of pedestrian and bicycle safety along roadways designated as Federal-aid highways.

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4 FHWA and FTA Funds that May be Used for Bicycle and Pedestrian Activities - http://www.fhwa.dot.gov/hep/bkpedtble.htm
5 FHWA and FTA Funds that May be Used for Bicycle and Pedestrian Activities - http://www.fhwa.dot.gov/hep/bkpedtble.htm
**Highway Safety Improvement Program**

The Highway Safety Improvement Program (23 US 148) provides assistance to states to dramatically reduce traffic related fatalities and injuries on all public access roadways. Each state must initially apply HSIP funding to improving rural roadways that are at a high risk for traffic related accidents. Once states have met federal requirements for improving safety on their high risk rural roads, they can utilize the remaining funding for any safety related improvement.\(^7\) Safety projects that are eligible for Transportation Enhancement funding include any improvements that reduce the risk of traffic related accidents for bicyclists and pedestrians such as intersection improvements, signage near school zones, and traffic calming.

**State and Community Traffic Safety Program**

Section 402, or the State and Community Traffic Safety program, is available to assist states and communities with improving highway safety by reducing traffic related crashes and accidents. Funding from this resource is provided to each state based on a level of need formula and they are responsible for administering the program. States have to meet various stipulations before they are allowed to receive financial assistance from Section 402. For example, they are required to annually prepare safety and performance plans that demonstrate that the states’ efforts have reduced highway traffic related accidents. States can utilize Section 402 funds for bicycle and pedestrian safety education campaigns, security measures such as police patrols, and traffic calming through speed reduction.

**Safe Routes to School**

Safe Routes to School (SRTS) (S-LU Sec. 1404) is a federal grant program that is designed to fund improvements in safety and air quality near primary, elementary, and middle schools. Other goals of SRTS are to encourage children to utilize alternative travel modes to school including biking and walking, and fund the planning and implementation of projects that meet the program’s objectives. Additionally, the SRTS provides a 100% federal share.

Resources from this program are distributed to every state based on need or enrollment of students. Each state department of transportation is responsible for administering the SRTS program through a competitive grant application. Eligible recipients of SRTS financial assistance include any state, local, regional and non-profit organization that exhibit need and meet the planning and implementation requirements of the program. Potential projects that meet SRTS funding requirements include infrastructure improvements such as traffic calming, constructing sidewalks and other bike and pedestrian pathways. The SRTS program also provides funding for non-infrastructure programs such as education and outreach programs; signage, security and other enforcement measures; and program administration costs. In both Texas and Arkansas, in order to qualify for a SRTS infrastructure grant, it is necessary to first have a Safe Routes to School Plan in place. This could be a top priority of the Bicycle Pedestrian Advisory Panel.

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Scenic Byways

The National Scenic Byways Program (23 USC 162) is a funding resource that is designed to foster the development of picturesque roadways that have natural, recreational, archaeological, or cultural qualities. Provisions from the National Scenic Byways Program fund are appropriated to both states and Indian tribes. Bicycle and pedestrian related projects that qualify for assistance from the National Scenic Byways Program include safety improvements, and construction of bike and pedestrian facilities along roadways that are categorized as scenic and provide access to recreational activities.

Transportation, Community and Systems Preservations Pilot Program

The Transportation, Community and Systems Preservation (TCSP) program (Section 1117) provides funding to cultivate an improved relationship between transportation, community and state system preservation goals. State, regional, and local governments are responsible for administering the TCSP program. Eligible uses of TCSP funding include providing transportation facilities that connect communities to jobs and services, creating bicycle and pedestrian plans, providing traffic calming, and building bicycle storage centers.

Highway Bridge Program

Under the Highway Replacement and Rehabilitation Program, funding is set aside through the Highway Bridge Program (23 USC 144) to help states repair or replace bridges that are categorized as “structurally deficient and functionally obsolete”. Federal statute 23 US § 217 states that in all cases where a federally owned highway bridge is being replaced, if adding bicycle and pedestrian facilities is safe and financially reasonable, then accommodations for these modes should be implemented. Resources from the Bridge Program are distributed to each state based on their need or estimated cost of repair and rehabilitation to hazardous highway bridges. Projects that are eligible for Bridge Program funding include construction of sidewalks and shared use paths, and striping of bike lanes on federally owned highway bridges.

Recreational Trails Program

The Recreational Trails Program (RTP) (23 USC 206) is a funding resource dedicated to constructing and maintaining motorized and non-motorized trails. Half of this resource is equally divided among each state and the other half is distributed to qualifying states that have non-highway recreational fuel consumption. State agencies, such as transportation and parks and wildlife departments, are responsible for administering the Rails to Trails program through a competitive application process. Eligible recipients of the RTP financial assistance include local and regional agencies, and non-profit

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organizations. Projects that qualify for funding from the RTP program include mixed use and constructing new mixed use and non-motorized trails, maintaining existing trails, educational programs geared towards safety and environmental protection, inventory or assessment of existing trail conditions, and the acquisition of easements or property.

Federal Transit Administration Capital, Urban and Rural

The Federal Transit Administration (FTA) (49 USC 5307) provides capital improvement and transportation planning assistance funding to transit operators in small urban and urban communities, as designated by the US Census Bureau, with 50,000 to 200,000 in population size. Funding resources are formula based and distributed by population size and density. Similar to the other funding sources, the FTA capital grant program requires at the maximum, an 80% federal funding match and a minimum of 20% non-federal match.

Eligible recipients for FTA capital formula grants include any publically owned transit operator or governmental agency that has the authority to accept and disperse federal resources. Most capital improvement projects that qualify for FTA funding include vehicle, computer and software acquisition, and the construction of maintenance and transit centers. Other capital improvements that enhance multi modal connections to transit are another qualifying area for FTA grants funding. These related projects include adding bike racks to vehicles, providing bicycle storage near transit centers, and accessible pathways near bus stops.

State/Metropolitan Planning Funds

Both State (23 USC 134 (F)) and Metropolitan (23 USC 505) Planning grants are available for providing financial assistance to statewide and metropolitan bicycle and pedestrian planning processes. States and metropolitan regions are required to use a small portion of their Federal-aid highway funding to support planning efforts. Only activities specific to planning for bicycle and pedestrian improvements at the state and metropolitan level are eligible for these resources.

6.2 Facility Maintenance

From a user’s perspective, one of the most important jobs of the management of the system is that it is kept in a safe and clean condition. This is done by the ongoing maintenance of the system. In addition to surface conditions such as roadway striping, signage, and sweeping schedules, the maintenance of bicycle facilities can extend to security lighting of over or underpasses, grooming of trails, installation and upkeep of parking stands and possibly shower or changing areas.

Bicyclists ride on two narrow, high-pressure tires. What may be an adequate roadway surface for automobiles (with four wide, low-pressure tires) can be treacherous for cyclists. Small rocks, branches and other debris can deflect a wheel. Sand, loose gravel and small imperfections in the surface of the roadway can cause bicycle accidents. Minor ridges in the pavement can cause spills, and potholes can cause wheel rims to bend. Wet leaves are slippery and can cause a fall. Gravel blown to the side by
traffic accumulates in the area where bicyclists ride. Broken glass can easily puncture bicycle tires. For these reasons, in the case of on-road bicycle facilities, management should extend to the furthest edge of the roadway surface. Poor maintenance of a bicycle or pedestrian system may discourage use of the facility.

Facility users are often the first to experience deficiencies. Spot-improvement programs enable bicyclists and pedestrians to bring problems to the attention of authorities in a quick and efficient manner. Postage-paid, pre-addressed postcards can be made available to the public, to be sent in when they notice a needed improvement. Telephone numbers for the point person and other staff contacts can be included. The point person should have the ability to respond quickly to requests of maintenance and should value the public input. The facility users, in essence, will help staff to spot and maintain the conditions of the network.

*Striping and Signage*

All striped lanes and lane markings should be standard width white paint (4") and clearly visible to motorists. The layout of signs and markings should be consistent and conform to the Texas or Arkansas Manual of Uniform Traffic Control Devices (MUTCD) as appropriate.

Some municipalities have opted to use raised pavement markers (RPM) to help discourage driving in the marked bicycle lanes. RPMs can be problematic for bicyclists. Per the MUTCD, "raised markers generally should not supplement right edge lines", therefore, it is suggested that existing RPMs be removed if not needed for motorist safety. Any RPMs deemed necessary should be installed on the motorists' side of the stripe.

A regular schedule of restriping and maintenance of signage and markings should be instituted and their locations should be noted on the inventory.

*Facility Sweeping*

Bicyclists avoid shoulders and bike lanes filled with gravel and other debris; they will ride in the roadway instead. Debris from the sidewalk should not be swept onto the roadway.

A regularly scheduled sweeping program helps ensure that travel way litter is picked up or swept. If possible, seek to prevent the problem by encouraging the use of tarps over gravel trucks and requiring immediate clean up of broken glass and other hazards at car crash sites.

*Street Repairs and Overlays*

Pavement overlays are good opportunities to improve conditions for cyclists if done carefully: a ridge should not be left in the area where cyclists ride. This can occur where an overlay extends part-way into a shoulder bikeway or bike lane. Overlay projects also offer opportunities to improve the outside lane or shoulder, where bicyclists often travel, or to stripe the roadway with bike lanes.
After overlays, raise inlet grates, manhole and valve covers to within 6 mm (1/4") of the pavement surface. Pave gravel driveways and approaches 4.5 m (15 ft) from the edge of pavement to prevent gravel from spilling onto shoulders or bike lanes.

For rural and recreational routes in areas subject to water runoff, a maintenance program for erosion should be developed. Local ordinances should allow road authorities to control vegetation that originates from private property. Some jurisdictions require adjacent landowners to control vegetation, or else maintenance personnel perform the work and bill the property owner.

### 6.3 Performance Measures

One way to measure the performance of this Plan is by counting the miles of trails, sidewalks, and bicycle lanes built and the number of crosswalks and bicycle- and pedestrian-friendly intersections installed. However, the true measure of the system is how well it addresses the priorities of the people of Texarkana. The people have expressed their thoughts on this subject in public meetings as described in section 1.5. Based on these criteria, some potential performance measures are:

- Percent of parks accessible by bicycle and walking,
- Percent of schools accessible by bicycle or walking, and
- Gaps filled.

It may be appropriate for a pedestrian and bicycle panel to develop relevant measures.
**APPENDIX A: Average Scores of Project Criteria from Public Meeting**

<table>
<thead>
<tr>
<th>Prioritized Criteria Ranking</th>
<th>Average Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinates with other local plans (i.e. Safe Routes to Schools, City Bike/Pedestrian Plan, Rails to Trails)</td>
<td>4.8</td>
</tr>
<tr>
<td>Proximity to park</td>
<td>4.5</td>
</tr>
<tr>
<td>Proximity to school (nearness to any school, college, or univ.)</td>
<td>4.4</td>
</tr>
<tr>
<td>Cost/Likelihood of funding</td>
<td>4.3</td>
</tr>
<tr>
<td>Extend path/trail (continue an existing sidewalk or trail)</td>
<td>4.3</td>
</tr>
<tr>
<td>Security issues addressed (security is related to intentional harm, such as when someone robs you)</td>
<td>4.3</td>
</tr>
<tr>
<td>Street traffic (amount of traffic)</td>
<td>4.1</td>
</tr>
<tr>
<td>Safety issues addressed (unintentional harm, such as when you trip)</td>
<td>4.1</td>
</tr>
<tr>
<td>Filling gaps (connecting existing sidewalks or trails)</td>
<td>4.1</td>
</tr>
<tr>
<td>Enhancements (additions to an existing path or trail such as lighting, signs, paint)</td>
<td>4.1</td>
</tr>
<tr>
<td>Supports community health plan</td>
<td>4.0</td>
</tr>
<tr>
<td>Public support</td>
<td>3.9</td>
</tr>
<tr>
<td>Environmental impact</td>
<td>3.9</td>
</tr>
<tr>
<td>Eliminate barriers</td>
<td>3.9</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>3.8</td>
</tr>
<tr>
<td>Demonstrated demand (desire line/beaten path)</td>
<td>3.8</td>
</tr>
<tr>
<td>Supports economic development</td>
<td>3.8</td>
</tr>
<tr>
<td>Promotes commuting</td>
<td>3.7</td>
</tr>
<tr>
<td>Pass through, or adjacent to, neighborhoods with socioeconomics likely to generate high pedestrian use (e.g. senior community)</td>
<td>3.7</td>
</tr>
<tr>
<td>Street classification (streets are arranged on a hierarchy from low capacity local streets to high capacity highways)</td>
<td>3.7</td>
</tr>
<tr>
<td>Maintain existing resources</td>
<td>3.7</td>
</tr>
<tr>
<td>Proximity to civic building (nearness to buildings such as a library or city hall)</td>
<td>3.6</td>
</tr>
<tr>
<td>Upgrade to meet current standards (older sidewalks and paths that may not meet current engineering standards)</td>
<td>3.6</td>
</tr>
<tr>
<td>Multimodal connection (connect to another mode such as the bus or train)</td>
<td>3.5</td>
</tr>
<tr>
<td>Fulfilling mandates</td>
<td>3.5</td>
</tr>
<tr>
<td>Future development with attractors/generators</td>
<td>3.5</td>
</tr>
<tr>
<td>Proximity to shopping</td>
<td>3.4</td>
</tr>
<tr>
<td>Number of residents within ¼ mile of facility</td>
<td>3.3</td>
</tr>
<tr>
<td>Amenities - for people and pets</td>
<td>3.3</td>
</tr>
<tr>
<td>Connects neighborhoods to destinations</td>
<td>2.7</td>
</tr>
<tr>
<td>Develop routes on wide streets</td>
<td>0.7</td>
</tr>
<tr>
<td>Follow legal guidelines</td>
<td>0.7</td>
</tr>
<tr>
<td>Task</td>
<td>Score</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Continual development</td>
<td>0.5</td>
</tr>
<tr>
<td>Add route markings and signs</td>
<td>0.3</td>
</tr>
<tr>
<td>Volunteer efforts needed</td>
<td>0.3</td>
</tr>
<tr>
<td>Advertise in paper and travel magazines</td>
<td>0.3</td>
</tr>
<tr>
<td>Lake/water for dogs to swim or wade</td>
<td>0.3</td>
</tr>
<tr>
<td>Volunteer maintenance plans</td>
<td>0.3</td>
</tr>
<tr>
<td>More meetings</td>
<td>0.3</td>
</tr>
</tbody>
</table>
APPENDIX B: Public Involvement and Local Press Coverage

Between March and June of 2009 six public meetings were held to gather input from the public. Participants were asked to give their input by drawing on maps, providing weighted voting on priorities and projects, and generally discuss their thoughts on the bicycling and walking in Texarkana. In addition, a Bicycle and Pedestrian Safety Workshop was held for interested parties. The workshop drew representatives from both state transportation departments, both Cities of Texarkana, the local bike club, and a local non-profit dedicated to providing trails throughout the Texarkana area.

Public input wanted on pathways

Officials seek master plan; residents have until July deadline to voice ideas, concerns

By Beverly S. Crippen
Texarkana Gazette

Public opinion is a step in the right direction when planning paths and this is what the local Metropolitan Planning Organization is doing.

The MPO has contracted with Alliance Transportation Group from Austin to help develop Texarkana’s first pedestrian and bicycle path master plan. Part of the process is gathering input from the people who will use the pathways.

“We hope to get a good sense of what the public would like to see first,” said MPO Director Brad McLain. “Probably the worst thing we can do is hold

See PATH on Page 6A
Path

Continued from Page 1A

something nobody uses.” Suggestions and concerns will be collected in a meeting next week.

“There’s a growing interest in alternative modes of transportation, especially with the state of the economy and the cost of fuel and cost to own and operate a vehicle,” McCaleb said.

“People just like to have those facilities available. They’re attractive, it adds to the quality of life.”

McCaleb said that quality of life is what many companies consider when building industries and creating jobs.

“In a number of surveys, bike/pedestrian facilities, trails, those amenities are consistently in the top five of things businesses look for,” McCaleb said. “It’s one of the things that really gets their attention. The perception is, if you have those facilities (the area cares) about how the community looks and feels.”

Several suggestions have already been made about locations for development or improvement of pathways and sidewalks around the city.

McCaleb said Partnership for the Pathway, a local nonprofit group that spearheaded several trails projects, will be instrumental in developing and implementing the master plan.

But the projects and focus areas will largely be determined by the community’s feedback.

“Up to this point we’ve concentrated on areas within two blocks of our public schools,” McCaleb said. “Obviously commercial areas are of interest.”

Once the plan is created it will take years to see all the pieces implemented.

“If I see us being the basics, a beginning point,” McCaleb said. “Hopefully we’ll be able to come back and add to this plan in the future.”

City and community leaders will also be updated as the plan develops.

“We try to meet with elected officials to make them aware of what we’re going to cover ... and see if they have questions for specific issues they would like for us to look at,” McCaleb said.

Several meetings are scheduled to gather public input for the master pedestrian plan. The first one is 6:30 p.m. Tuesday in the Pleasant Grove High School cafeteria, 5406 McKnight Road.

The deadline for receiving the public’s comments is July 2, but McCaleb said those submitted earlier can be considered in the public forums.

A comment form is also available on the MPO’s Website at texarkanampo.org.

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SATURDAY, MARCH 16

AND ON WWW.TEXARKANAGAZETTE.COM

Janet Barnes
315 Pine Street
Texarkana, TX
903-294-3311
email: jlbarnes@texhco.com

Janet Barnes has been the office manager at the Texarkana Gazette since December 1998. She has served in all phases of the accounting area. She was voted Texarkana Gazette Employee of the Year as well as W.E. Husbands Employee of the Year in 1998 graduate of East Texas State University, Texarkana, she received the Distinguished Alumni Award in 1998. She is also a graduate of Leadership Texarkana and is an ad member of Apostolic Tabernacle, Texarkana, AR. Janet and her husband, Mark, her daughter, son-in-law, 2 grandchildren, 1 granddaughter & 1 great-granddaughter.
Community input helps outdoor planning

By BRANDY S. CHEWING
Texarkana Gazette

Fifteen interested citizens attended a meeting Tuesday that will help create a master plan for walking and biking paths in the Texarkana area.

Metropolitan Planning Organization Director Brad McCaleb said the public input is needed to understand the concerns and desired projects of the community.

"When that's left up to staff level individuals like myself or professionals in the transportation industry, we might not have the same perspective as the local community," he said.

The community input will be included in the bike/ped master plan, a document opening the door to additional funding sources.

"The way things work in transportation, you have to do the planning and project development in order to be eligible to get any funding for the projects," McCaleb said.

"Whether it's funding through the state, federal sources or grant money, everybody wants to know what you're going to do with it ... if there's support for the project, have you looked at environmental issues?"

McCaleb said a recent missed opportunity was the widening of Highway 82 in Texarkana. Ark Highway officials were prepared to include a pedestrian pathway in the construction, but one was not in the transportation master plan.

Residents at Monday's meeting reviewed lists of proposed goals and objectives and added their own, such as routes to cross major arteries like Interstate 30 and State Line Avenues. Many also expressed support of educating motorists on sharing roads with cyclists.

\[ \text{Brad McCaleb, Director Texarkana Metropolitan Planning Organization, takes input from the public during a meeting aimed at developing a master plan for walking and bike pathways around the city.} \]

- Adding bicycle lanes to roads already wide enough to accommodate them.
- Recommendations for existing and future trails included amenities for people and pets using them, such as shade and attractive landscaping, benches, trash receptacles and water fountains.

The draft of the master plan will be prepared next month, but more meetings will still allow for public input.
Path plan uses rail lines, calls for more data

BY BRANDY S. CHEWING
Texarkana Gazette

The draft plan for pedestrian and bicycle pathways in Texarkana was unveiled Tuesday, recommending several changes and listing more that can be researched further.

Lisa Weston, Alliance Transportation project manager, showed a conceptual plan for "Mockingbird Junction."

Named for the state bird of both Texas and Arkansas, the hiking and walking path would be a continuation of a national project utilizing abandoned rail lines.

The Rails to Trails program is planned to connect Paris and New Boston, and Weston suggested extending a branch to Texarkana that would then fork to the northeast and southeast.

The plan also recommends:

- Trail connections that tie existing segments together.
- Trails along creeks and extending the Nix Creek Trail in Texarkana, Ark., to Crossroads Business Park and Hobo Jungle Park.
- Paths connecting several school campuses including Texas A&M University Texarkana at Bringle Lake.

A connection between the Greyhound bus and Amtrak stations.

Comments have been submitted in four public meetings since March, and those, combined with input from local transportation officials, outlined the plan for non-motorized transportation paths.

Weston also suggested gathering more information to be stored in a database, such as right-of-way availability and crash data for pedestrians and cyclists.

Another suggestion was uniform marking of pedestrian and cycle areas.

"Not all projects are laying concrete or asphalt and doing major things like that," Weston said. "In some places, paint and signs will help make things more clear for the riding public as well as for the motoring public."

The plan is a 25-year planning document. The draft will be available next week for review online at www.texarkanaapd.org and comments are still being accepted.

The final version will be presented at 5:30 p.m. July 9 at the Texas Municipal Building.
Future pathways
Committee reveals draft plan for bicycle, pedestrian access trails

BY BRANDY S. CHEEKING
Texarkana Gazette

Months of research was unveiled Thursday in the form of a draft master plan for bicycle and pedestrian access ways around Texarkana.

While suggestions are still coming in, Dr. Lisa Weston, a senior planner with Alliance Transportation Group, suggested forming an advisory committee to work between the local Metropolitan Planning Organization and the public to implement the 25-year plan.

Part of a large transportation plan Weston dubbed Mockingbird Junction for the state bird of Texas and Arkansas, potential pathways include abandoned railways and future interstate corridors.

“This demonstrates commitment to quality of life for businesses coming,” she said. “A lot of businesses can pick anywhere to go and Texarkana is what it is—it’s a junction of railroads of three, four states. It’s a nice place to live.”

MPO Director Brad McCaleb agreed.

“Several research studies have been done and have found bike and pedestrian amenities are in the top five (desires) of businesses looking to relocate, because they’re looking out for what their employees want,” he said. “There’s also research out.

See PATHS on Page 6A

Daniel DuFrees and Terry Spivey, both Texarkana, Texas, bicyclists, look over a map of proposed pathways for non-motorized transportation around Texarkana. Thursday, the local Metropolitan Planning Organization presented the plan draft, which Spivey said will help make cycling safer for area residents.
Paths

Continued from Page 1A

there that indicates residential and commercial property that has access to bike/ped facilities has a higher market value. It's more desirable because of the aesthetics and the access and the whole quality-of-life issue.

Public comments included in the plan include requests to get trails to schools and parks and improving safety such as adding lighting and separating pedestrians from traffic.

"People often think of bicycles and pedestrians together," Weston said. "They are different. Bicycles are considered a vehicle and they can share with motor vehicles. Pedestrians cannot."

McCaleb said some projects listed in the plan are still under review to determine if they will hold pedestrian paths, bike paths or both.

Traditional recommendations in a bicycle plan include trails, cycle lanes, signal, parking and signals that will sense and change to cyclists such as underground loops.

More suggestions made Thursday included cameras at intersections that will recognize and change traffic signals for bicyclists.

The plan also points out improvements silently voiced by the community called desire lines, areas so frequently traveled that paths are worn down to the dirt. One need Weston noted was an improved "P" Line bus stop near the Greyhound bus station in Texarkana, Ark.

"This is an intermodal connection, it's obviously a well-used stop because the grass is all mowed down and it's just a stick by the road between the frontage and the interstate,"
she said. "People who obviously don't drive are coming to Texarkana and this is how they are getting through town, by standing by the side of the road."

A major installment of the plan is a list of more than a dozen potential funding sources at the local, state and federal levels. McCaleb said without a master plan for these projects, the MPO could not agree about 80 percent of those sources.
### APPENDIX C: Pedestrian Generators Included in this Plan

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>State</th>
<th>Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberty Eylau Pre-Kindergarten School</td>
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<tr>
<td>Carver Kindergarten School</td>
<td></td>
<td></td>
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<tr>
<td>Liberty Eylau Primary School</td>
<td></td>
<td></td>
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<td>C.K. Bender Elementary School</td>
<td></td>
<td></td>
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<tr>
<td>College Hill Elementary School</td>
<td>200 Artesian</td>
<td>AR</td>
<td></td>
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<tr>
<td>Dunbar Elementary School</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fairview Elementary School</td>
<td>820 E. 17th</td>
<td>AR</td>
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<tr>
<td>Highland Park Elementary School</td>
<td></td>
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<tr>
<td>Kilpatrick Elementary School</td>
<td>904 E. 35th</td>
<td>AR</td>
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<tr>
<td>Morriss Elementary School</td>
<td></td>
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<td></td>
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<tr>
<td>Nash Elementary School</td>
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<tr>
<td>Pleasant Grove Elementary School</td>
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<tr>
<td>Red Lick Elementary School</td>
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<tr>
<td>Spring Lake Park Elementary School</td>
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<td></td>
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<tr>
<td>Trice Elementary School</td>
<td>4505 Pinson</td>
<td>AR</td>
<td></td>
</tr>
<tr>
<td>Union Elementary School</td>
<td>1701 Line Ferry Rd.</td>
<td>AR</td>
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<tr>
<td>Wake Village Elementary School</td>
<td></td>
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<tr>
<td>Westlawn Elementary School</td>
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<tr>
<td>North Heights Junior High School</td>
<td>2118 E. 35th</td>
<td>AR</td>
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<tr>
<td>College Hill Middle School</td>
<td>1600 Forrest</td>
<td>AR</td>
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<td>Liberty Eylau Middle School</td>
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<tr>
<td>Pleasant Grove Middle School</td>
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<tr>
<td>Red Lick Middle School</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Texas Middle School</td>
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<tr>
<td>Arkansas High School</td>
<td>1500 Jefferson Ave.</td>
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<td>Pleasant Grove High School</td>
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<tr>
<td>Texas High School</td>
<td></td>
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<tr>
<td>Liberty Eylau School of Success Options School</td>
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<td></td>
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<tr>
<td>Theron Jones Early Literacy Center</td>
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</tr>
<tr>
<td>W.T. Daniels School</td>
<td>223 E. Short 10th St.</td>
<td>AR</td>
<td>Gifted/Talented and Special Ed.</td>
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<tr>
<td>Washington 4-A Academy</td>
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<tr>
<td>Texarkana College</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Texas A&amp;M University</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Parks/Community Centers</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities, Inc.</td>
<td>6101 State Line Rd.</td>
<td>TX</td>
<td>Senior Adult Day Center &amp; Child Care</td>
</tr>
<tr>
<td>Grady T. Wallace</td>
<td>3419 Leopard Dr.</td>
<td>TX</td>
<td>Community Park</td>
</tr>
<tr>
<td>Bringle Lake</td>
<td>7602 Bringle Lake Rd.</td>
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<td>Community Park</td>
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<tr>
<td>William Karrh</td>
<td>2102 S. Ann</td>
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<td>Community Park</td>
</tr>
<tr>
<td>Name</td>
<td>Address</td>
<td>State</td>
<td>Qualities</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------</td>
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<tr>
<td>Collins Memorial Senior Center</td>
<td>3000 Texas Blvd.</td>
<td>TX</td>
<td>Community Center</td>
</tr>
<tr>
<td>Southwest Recreation Center</td>
<td>3222 W. 7th St.</td>
<td>TX</td>
<td>Community Center</td>
</tr>
<tr>
<td>Vera Bradfield Park and Community Center</td>
<td>616 Euclid St.</td>
<td>TX</td>
<td>Community Center</td>
</tr>
<tr>
<td>Jefferson Park</td>
<td>E. 12th and Jefferson AR</td>
<td></td>
<td>Community Park (amphitheater)</td>
</tr>
<tr>
<td>Inghram Park</td>
<td>Preston and Des Moines AR</td>
<td></td>
<td>Community Park (pool)</td>
</tr>
<tr>
<td>Hobo Jungle Park</td>
<td>Division and Roberts AR</td>
<td></td>
<td>Community Park (BB fields, tennis ct.)</td>
</tr>
<tr>
<td>Beverly Community Center</td>
<td>201 Lumpkin St.</td>
<td>TX</td>
<td>Community Center</td>
</tr>
<tr>
<td>Bell Park</td>
<td>3208 Lincoln Ave</td>
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<td>Beverly Park</td>
<td>2612 New Boston</td>
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<td>Findley Park</td>
<td>410 Findley</td>
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<td>Scott Joplin Park</td>
<td>1621 West St.</td>
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<tr>
<td>Ferguson Park</td>
<td>3000 Texas Blvd.</td>
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<td>Mini-Park (across from Community Center)</td>
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<tr>
<td>Kidtopia</td>
<td>201 Oak St.</td>
<td>TX</td>
<td>Mini-park (across from Library)</td>
</tr>
<tr>
<td>Bobby Ferguson Park</td>
<td>AR 245 and IH 30</td>
<td>AR</td>
<td>Community Park (fairgrounds)</td>
</tr>
<tr>
<td>Bramble Park</td>
<td>1002 Ferguson</td>
<td>AR</td>
<td>Community Park (BkB cts, fishing)</td>
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<tr>
<td>Ed Worrall Park</td>
<td>E. 35th and Forestwood AR</td>
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<tr>
<td>Senator Street Park</td>
<td>E. 28th and Senator AR</td>
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<tr>
<td>Sandflat/Glendale Park/</td>
<td>209 E. 14th St.</td>
<td>AR</td>
<td>Neighborhood Center</td>
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<td>Kline Park</td>
<td>County Ave. and MLK, Jr. Blvd.</td>
<td>AR</td>
<td>Neighborhood Park</td>
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<td>Peyton Park</td>
<td>E. 3rd and E. Broad AR</td>
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<td>Neighborhood Park</td>
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<tr>
<td>George Williams and Ernest Hill Park</td>
<td>Siebert and Preston AR</td>
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<td>Neighborhood Park</td>
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<tr>
<td>Iron Mountain Park</td>
<td>E. 15th and Ray AR</td>
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<td>Neighborhood Park (BkB cts, tennis ct)</td>
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<td>Spring Lake Park</td>
<td>4303 North Park Rd.</td>
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<tr>
<td>Public Library</td>
<td>600 W. 3rd St.</td>
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<td>Texarkana Boys &amp; Girls Club</td>
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<td>AR</td>
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<td><strong>Malls/Shopping Centers</strong></td>
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<td>Central Mall</td>
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<td>Oaklawn Village Shopping Center</td>
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<tr>
<td>Richmond Ranch Shopping Center</td>
<td>Richmond and IH 30</td>
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<tr>
<td><strong>Medical</strong></td>
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<td>Christus St. Michael</td>
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<td>Acute Care Hospital</td>
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<td>Wadley Regional Medical Center</td>
<td>1000 Pine St.</td>
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<td>Acute Care Hospital</td>
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<td>Rehabilitation Hospital</td>
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<td>Address</td>
<td>State</td>
<td>Qualities</td>
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<td>------------------------------------------------</td>
<td>----------------------------</td>
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<td>--------------------</td>
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<td>Temple Memorial Rehabilitation Center (Easter Seals)</td>
<td>1315 Walnut</td>
<td>TX</td>
<td>Training and Rehab</td>
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<tr>
<td>Texarkana Spec. Ed. Center (Opportunities, Inc.)</td>
<td>6101 N. State Line</td>
<td>TX</td>
<td>Training and Rehab</td>
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<td>Texarkana Resources for the Disabled</td>
<td>3015 E. 19th St.</td>
<td>AR</td>
<td>Training and Rehab</td>
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**Tourist Destinations**

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<tr>
<th>Name</th>
<th>Address</th>
<th>State</th>
<th>Qualities</th>
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<tbody>
<tr>
<td>Museum of Regional History</td>
<td>219 State Line Ave.</td>
<td>TX</td>
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<tr>
<td>Texarkana Regional Arts and Humanities Center/Perot Theatre</td>
<td>221 Main St.</td>
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<tr>
<td>Ace of Clubs House</td>
<td>420 Pine St.</td>
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<tr>
<td>Post Office/Federal Courthouse</td>
<td>500 N. State Line Ave.</td>
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<td>Tex-Ark Antique Auto Museum</td>
<td>217 Laurel St.</td>
<td>AR</td>
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<tr>
<td>Discovery Place</td>
<td>215 Pine St.</td>
<td>AR</td>
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<tr>
<td>Texarkana Amtrak Station</td>
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<td>AR</td>
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<tr>
<td>Cinemark Theater 350</td>
<td>4230 St. Michael Dr.</td>
<td>TX</td>
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</table>
APPENDIX D: Potential Transportation Infrastructure Upgrades Near Schools

The following recommendations are based on a brief evaluation of transportation infrastructure near area schools. Exact specifications should be determined after completing a Safe Routes to School plan for an individual school. However, if improvements are planned for a nearby roadway before that plan is completed, these are projects that should be considered for inclusion to benefit students accessing the school.

Note: CW & PW = crosswalks and pedheads

**Pleasant Grove Elementary School**

- Sidewalks: N. King’s Highway
- Crosswalks: N. King’s Highway
- Ped Heads: Richmond & N. King’s Highway

**Nash Elementary School**

- Sidewalks: N. King’s Highway from Alumax to Front St.
- CW & PH: N. King’s Highway & U.S. 82

**Pleasant Grove High School/ Morriss Elementary School**

- Sidewalks: McKnight
- Crosswalks: Gin Rd. (when it is extended)
  McKnight & Gibson
- Ped Heads: McKnight & Gibson

**Pleasant Grove Middle School**

- Sidewalks: Moores
- CW & PH: Moores & Cowhorn Creek

**Texas Middle School/Texas High School**

- CW & PH: Summerhill & Kennedy
  Summerhill & College Dr.

**Spring Lake Park Elementary School**

- Crosswalks: Elizabeth & McCartney
  Ghio-Fish & W. 41st
- Ped Heads: Elizabeth & McCartney
  Ghio-Fish & W. 41st
Trice Elementary School
CW & PH    Jefferson & Arkansas

Kilpatrick Elementary School
CW & PH    Jefferson & E. 35th

Fairview Elementary School/Arkansas High School
CW & PH    Jefferson & E. 18th
            Jefferson & E. 9th

Liberty Eylau Elementary School
CW & PH    Lake Dr. and Leopard
APPENDIX E: Sample Ordinance Language

In order to create pedestrian-friendly communities, areas may consider adopting ordinances that address the following issues:

- Requirements to include pedestrian planning early in the site planning process,
- Pedestrian-friendly design principles that address factors such as reduced street widths, accessible street crossings, accessible sidewalk standards, and street lighting standards,
- Requirements for connectivity between adjacent developments,
- Requirements for commercial developments to place parking to the side or back of the lot and encourage of shared parking, and
- Requirements for commercial developments to provide pedestrian access between buildings on their property and to adjacent properties.

Safety Regulations for Bicycle and Pedestrian Users

Municipalities may utilize various types of ordinances to enforce the safety of bicycle and pedestrian travel modes. For instance, there are ordinances that focus solely on the requirement for bicyclists and pedestrians to obey all traffic-control devices. Examples of these types of bicycle and pedestrian traffic control ordinances are provided below:

- **Sec. 54-567. Obedience to traffic-control devices.**

  Any person operating a bicycle or motorized bicycle shall obey the instructions of official traffic-control signals, signs and other control devices applicable to vehicles, unless otherwise directed by a police officer. (Denver, CO, Code 1950, § 522.12)

- **Sec. 54-535. Subject to traffic-control devices.**

  Pedestrians are subject to obey traffic-control signals heretofore declared in section 54-101, but at all other places pedestrians shall be granted those rights and be subject to those restrictions stated in this article. (Denver, CO, Code 1950, § 521.1)

Another type of safety regulations are ordinances that regulate what rights-of-way bicyclists and pedestrians are allowed to and prohibited from utilizing. For example, most municipalities do not allow bicyclists to ride on sidewalks or pedestrians to walk in busy streets. An example of right-of-way ordinances for the City of Minneapolis and Denver’s municipal code are listed below.

- **PB9-94. Riding on designated pedestrian path prohibited; exception.**

  No person shall ride a bicycle on any designated pedestrian path except where such path is also a designated bicycle path. (Minneapolis, MN, Code 1960, As Amend., § 1044.020; Pk. Bd. Ord. No. 74-102, § 2, 5-1-74)
Sec. 54-545. Right-of-way on sidewalks.
A pedestrian shall have the right-of-way upon a sidewalk at all times over any motor-driven or self-propelled vehicle which will carry a person on wheels, such as coasters, bicycles, toy vehicles, skateboards, roller-skates, wagons or similar devices, and including motor-driven, wheeled devices designed for operation by persons with mobility handicaps. (Denver, CO, Code 1950, § 521.10)

Other types of ordinances only apply to bicycle users. Such laws include helmet use for children, parking and speed enforcement. Depending on state laws, municipalities may or may not require bicyclists to wear helmets. However, in most cities bicyclists are required to ride at a speed that is safe and park their bikes in locations that do not impede other motorists or pedestrians. The following ordinances are examples of other types of ordinances that are specific to bicyclists:

- § 12-2-31 Helmet Required.
Except as permitted by Section 12-2-33 (Health Condition Exemption) a child may not operate or ride on a bicycle, sidecar, trailer, child carrier, seat, or other device attached to a bicycle unless the child is wearing a helmet. (Austin, TX Source: 1992 Code Sections 16-8-1 and 16-8-40; Ord. 031204-13; Ord. 031211-11.)

- Sec. 54-575. Parking.
It shall be unlawful for any person to park a bicycle or motorized bicycle upon a street other than upon the roadway against the curb or upon the sidewalk in a rack to support the bicycle or motorized bicycle or against a building or at the curb, in such manner as to afford the least obstruction to pedestrian traffic. (Denver, CO, Code 1950, § 522.18)

- Sec. 32-490. Speed.
No person shall operate a bicycle at a speed greater than is reasonable and prudent under the conditions then existing. (Code 1961, § 39-118)

Bicyclists and Pedestrians Interaction with Motorists
Roadways and intersections are often shared with motorists, bicyclists and pedestrians. As a result, it is critical for bicycle and pedestrian ordinances to state how they are to interact with motorists and each other. For instance, regulations must clearly address how pedestrians and bicyclists are to interact with motorists and each other near intersections with complicated turning movements or one-directional traffic. In addition, on roadways with vehicles traveling at high speeds, motorists should be encouraged to exercise due care and proactively avoid collision with bicyclists and pedestrians. An example of this type of ordinance is provided below:

- SMC 11.44.040. Riding on roadways.
Every person operating a bicycle upon a roadway at a speed slower than the normal and reasonable flow of motor vehicle traffic thereon shall ride as near to the right side of the right through lane as is safe, except as may be appropriate while preparing to make or while making turning movements, or while overtaking and passing another bicycle or vehicle proceeding in the same direction. A person operating a bicycle upon a roadway that carries traffic in one (1) direction only and that has two (2) or more marked traffic lanes may ride as near to the left side of the left through lane as is safe. A person operating a bicycle upon a roadway may utilize the shoulder of the roadway or any specially designated bicycle lane if such exists. (RCW 46.61770(1)) (Seattle, WA,Ord. 108200 Section 2(11.44.040), 1979.)

- **Sec. 54-538. Right-of-way in crosswalk.**
  When traffic-control signals are not in place or not in operation, the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave the curb or edge of the roadway, or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield the right-of-way. A pedestrian’s right-of-way in the crosswalk is modified under the conditions and as stated in section 54-540. Whenever any vehicle is stopped at a marked crosswalk or at an unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle. (Minneapolis, MN, Code 1950, § 521.3)

- **Sec. 54-544. Drivers to exercise due care.**
  Notwithstanding the other provisions of this article, every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian upon any roadway and shall give warning whenever necessary and shall exercise proper caution upon observing any child or any confused, blind or incapacitated person upon a roadway, sidewalk area or other public way. (Minneapolis, MN)

**Promote the use of Biking and Walking**

Other regulations such as land use ordinances promote and encourage the use of alternative transportation modes such as bicycling and walking. These types of ordinances may be implemented for various reasons such as to meet a municipality’s goals for reducing energy consumption, improving air quality, increasing roadway capacity and curbing traffic related congestion and enhancing quality of life. These ordinances include subdivision and zoning regulations, commercial development and street design guidance.\(^{13}\) Examples of these types of regulations are provided below:

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\(^{13}\) Federal Highway Administration, *Using Land-Use Regulations to Encourage Non-Motorized Travel*
• 35.02.010 Required when building constructed
Any person who constructs or causes to be constructed any building or dwelling in the city shall construct curbs, gutters, sidewalks and streets in accordance with the city specifications along all street frontage adjoining the property upon which such building or dwelling is constructed, unless adequate curbs, gutters, sidewalks or streets already exist; provided, that in areas not subdivided or parceled into lots of one-half acre or less, such curbs, gutters, sidewalks and streets already exist shall be determined in each instance by the public works department, and an endorsement to that effect shall be made upon each building permit at the time it is issued. The building inspector shall deny final approval and acceptance, and shall refuse to allow final public utility connections, to any building or dwelling unless such curbs, gutters, sidewalks and streets exist, are constructed or unless money or a bond to guarantee their construction is deposited with the city in a sum equal to the estimated cost of the construction of the improvements as determined by the public works department. (Davis, CA Code 1964, § 5-5.103.)

• Block Length Requirements
In the R2S District, block lengths shall not, as a general rule, exceed 500 feet in length between street lines, unless required by exceptional topography or other limiting factors when approved by the Plan Commission. (Madison, WI, Sec. 28.08(13) Cr. by Ord. 11,436, 12-4-95)