



WACO

WACO RIVERWALK

THE BRAZOS RIVER IS THE HEART OF WACO.



DOWNTOWN WACO



Waco's history begins on the banks of the Brazos River. The earliest known human habitation was by the *Waco* people, who lived in the area for thousands of years. The city was founded in 1856 by a group of pioneers led by James W. Throckmorton. The city's name is derived from the *Waco* people, who were the dominant tribe in the area at the time of the city's founding.

The "Wacoing the Brazos" sculpture, created by artist Robert Summers, is located in Indian Spring Park and depicts the city's history and its connection to the Brazos River. The sculpture is a large, abstract work of art that is a tribute to the city's heritage.

The historic downtown area of Waco is a vibrant and walkable neighborhood. It features a mix of historic and modern architecture, as well as a variety of shops, restaurants, and cultural institutions. The downtown area is a great place to explore the city's history and enjoy the local scene.

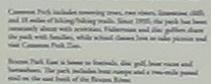
HISTORY & CULTURE

Waco's history is rich and diverse, with a long and storied past. The city was founded in 1856 and has since become a major center of commerce and industry in the state. The city's history is reflected in its architecture, culture, and traditions.



PARKS TRAIL

Waco is home to several beautiful parks and trails, offering a variety of recreational opportunities for residents and visitors alike. The city's parks are well-maintained and provide a great place to enjoy the outdoors.



WHICH WAY ARE YOU HEADED?

- 2 1/2 miles to downtown Waco
- 1 1/2 miles to downtown Waco
- 1 mile to downtown Waco
- 1/2 mile to downtown Waco
- 1/4 mile to downtown Waco

Riverwalk Map | www.waco-texas.com | Event Info or Trail Issues | (254) 750-9988 | Emergency Services | 911



CHAPTER 5:

IMPLEMENTING OUR TRAILS VISION

Chapter 5, Implementing Our Trails Vision, identifies the strategies and tools to move forward with the trail-building projects necessary to create and enhance the Waco Metropolitan Trails System. The Master Plan’s work program includes a list of prioritized investment projects and associated policies and programs that are essential for creating a city-wide trails system that meets the long-term interests and needs of our residents and visitors.

Successful implementation of our work program requires more than a simple acknowledgment of ideas for trail building. There must be a clear plan champion that can rally consistent buy-in from the partnering agencies that are essential for expanding, marketing and maintaining an ever-growing system. Even more challenging will be our efforts toward securing ongoing funding for our network, including recurring revenues to maintain our trails in a way that exceeds users’ expectations.

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TRAILS SYSTEM WORK PROGRAM

Creating the **Waco Metropolitan Trails System** envisioned in this Master Plan will require the City to make substantial and sustained monetary investments into property acquisition, trail construction, facility enhancement and system maintenance. But trail infrastructure investments are only part of the story. The value of our trails system is amplified where equal attention and effort is put towards the policies and practices that promote trail usage. There are a variety of policies, programs and other initiatives that should be taken to generate positive community attitudes toward walking and biking, both for recreational and transportation purposes, and for making Waco a trails destination.

Our trails system work program includes the following two components:

INVESTMENT PROGRAM

The **Investment Program** identifies and prioritizes the large-scale capital investment projects that are necessary to build-out the trail corridors as depicted on the **Waco Metropolitan Trails System Map** (pages 51 and 52). The investment program also recommends other miscellaneous improvement projects of varying scale that will be necessary to fully realize the long-term potential of Waco's trail infrastructure. These projects include improvements such as trail resurfacing or realignments and bridge replacement, and enhancements such as trailhead and wayside amenities and paddling trail launches.

POLICY PROGRAM

The **Policy Program** lists policies, programs, regulatory tools and other initiatives that represent the operational and procedural steps necessary to develop the **Waco Metropolitan Trails System** in an efficient manner and for maintaining long-term enthusiasm and community support. Policy program strategies and actions include methods for procuring trail corridors, developing recreational trail facilities and amenities, maintaining the system, identifying and leveraging trails system champions/partners, marketing the system and promoting safe usage.



Waco will need to commission a professional engineering report to determine the structural integrity of the Cotton Belt railroad trestle and the span's suitability for bicycle and pedestrian use.

INVESTMENT PROGRAM

The Master Plan’s recommended investment program includes two project categories: **A)** Corridor Construction projects which are capital projects that prioritize the development of new trail segments; and, **B)** System Enhancement projects which represent miscellaneous investments (both capital and non-capital in scale) that will enhance existing and future trail infrastructure. Estimated costs per unit for new trail construction are illustrated below in **Cost Estimates** and represent “planning level” estimates for proposed new trails at a pre-design stage.

COST ESTIMATES

Facility	Estimated Unit Cost ¹
10 ft. wide reinforced concrete shared-use path (per linear foot)	\$85 per l.f.
12 ft. wide reinforced concrete shared-use path (per linear foot)	\$105 per l.f.
10ft. wide asphalt shared-use path (per linear foot)	\$70 per l.f.
12ft. wide asphalt shared-use path (per linear foot)	\$84 per l.f.

1. Order of magnitude (planning level) cost per unit estimates as of June 2022. Subject to disclaimers represented below.

ORDER OF MAGNITUDE (PLANNING LEVEL) COSTS

Recommendations presented in this Master Plan include opinions of probable construction costs (OPCC) for suggested trail additions and improvements. **Where presented, OPCC are subject to the assumptions and disclaimers summarized below.**

- A. All costs represent the Consultant’s best judgment as professionals familiar with the construction industry and current available unit pricing (as of June 2022). Consultant does not guarantee that proposals, bids or actual project construction costs will not vary from this opinion. OPCC presented in this Master Plan do not include subsurface utilities.
- B. Unit pricing is based on average cost statewide and does not account for any site specific determinants that would effect costs of construction (i.e., unknown subsurface conditions, structural foundations/footing per local soil conditions, etc.).
- C. Twenty percent construction contingency includes (but is not limited to): general conditions, mobilization, demolition, erosion/sedimentation control, site retaining walls and unclassified earthwork.
- D. Environmental and regulatory review, permitting and associated fees are not included in the OPCCs presented in this Master Plan.
- E. Horizontal utility adjustments/relocations/extensions/services for storm sewer, domestic water, sanitary sewer, gas, electric and communication utility lines to a project site are not included in the OPCC presented in this Master Plan.
- F. Projection of future construction costs should include a 10 percent annual increase at a minimum to account for inflation.



CORRIDOR CONSTRUCTION PROJECTS

The **Waco Metropolitan Trails System** is proposed to extend over 137 linear miles at a cumulative estimated cost of between \$36,168,000.00 and \$75,952,800.00 dollars (in 2022 dollars) depending on trailway width and materials. The investments necessary to effect this ambitious trail building project cost can be marginally overset by linking some trail segment construction to new development (see page 88) but this system will ultimately be a legacy project that will take an extended period to complete and public investment must be incrementally programmed over many years.

PROJECT PRIORITIZATION

To assist in the incremental integration of **Waco Metropolitan Trails System** projects into the City of Waco's Capital Improvement Plan (CIP), this Plan has prioritized all proposed metropolitan trail segments by dividing them into "Tier One," "Tier Two" and "Tier Three" groupings. Trail segments were divided into each grouping through the application of established project prioritization criteria.

Project prioritization criteria are categorized and defined by eleven **Community Benefit Criteria** and **Operational Criteria**. Community benefit criteria consider the recreational and transportation benefits that each trail segment can provide. Operational criteria consider the constructibility of each proposed trail segment.

TIER ONE TRAIL SEGMENTS

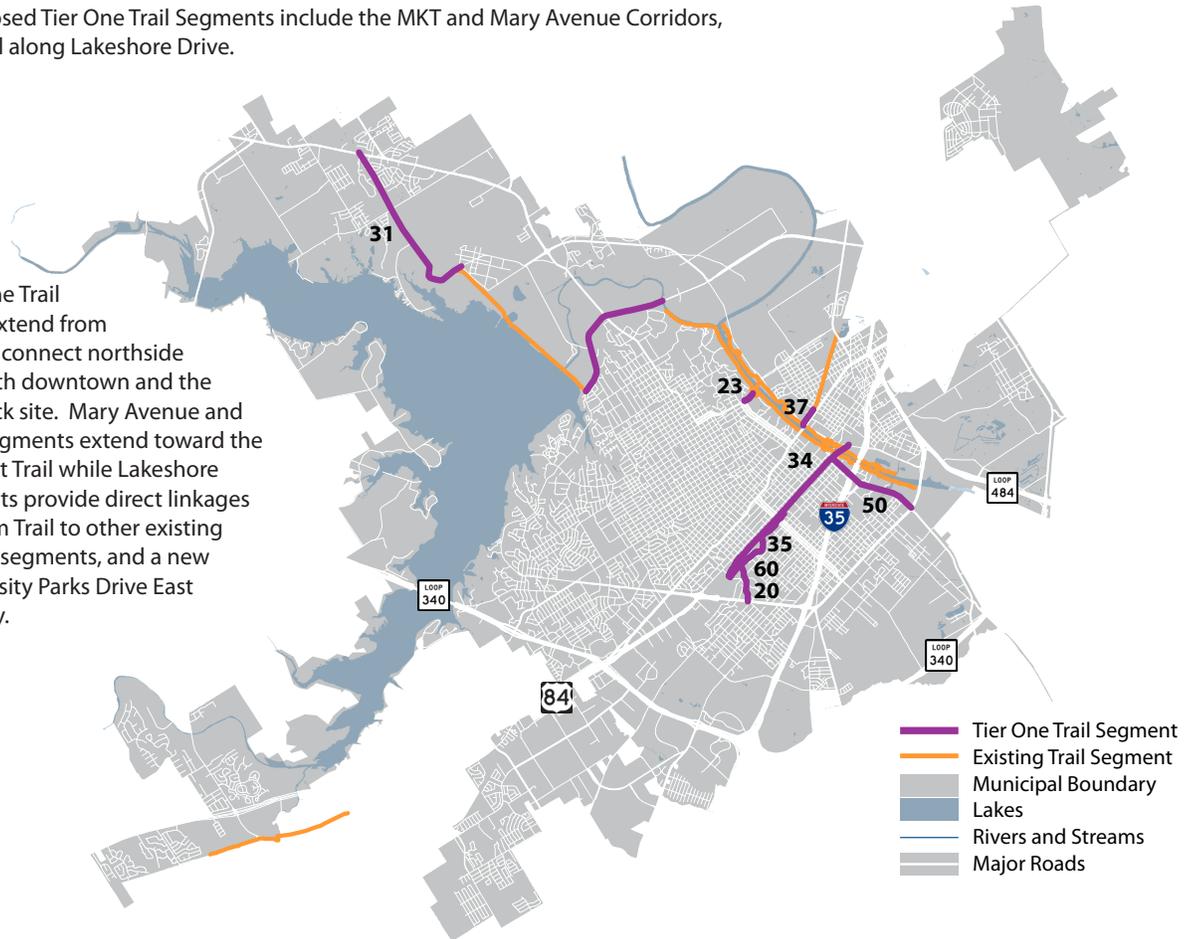
Over 16 miles of roadside and greenway trails are proposed to be constructed as part of the City’s initial phase of trail development at an estimated cost of between \$4,224,000.00 and \$8,870,400.00 dollars.

TIER ONE TRAIL SEGMENTS

Key #	Segment	Trail Type	Beginning	End	Distance (Miles)
34	Mary Ave. North	Roadside	S MLK Jr. Blvd	S 16th St	1.5
60	Waco Creek	Greenway	S 16th St	S 32nd St	1.5
20	Floyd Casey/Valley Mills Connector	Greenway	UP Railline at Waco Creek	S Valley Mills Dr	0.6
35	Mary Ave. South	Roadside	S 11th St	S 32nd St	1.3
37	Mill St. MKT Connector	Greenway	Dallas Street	Brazos Riverwalk	0.3
23	Herring Ave	Roadside	Riverwalk @ Uni. Parks Dr	N 4th St	0.2
50	S University Parks Drive East	Roadside	US 77	Mary Ave	1.5
31	Lake Waco Dam Trail North Ext.	Roadside	Access Road/Skeet Eason Dr.	China Spring Rd (FM 1637)	2.9

SEGMENTS. Proposed Tier One Trail Segments include the MKT and Mary Avenue Corridors, and a roadside trail along Lakeshore Drive.

LINKAGES. Tier One Trail Segments would extend from the Brazos River to connect northside neighborhoods with downtown and the Hart-Patterson Track site. Mary Avenue and Waco Creek trail segments extend toward the existing Cotton Belt Trail while Lakeshore Drive Enhancements provide direct linkages from the Waco Dam Trail to other existing and proposed trail segments, and a new route along University Parks Drive East to Baylor University.



TIER TWO TRAIL SEGMENTS

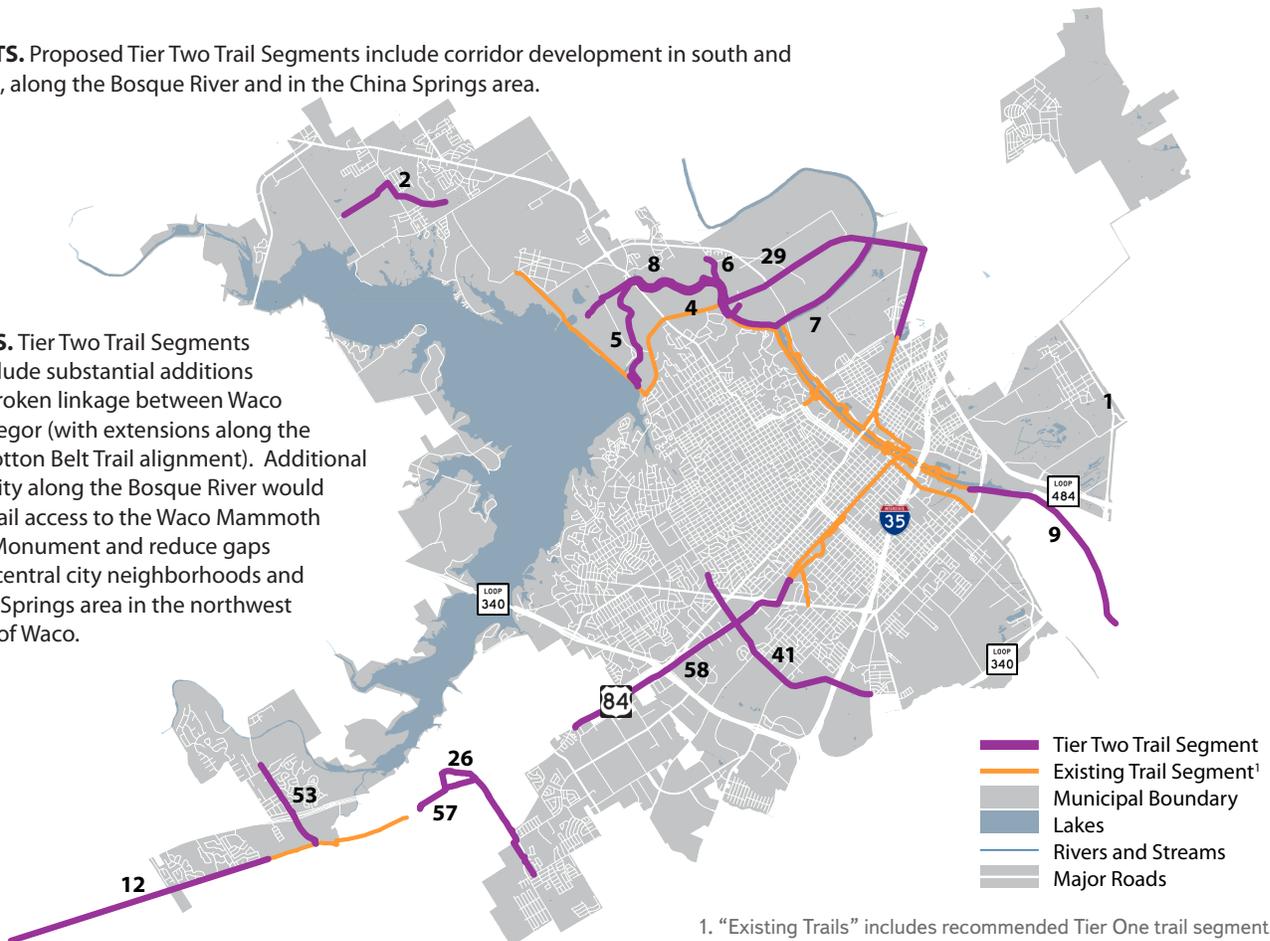
Tier Two segments include over 33 miles of roadside and greenway trails to be constructed at an estimated cost of between \$8,712,000.00 and \$18,295,200.00 dollars.

TIER TWO TRAIL SEGMENTS

Key #	Segment	Trail Type	Beginning	End	Distance (Miles)
53	Speegleville Rd	Roadside	Oak Rd	Old Lorena Rd/Church Rd (Cottonbelt Trail)	1.5
5	Bosque River/Lake Waco Dam	Greenway	N 19th Street (FM 1637)	Lake Waco Dam Trail	2.2
9	Brazos RF Baylor Ext.1	Greenway	Brazos Riverfront Baylor	Treatment Plant Dr.	3.5
12	Cottonbelt Extension	Greenway	Cottonbelt Terminus	E 2nd St/S Johnson St	7.0
41	New Rd.	Roadside	Old Robinson Road	New Road/W Industrial Dr.	3.5
57	US 84/Hannah Hill Rd	Roadside	Ritchie Rd	UP Railline (East of Bush Dr)	1.0
58	Waco-McGregor North Segment	Roadside	Mary Ave / S 32nd St	Old Hewitt Rd	4.3
2	Arnett Lane Connector	Greenway	Skeet Eason Dr.	China Spring Rd (FM 1637) and Yankee Rd.	1.9
4	Bosque River South Shore Trail	Greenway	Lake Shore Dr	N 19th St (FM 1637)	2.0
6	Brazos RF Waco Mammoth Conn.	Greenway	Waco Riverbend Park	Waco Mammoth Site	0.5
7	Brazos RF North Ext. East Segment	Greenway	Lake Shore Dr	Lake Shore Dr	3.2
8	Brazos RF North Ext. West Segment	Greenway	Lake Shore Dr	Lake Waco Dam Trail	3.0
29	Lake Shore	Roadside	Industrial Blvd/FM 3051	Lake Waco Dam Trail	5.7
26	Hewitt to Cotton Belt	Roadside	Panther Way	US 84 @ Ritchie Rd	2.6

SEGMENTS. Proposed Tier Two Trail Segments include corridor development in south and east Waco, along the Bosque River and in the China Springs area.

LINKAGES. Tier Two Trail Segments would include substantial additions to an unbroken linkage between Waco and McGregor (with extensions along the current Cotton Belt Trail alignment). Additional connectivity along the Bosque River would provide trail access to the Waco Mammoth National Monument and reduce gaps between central city neighborhoods and the China Springs area in the northwest quadrant of Waco.

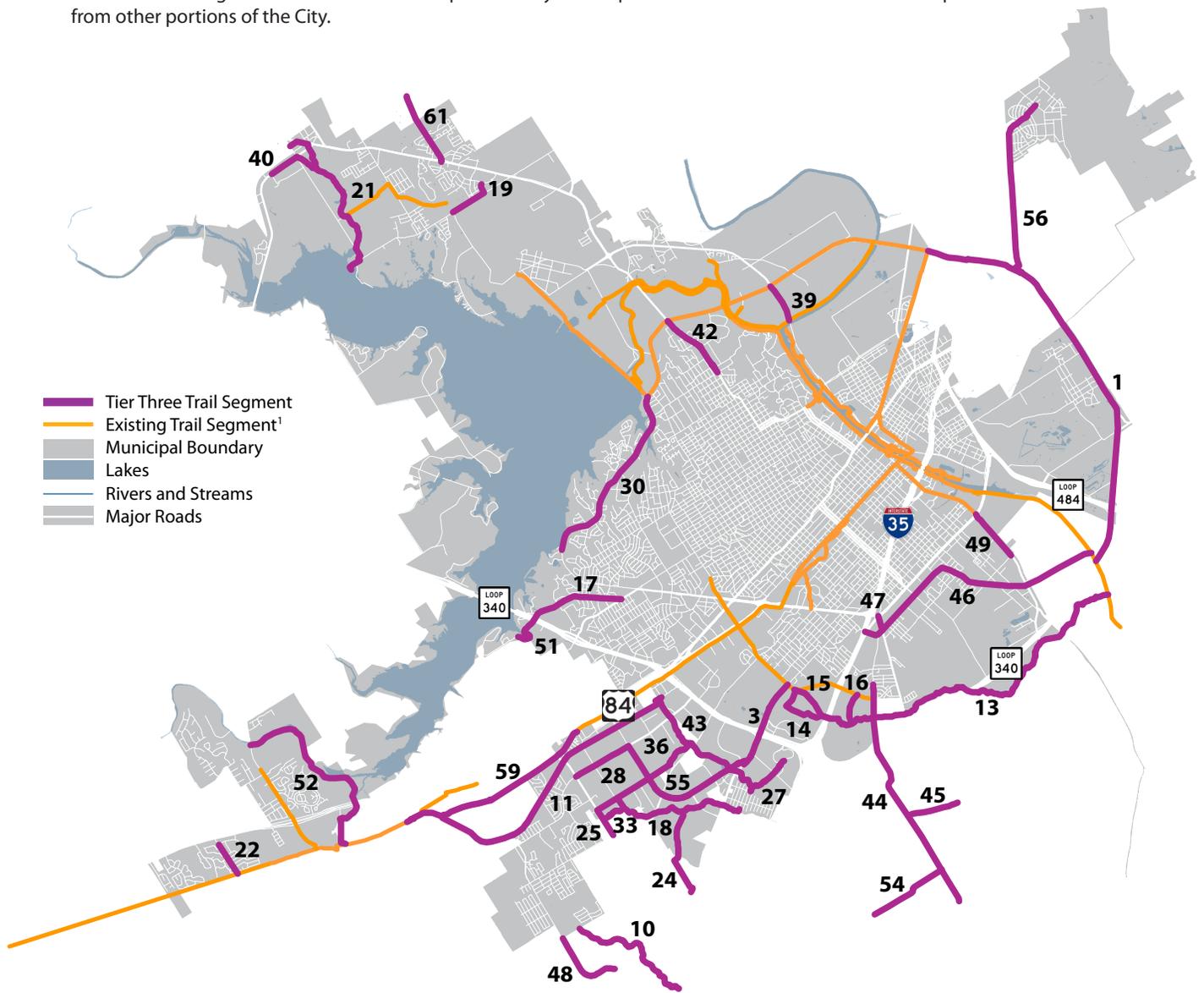


TIER THREE TRAIL SEGMENTS

Tier Three trail segments include the remaining 76 miles of roadside and greenway trail proposed by this Master Plan. Total estimated construction costs for Tier Three trail segments are estimated to cost between \$20,064,000.00 and \$42,134,400.00 dollars (2022) but it is acknowledged that overall costs may far exceed this estimated due to inflation over an extended period of time.

Tier Three trail segments may be further summarized as follows:

- **SEGMENTS.** Proposed Tier Three Trail Segments are concentrated along the southern and eastern periphery of Waco and throughout the China Springs area in the northwestern quadrant of the City. The perceived absence of facilities in center city neighborhoods reflects the fact that many of these areas are intended to be served by a combination of sidewalks and bikeway facilities. (See **Waco Active Transportation Network, System Map**, on pages 53 and 54).
- **LINKAGES.** Tier Three Trail Segments complete the Waco to McGregor linkage and the linkage between the China Springs area and central Waco. Southern and eastern neighborhoods are linked to the City's active transportation network while a trail corridor along SH 340 and Air Base Road provide bicycle and pedestrian access to the TSTC Waco Airport from other portions of the City.



1. "Existing Trails" includes recommended Tier One and Tier Two trail segments.
Note: Corresponding trail segment descriptions are located on page 91.

TIER THREE TRAIL SEGMENTS*

Key #	Segment	Trail Type	Beginning	End	Distance (Miles)
11	Cement Plant Rail	Greenway	UP Railline near Wickson Rd	North Flat Creek	4.4
13	Cottonwood Creek	Greenway	South of TX-340 Loop	IH-35	5.7
19	Flat Rock Road	Roadside	Skeet Eason Dr	Desperado Dr	0.7
33	Mars Dr	Roadside	Hewitt Dr	Midway High School	0.4
39	N MLK Jr. Connector	Roadside	Brazos RF North Shore	Lake Shore Dr	0.6
40	N. River Crossing Connector	Greenway	n/a	N River Xing (FM 185)	0.9
49	S University Parks Dr West	Roadside	La Salle Ave (US 77)	Garden Dr	0.8
51	SH 6/Midway Park Connector	Greenway	Old Fish Pond Road	Midway Park	0.8
56	TSTC Extension	Roadside	IH-35 / TX-340 Loop	Texas State Technical College Waco	4.4
59	Waco-McGregor South Segment	Roadside	Old Hewitt Rd	Cottonbelt Terminus	3.2
30	Lake Shore Drive to Koehne Park	Roadside	Lake Waco Dam SE Terminus	Koehne Park	3.0
42	North 19th St (FM 1637)	Roadside	Lake Shore Dr	Park Lake Dr	1.1
1	340 Loop	Roadside	Airbase Rd (US 84/Loop 340)	Brazos River South Shore	5.0
3	Bagby Ave	Roadside	S New Rd	Exchange Pkwy @ North Flat Creek	1.4
16	Cottonwood Creek Alt @ W. Uni HS	Greenway	South of University HS	New Rd.	0.5
21	Greenway Yankee Rd	Greenway	Yankee Rd./Flat Rock Rd.	Yankee Rd./Tulum Lane	2.8
22	Harris Creek Rd	Roadside	UP Railline @ Harris Creek Rd	Stageline Dr	0.5
46	Primrose Trail	Greenway	TX-340 Loop	IH-35	4.2
52	South Bosque Trail	Greenway	Cottonbelt Old Lorena Switchback	Speegleville Rd	3.4
10	Castleman Creek	Greenway	W Warren Rd	Warren Park (Old Temple Rd)	2.2
14	Cottonwood Creek Alt @ Bagby Rd	Greenway	IH-35	Bagby Ave/New Rd.	1.0
15	Cottonwood Creek Alt @ IH-35	Greenway	IH-35	New Road/Bagby Ave	0.7
17	Fish Pond Rd	Roadside	Bosque Blvd	Old Fish Pond Rd	1.3
24	Hewitt Connector	Greenway	Flat Creek Trail	Sun Valley Dr / Old Temple Rd	1.4
25	Hewitt Rd	Roadside	Mars Dr	Panther Way	0.5
27	Hillcrest Connector	Roadside	Coldwater Dr / Costa Dr	Baylor Scott and White Hillcrest	0.8
28	Imperial Dr (FM 3223)	Roadside	Texas Central Pkwy	New Hewitt Rd	0.9
36	Midway Connector	Roadside	N Hewitt Dr / Regal Dr	North Flat Creek Trail	2.0
43	North Flat Creek Trail	Greenway	Coldwater Dr / Costa Dr	Cactus Dr/Otis Dr	2.4
45	Peplow Street	Roadside	N Old Robinson Rd	Chado Lane	0.8
47	Primrose Trail Alt. to La Salle	Roadside	Primrose Dr.	IH-35 Frontage/The Circle	0.2
18	Flat Creek Trail	Greenway	Midway High School	Mundo Dr	2.1
54	Tate Ave	Roadside	S Old Robinson Rd	Pompano Park Dr	1.3
55	Texas Central Pkwy	Roadside	Bagby Ave	Imperial Dr	2.4
48	Ritchie Rd	Roadside	W Warren Rd	S Hewitt Dr	1.2
61	Wortham Bend Road	Roadside	Ziegler Rd	China Springs Rd (FM 1637)	1.2
44	Old Robinson Road	Roadside	Chesser Dr	Moonlight Drive	3.8

*Note: Corresponding map located on page 90.

SYSTEM ENHANCEMENT PROJECTS

In addition to the construction of new trail segments, there exist many identified near-term needs are identified along existing metropolitan and recreational trail segments that can enhance the user experience. Although not an all-inclusive list, the following projects should be considered for near-term inclusion in the City's capital budget.

BRAZOS RIVERWALK TRAIL

The Brazos Riverwalk Trail is the City's most high-profile trail facility. Much has been learned by the City regarding trail construction and maintenance since the design and construction of the original trail segments adjacent to downtown. Riverwalk improvements involve the realignment and reconstruction of multiple trail segments to accommodate new development, ensure a higher degree of user comfort and reduce recurring maintenance issues related to periodic flooding.

SOUTH BANK/DOWNTOWN

- **Realignment.** Construct an alternative alignment for segments of the trail that are currently located in the floodway to ensure that the trail remains accessible during flooding events. Alter trail alignments through Indian Springs Park to eliminate switchbacks and to incorporate a pending connection to the Mary Avenue Corridor when constructed.
- **Surfacing.** Replace asphalt segments of the trail with concrete - ensuring that trail surface widths and clearances are consistent with the trail design features presented in this Plan.
- **Access.** This applies to both the north and south bank of the river through the Baylor campus area. Especially on the north side near McLane Stadium.

NORTH BANK/EAST WACO

- **Realignment.** Realign or reconfigure segments of the trail that are directly adjacent to N. MLK Jr. Boulevard to create greater roadway separation and/or reduce driveway crossings. Propose new alignment to separate trail from main roadway and avoid driveway crossings. Options may include additional boardwalk sections or barricades between the trail and adjacent roadway.
- **Trailhead.** Construct a new major trailhead along S. MLK Jr. Boulevard in the vicinity of the IH 35 frontage road.

RIVER TRAIL (CAMERON PARK)

Classified as a recreational trail, the River Trail in Cameron Park has a more rustic feel than proximate segments of the Brazos Riverwalk, which this Plan proposes to maintain even if future trail connectivity increases bicycling and walking traffic along its length. The geography of the trail between the riverbanks and adjacent bluffs will require additional measures to mitigate periods of flooding.

- **Trail Surfacing.** Repair rustic trailway surface to adhere to the greenway trail design features presented in this Plan. Wholesale enhancements will include the re-establishment of a defined soft surface trailway and trailway clearance (including removal of boulders).
- **River Embankments.** Re-enforce river embankments where necessary to mitigate ongoing sloughing that endangers the trail corridor. Install railings as necessary where engineered solutions eliminate natural buffers between the trailway and river edge.
- **Bridges.** Replace narrow bridges near the northern trail terminus at MCC. Raise approaches to replacement bridges to reduce the number and duration of periods of heavy rain and inundation.
- **McLennan Community College (MCC) Trailhead.** Improve the MCC trailhead in accordance with the major trailhead design recommendations contained in this Plan.
- **Hard-surface Trail Segment.** Replace the worn pathway extending from the Redwood Shelter parking lot northwest along the Brazos River to the tree line (where the trail diverges from Cameron Park Drive) with a paved surface that adheres to the roadside trail design features presented in this Plan.
- **Signage.** Upgrade existing trailhead signage at Redwood Shelter and the MCC trailhead. Install way-finding signage (including distance markers) along the length of the River Trail.



The City should work with TxDOT to transform the parking area along the Cotton Belt Trail at Old Church Road into a major trailhead.

COTTON BELT TRAIL

As a newer facility within the City's trails system, the Cotton Belt Trail remains in good condition. Immediate investments which can improve the user experience are primarily related to trailheads - although preventative maintenance activities may be warranted due to the railway's dual use as a utility service corridor.

- **Trail Surface.** Repair longitudinal cracking. Replace segments of the existing trail surface with reinforced concrete to support weight of service vehicles.
- **Trailhead Enhancements.** Construct a major trailhead at the unofficial trailhead on Old Church Road. Construct a permanent restroom at Trail Blazer Park.
- **Crossings.** Upgrade the crossing at Old Church Road to compel trail users to approach at lower speeds and encourage motorists to yield for trail user traffic.

LAKE WACO DAM TRAIL

As with the Cotton Belt Trail, immediate investments which can improve the user experience are primarily related to trailheads - facility upgrades which may be accomplished in partnership with the U.S. Army Corps of Engineers. Corresponding investments in shade structures are also warranted due to the length of the trail that is directly exposed to the elements.

- **Trailhead Enhancements.** Expand and improve parking at the popular trailhead on the southeast end of trail (Lakeshore Drive). Provide general repair and improvements at the trailhead on the northwest side of dam (near airport).
- **Shade Structures.** Coordinate with the US Army Corps to install wayside shade structures at incremental locations along the trail (including on the dam structure).

GENERAL INVESTMENTS

The master planning process has revealed other public preferences and trail development opportunities that extend beyond the construction of new metropolitan trail segments or a location-specific enhancement to existing metropolitan trail segments. Additional system-wide enhancements are recommended.

- **Trails System Branding.** Create a trails system branding and way-finding plan. Provide annual funding for the gradual installation of coordinated signage and way-finding features across all segments of the Waco Metropolitan Trails System.
- **Trailheads and Waysides.** Construct major trailheads in conjunction with new trail segments and as identified within this Master Plan. Identify where new minor trailheads and waysides may be desired/warranted and fund gradual installation of new features.
- **Special Use Trails - Cameron Park Trails.** Prepare a network plan for the Cameron Park special use trails. Work with advocacy groups to determine which routes may be designated as joint use versus hiking or mountain biking only. Implement the plan including trail surface rehabilitation, use and direction of travel. Specialized trail upgrades (i.e. flow or downhill segments) include signage and way-finding, geo-locating the trail routes, etc.
- **Recreational Trails, Lake Waco.** Coordinate with the US Army Corps of Engineers to generate a plan for the construction of a recreational trail circling Lake Waco.
- **Brazos and Bosque River Paddling Trail Investments.** Work with TPWD to design and construct a series of paddling launches and channel markers to support and encourage access to the Brazos and Bosque River Paddling Trail.

POLICY PROGRAM

The inclusion of trail infrastructure for pedestrians and bicyclists can bring a number of social, environmental, economic and health benefits to the Waco community. The benefits of trail infrastructure is also amplified where equal attention and effort is put towards the policies and practices that promote trail usage. Positive community attitudes toward walking and biking, both for recreational and transportation purposes, requires the creation of a safe environment – one which extends beyond just the presence of trails.

The League of American Bicyclists (LAB) identifies five primary categories of elements that are essential to the development of a bicycle-friendly community. These categories also known as the “Five E’s”. The Policy Program provides a list of programs, policies, ordinances, and facilities that can be utilized by the City of Waco to develop policies and programs centered around trails. These policies are not presented in any order of priority. Note that much of the engineering policies and programs are identified throughout Chapter 4: Designing Our Network.

POLICIES/REGULATIONS

- **Trail Dedication and Construction.** Prepare and adopt amendments to municipal land development regulations that require the reservation of trail corridors and trail construction as part of the development process. (See **Trail Dedication and Development Provisions** on page 43.)
- **Hours of Operation.** Selectively reduce hours of trail usage to improve user safety during night time hours. In general, access to non-lighted metropolitan and recreational trails should be limited to daytime hours. Exceptions to this baseline standard can (and should) vary widely. Access to roadside trails should not be limited because they serve as a transportation facility in the same manner as a street, bicycle lane or sidewalk. Likewise, greenway trails that provide important transportation linkages should be lighted to allow for 24-hour access and use, as determined on a case-by-case basis.
- **Micro-mobility/Automated Vehicles.** Establish clear policies or regulations governing the operation of scooters, E-bikes and other forms of micro-mobility on metropolitan trails and recreational trails. Adopted policies and regulations should also consider mobile (automated) delivery vehicles in accordance with recent amendments to the Texas Transportation Code.

OPERATIONS

- **Maintenance Plan/Procedures.** Establish a standard trail maintenance program which may include minor surface repair; standard and post-storm sweeping and clearing debris; lighting and signage replacement; trash collection, litter removal and graffiti removal; cleaning of restrooms, drinking fountains, parking lots and other trailhead and trail amenities; and trimming of vegetation to ensure visibility. Upon implementation, generate an estimate of annual trail maintenance and operations costs per linear mile and adjust budgets accordingly. Create a corresponding asset database.
- **Trail Level of Service.** Starting with the baseline trail counts collected as part of this master planning process, collect annual or semi-annual trail user counts to measure changes in usage patterns. Accurate trail counts will assist the City in determining when trail segments should be widened beyond minimum recommendations or when roadway crossing enhancements should be considered. Utilize annual trail count data and the FHWA’s Shared-use Path Level of Service (LOS) Calculator to monitor the level of service on existing trails.
- **Trail Stewardship.** Support the development of a trail advocacy organization through direct funding and/or in-kind support such as office space and materials. Rely on the organization to assist with trail maintenance and stewardship, generate and support funding initiatives, and to serve as clearinghouse for community-wide bicycling initiatives.

FUNDING STRATEGIES

There are multiple funding strategies that can be utilized to implement the action items discussed in the Master Plan's Policy Program and Investment Program. This section outlines typical city-generated funding and funding at the local, regional, state and federal levels.

CITY OF WACO

- **General Fund Expenditure.** Primarily used for improvements or repairs to existing facilities. Typical general fund expenditures are for smaller repair and replacement efforts.
- **Bond Fund.** Primarily targeted for new facilities.
- **Utility Partnerships.** May be established for trails within utility easements. This partnership typically does not involve monetary contributions. Rather, it includes use agreements for easements held by utility companies.
- **Business Improvement District Funds.** A type of public-private partnership that leverages public and private funds to increase the attractiveness of defined geographic areas to existing and potential customers. These entities often see value in making streetscape improvements that make walking and biking more comfortable.

LOCAL AND REGIONAL

- **Waco Metropolitan Planning Organization (MPO).** Available for all stages of a project from planning, design and construction. MPO funding may be particularly helpful in projects that need further study.
- **Private Foundations.** Private foundations such as Downtown Waco can assist in funding for projects that have an economic development impact in Waco's downtown area.
- **Baylor University.** Partnerships can be formed to fund segments of trail that have benefits for people moving to, from and around the Baylor University campus. These partnerships can also be made in the trail maintenance stage of the project as well.
- **School Districts.** School districts can partner with the City to implement the Safe Routes to Schools (SRTS) Program.
- **Waco Lake - Army Corps of Engineers.** The Army Corps of Engineers can partner with the City to implement the trail segments around Lake Waco.

STATE OF TEXAS

- **Recreational Trail Grants.** Funds can be utilized on both motorized and non-motorized recreation trail projects, such as the construction of new recreational trails, improvements to existing trails, to develop trailheads or trailside facilities and to acquire trail corridors. The grants can be up to 80 percent of project cost with a maximum of 300,000 dollars for non-motorized trail grants and a maximum of 600,000 dollars for motorized trail grants.
- **Outdoor Recreation Grants.** Provide 50 percent matching grant funds to cities, counties, Municipal Utility Districts (MUDs) and other special districts to acquire and may specify that these funds can be used for the development of trails. There is one funding cycle per year, with a maximum grant amount of 750,000 dollars for populations under 500,000.
- **Community Outdoor Outreach Program (CO-OP) Grants.** Provide funding to local governments and non-profit organizations for programming that introduces under-served populations to environmental and conservation programs as well as TPWD mission-oriented outdoor activities. This is not a land acquisition or construction grant; this is only for programs. Grants are awarded to non-profit organizations, schools, municipalities, counties, cities and other tax-exempt groups. Individual grant requests may be between 5,000 and 50,000 dollars.
- **Transportation Alternatives.** Administered through both TxDOT and local MPOs, depending on project location, to provide funding for pedestrian- and bike-oriented infrastructure that facilitates walking and biking for short trips. Projects should have rights-of-way and easements settled, be able to advance to construction within 3 years and show connections to multiple locations.

FEDERAL

- **RAISE Transportation Discretionary Grant Program.** Rebuilding American Infrastructure with Sustainability and Equity grants focus on projects that provide significant economic benefits while also improving safe transportation options. Funding can be used for, but is not limited to, bicycle lanes, crosswalks, lighting, and bridges. Most bicycle and pedestrian projects will only be competitive under this program if they are part of a larger project with proven economic, equity and safety benefits at a regional level.
- **Surface Transportation Block Grant Program (STBG).** Provides funds that are eligible for bicycle and pedestrian improvement projects. Federal funds are sub-allocated to the local level based on population and TxDOT then prioritizes projects and administers STBG funds.
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ).** Federal Highway Administration (FHWA) funds that are apportioned to states. CMAQ funds are intended to fund projects that improve air quality and reduce congestion. CMAQ funds may be used on projects related to pedestrian and bicycle infrastructure such as bicycle lanes, sidewalks, shared use paths, and signage. In Texas, CMAQ funds are included within TxDOT's Category 5 funding.
- **Federal Transit Administration (FTA).** Provides funds for bicycle and pedestrian investment as they relate to transit. FTA funds may be used to fund improvements such as bicycle lanes, bicycle parking, bus shelters/benches, sidewalks and lighting among others. To qualify for FTA funds, projects must provide or improve access to existing or planned transit facilities such as stops and stations.
- **The Community Development Block Grants (CDBG).** Provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may use the funds for real property, public facility improvements and planning. Trail master plan projects that enhance accessibility are a good fit for this funding source. CDBG funds could also be used to write an ADA Transition Plan for the city or support design and construction of projects. These funds are administered through the Texas Department of Agriculture and MPOs, and must benefit low to moderate income households.
- **The Rivers, Trails, and Conservation Assistance Program (RTCA).** A National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance - there are no implementation funds available. This program may benefit trail development throughout the region indirectly through technical assistance, particularly for community organizations, but should not be considered a future capital funding source.
- **Reconnecting Communities.** A USDOT program that supports pedestrian and other transportation related infrastructure for large, impactful projects that reconnect communities that have been divided by transportation corridors. Equity, supportive stakeholders and safety are key considerations.

The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future. **For up-to-date information about grant programs through all federal agencies, see <http://www.grants.gov/>.**

TRAIL CORRIDOR ACQUISITION TOOLS

Given the cost, timing and complexity of developing a robust trail network, linear corridors must be pro-actively reserved by the City. This can occur through two primary methods including **A)** Land dedication requirements within the City's land development regulations; and **B)** Direct acquisition of easements or rights-of-way.

LAND DEDICATION

As previously discussed in Chapter 2, Our Trails System Today (page 43), the City must make trail corridor dedication/reservation a standard part of its land development process. In this way, proposed trail alignments and access points via feeder paths can be preserved so that rights-of-way will be available for future trail construction. As previously noted in this Plan however, trail dedication provisions need not be limited to reservation of the corridor itself, but may also require that the developer construct the applicable section of greenway trail, roadside trail and/or feeder path on their properties as they would for required streets, sidewalks and bikeways.

EASEMENTS AND FEE-SIMPLE RIGHTS-OF-WAY

Trail easements represent a partial interest in a property, giving the easement holder the right to enter onto the property, develop a trail facility within a designated corridor, and allow others into that corridor to use the trail. Easements should be structured so that they run with the land and are legally binding on successive owners of the property. Some property owners may be willing to donate the easement to the community while others are interested in the income aspect. In contrast, fee-simple purchase of property may be more expensive for the City but would also ensure that future disputes over public access to and use of the land are minimized.

The pro-active acquisition of easements or rights-of-way by the City of Waco or a third party for trail development should be an option that is exercised in conjunction with corridor acquisition. Such a parallel approach to corridor reservation is necessary because many areas of the City are already developed and may not be impacted in the near future by development-triggered regulations.

ADMINISTRATION AND MANAGEMENT

PLAN ADMINISTRATION

The Waco Parks and Recreation Department will be the primary administrator of this Master Plan. The department will be responsible for the day-to-day oversight of all Plan activities including the coordination of implementation, amendments and monitoring success. Successful implementation of this Plan's Policy Program and Investment Program will also require the collective efforts of other City departments, boards and commissions.

MUNICIPAL DEPARTMENTS

Multiple City departments will participate in Waco's efforts to build a comprehensive system of metropolitan and recreational trails. The following departments will assume important and ongoing roles in assisting the Parks and Recreation Department with its plan administration duties:

ENGINEERING DEPARTMENT

- Assist in incorporating trail and other bicycle/pedestrian accommodations into roadway, bridge and intersection construction or improvement projects.
- Provide standard specifications for trail construction including trailways and roadway crossings, etc.
- Maintain public street rights-of-way and trail corridors.

PLANNING & ZONING DEPARTMENT

- Process land development code amendments that provide for trail easement dedication, trail construction and trails system access via feeder trails.
- Amend of long-range planning documents to align with the recommendations of this Plan.

TRAFFIC DEPARTMENT

- Design and installation of traffic control devices for trails - including roadside trails and at various crossing locations.
- Monitor trail usage via the collection of trail counts.

BOARDS AND COMMISSIONS

The following City boards and commissions may assume ongoing roles in assisting with Master Plan implementation in accordance with the powers and duties vested in them by City Charter and/or Municipal Code:

PARKS AND RECREATION COMMISSION

- Will oversee and make recommendations on the development of new metropolitan and recreational trails.
- Will work with Parks and Recreation staff to monitor and report on Master Plan implementation



City staff installing trail and sidewalk counters as part of the master planning process.

PLAN COMMISSION

- Will provide recommendations to City Council on proposed land development code amendments related to trail construction, dedications and access.
- Will review development plans for consistency with trail-related code provisions.
- Will recommend amendments to the comprehensive plan and other long-range planning documents to align with the recommendations of this Master Plan.

WACO METROPOLITAN PLANNING ORGANIZATION



The Waco Metropolitan Planning Organization (MPO) coordinates the long-range transportation planning activities for McClennan County and all local government jurisdictions within the County boundaries - including the City of Waco. Not only does the MPO develop long-range transportation plans for its jurisdictional area, it programs federal funds to support local transportation projects and operations.

Waco MPO staff was reliable partner to City staff in preparing this Master Plan. MPO staff - as well as the MPO's Policy Board and Technical Advisory Committee - will remain an essential partner in Master Plan implementation. Key MPO-tasks will be to ensure consistency between the recommendations of this Master Plan and other long-range transportation plans as well as incorporating recommended trail projects into the metropolitan area's Transportation Improvement Program.

NON-PROFIT ORGANIZATIONS

There is often a direct correlation between successful development and operation of a comprehensive community-wide trails system and the presence (and active participation) of champions outside of the local government organization. Many such organizations in Waco actively participated in the early stages of the trails master planning process including Waco Walks, Waco Chamber of Commerce, Waco Bicycle Club and more. The City must continue to engage these entities for support with the following tasks:

- **Raise interest and awareness of trails**
- **Advocate, promote and encourage trail development**
- **Host, sponsor, or co-sponsor events and activities that highlight and utilize trails and other active transportation facilities in Waco**
- **Assist in advocating for trail funding and in directly raising money for trail development and maintenance**
- **Help to organize volunteers to assist with implementation, maintenance and management**

As suggested in the Plan's Policy Program (page 94), the City may wish to facilitate the creation of a trail-dedicated non-profit advocacy organization that is geared toward furthering the trails initiatives listed above.

“WE ARE THE DRIVING FORCE BEHIND A 200+ MILE PLANNED SYSTEM OF MULTI-USE TRAILS –A DYNAMIC NETWORK OF CONNECTED STREAMS, PARKS, BUSINESSES, AND NEIGHBORHOODS. TRAILS ARE RECREATION, TRANSPORTATION INFRASTRUCTURE, TOURISM DESTINATIONS, AND QUALITY-OF-LIFE NECESSITIES.”

- EXAMPLE MISSION STATEMENT EXCERPT (OZARK GREENWAYS)

GOVERNMENT PARTNERS

Much of this Plan’s proposed metropolitan and recreational trail mileage will be located within public road rights-of-way and/or on federal land (much of which is owned and maintained by the U.S. Army Corps of Engineers). Successful Plan implementation will require close coordination with federal and state entities such as the U.S. Army Corps, National Parks Service and TxDOT for purposes of obtaining funding support and rights of access, construction and use on non-municipal property. These considerations extend equally to public utility authorities for the use of utility corridors for the development of some trail segments.



Completion of the proposed recreational trail circling Lake Waco will require ongoing coordination with the U.S. Army Corps of Engineers.

MEASURING SUCCESS

There are several measurable benchmarks that the City of Waco can monitor in affirming its commitment to implementing the recommendations of this Master Plan. Although not all-inclusive, **Performance Indicators** presents a list of example measures that should be periodically updated to gauge the effectiveness of the City’s and its partners’ efforts in building an expanded and improved **Waco Metropolitan Trails System**.

PERFORMANCE INDICATORS

Topic	Indicator	Measure
Network	Trail Mileage	Cumulative metropolitan trail mileage
Network	Trail Mileage	Amount/percentage of recommended trail mileage constructed
Network	Access	Percentage of residential areas within 1/4 mile of a metropolitan trail
Network	Access	Linear miles of trail per 1,000 city residents
Network	Access	Number/frequency of feeder paths between metropolitan trails and adjacent properties
Network	Connectivity	Schools/parks/public housing directly accessed or within 1/4 mile of a metropolitan trail
Investment	Trails	Amount of funding expended for new trail mileage
Investment	Trails	Amount of funding expended for the improvement of existing trailways
Investment	Amenities	Number of major and minor trailheads
Investment	Safety	Type/value of trailway enhancements (i.e. surfacing, lighting, way-finding, etc.)
Investment	Safety	Number/type/value of roadway crossing enhancements
Safety	Crashes	Number and rate of reduction in crashes involving bicyclists
Safety	Crashes	Number and rate of reduction in crashes involving pedestrians
Usage	Trail Counts	Annual change in trail usage at trail counter locations
Usage	Mode Share	Amount of trips by biking/walking as a percentage of all trips