

Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum



City of Dallas



THE TRINITY TRUST

RECLAIMING OUR RIVER



March 2014

TABLE OF CONTENTS

Chapter 1: Introduction	1
Background & Purpose	2
Vision & Goals	2
Project Location	4
Previous Plans & Studies	4
Chapter 2: Site Inventory & Analysis	11
Site Inventory	12
Opportunities & Challenges	13
Focus Areas	18
Chapter 3: Trail Alignment	25
Spine Trail	26
Connector Trails	26
Trail Access	27
Spine Segment Analysis	30
Chapter 4: Design & Amenities	43
Design Concept	45
Trail Amenities	48
Chapter 5: Unique Opportunities	57
Lawnview Park & Lawnview DART Station	58
Urban Wilderness Adventure Park (former Roosevelt Heights Neighborhood)	62
Chapter 6: Conclusion	67
Summary of Costs	68
Recommendations	69





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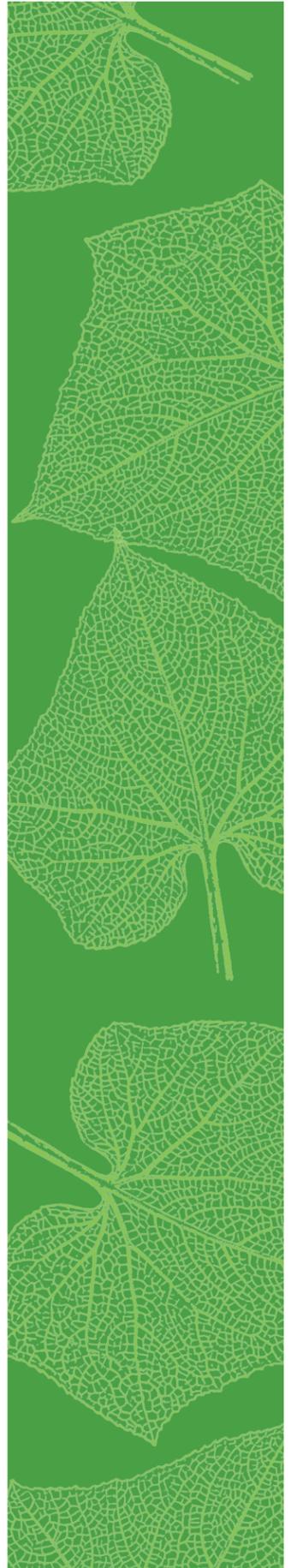
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 1

Introduction

Background & Purpose | Vision & Goals | Project Location | Previous Plans & Studies



INTRODUCTION

This plan helps establish the future vision and identity of the Trinity Forest Spine Trail corridor while serving to streamline implementation for regional and local pedestrian/bicycle, equestrian, and paddle trails, as well as access from neighborhoods.

Background & Purpose

The Trinity Forest Spine Trail (TFST) Trail Master Plan establishes a vision and identity for the future, analyzes opportunities and challenges, provides conceptual design for trails and amenities, provides cost estimates, and serves as a guide for implementation. This plan effectively bridges the gap between the broad view of plans such as the Dallas Trail Network Plan, the Great Trinity Forest Master Plan and the detailed design of individual trail segments. This plan unifies and simplifies the “spaghetti network” of trail plans developed over the past several decades. The unified vision of this plan is a central “spine” trail 15.5 miles in length; however, additional “connector” trails linking the spine trail to destinations and other routes for bicyclists, pedestrians, equestrians, and canoeists are also considered.

The plan is organized into six chapters, as follows:

» Chapter 1: Introduction

This chapter explains the background and purpose behind this plan; the vision and goals for the trail corridor; the general project location; and the previous studies and plans that led to this effort.

» Chapter 2: Site Inventory & Analysis

Existing conditions, challenges, and opportunities are described in this chapter. Special attention is given to seven unique challenge areas.

» Chapter 3: Trail Alignments

Various trail typologies are explained herein. The spine trail is divided into seven parts and is analyzed segment-by-segment to determine design challenges and cost estimates.

» Chapter 4: Design & Amenities

A distinct palette of design elements and amenities was created for this trail corridor. The design of elements—such as pavilions—is discussed in this chapter.

» Chapter 5: Unique Opportunities

Two unique opportunities are explored in this chapter—creating an “Urban Wilderness” park near the US 175 and 2nd Avenue intersection and expanding the use of Lawnview Park and the area south of the Lawnview DART station.

» Chapter 6: Implementation & Recommendations

A summary of costs, general recommendations, and a set of guidelines for determining priorities serve as the conclusion of this document.

VISION & GOALS

A vision for the future and complementary goals are the foundation of and provide meaning to the project.

Vision for the Future

The Great Trinity Forest encompasses a vast hidden urban oasis along southern White Rock Creek and the Trinity River greenways in southeast Dallas, teeming with native flora and fauna. The vision for the area is that one day soon, neighborhoods and communities surrounding the Great Trinity Forest will be engaged in creating gateways, trailheads, gardens, cottage industries, and connector trails leading from their neighborhoods to the Trinity Forest Spine Trail corridor. Local residents and visitors alike will feel welcome, safe, curious, and inspired to explore and invest in the forest ecology. Gateways, trailheads and the connecting trails will foster active and ongoing neighborhood engagement, with pride of stewardship of the forest assets.



Forest visitors will be attracted from near and far, to experience the urban bottomland forest canopy and meadows that surround the Trinity River and White Rock Creek. They will walk through revitalizing neighborhoods that are strongly connected to the beauty of the thriving forest and meadow corridors. Safe walking routes will traverse from local schools to neighborhood nature trails, which will provide unique opportunities where students and teachers can gather to learn about history, fauna, and flora. Trailheads, reflective of deeper area and neighborhood histories, will offer gathering places for socializing and relaxing. Within the forest are historic trees, hilltop vistas, and dramatic overlooks. The forest’s paved spine trail will meander along the southern White Rock Creek corridor from near White Rock Lake at its junction to the Santa Fe Trail, southward to the Trinity Forest Trail, Trinity River Horse Park¹, Trinity Forest Golf Course², Trinity River Audubon Center, McCommas Bluff Preserve, and Great Trinity Forest Gateway and Horsetrails.

The thousands of acres of deciduous forest in the corridor contribute to individual, community, and regional health—both human and ecological. The gateways and trails will invite people to explore and enjoy nature. The Great Trinity Forest area is being reborn with invigorated residents and businesses investing to serve the community and their visitors. The resounding chorus of birds and other wildlife echoing along every streambed throughout the forest calls for commitment to restoring nature’s capillaries. The rumble for restoration and renewal has been heard! Connected communities along the Trinity River and its tributaries—White Rock, Prairie, Cedar and Five Mile Creeks—will become the anchoring elements in unifying a balanced green city. Neighborhoods will embrace the forest heartland, capitalizing on the Great Trinity Forest’s attractive qualities and engaging people who embrace the benefits the forest offers.

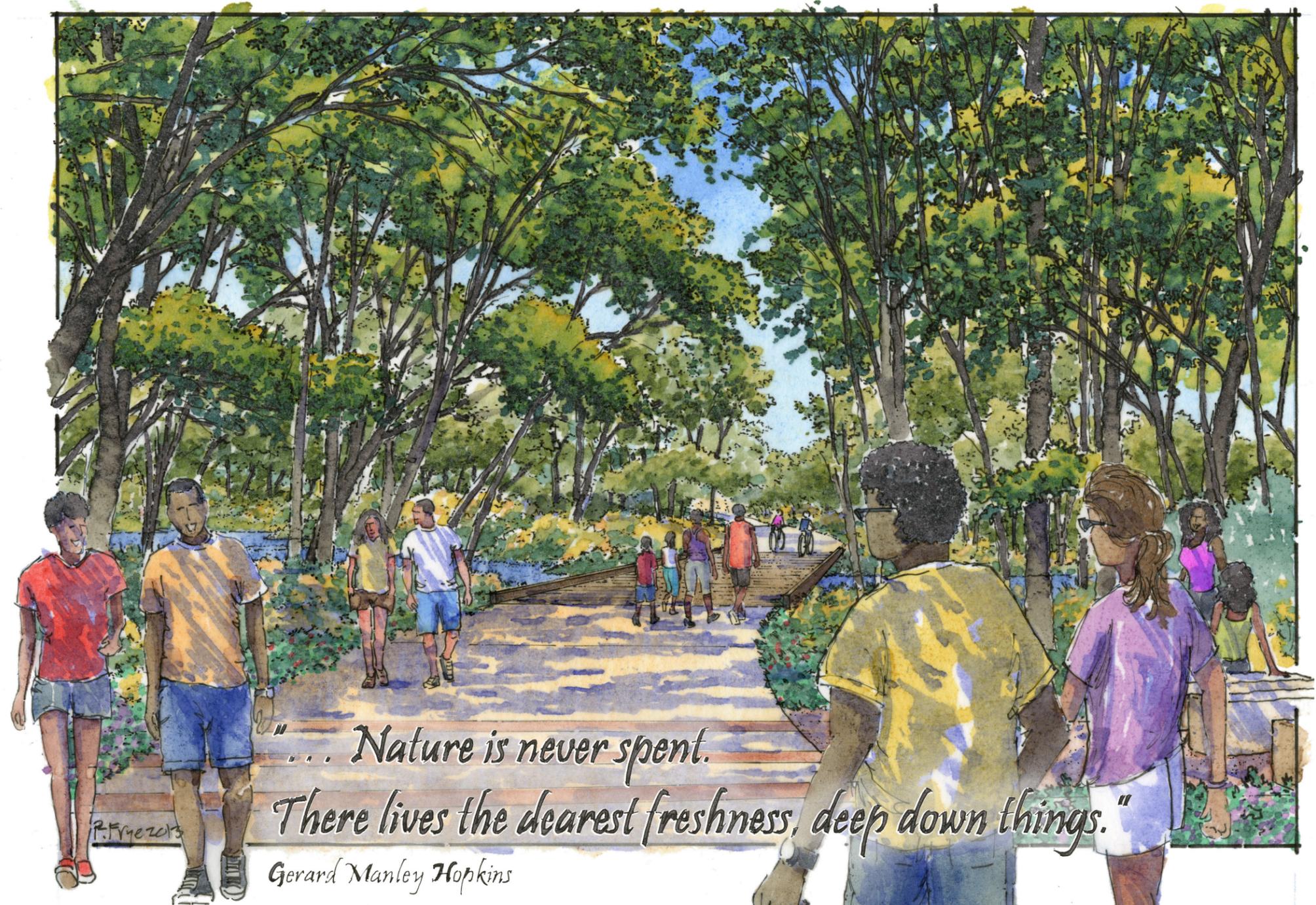
The Trinity Forest Spine Trail will support the broad vision of the Great Trinity Forest by serving as a unique recreational and transportation opportunity that winds through forest, prairie, and wetland and connects to the city-wide trail network.

1 Planned.
2 In design.

Goals

Goals for the Trinity Forest Spine Trail include:

- Providing recreational opportunities, mobility, and access for a variety of users, including pedestrians, bicyclists, skaters, and people with disabilities, along durable, hard-surface spine and connector trails.
- Providing access to scenic overlooks, including the Scyene Overlook and McCommas Bluff Overlook, that reveal the majesty of the Great Trinity Forest's intrinsic beauty.
- Celebrating the green gift that is the Great Trinity Forest through art, poetry, and other experiential elements.
- Connecting historic destinations, such as the Springs, the Trinity River Lock Operator's House and Chapel, and the Historic Lock and Dam.
- Linking trails to transit, including DART Light Rail stations and bus stops by way of paved all-weather trails and sidewalks.
- Seeking out opportunities for volunteer trail building, including utilizing the Groundwork Dallas Green Team for natural soft-surface trails including those that create connections from nearby neighborhoods to the paved spine trail, trails for nature study and bird watching, and trails for specialized use (such as mountain bike or equestrian trails).
- Incorporating opportunities for equestrians along natural surface trails (generally in the southern portion of the corridor).
- Identifying canoe launch locations along southern White Rock Creek and along the Trinity River.



PROJECT LOCATION

The TFST Trail follows White Rock Creek, south of White Rock Lake, to its convergence with the Trinity River, which it then follows southeast to IH 20.

The southern White Rock Creek corridor begins in the north at the dam at the southern end of White Rock Lake near Garland Road and Winsted Drive, five miles east of downtown, and three miles east of Fair Park. The TFST Trail itself officially begins at the Santa Fe Trail stub-out south of Garland Road and runs southward past Ascher Silberstein Elementary School, through Lawnview Park and the Lawnview DART Light Rail Station, to and through the Great Trinity Forest (the largest urban hardwood forest in the United States), to the planned Texas Horse Park, the planned Trinity Forest Golf Course, the Trinity River Audubon Center, and the McCommas Bluff Preserve, and terminating at Great Trinity Forest Gateway and Horse Trails at Dowdy Ferry Road.

The TFST Trail will serve as the spine trail for proposed connector trails. This combined system of trails will connect to significant destinations including:

- White Rock Lake;
- Businesses along Garland Road;
- The Santa Fe Trail (which leads to Deep Ellum and Downtown);
- A proposed regional trailhead at Samuell Blvd/IH 30;
- The Ash Creek Greenbelt;
- Lawnview Park, the Lawnview DART Station, and nearby neighborhoods;
- A proposed nature trail connecting to the Scyene Overlook in Scyene Trail Park, Grover C. Keeton Golf Course/Clubhouse, and Gateway Park;
- A proposed "Urban Wilderness" park near Bruton/2nd Avenue;
- Historic springs near Pemberton Hill;
- The Trinity Horse Park (planned);
- The AT&T-sponsored Trinity Forest Golf Course (under design);
- The Trinity Audubon Center;
- The McCommas Bluff overlook; and
- The Trinity River Southern Gateway.



The bright red line shows the alignment of the Trinity Forest Spine Trail. The trail is in close proximity to Downtown, Fair Park, and White Rock Lake.

PREVIOUS PLANS & STUDIES

Nearly two decades of planning preceded and led to this master plan.

A number of studies and plans have been completed over the last two decades for the TFST corridor or nearby areas. The plans summarized in this section led to the development of this master plan for TFST trails and informed the planning effort.

White Rock Lake Master Plan (1996)

White Rock Lake is generally considered the northern terminus of the Trinity Forest Spine Trail. This plan established program guidelines, design illustrations that preserved the park's heritage, and provided design detail recommendations, which have been used as fundraising tools for White Rock Lake Improvements. Illustrations included granite trails and board walks in nature areas, concepts for public art, a plan for Winfrey Point improvements, and "Pump House Square" just west of the dam. The plan does not indicate a connection southward along White Rock Creek, nor does it include the subsequently-developed Santa Fe Trail. Recent multi-use trails at White Rock Lake have been designed and built at 12' in width. These include concrete trails, asphalt-overlaid concrete trails, and a boardwalk. The Santa Fe Trail connection to the White Rock Lake Trail is now also operational.

Great Trinity Forest Master Plan (1997)

This plan was prepared for the Texas Parks and Wildlife Department to guide long term park development within the Great Trinity Forest along the Trinity River



The White Rock Lake Master Plan (above) did not indicate a future trail along White Rock Creek to the south, but enabled the trail activity in east Dallas that the TFST Trail will also serve.



between Corinth Street and IH 20 and along White Rock Creek up to Scyene Road in the north (which contains a significant portion of the TFST spine trail proposed herein). The plan identified conceptual locations for recreational facilities, including the “Trinity Center,” an equestrian center, and a variety of recreational opportunities, including trails of various types; areas for bird-watching and nature observation, camping, fishing, canoeing, kayaking, and rafting. Key design parameters that guided the plan’s development included:

- Respect and preserve sensitive natural areas;
- Utilize previously disturbed areas for active recreation activities;
- Design for maximum accessibility;
- Provide a variety of access points; and
- Link the forest to other area greenbelts.

A Renaissance Plan (2002)

The Dallas Park and Recreation Department’s Long Range Development Plan—“A Renaissance Plan”—was centered on strategies to recover, regain, and reposition the Dallas park system as a model for cities throughout the United States. One area of focus was the implementation of a regional citywide trail network. The Plan sets standards for trails at 1 mile of trail per 5,000 population. A survey of citizen priorities conducted as part of this plan revealed that hike and bike trails were the top choice of respondents. By 2005, the Dallas Trail Network Plan was completed and adopted, then updated in 2008; the Trinity Forest Spine Trail is one of the major proposed trails in these plans.



A Feasibility Study and Master Plan for The Trinity River Interpretive Center, The Trinity Equestrian Center & Associated Components (2004)

Developed for the City of Dallas Park and Recreation Department and Trinity River Project Office, this plan first analyzed the feasibility of sites for the two centers, then developed a master plan to guide implementation for the selected Trinity River Interpretive Center and the Trinity Equestrian Center sites. These sites are located in the center of the Great Trinity Forest along Loop 12, about halfway between the proposed Northern and Southern Gateway parks.

The site for the Trinity River Interpretive Center, (now operating as the Trinity River Audubon Center), is located on the south side of Loop 12 at Longacre Lane west of Jim Miller Road. The Center provides adult, family and children’s programs, events, meeting spaces, and guided or unguided walks along the Center’s nature trails. The existing Trinity Forest Trail Phase 2 terminates at a trailhead adjacent to the Center’s overflow parking lot.

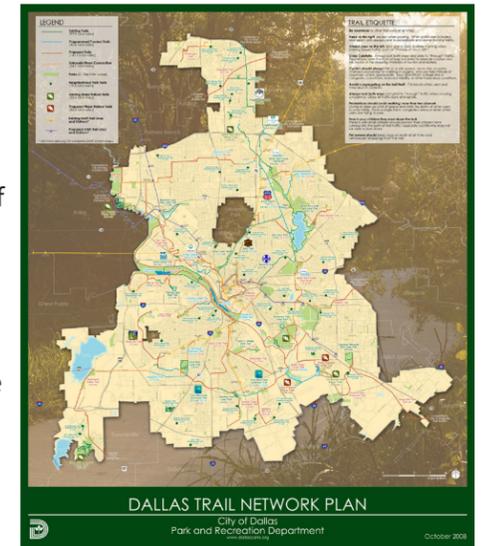
Trinity River Corridor Comprehensive Land Use Plan (2005)

Built on previous plans, this plan established preferred future land use scenarios within the Trinity Forest Spine Trail study area outside the Trinity River Floodplain. The primary scenarios identified were Residential Traditional, with Residential Urban in the area west of White Rock Creek and east of the Hatcher Street DART Station; Community Village at the Lawnview DART Station; and Mixed-Use High Density surrounding the Lake June DART station. Redevelopment area studies of particular interest for this master plan include:

- The Lake June Prototype Site, where access both from the Lake June DART Station and US 175 to Pleasant Grove, through the Great Trinity Forest, can provide access to the White Rock Creek basin and the planned Trinity River equestrian center;
- South Trinity Forest District Land Use Opportunity Plans and Urban Design Framework Plans for the IH 20 /Dowdy Ferry area and Pemberton Hill; and
- North Trinity Forest District Land Use Opportunity Plans and Urban Design Framework Plans for Rochester Park (now William Blair Jr. Park), Ideal Neighborhood, South Lamar, Cadillac Heights, and Skyline Heights.

Dallas Trail Network Plan (2008)

This plan was originally adopted in 2005 and was later updated in 2008. The Plan is intended to be updated as needed to show implementation status and newly proposed trails. At the time of the 2008 update, over 98 miles of trails already existed. By August 2012, over 116 miles of trails existed, including 44 miles of linear trails, 21 miles of major loop trails, 26 miles of nature trails, as well as 28 miles of neighborhood trails. At that time, 18 trail miles were programmed (funded and/or under design), and 149 miles were proposed. All linear trails in the Plan will ultimately be interconnected, including some on-street connections. Key elements of the Plan for the Trinity Forest Spine Trail Master Plan in and adjacent to the area include its connections to:



- The Santa Fe Trail to Deep Ellum, with an on-street connection to the Katy Trail at the American Airlines Center;
- The DART Lawnview Station and Scyene Trail/sidewalk connections to the east;
- The DART Lake June station (connected via Connector trails);
- William Blair Jr. Park (formerly Rochester Park);
- Neighborhood parks and trails along the corridor;
- Nature trails in the Great Trinity Forest;
- Existing, planned, and programmed segments of the Trinity Forest Trails;
- The proposed Texas Horse Park;
- Trinity River Audubon Center;
- McCommas Preserve nature trails; and
- The proposed Prairie Creek Trail at IH 20.

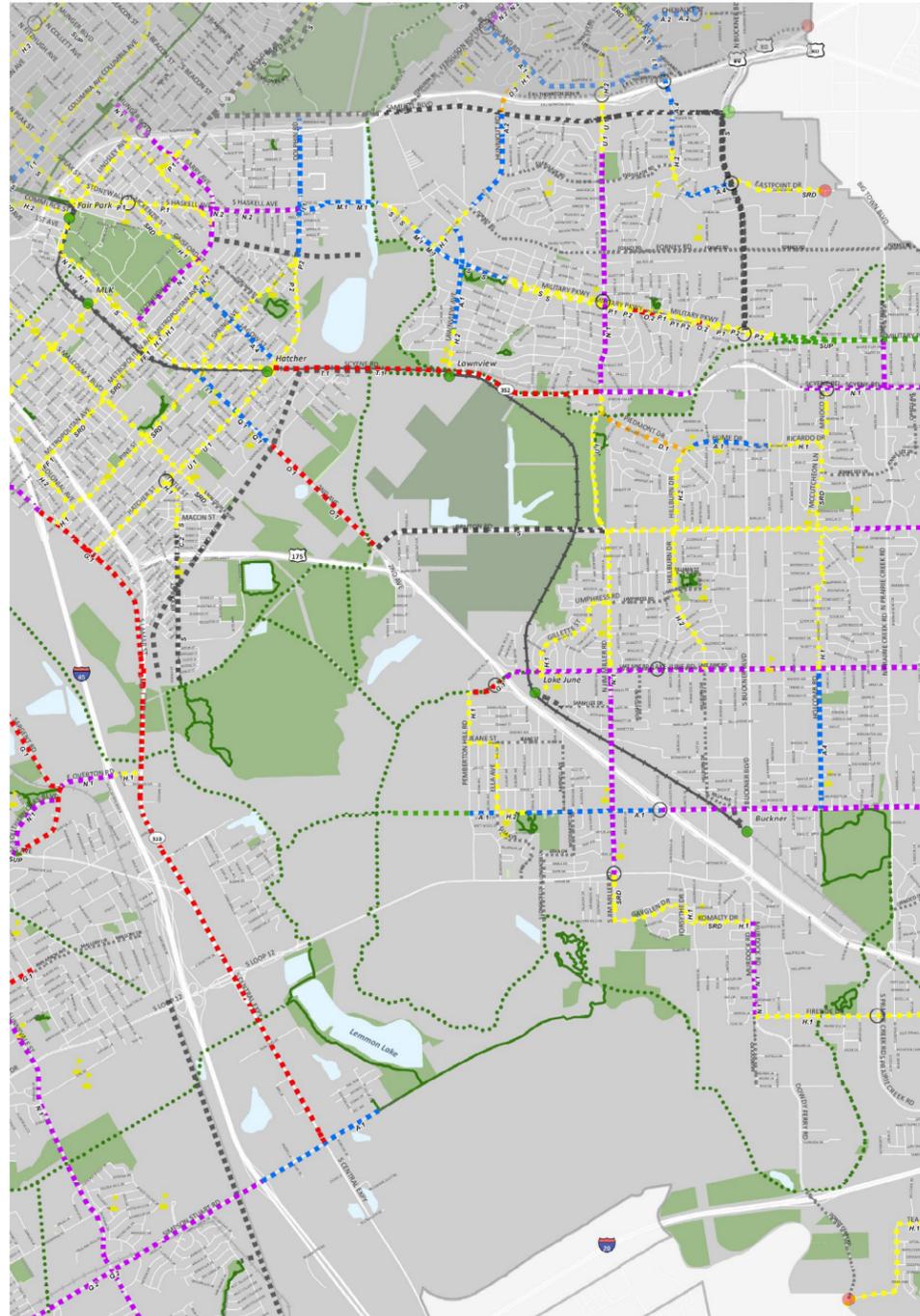


The Great Trinity Forest Management Plan (2008)

This plan is a 31-volume study providing year-by-year detailed instructions, schedules, and budgets for the City of Dallas for its 6,000-acre forest along the Trinity River for the next 100 years. The Plan addresses the City's "wildlife habitat, recreational, and forest management needs" for the Great Trinity Forest. The Plan recommended that forest improvement access trails be converted to foot and bicycle paths, spine trails be created along existing utility rights of way, and that part of Roosevelt Heights be converted to a campground. Various other trails, trailheads, and gateway parks are suggested, with 44 miles of existing and proposed trails called out. One interesting element of the Plan is the identification of "Wolfpack Trees" (now referred to as "Heritage Trees"). These are large and majestic trees that in most cases were fence line trees not cut down when the land was converted to farmland. Nature trails to some of these trees could serve as an attractive destination to those who will travel along the Trinity Forest Spine Trail.

Volumes 7-8 of the Forest Management Plan cover recreation and include trail sections such as:

- Forest Service Trail Accessibility Guidelines
- Accessibility Guidebook for Outdoor Recreation and Trails
- Trail Construction and Maintenance Notebook
- Wetland Trail Design and Construction
- Geosynthetics for Trails in Wet Areas
- Managing Degraded Off-Highway Vehicle Trails in Wet, Unstable, and Sensitive Environments.



Dallas Bike Plan (2011)

The citywide Dallas Bike Plan was prepared for the City of Dallas and the North Central Texas Council of Governments. The plan identified both on- and off-street bicycle facilities and incorporates the Dallas Trail Network Plan. This network is envisioned to provide over 1,000 miles of interconnected bicycle facilities that will provide access from neighborhoods to transit, employment centers, schools, and civic destinations. The plan shows connections to the Trinity Forest Spine Trail, both on- and off-street. Designated on-street bike facilities providing access to the TFST Trail include (from north to south):

- East Grand Avenue/Garland Road (via the Santa Fe Trail);
- Samuell Boulevard (subject to further study);
- Haskell Avenue/Military Parkway/Hunnicut Road (bike lanes/shared lane markings);
- Scyene Road (paved shoulder with segments requiring further study); and
- 2nd Avenue/Bruton Road (paved shoulder with segments requiring further study).

There are also access trails and on-road connections to the Lake Junco DART Station at Lake Junco Road at Pemberton Road (paved shoulders/cycletracks) and to the Buckner DART station via an access trail to Pemberton Road at Elam Road, with on-street connections along Elam.

This map (left) shows the Dallas Bike Plan recommendations for the area around the Great Trinity Forest. Shared-use trails are shown in green, cycletracks/buffered bike lanes are shown in purple, bike lanes are shown in blue, shared lanes are shown in yellow, and paved shoulders are shown in red. Solid lines represent existing facilities whereas dashed lines indicate planned or proposed facilities. Grey lines indicated streets for which further study is needed.



Complete Streets Initiative (2011, ongoing)

Launched in June 2011, the intent of this initiative is to institute a new approach to street design and construction. According to the initiative's website, the

"vision is to build streets that are safe and comfortable for everyone: young and old, motorists and bicyclists, walkers and wheelchair users, and bus and train riders alike. The final products of the Complete Streets Initiative will be a vision map, street design manual with policies and standards, and implementation program that will help institute this new approach."

Fourteen pilot project concept plans have been developed, including one on Buckner Boulevard between Lake June and Elam Road, which proposes 10' sidewalks with trees and pedestrian lighting on both sides of the street, as well as buffered bike lanes. Another pilot project, Grand Avenue between Good Latimer Expressway and Robert B. Cullum Boulevard proposes widened 6' sidewalks on both sides with trees and pedestrian lighting, with either shared lane markings or buffered bike lanes. City Council adoption of this plan was expected during the summer of 2012, but has not yet been scheduled.

Dallas Floodway Extension Project (ongoing)

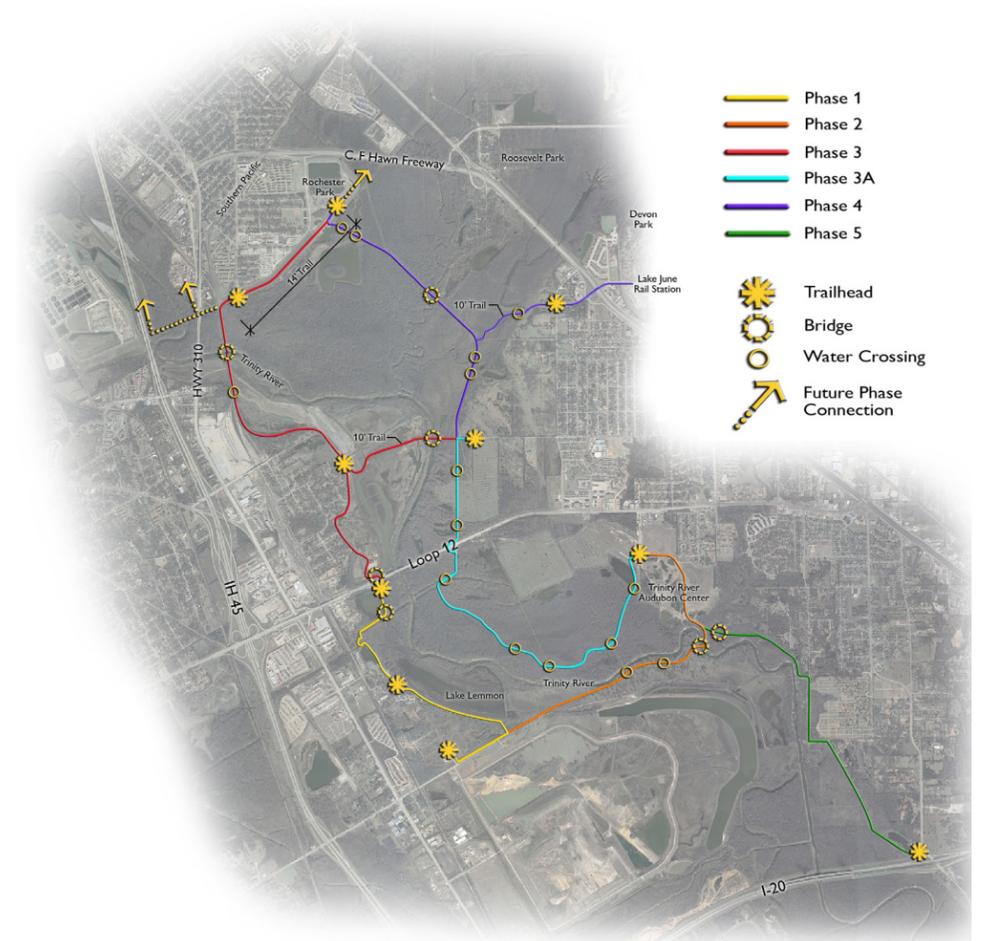
The US Army Corps of Engineers has oversight responsibility for all activities within the federally-authorized Dallas Floodway System. The Corps' Fort Worth District is the lead agency for the Dallas Floodway Extension Project between the Santa Fe Trestle Trail and IH 20 at Dowdy Ferry Road, focusing on flood protection, ecosystem restoration, and recreation. The City of Dallas, as the local sponsor, works in partnership with the Corps. A significant element of the Floodway Extension Project is the creation of a "Chain of Wetlands" between the Santa Fe Trestle Trail and Loop 12. The chain will be 3.7 miles long, with an average width of 600 feet and will significantly increase the stormwater storage capacity of the floodway. Wetland cells A-C, along the west side of the Trinity River between the Santa Fe Trestle Trail and IH 45, are under design; cells D-G between IH 45 and Loop 12 were completed by 2008.

Ecosystem restoration includes more than 270 acres of improved wetlands, open water, and grasslands. Due to the loss of more than 200 acres of bottomland forest for the wetlands, the Corps must acquire nearly 1,200 acres of forest and farmland along the east side of White Rock Creek and the Trinity River within the Great Trinity Forest. Included in the mitigation plan is improvement and management of bottomland hardwood trees and grasslands.

Trinity Forest Trails Master Plan (ongoing)

The Trinity Forest Trails Master Plan is a map that is to be updated as needed. This map consolidates existing plans, including the Dallas Trail Network Master Plan, The Great Trinity Forest Plan, The Dallas Floodway Plan, the Trinity River Implementation Plan, and the Dallas County Trail Plan. The planning identified land ownership, logical destinations, and impacts to on-going projects and mitigation lands. It also developed preliminary hard-surface spine network routes, including one leg along White Rock Creek from Scyene Road south to the William Blair Jr. Park area, where it veered to the southeast to the proposed Texas Horse Park and beyond.

This map, updated in 2013, indicates the revised alignment for Phase 3A, referred to as the "AT&T Trail" in this study. Construction will soon begin on this segment (the trailhead will be developed with the reconstruction of Elam Road from Pemberton Hill Road to its termination near the future First Tee Golf Facility).



Above: This map (updated in 2013) illustrates the Trinity Forest Trails Master Plan. Phases 1 and 2 are complete and Phases 3 and 3A have been designed and will begin construction soon. The proposed TFST Spine Trail overlaps all of Phases 3A and 5 and portions of Phases 2 and 4.

Left: Images of Phase 2 of the Trinity Forest Trail (portions remain under construction) near the Trinity River Audubon center. The bridge spanning the Trinity River not only provides a connection across the water body, but also serves as an overlook.

Next Page: This map illustrates the general alignment of the proposed TFST Spine Trail (highlighted in red), Connector Trails, trailheads, and access points.

Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

LEGEND

- | | | | |
|--|--|---|-------------------------------------|
| 1 Tenison Trail (1.8 Miles) | 4 Forest Outfield Ponds Trail (2.3 Miles) | 6 South Forest Gateway Trail (2.4 Miles) | Spine Trail (Proposed) |
| 2 Parkdale/Lawnview Station Trail (3.0 Miles) | 5 AT&T Trail (4.3 Miles) | Connector Trail (Proposed) | Major Trail (Existing or Proposed) |
| 3 Great Scyene Forest Trail (1.7 Miles) | 5A Joppa Connector Trail (2.0 Miles) | Trail Head | 2011 Dallas Bike Plan |
| | | Trail Access | Nature Trail (Existing or Proposed) |
| | | Canoe Launch | Park Loop Trail |
| | | Equestrian Trail Head | |



Trinity Forest Spine Trail Master Plan

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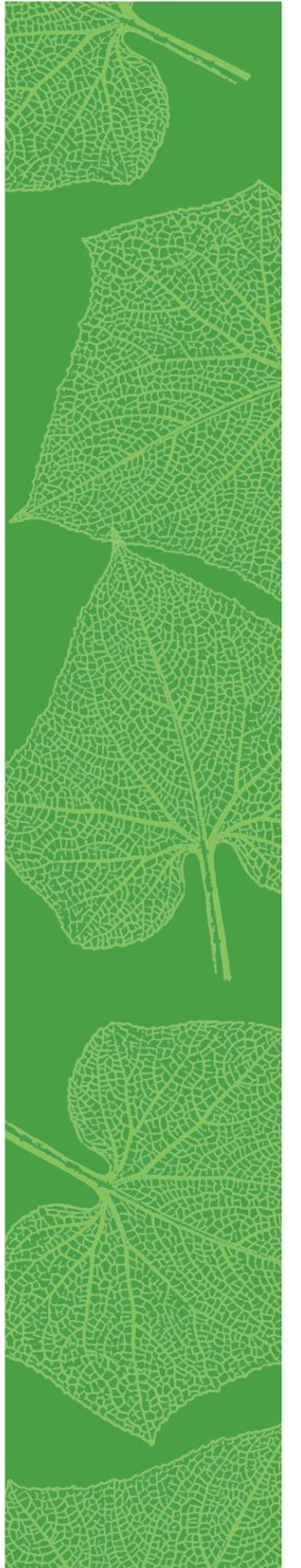
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 2

Site Inventory & Analysis

Site Inventory | Opportunities & Challenges | Focus Areas



SITE INVENTORY

A thorough inventory of the southern White Rock Creek corridor was developed through assembling GIS data and gathering additional data in the field.

A comprehensive Geographic Information System (GIS) was developed for this project. A significant amount of base data from various sources was collected and utilized. In addition, the Field Review portion of this project resulted in the creation of additional data. These data are incorporated into a single GIS database used through the duration of this project as well as for future use by the City of Dallas.

» Base Data

Base data was collected from numerous sources, including the City of Dallas, the North Central Texas Council of Governments (NCTCOG), the United States Geological Survey (USGS), Dallas County, the Texas Commission on Environmental Quality (TCEQ), the Texas Education Agency (TEA), the United States Environmental Protection Agency (EPA), and the Texas Railroad Commission (TRC). The following lists the base data incorporated into the GIS for this project. Unless otherwise noted in the table below, all data was provided by the City of Dallas or located via aerial imagery:

Base Data – City Limits; Aerial Imagery

Trails – Great Trinity Forest Trail Plan; 2011 Bike Plan; Trail Master Plan; Existing/Programmed Trails

Environmental Features – Streams (Dallas County); Lakes and Ponds (Dallas County); Topography (2' Contour Lines, USGS); Superfund Sites (TCEQ); Active and Closed Landfills (NCTCOG); 100-Year Floodplain (FEMA); Air Emissions Sources (EPA); Sources of Toxic Releases to Air, Water, and Land (EPA); Water Discharge Locations (EPA); Hazardous Waste Sites (EPA)

Public Facilities – Stadiums/Arenas; Schools (TEA); Golf Courses; Parks

Historic Features – National Registered Historic Properties; Historical Markers; National Registered Historic Districts; Cemeteries

Transportation – Streets and Roads (Dallas County); Railroads (NCTCOG); Existing Light Rail and Bus Rapid Transit Lines and Stations; Planned Light Rail Lines; Transit Centers

Utilities – Storm Water Pipelines; Oil/Gas Pipelines and Wells (TRC); Electric Transmission Lines

Property/Parcels – City/County/State Property; Utility Company Property; Railroad Property; Other Private Property

» Field-Collected Data

Field review work for this project was carried out during April, 2012 with follow-up field visits through July. The purpose of this portion of the project was to collect otherwise-unavailable data that may dictate decisions in determining trail alignments, access points, and amenities. Mobile GIS technology was utilized to record features, their location, and the condition of each. The following datasets were developed during this portion of the project:

Access Points – Trailheads; Local Bike/Pedestrian Access

Creek and Drainage Crossings – Creek Crossings; Wetland Areas; Presence of Existing Bridges; Potential Solutions

Points of Interest – Illegal Dumping; Potential Trail Destinations; Scenic Overlooks; Interpretive Opportunities

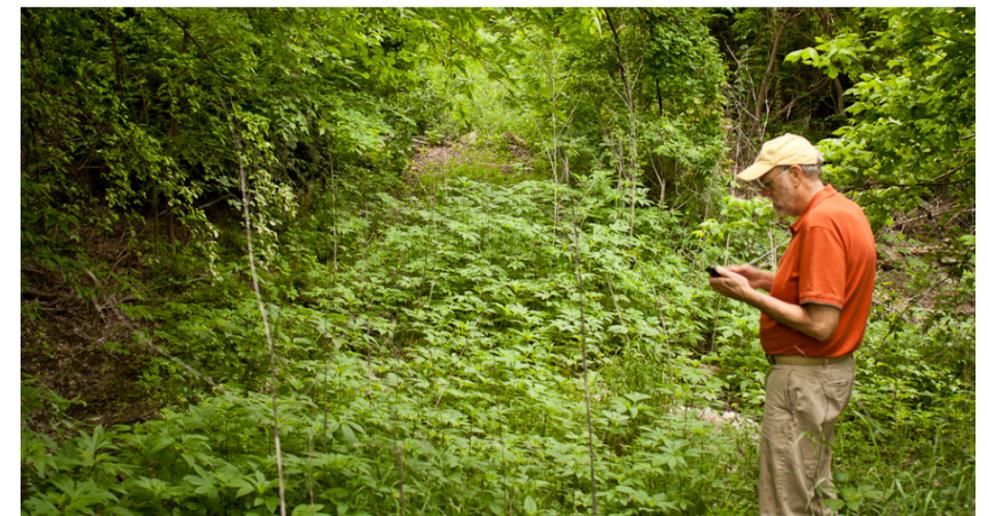
Roadway Crossings – Undercrossings; Midblock Crossings; Uncontrolled Intersection Crossings

Challenge Areas – Stream Bank Edges; Challenging Topography; Dense Vegetation; Invasive Vegetation

Alignments – Alternative Spine Trail Alignment Options



Several streets and railroads cross the corridor and are significant barriers. Opportunities to provide trail crossings under bridges were identified and considered in terms of ease of retrofitting a crossing, cost, and potential maintenance cycles.



Fieldwork for this project required a considerable amount of trailblazing and bushwhacking, but revealed the forest's true beauty (top). Field data was collected via Android and iPhone Mobile GIS applications (above).

OPPORTUNITIES & CHALLENGES

The following section describes the general challenges and constraints within the southern White Rock Creek corridor.

Opportunities

The entire southern White Rock Creek corridor is a major opportunity for the City of Dallas to enhance connectivity between neighborhoods via trails and provide access to one of the largest urban forests in the country. Several key opportunities have been identified.

» Natural Features

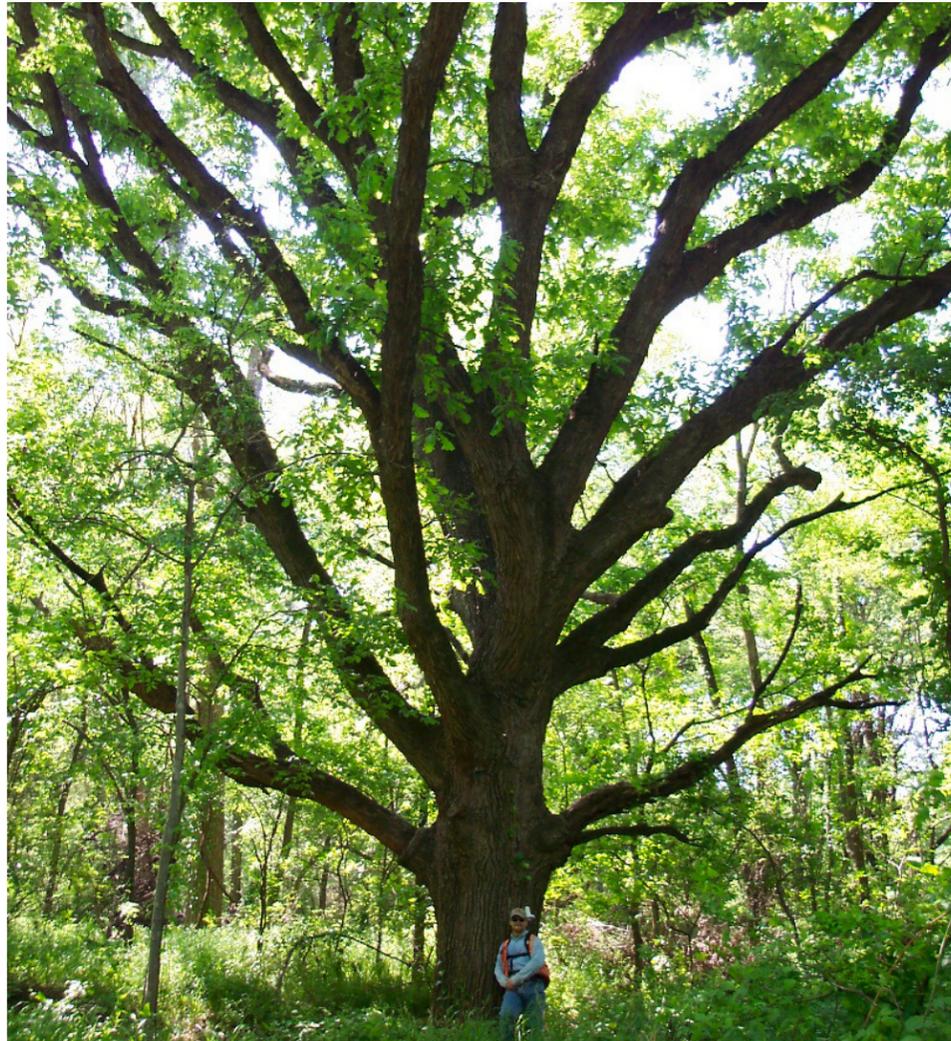
While many of the natural features in the corridor pose challenges to trail development, they also are the source of the area's natural beauty. The forest itself is the most prominent natural feature and provides opportunities for environmental education, hiking, bird-watching, and shade. White Rock Creek, along with the Trinity River and other nearby water bodies, provides opportunities for paddling sports (canoeing and kayaking), fishing, and wildlife viewing.

Looking out over one of the many small lakes that exist along the White Rock Creek (below). These provide opportunities for viewing wildlife, environmental education, and paddling.



At the middle of the 20th century, much of the corridor was used for agricultural purposes and consequently was not forested as it is today. As such, the forest is relatively young and the trees are generally small. However, there exist an estimated 40 to 70 trees of significant size and age within the area. These trees—referred to here as “heritage trees”—have diameters ranging from 25” to over 50” and can be over 90’ tall. Considering their size relative to other trees in the area, these heritage trees can have educational and aesthetic value as destinations within the corridor.

A large “heritage tree” located in the Great Trinity Forest (below).



The McCommas Bluff area presents a unique opportunity within the corridor. Whereas the majority of the corridor is low-lying, this area has steep inclines and cliffs that contrast the flatter, more marsh-like areas to the north and west. In addition, this area has historic significance, being the site of Trinity City—a frontier town established by the Peters Colony in the mid-1800s. Visible from the trail, all that remains of Trinity City is an unused chapel, a lock and dam on the river, and a house where the lock operator lived. This location was part of a system of 37 locks and dams (only seven were built) constructed between 1902 and 1921 intended to provide shipping access between Galveston and Dallas.



The Trinity River at McCommas Bluff (above). Unused chapel located near the lock-keeper's house and former Trinity City frontier town site (below).





» Existing & Planned Trail Networks

There are a number of existing and planned trails that can be connected along the corridor. On the northern end, the White Rock Lake Trail and Santa Fe Trail will connect the TFST Trail to the Deep Ellum/Fair Park areas and to Far North Dallas via the existing White Rock Creek Trail north of the lake. To the south, there are existing trails near and in William Blair Jr. Park that will connect the Rochester neighborhood to the overall corridor. In addition, the existing Trinity Trail that connects Loop 12 to The Trinity Audubon Center (by way of the Joppa Preserve) will be connected to the overall TFST Trail system.



The newly-redesigned trail and spillway at the southern end of White Rock Lake (above). Looking south at the future beginning point of the Trinity Forest Spine Trail at a “stub-out” along the existing Santa Fe Trail (below).



» DART Access

Light rail transit access to an urban natural area as large as the Great Trinity Forest is unprecedented. The DART Green Line follows Scyene Road, crossing the White Rock Creek near Lawnview Park. In this area, the Hatcher and Lawnview stations provide potential access to future trails within the area, with the latter being located immediately adjacent to the corridor. The Green Line continues along the eastern edge of the corridor, through Keeton Park Golf Course, to the Lake June station near US-175. This station also has the opportunity to connect to the corridor via connector trails and on-street linkages.



The DART Lawnview Station (above) provides the opportunity for unparalleled access to the Great Trinity Forest via DART’s Green Line. The station was designed to provide future trail connectivity to the Great Trinity Forest (below).



» Parks & Recreation Facilities

Access to parks and recreation facilities is a primary goal for trails within the corridor. Within the corridor there exist a number of City parks, two golf courses, the Dallas County McCommas Bluff Preserve, the Trinity River Audubon Center, and the future Texas Horse Park. In addition, there are nine recreation and community centers within approximately one mile of the corridor. North along the Trinity River and outside of the study area, the recreational elements of the Balanced Vision Plan will become destinations for trail users. Interconnecting these destinations with trails will help to solidify and reinforce the recreational value of the Great Trinity Forest.



William Blair Jr. Park is one of the many City of Dallas parks that will be connected to the Trinity Forest Spine Trail.

» Neighborhoods

Connectivity to surrounding neighborhoods to provide local access to this significant amenity is an important opportunity. Similarly, potential impacts to the surrounding community must also be considered. From north to south, the following neighborhoods immediately border the corridor:

- Forest Hills / Little Forest Hills
- Lakewood Hills
- Fair Park
- South Dallas
- Buckner Terrace
- Parkdale
- Bonton
- Piedmont
- Joppa
- Pleasant Grove



» Existing Corridors

A number of major electrical transmission lines and gas lines pass through the corridor. Each of these, either directly or indirectly, runs north-south to and from the former Parkdale Power Plant. Where they pass through densely-wooded portions of the corridor, the forest is cleared to avoid interference with the lines. As such, these serve as natural linkages and opportunities for trail connections and maintenance access.

In addition, there are a number of other existing corridors in the area. Examples include abandoned roads; connected pockets of former agricultural land; and water, sewer, and gas pipelines. In many cases, the forest canopy over these corridors is less disturbed than along the aforementioned electrical transmission corridors.

Abandoned roadways and maintenance roads offer opportunities for trails with minor disturbance to the forest and decreased construction costs. This example (below) crosses the rolling terrain in the McCommas Bluff area.



Examples of the major electrical transmission lines that pass through the corridor (above and below). While these corridors provide opportunities for trail alignments and/or trail construction access, the fragmentation of the forest is apparent.



Underground water, sewer, and gas pipeline easements (above), abandoned roads, and minor overhead utility corridors (below) provide opportunities for trails in a more natural setting and without removing additional canopy.





Challenges

» Creek and Drainage Crossings

There are numerous creek and drainage crossings, as well as general boggy areas that pose challenges to trail construction and will increase cost. Smaller drainage-ways and creeks can be crossed by way of culvert or low-water crossing. However, there are a number of crossings that will require bridges of significant spans. In addition, some low-lying areas will only be passable if the trail is raised or boardwalks are constructed. The impacts of bridges and crossings on drainage patterns and flood conveyance must be considered.



Numerous tributaries and drainageways exist (above), requiring bridges or boardwalks for trail crossings. Drainageways that are typically dry but convey water when it rains (below) are also numerous and require culverts, boardwalks, or bridges.



Many areas within the corridor contain wetlands and standing water (above and below), requiring boardwalks. While challenging, these areas also provide opportunities for environmental education and wildlife viewing.



» Dense Vegetation

There are a number of significant challenges that are present throughout the corridor. The dense woods and other vegetation throughout the corridor limit accessibility in the area. If intensive clearing is to be avoided, potential trail alignments are restricted to utility corridors, edges of the forest, along roadways, and areas previously cleared.



Chinese Privet is an invasive shrub that forms thick hedges in and around the Great Trinity Forest (above). Trail construction provides opportunities to remove invasive species. Dense vegetation of any species can create construction challenges.





» Transportation Infrastructure Crossings

Trails along southern White Rock Creek will by necessity cross streets, highways, and railroads. Most of these crossings (including all railroad crossings) will be grade-separated, with the trail passing underneath bridges. In some of these locations, vertical clearance underneath bridges, erosion impacts, and standing water are significant concerns. Although the preference is for all road and railroad crossings to be grade-separated, some will be at-grade due to these challenges.



The combination of standing water and low vertical clearance (above and below) creates exceptional challenges for trail undercrossings. In cases like these, the trail will be routed to a signalized intersection or another bridge with greater clearance.

» Private Property

While the vast majority of the land within the corridor is owned by the City of Dallas, Dallas County, or other public entities, there are locations where the most feasible trail alignments pass through land owned by private individuals or companies. In addition, private railroads, utility companies, and DART own land within the corridor. Crossing these properties will require easements and coordination.



The former Roosevelt Heights neighborhood (above) contains streets, utilities, and more than 450 platted residential lots (although the majority of houses were never constructed). Although many lots have been acquired by the City of Dallas and only one house remains at the time of writing, many of these parcels are still under private ownership.

» Active & Closed Landfills

The only active landfill in the area is the McCommas Bluff Landfill, near which the existing Trinity Trail is located (future trails will likely not be located in any closer proximity). However, there are at least seven known closed landfills in the corridor. Five of these are capped and are generally indistinguishable from open fields to the layperson. One is fitted with methane-extraction equipment. The seventh closed landfill now operates as an automotive scrap yard.



The site of a former illegal landfill (above) near the Trinity River Audubon Center and existing Trinity Trail. This landfill has been closed and remediation efforts include extracting methane gas, which is the purpose of the visible equipment.



» Public Safety & Security

Because of the remote nature of the corridor, public safety and security concerns must be considered. The sheer size of the corridor and potential distance from access points at which one may find themselves necessitates consideration for emergency access, 911 location markers, and possibly police call boxes. Depending on the hours of operation of trails in the corridor, lighting at access points and trailheads is recommended. Finally, the danger of contact with wildlife is present. The conditions are conducive to the presence of poisonous snakes, ticks, and other biting insects, as well as larger animals such as bobcats, coyotes, wild dogs, and feral hogs. However, none of these larger animals were seen during the field review.

» Hazardous Materials/Sites

The EPA has identified numerous air, water, and land pollution sources; hazardous waste sites; and sites producing emissions considered to be toxic located in the developed areas surrounding the corridor. The largest concentration that is in proximity to potential trail alignments is along Military Parkway and Parkdale Drive near the IC Harris Service Center. Generally speaking, these do not greatly impact the alignment of trails in the corridor.

Finally, there is one Superfund site near the corridor (the Sampson Horrice site). However, this former gravel pit that accepted solid waste disposal illegally has been remediated and the TCEQ has determined that no further clean-up is necessary.

FOCUS AREAS

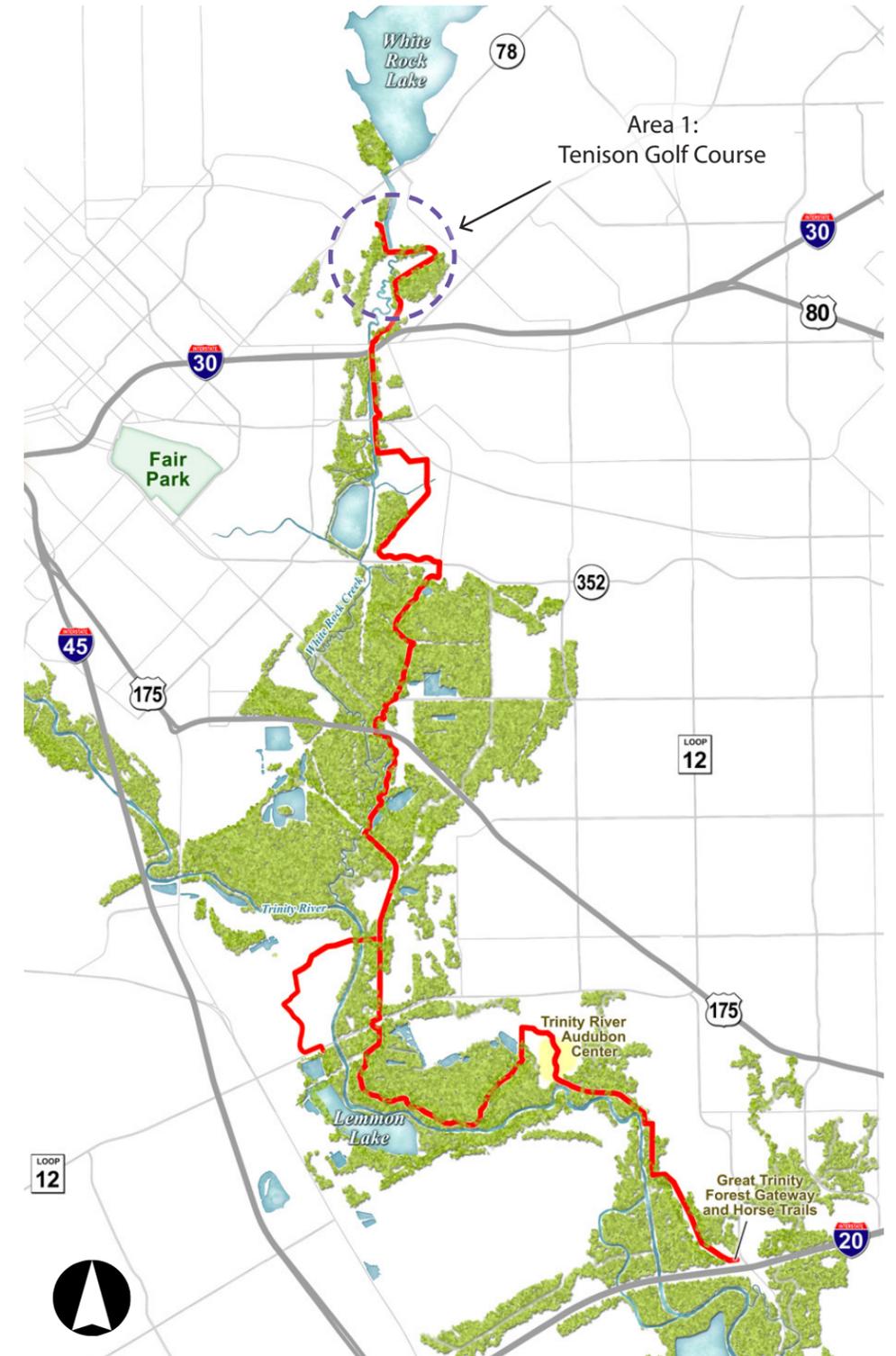
The opportunities and challenges of six focus areas are assessed in greater detail in this section. Due to their unique challenges, a significant amount of in-the-field time was dedicated to studying these areas.

Area 1: Tenison Golf Course

Near the southern end of White Rock Lake, a spur exists off the Santa Fe Trail serving as the beginning point for the Trinity Forest Spine Trail. This densely-populated area, with numerous recreational amenities already in use, offers many opportunities for the trail user with easy access and connectivity along existing drainage and utility corridors. Here, the lay of the land is generally flat and amenable to the addition of the spine trail. Pedestrian bridges will be required in at least two locations. In order to cross under the railroad that borders Tenison Golf Course on the north side, a trail will need to pass under the railroad on the west side of the creek, and cross over the creek and go east around the golf course.



A potential location for crossing under the existing Kansas City Southern railroad bridge (above). The existing trail “stub-out” on the Santa Fe Trail (above right). White Rock Creek is very wide where it crosses the railroad (right). Crossing the creek (on the far side of the bridge) will require a bridge of significant length.





Area 2: IC Harris Service Center

Topography in this area varies greatly, with lower, wet areas along White Rock Creek prone to flooding and higher areas to the east near Military Parkway and Parkdale Drive. In the lower areas, it may be necessary to provide multiple culvert crossings or more substantial bridges. Opportunities exist for the addition of trailheads and access points at a number of locations in the area.

The greatest obstacle is the Union Pacific railroad, which crosses White Rock Creek. Crossing underneath the railroad bridge is prohibitively challenging due to the steep slopes of the creek banks and horizontal clearance. The most viable solution is to align the trail on the north side of the IC Harris Service Center and south along Parkdale Drive, where a wooden vehicular bridge formerly crossed the railroad. A new trail bridge can be constructed at this location, providing a safe crossing.



The Union Pacific railroad bridge crossing White Rock Creek is not conducive to a cost-effective trail underscoring (above). The proposed solution is to route the trail along Parkdale Drive and build a new bridge where the former wooden vehicular bridge crossed over the railroad (right).





Area 3: Lawnview Park & Lawnview Station

At the southern edge of Lawnview Park, Scyene Road, an elevated DART rail line, and an unused freight rail line (sitting at-grade) run parallel and adjacent to each other, collectively presenting a major obstacle to trail connectivity. Passage underneath Scyene would be difficult due to vertical clearance and drainage patterns. Passage under the unused freight rail is not feasible. Because the DART rail line is elevated, a bridge over these three facilities is not practical. If the unused freight rail line is removed, a grade-separated crossing at this location would be more feasible. An alternative solution is to cross Scyene Road and the two rail lines at-grade at the Lawnview Drive intersection. This would necessitate intersection improvements (including enhanced crosswalks and signalization) and access easements through the DART station and DART-owned property south of the station. South of Scyene Road, the corridor is significantly wider, more densely vegetated, and crisscrossed by a network of tributaries and drainage-ways. These conditions present numerous minor challenges.



Three bridges—a freight rail line, the DART Green Line, and Scyene Road—present a major obstruction along White Rock Creek (above and right). The most feasible solution is to cross these three pieces of infrastructure at-grade where they cross Lawnview Drive (top right). This necessitates several infrastructure enhancements, including wider curb ramps, lengthened walk signal timing, and wider crosswalks.





Area 4: Roosevelt Heights

Originally a residential neighborhood now vacated due to flooding, the area of Roosevelt Heights has the potential to offer a wide variety of recreational activities beyond the spine trail, such as camping or day use activities. However, flooding may restrict or impact potential improvements in the area. In addition to concerns about flooding, the area is also home to rampant dumping and has thick, unkempt vegetation. Therefore, isolation is a concern and it would be advisable to consider clearing and grubbing the underbrush. This area is located at the convergence of 2nd Avenue, C.F. Hawn Freeway, and Bruton Road. Each of these roadways present potential challenges; however, many of the bridges provide adequate vertical and horizontal clearance for trail undercrossings. For other recreational uses—such as the aforementioned camping—it may be possible to take advantage of the existing infrastructure (streets and utilities) that remain.



Each of the three major roadways in this area—such as US 175 (above)—provide adequate clearance for trail undercrossings. Ponds, marshes, and minor drainageways are very prominent in this area (top right) and all the way south to White Rock Creek’s convergence with the Trinity River. Infrastructure remnants—such as utility lines and streets (right)—are found throughout this area in varying degrees of decay.





Area 5: Trinity Forest (West)

South of C.F. Hawn Freeway, this portion of the Trinity Forest is home to the most densely vegetated forest within the corridor. Overhead and underground utility easements cut through the forest, offering a natural path along which a trail might be placed. The area is typically low lying and wet in some places, which may require culvert crossings and/or bridges in the more challenging locations. At the time the field work was conducted, there was evidence of a feral hog population in the area, which may raise concerns for the safety of the trail user. In addition, there is a considerable amount of trash and debris within the area, either as a result of illegal dumping or debris being conveyed during flooding.



Utility corridors provide relatively open paths along which trails might be placed (above). While these areas are not as heavily-vegetated as the surrounding woods, dense brush and grasses quickly grow there. Long-abandoned bridges, low-water crossings, and utilities provide opportunities for creek crossings. They also sometimes create rapids (right), which would add an aural element to the trail user's experience.





Area 6: Trinity Forest (East)

Like Roosevelt Heights to the north, this area formerly supported single-family housing but is now vacated due to flooding, with only the streets remaining as evidence of its former use. Again, the issues are much the same, with flooding being a greater issue, potentially limiting or influencing what types of recreational facilities can be provided. One favorable aspect is that three separate small water bodies or lakes could provide opportunities for fishing or canoeing. A gas easement to the south offers easy access to and from the potential spine trail alignments, as well as nearby neighborhoods.



Water bodies both small (above) and large (top right) cover this area, providing significant challenges for trail construction but also valuable opportunities for recreation and environmental interaction. A gas pipeline easement (right) crosses through this area, providing a potential alignment for a trail.



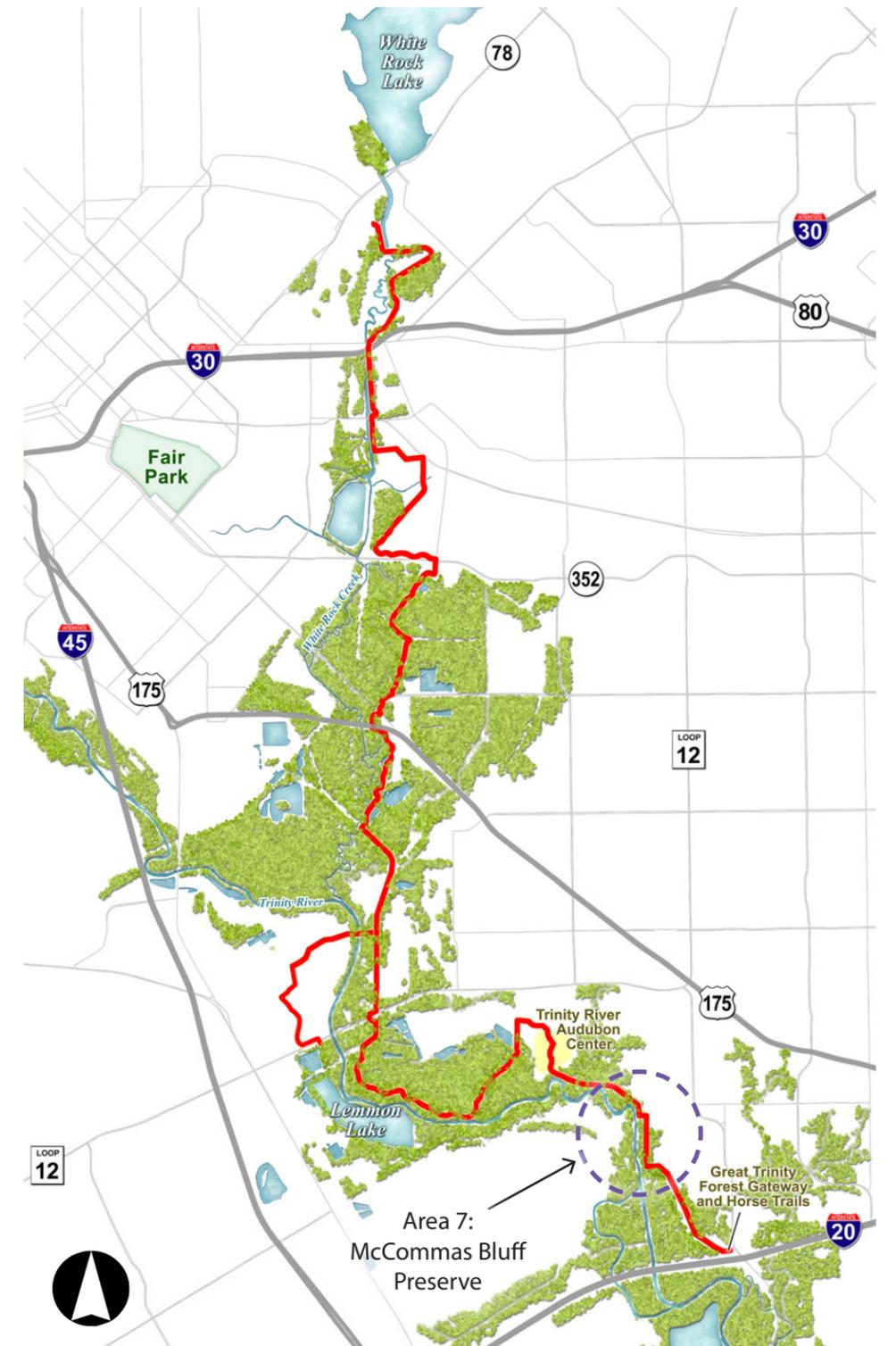


Area 7: McCommas Bluff Preserve

McCommas Bluff, near the Trinity River Audubon Center, is home to some of the more rugged terrain within the corridor. The area is awash with steep bluffs and rock outcroppings on higher elevations, which offer views of the surrounding landscape and the Trinity River. While this topography adds interest, it may also complicate trail construction by necessitating switch-backs, excavation, and other techniques to address sudden changes in elevation. The change in elevation is also apparent with a change in plant material from the more wetland-type plants found in other areas of the corridor to that of Prickly Pear (Cactus), Eastern Redbud, and Honeysuckle vines. Nearby Fairport Road and Riverwood Road offer opportunities for trail connections to the adjacent neighborhoods to the east.



An old dirt road meandering through a meadow provides a potential alignment for a future trail (above). There are valuable opportunities for overlooks at McCommas Bluff, near the terminus of Riverwood Road (top right). Steep slopes are ever-present in this area, creating potential trail construction challenges.



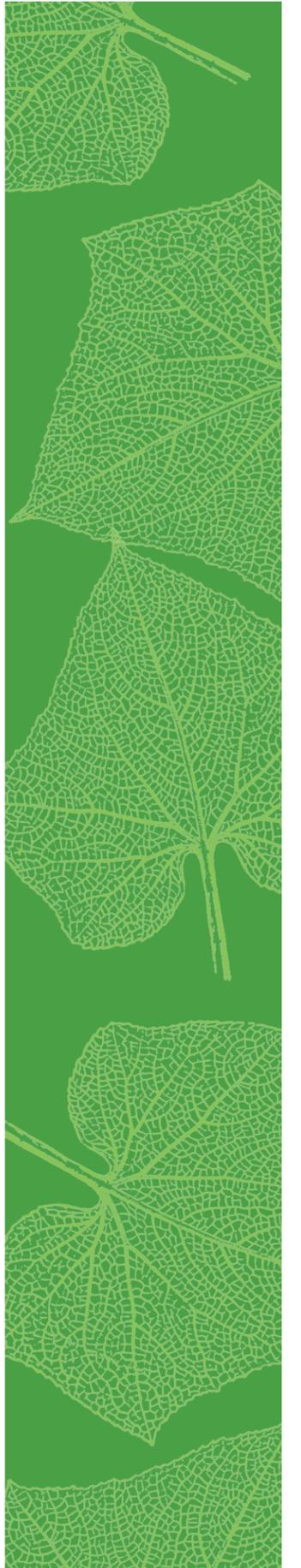
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 3

Trail Alignments

Spine Trail | Connector Trails | Trail Access | Spine Segment Analysis



TYPES OF TRAILS

The Trinity Forest Spine Trail consists of a 12'-16' wide paved Spine Trail that is linked by 10'-12' wide paved Connector Trails and Nature Trails to destinations along the corridor.

Spine Trail

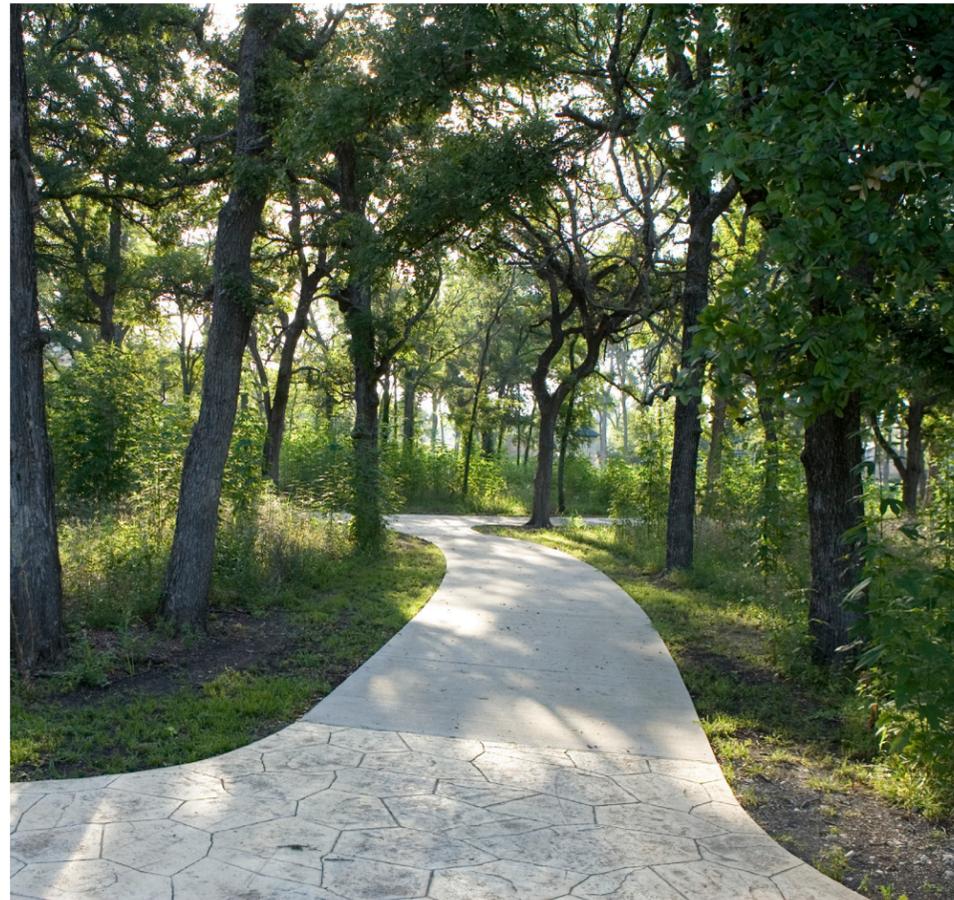
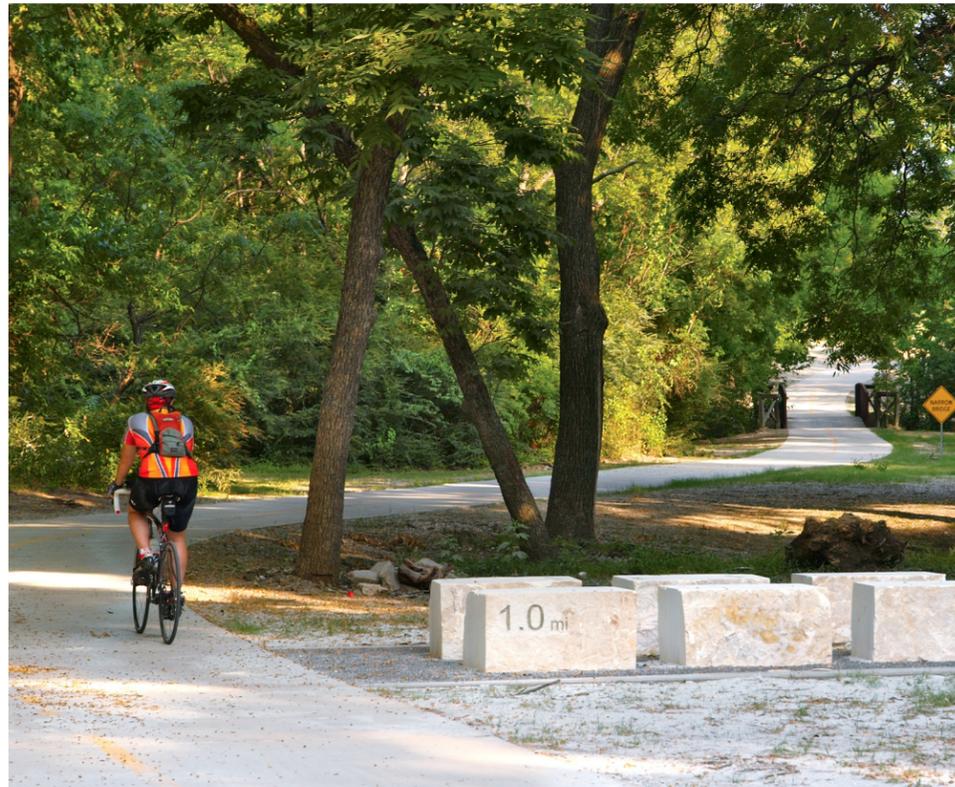
The primary element of the Trinity Forest Spine Trail is a single paved Spine Trail that runs from the Santa Fe Trail near White Rock Lake south to IH 20. The Spine Trail serves as the main throughway for trail users through the corridor and is the primary tool for creating long-distance trail connections between trailheads, neighborhoods, and transit. In many cases, final connections are made by Connector Trails that link to the Spine Trail. Due to the prominence, long distance, and expected popularity of the Spine Trail, it is anticipated that it will attract many users; this necessitates a concrete surface and 12'-16' of width, depending on location¹.

Connector Trails

Connector Trails link the Spine Trail to nearby destinations, neighborhoods, or other trails. These multi-use trails may end at a destination such as a lake, Heritage Tree, or trailhead. Connector Trails can also link Spine Trail segments together. On-street bike routes or bike lanes, together with sidewalks, can also serve as multi-use connector routes. Connector Trails should be constructed to match the surfaces and widths of the trails with which they connect. While the majority of Connector Trails should have a hard surface (concrete), certain segments—such as those terminating at a secluded overlook—can have a soft surface (dirt or crushed granite) depending on its intended users.

Nature Trails

A Nature Trail is a path through a minimally-disturbed natural area. These trails often include interpretive signage about flora and fauna, geology, ecology, and/or cultural history. Display exhibits that reflect the trail's purpose are usually erected at stations along the trail. When these trails are used as outdoor classrooms, a widened area, sometimes with seating, provides space for students to gather around the exhibit and teacher. A Nature Trail can be a spur trail, a loop trail, or a stacked loop trail, may begin at a trailhead or along the Spine Trail, and may end at a different location along the same Spine Trail. Most Nature Trails are earthen trails, but can also be hard-surfaced (recycled concrete, asphalt, or decomposed granite). It is important to provide access for users with disabilities, to the extent that terrain or other physical constraints reasonably allow. At a minimum, it is a goal to provide universal accessibility for the first 1/4 mile or to a point of interest.



¹ It is anticipated that the majority of the Spine Trail will be 12' in width. However, higher traffic areas (such as White Rock Lake and near DART Light Rail stations) may necessitate short sections with additional width.



Other Trail Types

» Equestrian Trails

Equestrian trails are natural surface trails that may stand alone on separate alignments or may be placed within a Spine or Connector Trail corridor, separated by vegetation or a fence from the concrete trail. Horses should be separated from other trail users for the first quarter mile to allow horses to relieve themselves—as is common after trailering—prior to joining the main trail corridor. Equestrian users need space to park their horse trailers at trailheads. Hitching posts should be available at the trailheads and along the trails at points of interest and near water for horses. Horses should not be tied to trees.

» Mountain Bike Trails

Although not specifically identified by this plan, the White Rock Creek corridor provides opportunities for mountain bike trails. Such a trail is a dirt or rock path, frequently with intended obstacles or challenges. It can be a one-way or two-way trail and is frequently configured in stacked loops of varying difficulty. These can be stand-alone trails with their own trailheads, or they may be accessed from the Spine Trail. Usually these trails are built by trained mountain bikers who partner with a city or county to build, maintain, and patrol them. Mountain bikers frequently share the trails they have built with hikers and/or equestrians.

» Paddling Trails

A paddling trail is a specialized type of facility that is very cost-effective for the recreational value it provides. A paddling trail requires very little capital investment compared to other facility types and minimal operational costs. The facilities needed to provide paddling opportunities along White Rock Creek and the Trinity River include mile markers (to aid emergency responders), and put-ins/take-outs, which are the paddling version of a trailhead. There is little difference between a put-in and a take-out other than its position on the creek/river relative to the segment the user will travel. These facilities should be located at areas with relatively flat river banks that extend into somewhat shallow water. They must have easy access to a street and parking area. Drinking fountains and information kiosks that provide warnings and river conditions will improve the user's experience.

TRAILHEADS & ACCESS POINTS

Trailheads and trail access points provide places for people to park, rest, and access the trails.

The recommended trailhead and access point locations were chosen in order to provide an adequate distribution of access points along the corridor, while specifically giving consideration to light rail transit connectivity. Specific locations were determined based on potential land availability; proximity to parks, schools, transit stations, and other key destinations; and relation to the Spine Trail.

Trailheads

Proposed trailheads are located approximately every one to three miles along the Spine Trail and at all locations where the Spine Trail crosses a major street or highway. In addition, trailheads are placed off of the Spine Trail in some instances and connected by a Connector Trail. A trailhead should include at minimum the following:

- Ten to twenty off-street parking spaces;
- Drinking fountains;
- Bike racks;
- Seating;
- Lighting;
- Landscaping;
- Gateway marker;
- Informational and educational signage; and
- A kiosk/map of the trails.

Trail Access Points

Proposed access points are located where the Spine Trail or a Connector Trail comes in close proximity to a neighborhood or other destination but not at a location that warrants a formal trailhead. An access point should include at minimum the following:

- Lighting,
- Informational and educational signage; and
- A kiosk/map of the trails.

Access points may also include:

- On-street parking;
- A drinking fountain;
- Bike racks; and
- Seating.

SPINE TRAIL SEGMENT ANALYSIS

The Spine Trail is divided into six segments and analyzed to identify constraints, design options, and cost estimates.

The Spine Trail has been divided into six segments, the scale of which corresponds with the typical trail construction project. These segments generally begin and end at trailheads and are organized from north to south as such:

» Segment 1 – Tenison Trail

Connects from the Santa Fe Trail stub-out near White Rock Lake south of Garland Road to the IH 30/Samuell Regional Trailhead and includes access to the St. Francis Park Trailhead and a residential neighborhood.

» Segment 2 – Parkview/Lawnview Station Trail

Runs from IH 30 south to Lawnview DART Light Rail station. Along this segment is space for a canoe put-in with access to White Rock Creek and ample room for amenities within a proposed acquisition along Lawnview near Military Parkway. Neighborhood trail access is provided to Lawnview Park and a popular White Rock Creek fishing spot in Lawnview Park.

» Segment 3 – Great Scyene Forest Trail

Begins as the gateway into the Great Trinity Forest and runs through the woods and wetlands to a proposed Bruton/2nd Avenue trailhead, which will provide access from US 175 and opportunities for fishing, picnicking, and other activities.

» Segment 4 – Forest Outfield Ponds Trail

Passes over creeks and ponds then follows a major utility easement south to a proposed trailhead at the west end of Elam Road, near the planned Texas Horse Park and First Tee Golf facility.

» Segment 5 – AT&T Trail

Follows a major utility easement south, crosses Great Trinity Forest Boulevard (Loop 12), runs through the woods parallel to the Trinity River, and terminates at the Trinity River Audubon Center trailhead.

» Segment 6 – South Forest Gateway Trail

Meanders through the McCommas Bluff Preserve, past the McCommas Bluff overlook of the Trinity River and the historic lock and dam and lock-keeper's house, and extends to a recently-built park with a small recreational lake at the Great Trinity Forest Gateway and Horse Trails at IH 20 and Dowdy Ferry Road.

The map on the following pages illustrates the general alignment of the proposed Trinity Forest Spine Trail (highlighted in red), Connector Trails, trailheads, and access points.

Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum



Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum





Segment 1: “Tenison Trail”

1.8 miles

From the Santa Fe Trail stub-out south of Garland Road to a proposed Regional Trinity Forest Spine Trailhead beneath IH-30.

» Overview

The “Tenison Trail” segment of Trinity Forest Spine Trail (TFST) will begin from the north at the existing Santa Fe Trail stub-out about 1,600 feet south of Garland Road, just south of White Rock Lake. This segment ends at the potential trailhead on the TxDOT property on the south side of Samuell Boulevard, beneath IH-30.

This densely-populated area, with numerous recreational amenities already in use, offers many opportunities for the trail user with easy access and connectivity along existing drainage and utility corridors. Here, the lay of the land is generally flat and amenable to the addition of a Spine Trail. A proposed pedestrian bridge will cross southern White Rock Creek just south of where the trail crosses under the Kansas City Southern Railroad that runs along the northeast side of Tenison Golf Course. A second pedestrian bridge will cross Ash Creek, west of Highland Road.

» Destinations

- Immediate Destinations** – Ferguson Road and Samuell Boulevard businesses, Grove Hill Memorial Park (cemetery), and Lakehill Preparatory School.
- Via Proposed Connector Trail** – St Francis Park
- Via Santa Fe Trail** – White Rock YMCA, White Rock Lake Trail and Park, Mata Elementary School, Lindsley Park, Dallas Community Charter School, Randall Park, Woodrow Wilson High School, J.L. Long Middle School, Baylor Hospital, Deep Ellum, Fair Park, and Downtown.
- Via On-Street Connections** – Tenison Park Golf Course, Samuell-Grand Park and Recreation Center, Mount Auburn Elementary, and White Rock Hills Park.

» Nearby Neighborhoods

Neighborhoods served include Gastonwood–Coronado Hills, Lakewood Hills, Hollywood Heights/Santa Monica, Santa Monica Conservation District and other East Dallas neighborhoods and Historic Districts to the west; Forest Hills, Little Forest Hills, Casa Linda Estates, Casa Linda, Enclave at White Rock to the east.

» Trail Access

Potential trailheads are located west of Highland Road along the Ash Creek Greenbelt proposed Connector Trail and beneath the IH-30 main lanes.

There is potential for a trail access point at Valley Glen Drive near a large apartment complex.

» Trail Connections

Because of this segment’s connection with the Santa Fe Trail, access is provided to many of Dallas’ most heavily-used trails.

Santa Fe Trail
White Rock Lake Trail (via Santa Fe Trail)
White Rock Creek Trail (via Santa Fe Trail and White Rock Lake Trail)
Southern Pacific Trail (via Santa Fe Trail and White Rock Lake Trail)
Katy Trail (through various on-street connections)
Proposed Ash Creek Greenbelt Connector Trail to St Francis Park
Ridgewood Trail—Katy Trail Extension (via White Rock Lake Trail)

» Property Ownership

Two private parcels totaling approximately 4.33 acres west of Highland Road will need to be acquired in whole or part, by purchase or easement. Easements will need to be secured from electric utility companies, TxDOT, and railroads. Ownership of the corridor as a factor of percentage of length is shown below.

City of Dallas	65%
Utility Companies	25%
Railroad Companies	6%
Private Owners	2%
TxDOT	2%

» Challenges

In addition to crossing White Rock Creek and Ash Creek, the primary challenge is the undercrossing of the active KCS railroad trestle to the northeast of the Tenison Park Golf Course. This requires careful consideration of the railroad crossing itself—an overhead shield (not included in cost estimate) above the trail may be necessary—as well as the proximity of the proposed bridge over White Rock Creek. This bridge will run parallel to the railroad trestle and may also require shielding or may need to be further set back.

» Improvements & Cost Estimate

1.8 Miles of 12' Concrete Trail	\$1,800,000
Trail Gateway at Intersection with Santa Fe Trail	\$50,000
120 LF Bridge (12' wide) over White Rock Creek	\$240,000
50 LF Bridge (12' wide) over Ash Creek	\$100,000
Trailhead at Highland Road	\$250,000
Access Point at Valley Glen Drive	\$50,000
Regional Trailhead at IH-30	\$350,000
Total Cost Estimate	\$2,840,000

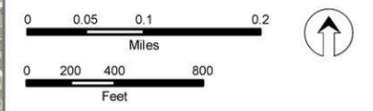
Notes:

- Costs are calculated based on an order-of-magnitude (OOM) estimate for 12' concrete trails of \$1 million per mile, plus additional major improvements.
- Trail bridge costs are estimated assuming a cost of \$2,000 per linear foot for minimum 12' wide bridges (16' wide bridges required if federal funding is used).

Trinity Forest Spine Trail

Segment 1 Tenison Trail

- Legend**
- Trail Access**
- Trail Head
 - Trail Access
 - Equestrian Trail Head
 - Canoe Launch
- Trails**
- Spine, Existing
 - Spine, Proposed
 - Connector, Existing
 - Connector, Proposed
 - Other Major, Existing
 - Other Major, Proposed/Programmed
 - Other Major, Sidewalk/Street
 - Nature Loop, Existing
 - Nature Loop, Proposed
 - Park Loop, Existing
- Private Parcels Acquisition**
- Spine, Required Acquisition
 - Spine, Optional Acquisition
 - Connector, Required Acquisition
 - Connector, Optional Acquisition
 - Roosevelt Heights, Required Acquisition
 - Trail Access, Required Acquisition
- Points of Interest**
- REC Recreation Centers
 - Heritage Trees
 - School
 - National Registered Historic Property
 - Historical Marker
 - National Registered Historic District
 - Cemetery
 - Stadium/Arena
 - Transit Center
- Base Data**
- Great Trinity Forest Boundary
 - Bus Rapid Transit
 - DART Light Rail Line
 - Electrical Transmission Line
 - Oil/Gas Pipeline



Segment 2: “Parkdale/Lawnview Station Trail”

3.0 miles

From the proposed Regional Trinity Forest Spine Trailhead beneath IH-30 to a trailhead at the DART Lawnview Light Rail Station south of Scyene Road.

» Overview

This trail segment begins at the proposed trailhead beneath the IH-30 main lanes on TxDOT right-of-way. It ends on the south side of the Dallas Area Rapid Transit (DART) Lawnview Light Rail Station south of Scyene Road at Lawnview Avenue, giving trail access to DART’s more than 25 million light rail passengers. This segment connects several existing and potential City facilities, including Lawnview Park, the IC Harris Service Center, and a potential future park north of Military Parkway. This future park could include a trailhead, canoe launch, and other park amenities.

Access from the west is limited due to the electric utility easements and the active Union Pacific Railroad corridor. Primary access from the west for this segment will be from the Samuell Boulevard, Military Parkway, and Scyene Road corridors. Dolphin Road/Hatcher Street can serve as north-south access to these east west streets. A proposed Connector Trail along the active Union Pacific railroad will improve access from the west. This proposed trail will also provide a connection to Fair Park, further west.

» Destinations

Immediate Destinations – Samuell Boulevard businesses, Grove Hill Memorial Park (cemetery), Potential Future Park north of Military Parkway, IC Harris Service Center, Ascher Silberstein Elementary School, Lawnview Park, and Lawnview DART Light Rail Station.

Via Proposed Connector Trail – Shearith Israel Memorial Park, Historic Beeman Cemetery, and Fair Park.

Via On-Street Connections – J.J. Craft Park, Wahoo Park, and Parkdale Park.

Via DART Light Rail – All destinations accessible through DART’s Light Rail and Bus network, the Trinity Railway Express, and the Denton County Transit Authority A-Train Commuter Rail.

» Nearby Neighborhoods

Neighborhoods served include Buckner Terrace, Peacock Terrace, Parkdale and Parkdale Heights, Dolphin Heights, Urbandale, and a mobile home park to the east; Owenwood and Dolphin Heights to the west.

» Trail Access

Potential trailheads are located beneath the IH-30 main lanes, the potential future land acquisition north of Military Parkway, along Parkdale Drive near the former Parkdale Power Plant, at Lawnview Park, and at the DART Lawnview Light Rail Station. There is potential for a trail access point along the proposed Connector Trail at the east end of Terrell Street, north of Beeman Cemetery.

» Trail Connections

With the proposed Connector Trail, which would link the Trinity Forest Spine Trail with Fair Park, connections to Downtown and the broader city-wide trail system are possible.

Proposed Trinity Forest Spine Trail–Fair Park Connector Trail
Programmed Santa Fe–Fair Park Connector Trail (via Proposed Trinity Forest Spine Trail–Fair Park Connector Trail)
Santa Fe Trail (via Proposed Trinity Forest Spine Trail–Fair Park Connector Trail and Programmed Santa Fe–Fair Park Connector Trail)
Proposed Major Sidewalk/Street Connection along Scyene Road

» Property Ownership

Two private parcels totaling approximately 5.9 acres north of the IC Harris Service Center will need to be acquired in whole or part, by purchase or easement. In addition, a potential acquisition of 33.1 acres north of Military Parkway will provide opportunities for trail access. Easements will need to be secured from electric utility companies, TxDOT, railroads, and DISD. Ownership of the corridor as a factor of percentage of length is shown below.

City of Dallas	60%
Utility Companies	25%
Private Owners	6%
Dallas ISD	5%
Railroad Companies	3%
TxDOT	1%

» Challenges

The Military Parkway bridge is very low, with steep abutments, making an

undercrossing a challenge. Design solutions require retaining walls and cut-and-fill. An alternative solution would be an at-grade, un-signalized crossing of the roadway; however, this is not desirable for safety reasons.

The Union Pacific railroad bridge over White Rock Creek does not allow an undercrossing. The solution is for the trail to run along the north side of the IC Harris Service Center and cross over the railroad where the wooden Parkdale Drive bridge formerly stood (requiring a new trail bridge).

The southern edge of Lawnview Park regularly experiences flooding and standing water, necessitating boardwalks to cross existing and future swales.

Scyene Road is a significant barrier; the preferred solution is to enhance the Scyene/Lawnview intersection to provide a safe and comfortable at-grade crossing. Improvements may include enhanced crosswalks, curb ramps, warning signage, and signal phasing modifications.

» Improvements & Cost Estimate

3.0 Miles of 12' Concrete Trail	\$3,000,000
Regional Trailhead at IH-30	n/a*
50 LF Bridge (12' wide) over Creek South of IH-30	\$100,000
Trailhead/Canoe Launch north of Military Parkway	\$250,000
Military Parkway Undercrossing	\$250,000
100 LF Bridge (12' wide) over Union Pacific Railroad	\$200,000
Trailhead at Parkdale Drive	\$250,000
Trailhead at Lawnview Park	\$250,000
500 LF Boardwalk (12' wide) in Lawnview Park	\$225,000
500 LF Boardwalk Railing	\$40,000
Trailhead at Lawnview DART Light Rail Station	\$250,000
Total Cost Estimate	\$4,815,000

*\$350,000, accounted for in the cost estimate for Segment #1.

Notes:

Costs are calculated based on an order-of-magnitude (OOM) estimate for 12' concrete trails of \$1 million per mile, plus additional major improvements.

Trail bridge costs are estimated assuming a cost of \$2,000 per linear foot for minimum 12' wide bridges (16' wide bridges required if federal funding is used).

Trinity Forest Spine Trail

Segment 2 Parkdale/Lawnview Station Trail

Legend

Trail Access

- Trail Head
- Trail Access
- Equestrian Trail Head
- Canoe Launch

Trails

- Spine, Existing
- Spine, Proposed
- Connector, Existing
- Connector, Proposed
- Other Major, Existing
- Other Major, Proposed/Programmed
- Other Major, Sidewalk/Street
- Nature Loop, Existing
- Nature Loop, Proposed
- Park Loop, Existing

Private Parcels Acquisition

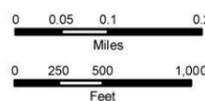
- Spine, Required Acquisition
- Spine, Optional Acquisition
- Connector, Required Acquisition
- Connector, Optional Acquisition
- Roosevelt Heights, Required Acquisition
- Trail Access, Required Acquisition

Points of Interest

- Recreation Centers
- Heritage Trees
- School
- National Registered Historic Property
- Historical Marker
- National Registered Historic District
- Cemetery
- Stadium/Arena
- Transit Center

Base Data

- Great Trinity Forest Boundary
- Bus Rapid Transit
- DART Light Rail Line
- Electrical Transmission Line
- Oil/Gas Pipeline



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Segment 3: “Great Scyene Forest Trail”

1.7 miles

From the proposed trailhead at the DART Lawnview Light Rail Station south of Scyene Road to a proposed trailhead at the Bruton Road/2nd Avenue intersection.

» Overview

Segment 3 begins on the south side of the DART Lawnview Light Rail Station and meanders southeast through the Great Trinity Forest. It passes through the former Roosevelt Heights neighborhood to 2nd Avenue east of Bruton Road. Entering the heart of the Great Trinity Forest, this segment passes through a flat, forested bottomland isolated from residential areas. There are several areas of boggy wetlands that are opportunities for environmental education and bird-watching, as well as significant construction challenges.

An Urban Wilderness park—to include camping, picnicking, environmental education, and other amenities—is proposed for the former Roosevelt Heights neighborhood area. When it is developed, this trail segment will connect it to the DART Lawnview Light Rail Station, providing the opportunity for DART passengers to have immediate access to the Great Trinity Forest, as well as camping and other outdoor activities.

» Destinations

Immediate Destinations – Lawnview DART Light Rail Station
Via Proposed Nature Trail – Scyene Trail Park, Grover C. Keeton Golf Course, and Gateway Park.
Via Proposed Connector Trail – Dixon Trail, Willie May Butler Park, and Larry Johnson Recreation Center.

» Nearby Neighborhoods

Through the development of the proposed Nature Trail, the Piedmont neighborhood, adjacent to the Great Trinity Forest will have access both to the DART Lawnview Light Rail Station and to the opportunities that are offered by the solitude and hidden lakes of the forest. Other neighborhoods served include Parkdale Heights and Piedmont Edition to the east, as well as Wheatley Place and Dixon Circle to the west (by way of the proposed Dixon Trail connector).

» Trail Access

Potential trailheads are located at the Lawnview DART Light Rail Station and at the intersection of 2nd Avenue and Bruton Road. A proposed Connector Trail heading west to Genaro Park will allow access via Dixon Trail.

» Trail Connections

Potential trail connections are limited along this segment due to its secluded location.

Proposed Dixon Trail Connector
Proposed Scyene Overlook Nature Trail Connector
Proposed Urban Wilderness Connector Loop (at the former Roosevelt Heights neighborhood area)

» Property Ownership

In this segment, six (6) small private parcels totaling 0.9 acres in the former Roosevelt Heights neighborhood area are recommended for acquisition. An alternative alignment—which would negate the need for acquiring these six parcels—is possible, but not preferred. In addition, acquisition is required for one 4.9 acre private parcel and one 0.5 acre parcel (for a proposed trailhead). Easements will need to be secured from electric utility companies and DART. Ownership of the corridor as a factor of percentage of length is shown below.

City of Dallas	62%
Railroad Companies (DART)	16%
Utility Companies	15%
Private Owners	7%

» Challenges

A significant portion of this segment—approximately 0.4 miles—is challenged by numerous creek and drainage crossings, as well as several “dry creek” crossings (channels that are typically dry, but convey water during and after rain events). This situation will necessitate numerous culverts, bridges, and boardwalk sections.

The challenges and expense of building a trail along the northern portion of this segment could be offset by the relative ease with which the southern half of the segment could be constructed. An existing dirt road can be utilized, minimizing the need for culverts, bridges, and boardwalks.

While developing the southernmost portion of this segment—where the trail crosses Bruton Road and 2nd Avenue—is relatively easy, there are a few challenges that must be addressed. First, the trail must avoid the lift station located adjacent to Bruton Road. Second, the trail must avoid a steep embankment along the north side of Bruton by utilizing an existing minor utility corridor that parallels the road. Finally, while the road undercrossings provide adequate vertical and horizontal clearance, these areas may require additional maintenance due to their flood-prone locations. The crossing under Bruton Road may also require a boardwalk section due to the boggy nature of this location.

» Improvements & Cost Estimate

1.7 Miles of 12' Concrete Trail	\$1,700,000
Trailhead at Lawnview DART Light Rail Station	n/a*
1,000 LF Boardwalk (12' wide) southwest of the Lawnview DART Light Rail Station	\$450,000
1,000 LF Boardwalk Railing	\$75,000
225 LF Boardwalk (12' wide) under Bruton Road	\$100,000
225 LF Boardwalk Railing	\$17,500
Trailhead at Bruton Road/2 nd Avenue	\$250,000
Total Cost Estimate	\$2,592,500

*\$250,000, accounted for in the cost estimate for Segment #2.

Notes:

Costs are calculated based on an order-of-magnitude (OOM) estimate for 12' concrete trails of \$1 million per mile, plus additional major improvements.

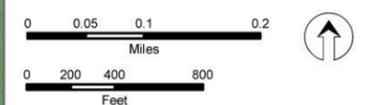
Trail bridge costs are estimated assuming a cost of \$2,000 per linear foot for minimum 12' wide bridges (16' wide bridges required if federal funding is used).

Trinity Forest Spine Trail

Segment 3 Great Scyene Forest Trail

Legend

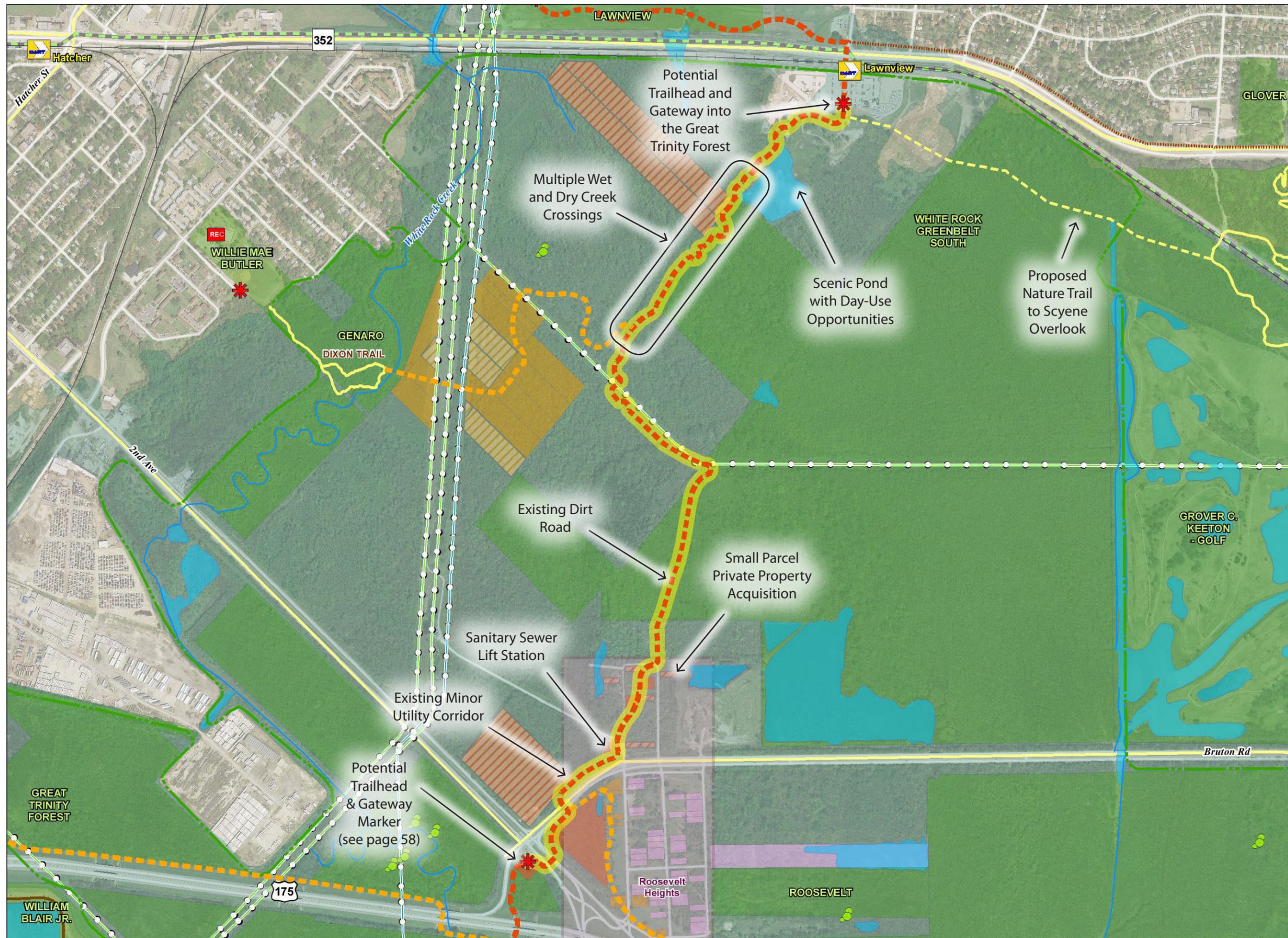
- Trail Access**
- Trail Head
 - Trail Access
 - Equestrian Trail Head
 - Canoe Launch
- Trails**
- Spine, Existing
 - Spine, Proposed
 - Connector, Existing
 - Connector, Proposed
 - Other Major, Existing
 - Other Major, Proposed/Programmed
 - Other Major, Sidewalk/Street
 - Nature Loop, Existing
 - Nature Loop, Proposed
 - Park Loop, Existing
- Private Parcels Acquisition**
- Spine, Required Acquisition
 - Spine, Optional Acquisition
 - Connector, Required Acquisition
 - Connector, Optional Acquisition
 - Roosevelt Heights, Required Acquisition
 - Trail Access, Required Acquisition
- Points of Interest**
- Recreation Centers
 - Heritage Trees
 - School
 - National Registered Historic Property
 - Historical Marker
 - National Registered Historic District
 - Cemetery
 - Stadium/Arena
 - Transit Center
- Base Data**
- Great Trinity Forest Boundary
 - Bus Rapid Transit
 - DART Light Rail Line
 - Electrical Transmission Line
 - Oil/Gas Pipeline



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Segment 4: “Forest Outfield Ponds Trail”

2.3 miles

From a proposed trailhead at the Bruton Road/2nd Avenue intersection to a planned trailhead at Elam Road.

» Overview

This segment begins at the proposed trailhead, crosses under US-175, skirts the edge of the former Roosevelt Heights neighborhood, passes a number of small ponds and wetlands, then follows two utility easements south to a future trailhead at the western end of Elam Road.

This area is very isolated from residential neighborhoods and offers solitude and access to a number of hidden ponds. There are opportunities for canoe launches accessing these ponds as well as southern White Rock Creek. Several proposed Connector Trails crisscross this area of the forest, providing neighborhood access and connectivity to nearby parks and the Lake June DART Light Rail Station. In addition, there are many opportunities for Nature Trails around the ponds, as well as on the west side of the creek, which could provide access to overlooks and Heritage Trees.

» Destinations

Immediate Destinations – Future Urban Wilderness Park, numerous ponds and Heritage Trees, and the planned Texas Horse Park.

Via Programmed and Planned Trinity Forest Trails – William Blair Jr. Park, Thompson Elementary School, Janie C. Turner Recreation Center, Buckeye Trail, Trinity River Parks, and Downtown.

Via Proposed Malcolm X Boulevard Connector Trail and On-Street Connections – Numerous Historic Districts, markers, and properties; Lincoln Humanities/Communications Magnet High School; Madison High School; Anderson Learning Center (middle school); Wheatley Park, Dade, and Rice Elementary Schools; Opportunity Park; Nelson Park; Exline Park; numerous neighborhood parks; Exline Recreation Center; Opportunity Cemetery; Oakland Cemetery; and L. Butler Nelson Cemetery.

Via Proposed Lake June Connector Trail and On-Street Connections – Lake June DART Light Rail Station; Devon Anderson Park; Piedmont Ridge Trail; Gonzales, Ireland, Hawthorne, and Adams Elementary Schools; and Umphress Park and Recreation Center.

» Nearby Neighborhoods

Along this segment, neighborhoods to the east that will benefit from both recreation and transportation connections Pleasant Grove and Pemberton Hill. To the west are the Rose Garden, Ideal, and Bonton neighborhoods, which will have access via a proposed Connector Trail and a future phase of the Trinity Forest Trails.

» Trail Access

Potential trailheads are located at the 2nd Avenue/Bruton Road intersection, the Lake June Road/Pemberton Hill Road intersection (via Connector Trails), and the west end of Elam Road. The proposed Connector Trails heading east also provide access from the Lake June DART Light Rail Station.

» Trail Connections

This segment will eventually connect to the broader city-wide trail system when later phases of the Trinity Forest Trails are completed.

Programmed and Planned portions of the Trinity Forest Trails	
Proposed Malcolm X Boulevard Connector Trail	
Proposed Lake June Connector Trail	

» Property Ownership

In this segment, seven (7) small private parcels totaling 1.9 acres in the former Roosevelt Heights neighborhood area are recommended for acquisition. An alternative alignment—which would negate the need for acquiring these six parcels—is possible, but not preferred. In addition, acquisition of one 0.5 acre parcel is required for the proposed trailhead (as previously discussed in Segment 3). Easements will need to be secured from electric utility companies. Ownership of the corridor as a factor of percentage of length is shown below.

City of Dallas	49%
Utility Companies	46%
Private Owners	5%

» Challenges

The trail comes in close proximity to White Rock Creek immediately south of US-175. After crossing under US-175, the trail will need to make a sharp turn (while meeting AASHTO design guidelines) in order to cross the creek via a proposed bridge running parallel to the highway.

This segment passes through wet, swampy land from the southern end of the former Roosevelt Heights neighborhood to the trail’s intersection with the electric transmission easement. These conditions necessitate boardwalk sections and multiple bridges or large culverts.

While the southern portion follows existing utility easements, there will be a need for bridges and culverts to cross minor drainageways as well as a branch of White Rock Creek. In addition, there are several areas where the land within these easements is somewhat marshy, potentially necessitating boardwalk sections.

» Improvements & Cost Estimate

2.3 Miles of 12' Concrete Trail	\$2,300,000
Trailhead at Bruton Road/2 nd Avenue	n/a*
100 LF Bridge (12' wide) over White Rock Creek	\$200,000
1,600 LF Boardwalk (12' wide) south of former Roosevelt Heights area	\$720,000
1,600 LF Boardwalk Railing	\$120,000
110 LF Bridge (12' wide) over Branch of White Rock Creek	\$220,000
Trailhead at Elam Road	n/a**
Total Cost Estimate	\$3,560,000

*\$250,000, accounted for in the cost estimate for Segment #3.

**To be constructed as part of the Trinity Forest Trails Phase 3 project.

Notes:

Costs are calculated based on an order-of-magnitude (OOM) estimate for 12' concrete trails of \$1 million per mile, plus additional major improvements.

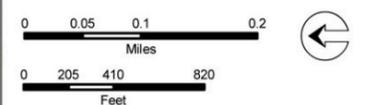
Trail bridge costs are estimated assuming a cost of \$2,000 per linear foot for minimum 12' wide bridges (16' wide bridges required if federal funding is used).

Trinity Forest Spine Trail

Segment 4 Forest Outfield Ponds Trail

Legend

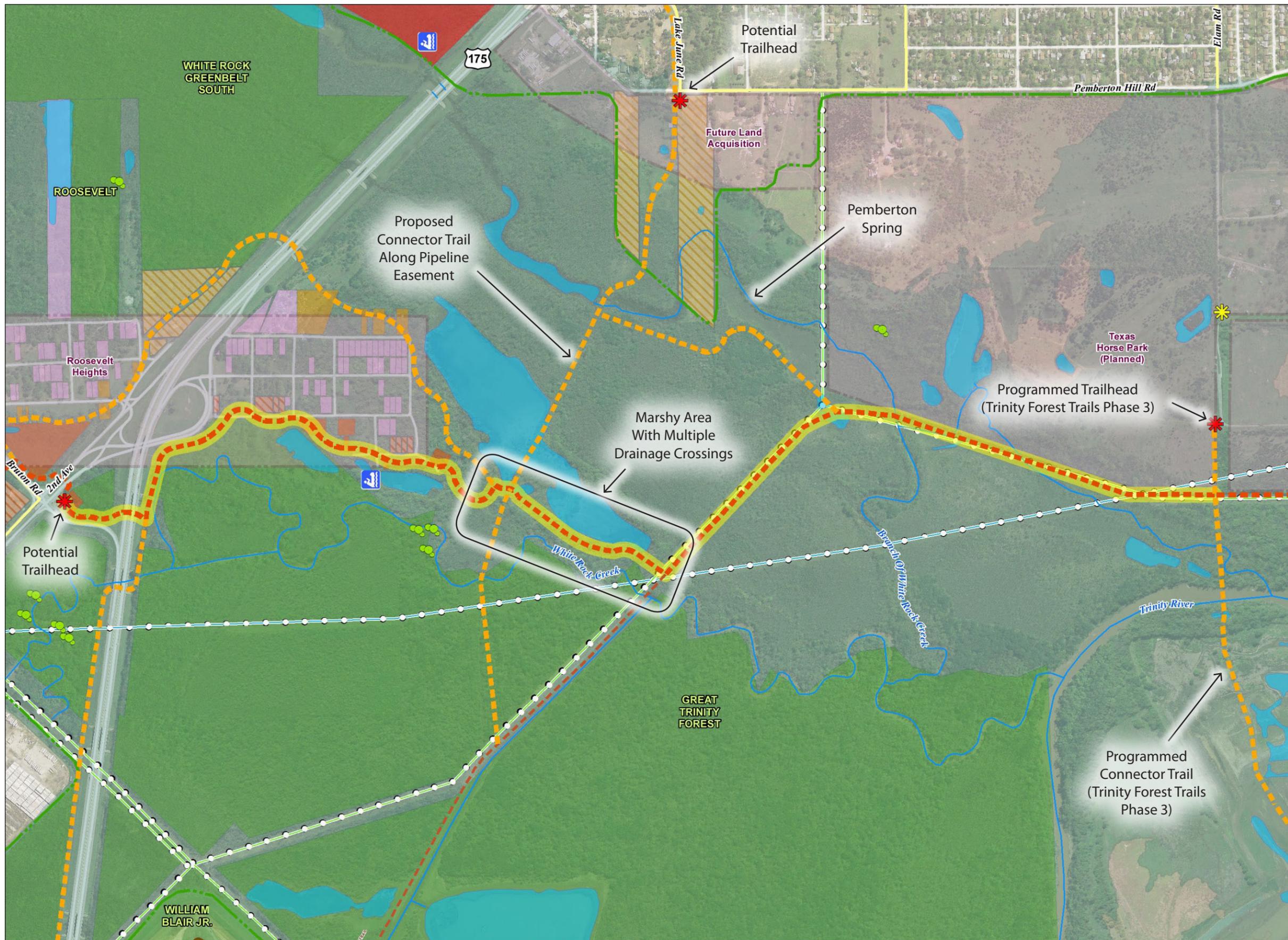
- Trail Access**
- Trail Head
 - Trail Access
 - Equestrian Trail Head
 - Canoe Launch
- Trails**
- Spine, Existing
 - Spine, Proposed
 - Connector, Existing
 - Connector, Proposed
 - Other Major, Existing
 - Other Major, Proposed/Programmed
 - Other Major, Sidewalk/Street
 - Nature Loop, Existing
 - Nature Loop, Proposed
 - Park Loop, Existing
- Private Parcels Acquisition**
- Spine, Required Acquisition
 - Spine, Optional Acquisition
 - Connector, Required Acquisition
 - Connector, Optional Acquisition
 - Roosevelt Heights, Required Acquisition
 - Trail Access, Required Acquisition
- Points of Interest**
- REC Recreation Centers
 - Heritage Trees
 - School
 - National Registered Historic Property
 - Historical Marker
 - National Registered Historic District
 - Cemetery
 - Stadium/Arena
 - Transit Center
- Base Data**
- Great Trinity Forest Boundary
 - Bus Rapid Transit
 - DART Light Rail Line
 - Electrical Transmission Line
 - Oil/Gas Pipeline



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Segment 5: “AT&T Trail”

4.3 miles

From a planned trailhead at Elam Road to the Trinity River Audubon Center. This segment is being developed as part of the Trinity Forest Trails Phase 3 project.

» Overview

This segment begins at the planned trailhead located at the west end of Elam Road (to be constructed along with the Trinity Forest Trails Phase 3 project) and follows an electric utility easement due south. The trail runs parallel between the Trinity River and the planned First Tee Golf Course. It then makes a westerly turn to pass underneath Great Trinity Forest Boulevard (Loop 12) at an existing bridge.

This segment then meanders south from Loop 12 and heads east through the Trinity River bottomlands forest along the north side of the Trinity River. It connects to the existing Trinity Forest Trails at the Trinity River Audubon Center. An existing trailhead is located on the north side of the Audubon Center along the entry drive, which will also provide access to this trail segment.

Nature study and birding opportunities abound along this segment. The possibility exists to provide multiple Nature Trails spurring off of the Spine Trail to access the ponds, river bank, Heritage Trees, and the forest itself.

» Destinations

Immediate Destinations – Planned Texas Horse Park, Planned First Tee Golf Course, Planned Trinity Forest Golf Course, Trinity River Audubon Center, and McCommas Bluff Preserve.

Via Programmed and Planned Trinity Forest Trails – Chain of Wetlands, Buckeye Trail, Joppa Preserve, Trinity River Parks, and Downtown.

Via On-Street Connections – Pemberton Hill Park, Burleson Elementary School, Comstock Middle School, Douglas Elementary School, Woodland Springs Park, and Blair Elementary School.

» Nearby Neighborhoods

Two neighborhoods to the east—Pemberton Hill and Shady Hills—will be directly served by this segment. In addition, the Joppa Neighborhood will have access via a proposed Connector Trail and other portions of the programmed Trinity Forest Trails Phase 3.

» Trail Access

One planned trailhead is located at the west end of Elam Road. This trailhead is to be constructed as part of the Trinity Forest Trails Phase 3 project. In addition, the existing trailhead at the Trinity River Audubon Center will provide access from the south.

» Trail Connections

This segment will eventually connect to the broader city-wide trail system when later phases of the Trinity Forest Trails are completed.

Existing, Programmed, and Planned portions of the Trinity Forest Trails

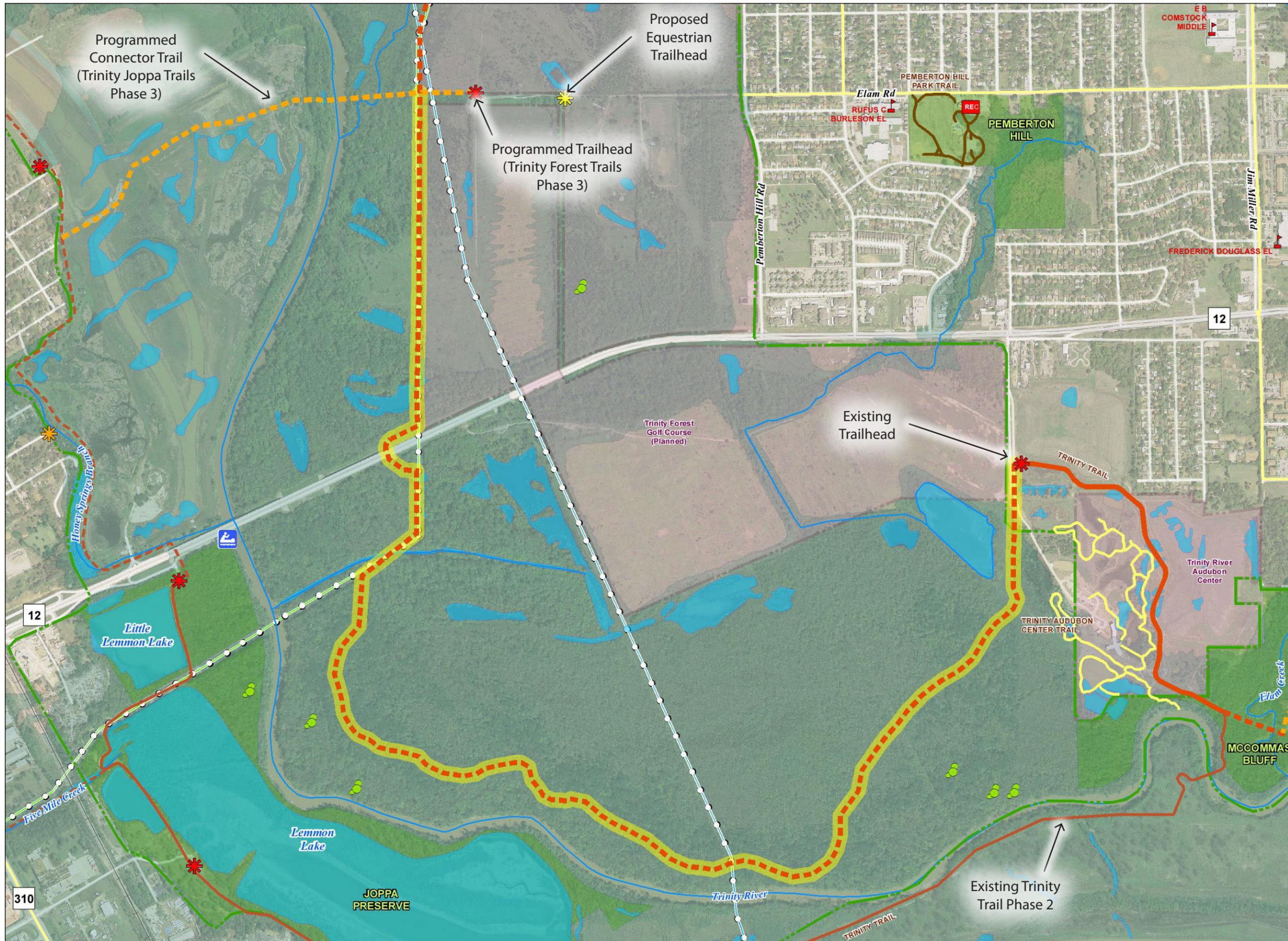
» Property Ownership

No private land will need to be acquired for this segment. Easements will need to be secured from electric utility companies and TxDOT. Ownership of the corridor as a factor of percentage of length is shown below.

Utility Companies	86%
City of Dallas	12%
TxDOT	3%

» Trail Development

This segment is being developed as part of the Trinity Forest Trails Phase 3 project. Improvements and cost estimates for this segment are included in that project’s construction documents.



Trinity Forest Spine Trail

Segment 5 AT&T Trail

Legend

Trail Access

- Trail Head (Red asterisk)
- Trail Access (Yellow asterisk)
- Equestrian Trail Head (Yellow asterisk with a dot)
- Canoe Launch (Blue boat icon)

Trails

- Spine, Existing (Red dashed line)
- Spine, Proposed (Red dashed line with a dot)
- Connector, Existing (Orange dashed line)
- Connector, Proposed (Orange dashed line with a dot)
- Other Major, Existing (Brown dashed line)
- Other Major, Proposed/Programmed (Brown dashed line with a dot)
- Other Major, Sidewalk/Street (Brown dashed line with a dot)
- Nature Loop, Existing (Yellow dashed line)
- Nature Loop, Proposed (Yellow dashed line with a dot)
- Park Loop, Existing (Green dashed line)

Private Parcels Acquisition

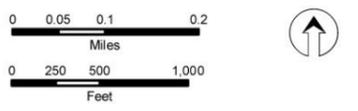
- Spine, Required Acquisition (Red solid line)
- Spine, Optional Acquisition (Red solid line with a dot)
- Connector, Required Acquisition (Orange solid line)
- Connector, Optional Acquisition (Orange solid line with a dot)
- Roosevelt Heights, Required Acquisition (Pink solid line)
- Trail Access, Required Acquisition (Red solid line with a dot)

Points of Interest

- REC Recreation Centers (Red square with REC)
- Heritage Trees (Green tree icon)
- School (Red school icon)
- National Registered Historic Property (Yellow star)
- Historical Marker (Yellow triangle)
- National Registered Historic District (Red hatched area)
- Cemetery (Purple hatched area)
- Stadium/Arena (Blue star)
- Transit Center (Blue bus icon)

Base Data

- Great Trinity Forest Boundary (Green dashed line)
- Bus Rapid Transit (Orange dashed line)
- DART Light Rail Line (Green dashed line)
- Electrical Transmission Line (Green dashed line with a dot)
- Oil/Gas Pipeline (Blue dashed line)



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Sustainable Green Infrastructure



Segment 5A: “Joppa Connector Trail”

2.0 miles

From a planned trailhead north of Loop 12 and east of the Joppa and South Central Community. This segment is a proposed connector trail from the existing trailhead to Little Lemmon Lake.

» Overview

This segment begins at the existing trailhead at Little Lemmon Lake located south of Loop 12, crossing Honey Springs Branch, running along eastern edge of the Joppa and South Central Community. The trail will run perpendicular to the Trinity River and connect to the programmed major trail spine to the west.

This connector trail will cross the Trinity River via a pedestrian bridge and a low lying bottomland west of the Trinity River. This connector trail will provide direct access to Little Lemmon Lake and Lemmon Lake within the Joppa Preserve.

This segment will provide excellent opportunities for experience with diverse riparian areas across and to the west of the Trinity River as well as Lemmon Lake and the dense forest of the Joppa Preserve, also providing an alternative route to the Trinity River Audubon Center. This connecting trail will also provide access to canoe put-in/take-out to the Trinity River at the intersection of Loop 12.

» Destinations

Immediate Destinations – Planned Texas Horse Park, Planned First Tee Golf Course, Planned Trinity Forest Golf Course, Trinity River, Chain of Wetlands, Joppa Preserve, and Joppa Rodeo.

Via Programmed and Planned Trinity Forest Trails – Buckeye Trail, Trinity River Parks, Future Urban Wilderness Adventure Park, and Downtown.

» Nearby Neighborhoods

The Joppa neighborhood to the west of the Trinity River will be able to directly access this connector. In addition, they will have be able to access other portions of the programmed Trinity Forest Trails Phase 3.

» Trail Access

One planned trailhead is located at planned Texas Horse Park and First Tee Golf Course. This trailhead is to be constructed as part of the Trinity Forest Trails project. A second trailhead is proposed east of the Joppa neighborhood which will provide access to the connecting trail and the spine trail. A final trailhead will be located at Lemmon Lake near Loop 12.

» Trail Connections

This segment connects the spine trail to the major connecting trail that leads to the Joppa Preserve and provides an alternative route to the Trinity River Audubon Center through the Trinity Trail.

Existing, Programmed, and Planned portions of the Trinity Forest Trails

» Property Ownership

No private land will need to be acquired for this segment. Easements will need to be secured from electric utility companies and TxDOT. Ownership of the corridor as a factor of percentage of length is shown below.

Utility Companies	12%
City of Dallas	86%
TxDOT	3%

» Trail Development

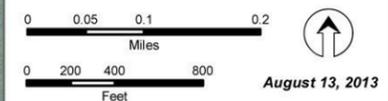
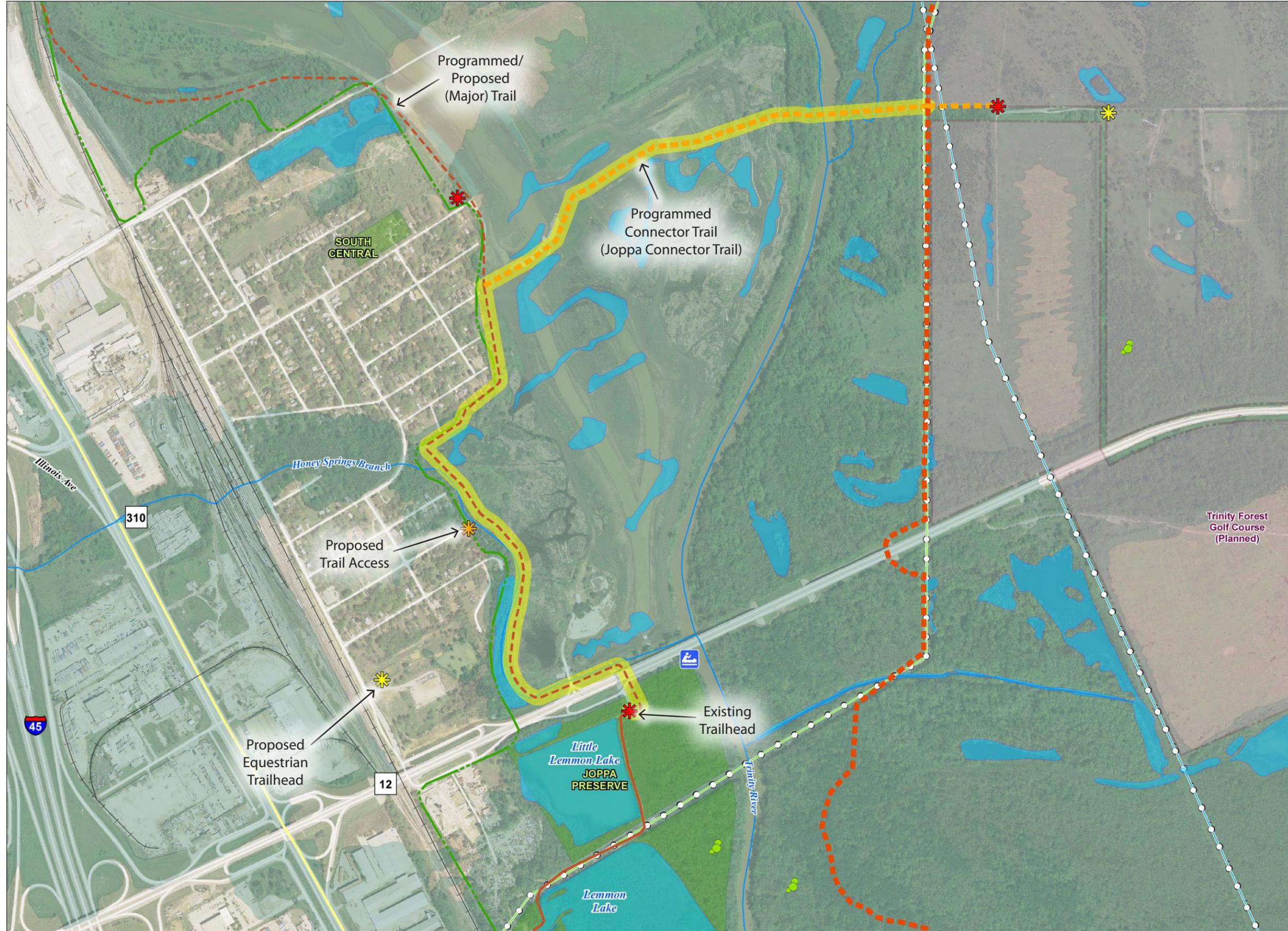
This segment is being developed as part of the Trinity Forest Trails Phase 3 project. Improvements and cost estimates for this segment are included in that project’s construction documents.

*The cost of the trail is \$2,520,000. Cost received from the City of Dallas.

Trinity Forest Spine Trail

Segment 5A Joppa Connector Trail

- Legend**
- Trail Access**
- Trail Head
 - Trail Access
 - Equestrian Trail Head
 - Canoe Launch
- Trails**
- Spine, Existing
 - Spine, Proposed
 - Connector, Existing
 - Connector, Proposed
 - Other Major, Existing
 - Other Major, Proposed/Programmed
 - Other Major, Sidewalk/Street
 - Nature Loop, Existing
 - Nature Loop, Proposed
 - Park Loop, Existing
- Private Parcels Acquisition**
- Spine, Required Acquisition
 - Spine, Optional Acquisition
 - Connector, Required Acquisition
 - Connector, Optional Acquisition
 - Roosevelt Heights, Required Acquisition
 - Trail Access, Required Acquisition
- Points of Interest**
- REC Recreation Centers
 - Heritage Trees
 - School
 - National Registered Historic Property
 - Historical Marker
 - National Registered Historic District
 - Cemetery
 - Stadium/Arena
 - Transit Center
- Base Data**
- Great Trinity Forest Boundary
 - Bus Rapid Transit
 - DART Light Rail Line
 - Electrical Transmission Line
 - Oil/Gas Pipeline



Segment 6: “South Forest Gateway Trail”

2.4 miles

Extends southward from the existing Trinity Forest Trails Phase 2 near the Trinity River Audubon Center to the proposed Regional Trinity Forest Spine Trailhead near the IH-20/Dowdy Ferry Road intersection.

» Overview

This segment begins on the west side of McCommas Bluff Preserve near the Trinity River Audubon Center. The segment ties into the existing Trinity Forest Trails Phase 2 just north of its crossing over the Trinity River. From there, it runs through the preserve, traversing steep inclines and rolling terrain, while also providing opportunities for expansive views from the bluffs overlooking the Trinity River. This is the only segment included as part of the Trinity Forest Spine Trail that passes through such terrain.

As the trail passes through the McCommas Bluff Preserve and skirts the edge of Lincoln Memorial Park cemetery, it passes through the former site of Trinity City—a frontier town established by the Peters Colony in the mid-1800s. Visible from the trail, all that remains of Trinity City is an unused chapel, a lock and dam on the river, and a house where the lock operated lived. This location was part of a system of 37 locks and dams (only seven were built) constructed between 1902 and 1921 intended to provide shipping access between Galveston and Dallas.

The southern terminus of this segment is a proposed regional trailhead providing access from IH-20, as well as a connection to the planned Prairie Creek Trail.

» Destinations

Immediate Destinations – Trinity River Audubon Center, McCommas Bluff Preserve, Woodland Springs Park, and Lincoln Memorial Park.

Via Planned Prairie Creek and Kleburg Trails – Fireside Park, Crawford Memorial Park, and Buckner DART Light Rail Station.

Via Existing and Planned Trinity Forest Trails – Joppa Preserve, Chain of Wetlands, Buckeye Trail, Trinity River Parks, and Downtown.

» Nearby Neighborhoods

The only neighborhood directly served by this segment is the Rylie Neighborhood to the east.

» Trail Access

This segment will be accessed by the existing trailhead north of the Trinity River Audubon Center, as well as a proposed regional trailhead near the IH-20/Dowdy Ferry Road intersection. In addition, trail access can be provided at the south end of Riverwood Road as well as by means of an abandoned roadway that runs through McCommas Bluff Preserve to the western end of Fairport Road.

» Trail Connections

This segment will eventually connect to the broader city-wide trail system when the Prairie Creek Trail, Kleburg Trail, and later phases of the Trinity Forest Trails are completed.

Existing, Programmed, and Planned portions of the Trinity Forest Trails

Planned Five Mile Creek Trail (via Trinity Forest Trails)

Planned Prairie Creek Trail

Kleburg Trail (via Planned Prairie Creek Trail)

» Property Ownership

No private land will need to be acquired for this segment. This segment crosses two natural gas pipelines; however, these exist within easements across City property. Ownership of the corridor as a factor of percentage of length is shown below.

City of Dallas	68%
Dallas County (Managed by City of Dallas)	32%

» Challenges

The primary challenge for the development of this segment is the area’s undulating terrain. The northern portion of this segment runs along a plateau between the bluffs overlooking the river and a ridge to the north and east. As the river flows southeast, its banks and the ridge converge, creating a pinch point for the trail. While the trail follows an old dirt road in this area, the cross slopes may pose a design challenge.

Along the western edge of Lincoln Memorial Park, the trail continues to follow an old dirt road. However, there are multiple steep slopes that the trail must climb and descend. This could make meeting the requirements of the Texas Accessibility Standards a challenge.

» Improvements & Cost Estimate

2.4 Miles of 12’ Concrete Trail	\$2,400,000
75 LF Bridge (12’ wide) over Elam Creek	\$150,000
Access Point, Trinity River Overlook, and Plaza at Riverwood Road	\$250,000
35 LF Bridge (12’ wide) at South End of Lincoln Memorial Park	\$70,000
Regional Trailhead at IH-20	\$350,000
Total Cost Estimate	\$3,220,000

Notes:

Costs are calculated based on an order-of-magnitude (OOM) estimate for 12’ concrete trails of \$1 million per mile, plus additional major improvements.

Trail bridge costs are estimated assuming a cost of \$2,000 per linear foot for minimum 12’ wide bridges (16’ wide bridges required if federal funding is used).

Trinity Forest Spine Trail

Segment 6 South Forest Gateway Trail

Legend

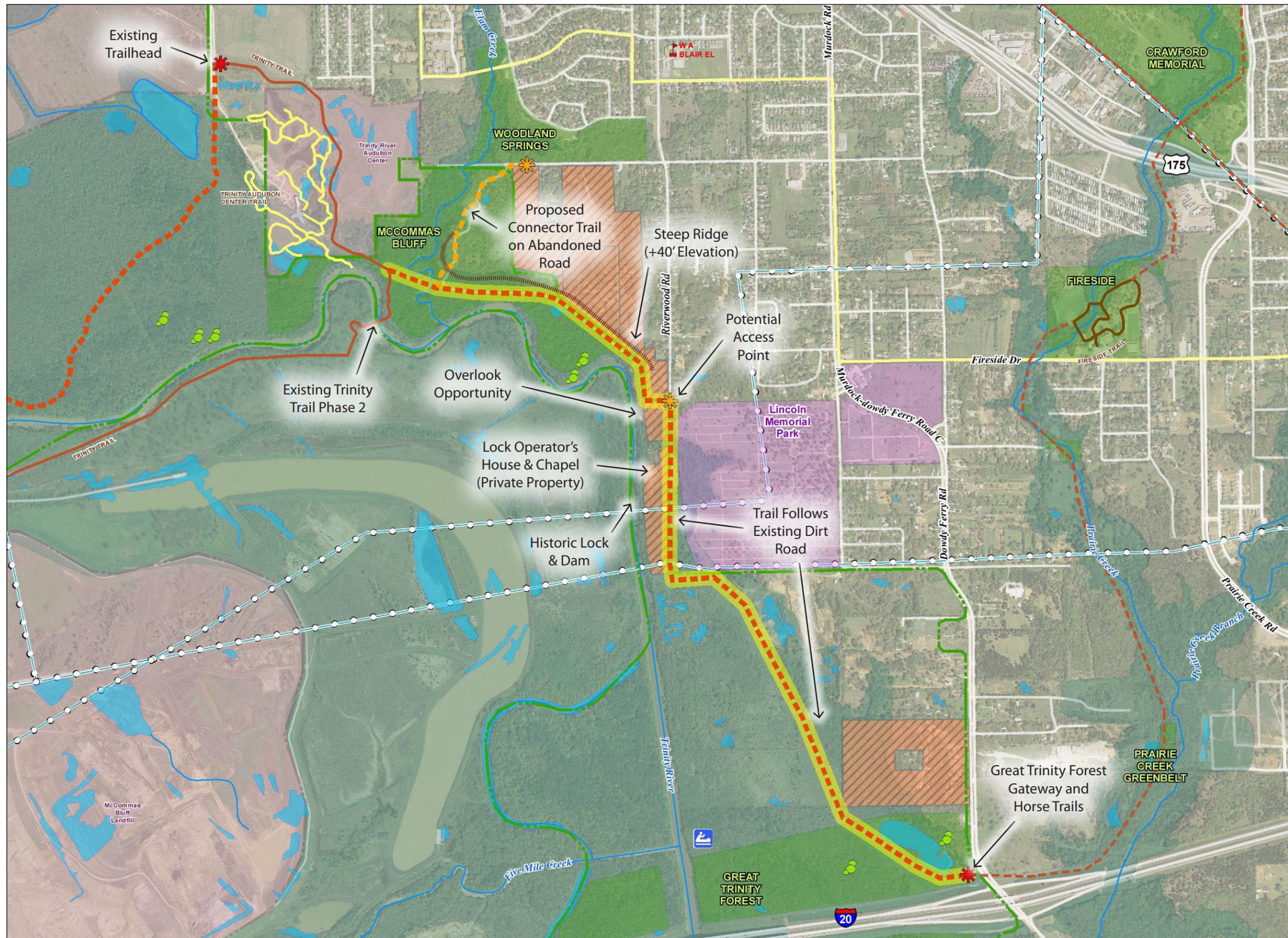
- Trail Access**
- Trail Head
 - Trail Access
 - Equestrian Trail Head
 - Canoe Launch
- Trails**
- Spine, Existing
 - Spine, Proposed
 - Connector, Existing
 - Connector, Proposed
 - Other Major, Existing
 - Other Major, Proposed/Programmed
 - Other Major, Sidewalk/Street
 - Nature Loop, Existing
 - Nature Loop, Proposed
 - Park Loop, Existing
- Private Parcels Acquisition**
- Spine, Required Acquisition
 - Spine, Optional Acquisition
 - Connector, Required Acquisition
 - Connector, Optional Acquisition
 - Roosevelt Heights, Required Acquisition
 - Trail Access, Required Acquisition
- Points of Interest**
- REC Recreation Centers
 - Heritage Trees
 - School
 - National Registered Historic Property
 - Historical Marker
 - National Registered Historic District
 - Cemetery
 - Stadium/Arena
 - Transit Center
- Base Data**
- Great Trinity Forest Boundary
 - Bus Rapid Transit
 - DART Light Rail Line
 - Electrical Transmission Line
 - Oil/Gas Pipeline



HALFF

Bowman-Melton Associates, Inc.
Bicycle and Pedestrian Planners

SGI
Statewide Geospatial, Inc.





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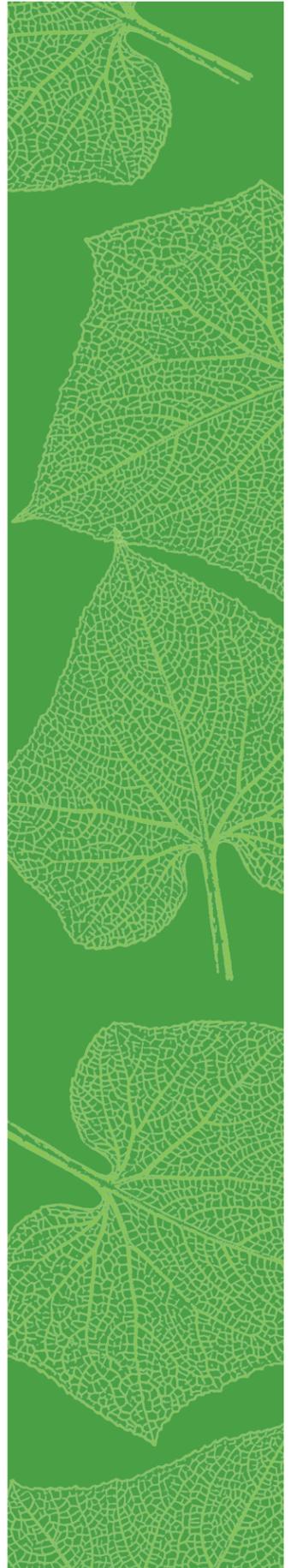
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 4

Design & Amenities

Design Concept | Trail Amenities



DESIGN CONCEPT

The proposed design for amenities along the Trinity Forest Spine Trail is inspired by the natural context of the corridor.



Inspiration

The design concept for amenities and elements along the Trinity Forest Spine Trail is rooted in the context and history of the area. The corridor includes a variety of landscapes and environments as it runs from White Rock Lake south, along White Rock Creek, then follows the Trinity River to IH 20. Along the way, it takes the form of an urbanized creek corridor, a lowland forest, and a row of bluffs overlooking the Trinity River. Each of these zones influences the design concept in different ways.

» Creek Zone (White Rock Lake to Scyene Road)

The northern portion takes the form of an urbanized creek corridor with neighborhoods, businesses, and former adjacent industrial areas. Urban elements permeate this zone in the form of a manicured golf course and city park, numerous electrical transmission lines, and the channelized and dammed nature of the creek. The creek was modified from its natural state as part of the construction of the Parkdale Generating Plant, which was demolished in 2008. Although the plant is gone, the site still serves as a transfer station for the many electrical transmission lines criss-crossing the area. In the southernmost portion of this zone, the trail skirts the edge of the Parkdale and Lawnview Neighborhoods before crossing through Lawnview Park to Scyene Road. Throughout this zone, the interplay between the natural and built environment is present.



The deteriorating dam and bridge (above) near the former Parkdale Generating Plant site demonstrates the human influence in the Creek Zone and the power of the creek to eventually reclaim its course.

» Forest Zone (Scyene Road to Trinity River Audubon Center)

This zone is the largest and most prominent of the three zones along the TFST Trail corridor. In the first half of the 20th century, the area now known as the Great Trinity Forest was agricultural land devoid of most trees. When farming ceased to occur in these locations due to regular flooding, the land began its transformation from manipulated farmland back to natural wilderness. As a result, the majority of the Great Trinity Forest consists of relatively young growth woodlands with pockets of meadow, marsh, and wetlands scattered throughout the area. However, the former human influence can be seen—perhaps with a bit of irony—in the presence of a number of “Heritage Trees” found in the forest. These are large trees that are much older than the forest itself, having existed during and even prior to the land’s agricultural period. These trees were preserved by the people that worked this land, likely as fence-row trees, where the land was not cleared or tilled, or perhaps near structures such as barns or farmhouses.



In the Forest Zone, the vegetation is typically very thick. But along utility corridors and former roads, the continuity of the canopy across hundreds of individual trees can be easily seen, even as trees lean and reach across the clearing (above).



» Bluff Zone (Trinity River Audubon Center to IH 20)

The Trinity River Audubon Center is situated in an area where the landscape transitions from lowland to upland forest. The TFST Trail corridor is very narrow in this zone, being book-ended by the Trinity River to the south and west and neighborhoods and a cemetery to the east. The McCommas Bluff Preserve and the bluffs themselves—which overlooks the Trinity River—define this zone. In contrast to the other zones, this area has significant topographic variation and does not regularly flood. The location of the bluffs, which are white limestone and serve as the eastern bank of the Trinity River, is one of the most scenic areas in Dallas.



The white rock outcroppings and undulating terrain distinguish the Bluff Zone (above). The beauty of the natural stone inspires the design concept's material palette. The natural overlooks are to be interpreted in other parts of the corridor.

Design Approach

The various zones of land along the TFST Trail corridor have at one point in time been tamed and modified by human influence. This is especially true for the Great Trinity Forest portions, which once existed as thousands of acres of cleared farmland. Most of the corridor, especially south of Scyene Road, was allowed to return to nature, becoming “lost” to wilderness. The Trinity Forest Spine Trail is one of several ways that people will be brought back to the area, not to reclaim the land, but to experience and enjoy all that it has to offer in its natural form. The design and incorporation of the amenities and elements illustrated in this chapter enriches this new relationship between human and land.

Design Statement

The design of amenities and elements within the TFST Trail corridor reflects the interplay between human influence and natural beauty. Influenced by each of the zones within the corridor, the concept mimics nature's expression through form, function, tactility, and incorporation of natural materials. Man-made materials provide contrast and long-lasting value, while the basis of providing comfort for trail users dictates the ultimate functionality of each element. These two facets form a palette that merges the urban or human influence with nature via a clean, elegant aesthetic that blends into the surroundings while not degrading the context.

The design of individual elements—such as canopy structures and overlooks—is intended to bring focus to the space, work with the natural aspects of each site, and facilitate the interaction and experience between people and nature. Examples of this are boardwalks that hover over wetland areas, overlooks that provide views while allowing people to interact with the forest, and shade-providing canopy structures that mimic the functionality of the natural tree canopy.

From each of the three zones comprising the TFST Trail corridor comes inspiration for the design concept. From the Creek Zone, the highly visible urban/nature interplay inspires the fundamental basis of the concept. From the Forest Zone, the extensive tree canopy and the light that dapples through it inspires the design of canopy structures. And from the Bluff Zone comes the influence of the bluffs and how they overlook the Trinity River, which translates into man-made overlooks that seek to provide similar experiences along the corridor.

While several specific amenities are shown this chapter, this concept can be applied to other elements as needs or opportunities arise. Bird blinds, for example, could be made to incorporate the rook element of the canopy structures and the platform element of boardwalks and overlooks. The intent is to create continuity of design throughout the corridor by means of material selection and overall design.

The images on the following pages illustrate the manifestation of this design concept in various amenities and design elements. Computerized graphics are used to depict detail within each design and in several instances, artist renderings depict the intended character of the concepts.

AMENITIES

The following images and descriptions depict the application of the design concept to various amenities within the TFST Trail corridor.



Overlook

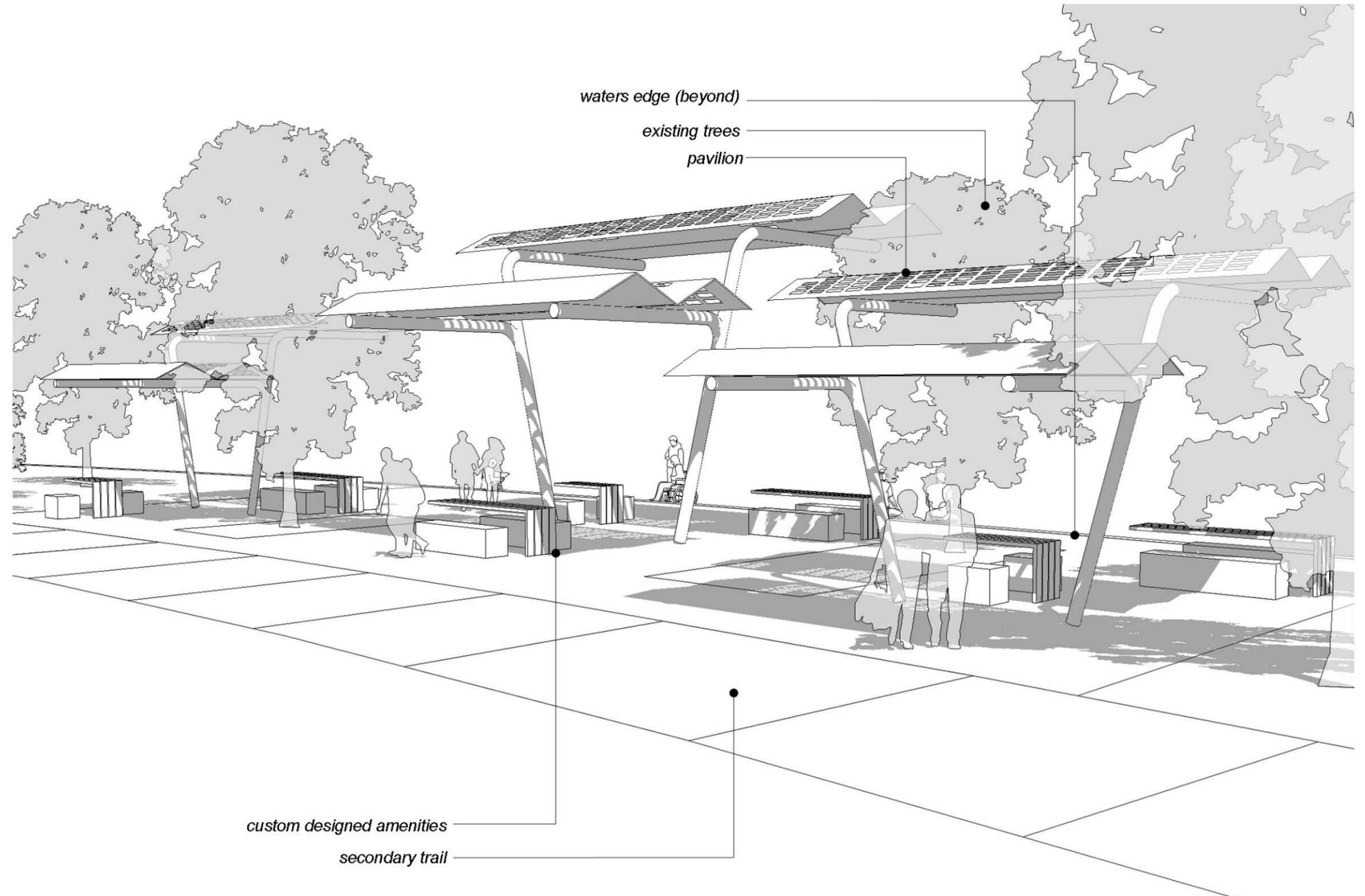
The central element of the overlook—as well as several other amenities within this palette—is the canopy shade structure. The design for these structures mimics the form of a tree and aims to simulate the experience of walking through the forest. The undulating form of the canopy roof mimics the irregularity of a tree’s canopy. Geometric perforations allow small amounts of sunlight to pass through, casting light on the ground in a manner similar to sunlight dappling through a tree’s leaves. The posts lean, bend, and spread, much like the branching of tree trunks and limbs. In these ways, man-made materials are shaped as an interpretation of natural forms.

The overlook amenity, as illustrated by the drawings on this page and the next, incorporates multiple canopy structures in a relatively loose formation, intended to integrate with the landscape. Existing trees are preserved and interplay with the man-made structures that are introduced to the site. Natural stone and wood are cut into geometric shapes and arranged to form tables and benches as areas of respite under the combined canopy of the structures and trees. Surface materials—such as decomposed granite—provide functionality while also adding to the experience of the amenity. The crunch of decomposed granite underfoot adds an aural element to the user’s experience.



Overlook locations will be placed where a trail is in close proximity to a site that provides an attractive vista. In most cases, these locations will be adjacent to and provide views of ponds or wetland areas. However, the general overlook concept can be applied as a stand-alone pavilion where significant vistas are not present but the desire for a gathering area exists.

In order to minimize conflicts between trail users that are passing by overlooks and those that wish to stop and experience the place, it is recommended that overlooks be places along secondary access pathways, rather than the Spine Trail itself. These pathways should be paved and meet all accessibility requirements.



Canopy Shade Pavilions



*"In that blest moment I felt myself,
Felt myself so small, so great."*

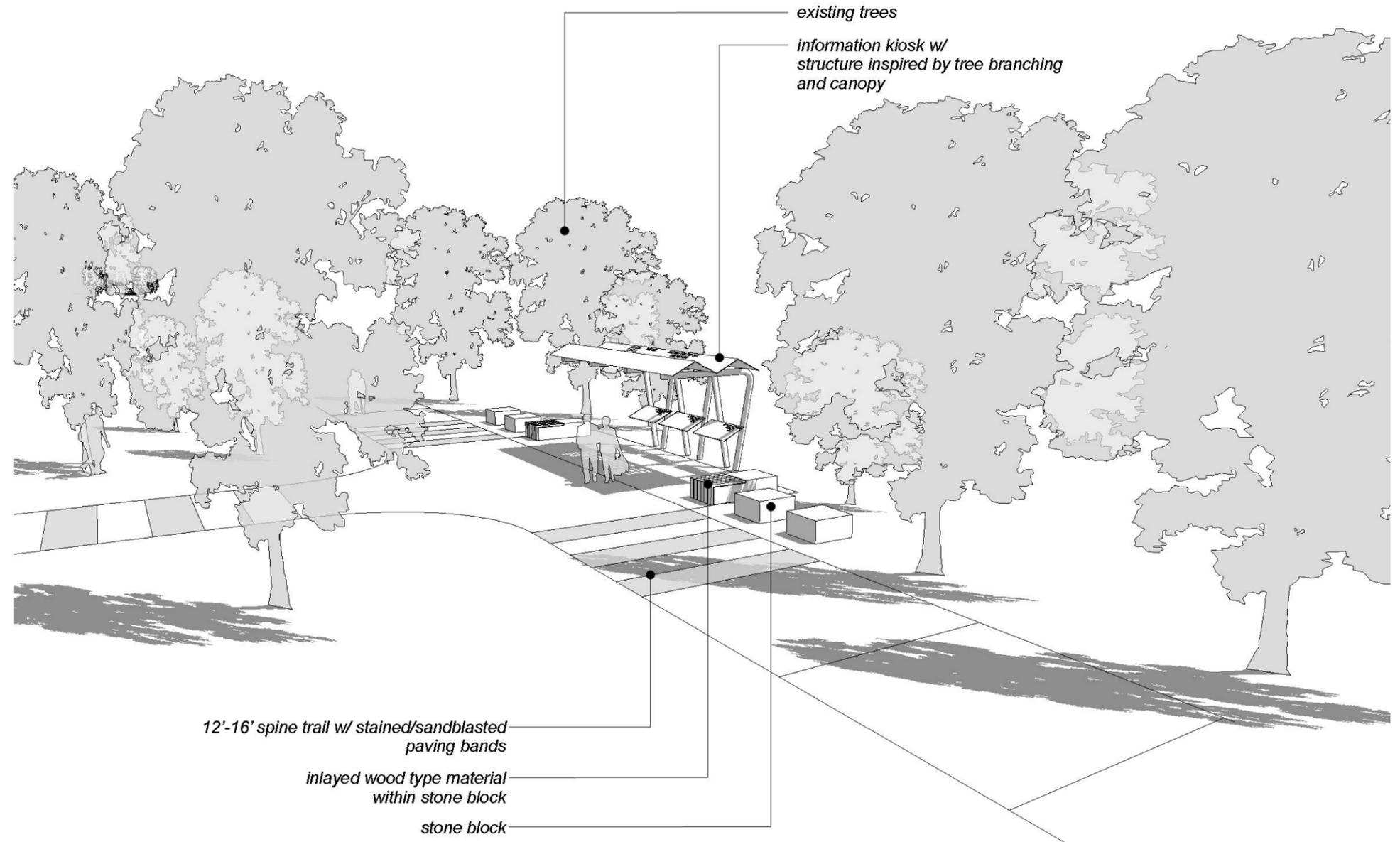
Goethe

Kiosks

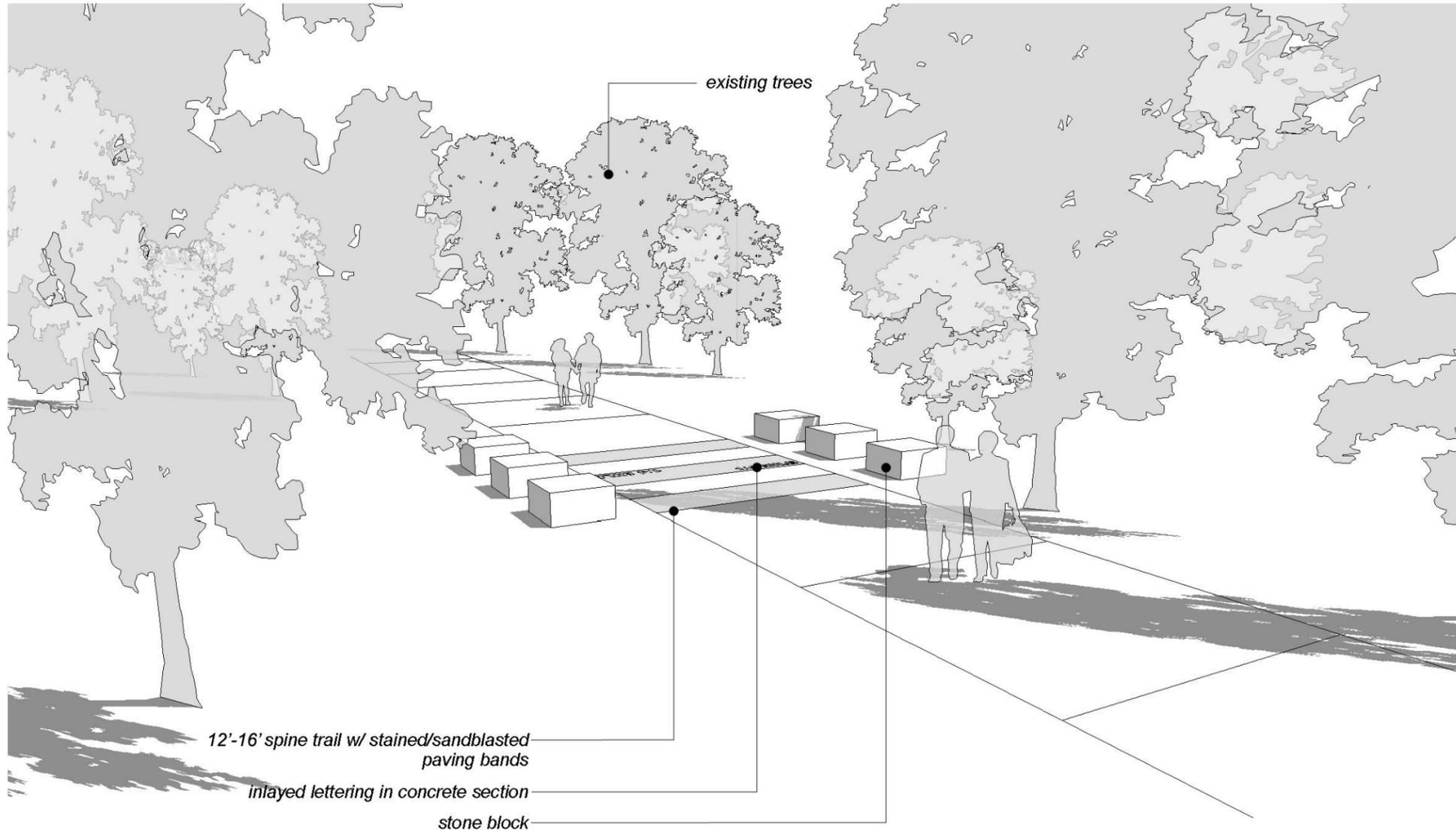
As with other amenities in this palette, the basic concept of the canopy structure is central to the design of kiosk amenities. In contrast with the canopy structures included in the overlook amenity, structures in the kiosk amenity incorporate opportunities for interpretive and informational signage, rather than seating and tables. These areas will provide shaded respite for trail users while also presenting educational opportunities. Large cut stone blocks—similar to the benches and other seating elements in the overlook amenity—provide resting opportunities. Bands of contrasting pavement cross the trail to signal to cyclists that speeds should be lowered while also serving as a visual and tactile element to unify the design of the trail and the off-set kiosk areas.



Kiosks can be located at trail intersections, near interpretive areas (such as a Heritage Tree or unique topographic element), or as part of trailheads. They should be situated in such a way as to preserve existing vegetation and integrate with the site as a whole. It may be appropriate in some locations to incorporate seating under the canopy structures in addition to the sign panels that are shown on these images.



Kiosks & Interpretive Citations



Mile Markers

Mile markers are important amenities for trail users that wish to know the total distance they have traveled. They also supplement the City's standard 911 location system by providing an additional point of reference for users and emergency responders.

This particular design incorporates cut stone blocks and bands of contrasting pavement to provide the experience of passing through a minor gateway. This image shows the mileage as lettering inlaid into the pavement bands. However, lettering for mileage could also be set on the faces of the stone blocks and other text—such as the trail's name or lines of poetry—could be inlaid in the pavement.

The mile marker amenity is similar to the kiosk design, except without the canopy structures. The stone blocks provide a visual amenity as well as a seating opportunity. In some locations it may be appropriate to combine the mile marker with the kiosk into one combined amenity. This could easily be accomplished thanks to the similarity of the two designs.

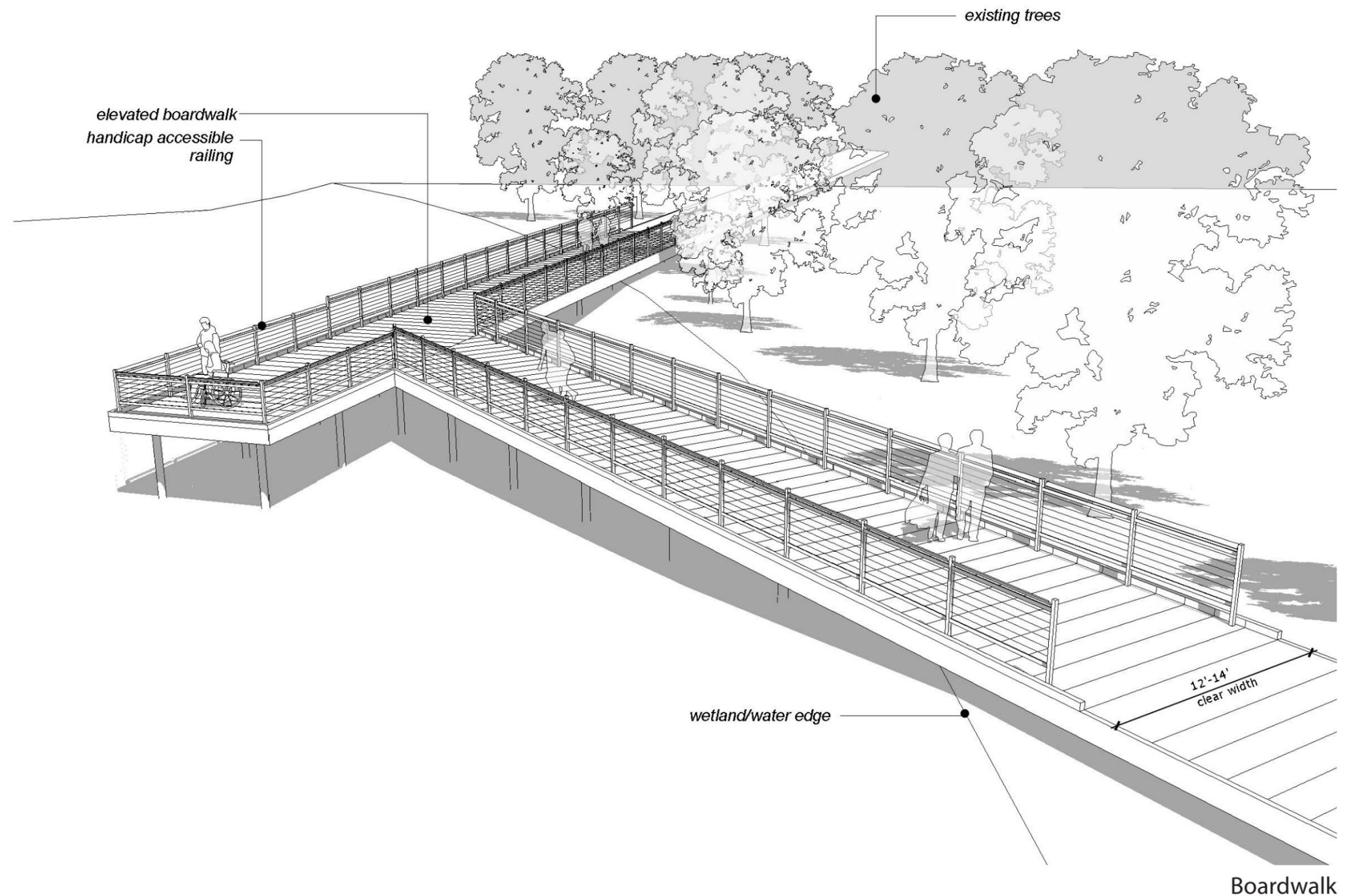
Mile Markers



Boardwalk

Boardwalks are recommended in many locations along the corridor either out of necessity (such as crossing wetland areas) or because of an opportunity to bring users closer to nature, such as overlooking a wetland (as shown in the drawing to the right). Typically, boardwalks will be linear in nature, often curving to provide a more organic alignment. However, when locations allow for it, platforms off of the main boardwalk can provide destinations and rest areas for users. These areas provide access to the immediately adjacent natural environment as well as views toward the surroundings.

Due to the corridor's propensity to flood, it is recommended that boardwalks be constructed with concrete piers and decking and that railing be predominately metal, potentially with wood like or recycled plastic (or concrete) to resemble wood. The concrete, especially for the decking, should be of a natural color and pattern to reflect the natural character of the area. Manufacturers exist that produce modular, precast concrete boardwalk systems that can be colored and stamped to resemble wood or stone. These systems can be installed by hand or with lightweight equipment, thereby minimizing the impact of construction in sensitive wetland areas.





*"How to find my soul a home
Where water is not thirsty
And bread loaf is not stone."*

Maya Angelou

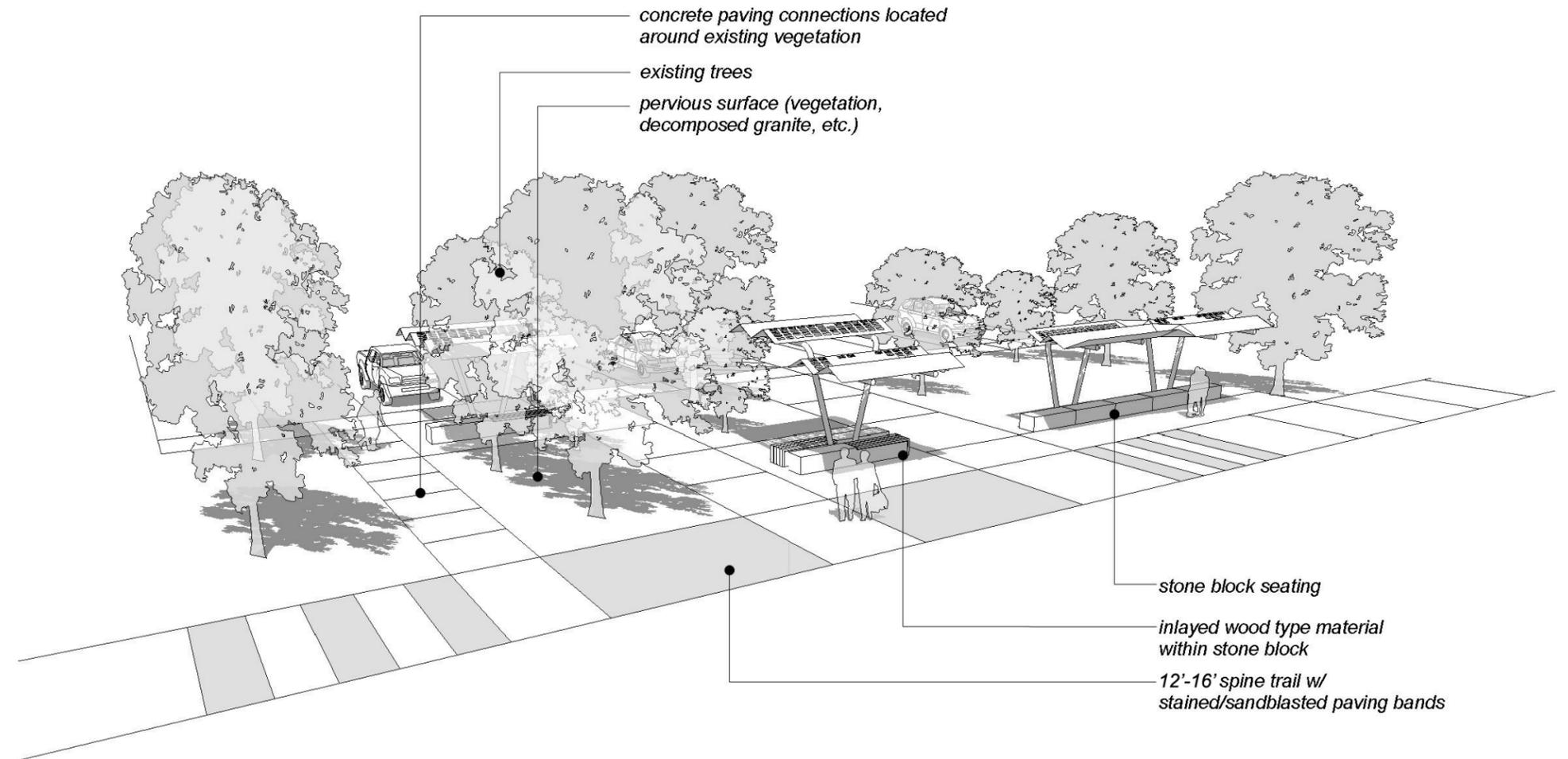
Trailhead

As described on page 23, trailheads are to be located approximately every one to three miles along the Spine Trail and at all locations where the Spine Trail crosses a major street or highway. A trailhead should include at minimum the following:

- Ten to twenty off-street parking spaces;
- Drinking fountains;
- Bike racks;
- Seating;
- Lighting;
- Landscaping;
- Gateway marker;
- Informational and educational signage; and
- A kiosk/map of the trails.

Trailheads serve as gateways to the Trinity Forest Spine Trail corridor. They are designed as points of arrival and should provide users with the experience of passing from the city into nature. The Bruton Road/ 2nd Avenue trailhead (shown to the left) in particular serves as a gateway, not only for trail users but also for vehicular traffic. In addition to the trailhead itself, there are opportunities for intersection enhancements, monumentation, aesthetic improvements to bridges (such as non-structural railings and arches), and landscaping.

From a conceptual design perspective, trailheads are intended to mirror the elements contained in the other amenities described in this chapter. Canopy structures, cut stone blocks, and contrasting paving patterns are incorporated in this design. While the design of each trailhead may vary considerably based on the unique physical characteristics of each site, the primary intent is for the trailhead to be a place where the natural and built environments blend. This is largely achieved by avoiding large expanses of paving and weaving the forest with multiple paved connections between the trailhead parking and the trail itself.



Trailhead



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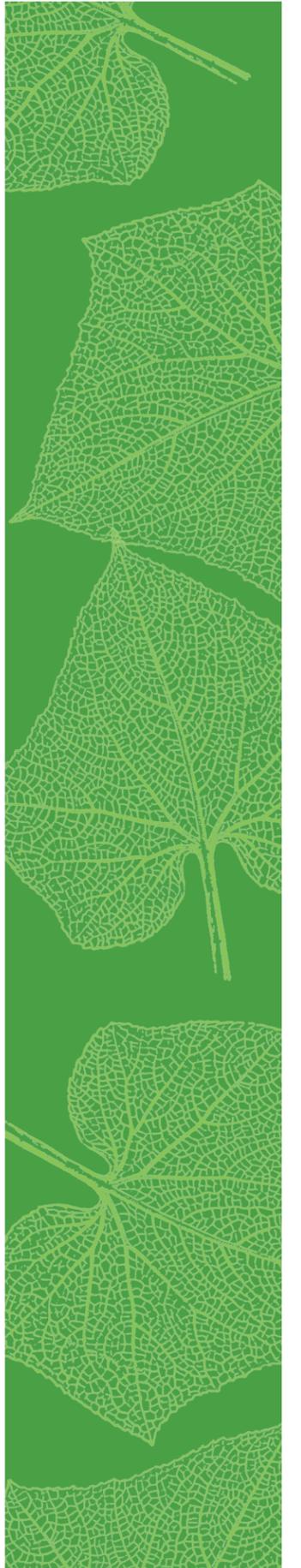
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 5

Unique Opportunities

Lawnview Park & Lawnview DART Station | Urban Wilderness Adventure Park (former Roosevelt Heights Neighborhood)





OVERVIEW

Concept plans were developed for two unique opportunity areas along the spine trail—one for the Lawnview Park/Lawnview DART Station area and one for a proposed Urban Wilderness Adventure Park in the former Roosevelt Heights area.

In addition to walking and biking, the Trinity Forest Spine Trail corridor—and the Great Trinity Forest as a whole—offers opportunities for a variety of recreational activities and amenities. Examples include kayaking at the standing wave underneath the Santa Fe Trestle Trail, wildlife viewing at Lemmon Lake, and connecting with cultural history at the Storytelling Place. Planned recreational opportunities—the Trinity Forest Golf Course, First Tee golf facility, and Texas Horse Park—will add to the value of the area.

There are two areas along the TFST Trail corridor that are closely connected to the success of the Spine Trail and Connector Trail network. These two areas will help encourage and facilitate use of the trails and will themselves be supported by the trails and their users. These two areas are:

» Lawnview Park & Lawnview DART Station

This concept plan proposes improvements to Lawnview Park to serve as a trailhead and to facilitate the passage of the Spine Trail. It also explores opportunities for connecting with the DART Station and utilizing the area—including a large pond—south of the station as an amenity.

» Urban Wilderness Adventure Park (former Roosevelt Heights Neighborhood)

Situated at the location of the now-abandoned Roosevelt Heights neighborhood, this concept plan includes overnight camping, day-use activities, nature trails, and opportunities for environmental education.

These two concepts are described in further detail on the following pages. Each concept plan includes a description of the site, how the site is accessed, and an overview of the future plans for the area.

Lawnview Park & Lawnview DART Station

» Site

The Lawnview Park portion of this site exists entirely north of Scyene Road, the DART Light Rail Green Line, and an unused freight rail line. The park is bordered by Scyene Road, White Rock Creek, the Parkdale and Lawnview Neighborhoods, and Ascher Silberstein Elementary School. These neighborhoods and the school are major stakeholders in the future of Lawnview Park and this portion of the TFST Trail. A recently-constructed playground is situated on the north side of the park, near Hollis Avenue. The southwest portion of Lawnview Park contains two existing soccer fields and a parking lot. The remainder of the park is unprogrammed open space. The soccer fields and parking lot regularly flood due to their low elevation and location near drainageways that parallel Scyene Road. In addition to flooding and depositing sediment on the parking lot on a regular basis, these swales tend to hold water on an ongoing basis.

The Lawnview DART Station portion of the site is located south of Scyene Road and the two rail lines at the signalized intersection of Scyene Road and Lawnview Avenue. This area is bordered by the Great Trinity Forest on two sides and an open drainage area on the third side (with the forest beyond). The station operates as both a park-and-ride and a bus transfer location. Riders also arrive on foot and by bicycle, primarily from the neighborhoods across Scyene Road. The station, which was constructed in 2010, includes provision for a trail connection between the platform and the forest. This pathway currently provides access to the platform from the parking lots. Immediately south and west of the station is the site of a former scrapyard. Beyond these clearings is the beginning of the Great Trinity Forest. As part of the gateway into the forest, a large pond offers attractive vistas and habitat for wildlife.

» Access

For trail users, the site will be accessed from the north along an electric transmission corridor that runs roughly parallel to White Rock Creek. From the south, trail users will follow a path through the woods, running along the west side of the pond, which provides opportunities for trail users to experience this amenity.

For other users, the Lawnview DART Station provides access to the site (for rail and bus passengers alike) and car parking is available at the DART Station, the parking lot in the southwestern corner of Lawnview Park, and along Hollis Avenue.

» Plan

The Lawnview Park side of the site will be enhanced through improving the parking lot located at the southwest corner of the park to serve as a major trailhead for the Spine Trail. Improvements should include raising the parking lot as needed so that it does not flood as regularly while also modifying site drainage to reduce the level of nearby standing water. In order to serve as a trailhead, it is also important to provide bike racks, drinking fountains, lighting, shaded seating areas, and potentially restrooms in this location.

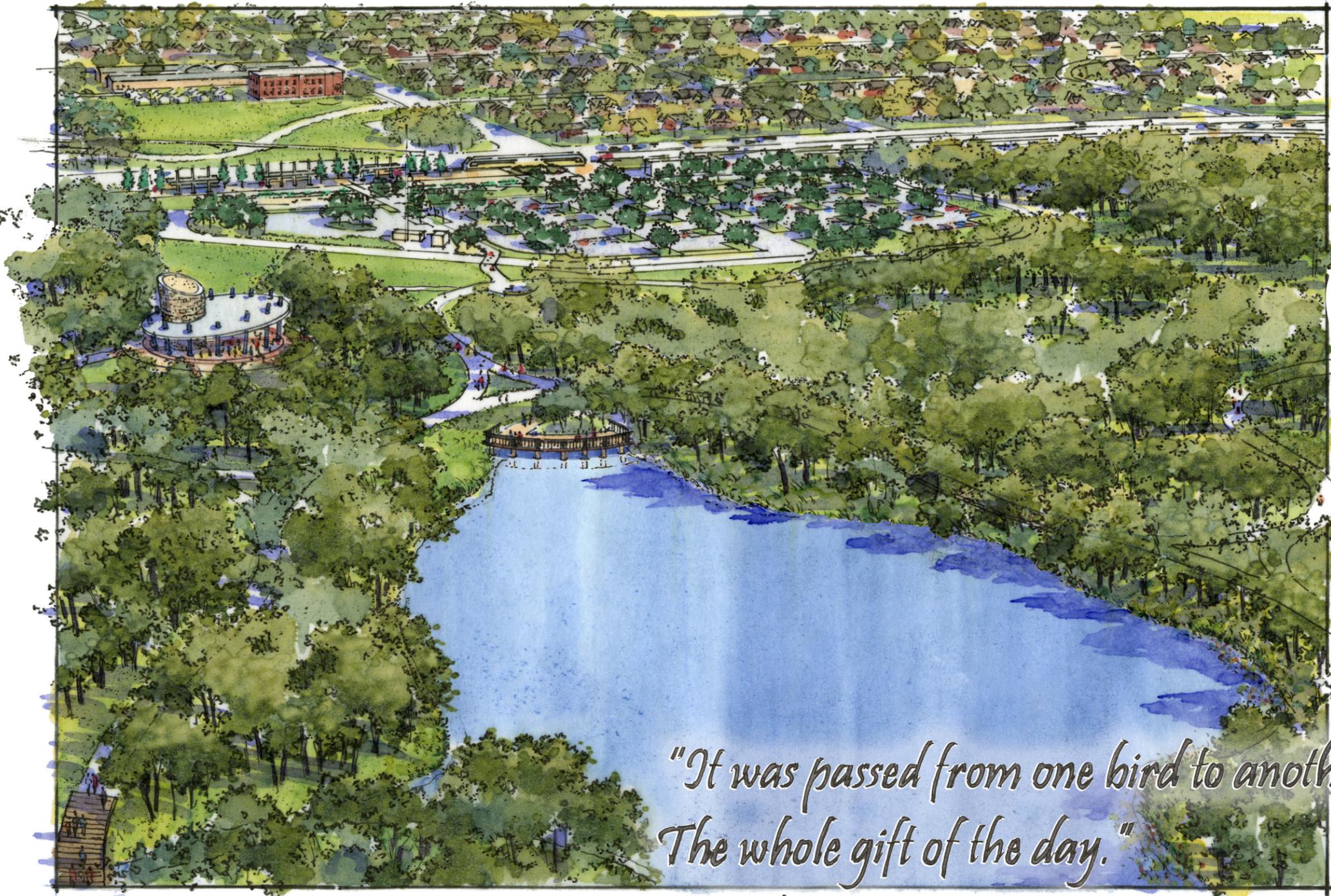
The Spine Trail will pass along the western edge of the park to this new trailhead, at which point it will turn east to run parallel to Scyene Road. The drainageways that exist in this area should be enhanced to serve as bioswales in order to clean the water and improve their aesthetics. Boardwalks will be utilized so that the trail can pass over these swales to enhance the user's experience. The placement of the spine trail along the western and southern edges of the park is intended to diminish any potential impacts of trail and trailhead use on the neighborhoods while still providing trail access for residents via internal circulation trails that will pass through existing trees for shade while providing access to amenities and exposure to the small creek running through the park.

Other enhancements to the park include on-street parking, a new pavilion associated with existing playground, and a small dog park.

As discussed on page 20, there are numerous challenges for crossing Scyene Road and the two rail lines. It is necessary to provide an at-grade crossing via enhancements to the intersection of Scyene and Lawnview by introducing larger landing areas at corners and enhanced paving for the crosswalk (which also crosses railroad tracks). South of the intersection the trail will carry through the parking lot and provides access to the station platform and bus stops. This benefits the nearby neighborhoods as well by means of improved transit access.

Lawnview Park & DART Station





South of the station, the plan shows additional circulating trails, amenities, picnicking, and overlooks surrounding the pond. This area is in close proximity to the DART parking and platform, which could allow users to access the area by car or transit, in addition to the trail. The Spine Trail continues to head south toward US 175. However, a proposed nature trail will split from a circulating trail that will loop around the pond. This nature trail will connect to the Scyene Overlook.

One of the most prominent amenities in the pond area is an overlook that provides physical and visual access to the water. This overlook will utilize the existing land form, which is elevated above the surrounding shoreline and has relatively few existing trees (reducing the need to remove trees). The placement of the overlook provides an immediate destination for trail users once they leave the Lawnview DART Station and an excellent presentation of the treasures offered by the Great Trinity Forest.

*"It was passed from one bird to another,
The whole gift of the day."*

Neruda



Much of Lawnview Park is unprogrammed open space. A small creek passes through the park (above). The parking lot at the southwest corner of the park regularly floods and collects debris and sediment (below).



The Scyene Road and Lawnview Avenue intersection must be enhanced to serve as a trail crossing (above). The Lawnview DART Station was designed to accommodate bike and pedestrian access to the Great Trinity Forest (below).



The area south of the Lawnview DART Station is a former scrapyard; the ground is covered by decaying asphalt (above). The pond is the landmark feature of this site and the location of the proposed overlook is shown below.





Urban Wilderness Adventure Park (former Roosevelt Heights Neighborhood)

» Site

This site formerly contained the Roosevelt Heights Neighborhood, which was vacated (save for one house) due to flooding. The area contains various infrastructure pieces—streets, power lines, cellular towers—and approximately 450 platted lots. These existing elements may present opportunities for reuse, but the fragmentation of land ownership may prolong and make challenging, the land acquisition process.

Located at the intersections of Bruton Road, 2nd Avenue, and US 175, the site is divided in two, primarily by US 175. Access to the northern half of the site from Bruton Road is relatively easy. However, access to the southern half, as well as access to the northern half from the south, is challenging due to the number of one-way ramps/access roads and varied topography.

The northern half of the site was more recently inhabited—one resident still lives in this area—thus the presence of infrastructure is much more noticeable. In the southern half, the infrastructure has been decomposing for a longer period of time and has more fully been reclaimed by nature. Both areas see a significant amount of illegal dumping and a junk/scrap yard exists adjacent to US 175 in the southern half of the site.

In addition to its further-progressed return to nature, the southern half of the site contains a series of ponds and wetland areas, a meandering segment of White Rock Creek, and numerous drainageways that feed into the creek. The former border between the neighborhood area and the surrounding dense forest is unrecognizable in most locations. These features combine to create a unique and secluded location nestled between water bodies.

» Access

For trail users, the site will be accessed from the north via a proposed Connector Trail that will intersect the proposed Spine Trail at Bruton Road. The proposed Spine Trail runs north to the Lawnview DART Station along a cleared corridor (possibly an abandoned road bed) until it enters the dense forest. From the south, the proposed Spine Trail will skirt the western edge of the site, run through the wetland area via boardwalks, and then follow a major electric transmission line corridor toward the planned Texas Horse Park. In addition, a proposed Connector Trail will head east from the southernmost part of the site along an underground utility corridor toward Pemberton Hill Road and a proposed trailhead. Planned on-street

connections will provide access to the Lake June DART Light Rail Station.

Vehicular traffic will access the northern portion of the site via Bruton Road. The southern portion will be accessed via the US 175 frontage roads and clover leaf that connects the highway to the 2nd Avenue/Bruton Road intersection. This is the only potential access point that can serve two-way traffic and both north-bound and south-bound traffic from US 175.

» Plan

The overall concept for this site is to serve as an “urban wilderness”—a city park that embraces the rugged natural environment with minimal development. The unique nature of this site and its location within the City of Dallas but separated from neighborhoods by forest makes it an ideal candidate for overnight camping—something that is lacking in and around the city. In addition to camping, this site provides opportunities for birdwatching and wildlife viewing, hiking, paddling, environmental education, and the introduction of ropes courses and climbing walls.

As a whole, the layout of the plan and its included elements—such as streets and the placement of amenities—follows and responds to the natural contours of the site. This approach minimizes the impact on the forest and existing vegetation while in some instances utilizing the pieces of existing infrastructure that are still in decent condition. As the site is split in two by US 175, two trails are provided to accommodate non-motorized movement across the site (one is the Spine Trail while an additional Connector Trail has been provided to serve as an eastern connection). Where these trails cross the major roadways in the area, there exist opportunities for significant gateway monuments, which would act as wayfinding aids for motorists and iconic features to define the area.

In general, the approach of placing the more impactful uses toward US 175 has been followed. The larger, pull-through camping spaces (which accommodate full-size recreational vehicles, also known as RVs) are located closest to the highway. These spaces require more clearing and level ground, which would be impactful to the more sensitive parts of the site. Smaller camping spaces that would still accommodate smaller RVs are located deeper within the site, away from the highway. Finally, tent camping spaces, day use areas, trails, and other less impactful amenities are located farthest from the highway.

The northern half of the site primarily functions as a campground for RVs and small camper vans. Some day use facilities are planned, such as a hiking trail to an overlook. As previously mentioned, a single point of access is provided on Bruton Road. At this access point (as with the access point for the southern half of the site), a gatehouse is positioned to collect user fees and a sanitary waste station is provided. This portion of the park is organized around a loop road that provides access to amenities as well as general circulation around the site.

South side:

The southern half of the site provides the same uses and amenities as the northern half in terms of camping facilities (back-in and pull-through RV campsites). However, it also contains a tent camping area and a greater number and variety of amenities, such as playgrounds, a dog park area, overlooks, and a canoe/kayak launch. A loop road provides access to the variety of camping options and an amenity center, at which high-intensity amenities—such as showers and restrooms—are clustered.

The series of ponds and wetland areas surrounding the southern portion of the site provide many opportunities for exploration and recreation. The layout of amenities responds to the existing ponds so that the various overlooks, trails, and picnic areas can take advantage of views of the water. A dense network of trails will provide exploration, lead to boardwalks, and give opportunities for bird-watching and fishing. The forest allows unique features like ropes courses, zip line courses, and climbing walls. This concept aims to seamlessly integrate the alignments of trails and roads as well as the placement of amenities with the existing physical features of the site. With this goal accomplished, the Urban Wilderness Adventure Park will become not just a camping destination, but a place to explore and find adventure.

Urban Wilderness Adventure Park



Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum



The series of ponds surrounding the southern portion of the Urban Wilderness Adventure Park site are not only beautiful, but also provide ample opportunity for environmental education, paddling, and wildlife viewing (above and below).



The edges of the ponds and wetlands are zones of dynamic wildlife habitat (above). These zones, as well as wetlands within the area (below) are often stagnant, which adds to their habitat value but also results in the presence of mosquitoes.



An underground utility easement, which passes between the two largest ponds in the area, provides the opportunity for a Connector Trail toward Pemberton Hill Road (above). The northern portion of the site still contains infrastructure remnants from the area's former life as the Roosevelt Heights neighborhood.





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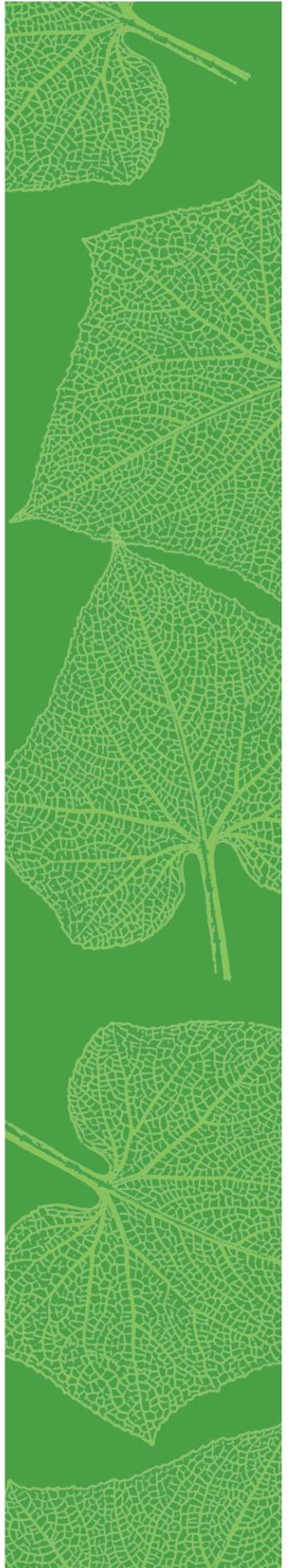
Trinity Forest Spine Trail Master Plan

From the Audubon to the Arboretum

Chapter 6

Conclusion

Summary of Costs | Recommendations



SUMMARY OF COSTS

Costs are based on order-of-magnitude estimates for each of the currently unfunded segments and total \$17.1 million.

For the cost provided in Chapter 3, approximated planning level order-of-magnitude (OOM) unit cost estimates were based on typical per-unit costs for various trail amenities, which were based upon recent project bids, current market, and engineering means and methods*. Typical per-unit costs for major elements that comprise the TFST Trail are as follows:

- 12' wide concrete trail: \$1 million per mile
- 12' wide prefabricated pedestrian bridge: \$2,000 per linear foot
- Existing roadway or railroad bridge undercrossing: \$250,000 each
- 12' wide boardwalk: \$450/linear foot
- Boardwalk railing (both sides): \$80/linear foot
- Neighborhood access point/trail gateway: \$50,000 each
- Community-scale trailhead with parking and minor amenities: \$250,000 each
- Regional trailhead with amenities: \$350,000 each

Based upon these estimates, the following potential costs per segment were developed.

Total Cost Summary

The TFST Spine Trail totals 15.5 miles in length (or 11.2 miles excluding Segment 5). The total estimated potential costs for all segments (excluding Segment 5) is \$17,027,500 or approximately \$1.52 million per mile.

Segment	Name	Length (Miles)	Cost
1	Tenison Trail	1.8	\$2,840,000
2	Parkdale/Lawnview Station Trail	3.0	\$4,815,000
3	Great Scyene Forest Trail	1.7	\$2,592,500
4	Forest Outfield Ponds Trail	2.3	\$3,560,000
5	AT&T Trail	4.3	(already funded)
5A	Joppa Connector Trail	2.0	\$2,520,000
6	South Forest Gateway Trail	2.4	\$3,220,000
Total		15.5	\$19,547,500*

Trail Segment Summary

» Segment 1 – Tenison Trail

Includes 1.8 miles of concrete trail, a trail gateway at the intersection with the Santa Fe Trail, two bridges totaling 170 linear feet, two trailheads (including a regional trailhead with parking and amenities at IH 30), and a neighborhood access point at Valley Glen Drive.

The total estimate of potential costs for this segment is \$2,840,000. †

» Segment 2 – Parkdale/Lawnview Station Trail

Comprises 3.0 miles of concrete trail, 500 feet of boardwalk (with railings), four trailheads, and two bridges totaling 150 linear feet.

The total estimate of potential costs for this segment is \$4,815,000. †

» Segment 3 – Great Scyene Forest Trail

Incorporates 1.7 miles of concrete trail, 1,225 feet of boardwalks (with railings), and two trailheads.

The total estimate of potential costs for this segment is \$2,592,500. †

» Segment 4 – Forest Outfield Ponds Trail

Segment 4 "Forest Outfield Ponds Trail" features 2.3 miles of concrete trail, two bridges of 100 and 110 feet, and a 1,600-foot boardwalk.

The total estimate of potential costs for this segment is \$3,560,000. †

» Segment 5 – AT&T Trail

Consists of 4.3 miles of trail. This segment is programmed as part of the Trinity Trails Phase 3 project and is currently in design.

Estimated costs are not included in this analysis because funding is already secured.

» Segment 5A – Joppa Connector Trail

Approximately 2.0 miles of trail, total of two bridges, one across the Trinity River and one across Honey Springs

Total estimate of potential costs for this segment is \$2,520,000. †

» Segment 6 – South Forest Gateway Trail

Includes 2.4 miles of concrete trail, two bridges of 75 and 35 linear feet, an area with an access point, river overlook and plaza, and a regional trailhead at IH 20.

The total estimate of potential costs for this segment is \$3,220,000. †

Corridor Destination Concept Plans Cost Summary

» Lawnview Park Concept Plan

This includes site work for new and improved areas, renovating existing and adding new utilities, 4,000 feet of 12-foot wide concrete trails, boardwalk, two pedestrian bridges, hardscape elements, community pavilion with restrooms and concessions, neighborhood pavilion, site furnishings, lighting, bioswales, LID plantings and landscaping.

The total estimate of potential costs for Lawnview Park is \$4,050,000. †

» Lawnview DART Station

Consists of general site work, demolition, and grading, 2,400 feet of 12-foot concrete trails, including a pedestrian bridge and mile markers, hardscape elements, pond overlook and pavilion, covered picnic pavilions, improved intersection crossing across Scyene Road, site furnishings, lighting, and landscaping.

The total estimate of potential costs for Lawnview DART Station is \$2,030,000. †

» Urban Wilderness Adventure Park (Former Roosevelt Heights - North)

Consists of sitework, renovations and additions of utilities, concrete trails, boardwalk, pedestrian bridges, hardscape elements, gatehouse and administrative area, 1,500 square foot amenity center with hardscape and landscaping, vehicular driveways, day use picnicing areas, covered picnic pavilions, RV camping spaces, RV waste station, lighting, and trailhead and parking lot at Bruton Road.

The total estimate of potential costs for this segment is \$6,092,500. †

» Urban Wilderness Adventure Park (Former Roosevelt Heights - South)

This features sitework, renovations and additions of utilities, concrete trails, boardwalk, two pedestrian bridges, hardscape elements, gatehouse and administrative area, 2,000 square foot amenity center with hardscape and landscaping, vehicular driveways, day use picnicing areas, covered picnic pavilions, barbeque grills, pond overlook RV camping spaces, RV waste station, and lighting.

The total estimate of potential costs for this segment is \$10,500,000. †

† All estimated potential costs are projected to include but are not limited to construction and engineering fees.

*All costs are approximate shall be used for planning purposes only. A detailed cost estimate shall be prepared with engineering construction drawings, survey, permitting and geotechnical borings.

RECOMMENDATIONS

A variety of short- and long-term recommendations for the TFST Trail and the TFST corridor as a whole will help improve the experience and functionality of the trail.

Short-Term Recommendations

A variety of short-term best practice strategies are recommended to assist development (and usability) of the trail and to enhance the experience for a variety of users. Criteria should distinguish between existing or programmed trails (trails for which funding has been secured) and planned or proposed trails (trails for which funding has not been secured).

» In General

- Prioritize small, complete and usable trails accessible from denser neighborhoods over longer paths that connect to lower-density areas.
- Build trailheads and trails at the same time.
- Provide amenities (such as seating, lighting, bollards, restrooms, trail signage, bicycle storage, drinking foundations, trail maps and vegetation) in conjunction with trailheads.
- Provide accessible connectivity to trailheads.
- Maintain a minimum width of 12 feet for the Spine Trails. Widen trails to 14 or even 16 feet where high volumes of trail users and other special circumstances necessitate it.
- Connector Trails should be at least 10 feet in width.
- The plan calls for 12-foot wide bridges. In high-traffic areas, bridges should be two to four feet wider to maintain shoulder widths at crossings (based on new AASHTO guidance).
- Implement on-street bikeways to trailheads prior to trail openings.
- Identify wildlife issues and notify appropriate agencies, biologists, naturalists, etc.
- Program Nature/Connector Trails where strongest community interest exists.

» Security and Safety

There is strong evidence that trails generally do not increase crime rates. In many cases, trails increase neighborhood security by encouraging “legitimate users” in once-isolated areas, such as a creek behind houses. Even so, it is imperative to take a proactive role in addressing security concerns. Several measures can be taken to decrease potential problems:

- Identify areas of high crime, low visibility, potential access to vulnerable areas, etc.
- Increase security patrols, placing cameras in areas of concern, adding lights, or using established design techniques (such as eliminating potential hiding spots) at areas of high concern.
- Consider installing monitored or video cameras at entries to record all who enter.
- Consider creating a community based volunteer patrol to monitor conditions and provide information, assistance, and trail surveillance.
- Review intersections with street crossings to ensure safe crossings, using traffic calming techniques to slow motorized traffic and increase trail user visibility.
- Avoid to the “broken windows” syndrome by responding quickly to vandalism or disorderly behavior.

» Maintenance and Management

- Conduct routine inspections year-round to remove litter, prune vegetation, make surface repairs, etc.
- Recruit volunteers for appropriate tasks (such as trail cleanups or landscaping projects).
- Utilize aggressive trail-corridor levels of maintenance to ensure secure, safe trail environments.

» Stakeholder Outreach

- For this project to serve local neighborhoods, it is necessary to engage these stakeholder groups during the design process for buy in, support, and partnerships to create trails to and from their communities. The program should be structured and offered to engage neighborhood stakeholders to seek out partnerships with the city to improve security, safety, aesthetics, community values, and property values, thereby enhancing quality of life.
- The City should work proactively in reaching out to stakeholders during the design process and prior to construction. In many situations, design or management solutions can help encourage stronger neighborhood support for these plans
- Projects should be coordinated with neighborhood improvements – in conjunction with sidewalk and other capital improvements.
- For connections from neighborhoods, funds should be identified to improve the street and sidewalk networks and to create pocket parks with benches, water fountains, lighting, etc.

» Funding

- Cultivate interdepartmental coordination and collaboration to combine resources when appropriate.
- Work in conjunction with a diverse group of potential funding bodies, including local, state, and federal entities; resources for alternative transportation; public health organizations; and environmental preservation groups.
- Work to establish public/private partnerships, including potential TIF districts, PIDs, or other types of overlays to foster continued improvements.
- Identify potential private benefactors and corporate sponsors to invest in quality trail or trailhead improvements.
- Consider placement of donor walls or plaques to acknowledge major contributors and recognize partnerships.
- Work to increase park and recreation budgets for trail maintenance.
- Establish a mechanism and guidelines for volunteer built soft-surface trails.



» Promotion

- Create a brand identity for the entire trail and its destinations.
- Create a marketing/promotional campaign advertising the trail and its amenities.
- Consider encouraging portable amenities and private enterprise (such as food trucks) to enhance activity around trailheads.
- Insure that all trail maps and online databases within the region include updated information about the trails.
- Work with other departments, adjacent cities, and other relevant entities to update trail maps. Advocate inclusion of information about transit, nearby amenities, and bike-friendly streets.
- Make trail brochures or booklets widely available; coordinate with hotels, tourism agencies, etc.

Long-Term Recommendations

» Neighboring Infrastructure

While substantial infrastructure investments will be required to build the trail itself, usability will be greatly increased if the areas near the trails are inviting, safe, and accessible. Partnerships between the City of Dallas, neighborhoods, and transportation agencies will be important in order to identify key locations (such as transit-adjacent areas, high bicycle or pedestrian use areas, and school zones) and make sure there are safe, convenient routes and street crossings.

» Prioritization

Potential gateway locations and trail alignments have been determined by means of a thorough review of conditions throughout the anticipated trail network. Decisions regarding trail alignments were made based on a number of prioritization criteria, which may also be used in determining the order of implementation for the Spine Trail segments or for Connector Trails. These criteria include:

- Trail areas that include points of interest or are near population centers should be built first and extended later to create final connections once demand and use increase.
- Long stretches of trails in unpopulated areas should not be constructed until the potential for significant use exists in order to minimize safety concerns.
- Trails that garner a significant level of interest by the neighboring community should be prioritized.
- Projects for which funding is more readily available should be constructed first.
- Higher priority should be given to trail segments that provide connectivity to other trails, on-street bikeways, or DART stations.
- It is preferable to extend an existing trail, rather than to build a completely new trail disconnected from the existing trail network.
- Strive to provide equity for neighborhoods that are currently underserved with trails and park spaces.
- The cost of trails may impact prioritization. Segments that are less expensive to construct on a per-mile basis often receive a higher priority.

It should be noted that the prioritization of trail segments needs to be flexible. Different types of funding sources will be applicable to different trail segments. For example, segments that roughly parallel roadways are eligible for transportation funding, whereas segments that primarily serve a recreational purpose are not.

Criteria for locating and prioritizing trailheads include:

- Access to parks and recreational amenities.
- Proximity to population centers and commercial districts.
- Connections to multiple types of trails, including soft-surface trails.
- Visibility of location for informal surveillance by the general public.
- Presence of scenic views and overlooks.
- Ability to serve additional roles, such as providing creek access for fishing or wildlife viewing.
- Proximity/access from DART stations (generally speaking, it is preferred for trailheads to be within 1 mile walking distance and 3 miles biking distance of transit stations).
- Proximity to highways or the arterial road system to improve vehicular access.
- Regular placement along the Spine Trail (approximately every 3 miles).

