

Chapter 4

Implementation Strategies

“Greenways are ‘the paths to the future’ as they link people to the outdoors. They meet an ever growing need, a need to leave the hectic city (if only for a moment) and to experience earth beneath your feet and fresh air in your lungs - to feel life and to feel alive.”

Victoria Logue, *Backpacking in the '90s*, 1995

Implementation Process

An action group designated for the trail plan implementation should coordinate all of these following steps:

- Preliminary Items: Environmental analysis, preliminary design, possible feasibility study, allocation of general construction budget – should be obtained before proceeding.
- Permits: By City Council, possibly Williamson County, by all involved trail corridor owners, e.g. TxDOT, utility and pipeline companies. Responsibility for the project construction lies primarily with the City of Georgetown.
- Funding: Research for necessary grant qualifications, Council approval to apply for grants or other funding sources, and ROW issues should be settled at this point.
- Design: Preparation of construction documents, specifications and cost estimates; followed by bid documents and bidding procedures after permits and funding are clarified.
- Physical construction of the project can now take place.

Coordination with Ongoing and Future Transportation and Drainage Improvements

Major public works improvements such as new street development or drainage facilities can provide an opportunity for trail development. The resurfacing of roads can be used to consider adding bicycle lanes; new roads can be sized to include bicycle lanes or to have side paths built as the road is built. When large new public facilities are being built, trail opportunities along their edges should be considered. Drainage channels can be planned in such a manner that they include trails along one or both sides, and can be oriented so that adjacent homes are not impacted.

Every effort in the city, whether private or public, whether funded by the City or by another agency such as Williamson County or TxDOT, should be considered early on as a potential bicycle facility or shared use path candidate. Adequate right of way should be acquired early on so as to provide a corridor for trails. It is extremely difficult to retrofit trails once development around it has occurred.

Private sector developments should be carefully reviewed to determine if key trail corridors shown in this plan can be integrated into the proposed development. In some cases, the City may consider funding some portions of the recommended trails over and above the developer portion so as to expedite construction of the overall trail system.

Issues Associated with Trail Funding

Funding for trail and greenway corridor development in Georgetown can come from a variety of sources, generated locally, from State of Texas, and federal sources. Private development of trails will also aid in the establishment of much of the future trails throughout the city.

Each trail segment will have unique funding opportunities, based on the neighborhoods around the trail and the specific characteristics of the corridor. Key issues associated with funding are as follows:

- If possible, funding should be continuous and steady. Annual designation of funds for trail development will result in a steady growth in the city's trail system, and allow the citizens of Georgetown to see a continuous flow of new trail segments every year, rather than in sporadic bursts.
- Construction of major trail corridors should be the focus of public expenditures. Major "spine" segments that connect neighborhood to neighborhood should be the primary focus of public expenditures for trails. Trails within and primarily serving private developments and individual neighborhoods should be paid for with private sector funds.
- Funds designated for trail development should not be taken from park development. Both parks and trails are extremely important to the future quality of life in Georgetown, and funding one should not imply that the other need not be funded.



Georgetown Parks and Recreation Master Plan

Draft Action Plan 2008-2018

Trails and Linear Park Recommendations

Priority	Action ID	Action	City Sector	Estimated Cost Range Low Range High Range	Type of Dev.	Potential Funding Mechanisms and Sources	Potential Time Frame
Potential Priorities							
High	1	South San Gabriel River Trail from Blue Hole Park to Lyndoch Park (1.6 miles)	Southwest	\$800,000 \$900,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2008-2010
High	2	Bootys Crossing Park to San Gabriel River Trail Extension	Southwest	\$1,700,000 \$3,700,000	New Development, may require some easements	Bonds, private donations, foundation assistance, in-kind services, TPWD grant funding, certificates of obligation, general fund, Garey	2008-2010
High	3	University Blvd. Trail to new Eastview High School (4.2 miles)	East	\$1,900,000 \$3,900,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2009-2012
High	4	Northwest Georgetown / Williams Dr. Trail to Lake Georgetown (1.6 miles)	West	\$1,100,000 \$1,600,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2009-2013
High	5	McMaster Athletic Complex Trail extension to San Gabriel River Trails	Southeast	\$1,300,000 \$2,300,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2010-2013
Medium	6	Scenic Dr. Overlook trail (1.5 miles)	Southeast	\$900,000 \$1,400,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2011-2014
Medium	7	Williams Dr. to River Park and Trail along Rivery Blvd.	Southwest	\$340,000 \$390,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2013-2016
Medium	8	Enhance / improve trails around Lake Georgetown	Citywide	\$350,000 \$2,200,000	Renovation and enhancement of existing trails.	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2012-2015
Medium	9	East San Gabriel River Trail extension to SH 130 (2.7 miles)	East	\$1,500,000 \$2,500,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2012-2015
Medium	10	South San Gabriel River Trail extension to Garey Park (8.7 miles)	Southwest	\$5,800,000 \$7,800,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2013-2015
Medium	11	Trail Connection to Texas State and Texas A&M Universities (3.7 miles)	Citywide / Southeast	\$3,700,000 \$4,000,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2014-2018
Medium	12	IH-35 Connector along Brushy Creek to Pecan Branch Park (3.7 miles)	Citywide / west	\$1,500,000 \$2,800,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	2015-2018
Low	13	North San Gabriel River Trail extension to Liberty Hill and Leander (5 miles)	Northwest	\$1,200,000 \$1,700,000	New Development, may require some easements	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	Beyond 2018
Low	14	Georgetown Tennis Center Trails	Northwest	\$1,200,000 \$1,700,000	Renovation and enhancement of existing trails.	Bonds, private donations, in-kind services, TPWD grant funding, certificates of obligation, general fund, sale of naming rights	Beyond 2018
Estimated Total				\$22,090,000 \$35,190,000			
Total Potential Expenditure Range For 2008 to 2018 Planning Timeframe and Beyond - (note that grants and donations may fund portions of the amount shown)				\$22,090,000 \$35,190,000			

1. Note: Costs shown are order of magnitude estimates prior to any concept or design, and will vary as site selection and more detailed design occurs. List is for guidance in planning, and not all items may be implemented. Grants and donations may reduce the cost of each item.
 2. Land costs, if shown, are general estimates intended to establish allowances and will vary. Land costs are estimated to be between \$50,000 and \$75,000 per acre.
 3. Cost include an annual 5% escalation factor. All costs shown are rounded to nearest \$50,000. Costs should be updated frequently as additional cost information becomes available.



Sources of Funding

Trails are considered by Georgetown residents as one of the things they like the most about the City, and as one of their highest priorities. Therefore, funding for trails should be treated as a key item in both annual and longer term budgeting. Regular steady funding, so that the trail system is added to on a continuous basis, is recommended. A broad range of funding mechanisms, from both the public and private sectors should be considered. These include:

Capital improvement or bond funds - Bond funds are typically the primary source of significant trail development efforts. The larger capacity of these funding sources allows for more development to occur.

Funding as part of other projects - trails can be efficiently funded as part of other larger city projects, such as new roads. However, separate trail funding should not be added to road projects to help supplement funding that is inadequate to begin with.

Parkland dedication funds - funds generated by new development can be used to help develop nearby trails. These funds are accrued in lieu of parkland.

Special district funding - funding from special districts such as the downtown area, the airport, or other new public improvement or tax increment financing areas can be used to help develop trails.

Private residential or commercial development - The majority of the trails noted in this master plan are located within residential communities or adjacent to commercial or business areas. As such, trail segments associated with either existing or new development can be partially or entirely built by the private development community. Specific mechanisms to require trail development which can be adopted by the City Council are further discussed in this chapter.

Grants from a variety of sources - Grants that can be used for trail development are available from a variety of sources. The existing remaining bond funds provide an ideal match for grant applications. Given the compelling local issues of traffic congestion and air quality, as well as a large local population that supports alternative transportation methods, local pursuit of grants could be successful and should be aggressively pursued. Major grant types include:

- **Texas Parks and Wildlife Department grants** - Through its outdoor recreation and community trail development grants, these matching grants can provide

from \$50,000 to \$500,000 in grant assistance.

- **Federal Enhancement funds** - Federal transportation dollars specifically allocated to pay for transportation enhancements have led to the creation of over 100 miles of trails throughout Texas over the past 10 years, and were the primary funding source for trail development in the State of Texas. These funds are administered by the Texas Department of Transportation, and as such must conform to federal guidelines for safety and for construction procurement. The locally required match is a minimum of 20%, but communities may overmatch to increase their competitive position. Funds must be reauthorized periodically by the United States Congress, and in 2008 are waiting for re-authorization.
- **Williamson County park and trail development funds** - Williamson County has participated in the development of much of the Brushy Creek regional trail along Brushy Creek in and near Round Rock. For trail corridors that have regional benefits, Williamson County will continue to be a significant future partner.
- **Congestion Mitigation and Air Quality (CMAQ) grant funds** - Federal dollars that assist in relieving traffic mitigation may also be used to develop trails corridors that can carry commuters to work or serve as an alternative transportation route to recreation or commercial areas.
- **Regional Surface Transportation Program (RSTP)** - This is a block grant program that makes money available statewide for roads, bridges, transit capital, bicycle and pedestrian projects. Metropolitan Transporting Organizations (MPOs) can transfer monies from other federal transportation funding sources to the RSTP program if they want more flexibility in how they allocate their funds. SAFETEA requires states to set aside 10% of the RSTP funds for safety construction activities and another 10% for the Transportation Enhancement Activities (TEA) Program. Applicants eligible for RSTP funds include cities, counties, metropolitan planning organizations (MPOs), transit operators, and the Texas Department of Transportation. Non-profit organizations and special districts also may apply for funds, but they must have a city, county or transit operator sponsor and in some cases administer the project.
- **Safe Routes to School Program (SR2S)** - The overall purpose of this program is to improve safety in and around school areas. While Safe Routes to School is an overall concept that includes education, enforcements and safety construction improvements, TxDOT's Safe Routes to School Program implemented by HB 2204 will only address safety construction improvements. The rules that established the SR2S Program were adopted by the TxDOT Commission and became effective on July 18, 2002. The following guidelines determine what projects can be submitted: the projects may be located on or off the state highway system, but must be located on public property; must be located within a two mile radius of a school; federal funds requested will be limited to \$500,000; projects can cover multiple school sites if similar work is preformed at each site;

local project funding match of 20% is required unless the project is located on the state highway system in which case TxDOT will provide the match; a project on the state highway system will not be eligible if the district finds that the project interferes with or disrupts any planned improvements or existing infrastructure. The six categories of work that are eligible for the funding are: sidewalk improvements; pedestrian / bicycle crossing improvements; on-street bicycle facilities; traffic diversion improvements; off-street bicycle and pedestrian facilities; and traffic calming measures for off-system roads.

- **Hazard Elimination Safety (HES) Program** - This is a federal safety program that provides funds for safety improvements on all public roads and highways. These funds serve to eliminate or reduce the number and / or severity of traffic accidents at locations selected for improvement. The amount of funds allocated to the local HES Program each Federal Fiscal Year may range from \$10 million to \$16 million. Each year, local agencies compete for HES funds by submitting candidate safety projects to TxDOT for review and analysis. TxDOT prioritizes these projects, statewide, and releases an annual HES Program Plan that identifies the projects that are approved for funding.
- **Foundation and Company Grants** - Some assist in direct funding for trail projects, and some support efforts of non-profit or citizen organizations. Further info can be found at "The Foundation Directory" and at "The Foundation Grants Index": www.fdncenter.org
- **"Grants for Greenways"** is a national listing that provides descriptions and links to groups who provide technical and financial support for greenway interests.

Partnering - Partnering with regional volunteer groups can also be helpful when constructing new trail projects. Their efforts can be used as part of the required match for some grants. Partnerships with Utility Companies can often be established for the proposed utility and pipeline easement trails.

- Georgetown volunteer programs, for example through schools or community groups, may substantially reduce the cost of implementing some of the proposed trail segments. Local construction companies might donate or offer discounted services, or local corporations might adopt bikeways, like it is already practiced with highways throughout the area.



Trail Ordinances

Successful implementation of the Trails Master Plan will require the protection of existing trail connections and the reservation of planned trail connections throughout the city. Although many of the trail corridors are intended to utilize public lands consistent with the goals and policies of the Trails Master Plan, acquisition of trail corridors on private lands will be necessary to successfully implement this plan.

The City of Georgetown's goal is to fund and build the spine of the network as outlined in Chapter 4 while working with private developers and landowners and encouraging the private sector to develop and build additional parts of the trail system as Georgetown continues to grow.

Many options are available to the City, public agencies, non-profits and private landowners to ensure the protection / reservation of these critical trail corridors. The objective of the Trails Master Plan is to provide a menu of available options to both public agencies and private landowners, promoting flexibility and creativity in the negotiation process. Careful crafting of transactions between private landowners and public agencies can and should produce mutually beneficial results.

Trail Development Ordinance - Consideration of a trail development ordinance is recommended by the Trails Master Plan. Similar ordinances have been enacted in Allen and Southlake, Texas, and have proven successful in helping to get trails constructed. Often, the required trails replace sidewalks, and therefore do not add significantly to the cost of the development. Credits for landscaping, pavement or other infrastructure elements can be given for trail construction. A central point to consider is that most developments will add trails automatically; therefore such a mandatory trail development ordinance only serves to create a level playing field between the many developments that include trails and those that will build them only if required to do so.

Develop Trail "Cost Sharing" ordinance revisions that require developer participation in trail development – An alternative type of ordinance can be patterned after sidewalk requirements, in which adjacent property owners fund a portion of the trail installation cost, with the City of Georgetown covering the remainder of the cost. The alternative ordinance model, used in Allen, Texas, requires complete developer construction of key trail segments that fall within their property limits, without city participation. City funding in the second alternative is used for other regional trails or for trailhead development.

New Development Reservations and Dedications - the preservation of trail corridors in conjunction with or independent of the open space areas required to be created with new residential development could be required in the City Code. Right-of-way reservations for pedestrian paths, bikeways, and multiple use trails could be required of new residential development consistent with the Engineering Standards and / or this Trails Master Plan. An offer of dedication is required when a reasonable relationship is demonstrated between the need for the dedication and the characteristics and impacts of the proposed development.

The City Code could also provide incentives to new development to encourage implementation of the Trails Master Plan. Reduction in required open space areas and fee waivers are two specific incentives for public trail reservations and dedications beyond that required of any new development. Additional flexibility could be provided for new development, promoting the highest quality development in concert with the public need and benefit derived from creative and innovative development proposals. This flexibility might come by allowing reductions in required off-street parking and flexibility in internal project circulation layout, which is justified with the reservation / dedication of lands in support of the planned recreational trail network.

Existing Development - in cases where trail corridors shown on the Trails Master Plan intersect with existing developed areas, the acquisition of lands will be necessary to create connectivity with adjoining trail corridors. Acquisition can be accomplished through a variety of forms: outright purchase of property; purchase of easements; donations or condemnation. All varieties of acquisition will be employed, while always seeking the most cost effective method to secure appropriate public interest when necessary and warranted. Public / private negotiations for outright purchase of private lands will be necessary in some instances; however, the purchase of easement or partial / restricted property right at less cost to the public will be encouraged.

Greenway and Trail Setback Recommendations - the purpose of this recommendation is to address the protection and preservation of greenways, trails and easements for future trail corridors. This will ease the implementation of the Trails Master Plan by protecting, conserving and maintaining the abundant qualities of the lands along creeks, rivers and waterways within Georgetown while increasing transportation and recreation opportunities.

Preservation and Access to Creek Corridors

Creek and drainage corridors will be some of the major trail corridors within the city, and as such should be developed with access along at least one side of the creek for small drainage tributaries and along both sides of the creek for major creeks such as Berry Creek and Pecan Branch Creek. These corridors are largely undevelopable, and can preserve much of the remaining natural space in Georgetown. Steps should be taken to require that natural creek corridors be preserved and trail access be allowed. In most cases, streets paralleling the drainage or creek corridor are preferred, rather than lots that back up to the creek and that effectively seal off the creek from public view or access.



This drainage corridor has a road adjacent to it and is the preferred method of trail development.

This drainage corridor has homes backing up to it and creates an unattractive corridor for trail development.



Trail Maintenance

Effective trail maintenance is critical to the overall success and safety of trails in Georgetown. Maintenance activities typically include pavement stabilization, landscape maintenance, facility upkeep, sign replacement, mowing, litter removal, and painting. A successful maintenance program requires continuity and often involves a high level of citizen participation. Routine maintenance on a year-round basis will not only improve trail safety, but will also prolong the life of the trail. The benefits of a good maintenance program are far-reaching, including:

- A high standard of maintenance is an effective advertisement to promote the trail as a regional and state recreational resource.
- Good maintenance can be an effective deterrent to vandalism, litter, and encroachments.
- Good maintenance is necessary to preserve positive public relations between the adjacent land owners and managing agency.
- Good maintenance can make enforcement of regulations on the trail more efficient. Local clubs and interest groups will take pride in “their” trail and will be more apt to assist in protection of the trail.
- A proactive maintenance policy will help improve safety along the trail.

Ongoing trail maintenance likely includes some, if not all, of the following activities:

Vegetation - In general, plantings should be placed far enough apart to maintain good visibility and avoid creating the feeling of an enclosed space. This will also give trail users good, clear views of their surroundings, which enhances the aesthetic experience of the trail. Under-story vegetation within most trail rights-of-way should not be allowed to grow higher than 36 inches, except in cases where the under-story vegetation is natural, desirable, and part of the habitat required for wildlife. Trees species selection and placement should be made that minimizes vegetative litter on the trail and root uplifting of pavement. Vertical clearance along the trail should be periodically checked, and any overhanging branches over the trail should be pruned to a minimum vertical clearance of 10 feet.

Some basic measures should be taken to protect the trail investment. This includes a bi-annual mowing along both sides of the trail to prevent invasion of plants into the pavement area. The recommended times of year for mowing are fall and spring.

Wherever possible, vegetation control should be accomplished by mechanical means or hand labor. Some species may require spot application of state-approved herbicide.

Surfacing - Where concrete is the recommended surface material, cracks, ruts, and water damage will need to be repaired periodically.

Where drainage problems exist along the trail, ditches and drainage structures will need to be kept clear of debris to prevent washouts along the trail and maintain positive drainage flow. Checks for erosion along the trail should be made during the wet season, and immediately after any storm that brings flooding to the local area. The use of trails with natural soft surfaces should be minimized and / or prohibited during wet conditions.

The trail surface should be kept free of debris, especially broken glass and other sharp objects, loose gravel, leaves, and stray branches. Trail surfaces should be swept periodically. Soft shoulders should be well maintained to maximize their usability.

Litter and Illegal Dumping - Staff or volunteers should remove litter along the trail. Litter receptacles should be placed at access points such as trailheads.

Illegal dumping should be controlled by vehicle barriers, regulatory signage, and fines as much as possible. When it does occur, it should be removed as soon as possible in order to prevent further dumping. Neighborhood volunteers, friends groups, alternative community service crews, and inmate labor should be considered in addition to maintenance staff.

Signage - Signage should be replaced along the trail on an as-needed basis.

The following table summarizes the recommended maintenance schedule for the proposed trails in Georgetown. These guidelines address maintenance for the off-street trails. On-street facilities such as sidewalks and bike lanes should be maintained per the standards of the City of Georgetown.

Table 4 - 1 Maintenance of Off-Street Trails	
Item	Frequency
Inspections	Seasonal - at both beginning and end of summer
Signage replacement	1 - 3 years
Pavement markings replacement	1 - 3 years
Major damage response (fallen trees, washouts, flooding)	Schedule based on priorities
Pavement sealing, potholes	5 - 15 years
Introduced tree and shrub plantings, trimming	Every 1 - 3 years
Culvert inspection	Before winter and after major storms
Cleaning ditches	As needed
Trash disposal	Weekly during high use, twice monthly during low use
Lighting luminaire repair	Once a year
Pavement sweeping / blowing	As needed, before high use season. Weekly in fall.
Maintaining culvert inlets	Inspect before the onset of the wet season, then again in early fall.
Shoulder plant trimming (weeds, trees, brambles)	Twice a year, middle of growing season and early fall
Waterbar maintenance (earthen trails)	Annually
Site furnishings, replace damaged components	As needed
Graffiti removal	Weekly, as needed
Fencing repair	Inspect monthly for holes and damage, repair immediately.
Shrub / tree irrigation for introduced planting areas	Weekly during summer months until plants are established.
Litter pick-up	Weekly for high use, twice a month for low use.

