Cypress Creek Greenway

Trails Master Plan

Implementation Strategies

Implementation

Who, How, When?

Due to the multiple entities who have partnered to develop the trails master plan for the study area, numerous groups will most likely play a role in the implementation of the plan.

The stakeholders with the greatest potential to immediately implement the plan are obviously the plan's partners. Malcomson Road UD, HCMUD 286, and Lakewood Forest UD have already developed trail projects and are therefore aware of the necessary steps for developing these types of facilties. HCMUD 468 and Prestonwood Forest UD have not developed recreational facilities within their Districts but could coordinate the development rather easily.

Other stakeholders may play a role in plan implementation including other Utility Districts, Harris County, the Cypress Creek Flood Control Coalition, Harris County Flood Control, private entities, home owner associations and property owner associations, among others.

The timeframe for plan implementation may take 20 years or more due to the extensive length of proposed trails as well as multiple partners. It is recommeded that this plan be reviewed and updated every 5 years to measure progress and re-assess priorities.

The plan should be used as a guide for trail development within the study area and can also serve as a model for development of trail plans along the rest of the Cypress Creek corridor.

Funding Strategies

There are two main strategies for funding trail projects recommended in the plan. The first is to identify a project partner, or lead, and appropriately budget for trail development. Costs may be incurred for preliminary reports, site surveys, engineering and design, permitting and environmental considerations.

The second strategy would be to seek alternate methods of funding including volunteer builds, donations and grants programs.

Budgeting for trail projects includes evaluating annual resources including Capital Improvement Project funds, operating funds, or planning for the approval, sale and use of special tax bonds.

 Constructed Foot Bridge in 100 Acre Wood

Off-setting costs of trail construction utilizing alternate methods of funding can increase the amount of trail development and stretch recreational dollars.

Volunteer builds can be utilized for several different phases of trail construction. A costly factor when developing trails within existing wooded areas is the initial staking of the trail alignment as well as clearing. If feasible, volunteers can be utilized to identify the preferred trail alignment, on-site, as well as perform some preliminary clearing of brush and small trees. If funding is limited, this key effort could allow early use of trail corridors before more formal trails are constructed. Training for volunteer trail building is available from area consultants. They can assist with organizing trail building events and providing training to key individuals that can be dedicated trail stewards.

Private companies and foundations may also have an interest in funding trail projects. Several national trails systems have been funded in this way. Major corporations within the HP Complex and Vintage Park should be approached for possible partnerships and support.

Local private foundations have also played a role in trail construction in the region. The Houston Parks Board has utilized private donations to secure parklands throughout the region and is currently developing greenways and trails for the Bayou Greenways 2020 program.

Grant programs are available for the planning and construction of park and recreational facilities including trail development. Each program has specific requirements and preparation for, awarding of, and utilization of grant monies may take several years. The potential for delays in projects must be considered before applying. Federal, State, and Local grant programs are listed below.

State grant programs include the following:

1. Texas Parks and Wildlife Department grants
    - Recreational trails program can fund up to 80% of a $250,000 project
    - Typical facilities funded include new trails, repairs to existing trails, aquisition of land or easements for trail construction, signage, and trail head facilities

Federal grant programs include the following:

1. Transportation Alternatives (TAP)
    - Funds provided for planning and construction, cover 80% of total project cost with local 20% match
    - Typical facilities funded include trails, pedestrian signals, traffic calming, lighting and safety related items
    - Administered through TxDOT
2. Congestion Mitigation and Air Quality (C-MAQ)
    - Funds provided for transportation projects that reduce emissions (automobile trips)
    - Typical facilities funded include trails, bike racks, outreach activitites
    - Administered through H-GAC
3. Highway Safety Improvements Program (HSIP)
    - Funds utilized to reduce traffic injuries and fatalities
    - Typical facilities funded include intersection improvements, traffic calming
    - Fund up to 90% of total project costs
4. Transportation Investment Generating Economic Recovery (TIGER)
    - Used to fund projects that do not fall into another federal category
    - Typical facilities include sidewalks, bike lanes, trails
    - Fund up to 80% of total project cost ($10M-$200M)

First Steps

The first step in developing a specific trail project is to identify property ownership. Some project segments may be located within one piece of property with one owner. Other trails may be located across several properties and include both public and private owners.

Entities such as Harris County and the Harris County Flood Control District should be contacted in order to determine what level of agreement would be needed for construction within their rights-of-ways. Typical agreements include maintenance and interlocal agreements between the County and the sponsoring entity. The sponsor will be responsible for developing

and maintaining trails per current regulations.

Most of the trail alignments proposed in this plan are located within public property while some connections and small segments do fall within private ownership. An attorney and/or easement specialist should be consulted to assist with securing access for trail development either by land aquisition or recreational easement.

Once ownership agreements are in place and funds have been identified and allocated for the design, construction and future maintenance of specific trail projects there are several steps to take from using this plan as a guide for trail alignments to the actual trail construction. Although recommended trail alignments in this plan have been identified through careful research and consideration, they should still be considered preliminary in nature.

Proposed trails that would be located within existing right-of-ways with relatively level topography, no expected environmental or cultural impacts, and few or no obstructions are most likely trails that can move directly into the design phase. However, the majority of the trails proposed within this plan may not fit this description and further analysis of the corridor must be performed.

The development of a preliminary engineering report (PER) for more complicated corridors can help identify challenges and avoid suprises for trail development and construction. This type of document typically states the overall scope of the project, analyzes preliminary topography (may utilize Lidar), gathers and reviews geotechnical information, provides preliminary drainage, traffic, and structural engineering needs, reviews access and constructability, outlines environmental concerns and requirements, and provides preliminary cost estimates and construction schedules. The report may also analyze alternative trail routes which can assist in determining the final alignment.

Design Standards

Establishing and adhering to a set of design standards for trail development before actual construction creates a consistency for projects within the study area. Standard aesthetics for amenities such as benches, litter receptacles, lighting, and signage as well as landscaping can contribute to the overall trail network identity. The Coordinating Board should consider developing such standards.

Design

Trail design will depend greatly on the type of facility and location. Recommendations have been provided for trail types, typical widths and materials. Detailed boundary and topographic surveys must be performed to review land ownership, encumbrances (easements), and existing slopes and drainage patterns. Topographic surveys will also be critical for trail corridors along drainageways as Harris County currently requires both plan and profile elevations for plan review and permitting.

An environmental expert should be consulted to review any potential environmental, cultural, or historical instances within the proposed trail corridors. They typically review an overall area of 50-feet surrounding the proposed trail. They can also assist with state and federal permits, as needed.

Final trail design should abide by current regulations for pedestrian and bicyclist facilities including the American Association of State Highway and Transportation Officials (AASHTO) pedestrian and bicycle handbooks and the Americans with Disabilities Act (ADA). Facilities within road rights-of-ways, especially crossings, must follow the Manual on Uniform Traffic Control Devices (MUTCD).

Construction

Construction of trail pieces must be carefully managed. Many of the proposed trail alignments will be located in environmentally sensitive areas and excessive and over clearing of the corridor should be discouraged. If construction will impede existing pedestrian routes, detours should be provided.

Maintenance and Operation

Every trail project recommended in this plan will require some level of maintenance. It is an important piece of a successful trails network that is sometimes forgotten in early planning stages. Although more durable hard surfaces, such as concrete may require

less overall maintenance, periodic sweeping, clearing of debris, and repair of cracked and damaged areas must be performed.

It is recommended that a maintenance company or group of volunteers be contracted with in order to set standards and maintenance schedules. These schedules must be evaluated and potentially adapted each year to the current corridor needs. Regular inspections of the entire trail corridor should take place and recommendations for immediate and future maintenance needs addressed.

Trail users should be provided an email or phone number, posted along the trail or at trail heads to contact someone with maintenance concerns. An avid walker, for example, may walk a single corridor each day and their constant knowledge of the trail condition and surroundings can provide a quicker response time for issues that may arise.

Costs associated with trail maintenance vary greatly. Factors that effect overall costs include trail surfacing type and width, surrounding landscaping, and the addition of trail amenities. For example, a concrete sidewalk within a public right-of-way, surrounded by turf may require only weekly mowing and trimming, while a decomposed granite trail within a wooded corridor that is prone to flooding would require more frequent and intense maintenance. Maintenace costs should be considered during the design phase of every trail project.

Entities who wish to construct trail pieces within this plan should seek out creative partnerships for maintenance, including volunteer groups, local home owner associations, and adopt-a-trail programs.

The following list includes typical activities associated with trail maintenance:

Weekly: mowing and trimming of turf, landscape care, trimming of vegetation within trail corridor, removal of debris, empty litter receptacles

Monthly: Irrigation inspection

Annually: Formal trail inspection to review condition of signage, irrigation system, drainage, safety equipment and lighting, striping, trail surface, bridges, support facilities and amenities

Special Circumstances/as needed: weather related, update to maps and signage as needed, vandalism

Special Partnerships

The success and implementation of this plan will wholly rely on the creative partnerships that can be formed to develop and promote trail projects within the study area. Although the Coordinating Board may have the capabilities to construct trail pieces within their boundaries, seeking out partnerships for funding, promotion, and maintenance for the project can improve project awareness in the region. These partnerships will be crucial to developing trails outside partner boundaries which may not have an easily identifiable partner or sponsor at this time.

Plan Promotion/ Trail Usage

Although some area stakeholders may not have the means to provide financial assistance for trail development within the study area, there are many ways that partners can assist with the promotion of trails. Home Owner Associations may be able to provide assistance with volunteer build days or perhaps offer their existing crews for trail or trail head maintenance. Area chambers of commerces and other non-profit groups can publicize this plan in order to generate public awareness and encourage support.