



4: COMMUNITY ENGAGEMENT

ENGAGEMENT STRATEGY

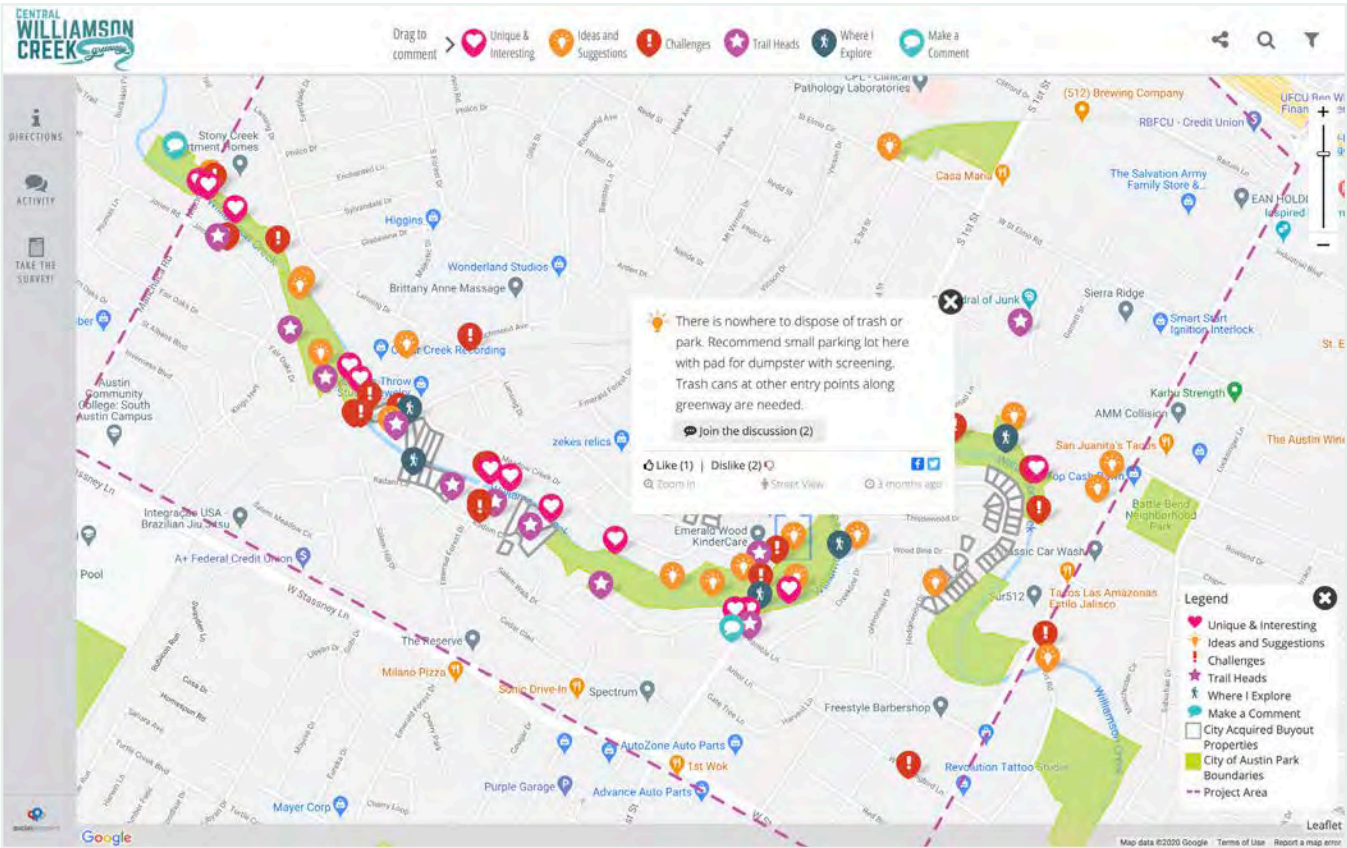
To ensure a process of co-creation of the vision for the Central Williamson Creek Greenway between the consultants and community, an extensive and comprehensive engagement strategy with both the Community Working Group and the general public was planned for this project. However, due to the COVID-19 crisis beginning in March 2020 and continuing throughout the entirety of the project, much of this engagement shifted from in-person to online, digital engagement with some outdoor, socially distanced “creekside” events, where participants could pick up a “creekpak” of engagement activities in English and Spanish. These activities could also be mailed to community members upon request.

DIGITAL ENGAGEMENT

The majority of digital engagement took place using a platform called Social Pinpoint. Virtual Community Working Group and City Working Group meetings were held monthly on Zoom (See schedule on pages 14 - 15). Three public virtual creek chats were held on Zoom to demonstrate Social Pinpoint, present designs, and solicit feedback.

Community Mapping

During the Existing Conditions Phase, community members were asked to use Social Pinpoint to geographically share their ideas, activities, and unique places along the Greenway. Categories included identifying locations for “Unique and Interesting Features,” “Ideas and Suggestions,” “Trailheads,” and “Challenges.” This online mapping activity was open from July 23rd, 2020 to October 13th, 2020.



Toolkit Idea Cards

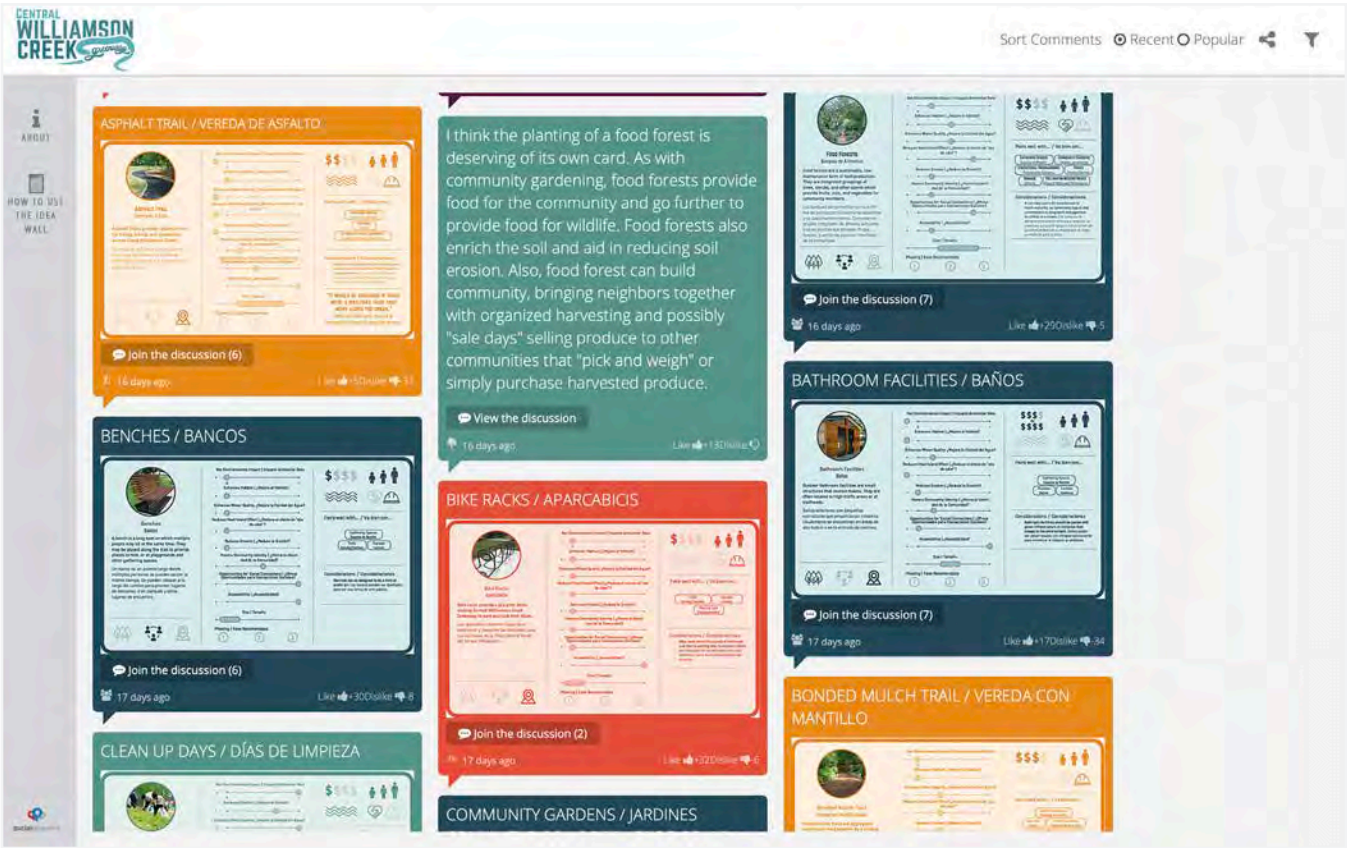
Findings from the Community Greenway Map and outcomes from the Storytelling activities, conversations with the Community Working Group, and other community engagement activities were then used to craft the four primary goals of the Central Williamson Creek Green Vision Plan.

- 1. A Restored, Biodiverse Greenway
- 2. A Community-Centered Greenway
- 3. An Accessible and Visible Greenway
- 4. An Active and Connected Greenway

These four goals guided the development of 52 unique “Creek Idea Cards,” each organized into one of the four goal categories. Community members on the Central Williamson Creek Greenway Social Pinpoint website voted on ideas by adding a thumbs up on ideas they wanted to see at the Greenway or a thumbs down on ideas they did not want to see. After voting closed on November 7th, the design team tabulated the votes, and integrated the highest scoring idea cards into the Vision Plan for the Central Williamson Creek Greenway.

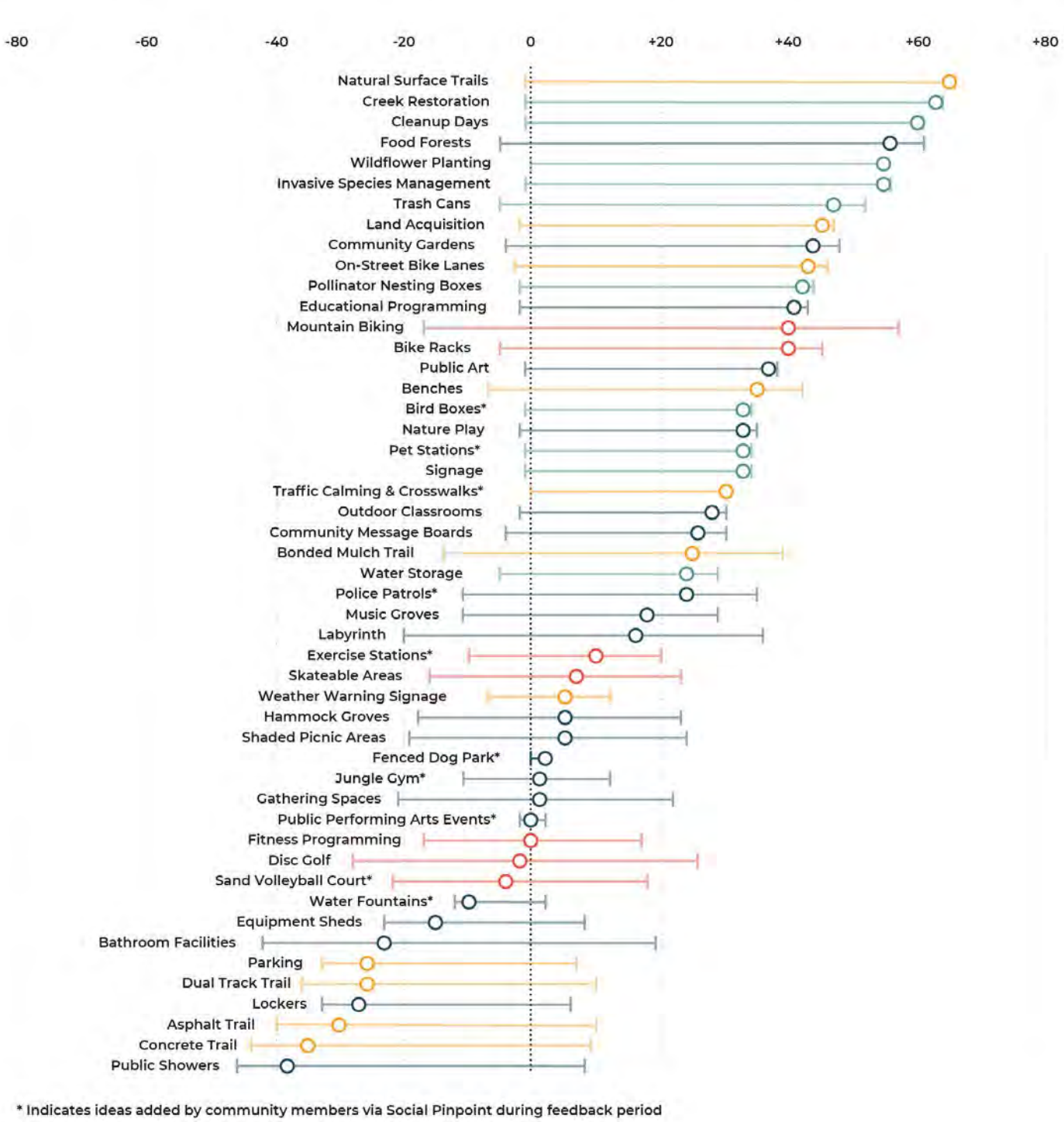
Idea Card Key

- 1. A Restored, Biodiverse Greenway
- 2. A Community-Centered Greenway
- 3. An Accessible and Visible Greenway
- 4. An Active and Connected Greenway



Idea Card Scores

Once the voting period on Social Pinpoint closed, the results were tabulated and summarized. This graphic shows the net score each creek idea card received. Idea cards received one point when they received a “thumbs up” and one negative point when they received a “thumbs down.” The sum of these points produced the net score.



Vision Plan- Placement of Creek Idea Cards

After the voting period on Social Pinpoint closed, the idea cards were then placed along the Greenway using information gathered from existing conditions, conversations with both the working group, and insights from the initial Social Pinpoint Greenway Mapping Exercise. A conceptual design for the entire greenway, as well as two trailheads at South 1st and Orland streets and Meadow Creek Drive were available for comment until January 18th, 2021.

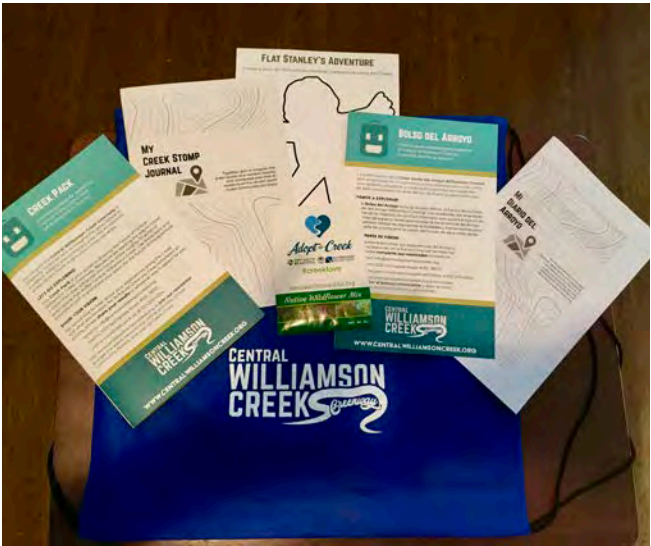


Comment on the Central Williamson Creek Greenway Vision Plan in the forum below!

- You can download the document from the Site Design section above.
1. Are there any ideas you would like to see at locations we don't currently have shown?
 2. Are there any ideas you see that should be removed from their locations because they are not ideal for that location?
 3. What do we not have enough of?
 4. What do we have too much of?
 5. Are there any other community-led ideas that should be added?
 6. What are we missing?
 7. Do you see anything that doesn't work?

IN-PERSON ENGAGEMENT

Due to the COVID-19 crisis, in-person engagement was limited to four “Creek Chats,” where Community Powered Workshop and representatives from the Community Working Group and representatives from the Community Working Group facilitated an in-person version of the Creek idea card activity. These events were socially distanced and held outdoors at picnic tables along Central Williamson Creek.





5: EXISTING CONDITIONS



Milk Snail found along the Greenbelt
Photo: Anna Pittala

CENTRAL WILLIAMSON CREEK PROVIDES A PEACEFUL PLACE FOR PEOPLE TO CONNECT WITH NATURE.

COMMUNITY CONTEXT

Demographics

The Central Williamson Creek area is surrounded by about 11,000 residents, mostly living in single-family homes. This is a diverse community both racially and economically. Fifty-one percent of residents are non-white, with 45% of that group identifying as Hispanic/Latinx. Forty-five percent of the neighborhood is low-income and 19% is middle income.¹ This area is considered to be socioeconomically vulnerable, with high levels of linguistic isolation and refugees.

Community Health

According to the Healthy Parks Plan for Travis, Bastrop, and Caldwell Counties, **this neighborhood has high rates of adult heart disease, high cholesterol, poor mental health, and prevalence of stroke.** These poor health outcomes can be aggravated and compounded by other demographic factors, including the area’s high socioeconomic vulnerability. **These are important considerations, as parks are critical public health assets that offer free opportunities to be active.** Parks and green space can ease depression and anxiety by providing areas to relax and connect with friends and family. They also cool the surrounding environment and filter out air and water pollutants that can harm health.

1. Low-income is defined as households whose ratio of household income to poverty level was less than 2, calculated from the Census Bureau’s American Community Survey.

Prior Engagement

The Central Williamson Creek Vision Plan expands upon a previous community engagement process that began in 2019 through a collaboration between neighborhood community members, Public Green & Wild, The Nature Conservancy, Community Powered Workshop, and the National Parks Service. Engagement efforts were focused in the Middle Williamson Creek buyout area between Union Pacific Railroad and S. 1st Street. The focus area includes the buyout neighborhoods of Meadow Creek Drive and Radham Circle. The engagement process included four community events as part of a series called *Explore! Williamson Creek*. Three of these events were “Creek Stomps,” which involved a short overview on the creek’s ecology and hydrology, a guided community hike, and an opportunity for community feedback. The final event invited those who were unable or uninterested in exploring the creek to attend a more traditional focus group format to garner feedback. In addition to these events, the Watershed Protection Department conducted feedback surveys at the Richmond Tributary Buyout Area, Meadow Creek, Heartwood Buyout Area, and Radham Circle. These surveys were intended to provide feedback to the Watershed Protection Department on how they are currently managing buyout land and how they may manage it in the future to align with community desires.

Prior Engagement Outcomes

Many themes emerged from the Explore! Williamson Creek focus group, creek stomps, and the Richmond Tributary survey from Watershed Protection Department.

Explore Williamson Creek!

Strengths

Nature and Wildlife

- Natural beauty of the creek
- Escape from the city
- Sense of discovery and joy

Recreation

- Place to hike or walk dogs
- Chance to connect with nature
- Opportunities to exercise

Challenges

People experiencing homelessness

Land Management Strategies

- Dislike for unmanaged lots
- Desire for mowing so areas are more aesthetically pleasing

Opportunities

Creek Trail

- Trails that improve connectivity

Community Spaces

- Areas with picnic areas, swings, and amenities

Neighborhood Stewardship

- Community stewardship events

Watershed Protection Dept.

Richmond Tributary Survey

Current Use

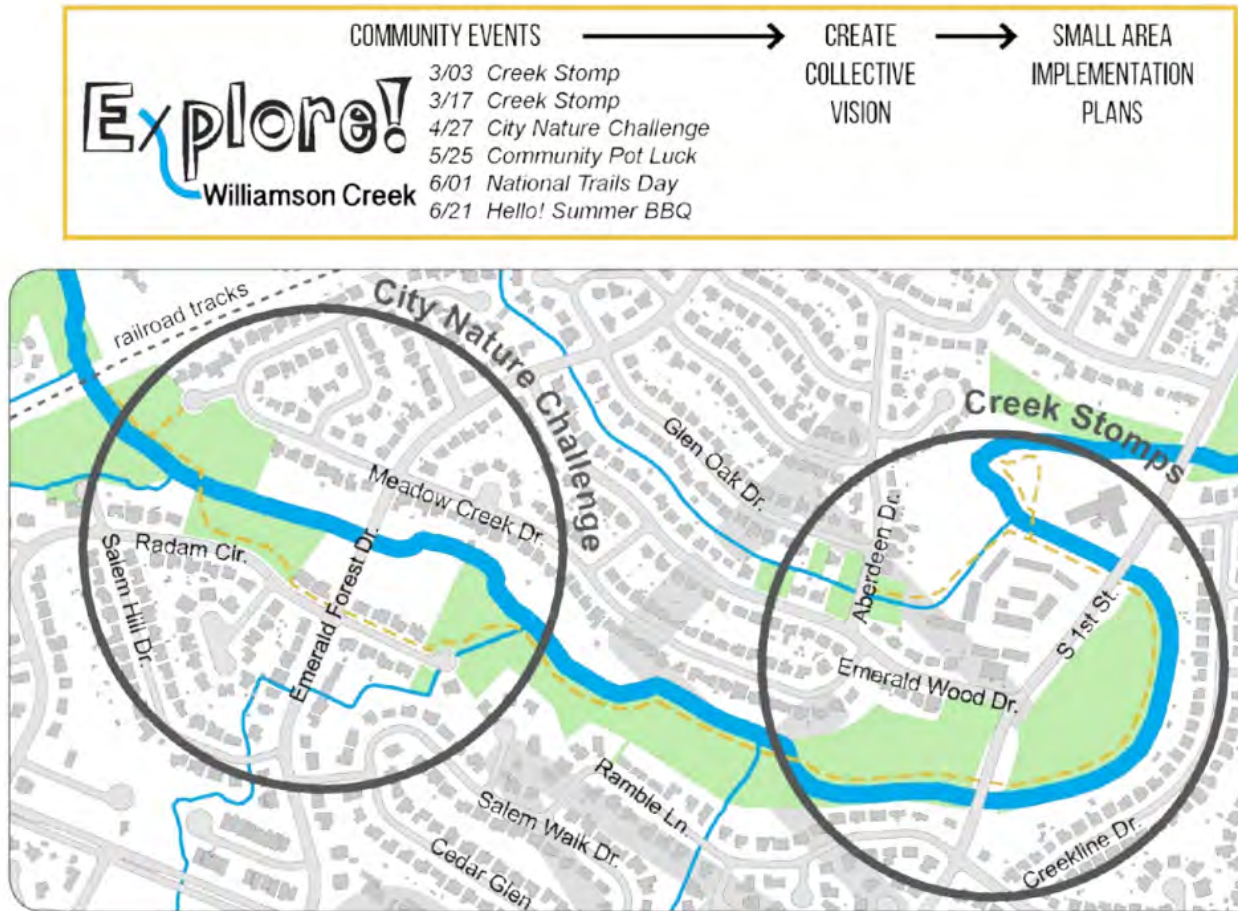
- The area is most commonly used for plant and wildlife observation.
- 63% of those surveyed use buyout areas for recreation.

Amenities

- 65% of survey participants are in favor of adding community amenities, volunteering, and management practices that benefit water quality and habitat for pollinators.

Buyout Landscape Management

- Half of those surveyed are in favor of low-growing meadows to provide clear lines of sight.
- A majority of participants are in favor of mowing areas near the front of lots and allowing native vegetation to grow near the back of lots by the creek.



Community Voices

The planning and design of the Central Williamson Creek Greenway emerges out of a close collaboration with community members and builds upon the previous engagement efforts of *Explore! Williamson Creek*. See Chapter 4 for a more detailed overview of the community engagement process for this vision document.

- 1

Challenge 1:
Balance conflicting community desires for maintained vs natural open spaces.
- 2

Challenge 2:
Balance access with people experiencing homelessness.
- 1

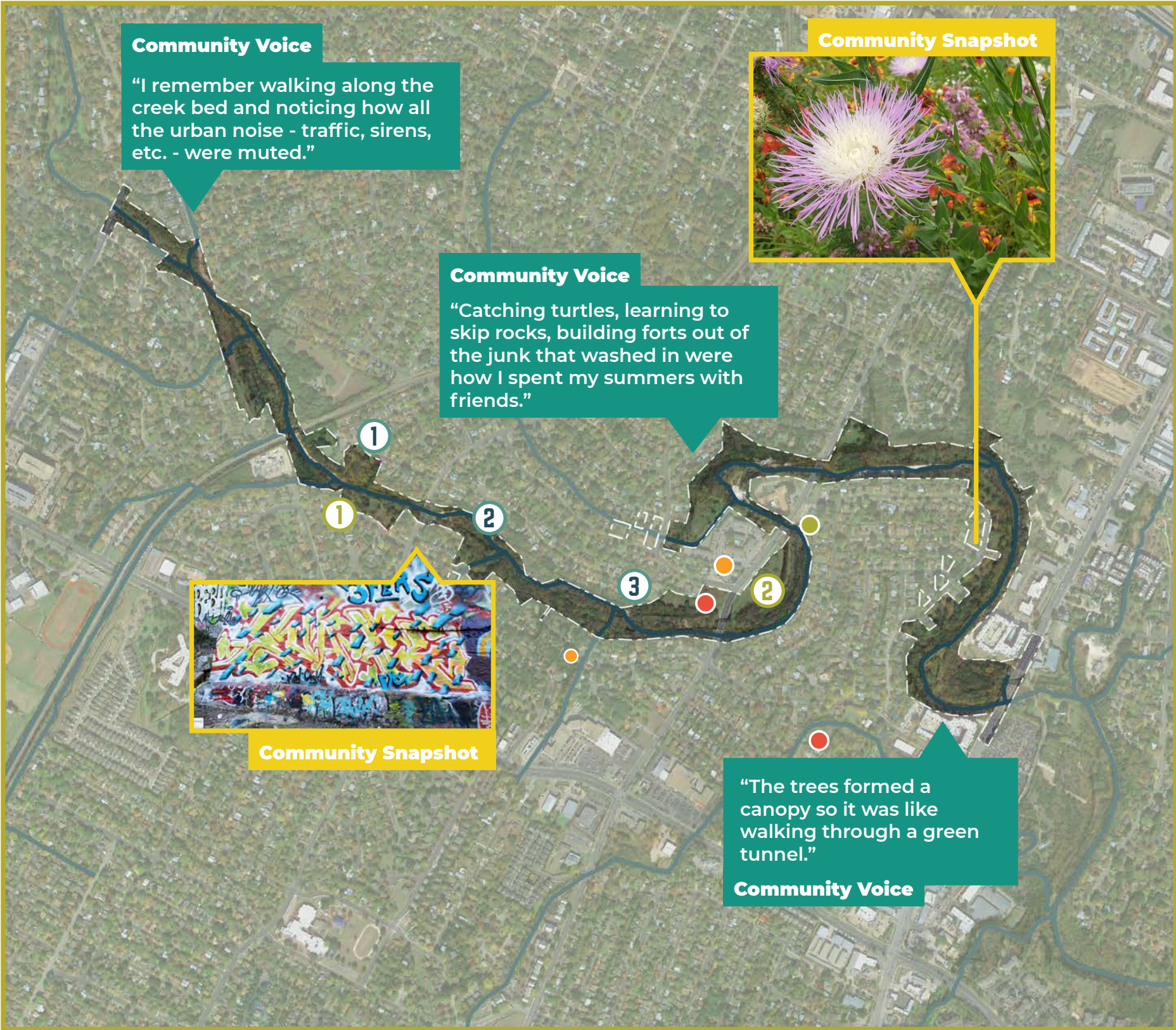
Opportunity 1:
Trailhead and Community Gathering Space
- 2

Opportunity 2:
Continuous trail along Central Williamson Creek.
- 3

Opportunity 3:
Gathering space with community gardens and food forest.

Legend

- Community Garden
- School
- Fresh for Less Site



COMMUNITY



Green Heron
Photo: David Reagan, Flickr

CENTRAL WILLIAMSON CREEK IS A GREEN RIBBON OF BIODIVERSITY THROUGH SOUTH AUSTIN.

LOCAL ECOLOGY

Williamson Creek stretches across the Environmental Protection Agency’s Level 3 Edwards Plateau and Blackland Prairie Ecological Regions. The Edwards Plateau ecoregion is characterized by thin limestone or granite soils and the Blackland Prairie region has thick clay soils. Each of these characteristic soils host different types of native plants, thus the ecotone² between these two ecoregions produce conditions that are very biodiverse.

These open spaces surrounding the creek are rich with biodiversity due to the alluvial sediments and availability of water, which create favorable conditions for a broad diversity of plant and wildlife species. The past few years have seen a community effort to document local biodiversity in Williamson Creek using iNaturalist, a citizen science phone app that identifies and records plant and animal sightings. Both native and invasive plants have been documented along the creek. Citizen scientists have recorded more than 305 nature observations of more than 171 species within the Central Williamson Creek Greenway. While the most observed wildlife species by citizen scientists include common species such as raccoons, woodpeckers, and fox squirrels, many sightings record less common species such as Barred Owl (*Strix varia*), Green Heron (*Butorides virescens*), and American Basketflower (*Centaurea americana*).

2. Ecotone - A region of transition between two biological communities.



Hayhurst's Scallopwing and Buttonbush



The wildflowers along Williamson Creek provide habitat and forage for urban wildlife.



Roseate Skimmer Dragonfly

Vegetation

Vegetation along Williamson Creek and in its floodplain is dominated by large areas of woody vegetation interspersed with intermittently mowed wildflower meadows in buyout parcels owned by the Watershed Protection Department. Patches of fringe wetlands, especially near seeps and springs, are scattered throughout floodplain. Many areas along the creek are dominated by invasive woody and herbaceous vegetation, most notably stands of Glossy Privet, Giant Reed, and Chinese Tallow. Areas dominated by invasive species should become high priority areas for invasive species management per the City of Austin Invasive Species Management Plan published in 2012.

Legend

- Creekbed soils
- Alluvial soils
- Tree Canopy
- Project Boundary

- 1

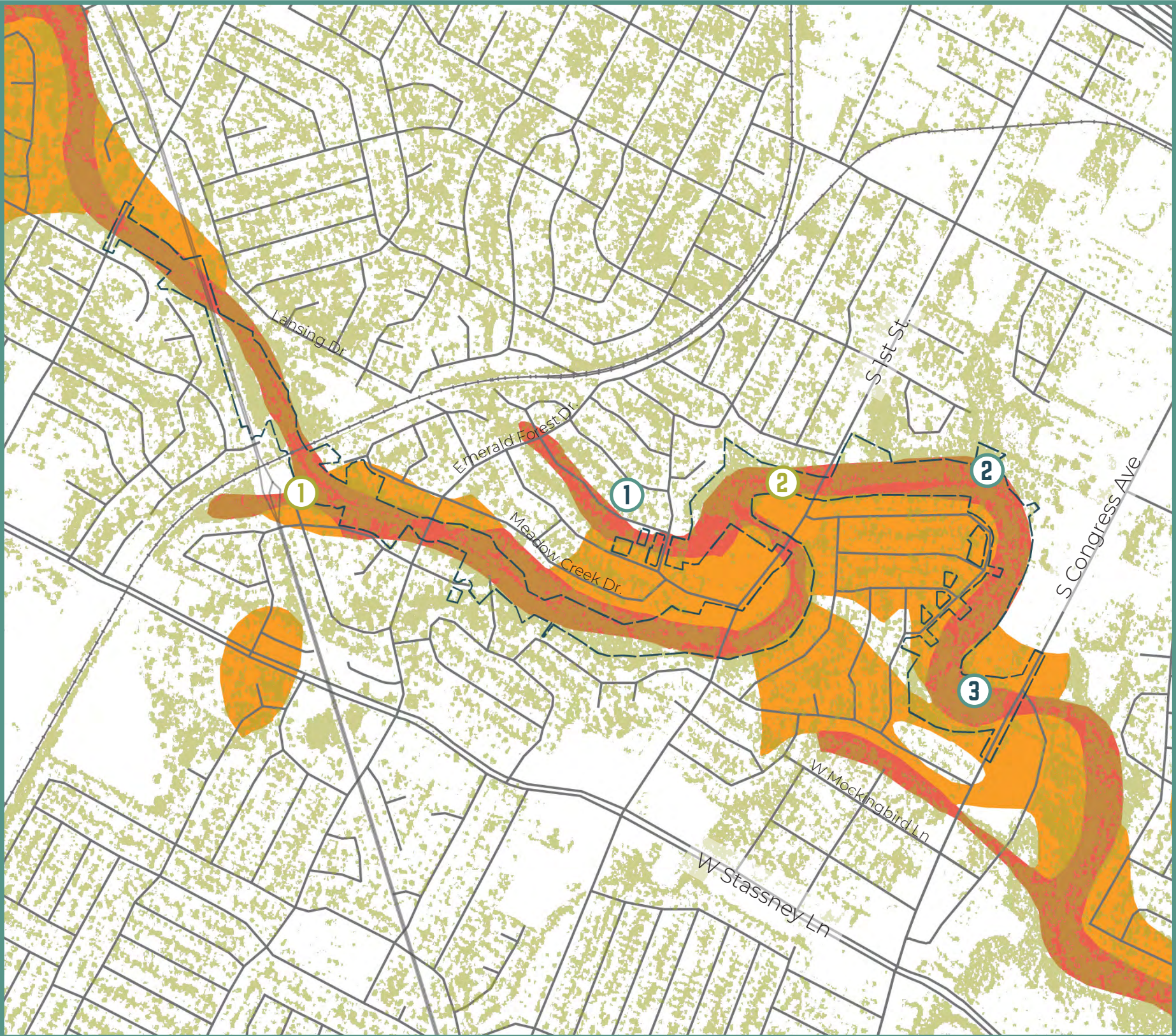
Challenge 1:
Balance sensitive ecology with community access and recreation.
- 2

Challenge 2:
Balance invasive species removal with erosion control.
- 1

Opportunity 1:
Educational wildflower meadow pocket parks at buyout areas.
- 2

Opportunity 2:
Context-sensitive ecological restoration and habitat creation.
- 3

Opportunity 3:
Invasive species management of Ligustrum and invasive grasses.



Data sources: City of Austin, iNaturalist, USGS

TREE CANOPY AND SOILS

iNaturalist

iNaturalist is a popular citizen-science app that allows users to document and share plant and animal observations. These observations are geolocated and provide researchers with valuable information about the spatial distribution and ecology of plant and animal species.

Residents and community members of Williamson Creek have used iNaturalist to document the creek’s biodiversity through both individual initiative and organized community “bio-blitzes.” The map on the right shows the results of these efforts.

Wildlife

The plant and habitat diversity in Williamson Creek allow for a broad range of fish, amphibian, bird, and mammal species to thrive. iNaturalist and previous field surveys conducted by The Nature Conservancy included spiny softshell turtle, green heron, great blue heron, cedar waxwings, and chimney swift sightings. In September 2018, two wildlife cameras were installed in the Central Williamson Creek Greenway with the Austin Wildlife Watch project and Austin park rangers. These cameras documented deer, raccoons, opossums, and coyotes.

Legend

- iNaturalist Wildflower Observation
- iNaturalist Plant Observation
- iNaturalist Wildlife Observation
- Creeks
- Project Boundary



Data sources: City of Austin, iNaturalist, USGS

INATURALIST OBSERVATIONS

Vegetative Inventory

This map was compiled by a series of field surveys completed by The Nature Conservancy intended to document existing vegetation. This inventory will be used to develop a site plan that protects healthy, native vegetation and removes and manages invasive species. In future plan development, patches of native plants and fringe wetlands along the creek may be designated as Vegetation and Soil Protection Zones (VSPZs) as part of the SITES Certification process.

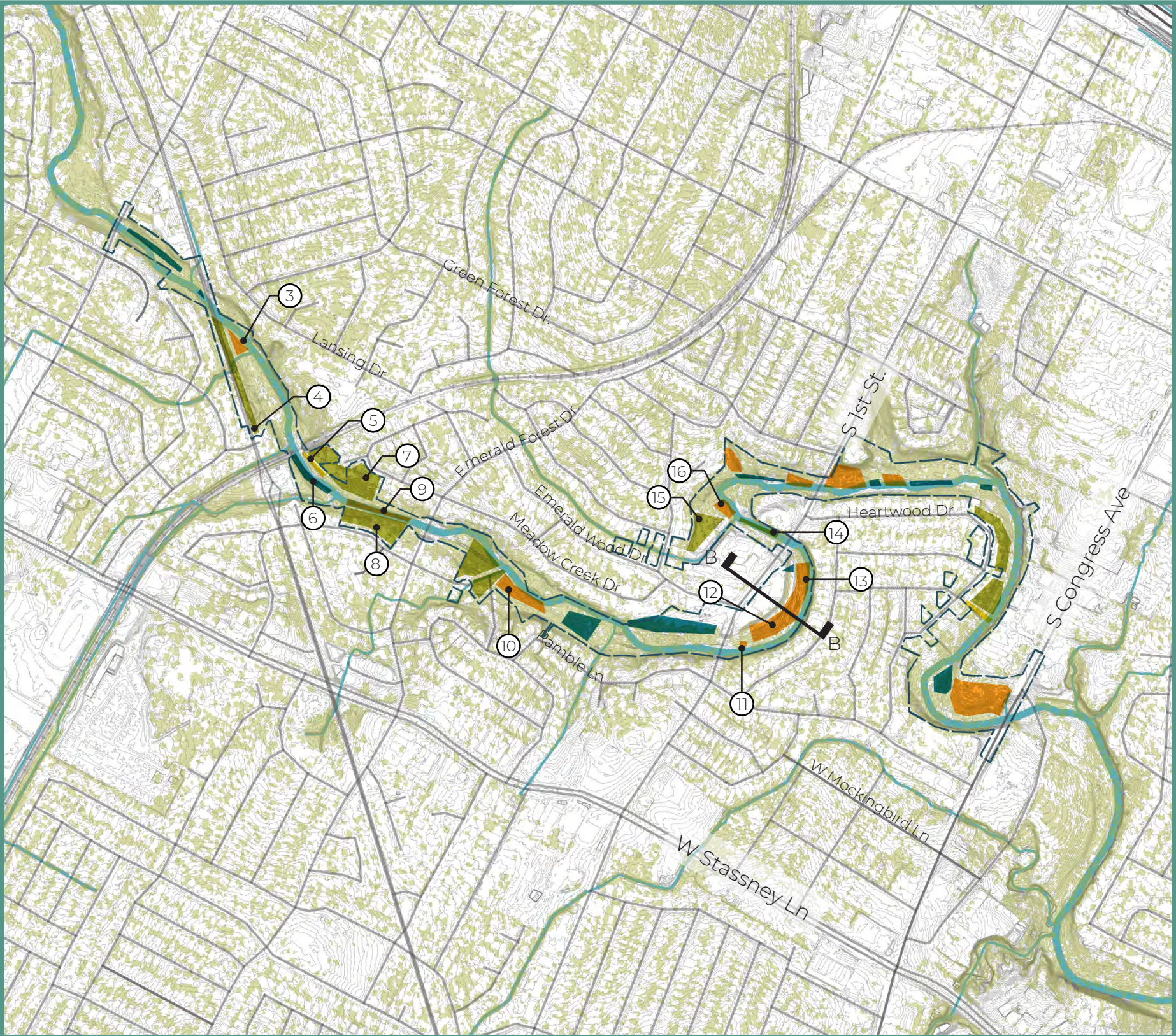


Native wetland fringe along Williamson Creek.

Legend

- Invasive
- Mowed
- Mixed invasive/native
- Native
- Tree Canopy
- Creeks
- Project Boundary

Patch	Description
1	Ash and Hackberry predominate/canopy. Pecans, American Elm, Boxelder dispersed. Some Liliu, Nandina
2	Dense giant ragweed, under power lines
3	Ligustrum, canopy, evidence of some management activities
4	Johnsongrass/Forb, Juvenile Woody (hackberry, cedar elm, pecan) under powerlines
5	Bamboo thicket, some Oaks
6	Dense red oaks along bank
7	Buyout area mowed, large cedar elms, a few pecans, a few live oaks
8	Buyout area mowed, some large DBH trees
9	Ligustrum along bank, some cedar elms
10	Ligustrum, canopy and understory. Towards east, more oaks and cedar elms mixed into canopy
11	Bamboo cluster
12	Grow zone east of trail; ligustrum understory, few cypress and Viburnum near bank. Few large pecans
13	Numerous young cedar elms
14	Yard for apartments, large native trees as partial canopy along bank
15	Detention Pond adjacent Richmond Trib, some forbs/wildflowers
16	Mostly Ligustrum NW of Richmond trib, heritage pecan tree, a few hackberries
	Unnumbered parcels to be classified



Data sources: City of Austin, The Nature Conservancy, USGS

Section B-B' on pp. 24-25

ECOLOGY AND BIODIVERSITY

Common Native Herbaceous Plants

- American Water Willow (*Justica americana*)
- Western Ragweed (*Ambrosia psilostachya**)
- Flame Acanthus (*Anisacanthus quadrifidus* var. *wrightii*)
- Illinois Bundleflower (*Desmanthus illinoensis*)
- Inland Seaoats (*Chasmanthium latifolium*)
- Plains Coreopsis (*Coreopsis tinctoria*)
- Pigeonberry (*Rivina humilis*)
- Purple Threeawn (*Aristida purpurea*)
- Sideoats Grama (*Bouteloua curtipendula* var. *curtipendula*)
- Silver Bluestem (*Bothriochloa laguroides* ssp. *torreyana*)

Common Native Tree Canopy

- American Elm (*Ulmus americana*)
- Ashe Juniper (*Juniperus ashei*)
- Black Willow (*Salix nigra*)
- Box Elder (*Acer negundo*)
- Cedar Elm (*Ulmus crassifolia*)
- Hackberry (*Celtis laevigata*)
- Live Oak (*Quercus fusiformis*)
- Pecan (*Carya illinoensis*)
- Texas Red Oak (*Quercus texana*)

Common Invasive Herbaceous Plants

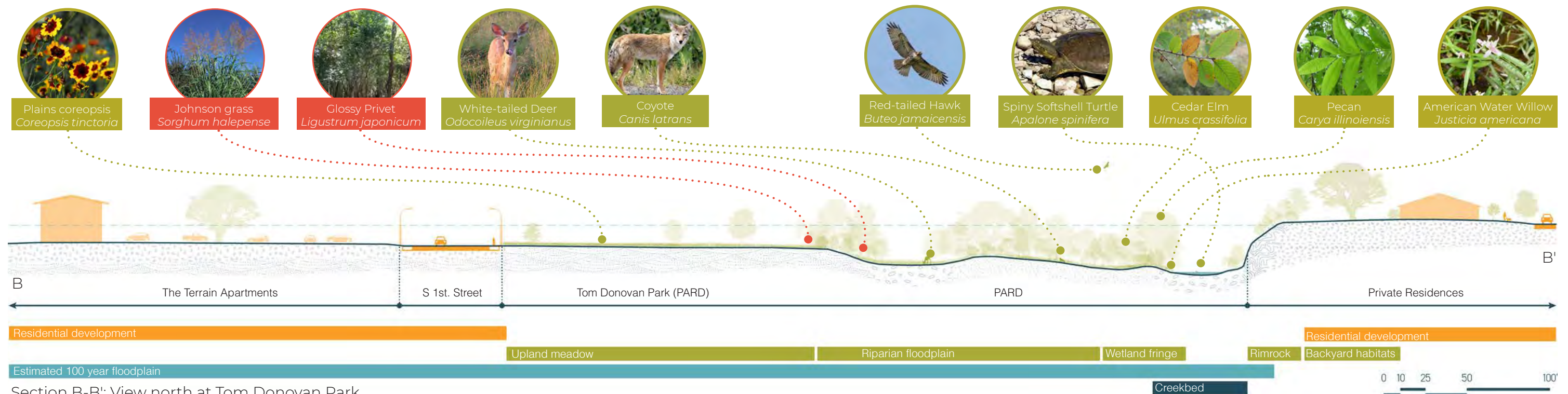
- Bamboo (*Phyllostachys aurea*)
- Barnyardgrass (*Echinochloa crus-galli*)
- Bermuda Grass (*Cynodon dactylon*)
- Garden Cornflower (*Centaurea cyanus*)
- Giant Reed (*Arundo donax*)
- Johnsongrass (*Sorghum halepense*)
- Perennial Ryegrass (*Lolium perenne*)
- Prickly Lettuce (*Lactuca serriola*)
- Rescuegrass (*Bromus catharticus*)
- Silky Bluestem (*Dichanthium sericeum*)
- Tropical Lantana (*Lantana camara*)

Common Invasive Tree Canopy

- Chinaberry (*Melia azedarach*)
- Chinese Privet (*Ligustrum senense*)
- Chinese Tallow (*Sapium sebiferum*)
- Glossy Privet (*Ligustrum japonicum*)
- Nandina/heavenly bamboo (*Nandina domestica*)
- Tree of Heaven (*Ailanthus altissima*)

Note - Invasive species are defined by the National Invasive Species Council as "nonnative (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health." However, even native species may be aggressive and outcompete other species, causing ecological harm.

Native plant species with an * next to their names indicates that these plants are aggressive and may harm biodiversity in the Williamson Creek ecosystem.





CENTRAL WILLIAMSON CREEK IS EASY TO GET TO BY BUS, BIKE, AND ON FOOT.

GREENWAY ACCESS

Neighborhood Access

The neighborhoods along Central Williamson Creek have a robust sidewalk network, creating good pedestrian connectivity for the adjoining neighborhoods. Emerald Forest Drive provides a dedicated bike lane for traveling in the north-south direction, and Stassney Lane provides a bike lane for travelling in the east-west direction. In the future, the CAMPO 2035 plan hopes to augment S. Congress Avenue S. 1st Street, and Menchaca Road to become safe, designated “bike corridors.” In the meantime, the surrounding neighborhood roads of mostly low-traffic residential homes offer a safe alternative to high-traffic thoroughfares like S. Congress Avenue and Menchaca Road. The City of Austin Urban Trail Network is actively working on a plan to develop the abandoned Bergstrom Spur Right-of-Way as an urban trail. The 2014 City of Austin Urban Trails Plan also proposes the creation of additional car-free regional connections via the Williamson Creek Greenway and the Union Pacific right-of-way. Central Williamson Creek is served by the 1, 3, 10, 311, and 801 bus.

Creek Access

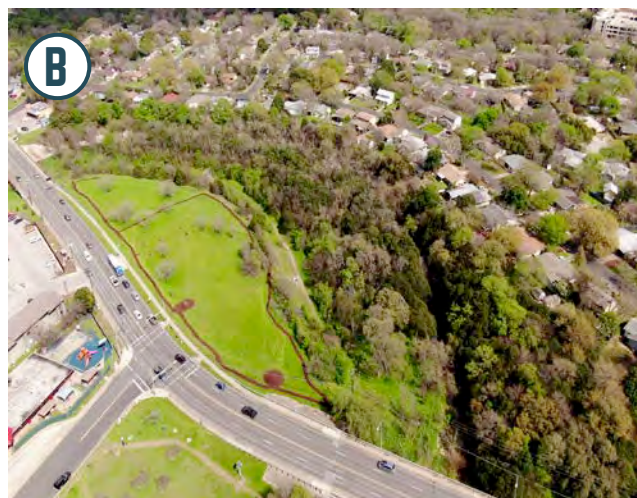
Access to the creek itself can be a challenge. Many informal trails and entrances have been created by community members. However, they occur sporadically through the greenway and do not provide a connected path along the entirety of the Central Williamson Creek Greenway. Access to these informal trails are frequently found at the mowed, grassy buyout parcels and under the bridges where S. 1st Street, S. Congress Avenue, and Menchaca Road cross Williamson Creek.



Creek entrance from the north side of S. Congress Avenue



South 1st Street is a common access point to Williamson Creek.



This major entryway along S. 1st Street is adjacent to a large, grassy park and the Emerald Wood Community Garden.

Legend

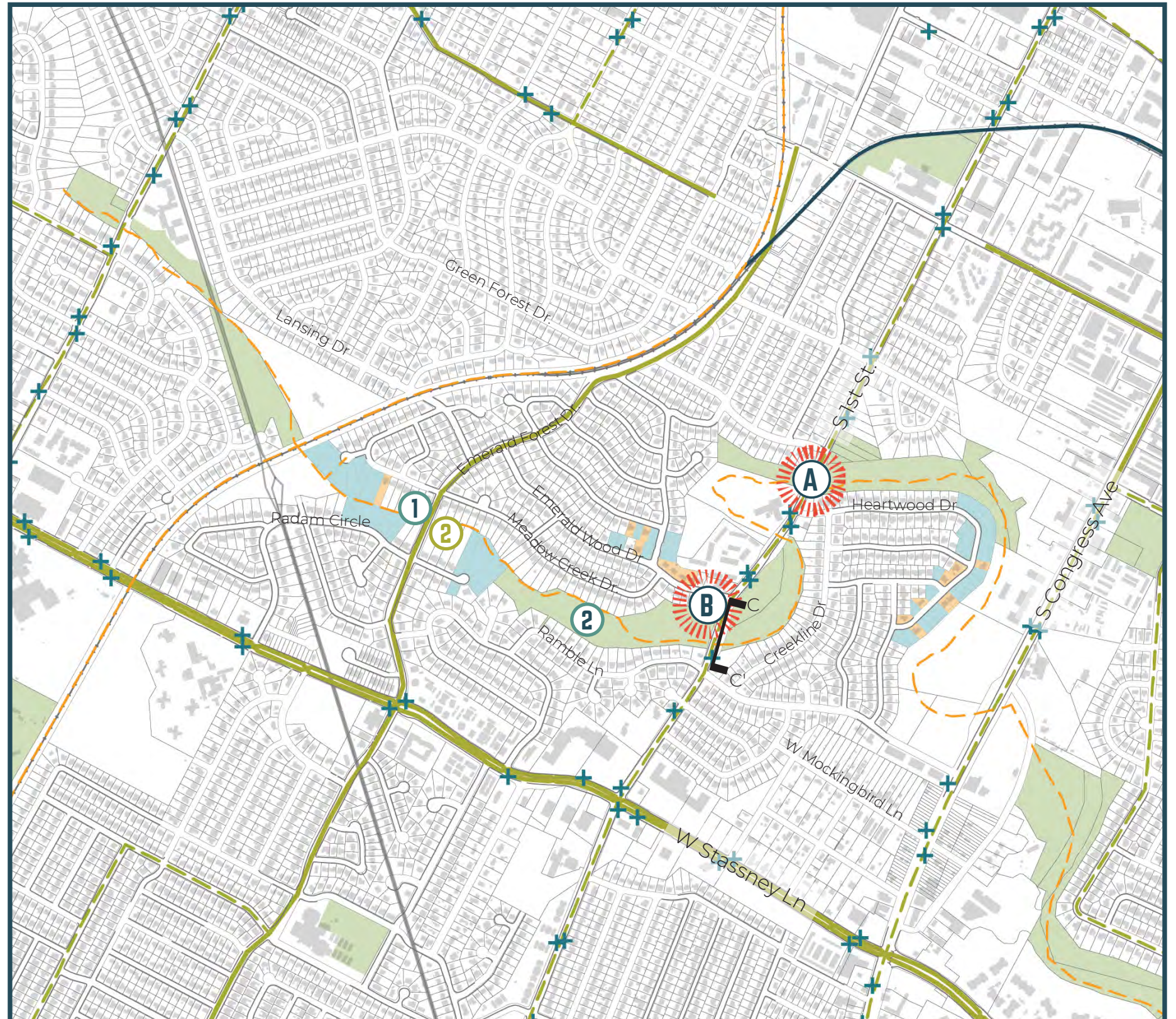
- Community-Identified Access Points
- CMTA Bus Stops
- Bicycle Lanes
- CAMPO 2035 Bicycle Corridors
- COA Urban Trails (2014 Plan)
- Bergstrom Spur (In Progress)
- Sidewalks
- Floodplain Buyout Lots (Owned by Watershed Protection Dept.)
- Floodplain Buyout Lots (Eligible)
- COA Parks (Owned by Parks and Recreation Dept.)

Challenge 1:
Steep slopes at potential access points at major road crossings.

Challenge 2:
Discontinuous publicly owned property along the creek.

Opportunity 1:
Easements along private property to allow access.

Opportunity 2:
Continuous, accessible trail along entirety of Central Williamson Creek.



Data sources: City of Austin, Google

Section C-C' on pp. 34-35

CIRCULATION AND ACCESS

Slope

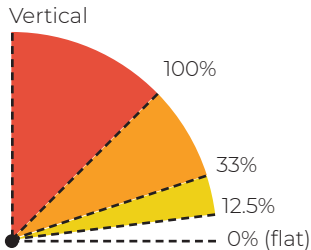
Access to Central Williamson Creek is hindered by the area’s rugged topography. In some areas, the creek’s erosive force has eaten into its banks, exposing steep rock faces dozens of feet tall. Erosion’s effects are less dramatic in other places, but still make it difficult to experience the creek. This map shows the locations of these steep areas, illustrating their relationship to the adjacent street grid and the limitations they place on access to Williamson Creek.



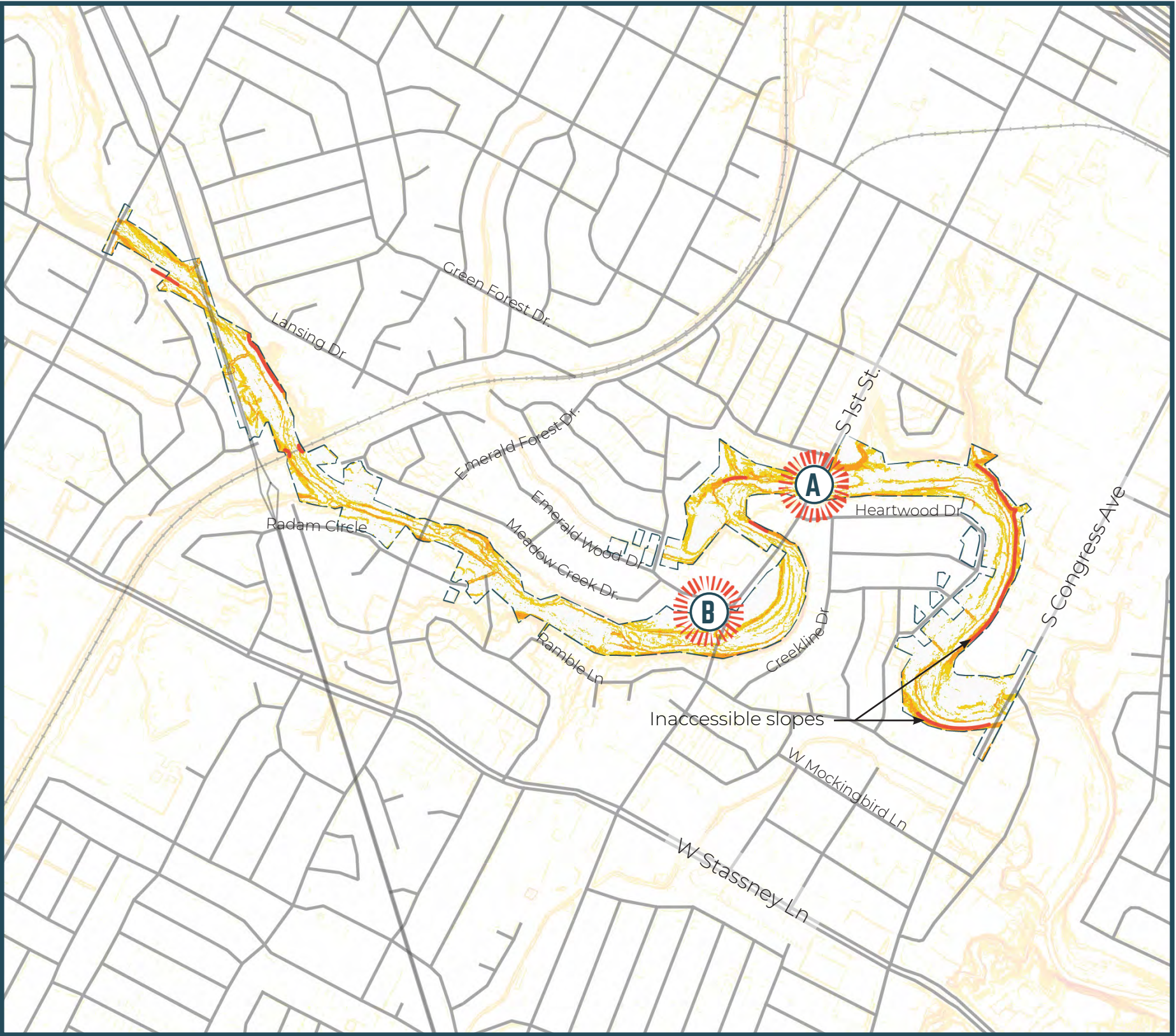
Steep conditions are often due to limestone outcroppings along the creek.

Legend

- Community-Identified Access Points
- Moderate slopes (12.5 - 33.3%)
- Steep slopes (33.3% - 100%)
- Extremely steep slopes (>100%)



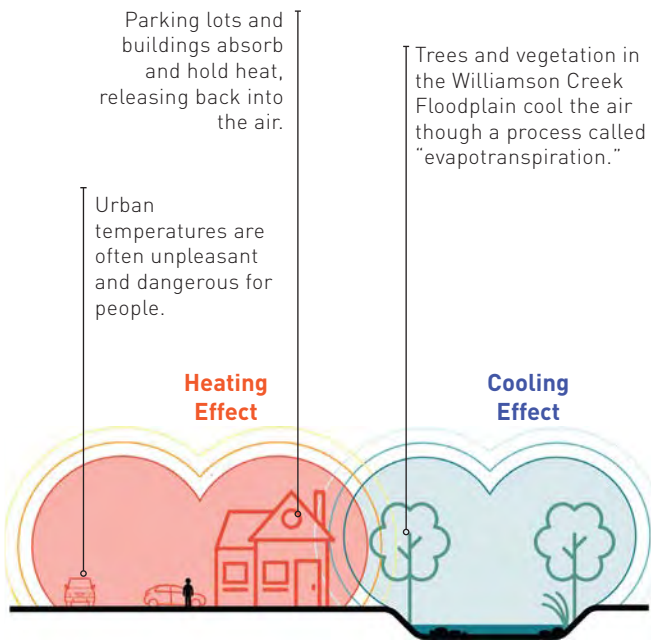
Data sources: City of Austin, Google



SLOPE

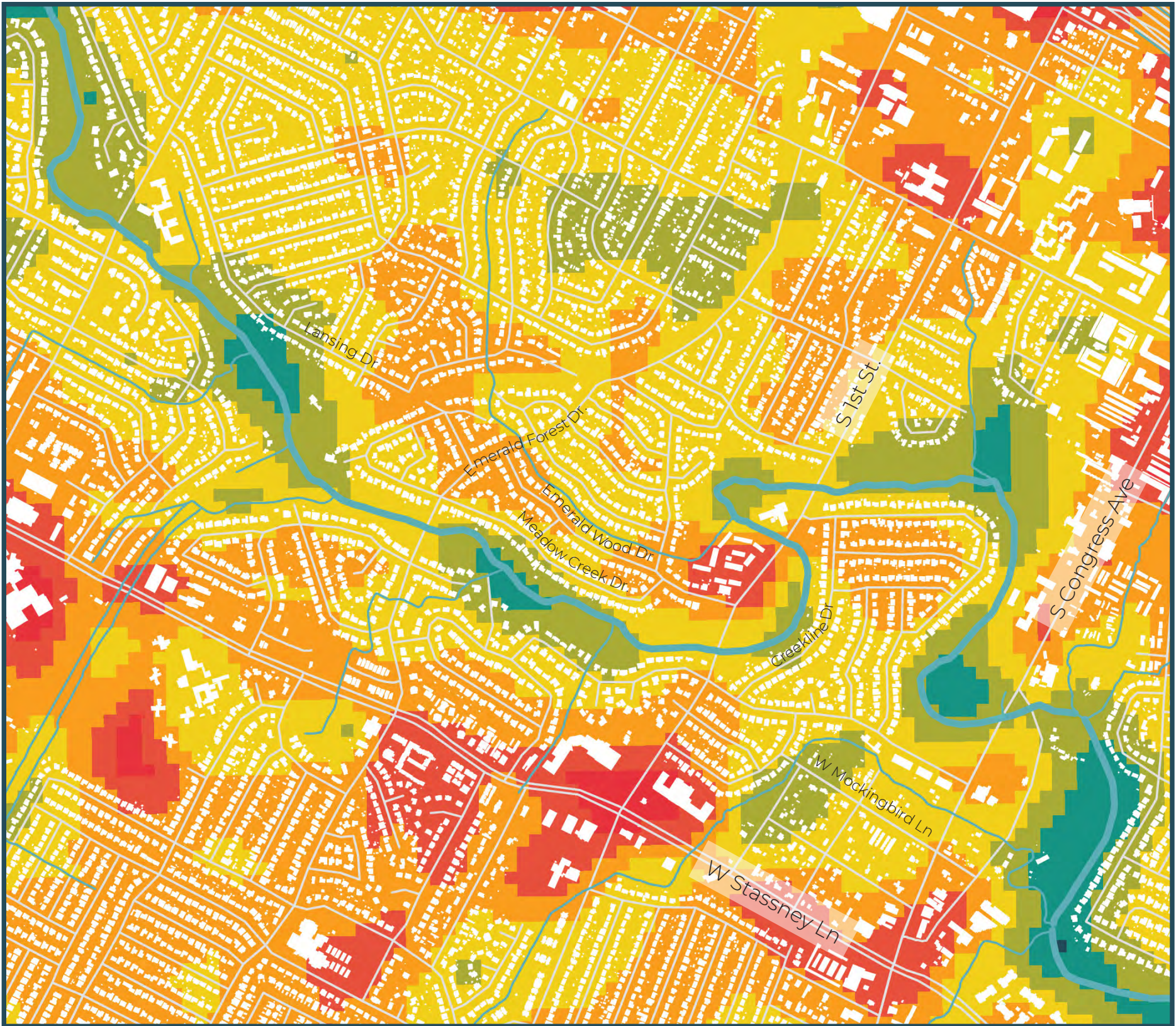
Urban Heat

In the summer and early fall, walking and biking on Austin’s hot streets is uncomfortable and puts at-risk groups including the very young, the elderly, and those with pre-existing conditions at risk for heat-related illness. The trees and vegetation along Central Williamson Creek creates a cool ribbon through a hot city. A future hike and bike trail along the creek would provide a safer and more comfortable transportation or exercise route than paved neighborhood streets and sidewalks.



Legend

- 84°F - 86°F
- 86°F - 88°F
- 88°F - 90°F
- 90°F - 92°F
- 92°F - 94°F
- 94°F - 96°F
- 96°F - 98°F
- Building Footprint
- Roads
- Creeks



Data sources: City of Austin, LANDSAT

URBAN HEAT ISLANDS

Trailheads

While there are currently no formal trailheads providing access to the Central Williamson Creek Greenway, many community members noted accessing the creek at several bridges that cross the creek. The section below illustrates where the creek flows underneath S. 1st Street bridge. This area presents an opportunity to provide more formalized access to the creek in the future.

Previous Planning Efforts

Austin Urban Trails Plan (2014): This plan identifies an opportunity for a trail along the Williamson Creek for three miles from Onion Creek to South Menchaca Road. It rates this trail as a Tier II priority, due to its proximity to major employers, public and private schools, access to transit, access to public places, and potential for completing gaps in existing on-street sidewalks or bike facilities.

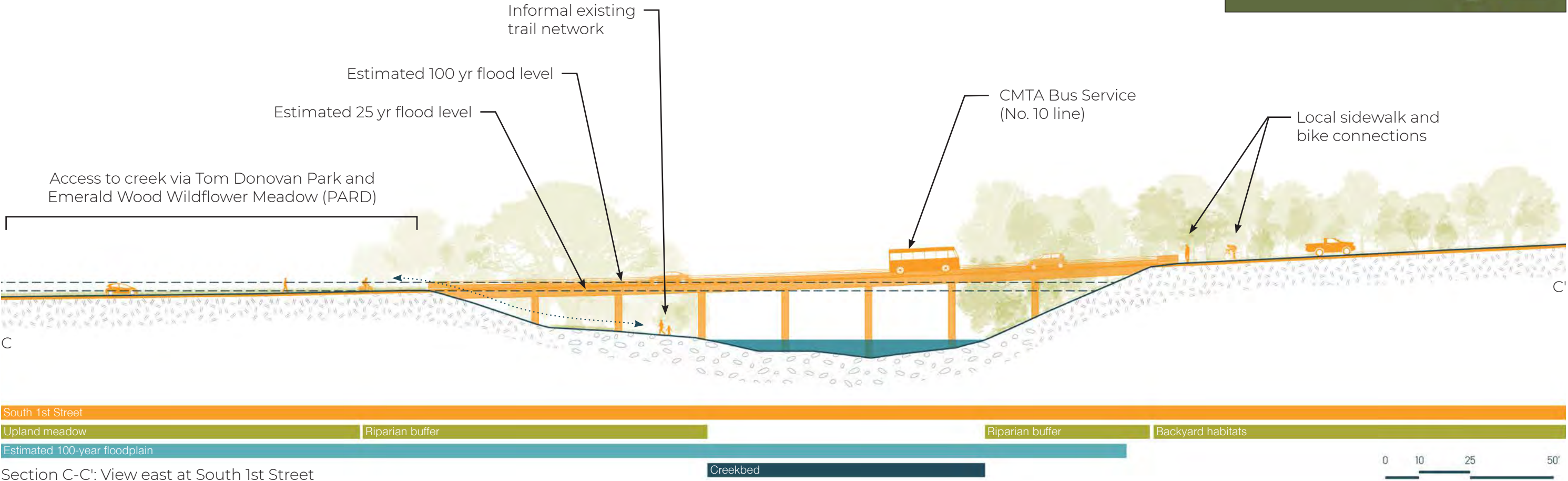
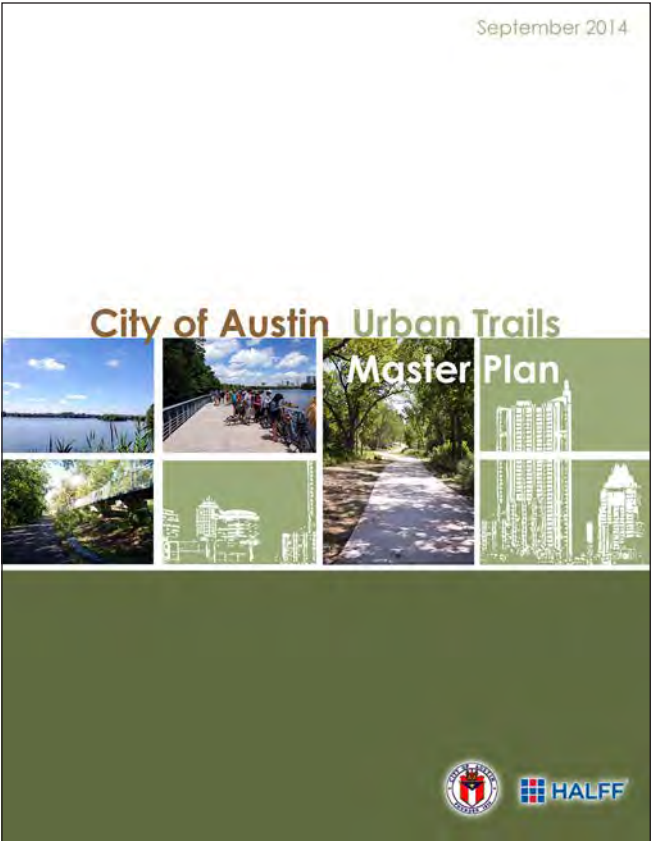




Photo: Austin Parks Foundation

CENTRAL WILLIAMSON CREEK IS TRANSFORMED WHEN IT RAINS.

HYDROLOGY

Williamson Creek Watershed

Beyond the Greenway Vision Plan area, Williamson Creek stretches almost 19 miles across South Austin from its headwaters just west of the intersection of Highway 71 and Covered Bridge Drive to where it empties into Onion Creek just east of I-35 at McKinney Falls State Park. This water then flows from Onion Creek into the Colorado River, where it travels across east Texas and empties into the Matagorda Bay and the Gulf of Mexico. The Williamson Creek Watershed, which contains Williamson Creek and its tributaries, covers 30.25 square miles. Thirty percent of the Watershed's land falls within the Edwards Aquifer Recharge Zone, land that is regulated by development code to ensure the continued function and quality of the Edwards Aquifer, a critical underground water source for central Texas. The Central Williamson Creek area drains 72.5% of the Williamson Creek Watershed (about 22 square miles). About 34% of the Williamson Creek Watershed is covered by impervious surfaces. Land use within the watershed is comprised by 41% single family homes, 9% apartments and condos, and 9% greenbelts. Tree canopy covers 38% of the watershed, and this high number is likely due to high residential land use and greenbelts within the watershed. A high percentage of trees surrounding the greenbelt may help alleviate some flooding.



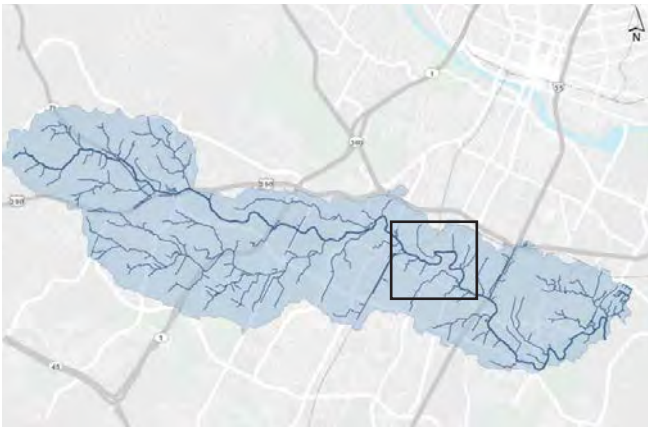
Between rainfalls, Williamson Creek almost completely dries out, leaving occasional standing pools of water.



Many seeps and springs arise from the rocky outcropping that runs along both banks of Williamson Creek.

Flooding

Austin averages about 34 inches of rainfall per year, with May, June, and October being the wettest months of the year. Rainfall tends to come in intense, short storm events that cause flash floods. Severe rain events can cause dramatic changes in the volume of water flowing through Central Williamson Creek, transforming the space from what is mostly a dry, rocky creekbed into a rapid stream of water. While flooding is an important part of the creek system and provides water flows for plant and animal species, these extreme rainfall patterns pose a threat to those living along Williamson Creek. (Continued on next page.)



- Williamson Creek
- Tributary
- Williamson Creek Watershed

Legend

- Buyout Lots
 - Estimated 25-year floodplain
 - Estimated 100-year floodplain
 - Creeks
 - Rimrock
 - Seep/spring
- Wetland
 - Stormwater Outfall
 - Project Boundary
 - Watershed Boundary
 - Buildings
 - Paved Surfaces

- 1

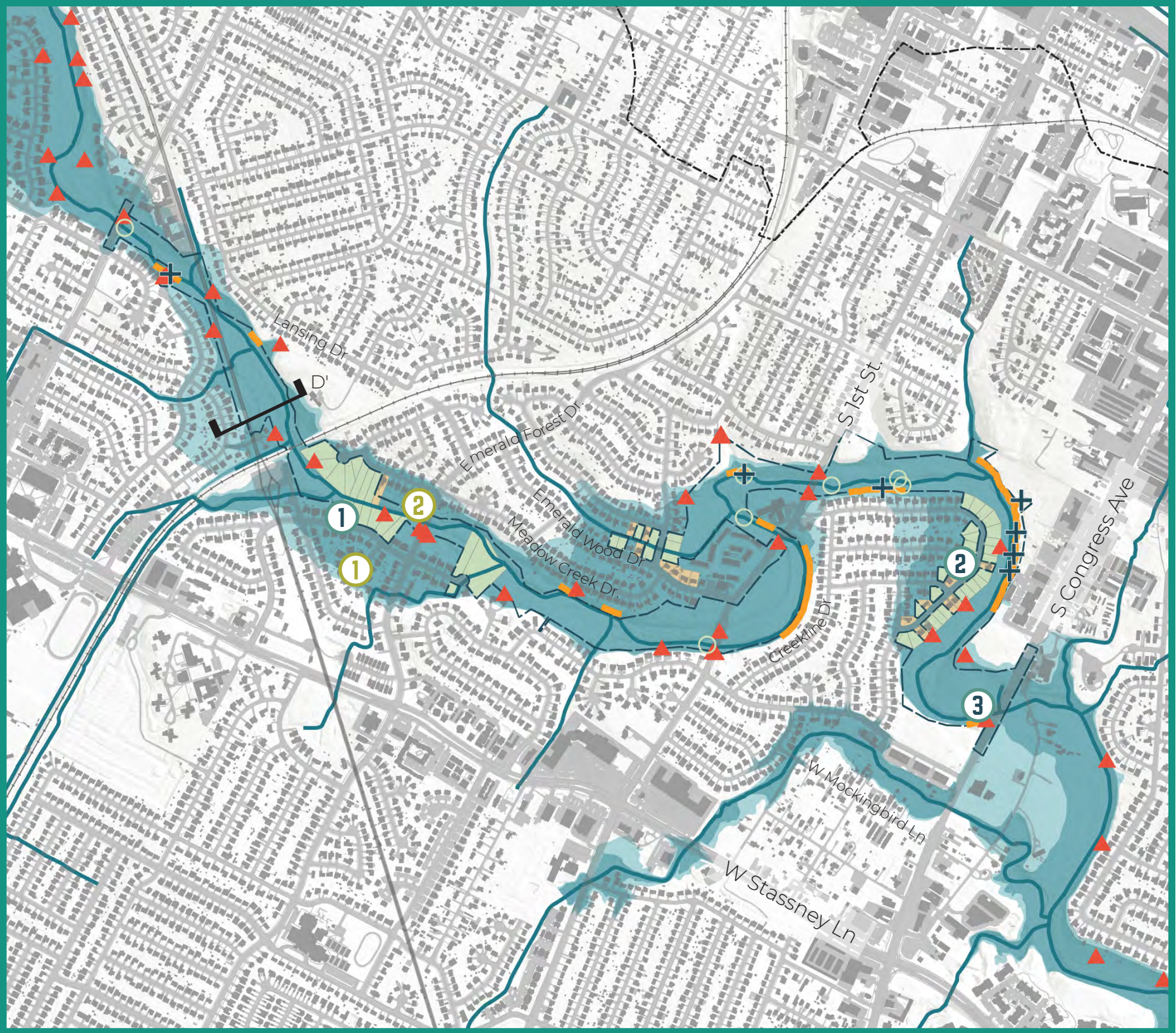
Challenge 1:
Help mitigate flooding of homes.
- 2

Challenge 2:
Balance trail and amenity placement with destructive flood events.
- 1

Opportunity 1:
Green infrastructure and other floodwater storage opportunities.
- 2

Opportunity 2:
Education around urban flooding and climate change.
- 3

Opportunity 3:
Improve stormwater outfalls to better conserve creek water quality.



Data sources: City of Austin, FEMA, USGS

HYDROLOGY

This flood risk is exacerbated by climate change and land development in the Williamson Creek watershed, making Central Williamson Creek a highly flood-prone area. Major floods in 1998, 2001, 2013, and 2015 prompted a buyout program that has seen 51 properties purchased by the City, demolished, and converted into open space owned by the Watershed Protection Department. This Williamson Creek Flood Risk Reduction program helps to mitigate the risk of damage to property by removing houses that have experienced repeated flooding out of the floodplain and maintaining these areas as floodable open spaces.

Water Quality

The 2017 Watershed Protection Department Integrity Index report found that the Watershed has a very good overall condition for aquatic life, water quality, contact and non-contact recreation, and habitat and sediment quality. However, there are many stormwater outfalls that empty into Williamson Creek, bringing stormwater runoff with pollutants from roads, parking lots, and other impervious surfaces into Williamson Creek. These common pollutants may include pesticides, fertilizers, construction debris, used car oil, and trash.

Critical Environmental Features

The City of Austin defines Critical Environmental Features as natural features that protect and enhance water quality. As of June 2020, The Williamson Creek Watershed has twenty-nine known springs and seeps, fifteen rimrock/bluff locations, and 55 wetland sites. These three images of rimrock, a seep, and a wetland were all found along Central Williamson Creek.

Rimrock



Rimrock and bluffs are outcroppings of rock that exceed a 60% slope, have a 5 foot rise, and a 40 foot length.

Seep

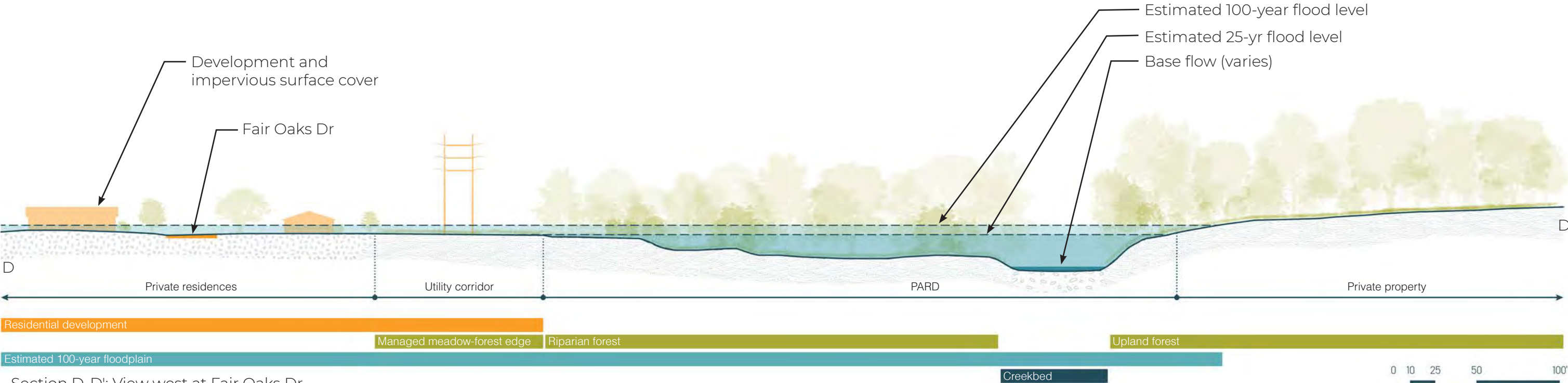


Springs and seeps are locations where ground water reaches the surface and begins to flow overland.

Wetland



Wetlands along Williamson Creek are identified by the type of vegetation found within them.





6: IMPLEMENTATION

IMPLEMENTATION STREAM

The Vision Plan encompasses three tiers of project effort and feasibility. Some ideas can have different levels of effort, and therefore may appear in more than one tier. All ideas, once implemented, will have perpetual maintenance requirements following their completion. The “Tiers” are as follows:

Tier 1:

Community-and non-profit-led efforts that are relatively low-cost and easy to install without technical equipment, machinery, or skills.

Tier 2:

Projects led by a city department, most likely the Parks and Recreation Department or Watershed Protection Department, with community volunteer and engagement opportunities.

Tier 3:

Large-scale city-led projects that may be implemented in the long-term by city staff or contractors.

Maintenance

All projects, no matter the size, will require maintenance for ensured community and environmental health and safety. Similar to implementation, these have levels of engagement and operations. As City-owned public land, community-led efforts must be approved by the property owner.

Tier 1 Projects

Community -led collaborations with City of Austin landowners Watershed Protection, and the Parks and Recreation Department. They can involve work and support with non-profits such as Austin Parks Foundation and Keep Austin Beautiful. All projects must have prior approval by City of Austin property owners.

Toolkit Items Include:

- Nature Trails
- Creek and Woodland Restoration
- Fitness Programming
- Food Forest
- Community Gardens
- Mountain Bike Trails
- Invasive Species Removal
- Labyrinth
- Music Grove
- Seating
- Pollinator Nesting Boxes

Maintenance Considerations:

For Tier 1 community and city-partnered projects, a maintenance agreement must be developed and approved by the City of Austin.

Tier 2 Projects

These are City of Austin landowner projects of \$50,000 dollars or less. They are part of the missions and plans of WPD or PARD, but require advocacy from the community. The community may also be involved for portions of these projects such as planting days.

Toolkit Items Include:

- Nature Play
- Green Infrastructure
- Wildflower Meadows
- Community Message Board
- Bonded Wood Mulch Trail
- BYO Hammock Grove

Maintenance Considerations:

Tier 2 projects should be maintained per City code and operations; however, the City may partner with non-profits and community groups to perform maintenance.

Tier 3 Projects

Projects that require long-term study and funding by City of Austin landowners that will total more than \$50,000 dollars and require major construction. Funds and grants may be raised on behalf of the community to implement these projects.. They will have required community engagement on their further development and route to implementation.

Toolkit Items Include:

- Land Acquisition and Easements
- On-street Bicycle Lanes
- Sidewalk-Shared Use Path
- Green Infrastructure (Large Scale)

Maintenance Considerations:

Tier 2 projects should be maintained per City code and operations; however, the City may partner with non-profits and community groups to perform maintenance.

IMPLEMENTATION STREAM

OPINION OF PROBABLE COST BY AREA

AREA 1

TIER 1 - 15,000-30,000*

TIER 2 - 206,000

TIER 3 - 320,000

AREA 2

TIER 1 - 15,000-30,000*

TIER 2 - 175,000

AREA 3

TIER 1 - 15,000-42,000*

TIER 2 - 150,000

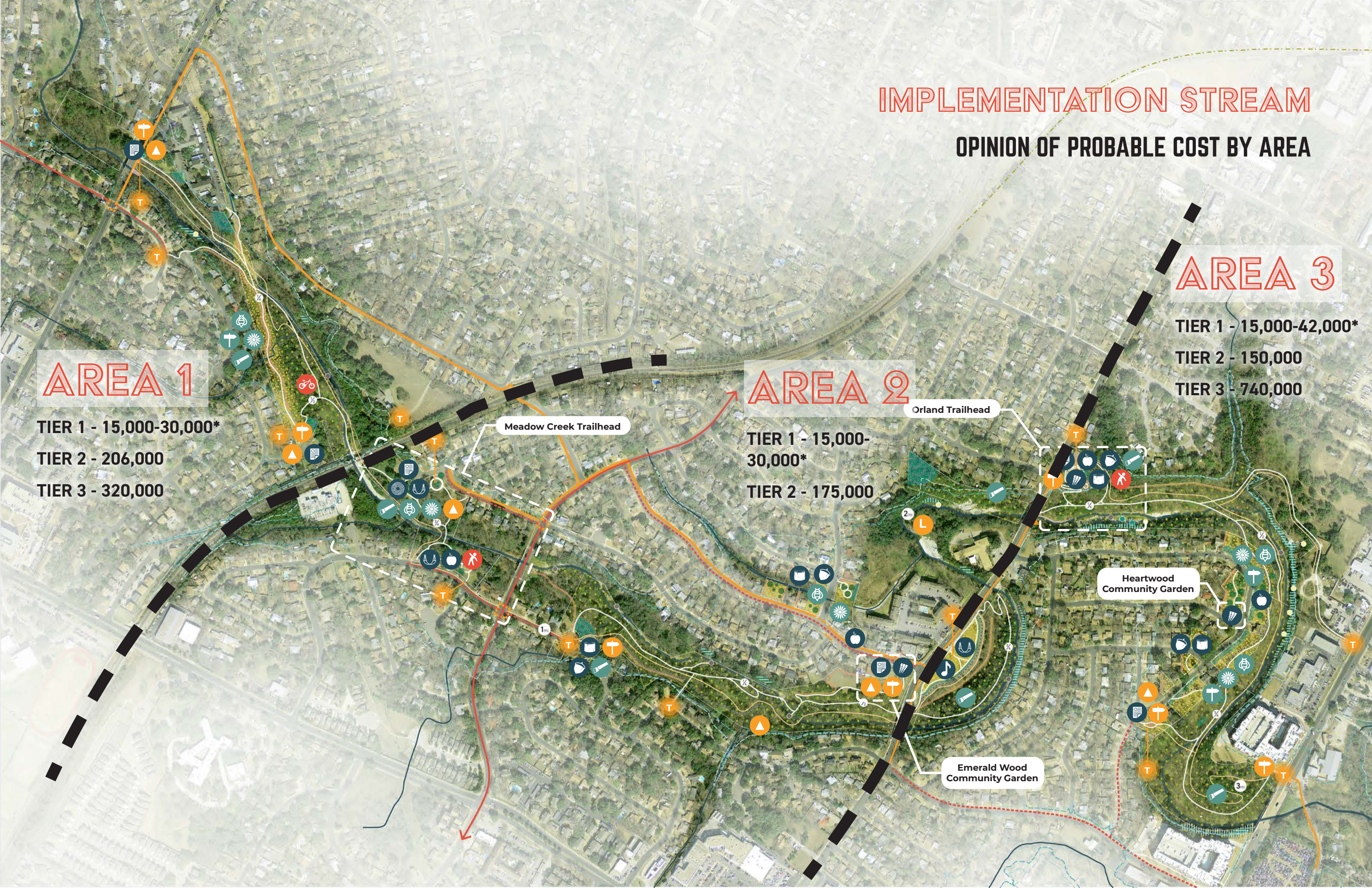
TIER 3 - 740,000

Meadow Creek Trailhead

Orland Trailhead

Heartwood Community Garden

Emerald Wood Community Garden



ONGOING CITY OF AUSTIN PROJECTS

There are several projects in an array of planning and implementation stages adjacent to the Central Williamson Creek Greenway.

Floodplain Buyout Improvements

The Watershed Protection Department has several projects underway to improve floodplain buyout lots. Such improvements include using split-rail fences to denote property boundaries, and removal of driveway concrete and debris. Buyouts are likely to continue, so additional land may be acquired and require community input on their maintenance and public use.

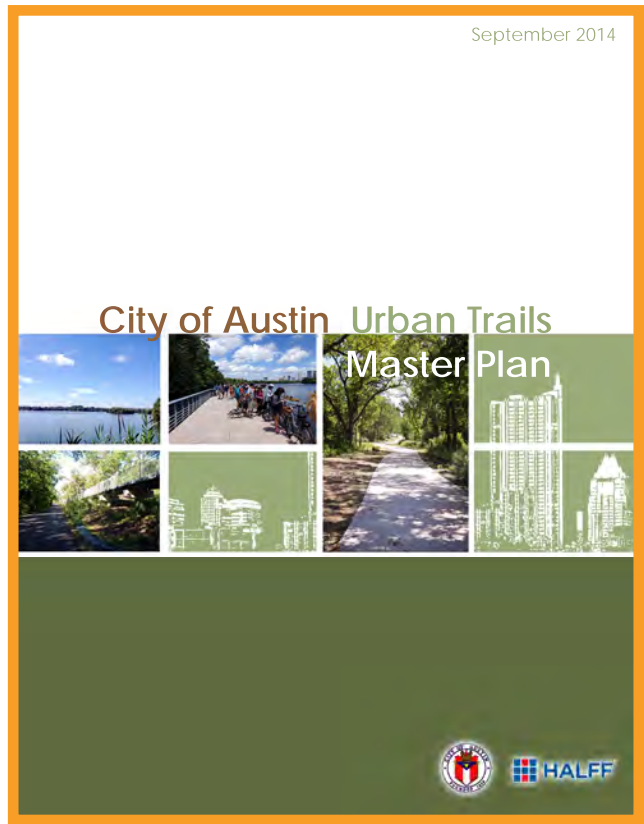
2014 Urban Trails Plan

The 2014 Urban Trails Plan identified Williamson Creek as a location for a Tier II trail. The proposed trail is a 12-foot wide concrete trail. As part of this update, the prioritization of trails may change, based on a variety of factors including equity, constructability, and community input

During the community engagement process for Central Williamson Creek Greenway, community members expressed a strong desire for trails within the greenway to be natural trails. This was stated in community meetings and shown in the Creek Ideas Card voting. As such, the Central Williamson Creek Greenway Vision Plan shows primarily nature trails and mountain bike trails with small accessible loops at trailheads. For street biking and connectivity, the Vision Plan proposes a ‘High Water Route’-- a series of bike lanes and shared-

use paths out of the floodplain that would connect to existing and planned bicycle and sidewalk networks. This would increase connectivity to an Urban Urban Trail if it moves forward.

The next phase for a trail would be for the City of Austin to commission a Preliminary Engineering Report from a team of consultant licensed engineers and landscape architects. This phase also requires community engagement. The Vision Plan recommends that the Central Williamson Creek Greenway community leaders and community working group are included as stakeholders in this process.



Middle Williamson Creek Flood Risk Reduction - Engineering Feasibility Study Phase 2

Middle Williamson Creek Flood Risk Reduction -Engineering Feasibility Study Phase 2 The study reviews methods to reduce flood risk over an area of Williamson Creek between West Gate Blvd and Congress Avenue. Some options requiring construction include: flood walls, which would consist of wall segments protecting specific areas from flooding; channel modifications, which would require excavation at some locations along the creek in order to increase the flow capacity; construction of detention ponds; or a diversion, which would allow water spilling out of the creek to be diverted through underground pipes in order to bypass areas at risk of flooding. The above options are being considered individually or as a combination. Another option considered is voluntary buyouts of homes at risk of flooding. Each of the options is being evaluated for flood reduction effectiveness, cost, as well as environmental impacts. Social impacts will also be evaluated once community engagement is conducted, after the draft feasibility report is available. This community engagement is expected to take place in the second half of 2021. For more information, please visit: <https://www.austintexas.gov/department/williamson-creek-flood-risk-reduction>

Wastewater Interceptor

Austin Water is working on a project to install a new gravity wastewater tunnel along and near Williamson Creek, from S 1st Street to S Pleasant Valley Road. The existing wastewater pipeline in Williamson Creek is reaching the end of its useful life and is projected to be nearing its capacity as growth continues in the area. Most of the old pipeline will be removed or properly abandoned once the new tunnel is in place. All proposed pipelines will be underground, although visible construction activity will occur to install the new tunnel and its connections. The project is currently in design, and is expected to begin construction in 2023. Additional community engagement is planned to begin in late 2021. For more information, please visit the City of Austin project website: <https://www.austintexas.gov/department/williamson-creek-wastewater-interceptor>

SUSTAINABLE SITES - A FRAMEWORK AND CERTIFICATION FOR SUSTAINABLE AND RESILIENT PROJECTS



The United States Green Building Council has a rating system and certification program called Sustainable SITES Initiative (SITES). SITES is a comprehensive land design and development rating system that is being used by both private and public sectors all around the world.

The purpose of SITES is to certify that a built landscape, such as Central Williamson Creek Greenway, meets measurable goals for sustainability and the environment. The certification is challenging to obtain, and has gained a reputation for innovation and forward-thinking sustainable design.

City of Austin Parks and Recreation Department advocates for new projects to pursue SITES. While the Central Williamson Creek Greenway Vision Plan is not yet constructed it includes the necessary high levels of sustainable components to realize a SITES certification. Important components to ensuring these criteria are met are included in the Materials Appendix and Planting Appendix.

To learn more about SITES, please review their free 'Client Deck' which describes the benefits of sustainable landscapes and how the rating system works : <https://kapost-files-prod.s3.amazonaws.com/uploads/asset/file/58efafd9acb75c0094000418/sites-client-deck.pptx>



IMPLEMENTATION BY IDEA

IDEA	 Pollinator Nesting Boxes	 Invasive Species Management
TIER 1	<p>Many plans for these boxes can be found online. Nest boxes consist of a house with a roof and an infill of material such as bamboo and twigs. The house, roof and post must be wood, sourced from a non-threatened tree species. For more information on materials, refer to the materials appendix. The infill may be constructed from materials found on the greenway- in particular from material salvaged from the invasive species removal efforts.</p> <p>http://www.xerces.org/sites/default/files/2018-05/12-015_02_XercesSoc_Nests-for-Native-Bees-fact-sheet_web.pdf</p>	<p>Invasive species removal at the Tier 1 level includes community volunteers leading a Watershed Protection or PARD approved clean-up day, that can also be supported by local non-profits such as Keep Austin Beautiful or the Austin Parks Foundation. Removal will be done by hand only and can include pulling herbaceous noxious weeds such as Johnson Grass, Bermuda Grass, using weed wrenches to remove mid-sized shrubs such as Nandina and tree girdling to remove Ligustrum spp. No herbicides or motorized mechanical equipment may be used as part of this effort.</p>
TIER 2		<p>Projects at the Tier 2 level are led by the Watershed Protection Department (WPD) or the Parks and Recreation Department (PARD) but can include community volunteers as well as non-profit organizations that contract with WPD or PARD such as The Other Ones Foundation and Texas Conservation Corps. Projects can also include machine removal of invasive trees.</p>
TIER 3		<p>Projects in this Tier will be a component of a large -scale project that is greater than \$50,000 in value. Projects will be responsible for removing any invasive material within their limit of construction.</p>
MAINTENANCE	<p>In order to keep nest boxes safe for pollinators , the infill materials-- sticks, bamboo etc-- must be replaced once a year during the winter between late January to early February. Old infill may be scattered away from the nest box to decompose. Also, box keepers should watch for any infestations and spider webs to ensure bees are safe from predators.</p>	<p>Invasive Species removal sites require continued maintenance. Often the soil has a continued seed bank of invasive species that will emerge following the removal of established plants. Quarterly inspections and seedling removals are recommended to ensure that sites are not recolonized. Addionatly, native seeds and plugs should be installed at removal areas.</p>

IDEA	 Signage	 Labyrinth
TIER 1	<p>Informal trail markers such as cairns may be implemented to mark distances and direction along trail.</p>	<p>A labyrnith may be a community -led project with City approval on all aspects of the design. Labyrinths may be constructed of rock berms from native stone quarried within a 100-mile radius of the site. Configuration of a labyrinth should allow water to drain. Stone berms should not be greater than 18-inches in height. The paths formed by the rock berms would receive shredded wood mulch.</p>
TIER 2	<p>Signage in this tier includes weather warnings, community message boards, educational information, interpretive signs, and trail distance markers. These signs can be up to 6ft in height and must follow the materials guidelines outline in Appendix X.</p>	
TIER 3	<p>This scale of signage will include monument signs and park rules. These signs require a third-party professional fabrication and are often included as a component of a larger project.</p>	<p>While a labyrinth could be designed and constructed as part of a larger project, the Vision Plan recommends community input and engagement. The labyrinth was conceived of as a mindful way to bring community members together.</p>
MAINTENANCE	<p>Signs should be made of durable material that will withstand exposure to elements such as cut metal and stone. Detailed educational signage with images should be placed in the shade to reduce fading over time. Maintenance should be performed on signs once a year to remove dirt and graffiti.</p>	<p>Typical maintenance will include a yearly inspection of the Labrynth. Tier 1 Labyrinths will require weed removal and should also be inspected after a flood event. Any shifted material should be restored to its original condition. Wood mulch paths should be refreshed anually or after flooding.</p>

IMPLEMENTATION BY IDEA, CONT.

IDEA	 Creek + Woodland Restoration	 Nature Trail
TIER 1	At the Tier 1 level, community members and non-profits may partner with City approval to plant native trees, perennials and grasses to improve the environment. A list of potential species, as well as additional resources, are provided in Appendix A Plant Species.	Nature Trails may be installed with City of Austin approval by community members or community members in partnership with non-profits such as Keep Austin Beautiful and Austin Parks Foundation. Nature Trails should consist of a 6-foot-wide pathway. The pathway material should be single grind hardwood mulch that does not contain invasive seeds.
TIER 2	Tier 2 restorations may involve small-scale site grading, planting and temporary irrigation. These projects will be conducted in part by the City of Austin and may also involve non-profits and community volunteers for some aspects of the work.	Projects in the Tier 2 category could be a typical nature trail, but with City of Austin supported installation. Also, Tier 2 includes projects where technical review and skills are required to install nature trails, such as traversing steep slopes. In these cases, City of Austin property owners may work within their department or contract with local trail building non-profits such as the Texas Conservation Corps.
TIER 3	Tier 3 projects involve large-scale improvements to the environment and creek. The projects may include repairing eroded banks, hydrologic engineering and changes to the creek, soil analysis and improvement and ecological restoration of wetlands and riparian areas.	
MAINTENANCE	Quarterly monitoring, weeding, and invasive species removal are recommended for project sites at all scales. Supplemental water until plants are established are recommended where feasible.	Trails should be maintained per City of Austin standards. Community groups can assist in maintaining trails through cleanup days and replenishing the mulch. After storm events trails should be checked for debris and washout.



IDEA	 Wildflower Planting	 Music Grove
TIER 1	Due to the technical nature of wildflower meadows on public lands-seeding, planting, establishment and maintenance, all wildflower meadows should be implemented by City of Austin property owner. Volunteer participation may be considered by the City of Austin property owner. Neighbors of the greenway are encouraged to establish wildflower meadows at their properties which will contribute to the health of the greenway.	Tier 1 music grove can involve informal seating areas distanced from private property. Natural elements may be used for seating material such as stumps and boulders between 18-24-inches in height.
TIER 2	Wildflower meadows can be established by City of Austin property owners. Establishing a meadow can be a multiyear process. Community members can advocate for meadows.	Tier 2 improvements could enhance music grove areas by providing an accessible route in permeable paving and accessible seating.
TIER 3		
MAINTENANCE	Wildflower meadows must be maintained according to City of Austin requirements to ensure they are functioning correctly. With prior approval from the City of Austin property owner, volunteers may participate in invasive species removal in Wildflower Meadow areas.	Music groves should be maintained biannually to be kept clean and clear.



IMPLEMENTATION BY IDEA, CONT.

IDEA	 Community Message Boards	 Green Infrastructure
TIER 1		Recommended that community members who own property consider cisterns or rain gardens with native plants to treat and slow the water entering the greenway.
TIER 2	Community Message Boards should be constructed of a non-threatened North American hardwood or suitable reclaimed lumber. Design can be initiated by the community but must be reviewed and finalized by the City of Austin property owner.	All green infrastructure projects on City of Austin property should have a review by a civil engineer to ensure they are sized correctly. Small-scale green infrastructure such as raingardens, vegetated swales, rock berms and curb cuts are recommended to allow for run off absorption and treatment prior to entering Williamson Creek. Look for opportunities whenever a projects is mobilized, such as a driveway removal at a floodplain buyout or demolition of existing structure. Add excavation work into these plans and keep access to water for establishment of planting.
TIER 3	If not already implemented, this should be included into trailhead projects that fall into Tier 3.	The greenway has an opportunity for large scale green infrastructure projects. These projects include diverting stormwater outlets into biofiltration or wetland areas along the creek, and creating larger basins at manholes coinciding with flood plain buyouts. These interventions will require designs by licensed civil engineers and landscape architects and should also function as community and environmental amenities with opportunities for recreation and incorporation of native plants.
MAINTENANCE	Recommended that neighborhood organization or community group partner in responsibility with City of Ausitn property owners. Excellent way to share about upcoming community events and organizations.	Green infrastructure elements must be maintained according to City policy listed under the Environmental Criteria Manual.

IDEA	 Community Gardens and Food Forests	 Nature Play
TIER 1	Examples of Food Forest at Tier 1 include expanding existing community gardens wtih Fruit Trees and Food Forest areas. Food forests can also be established, similar to community gardens, by working with City of Austin property owners.	For safety reasons all play elements must be Tier 2 or higher.
TIER 2	At the Tier 2 level, City of Austin property owners could work with non-profits and land managers to establish a series of Food Forests within the Greenway. Community engagement would be recommended to optimize longterm maintenance and care. Where possible, City of Austin may provide a water tap to water Food Forests and Community Gardens.	Tier 2 features include imaginative play elements that do not require safety fall surfacing. Elements may include tree step stones, vine tunnels, and child-sized raised garden beds. These require design, review and approval by City landowners.
TIER 3	Food forests are a recommended part of large-scale improvements. Maintenance groups must be established for successful implementation.	Tier 3 Nature Play elements include a combination of active and imaginative play elements. Any play element requiring a safety surface will fall in this category. Such elements include balance beams, swings, and climbable elements. Community engagement will be required for these designs.
MAINTENANCE	Maintenance can vary depending on size of Food Forest. At a minimum, plan for watering plants through establishment, quarterly weeding and developing a harvest schedule.	Maintenance varies depending on the play type. All play elements should be maintained by City of Austin.

IMPLEMENTATION BY IDEA, CONT.

IDEA	 Bonded Mulch Trail	 Easement or Land Acquisition
TIER 1		At the Tier 1 scale community members could advocate with the City and land owners to establish easements for parkland or acquire additional buyout properties along the greenway. In particular, community groups partnering with private land owners could establish a series of easements that would allow for more continuous trail and park areas through the greenway.
TIER 2		
TIER 3	Bonded wood mulch trails will be fully accessible routes that require grading and design by professional engineer and landscape architect to implement. Installation must be performed by a third-party contractor.	Tier 3 includes land aquisition by the City, such as additional floodplain buyouts. It also includes dedication of park and trail easements for developments adjacent to the greenway.
MAINTENANCE	Bonded mulch trails should be cleaned yearly by spraying a clear coat material to keep the surface well -bound and prevent wear from eroding the surface layer.	

IDEA	 Fitness Programming	 On-Street Bike Lanes
TIER 1	At the Tier 1 level, this could included hiking groups and non-profit programming in existing open spaces such as yoga in the park. Paid activities require permission from the City of Austin	
TIER 2	Projects at this level can include maintaining a mowed area for activity use, small grading projects, elements, such as metal bars for pull ups or limestone block or boulders to use as aids in kinesthetic and body weight exercises.	
TIER 3	This would include commercial-grade activity equipment, such as a hand-cycle or recumbent bike. Equipment of this type must include an accessible route and safety surfacing. Equipment should be located at trailheads out of the floodplain only. Additional community engagement is required for this type of equipment. Smaller elements noted in Tier 2 could also be incorporated into Tier 3 projects.	On-street bike lanes require design and review by Austin Transportation Department (ATD). Community members can advocate for bike lanes by contacting the ATD.
MAINTENANCE		On street bike lanes should be maintained by City of Austin per City standards.

PEOPLE EXPERIENCING HOMELESSNESS

Austin’s parks and open spaces are places where all community members gather to enjoy trails, build social capital, and access Austin’s urban nature. Due to the diversity of groups and interests of Austin residents, it is not surprising that conflict may arise between park users. Conflicts between neighborhoods, park users, and unsheltered individuals living in Austin’s parks has become an ongoing issue in Austin, and Williamson Creek is no exception. In 2019, Austin City Council enacted a set of ordinances that permitted people experiencing homelessness to sit, sleep, lie, and camp in most public spaces. The homelessness crisis was further exacerbated by 2020’s COVID-19 crisis, when the number of unsheltered individuals rose 45% from 2019 to 2020¹.

Across the city, residents and park users have voiced concerns over the symptomatic impacts of Austin’s housing and homelessness crisis, such as the presence of unsheltered individuals in parks, and their associated tents, belongings, and refuse. Through the COVID-19 crisis, responses and land management practices have evolved to the changing situation and need. At the time of writing, camping is not allowed in the properties along the greenway. **This Vision Plan does not propose camping, but seeks to build compassion and community amidst changing conditions by providing information written here.**

Short-term responses to camps may hinder efforts by support services and unsheltered individuals seeking long-term housing solutions. Park relocations can strain city department resources, draining time and money away from parks improvements city-wide. The displacement of people

¹ <https://www.austinecho.org/about-echo/homelessness-in-austin/>

experiencing homelessness from parks in this manner also further entrenches homelessness. After a clean-up, displaced individuals may simply relocate to a new area on public land, making it difficult for organizations that provide support services to locate them to connect them to housing and other resources. When clean-ups dispose of people’s belongings, this further burdens unsheltered individuals. They must then use their limited financial means to purchase or procure more blankets, tents, or supplies needed to survive living outdoors and limits their ability to spend money on food, transportation, and shelter.

Fully addressing the causes of homelessness is a complex and long-term undertaking that is outside the scope of this Vision Plan. In the short-term, taking an empathetic and communicative approach may help ameliorate conflicts.

At Central Williamson Creek Greenway, the following approaches are recommended:

- 1. Prioritize project implementation** in areas along Williamson Creek that will not displace people experiencing homelessness, work with the city to implement projects with participation of unsheltered individuals.
- 2. Post the names and contact information of resources** like The Other Ones Foundation (TOOF) to community message boards. Many unsheltered individuals are not aware of community resources available to help them secure shelter, personal hygiene, food, access to the internet, and other necessities.
- 3. Temporarily employ unsheltered individuals on land improvement projects.** The City of Austin contracts with The Other Ones Foundation (TOOF) on projects like trail-building and invasive species removal. Consider coordinating between the COA

and TOOF on appropriate projects along the greenway, including:

- Creation of Nature Trails
- Creek and Woodland Restoration
- Community Gardens
- Invasive Species Removal
- Pollinator Nesting Boxes
- Signage Installation

Invest in neighborhood public education around unsheltered individuals, emphasizing the following ideas:

- Those experiencing homelessness are part of our community.
- It is possible for anyone to experience homelessness.
- Everyone is welcome to use public parks and open spaces
- Those experiencing homelessness may face life-long issues, such as poverty, mental health concerns, physical ailments, and/or addiction.
- Public complaints may strain park resources.
- Public complaints that result in displacement may hinder long-term efforts to find housing for unsheltered individuals. homelessness.

4. Educate the neighborhood about the newly expanded Integral Care-EMCOT (Expanded Mobile Crisis Outreach Team) a branch of 911 that responds to all mental health-related 911 calls that do not present an imminent threat to public safety without the involvement of city or county police. Neighbors can be directed to request a mental health professional to resolve conflicts rather than police in an effort to stem the potential for police violence against an unsheltered individual and to

better address non-violent crisis with the correct training.

5. Support affordable housing in the community. Connect with organizations like HousingWorks Austin, Austin Housing Coalition, and Reform Austin.

6. Advocate for trash cans and trash removal services to service these communities. Support shelterless individuals in taking a land stewardship approach to the spaces they inhabit by providing the resources to remove trash and refuse from the site as well as through educational programs on local ecology and general stewardship principles.

Austin-Based Resources

The Other Ones Foundation
Provides employment and case management

Ending Community Homelessness Coalition
Plans community-wide strategies to end homelessness

Austin Resource Center for the Homeless
City-owned men’s shelter

Austin Shelter for Women and Children
Emergency shelter for adult women and their dependents

Front Steps
Offers emergency shelter

United Way for Greater Austin
Connects people to a wide range of services

Mobile Loaves and Fishes
Provides food, clothing, hygiene products, and housing



7: AFTERWORD & APPENDICES



AFTERWORD

The Central Williamson Creek Greenway Vision Plan has been created to guide future greenway improvements and to support fundraising efforts for both community-built and City of Austin-built projects by identifying four primary goals envisioned for the future of the Greenway. These goals, along with their corresponding design strategies, were created from both community input and trail, parks, and ecological design best practices.

Upon approval from the City of Austin's Parks and Recreation Board, this plan is to become a planning document of record, reflecting the desires of the Community Working Group, and the general public to create an ecologically sound and inclusive vision for the future of Central Williamson Creek Greenway. With strategic investment and further design, Central Williamson Creek Greenway, already a beloved place for many, has the potential to become a community-wide park to the growing neighborhood and Austin Community.

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Appendix A

RECOMMENDED PLANT LIST

Native Texas plants should always be selected for woodland restoration, wetland restoration, wildflower planting, and green infrastructure along the greenway. The following is a short list of example species. Consult resources the Lady Bird Johnson Wildflower Center, Austin Grow Green Guide, Texas A&M AgriLife Extension Service of Travis County for more information on plant species selection.

	Forbs	Grasses		Shrubs	Trees
Wetland	American Water-willow (<i>Justica americana</i>) Obedient Plant (<i>Physostegia virginiana</i>), Swamp Milkweed (<i>Asclepias incarnata</i>), Spiderwort (<i>Tradescantia</i> spp.), Rosemallow (<i>Hibiscus laevis</i>), Virginia Iris (<i>Iris virginiana</i>)	Bushy Bluestem (<i>Andropogon glomeratus</i>), Cherokee Sedge (<i>Carex cherokeensis</i>), Purple Threeawn (<i>Aristida purpurea</i>)		Buttonbush (<i>Cephalanthus occidentalis</i>), Globe Mallow (<i>Sphaeralcea ambigua</i>)	Black Willow (<i>Salix nigra</i>); Bald Cypress (<i>Taxodium distichum</i>), American Cottonwood (<i>Populus deltoides</i>), American Sycamore (<i>Platinus occidentalis</i>)
Woodland	Turkscap (<i>Malaviscus arboreus</i>), Red Columbine (<i>Aquilegia canadensis</i>), River Fern (<i>Thelypteris kunthii</i>)	Southwestern Bristle Grass (<i>Setaria scheelei</i>), Cherokee Sedge (<i>Carex cherokeensis</i>), Inland Sea Oats (<i>Chasmanthium latifolium</i>)		Virginia Sweetspire (<i>Itea virginica</i>), American Beautyberry (<i>Callicarpa americana</i>), Redbud (<i>Cerces canadensis</i>), Yaupon Holly (<i>Ilex vomitoria</i>), Flame Acanthus (<i>Anisacanthus quadrifidus</i>)	Curly mesquite (<i>Hilaira belangeri</i>), Cedar Elm (<i>Ulmus crassifolia</i>), American elm (<i>Ulmus americana</i>), Pecan (<i>Carya illinoensis</i>), Hackberry (<i>Celtis occidentalis</i>), Box Elder (<i>Acer negundo</i>), Live Oak (<i>Quercus virginiana</i>), Texas Red Oak (<i>Quercus buckleyi</i>)
Wildflower Meadow	Illinois Bundleflower (<i>Desmanthus illinoensis</i>), Bluebonnet (<i>Lupinus texensis</i>), Black-eyed Susan (<i>Rudbeckia hirta</i>), Zexmenia, Gayfeather (<i>Liatris mucronata</i>), Butterflyweed (<i>Asclepias tuberosa</i>), Standing Cyrpress (<i>Ipomopsis rubra</i>), Horsemint (<i>Monarda citiodora</i>), Plains coreopsis (<i>Coreopsis tinctoria</i>)	Purple threeawn (<i>Aristida purpurea</i>), Sideoats grama (<i>Bouteloua curtipendula</i>), Silver bluestem (<i>Bothriochloa saccharoides</i>), Green Sprangletop (<i>Leptochloa dubia</i>),		N/A, Woody vegetation should be used sparingly in wildflower meadows.	N/A, Woody vegetation should be used sparingly in wildflower meadows.
Green Infrastructure	Coneflower (<i>Echinacea purpurea</i>), Wax Mallow (<i>Malaviscus arboreus</i> var. <i>drummondii</i>), Bergamot (<i>Monarda fistulosa</i>), Blood Sage (<i>Salvia coccinea</i>), Obedient Plant, Blue Mistflower	Indiangrass (<i>Sorghastrum nutans</i>), Sideoats Grama (<i>Bouteloua curtipendula</i>), Switchgrass (<i>panicum virgatum</i>)		Buttonbush (<i>Cephalanthus occidentalis</i>), Southern Wax Myrtle (<i>Myrica cerifera</i>), American Beauty Berry (<i>Callicarpa americana</i>)	Bald Cypress (<i>Taxodium distichum</i>)

Appendix B

RECOMMENDED MATERIALS CRITERIA

Selecting sustainable and safe materials for construction along Williamson Creek will ensure the continued health of the creek and lessen the environmental impacts of construction and development. Learn more about these strategies through the Sustainable Sites Initiative (sustainablesites.org).

Recommendation	Intent	Strategy 1		Strategy 2	Strategy 3	More Resources
Use sustainable wood sources	Many commonly-used landscape wood products are sourced from threatened tree species or threatened ecosystems. Minimize impact on these species by purchasing sustainably-sourced wood from non-threatened tree species.	Review the Convention on International Trade in Endangered Species (CITES) website to review the status of tree species and ensure that is not threatened with extinction or listed as requiring trade controls to avoid utilization incompatible with their survival. www.cites.org/eng/resources/species.html		Review the International Union for Conservation of Nature’s “Red List of Endangered Species” to ensure the species is not in danger of extinction. www.iucnredlist.org .	Use recycled plastic, composite lumber, or another material instead of wood.	
Use salvaged materials and plants	Salvaging landscape materials from on-site or from re-use suppliers like a member of the Building Materials Reuse Association is an effective way to divert waste from landfills and conserve financial resources. Salvaged plant materials also conserves native, local plant genetic pools.	Identify salvaged materials suppliers or local demolition and construction projects. Search diirectories of reuse stores here: Building Materials Reuse Association, www.buildingreuse.org Habitat for Humanity’s ReStore, www.habitat.org/env/restores.aspx		Get in touch with a local native plant conservation group. Many of these groups “rescue” native plants from construction sites, and may be able to provide locally-sourced salvaged plants.		Green Building Research Guide’s searchable database, www.greenguide.com/exchange/search.html Reuse Development Organization, www.redo.org
Use materials with a high recycled content	Use of new materials with a high recycled content reduces resource extraction and diverts materials away from landfills and into the production of new materials.	Speak with local materials suppliers about products that may help achieve this goal. Examples of some materials include plastic lumber with recycled content, asphalt with recycled asphalt aggregate, and high recycled content steel.		Learn more about recycled products and industry materials recycling. The U.S. EPA Industrial Materials website: www.epa.gov/industrialmaterials The U.S. EPA’s Comprehensive Procurement Guidelines www.epa.gov/cpg		California Department of Resources and Recycling, Recycled Content Products Directory, www.calrecycle.ca.gov/RCP/default.asp

Recommendation	Intent	Strategy 1		Strategy 2	Strategy 3	More Resources
Use regional materials	Sourcing regional landscape materials and plants has many benefits, including reducing the use of fossil fuels used for transportation, supporting local economies, increasing the demand and therefore the future supply of native plants, and supporting regional identity through the use of local materials.	Soils, compost, mulch, boulders, and aggregate sourcing should occur within 50 miles of the project site.		Plant material should be grown and supplied within 250 miles of the site.	The extraction, harvest or recovery, and manufacture of all other materials should occur within 500 miles of the site.	For more information about materials and resources, consult the U.S. Green Building Council's website: leedcasestudies.usgbc.org/materials.cfm?ProjectID=189. JW Thompson and K Sorvig, Sustainable Landscape Construction: A Guide to Green Building Outdoors (Washington, D.C., Island Press, 2000.
Use materials that will not harm the health of Williamson Creek or human health.	Use materials that do not contain chemicals known to harm human health or aquatic health. Prioritize materials that have chemical inventories, life-cycle information and hazard assessments. In addition to eliminating harmful chemical runoff, do not use materials that contribute sediment or aggregate to the creek.	Specify products from manufacturers who can provide chemical inventories covering all chemicals in each life cycle stage of the product. Manufacturers should also report all known hazards and their concentrations.		Use materials without topical finishes or other chemical additives whenever possible.	Learn more about chemicals in building products by consulting Pharos Project's Chemical and Material Library at www.pharosproject.net/material.	United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), www.osha.gov/dsg/hazcom/ghs.html. Green chemicals standards are listen through NSF/GCI/ANSI 355 Greener Chemicals Products and Processes Information Standard, www.nsf.org/business/sustainability/product_greener_chemicals.

OPINION OF PROBABLE COSTS SUMMARY

IMPLEMENTATION STREAM

OPINION OF PROBABLE COST BY AREA

AREA 1

TIER 1 - 15,000-30,000*
TIER 2 - 206,000
TIER 3 - 320,000

AREA 2

TIER 1 - 15,000-30,000*
TIER 2 - 175,000

AREA 3

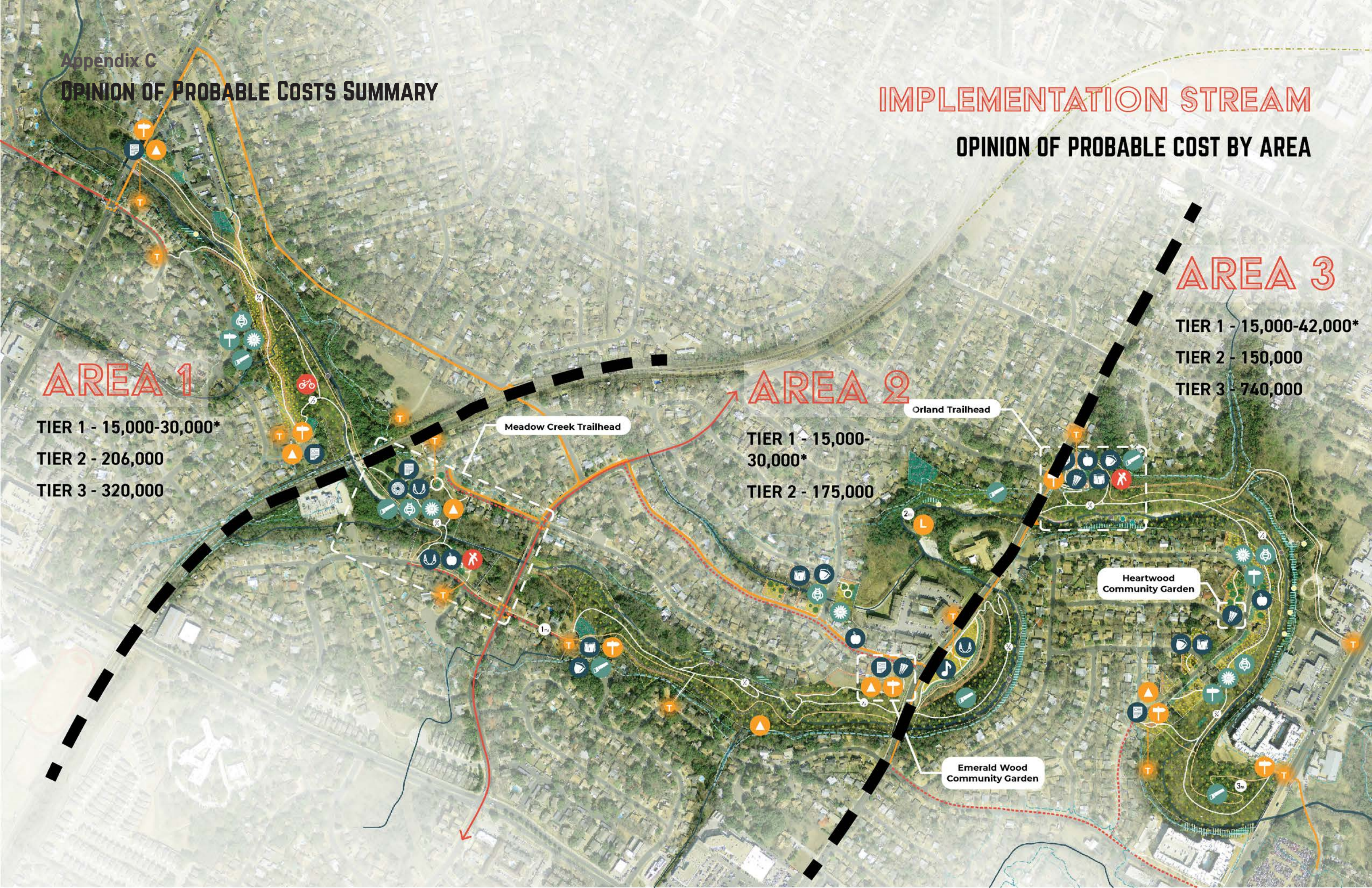
TIER 1 - 15,000-42,000*
TIER 2 - 150,000
TIER 3 - 740,000

Meadow Creek Trailhead

Orland Trailhead

Heartwood Community Garden

Emerald Wood Community Garden



OPINION OF PROBABLE COSTS - AREA 1 - TIER 1

AREA 1 - TIER 2 \$30,674.33

IDEA	QUANTITY	UNIT	UNIT COST	SUBTOTAL	Comments
Invasive Species Removal					Costs for this phase could be further reduced by partnering with City of Austin or a local non profit for use of tools rather than purchasing or renting equipment. Costs in this section indicate approximate cost to purchase equipment. Tier 1 invasive species removal to involve a group of community volunteers with approval by the City of Austin property owner.
Weed Wrench	3	EA	\$189.00	\$567.00	
Loppers	4	EA	\$50.00	\$200.00	
Mattock	2	EA	\$50.00	\$100.00	
Shovel - Round Point	4	EA	\$50.00	\$200.00	
Aborist Hand Saw	2	EA	\$75.00	\$150.00	
Tree Paint	10	EA	\$6.00	\$60.00	
Tree Girdler Tool	4	EA	\$222.00	\$888.00	
General Conditions Sub-Total				\$2,165.00	
Seating - Informal, Wilderness					May be boulders or logs adjacent to nature trail where uses can rest. Provide informal seating every 1/8-mile for broader access. Assumes labor by volunteers with permission from City of Austin property owners.
Boulders - Existing		EA	\$-	\$-	Community members may not move existing boulders, but may take advantage of them by locating a natural trail nearby so long as the area is outside of the critical environmental feature setback zone.
Logs - Existing		EA	\$-	\$-	Logs may be cut into 4-feet in length or smaller and placed near the trail. No native trees may be cut by community members to create logs.
Logs - Invasive Species Removal		EA	\$-	\$-	Large trees removed in Tier 2 efforts may be reclaimed for informal seating near trail.
Seating Sub-Total				\$-	
Nature Trail - 1 mile					Assumes labor by volunteers with permission from City of Austin property owners.
Mulch - Wholesale	293	CY	\$40.00	\$11,733.33	First grind mulch placed 3-inches thick on a 6ft wide nature trail. Collaborate with City of Austin property owner or non-profit for reduced cost.
Wood Chipper Rental		DAY	\$400.00	\$-	Cost may be reduced by partnering with local non-profit such as Keep Austin Beautiful, or City of Austin property owners PARD or WPD
Mulch - Invasive Species		CY	\$-	\$-	Use branches 6-inches or larger. Ensure no branches or seeds are placed into the wood chipper. Grind the mulch twice. Mulch from invasive species removal may be used to reduce cost of retail mulch.
Nature Trail - 1 mile Sub-Total				\$11,733.33	
Mountain Bike Trail - 1 mile					Assumes labor by volunteers with permission from City of Austin property owners.
Shovel - Round Point	4	EA	\$50.00	\$200.00	No digging over 6-inches to level the trail.
Loppers	4	EA	\$50.00	\$200.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Aborist Hand Saw	2	EA	\$75.00	\$150.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Tree Paint	10	EA	\$6.00	\$60.00	All pruning areas must be covered in tree paint.
Natural Trail - 1 mile Sub-Total				\$610.00	

OPINION OF PROBABLE COSTS - AREA 1 - TIER 1 (CONTINUED)

Native Shade Tree	60	Lump	\$-	\$-	Tree Folks NeighborWoods Program
Native Ornamental Tree	60	EA	\$-	\$-	Tree Folks NeighborWoods Program
Mulch	3	CY	\$40.00	\$133.33	Organic, shredded hardwood mulch for trees and display planting areas.
Planting Bed Soil	3	CY	\$65.00	\$216.67	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.
Subtotal Planting				\$350.00	

CREEK RESTORATION - PLANTS					Tier 1 Planting for Area 1 includes accent planting at trailheads and restoration planting with native trees, grasses and perennials at invasive species removal areas. Community volunteers to collaborate with City of Austin and nonprofits to receive wholesale or discounted prices on materials. Community members and community gardens could learn from local organizations such as Native Plant Society of Texas to propagate native plants and save costs. Assumes labor by volunteers with permission from City of Austin property owners.
Native Grass Live Root Bunch	50	EA	\$20.00	\$1,000.00	Bunches of live roots of native grasses.
Shrub/Cacti	30	EA	\$20.00	\$600.00	1 Gal. containers of native cactii
Native Perennials	200	EA	\$10.00	\$2,000.00	4" pot of native plants planted at trail heads
Vine	30	EA	\$15.00	\$450.00	4" pot native vine to be planted along fences or vertical elements
Mulch	130	CY	\$40.00	\$5,200.00	Organic, shredded hardwood mulch for trees and display planting areas.
Planting Bed Soil	100	CY	\$65.00	\$6,500.00	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.
Subtotal Planting				\$15,750.00	

DISCLAIMER ON THE OPINION OF PROBABLE CONSTRUCTION COST

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9985 (0.23 acres)

1500 (15%)

8500 (85%)

500 (5%)

9500 (95%)

OPINION OF PROBABLE COSTS - AREA 1 - TIER 2

AREA 1 - TIER 2				\$206,015.99	
Item	Quantity	Unit	Unit Cost	Extension	Comments
Bonded Hardwood Mulch Loop Trail				\$82,929.88	
At Menchaca Road Trailhead				\$29,605.11	1/8 mile loop
General Conditions					
Mobilization	1	LS	5%	\$1,357.65	5% of Project Subtotal
Stabilized Construction Access	30	SY	\$15.00	\$450.00	
SWPPP maintenance	3	Month	\$8.00	\$24.00	
Safety and PPE	1	LS	\$500.00	\$500.00	
Job Site Supervision		WK	\$100.00	\$-	projected job duration in weeks
Job Site Fencing and Gate		LF	\$3.80	\$-	Perimeter only
Bond		LS	0.15%	\$40.73	0.15% of Project Subtotal
Insurance		LS	2%	\$543.06	2% of Project Subtotal
Fencing Screen	200	LF	\$2.00	\$400.00	
Fence Sand Bags	20	EA	\$5.50	\$110.00	1 per 10 LF
Tree Protection Fencing					
Temporary Chainlink fence	200	LF	\$3.00	\$600.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	3	Month	\$125.00	\$375.00	
Hardscape					
Bonded Hardwood Mulch	1,980	SF	\$12.50	\$24,750.00	6ft wide hardwood mulch with binder
Grading /Drainage					
Site Grading	147	SY	\$3.10	\$454.67	Grading for accessibility
At Utility Corridor				\$53,324.77	1/4 mile loop
General Conditions					
Mobilization	1	LS	5%	\$1,357.65	5% of Project Subtotal
Stabilized Construction Access	30	SY	\$15.00	\$450.00	
SWPPP maintenance	3	Month	\$8.00	\$24.00	
Safety and PPE	1	LS	\$500.00	\$500.00	
Job Site Supervision		WK	\$100.00	\$-	projected job duration in weeks
Job Site Fencing and Gate		LF	\$3.80	\$-	Perimeter only
Bond		LS	0.15%	\$40.73	0.15% of Project Subtotal
Insurance		LS	2%	\$543.06	2% of Project Subtotal
Hardscape					

OPINION OF PROBABLE COSTS - AREA 1 - TIER 2 (CONTINUED)

Bonded Hardwood Mulch	3,960	SF	\$12.50	\$49,500.00	6ft wide hardwood mulch with binder
Grading /Drainage					
Site Grading	293	SY	\$3.10	\$909.33	Grading for accessibility
Seating -Accessible, Park				\$5,000.00	
Bench	2	EA	\$2,500.00	\$5,000.00	City of Austin PARD benches
Waste Receptables at Trailheads				\$15,000.00	
Litter Receptacles	3	EA	\$2,500.00	\$7,500.00	City of Austin PARD standard
Recycling Receptacles	3	EA	\$2,500.00	\$7,500.00	City of Austin PARD standard
Community Kiosk				\$1,500.00	
Message Board	1	EA	\$1,000.00	\$1,500.00	4ftx6ft wood frame message board with roof
Weather Warning Signage				\$1,800.00	
Metal Post Sign	3	EA	\$600.00	\$1,800.00	Galvanized aluminum post set in concrete, reflective aluminum sign
Geology Interpretive Sign				\$1,000.00	
Metal Sign	1	EA	\$1,000.00	\$1,000.00	Galvanized aluminum post set in concrete, reflective aluminum sign
Wildflower Meadow				\$98,786.11	
At Utility Corridor					Can be done in phases
Soil Removal	1,472	CY	\$10.00	\$14,722.22	
Site Grading	1,472	SY	\$3.10	\$4,563.89	
Wildflower Hydroseed	159,000	SF	\$0.50	\$79,500.00	
Reclaimed Branch Berm				\$-	
Branches 3-inch Diameter		LS	\$-	\$-	
Rock Berm				\$833.33	
9-12-inch Rock	42	CY	\$20.00	\$833.33	Rock berm 1'-6" height max

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PROBABLE CONSTRUCTION COST

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OPINION OF PROBABLE COSTS - AREA 1 - TIER 3

AREA 1 - TIER 3				\$316,955.46	
Bike Lanes				\$10,600.00	
Jentsch Court					Extension of Jones Road bike lanes east across Menchaca to neighborhood trailhead
Striping	530	LF	\$20.00	\$10,600.00	City of Austin standard
Flexible Delineator	35	EA	\$40.00	\$1,413.33	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
Lansing Drive					Extension of Jones Road bike lanes east across Menchaca to neighborhood trailhead
Striping	3,400	LF	\$20.00	\$68,000.00	City of Austin standard
Flexible Delineator	227	EA	\$40.00	\$9,066.67	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
High Water Route				\$26,000.00	
Sidewalk on Menchaca to Kings Hwy					Extension of Jones Road bike lanes east across Menchaca to neighborhood trailhead
Thermoplastic Pavement Markings	1,300	LF	\$20.00	\$26,000.00	High traffic pavement markings for wayfinding to indicate high water route
Green Infrastructure				\$280,355.46	
Stormwater Quality Feature adjacent to				\$280,355.46	Large stormwater quality feature intercepting stormwater outfall into creek
General Conditions				\$51,331.76	Section to be used when Asakura Robinson is the Prime.
Mobilization		LS	5%	\$13,082.35	5% of Project Subtotal
Stabilized Construction Access	300	SY	\$15.00	\$4,500.00	
SWPPP maintenance	8	Month	\$8.00	\$64.00	
Safety and PPE	8	LS	\$500.00	\$4,000.00	
Job Site Supervision	96	WK	\$100.00	\$9,600.00	projected job duration in weeks
Job Site Fencing and Gate	3,000	LF	\$3.80	\$11,400.00	Perimeter only
Bond		LS	0.15%	\$392.47	0.15% of Project Subtotal
Insurance		LS	2%	\$5,232.94	2% of Project Subtotal
Fencing Screen	1,200	LF	\$2.00	\$2,400.00	
Fence Sand Bags	120	EA	\$5.50	\$660.00	1 per 10 LF
Tree Protection Fencing				\$4,000.00	
Temporary Chainlink fence	1,000	LF	\$3.00	\$3,000.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	8	Month	\$125.00	\$1,000.00	
Demolition				\$10,105.19	
Tree Removal	2	EA	\$10.00	\$20.00	Invasive Species only
Clearing and grubbing of vegetation	14,000	SF	\$0.35	\$4,900.00	
Soil Removal	519	CY	\$10.00	\$5,185.19	

OPINION OF PROBABLE COSTS - AREA 1 - TIER 3 (CONTINUED)

Grading /Drainage				\$88,881.48	
Site Grading	14,000	SF	\$3.10	\$43,400.00	
Landscape Area Drains	2	EA	\$2,000.00	\$4,000.00	Civil to provide connections
Bioinfiltration Media	519	CY	\$80.00	\$41,481.48	
Planting				\$126,037.04	
Ornamental Grass	3,780	EA	\$25.00	\$94,500.00	1 Gal. mix of grasses and perennials- must meet ECM diversity requirements
Mulch	130	CY	\$65.00	\$8,425.93	3"
Top Soil Fine Grading	156	CY	\$65.00	\$10,111.11	4"
Irrigation	4	ZN	\$2,500.00	\$10,000.00	
Irrigation Meter	1	EA	\$3,000.00	\$3,000.00	2" meter

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OPINION OF PROBABLE COSTS - AREA 2 - TIER 1

AREA 1 - TIER 2 \$30,734.33

IDEA	QUANTITY	UNIT	UNIT COST	SUBTOTAL	Comments
Invasive Species Removal					Costs for this phase could be further reduced by partnering with City of Austin or a local non profit for use of tools rather than purchasing or renting equipment. Costs in this section indicate approximate cost to purchase equipment. Tier 1 invasive species removal to involve a group of community volunteers with approval by the City of Austin property owner.
Weed Wrench	3	EA	\$189.00	\$567.00	
Loppers	4	EA	\$50.00	\$200.00	
Mattock	2	EA	\$50.00	\$100.00	
Shovel - Round Point	4	EA	\$50.00	\$200.00	
Aborist Hand Saw	2	EA	\$75.00	\$150.00	
Tree Paint	10	EA	\$6.00	\$60.00	
Tree Girdler Tool	4	EA	\$222.00	\$888.00	
General Conditions Sub-Total				\$2,165.00	
Seating - Informal, Wilderness					May be boulders or logs adjacent to nature trail where uses can rest. Provide informal seating every 1/8-mile for broader access. Assumes labor by volunteers with permission from City of Austin property owners.
Boulders - Existing	NA	EA	\$-	\$-	Community members may not move existing boulders, but may take advantage of them by locating a natural trail nearby so long as the area is outside of the critical environmental feature setback zone.
Logs - Existing		EA	\$-	\$-	Logs may be cut into 4-feet in length or smaller and placed near the trail. No native trees may be cut by community members to create logs.
Log Stumps - Invasive Species Remov-	30	EA	\$-	\$-	Large trees removed in Tier 2 efforts are reclaimed for stumps at outdoor classrooms and music grove.
Seating Sub-Total				\$-	
Nature Trail - 1 mile					Assumes labor by volunteers with permission from City of Austin property owners.
Mulch - Wholesale	293	CY	\$40.00	\$11,733.33	First grind mulch placed 3-inches thick on a 6ft wide nature trail. Collaborate with City of Austin property owner or non-profit for reduced cost.
Wood Chipper Rental		DAY	\$400.00	\$-	Cost may be reduced by partnering with local non-profit such as Austin Parks Foundation, or City of Austin property owners PARD or WPD
Mulch - Invasive Species		CY	\$-	\$-	Use branches 6-inches or larger. Ensure no branches or seeds are placed into the wood chipper. Grind the mulch twice. Mulch from invasive species removal may be used to reduce cost of retail mulch.
Nature Trail - 1 mile Sub-Total				\$11,733.33	
Mountain Bike Trail - 1 mile					Assumes labor by volunteers with permission from City of Austin property owners.
Shovel - Round Point	4	EA	\$50.00	\$200.00	No digging over 6-inches to level the trail.
Loppers	4	EA	\$50.00	\$200.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Aborist Hand Saw	2	EA	\$75.00	\$150.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Tree Paint	10	EA	\$6.00	\$60.00	All pruning areas must be covered in tree paint.
Natural Trail - 1 mile Sub-Total				\$610.00	

OPINION OF PROBABLE COSTS - AREA 2 - TIER 1 (CONTINUED)

Pollinator Nesting Boxes					Assumes labor by volunteers with permission from City of Austin property owners. Quantities of materials will be sufficient for up to 6 nesting boxes.
Wood Boards	6	EA	\$10.00	\$60.00	2x4x8 Rough Sawn Atlantic Cedar - untreated
Fasteners	3	EA	\$10.00	\$30.00	3-inch Wood Screws
Dried bamboo	0	LS	\$-	\$-	Harvest from invasive species removal
Drill Bit	1	EA	\$12.00	\$12.00	3/8 Drill Bit
4x4 Wood Post	1	EA	\$24.00	\$24.00	4x4x8 Rough Sawn Atlantic Cedar - untreated cut to 3ft length
Subtotal Planting				\$126.00	
CREEK RESTORATION - TREES					Tier 1 Planting for Area 2 tree plantings include small 5 gallon trees sourced from Tree Folks NeighborWoods Program or a similar non-profit source. Community members and community gardens could also partner with non profits to propogate native trees for the greenway. Assumes labor by volunteers with permission from City of Austin property owners.
Native Shade Tree	60	Lump	\$-	\$-	Tree Folks NeighborWoods Program
Native Ornamental Tree	60	EA	\$-	\$-	Tree Folks NeighborWoods Program
Mulch	3	CY	\$40.00	\$133.33	Organic, shredded hardwood mulch for trees and display planting areas. To reduce cost, community members may apply for a grant from Austin
Planting Bed Soil	3	CY	\$65.00	\$216.67	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.
Subtotal Planting				\$350.00	
CREEK RESTORATION - PLANTS					Tier 1 Planting for Area 1 includes accent planting at trailheads and restoration planting with native trees, grasses and perennials at invasive species removal areas. Community volunteers to collaborate with City of Austin and nonprofits to receive wholesale or discounted prices on materials. Community members and community gardens could learn from local organizations such as Native Plant Society of Texas to propogate native plants and save costs. Assumes labor by volunteers with permission from City of Austin property owners.
Native Grass Live Root Bunch	50	EA	\$20.00	\$1,000.00	Bunches of live roots of native grasses.
Shrub/Cacti	30	EA	\$20.00	\$600.00	1 Gal. containers of native cactii
Native Perennials	200	EA	\$10.00	\$2,000.00	4" pot of native plants planted at trail heads
Vine	30	EA	\$15.00	\$450.00	4" pot native vine to be planted along fences or vertical elements
Mulch	130	CY	\$40.00	\$5,200.00	Organic, shredded hardwood mulch for trees and display planting areas. To reduce cost, community members may apply for a grant from Austin
Planting Bed Soil	100	CY	\$65.00	\$6,500.00	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.
Subtotal Planting				\$15,750.00	

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OPINION OF PROBABLE COSTS - AREA 2 - TIER 2

AREA 2 - TIER 2				\$176,125.48	
Item	Quantity	Unit	Unit Cost	Extension	Comments
Bonded Hardwood Mulch Loop Trail				\$29,605.11	
At Meadow Creek Trailhead				\$29,605.11	1/8 mile loop
General Conditions					
Mobilization	1	LS	5%	\$1,357.65	5% of Project Subtotal
Stabilized Construction Access	30	SY	\$15.00	\$450.00	
SWPPP maintenance	3	Month	\$8.00	\$24.00	
Safety and PPE	1	LS	\$500.00	\$500.00	
Job Site Supervision		WK	\$100.00	\$-	projected job duration in weeks
Job Site Fencing and Gate		LF	\$3.80	\$-	Perimeter only
Bond		LS	0.15%	\$40.73	0.15% of Project Subtotal
Insurance		LS	2%	\$543.06	2% of Project Subtotal
Fencing Screen	200	LF	\$2.00	\$400.00	
Fence Sand Bags	20	EA	\$5.50	\$110.00	1 per 10 LF
Tree Protection Fencing					
Temporary Chainlink fence	200	LF	\$3.00	\$600.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	3	Month	\$125.00	\$375.00	
Hardscape					
Bonded Hardwood Mulch	1,980	SF	\$12.50	\$24,750.00	6ft wide hardwood mulch with binder
Grading /Drainage					
Site Grading	147	SY	\$3.10	\$454.67	Grading for accessibility
Food Forest				\$14,000.00	
Meadow Creek Trailhead on Meadow	1	EA	\$7,000.00	\$7,000.00	
Meadow Creek Trailhead on Radam Circle	1	EA	\$7,000.00	\$7,000.00	
Seating - Informal, Wilderness				\$8,000.00	
Boulders	20	EA	\$400.00	\$8,000.00	4x6 Limestone boulders. Refer to materials list for additional requirements.
Waste Receptables at Trailheads				\$25,000.00	
Litter Receptacles	5	EA	\$2,500.00	\$12,500.00	City of Austin PARD standard
Recycling Receptacles	5	EA	\$2,500.00	\$12,500.00	City of Austin PARD standard
Community Kiosk				\$1,500.00	
Message Board	2	EA	\$1,000.00	\$1,500.00	4ftx6ft wood frame message board with roof
Weather Warning Signage				\$2,400.00	

OPINION OF PROBABLE COSTS - AREA 2 - TIER 2 (CONTINUED)

Metal Post Sign	4	EA	\$600.00	\$2,400.00	Galvanized aluminum post set in concrete, reflective aluminum sign
Geology Interpretive Sign				\$4,000.00	
Metal Sign	4	EA	\$1,000.00	\$4,000.00	Galvanized aluminum post set in concrete, reflective aluminum sign
Wildflower Meadow				\$105,620.37	
At Meadow Creek Trailhead				\$18,638.89	
Soil Removal	278	CY	\$10.00	\$2,777.78	
Site Grading	278	SY	\$3.10	\$861.11	
Wildflower Hydroseed	30,000	SF	\$0.50	\$15,000.00	
At Emerald Wood Floodplain Buyouts				\$46,597.22	May be done in phases by each lot.
Soil Removal	694	CY	\$10.00	\$6,944.44	
Site Grading	694	SY	\$3.10	\$2,152.78	
Wildflower Hydroseed	75,000	SF	\$0.50	\$37,500.00	
At Emerald Wood Floodplain Buyouts				\$40,384.26	May be done in phases.
Soil Removal	602	CY	\$10.00	\$6,018.52	
Site Grading	602	SY	\$3.10	\$1,865.74	
Wildflower Hydroseed	65,000	SF	\$0.50	\$32,500.00	
Reclaimed Branch Berm				\$-	
Branches 3-inch Diameter		LS	\$-	\$-	
Rock Berm				\$833.33	
9-12-inch Rock	42	CY	\$20.00	\$833.33	Rock berm 1'-6" height max

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OPINION OF PROBABLE COSTS - AREA 2 - TIER 3

AREA 2 - TIER 3 \$337,343.61

Bike Lanes				\$99,733.33	
Radam Circle				\$27,200.00	
Striping	1,200	LF	\$20.00	\$24,000.00	City of Austin standard
Flexible Delineator	80	EA	\$40.00	\$3,200.00	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
Meadow Creek Circle Drive				\$15,866.67	
Striping	700	LF	\$20.00	\$14,000.00	City of Austin standard
Flexible Delineator	47	EA	\$40.00	\$1,866.67	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
Emerald Wood Drive				\$56,666.67	
Striping	2,500	LF	\$20.00	\$50,000.00	City of Austin standard
Flexible Delineator	167	EA	\$40.00	\$6,666.67	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
High Water Route				\$88,000.00	
Emerald Wood Drive					
Thermoplastic Pavement Markings	2,500	LF	\$20.00	\$50,000.00	High traffic pavement markings for wayfinding to indicate high water route
Radam Circle					
Thermoplastic Pavement Markings	1,200	LF	\$20.00	\$24,000.00	High traffic pavement markings for wayfinding to indicate high water route
Meadow Creek Circle Drive					
Thermoplastic Pavement Markings	700	LF	\$20.00	\$14,000.00	High traffic pavement markings for wayfinding to indicate high water route
Green Infrastructure				\$149,610.28	
Rain Garden on Meadow Creek Circle				\$149,610.28	Series of raingardens intercepting stormwater from MeadowCreek Drive before entering the storwamter inlet
General Conditions				\$51,331.76	Section to be used when Asakura Robinson is the Prime.
Mobilization		LS	5%	\$13,082.35	5% of Project Subtotal
Stabilized Construction Access	300	SY	\$15.00	\$4,500.00	
SWPPP maintenance	8	Month	\$8.00	\$64.00	
Safety and PPE	8	LS	\$500.00	\$4,000.00	
Job Site Supervision	96	WK	\$100.00	\$9,600.00	projected job duration in weeks
Job Site Fencing and Gate	3,000	LF	\$3.80	\$11,400.00	Perimeter only
Bond		LS	0.15%	\$392.47	0.15% of Project Subtotal
Insurance		LS	2%	\$5,232.94	2% of Project Subtotal
Fencing Screen	1,200	LF	\$2.00	\$2,400.00	
Fence Sand Bags	120	EA	\$5.50	\$660.00	1 per 10 LF
Tree Protection Fencing				\$4,000.00	
Temporary Chainlink fence	1,000	LF	\$3.00	\$3,000.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	8	Month	\$125.00	\$1,000.00	

OPINION OF PROBABLE COSTS - AREA 2 - TIER 3 (CONTINUED)

Demolition				\$3,765.93	
Tree Removal	2	EA	\$10.00	\$20.00	Invasive Species only
Clearing and grubbing of vegetation	5,200	SF	\$0.35	\$1,820.00	
Soil Removal	193	CY	\$10.00	\$1,925.93	
Grading /Drainage				\$35,527.41	
Site Grading	5,200	SF	\$3.10	\$16,120.00	
Landscape Area Drains	2	EA	\$2,000.00	\$4,000.00	Civil to provide connections
Bioinfiltration Media	193	CY	\$80.00	\$15,407.41	
Planting				\$54,985.19	
Ornamental Grass	1,404	EA	\$25.00	\$35,100.00	1 Gal. mix of grasses and perennials- must meet ECM diversity requirements
Mulch	48	CY	\$65.00	\$3,129.63	3"
Top Soil Fine Grading	58	CY	\$65.00	\$3,755.56	4"
Irrigation	4	ZN	\$2,500.00	\$10,000.00	
Irrigation Meter	1	EA	\$3,000.00	\$3,000.00	2" meter
Stormwater Quality Feature on Radam				\$133,031.39	Large stormwater quality feature intercepting stormwater outfall that current lets out into Williamson Creek.
General Conditions				\$51,331.76	Section to be used when Asakura Robinson is the Prime.
Mobilization		LS	5%	\$13,082.35	5% of Project Subtotal
Stabilized Construction Access	300	SY	\$15.00	\$4,500.00	
SWPPP maintenance	8	Month	\$8.00	\$64.00	
Safety and PPE	8	LS	\$500.00	\$4,000.00	
Job Site Supervision	96	WK	\$100.00	\$9,600.00	projected job duration in weeks
Job Site Fencing and Gate	3,000	LF	\$3.80	\$11,400.00	Perimeter only
Bond		LS	0.15%	\$392.47	0.15% of Project Subtotal
Insurance		LS	2%	\$5,232.94	2% of Project Subtotal
Fencing Screen	1,200	LF	\$2.00	\$2,400.00	
Fence Sand Bags	120	EA	\$5.50	\$660.00	1 per 10 LF
Tree Protection Fencing				\$4,000.00	
Temporary Chainlink fence	1,000	LF	\$3.00	\$3,000.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	8	Month	\$125.00	\$1,000.00	
Demolition				\$4,151.48	

OPINION OF PROBABLE COSTS - AREA 2 - TIER 3 (CONTINUED)

Storm Inlet Removal	1	EA	\$500.00	\$500.00	
Small Drain/Inlet Removal	1	EA	\$250.00	\$250.00	
Manhole Removal	1	EA	\$500.00	\$500.00	
Tree Removal	2	EA	\$10.00	\$20.00	Invasive Species only
Clearing and grubbing of vegetation	4,000	SF	\$0.35	\$1,400.00	
Soil Removal	148	CY	\$10.00	\$1,481.48	
Grading /Drainage				\$28,251.85	
Site Grading	4,000	SF	\$3.10	\$12,400.00	
Landscape Area Drains	2	EA	\$2,000.00	\$4,000.00	Civil to provide connections
Bioinfiltration Media	148	CY	\$80.00	\$11,851.85	
Planting				\$45,296.30	
Ornamental Grass	1,080	EA	\$25.00	\$27,000.00	1 Gal. mix of grasses and perennials- must meet ECM diversity requirements
Mulch	37	CY	\$65.00	\$2,407.41	3"
Top Soil Fine Grading	44	CY	\$65.00	\$2,888.89	4"
Irrigation	4	ZN	\$2,500.00	\$10,000.00	
Irrigation Meter	1	EA	\$3,000.00	\$3,000.00	2" meter

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OPINION OF PROBABLE COSTS - AREA 3 - TIER 1

AREA 3 - TIER 1				\$42,467.67	
IDEA	QUANTITY	UNIT	UNIT COST	SUBTOTAL	Comments
Invasive Species Removal				\$2,165.00	Costs for this phase could be further reduced by partnering with City of Austin or a local non profit for use of tools rather than purchasing or renting equipment. Costs in this section indicate approximate cost to purchase equipment. Tier 1 invasive species removal to involve a group of community volunteers with approval by the City of Austin property owner.
Weed Wrench	3	EA	\$189.00	\$567.00	
Loppers	4	EA	\$50.00	\$200.00	
Mattock	2	EA	\$50.00	\$100.00	
Shovel - Round Point	4	EA	\$50.00	\$200.00	
Aborist Hand Saw	2	EA	\$75.00	\$150.00	
Tree Paint	10	EA	\$6.00	\$60.00	
Tree Girdler Tool	4	EA	\$222.00	\$888.00	
Seating - Informal, Wilderness				\$-	May be boulders or logs adjacent to nature trail where uses can rest. Provide informal seating every 1/8-mile for broader access. Assumes labor by volunteers with permission from City of Austin property owners.
Boulders - Existing	NA	EA	\$-	\$-	Community members may not move existing boulders, but may take advantage of them by locating a natural trail nearby so long as the area is outside of the critical environmental feature setback zone.
Logs - Existing		EA	\$-	\$-	Logs may be cut into 4-feet in length or smaller and placed near the trail. No native trees may be cut by community members to create logs.
Log Stumps - Invasive Species Removal	30	EA	\$-	\$-	Large trees removed in Tier 2 efforts are reclaimed for stumps at outdoor classrooms and music grove.
Nature Trail - 2 miles				\$23,466.67	Assumes labor by volunteers with permission from City of Austin property owners.
Mulch - Wholesale	587	CY	\$40.00	\$23,466.67	First grind mulch placed 3-inches thick on a 6ft wide nature trail. Collaborate with City of Austin property owner or non-profit for reduced cost.
Wood Chipper Rental		DAY	\$400.00	\$-	Cost may be reduced by partnering with local non-profit such as Austin Parks Foundation, or City of Austin property owners PARD or WPD
Mulch - Invasive Species		CY	\$-	\$-	Use branches 6-inches or larger. Ensure no branches or seeds are placed into the wood chipper. Grind the mulch twice. Mulch from invasive species removal may be used to reduce cost of retail mulch.
Mountain Bike Trail - 1 mile				\$610.00	Assumes labor by volunteers with permission from City of Austin property owners.
Shovel - Round Point	4	EA	\$50.00	\$200.00	No digging over 6-inches to level the trail.
Loppers	4	EA	\$50.00	\$200.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Aborist Hand Saw	2	EA	\$75.00	\$150.00	For pruning branches 2-inch diameter in size or less adjacent to the trail. Blade must be washed in bleach between every new tree.
Tree Paint	10	EA	\$6.00	\$60.00	All pruning areas must be covered in tree paint.
Pollinator Nesting Boxes				\$126.00	Assumes labor by volunteers with permission from City of Austin property owners. Quantities of materials will be sufficient for up to 6 nesting boxes.
Wood Boards	6	EA	\$10.00	\$60.00	2x4x8 Rough Sawn Atlantic Cedar - untreated
Fasteners	3	EA	\$10.00	\$30.00	3-inch Wood Screws
Dried bamboo	0	LS	\$-	\$-	Harvest from invasive species removal
Drill Bit	1	EA	\$12.00	\$12.00	3/8 Drill Bit
4x4 Wood Post	1	EA	\$24.00	\$24.00	4x4x8 Rough Sawn Atlantic Cedar - untreated cut to 3ft length

OPINION OF PROBABLE COSTS - AREA 3 - TIER 1 (CONTINUED)

CREEK RESTORATION - TREES				\$350.00	Tier 1 Planting for Area 2 tree plantings include small 5 gallon trees sourced from Tree Folks NeighborWoods Program or a similar non-profit source. Community members and community gardens could also partner with non profits to propogate native trees for the green-way. Assumes labor by volunteers with permission from City of Austin property owners.
Native Shade Tree	60	Lump	\$-	\$-	Tree Folks NeighborWoods Program
Native Ornamental Tree	60	EA	\$-	\$-	Tree Folks NeighborWoods Program
Mulch	3	CY	\$40.00	\$133.33	Organic, shredded hardwood mulch for trees and display planting areas. To reduce cost, community members may apply for a grant from Austin Parks Foundation.
Planting Bed Soil	3	CY	\$65.00	\$216.67	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.
CREEK RESTORATION - PLANTS				\$15,750.00	Tier 1 Planting for Area 1 includes accent planting at trailheads and restoration planting with native trees, grasses and perennials at inva-sive species removal areas. Community volunteers to collaborate with City of Austin and nonprofits to receive wholesale or discounted pric-es on materials. Community members and community gardens could learn from local organizations such as Native Plant Society of Texas to propogate native plants and save costs. Assumes labor by volunteers with permission from City of Austin property owners.
Native Grass Live Root Bunch	50	EA	\$20.00	\$1,000.00	Bunches of live roots of native grasses.
Shrub/Cacti	30	EA	\$20.00	\$600.00	1 Gal. containers of native cactii
Native Perennials	200	EA	\$10.00	\$2,000.00	4" pot of native plants planted at trail heads
Vine	30	EA	\$15.00	\$450.00	4" pot native vine to be planted along fences or vertical elements
Mulch	130	CY	\$40.00	\$5,200.00	Organic, shredded hardwood mulch for trees and display planting areas. To reduce cost, community members may apply for a grant from Austin Parks Foundation.
Planting Bed Soil	100	CY	\$65.00	\$6,500.00	Organic topsoil from Organics by Gosh or similar to add to planting areas and tree pits.

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OPINION OF PROBABLE COSTS - AREA 3 - TIER 2

AREA 3 - TIER 2

\$156,464.83

Item	Quantity	Unit	Unit Cost	Extension	Comments
Bonded Hardwood Mulch Loop Trail				\$29,605.11	
At Orland Trailhead				\$29,605.11	1/8 mile loop
General Conditions					
Mobilization	1	LS	5%	\$1,357.65	5% of Project Subtotal
Stabilized Construction Access	30	SY	\$15.00	\$450.00	
SWPPP maintenance	3	Month	\$8.00	\$24.00	
Safety and PPE	1	LS	\$500.00	\$500.00	
Job Site Supervision		WK	\$100.00	\$-	projected job duration in weeks
Job Site Fencing and Gate		LF	\$3.80	\$-	Perimeter only
Bond		LS	0.15%	\$40.73	0.15% of Project Subtotal
Insurance		LS	2%	\$543.06	2% of Project Subtotal
Fencing Screen	200	LF	\$2.00	\$400.00	
Fence Sand Bags	20	EA	\$5.50	\$110.00	1 per 10 LF
Tree Protection Fencing					
Temporary Chainlink fence	200	LF	\$3.00	\$600.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	3	Month	\$125.00	\$375.00	
Hardscape					
Bonded Hardwood Mulch	1,980	SF	\$12.50	\$24,750.00	6ft wide hardwood mulch with binder
Grading /Drainage					
Site Grading	147	SY	\$3.10	\$454.67	Grading for accessibility
Food Forest				\$14,000.00	
Heartwood Community Garden	1	EA	\$7,000.00	\$7,000.00	
Orland Trailhead	1	EA	\$7,000.00	\$7,000.00	
Seating - Informal, Wilderness				\$16,000.00	
Boulders	40	EA	\$400.00	\$16,000.00	4x6 Limestone boulders. Refer to materials list for additional requirements.
Waste Receptables at Trailheads				\$30,000.00	
Litter Receptacles	6	EA	\$2,500.00	\$15,000.00	City of Austin PARD standard
Recycling Receptacles	6	EA	\$2,500.00	\$15,000.00	City of Austin PARD standard
Community Kiosk				\$1,500.00	
Message Board	2	EA	\$1,000.00	\$1,500.00	4ftx6ft wood frame message board with roof
Weather Warning Signage				\$3,600.00	
Metal Post Sign	6	EA	\$600.00	\$3,600.00	Galvanized aluminum post set in concrete, reflective aluminum sign

OPINION OF PROBABLE COSTS - AREA 3 - TIER 2 (CONTINUED)

Geology Interpretive Sign				\$4,000.00	
Metal Sign	4	EA	\$1,000.00	\$4,000.00	Galvanized aluminum post set in concrete, reflective aluminum sign
Wildflower Meadow				\$71,759.72	
At Heartwood Drive Floodplain Buyouts				\$71,759.72	May be done in phases by each lot.
Soil Removal	1,069	CY	\$10.00	\$10,694.44	
Site Grading	1,069	SY	\$3.10	\$3,315.28	
Wildflower Hydroseed	115,500	SF	\$0.50	\$57,750.00	
Reclaimed Branch Berm				\$-	
Rock Berm				\$5,000.00	
9-12-inch Rock	250	CY	\$20.00	\$5,000.00	Rock berm 1'-6" height max

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OPINION OF PROBABLE COSTS - AREA 3 - TIER 3

AREA 3 - TIER 3				\$738,761.85	
Bike Lanes				\$74,800.00	
Ramble Lane				\$56,666.67	
Striping	2,500	LF	\$20.00	\$50,000.00	City of Austin standard
Flexible Delineator	167	EA	\$40.00	\$6,666.67	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
Meadow Creek Circle Drive				\$18,133.33	
Striping	800	LF	\$20.00	\$16,000.00	City of Austin standard
Flexible Delineator	53	EA	\$40.00	\$2,133.33	Flexible Delineator between bike lane and vehicular lane spaced 15ft o.c.
High Water Route				\$50,000.00	
South 1st Street					
Thermoplastic Pavement Markings	2,500	LF	\$20.00	\$50,000.00	High traffic pavement markings for wayfinding to indicate high water route
Boardwalk				\$120,000.00	
Orland Trailhead					
Wood Boardwalk with Steel Structure	400	LF	\$300.00	\$120,000.00	Boardwalk with 42-inch guardrails to create ADA route to nature trails and creek
Green Infrastructure				\$613,961.85	
Rain Garden on Heartwood Drive Buyouts				\$94,637.87	Series of raingardens intercepting stormwater from MeadowCreek Drive before entering the storwamter inlet and creek
General Conditions				\$51,331.76	Section to be used when Asakura Robinson is the Prime.
Mobilization		LS	5%	\$13,082.35	5% of Project Subtotal
Stabilized Construction Access	300	SY	\$15.00	\$4,500.00	
SWPPP maintenance	8	Month	\$8.00	\$64.00	
Safety and PPE	8	LS	\$500.00	\$4,000.00	
Job Site Supervision	96	WK	\$100.00	\$9,600.00	projected job duration in weeks
Job Site Fencing and Gate	3,000	LF	\$3.80	\$11,400.00	Perimeter only
Bond		LS	0.15%	\$392.47	0.15% of Project Subtotal
Insurance		LS	2%	\$5,232.94	2% of Project Subtotal
Fencing Screen	1,200	LF	\$2.00	\$2,400.00	
Fence Sand Bags	120	EA	\$5.50	\$660.00	1 per 10 LF
Tree Protection Fencing				\$4,000.00	
Temporary Chainlink fence	1,000	LF	\$3.00	\$3,000.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	8	Month	\$125.00	\$1,000.00	
Demolition				\$1,100.56	
Tree Removal	2	EA	\$10.00	\$20.00	Invasive Species only
Clearing and grubbing of vegetation	1,500	SF	\$0.35	\$525.00	
Soil Removal	56	CY	\$10.00	\$555.56	

OPINION OF PROBABLE COSTS - AREA 3 - TIER 3 (CONTINUED)

Grading /Drainage				\$13,094.44	
Site Grading	1,500	SF	\$3.10	\$4,650.00	
Landscape Area Drains	2	EA	\$2,000.00	\$4,000.00	Civil to provide connections
Bioinfiltration Media	56	CY	\$80.00	\$4,444.44	
Planting				\$25,111.11	
Ornamental Grass	405	EA	\$25.00	\$10,125.00	1 Gal. mix of grasses and perennials- must meet ECM diversity requirements
Mulch	14	CY	\$65.00	\$902.78	3"
Top Soil Fine Grading	17	CY	\$65.00	\$1,083.33	4"
Irrigation	4	ZN	\$2,500.00	\$10,000.00	
Irrigation Meter	1	EA	\$3,000.00	\$3,000.00	2" meter
Stormwater Quality Feature on Englewood				\$519,323.98	Large stormwater quality feature intercepting stormwater outfall that current lets out into Williamson Creek.
General Conditions				\$51,331.76	Section to be used when Asakura Robinson is the Prime.
Mobilization		LS	5%	\$13,082.35	5% of Project Subtotal
Stabilized Construction Access	300	SY	\$15.00	\$4,500.00	
SWPPP maintenance	8	Month	\$8.00	\$64.00	
Safety and PPE	8	LS	\$500.00	\$4,000.00	
Job Site Supervision	96	WK	\$100.00	\$9,600.00	projected job duration in weeks
Job Site Fencing and Gate	3,000	LF	\$3.80	\$11,400.00	Perimeter only
Bond		LS	0.15%	\$392.47	0.15% of Project Subtotal
Insurance		LS	2%	\$5,232.94	2% of Project Subtotal
Fencing Screen	1,200	LF	\$2.00	\$2,400.00	
Fence Sand Bags	120	EA	\$5.50	\$660.00	1 per 10 LF
Tree Protection Fencing				\$4,000.00	
Temporary Chainlink fence	1,000	LF	\$3.00	\$3,000.00	5' ht. per details, with sandbags for stability
Arborist/Forester consultation	8	Month	\$125.00	\$1,000.00	
Demolition				\$22,881.11	
Storm Inlet Removal	1	EA	\$500.00	\$500.00	
Small Drain/Inlet Removal	1	EA	\$250.00	\$250.00	
Manhole Removal	1	EA	\$500.00	\$500.00	
Tree Removal	2	EA	\$10.00	\$20.00	Invasive Species only
Clearing and grubbing of vegetation	30,000	SF	\$0.35	\$10,500.00	
Soil Removal	1,111	CY	\$10.00	\$11,111.11	
Grading /Drainage				\$185,888.89	
Site Grading	30,000	SF	\$3.10	\$93,000.00	

OPINION OF PROBABLE COSTS - AREA 3 - TIER 3 (CONTINUED)

Landscape Area Drains	2	EA	\$2,000.00	\$4,000.00	Civil to provide connections
Bioinfiltration Media	1,111	CY	\$80.00	\$88,888.89	
Planting				\$255,222.22	
Ornamental Grass	8,100	EA	\$25.00	\$202,500.00	1 Gal. mix of grasses and perennials- must meet ECM diversity requirements
Mulch	278	CY	\$65.00	\$18,055.56	3"
Top Soil Fine Grading	333	CY	\$65.00	\$21,666.67	4"
Irrigation	4	ZN	\$2,500.00	\$10,000.00	
Irrigation Meter	1	EA	\$3,000.00	\$3,000.00	2" meter

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Appendix D

ALL TOOLKIT ITEMS



Wildflower Planting
Siembra de Plantas Silvestres

Planting native wildflowers and grasses that are native to central Texas. These native species provide habitat and food for urban wildlife, such as monarch butterflies and pollinator bee populations.

Sembrar flora nativa de Texas. Estas especies nativas proveen hábitat y comida para la vida silvestre urbana, como las mariposas monarcas y abejas polinizadoras.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Invasive Species Management
Días de Limpieza

Creek Restoration
Manejo de Especies Invasivas

Community Garden
Restauración del Arroyo


Considerations / Consideraciones...

- Vacant lots are ideal candidates for wildflower meadow planting. Las parcelas vacantes son buenas candidatas para praderas de plantas silvestres.
- Meadows require maintenance, especially in the years immediately after planting.

"Plant wildflowers along the creek"

"Sembrar plantas silvestres a lo largo del arroyo"

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Invasive Species Management
Manejo de Especies Invasivas

Removal of invasive species, either by volunteers or professionals. Methods may include hand-pulling plants, herbicide application, or cutting down woody vegetation.

Remoción de especies invasivas por voluntarios o profesionales. Algunos de los métodos incluyen remoción manual, aplicación de herbicida, o cortando vegetación leñosa.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Clean-Up Days
Días de Limpieza

Wildflower Planting
Siembra de Plantas Silvestres

Creek Restoration
Restauración del arroyo

Considerations / Consideraciones...

- Consult with ecological restoration experts to determine plan of removal to minimize herbicide usage and erosion potential. Consultar con expertos de restauración ecológica para establecer un plan de remoción que minimize el uso de herbicidas y potencial de erosión



Clean Up Days
Días de Limpieza

In urban streams like Williamson Creek, trash is often washed into the floodplain from upstream sources or left behind by visitors to the creek. Creek clean-ups are community events where volunteers remove trash and other debris from the creek.

En arroyos urbanos, como el Arroyo Williamson, es común encontrar basura que llega de río arriba o que han dejado visitantes del arroyo. Los días de limpieza son eventos comunitarios donde voluntarios recogen basura a lo largo del arroyo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño
N/A

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Invasive Species Management
Manejo de Especies Invasivas

Wildflower Planting
Siembra de Plantas Silvestres

Creek Restoration
Restauración del Arroyo

Considerations / Consideraciones

- Consult with ecological restoration experts to determine plan of removal to minimize herbicide usage and erosion potential.



Creek Restoration
Restauración del Arroyo

Work done to improve the environmental health of Williamson Creek in support of biodiversity, recreation, flood management, and habitat.

Trabajo para mejorar la salud ambiental del Arroyo Williamson para proteger la biodiversidad, recreación, manejo de inundaciones, y hábitats que se encuentran a lo largo del mismo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Clean-Up Days
Días de Limpieza

Invasive Species Management
Manejo de Especies Invasivas

Wildflower Planting
Siembra de Plantas Silvestres


Considerations / Consideraciones

- Consult with ecological restoration experts to determine plan for restoration. Consultar con expertos de restauración ecológica para establecer un plan de restauración.

"Erosion has made fencing fall down"

"La erosión ha causado que cercas se caigan."

ALL TOOLKIT ITEMS (CONTINUED)



Equipment Sheds

Casetas de equipo

Equipment sheds may hold tools for invasive species removal and community gardening.

Las casetas de equipo pueden guardar herramientas de jardines comunitarios y para la remoción de especies invasivas.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Invasive Species Management
Manejo de Especies Invasivas

Community Gardens
Jardines Comunitarios

Considerations / Consideraciones

- Can be designed to minimize environmental impact. Puede ser diseñado para minimizar impactos ambientales.

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Green Infrastructure

Infraestructura Verde

Green infrastructure, which includes features like rain gardens, bioswales, and permeable pavement, is a way to filter polluted stormwater and infiltrate it into the ground before it washes into Williamson Creek.

La infraestructura verde, incluyendo herramientas como jardines de agua, 'bioswales,' y pavimento permeable, es una manera de filtrar agua de lluvia contaminada antes de que llegue al Arroyo Williamson.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

N/A

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Parking Lots
Estacionamientos

public bathrooms
Baños Públicos

equipment sheds
Casetas de Equipo

Considerations / Consideraciones

- Green infrastructure should be strategically located to minimize impact of parking lots and other structures on the environment. La infraestructura verde debe ser localizada estratégicamente para minimizar el impacto a estacionamientos y otras estructuras en el ambiente.



Educational Programming

Programación Educativa

Immersive educational experiences that seek to educate children and adults about Williamson Creek and Austin's ecological systems.

Experiencias educativas de inmersión que buscan educar a niños y adultos sobre el sistema ecológico de El Arroyo Williamson.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

N/A

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Invasive Species Management
Manejo de Especies Invasivas

outdoor classrooms
Aulas al Aire Libre

Creek Restoration
Restauración del arroyo

Considerations / Consideraciones

- Programming may be coordinated with PARD, or local schools. Programación puede ser coordinada con PARD, o escuelas locales.



Water Storage

Almacenamiento de Agua

Water storage installations, such as rain barrels or underground cisterns, that are used to store water stormwater that runs off roofs or other surfaces during a rainfall.

Instalaciones de almacenamiento de agua, tales como barriles de agua o cisternas bajo la tierra, que se utilizan para almacenar agua de lluvia que baja de los tejados u otras superficies durante lluvias.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

N/A

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Parking Lots
Estacionamientos

public bathrooms
Baños Públicos

equipment sheds
Casetas de Equipo

Considerations / Consideraciones

- Water storage should be paired with structures and parking lots to reduce stormwater runoff into the creek. Almacenamientos del agua deben ir a la par con estructuras y estacionamientos para reducir las escorrentías de lluvias hacia el arroyo.

ALL TOOLKIT ITEMS (CONTINUED)



Wildlife Crossing

Cruce de Vida Silvestre

Wildlife crossings provide places for both water and the smallest animals such as insects, reptiles and amphibians to cross concrete sidewalks.

Los cruces de vida silvestre proveen espacio para agua y animales pequeños, tales como insectos, reptiles y anfibios, a que crucen banquetas.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Trails
Veredas/Caminos

Creek Restoration
Restauración del Arroyo

Considerations / Consideraciones

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Dual-Track Trail

Veredas con Pistas Duales

Dual-Track Trails separate pedestrian tracks and bicycle tracks to minimize accidents. This type of separation is most appropriate in high-traffic areas.

Veredas con pistas duales separan a peatones de ciclistas para minimizar accidentes. Esta separación es apropiada en lugares de alto tráfico.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

gathering spaces
Espacios de Reunión


Benches
Bancos

outdoor fitness equipment
Equipo de Gimnasio al Aire Libre

Considerations

• Dual track trails should be paired with green infrastructure to minimize their impact to the environment. Veredas con pistas duales van bien con infraestructura verde para minimizar su impacto al ambiente.

"It would be awesome if there were a hike/bike trail that went along the creek."
Sería increíble tener una vía de caminata/ciclismo a lo largo del arroyo."



Pollinator Nesting Boxes

Cajas de Nidos para Polinizadores

Many nesting bee species in build nests in aboveground cavities or tunnels in wood or plant stems. Pollinator Nesting Boxes provide nesting resources to bees through the use of hollow bamboo rods or drilled holes in wood.

Muchas especies de abejas crean sus colonias en nidos pre-construidos sobre la tierra, o en tuneles de madera o tallos de plantas. Las Cajas de Nidos para Polinizadores proveen nidos para abejas usando bambú hueco o tubos de madera huecos.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Wildflower Planting
Siembra de Plantas Silvestres

Considerations / Consideraciones

• These boxes can be hand-made by the community or bought. Estos cajones pueden ser creados a mano por la comunidad o comprados.

"Add Pollinator Nesting Boxes to help Native Bees. Potentially Sponsored by a local business or individuals"

Añadir cajas de nidos para Polinizadores para ayudar a las abejas nativas. Potencialmente auspiciadas por comercios locales o individuos."



Bonded Mulch Trail

Vereda con Mantillo Unido

Bonded mulch trails are aggregated wood mulch held together by a binding material. This surface is soft, natural, flood-resilient, and allows water to flow through its surface.

Veredas con mantillo son agregados de madera que se mezclan con un agente adhesivo para hacer un material resistente. Esta superficie es suave, natural, resistente a inundaciones, y permite que el agua pase por su superficie.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

gathering spaces
Espacios de Reunión

Benches
Bancos

creek restoration
Restauración del Arroyo

outdoor fitness equipment
Equipo de Gimnasio al Aire Libre

Considerations / Consideraciones

• Bonded mulch is ADA-compliant. Estas veredas pueden ser accesibles para personas con discapacidad (ADA).

• Bonded mulch trails require occasional maintenance and re-surfacing. Estas veredas necesitan mantenimiento ocasional.

"It would be awesome if there were a hike/bike trail that went along the creek."
Sería increíble tener una vía de caminata/ciclismo a lo largo del arroyo."

ALL TOOLKIT ITEMS (CONTINUED)



ASPHALT TRAIL
Vereda de Asfalto

Asphalt Trails provide opportunities for hiking, biking, and wheelchair access along Williamson Creek.

Veredas de asfalto proveen acceso al Arroyo Williamson a través de caminatas, ciclismo, y a personas en sillón de ruedas.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

GATHERING SPACES
Espacios de Reunión

BENCHES
Bancos

OUTDOOR FITNESS EQUIPMENT
Equipo de Gimnasio al Aire Libre


Considerations / Consideraciones

Asphalt trails should be paired with green infrastructure to minimize their impact to the environment. Las veredas de asfalto van bien con infraestructura verde para minimizar su impacto al ambiente.

"IT WOULD BE AWESOME IF THERE WERE A HIKE/BIKE TRAIL THAT WENT ALONG THE CREEK."

Sería increíble tener una vía de caminata/ciclismo a lo largo del arroyo.

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Natural Trail
Vereda Natural

Natural trails do not have any paved or aggregate surfacing. They are typically mowed grass or bare soil, and may be covered in a layer of mulch or other decomposable material.

Las veredas naturales no tienen superficies pavimentadas o agregadas. Usualmente son grama cortada o tierra, y pueden ser cubiertas por una capa fina de mantillo o material que se descompone.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

gathering spaces
Espacios de Reunión

Benches
Bancos

creek restoration
Restauración del Arroyo


outdoor fitness equipment
Equipo de Gimnasio al Aire Libre

Considerations / Consideraciones

Natural trails may be eroded during flood events. Las veredas naturales pueden ser erosionadas durante periodos de inundaciones.

"Connect to patchwork lots via the Richmond trib. On these shady lots, we could do a 'figure 8' mulch trail, focus on biodiversity, install benches."

Conectar propiedades a lo largo del tributario Richmond. En estos espacios con sombra se podría hacer una 'figura 8' con mantillo, enfocarse en la biodiversidad, e instalar bancos.



Concrete Trail
Vereda de Cemento

Concrete trails provide opportunities for hiking, biking, and wheelchair access along Williamson Creek.

Las veredas de cemento proveen oportunidades para caminatas, ciclismo, y acceso a sillones de ruedas a lo largo del Arroyo Williamson.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

gathering spaces
Espacios de Reunión

Benches
Bancos

outdoor fitness equipment
Equipo de Gimnasio al Aire Libre

Considerations / Consideraciones

Concrete trails should be paired with green infrastructure to minimize their impact to the environment. Las vías pavimentadas van bien con infraestructura verde para minimizar el impacto al ambiente.

"PARD has used brown permeable concrete for trails where flooding occurs."

PARD ha usado concreto permeable para vías inundables.



Parking
Estacionamiento

Parking lots provide vehicular access to trailheads, gathering spaces, and other areas of interest along the trail.

Estacionamientos proveen acceso vehicular a las entradas de los caminos, espacios de reunión, y otras áreas de interés a lo largo del arroyo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Green Infrastructure
Infraestructura Verde


Considerations / Consideraciones

Parking should be paired with green infrastructure to capture stormwater runoff and prevent it from washing into the creek. Estacionamientos van a la par con infraestructura verde para capturar escorrentías y prevenir que las mismas lleguen al arroyo.

"There is nowhere to dispose of trash or park. Recommend small parking lot here."

No hay donde tirar la basura o estacionarse. Recomendar un pequeño estacionamiento aquí.

ALL TOOLKIT ITEMS (CONTINUED)



On-Street Bike Lanes
Carril de bicicletas en la calle

Bike lanes may be placed along roads that access Williamson Creek to provide safe routes of travel for bicyclists from other neighborhoods or major thoroughfares to the Greenway.

Carriles de bicileras pueden ser incorporados a lo largo de las carreteras que accesan al Arroyo Williamson para proveer rutas seguras de viaje para ciclistas de otros vecindarios o vías mayores de la Cinta Verde.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Green Infrastructure
Infraestructura Verde

Considerations / Consideraciones

- Bike lanes should connect CWCG to adjacent trails and the neighborhood. Carriles de bicicletas deben conectar CWCG a otras vías y vecindarios.

"There's a plan to create a trail following an old rail line starting here, could be a great reason to get a sidewalk/bicycle path extension along Vinson to connect that trail and the greenway!" "Hay un plan para crear una vía a lo largo de la línea del tren comenzando aquí, que sería una buena razón para tener una vía de peatones/ciclistas a lo largo de Vinson que conecte esa vía con la cinta verde!"

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Low Water Crossing
Cruce bajo de aguas

Low water crossings provide a bridge across bodies of water for pedestrian and bike access when water levels are low, however, they are designed to allow water to flow over them during a rainstorm or flood event.

Un cruce bajo de agua provee un puente para peatones y ciclistas a través de cuerpos de agua que son bajos. No obstante están diseñados para que el agua corra sobre los mismos en eventos de inundaciones o lluvias.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Trails
Veredas / Caminos

Considerations / Consideraciones

- Low water crossings can act as dams during flood events, causing build-up of trash and debris. Cruces bajos de agua pueden convertirse en diques durante eventos de inundaciones, causando bloqueos con basura y escombros.

"Need bridges to make the pathway easily traversable" "Se necesitan puentes para que la vía se pueda atravesar fácilmente."



Land Acquisition
Adquisición de tierras

Land Acquisition is the process of acquiring property or pieces of property adjoining the creek to create a continuous greenway trail or to create additional public open space.

Adquisición de tierras es el proceso de adquirir propiedades o parte de propiedades para crear una cinta verde continua o crear espacios públicos adicionales.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Trails
Veredas / Caminos

Considerations / Consideraciones

- Work with PARD to make recommendations on land acquisition. Trabajar con PARD para hacer recomendaciones de adquisición de tierras.

"There is an abandoned/unused business space right now that has available parking and access to the trail...parks should purchase this space."

"Hay un comercio abandonado/sin usar ahora mismo que tiene estacionamiento disponible y acceso a la vía... [el departamento de] parques debería comprar este espacio."



Weather Warning Signage
Letreros de advertencia del clima

Warning signage and system regarding flash flooding and greenway access.

Letreros de advertencia sobre inundaciones repentinas y acceso a la vía verde.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Trailhead
Entrada a la vereda/camino

Considerations / Consideraciones

- Can be a general sign or as complex as an updated series of warnings. Puede ser un letrero o una serie de advertencias.

"Need a warning system for people in the greenway when storms are expected." "Se necesita una sistema de advertencia para la gente que este en la cinta verde cuando se esperan tormentas."

ALL TOOLKIT ITEMS (CONTINUED)



Labyrinth
Laberinto

A labyrinth is a curving pathway that winds in concentric circles to a central point. Walking into and out of a labyrinth can be a relaxing, contemplative exercise.

Un laberinto es un camino curvo que lleva a un punto céntrico a través de círculos. Caminar por un laberinto puede ser un ejercicio contemplativo y de relajación.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Gathering Spaces
Espacios de Reunión


Wildflower Plantings
Siembre de Plantas Silvestres

Considerations / Consideraciones

Labyrinths can be made by community members with stones and other materials found in the floodplain. Los miembros de la comunidad pueden crear los laberintos utilizando piedras y otros materiales de la zona inundable.

"It might be cool to have a labyrinth"
"Sería divertido tener un laberinto"

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Music Groves
Espacios musicales

Music groves may be created in collaboration with the Red Leaf School of Music as a place for their students and other members of the public to practice their instruments in an outdoor setting. These may include seating and shade. Se podrían crear espacios musicales en colaboración con la Escuela de Musica Red Leaf donde los estudiantes de la escuela y otros en la comunidad puedan practicar sus instrumentos al aire libre. El lugar puede incluir lugares con sombra para sentarse.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño


Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Trails
Veredas/Caminos

Considerations / Consideraciones

Music groves can be made in collaboration with the Red Leaf School of Music or other educational institution. Los espacios musicales pueden hacerse en colaboración con la Escuela de Musica Red Leaf u otra institución educativa.



Gathering Spaces
Espacios de Reunión

Gathering spaces provide places for community members to relax, picnic, and spend time with friends and family. They may include benches, shade structures, outdoor tables, games, or other design features that inspire connection. Espacios de reunion proveen lugares donde miembros de la comunidad pueden relajarse, hacer picnic, y pasar tiempo con familia y amigos. Estos pueden incluir bancos, estructuras en la sombra, mesas al aire libre, juegos, y otros atractivos que inspiren conexiones.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Labyrinth
Laberinto

Trails
Veredas/Caminos

Context Dependant

Considerations / Consideraciones

Gathering spaces with concrete pads and shade structures can be paired with water storage or green infrastructure to minimize environmental impact. Espacios de reunión con pisos de cemento y tejado pueden tener estructuras para almacenamiento de agua o infraestructura verde para mimizar el impacto ambiental.



Shaded Picnic Areas
Area de Picnic con Sombra

Groups of picnic tables provide an opportunity for large gatherings or small groups to enjoy meals outdoors together.

Grupos de mesas de picnic proveen oportunidad de compartir para grupos grandes o pequeños.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Gathering Spaces
Espacios de Reunión

Benches
Bancos

Signage
Letrero


Community Message Boards
Tablero de Mensajes Comunitario

Educational Programming
Programación Educativa

Considerations / Consideraciones

Shaded Picnic Areas should always be paired with trash cans, and should be wheelchair accessible. Las áreas de picnic en sombra pueden tener cestos de basura, y deben ser accesibles para personas en sillones de ruedas.

ALL TOOLKIT ITEMS (CONTINUED)



Hammock Grove
Área de Hamacas

Hammock Groves are designated trees or poles where visitors to Williamson Creek can set up their own hammocks to relax and swing.

Áreas de hamacas son áreas de árboles o postes donde los visitantes del Arroyo Williamson pueden colocar sus hamacas para mecerse y relajarse.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Gathering Spaces
Espacios de Reunión

Community Gardens
Jardines comunitarios

Considerations / Consideraciones

- While hammocks can not be placed permanently in parks, community members can bring their own or set up a hammock-share program. A pesar de que las hamacas no pueden ser instaladas permanentemente en los parques, los vecinos pueden traer las suyas o establecer un programa de compartir hamacas.

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Community Message Boards
Tablero de Mensajes Comunitarios

A community message board may be a small, enclosed bulletin board placed in high-traffic areas to provide a place for community members to advertise community events along Williamson Creek.

El tablero de mensajes comunitario puede ser un tablón cerrado de anuncios pequeño colocado en un área de mucho tráfico para que los vecinos puedan promocionar eventos comunitarios a lo largo del arroyo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Gathering Spaces
Espacios de Reunión

Trails
Veredas/Caminos

Signage
Letreros

Considerations / Consideraciones

- Community message boards should be placed along trails in high-traffic areas. Los tableros comunitarios de mensajes deben ser colocados a lo largo del camino en áreas de mucho tráfico.



Benches
Bancos

A bench is a long seat on which multiple people may sit at the same time. They may be placed along the trail to provide places to rest, or at playgrounds and other gathering spaces.

Un banco es un asiento largo donde múltiples personas se pueden sentar al mismo tiempo. Se pueden colocar a lo largo del camino para proveer lugares de descanso, o en parques y otros lugares de encuentro.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...


Gathering Spaces
Espacios de Reunión

Trails
Veredas/Caminos

Signage
Letreros

Considerations / Consideraciones

- Benches can be designed to be a form of public art. Los bancos pueden ser diseñados para ser una forma de arte público.



Public Art
Arte Publica

Outdoor public art varies, but may be sculptures, artistic benches, or other installations that enhance the identify of the Williamson Creek community and fosters community pride and a sense of belonging.

El tablero de mensajes comunitario puede ser un tablón cerrado de anuncios pequeño colocado en un área de mucho tráfico para que los vecinos puedan promocionar eventos comunitarios a lo largo del arroyo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Gathering Spaces
Espacios de Reunión

Creek Restoration
Restauración Del Arroyo

Wildflower Planting
Siembra de plantas silvestres

Benches
Bancos


Context
Dependant

Considerations / Consideraciones

- Public art may be coordinated with Austin's AIPP (Art in Public Places) program. Arte publica puede ser coordinada con el programa de AIPP (Art in Public Places).

"Would love to see Art from local artist along the trail."
"Me encantaría ver arte de artistas locales a lo largo del camino."

ALL TOOLKIT ITEMS (CONTINUED)



Community Gardens

Jardines Comunitarios

Community Gardens in the floodplain of Williamson Creek will provide a place for neighbors to grow food. This may be especially important for those living in multi-family apartment complexes without access to outdoor space to have their own gardens. Jardines comunitarios en la zona de inundaciones del Arroyo Williamson puede proveer un lugar donde los vecinos pueden sembrar comida. Esto puede ser importante para aquellos que viven en departamentos multifamiliares sin acceso a espacios al aire libre y que no pueden tener sus propios jardines.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Public Art
Arte Pública

Benches
Bancos

Gathering Spaces
Espacios de Reunión

Considerations / Consideraciones

- Community gardens should be placed so they are easily accessible by local neighborhoods. Los jardines comunitarios deben ser accesibles a los vecindarios locales.

"if people push hard enough for community gardens, these two areas are good for urban farming"

"Si la gente genera presión, estas dos áreas son buenas para jardines comunitarios y agricultura urbana."

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Outdoor Classrooms

Aulas al Aire Libre

Outdoor classrooms are gathering spaces where either children or adults can gather in a group setting to learn, listen, and interact with the environment.

Aulas al aire libre son espacios de encuentro donde niños o adultos se pueden encontrar en grupos para aprender, escuchar, e interactuar con el medio ambiente.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Context Dependant

Benches
Bancos


Public Art
Arte Pública

Music Groves
Espacios Musicales

Educational Programming
Programación Educativa

Considerations / Consideraciones

- Outdoor classrooms can be created in collaboration with local schools or other educational institutions. Aulas al aire libre pueden ser creadas en colaboración con escuelas locales u otras instituciones educativas.



Nature Play

Juego Natural

Nature playgrounds are children's play areas created using natural elements, which may include boulders, sticks, and stumps, water, sand, and structures made from natural materials. Children are encouraged to use these materials to build, explore, play, and develop fine motor skills. Parques naturales son áreas de juego de niños creadas usando elementos naturales, tales como rocas, troncos de árboles, agua, arena, y estructuras construidas con materiales naturales. Se exhorta a que los niños usen estos materiales para crear, explorar, jugar, y desarrollar habilidades motoras.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Public Art
Arte Pública

Benches
Bancos

Gathering Spaces
Espacios de Reunión


Community Gardens
Jardines Comunitarios

Considerations / Consideraciones

- Nature play areas can be created using materials from Central Williamson Creek. Lugares de juego natural pueden ser creados usando materiales del Arroyo Williamson.

"Playground in this open area"

"Parques en esta área abierta."



Bathroom Facilities

Baños

Outdoor bathroom facilities are small structures that contain toilets. They are often located in high-traffic areas or at trailheads.

Baños exteriores son pequeñas estructuras que proporcionan inodoros. Usualmente se encuentran en áreas de alto tráfico o en la entrada de caminos.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Gathering Spaces
Espacios de Reunión


Showers
Duchas

Lockers
Casilleros

Considerations / Consideraciones

- Bathroom facilities should be paired with green infrastructure to minimize their impact to the environment. Baños pueden ser desarrollados con infraestructura verde para minimizar el impacto al ambiente.

ALL TOOLKIT ITEMS (CONTINUED)



Signage
Letreros

Signs provide wayfinding and educational information about the environment to visitors.

Letreros proveen direcciones e información educativa sobre el ambiente a visitantes.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Trails
Veredas / Caminos

Gathering Spaces
Espacios de Reunión

Benches
Bancos


Considerations / Consideraciones

Signs should be placed in high-traffic areas. Letreros deben ser colocados en áreas de alto tráfico.

"Need signage that is a public entrance."

"Necesita letreros que digan que es una entrada pública."

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Public Showers
Duchas Públicas

Public showers are small structures that contain running, hot water and private shower areas. They may be located in high-traffic areas or at trailheads.

Duchas públicas son pequeñas estructuras que tienen agua potable caliente y áreas privadas para ducharse. Pueden colocarse en áreas de alto tráfico o en las entradas al camino.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada


Pairs well with... / Va bien con...

Lockers
Casilleros

Bathroom Facilities
Baños

Considerations / Consideraciones

Public showers should be paired with green infrastructure to minimize their impact to the environment. Duchas públicas pueden ser desarrolladas con infraestructura verde para minimizar el impacto al ambiente.



Trash Cans
Cestos de Basura

Trash cans are receptacles for visitors to Williamson Creek to place any refuse so that it does not pollute the waterway.

Cestos de basura son receptáculos donde los visitantes del Arroyo William-son pueden colocar sus desperdicios y no contaminar el arroyo.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Gathering Spaces
Espacios de Reunión

Benches
Bancos


Community Gardens
Jardines Comunitarios

Considerations / Consideraciones

Trash cans should be placed at trailheads and at gathering spaces. Cestos de basura deben ser colocados a la entrada de los caminos y en espacios de reunión.

"Trash cans at other entry points along greenway are needed."

"Se necesitan cestos de basura en otros puntos de entrada a la vía."



Lockers
Casilleros

Public lockers provide a place for storage of personal belongings along the trail, and may be especially useful for people experiencing homelessness.

Casilleros públicos proveen un lugar para almacenar artículos personales a lo largo del camino, y pueden ser muy útiles para individuos que no tiene vivienda.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Bathroom Facilities
Baños Públicos

Public Showers
Duchas Públicas


Gathering Spaces
Espacios de Reunión

Outdoor Fitness equipment
Equipo de Gimnasio al Aire Libre

Considerations / Consideraciones

Lockers should be paired with green infrastructure to minimize their impact to the environment. Casilleros pueden ser complementados con infraestructura verde para minimizar impactos al ambiente.

ALL TOOLKIT ITEMS (CONTINUED)



FOOD FORESTS

Bosques de Alimentos

Food forests are a sustainable, low-maintenance form of food production. They are integrated groupings of trees, shrubs, and other plants which provide fruits, nuts, and vegetables for community members.

Los bosques de alimentos son una forma de producción alimentaria sostenible y de bajo mantenimiento. Consisten en grupos integrados de árboles, arbustos, y otras plantas que proveen frutas, nueces, y verduras para los miembros de la comunidad.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

GATHERING SPACES
Espacios de Reunión

COMMUNITY GARDENS
Jardines comunitarios

EDUCATIONAL PROGRAMMING
Programación Educativa

TRAILS
Veredas/Caminos


SIGNAGE
Letreros

POLLINATOR NESTING BOXES
Cajas de Nidos para Polinizadores

Considerations / Consideraciones

- It can take years for food forests to reach maturity, so community buy-in and commitment to long-term management is critical to success. Los bosques de alimentos requieren años para alcanzar la madurez, así que el apoyo y compromiso de la comunidad con el manejo por el largo es esencial para el éxito.

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Outdoor Fitness Equipment

Equipo de Gimnasio al Aire Libre

Outdoor fitness equipment helps community members be active and combat health risks associated with overweight and obesity by providing outdoor fitness activity installations.

Equipo de Gimnasio al Aire Libre ayuda a los miembros de la comunidad a ser activos y combatir riesgos de salud asociados a la obesidad al proveer instalaciones para ejercicios al aire libre.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Skatable Areas
Áreas de Patinaje

Trails
Veredas / Caminos

Considerations / Consideraciones

- Select a range of fitness equipment that is accessible to youth, adults, and seniors. Seleccionar variedad de equipos de ejercicios que sean accesibles a jóvenes, adultos, y mayores de edad.



Skatable Areas

Áreas de Patinar

Skateable areas may include skate parks or other features meant to be used on skateboards, rollerblades, and rollerskates.

Las área de patinar pueden incluir parques de patinaje u otras estructuras para ser utilizadas por patines y patinetas.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Outdoor Fitness Equipment
Equipo de Gimnasio al Aire Libre

Gathering Spaces
Espacios de Reunión

Green Infrastructure
Infraestructura Verde

Considerations / Consideraciones

- Skateable areas should be paired with green infrastructure to minimize environmental impact. Áreas de patinajeorean con infraestructura verde para minimizar impactos al ambiente.
- Opportunity to enhance existing channel for both stormwater and skating. Existe la oportunidad de mejorar el canal existente para patinaje como para las aguas pluviales.

"People come from all over to skate this ditch during Stupid-Fest. Fringe group famous."
"La gente viene de todos lados a patinar in este cuneta. Es famoso."



Mountain Biking Trail

Vías/Caminos de Ciclismo de Montaña

Mountain biking trails provide off-road terrain loops or paths for mountain bikes. These trails are often, but not always, for exclusive use by bikers to prevent accidental collision with pedestrians.

Las veredas de ciclismo de montaña proveen terreno fuera de la carretera para los ciclistas de montaña. Estas veredas a veces, pero no siempre, son exclusivamente para el uso de ciclistas para prevenir accidentes con peatones.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Skatable Areas
Áreas de patinaje

Considerations / Consideraciones

- Mountain biking trails should be carefully designed to avoid erosion. Las vías para ciclistas de montaña deben ser diseñadas con precisión para evitar erosión

ALL TOOLKIT ITEMS (CONTINUED)



Bike Racks
Aparcabicis

Bike racks provide a place for those visiting Central Williamson Creek Greenway to park and lock their bikes.

Los aparcabicis proveen lugar para estacionar y asegurar las bicicletas para los visitantes de la Cinta Central Verde del Arroyo Williamson.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Trails
Veredas/Caminos

Signage
Letreros

Parking Lots
Estacionamientos

Considerations / Consideraciones

- Bike racks should be placed at trailheads and next to parking lots. Aparcabicis deben ser colocados en las entradas a las vías/caminos y cerca de los estacionamientos de autos.

NOTE: SOME ITEMS IN THIS SECTION WERE NOT INCLUDED IN THE VISION PLAN BECAUSE THEY WERE NOT LIKED BY THE COMMUNITY. REFER TO THE IDEA CARD SCORES ON PAGE 80 FOR MORE INFORMATION.



Fitness Programming
Programación de Ejercicios

Fitness programming may include a wide variety of planned group activities led by fitness instructors, including outdoor yoga classes, community hikes, and races.

Programas de ejercicios pueden incluir una gran variedad de actividades grupales lideradas por un instructor, incluyendo yoga, caminatas comunitarias, y carreras.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño
N/A

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Disc Golf
Disco Golf

Considerations / Consideraciones

- Fitness programming can be coordinated with local gyms or PARD. Programación de ejercicios puede ser coordinado con gimnasios locales o PARD.



Disc Golf
Disco Golf

Disc golf is a game in which frisbees are thrown into a series of metal baskets situated on an outdoor course. The object is to win by completing the course with as few throws as possible.

Disco golf es un juego donde los discos se arrojan a una serie de cestas de metal dispersadas por un campo de juego al aire libre. El objetivo es ganar al completar el curso de cestas con el menor numero de intentos.

Net Environmental Impact | Impacto Ambiental Neto

Enhances Habitat | ¿Mejora el hábitat?

Enhances Water Quality | ¿Mejora la Calidad del Agua?

Reduces Heat Island Effect | ¿Reduce el efecto de 'isla de calor'?

Reduces Erosion | ¿Reduce la Erosión?

Honors Community Identity | ¿Honra la Identidad de la Comunidad?

Opportunities for Social Connections | ¿Ofrece Oportunidades para Interacciones Sociales?

Accessibility | ¿Accesibilidad?

Size | Tamaño

Phasing | Fase Recomendada

Pairs well with... / Va bien con...

Fitness Programming
Programación de Ejercicios

Considerations / Consideraciones

- Disc golf requires ongoing maintenance and mowing of grass. Disco golf requiere mantenimiento continuo y corte de grama.

Appendix E

ALL COMMUNITY ENGAGEMENT + COMMUNICATIONS

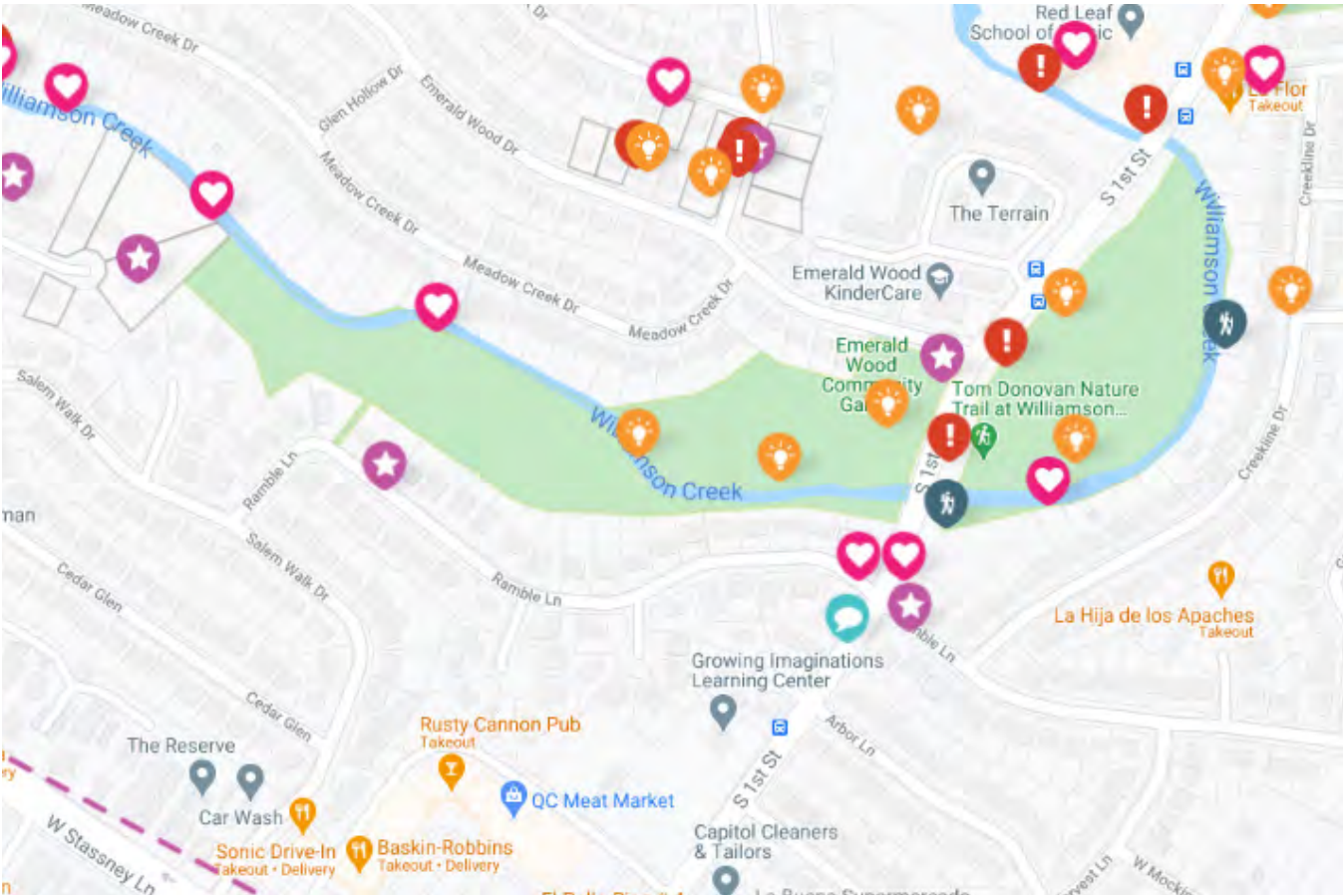
The following pages detail additional community engagement outlets and activities that were available for the public to participate in throughout the course of the project.

These include:

- 1: Audio Stories and Creek Animation
- 2: Creek Packs
- 3: Flat Stanley Activity
- 4: Virtual Creek Stomps
- 5: Community Photos from the iNaturalist App
- 6: Virtual Community Picnics and Celebrations
- 7: Community Powered Workshop Newsletter
- 8: Central Williamson Creek Greenway Facebook Page
- 9: Conversation Toolkits
- 10: Creek Stomp Journals

Social Pinpoint - Virtual Map

The interactive map on Social Pinpoint provided the opportunity to geographically share ideas, activities, and unique places along the Greenway. The map helped to shape the Creek Idea Cards.



Social Pinpoint - Creek Idea Cards

The Creek Idea Cards were based on ideas shared by the Williamson Creek Community. The idea cards were posted to Social Pinpoint, a community engagement platform, and categorized hierarchically through public vote as a way to prioritize which ideas would be included in the Vision Plan.



Social Pinpoint - Public Comment

Participants provided feedback on the Vision Plan drafts through Social Pinpoint, a virtual engagement platform.



Comment on the Project Overview & Vision Plan Chapters in the forum below!

You can download the document from the Vision Plan section above. There is a 500 character limit per comment but feel free to leave multiple comments to share your feedback.

- 1. What other context for the project may have been missed?
- 2. Do you see anything that doesn't work, or that you'd like to see included?
- 3. Anything else you'd like to provide feedback on?

Storytelling

Storytelling activities were employed to help ensure that the Vision Plan represented the full spectrum of experiences and hopes held by those who live and explore along the greenway, including audio stories to preserve and share personal accounts about Central Williamson Creek, the green spaces that surround it, and what it means to residents. A series of audio stories were produced as well as an animation by [Kiln Pictures](#) in partnership with community members of Central Williamson Creek Greenway, [Community Powered Workshop](#), and [The Nature Conservancy](#) and illustrates how the Vision Planning process centered community voices.

Contributors:

- Alfred Mcleod
- Allison Mclean
- Barbara Mead
- Darin Banduch
- Dave Bradshaw
- Genoi Strola
- Kate Mason-Murphy
- Kelly Davis-Burns
- Mark Branson
- Mary Olmstead
- Melody Plate
- Nicole Sanford
- Steve Prather
- Tom Paolini
- Ryan and Haley Flener
- Russell Julian



“I’ve always enjoyed birds. My father was a birder; my grandmother, she knew her birds.”



“It’s like having a little park in the city”



“We would dog paddle in the rapids when we had a good rain”



“After they put in the sewage system, our creek completely died”



“Improving any park is just a matter of involving your neighbors”



“I couldn’t live in any other place”

Creek Chats

The weekly Creek Chats were provided in two formats - through Zoom and at a socially-distanced outdoor pop-up space. Members from the Community Working Group, Community Powered Workshop and Asakura Robinson were available for in-depth community conversations about questions, ideas and ways to get involved.



Community working group members at a creek chat.



CWCG Vision Plan Yard Sign



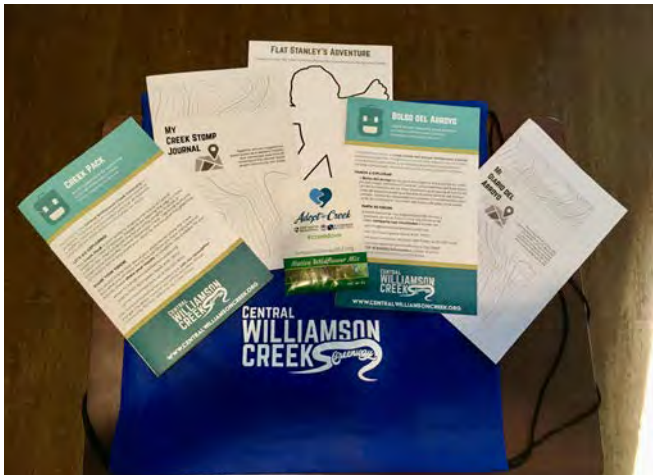
Toolkit item activities at the Creek Chats

Creek Packs

Creek Packs were available at Creek Chat pop-ups or upon request and included printed engagement activities and tools available in English and Spanish as a guide to shaping the future of the Greenway.



Creek Packs were distributed at Creek Chats.



Creek Pack



Creek Packs were distributed at Creek Chats.

Flat Stanley

Flat Stanley is an educational project that uses paper cut-outs to tell stories about people and places. Participants created their story of Flat Stanley’s future in the Creek by taking photos of them in different scenes to document their experiences along the Greenway.

GOAL: Flat Stanley is an educational project that uses paper cut-outs to tell stories about people and places. Create the story of Flat Stanley’s future in the Creek by taking photos of them in different scenes along the Creek to describe their adventures in different places. Pair Flat Stanley with found or created objects and materials to indicate emotions or experiences.

MATERIALS NEEDED

Flat Stanley – you can find templates available online to print at home or create your own version of Flat Stanley or request a mailed hard copy by emailing info@centralwilliamsoncreek.org

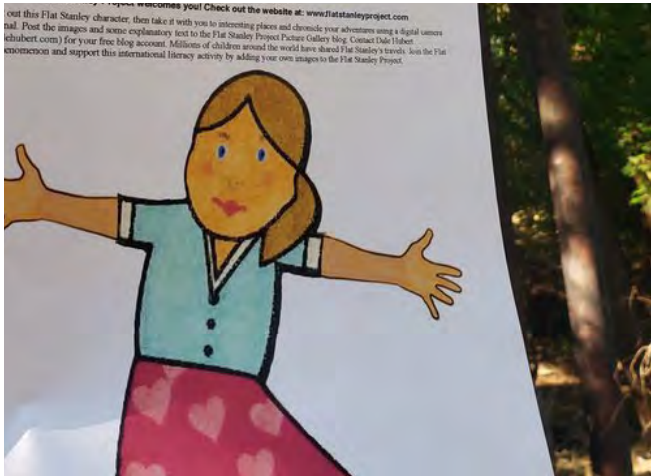
- Found objects
- Materials to indicate emotions or experiences
- Camera to take photos

ACTIVITY

- 1: Think about the spaces you visit along the Creek today.
- 2: Create the story of Flat Stanley’s future experiences in the Creek.
- 3: Using Flat Stanley plus any found or created objects/materials, create 3 scenes of creek experiences. Consider using other elements to indicate emotions or experiences, (e.g. sunshine indicates likes, rain clouds indicate dislikes.)
- 4: Describe Stanley’s adventure. Explain the

meanings of the objects/materials you found or created and why you chose them. Describe the scene and why you chose to take the photo there.

- 5: Share your 3 scenes through photos and text below or on the Central Williamson Creek Greenway Facebook page.



Virtual Creek Stomps

Community members filmed and narrated their physical experiences of the Creek as Virtual Creek Stomps to document creek conditions and inspire others to explore the creek.



“...we even had a gray fox that came up one summer that we fed every evening”



Armadillo skeleton captured by Jessica



Creek captured by Landscape Architecture team and City of Austin staff



Waterfall captured by Watershed Protection Department



Trash and debris along the creek captured by Jessica



Wetland plants captured by Landscape Architecture team and City of Austin staff



Railroad bridge captured by Greg and Anna



Tunnels and skating area captured by Greg and Anna

iNaturalist Community Photos

Participants shared their Greenway experience by documenting plants, animals, nature, and places through the iNaturalist, a nature app that helps to identify plants and animals. These observations were geolocated and provided valuable information about the spatial distribution and ecology of plant and animal species throughout the Greenway.



Map of iNaturalist sightings in the Central Williamson Creek Greenway



Stereum ostrea
False Turkey-tail



Hyles Lineata
White-lined Sphinx



Spinus psaltria
Lesser Goldfinch



Coccinellidae
Lady Beetles



Chrysomela texana
Red-headed Willow Leaf Beetle



Gaillardia pulchella
Indian Blanket



Tecoma stans
Yellow Trumpetflower

Virtual Community Picnics and Celebrations

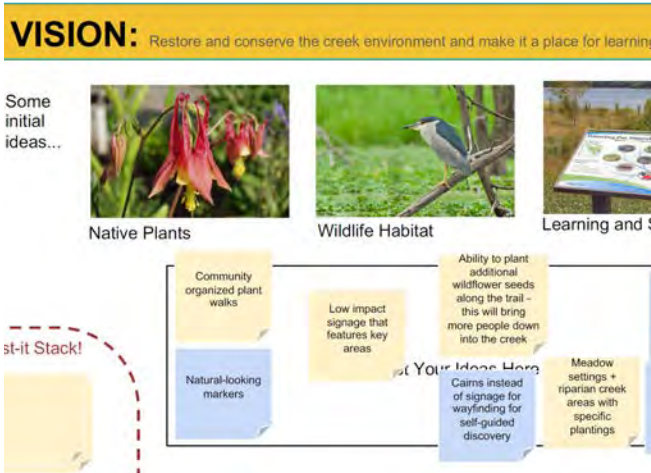
Community-wide, family-friendly virtual picnics hosted on Zoom included interactive sessions led by members of the Community Working Group to engage their neighbors in the Vision Planning process by demonstrating activities and sharing updates. The “Green Ribbon Celebration” in December 2020 celebrated the release of the plan to the public for comment.



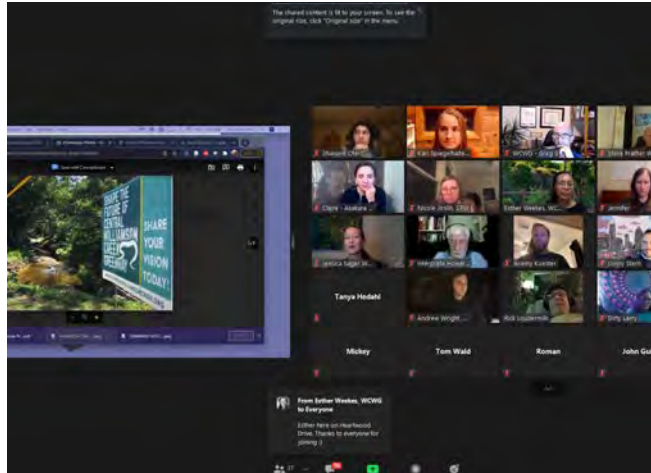
Community Picnic



Green Ribbon Celebration



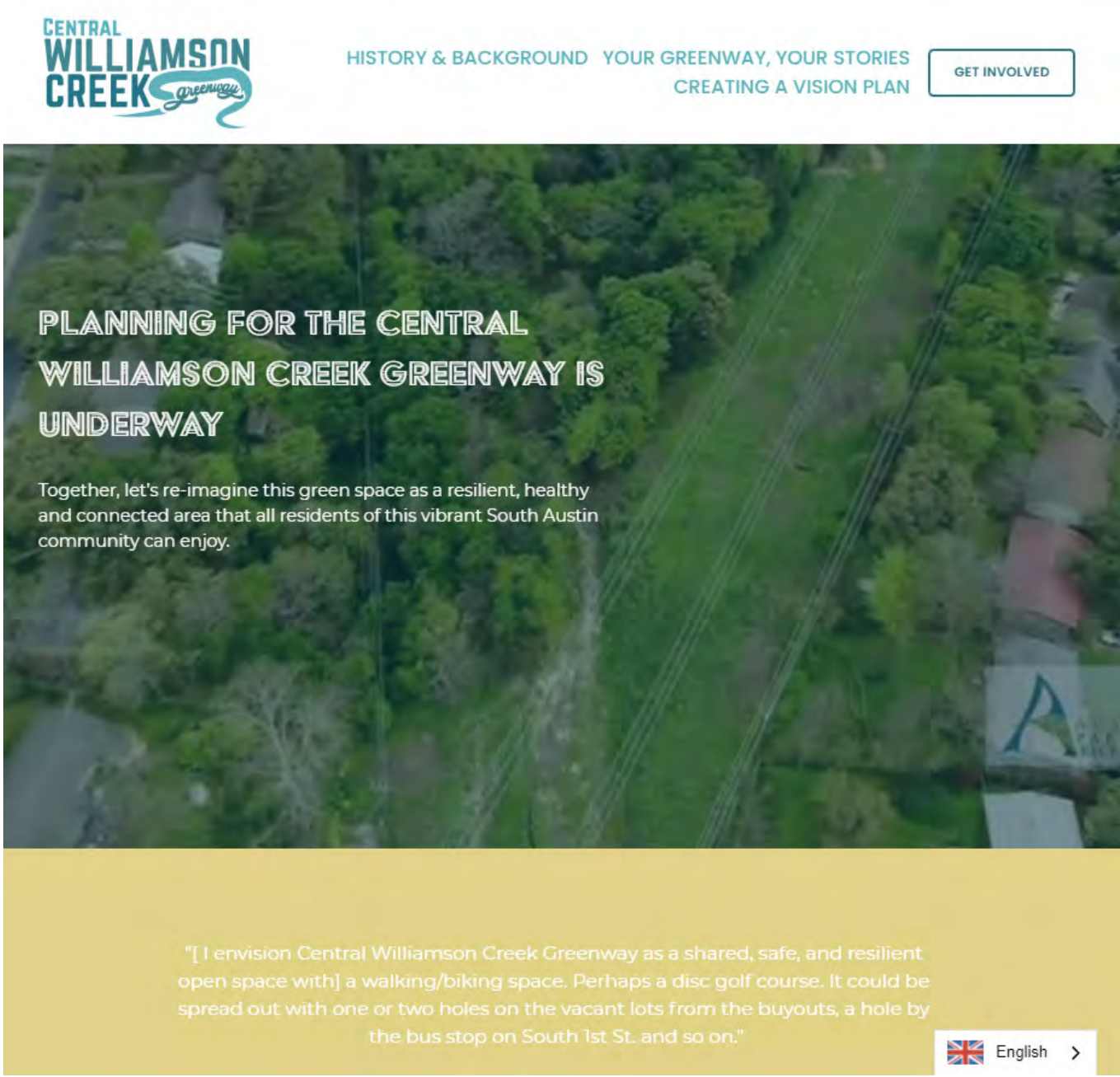
Community Picnic



Green Ribbon Celebration

Website

The website www.centralwilliamsoncreek.net shared the history and background of the project, community stories, engagement activities and information on the project area, process, partners and documents, including drafts of the Vision Plan. The website will continue to serve as a transparent method of sharing ways to get involved in the implementation of the Vision Plan.



Newsletter

The newsletter served as a primary communication outlet to share ways to get involved, events, Vision Plan updates, blog posts and community stories.

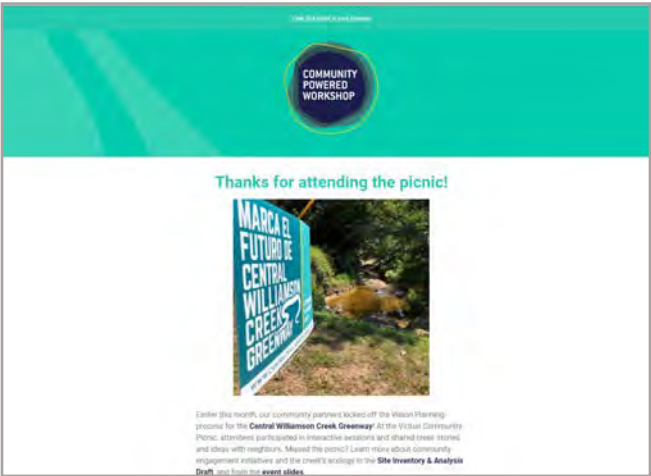
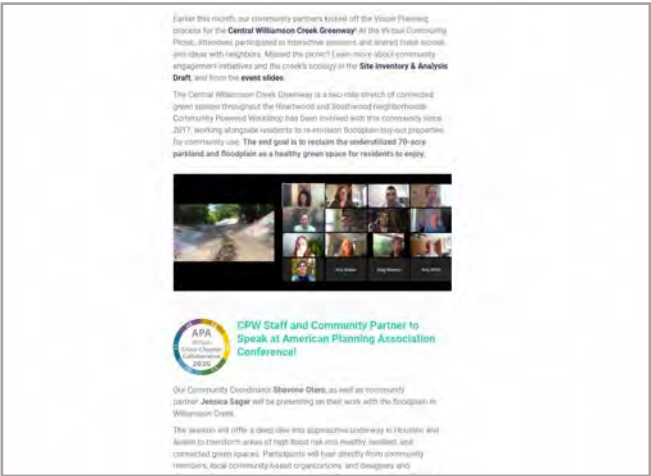
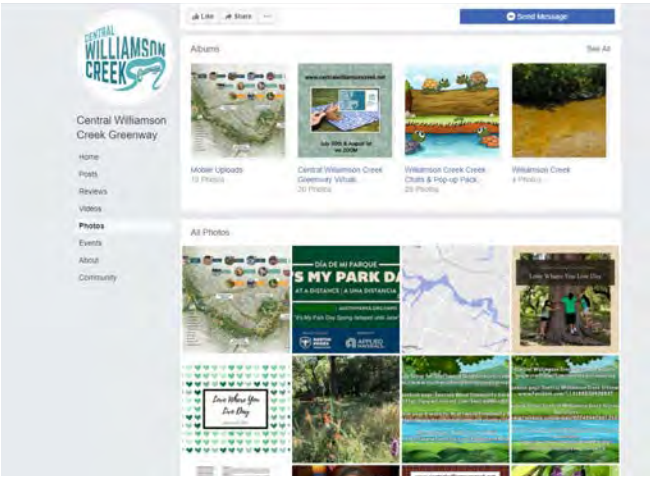
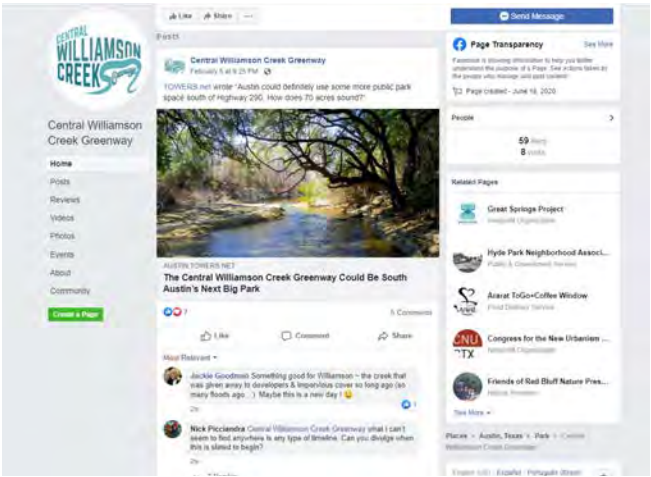
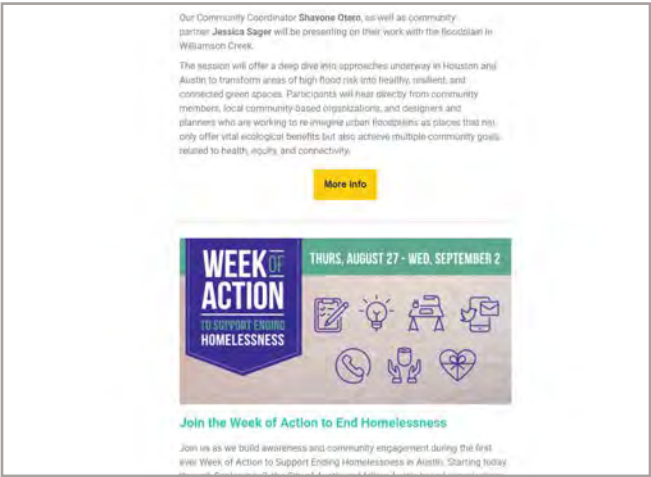
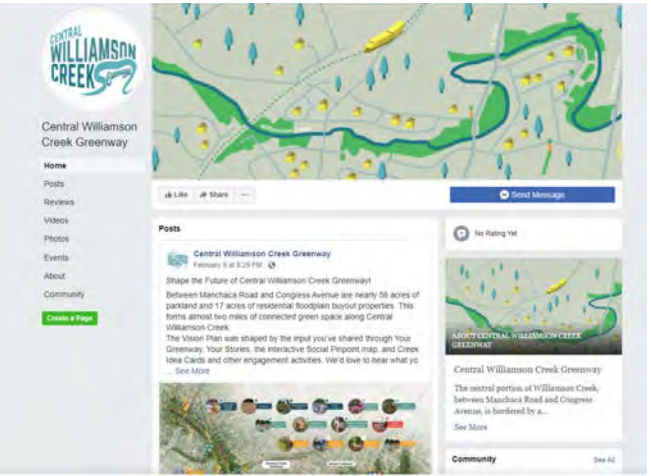
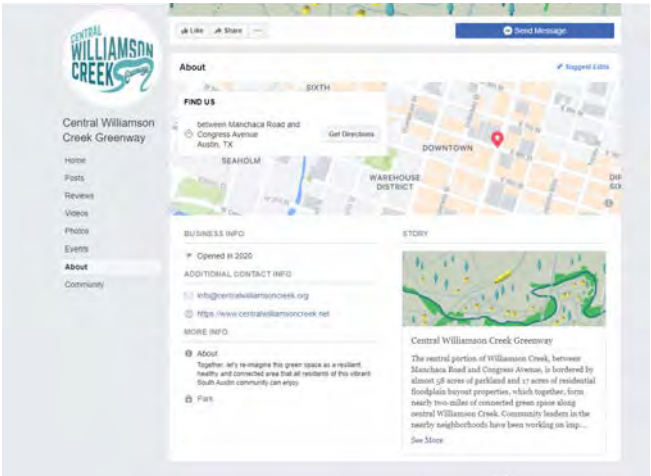


Photo by Anna Pittala



Facebook

Community events and updates to the Vision Plan were posted to the Central Williamson Creek Greenway Facebook page.



Conversation Toolkits

The Toolkit was created for anyone wanting to facilitate a conversation with their neighbors to re-imagine the Central Williamson Creek Greenway as a community space, capturing opinions, perceptions, and stories. The prompts provided helped individuals think through the future of the Greenway or host meaningful conversations with family and friends.



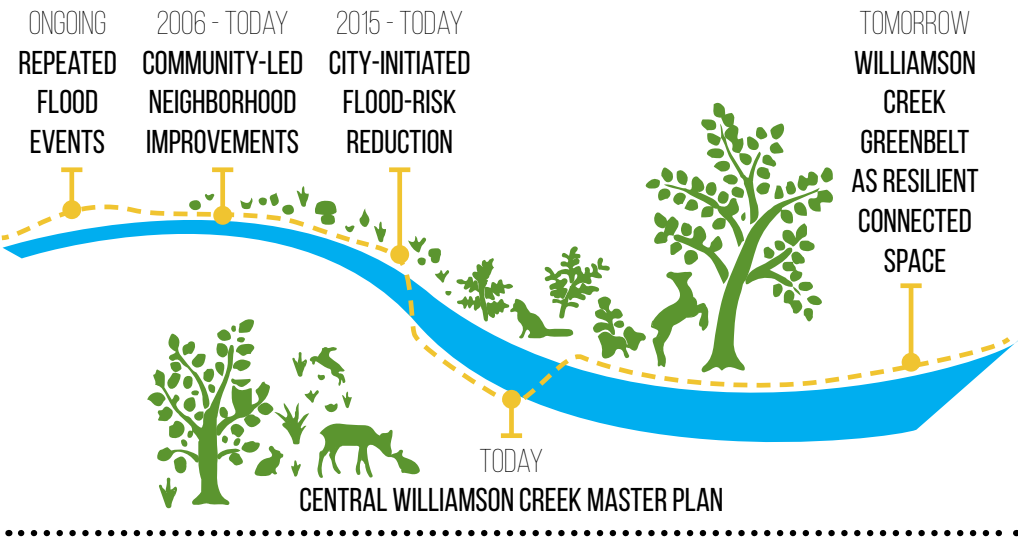
COMMUNITY CONVERSATION TOOLKIT

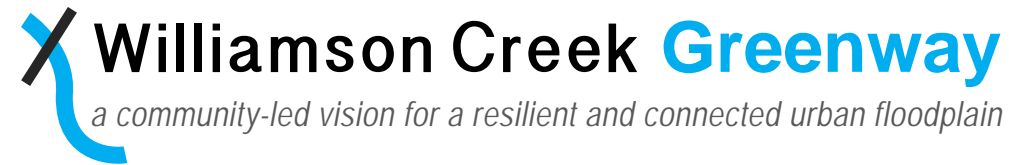
WHY ARE WE DOING THIS?

Floodplains in Texas cities are expanding as storms become more intense and more frequent with climate change. As a result, urban communities increasingly face the dual challenge of protecting human lives and sustainably managing flood-prone urban landscapes.

Williamson Creek in South Austin has been continually ravaged by floods over the last two decades. As a result, the City of Austin and U.S. Army Corps of Engineers partnered on a buyout process beginning in 2015. With 17.8 acres of flood buyout properties, combined with 58.3 acres of underutilized park-land, the central portion of Williamson Creek represents an opportunity to *re-imagine this floodplain as a resilient collective and connected space* in partnership with an ethnically and socioeconomically diverse community.

WHERE HAVE WE BEEN & WHERE ARE WE GOING?





OBJECTIVE:

This toolkit is made for anyone wanting to participate in a conversation about Central Williamson Creek Greenway and how it could be re-imagined as a community space in the future, sharing opinions, perceptions, and stories.

HOW TO:

The following prompts are intended for you or to help facilitate a conversation with family, friends, and neighbors. Please record your conversation as well as any important or recurring points. You may cover all four themes during your conversation or focus on a specific topic, it's up to you!

COMMUNITY CONVERSATION THEMES:

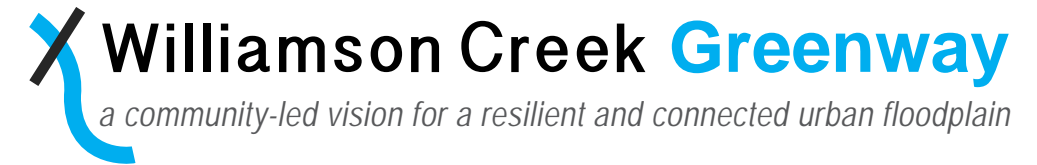
- THEME 1: Current Creek Perceptions
- THEME 2: Creek Likes
- THEME 3: Creek Challenges
- THEME 4: Implementing Our Vision

MATERIALS INCLUDED IN THIS TOOLKIT:

- Guide for Creek Conversations
- Neighborhood & Creek Map

SHARE YOUR CONVERSATION TOOLKIT RESULTS:

- Email a photo or scan to info@centralwilliamsoncreek.org
- Mail to Community Powered Workshop, 1023 Springdale Road, #13F, 78721



The information collected through this process will be aggregated to form an overall vision for Central Williamson Creek Greenway. Your personal information will not be shared outside of the project group and you will not be contacted other than to keep you plugged into the process. If you have any questions or concerns please feel free to reach out to us at info@centralwilliamsoncreek.org.

CONVERSATION FACILITATOR:

Name:
Phone/Email:
Address:

CONVERSATION PARTICIPANTS:

Name	Phone/Email	Address	Future Volunteer
------	-------------	---------	------------------

1 CURRENT CREEK PERCEPTIONS

Share experiences had in Central Williamson Creek Greenway and the surrounding area and how you currently feel about the creek.

GUIDING QUESTIONS:

- If you have spent time in Central Williamson Creek Greenway, what brought you there and how did you get there (actual entry point)?
(e.g. walking, walking the dog, meeting with friends on a path near my street, etc.)
- If no, is there a particular reason why you don't go there?
- Describe the creek in one word.

MAP IT:

- Using the map of the area, mark the spots you have visited before using a circle
- Do you have any stories you are willing to share about being in that space?
- If you have not visited, are there any stories you might have heard about specific spaces of the creek?

1 NOTES CREEK PERCEPTIONS

How do you spend time in Central Williamson Creek Greenway?

What keeps you away from Central Williamson Creek Greenway?

1 NOTES CREEK PERCEPTIONS

*Describe Central Williamson Creek Greenway
in ONE WORD*

*Stories about
Central Williamson Creek Greenway*

*Anything else you would like to share about how you
currently experience and perceive the creek?*


2 CREEK LIKES

Share details about things and spaces you like along Central Williamson Creek Greenway.

GUIDING QUESTIONS:

- What 3 words describe a place that makes you feel comfortable and a sense of belonging.
- Where along Central Williamson Creek Greenway might you be able to feel that?
- If not, how do you think these feelings could be achieved in Central Williamson Creek Greenway?

MAP IT:

-  Using the map of the area, ask people to mark the spots they are most likely to feel comfortable and a sense of belonging in Central Williamson Creek Greenway with a triangle.

2 NOTES

Places that make you feel comfortable and belonging in 3 words

CREEK LIKES

Spaces in Central Williamson Creek Greenway that make you feel this way

2 NOTES

CREEK LIKES

*Ways Central Williamson Creek Greenway
could provide a greater sense of comfort
and belonging for the neighborhood*

*Anything else you would like to share
about what you like about the creek?*

3 CREEK CHALLENGES

Share details about what you see as challenges along Central Williamson Creek Greenway.

GUIDING QUESTIONS:

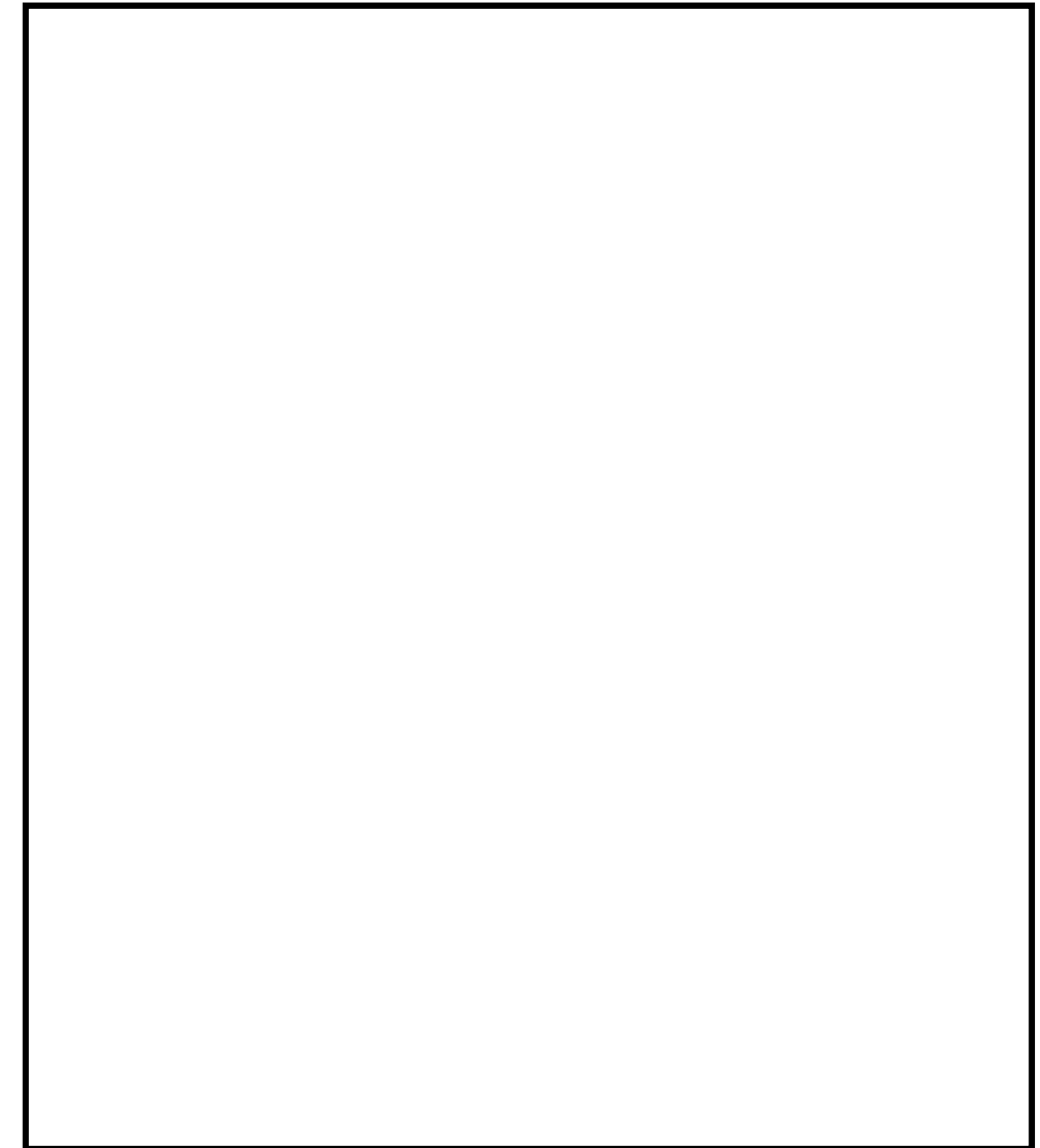
- What challenges do you have in experiencing Central Williamson Creek Greenway as a neighborhood amenity?
- Are these concerns and challenges shared by other neighbors or are there others you have heard?
- How do you think the challenges you have identified could be overcome?

MAP IT:

- Using the map, mark areas that pose significant challenges with a square.

3 NOTES CREEK CHALLENGES

Concerns and Challenges seeing or experiencing Central Williamson Creek Greenway as a neighborhood amenity



3 NOTES CREEK CHALLENGES

Ways these challenges or concerns could be overcome

Anything else anyone would like to share about creek concerns or challenges?

4 IMPLEMENTING OUR VISION

Share information about what you would like to see in Central Williamson Creek Greenway.

GUIDING QUESTIONS:

- What type of activities would you like to engage in or see other people engaging in along Central Williamson Creek Greenway? Are there specific locations you have in mind?
- If stewardship means caring for Central Williamson Creek Greenway, how do you see you and your neighbors as stewards?
- How do you think the neighborhood can collectively work towards implementing a shared vision for Central Williamson Creek Greenway?

MAP IT:

- Using the map, mark areas along the creek where your vision would be most impactful or where you would like to see specific activities happen with a star.



4 NOTES

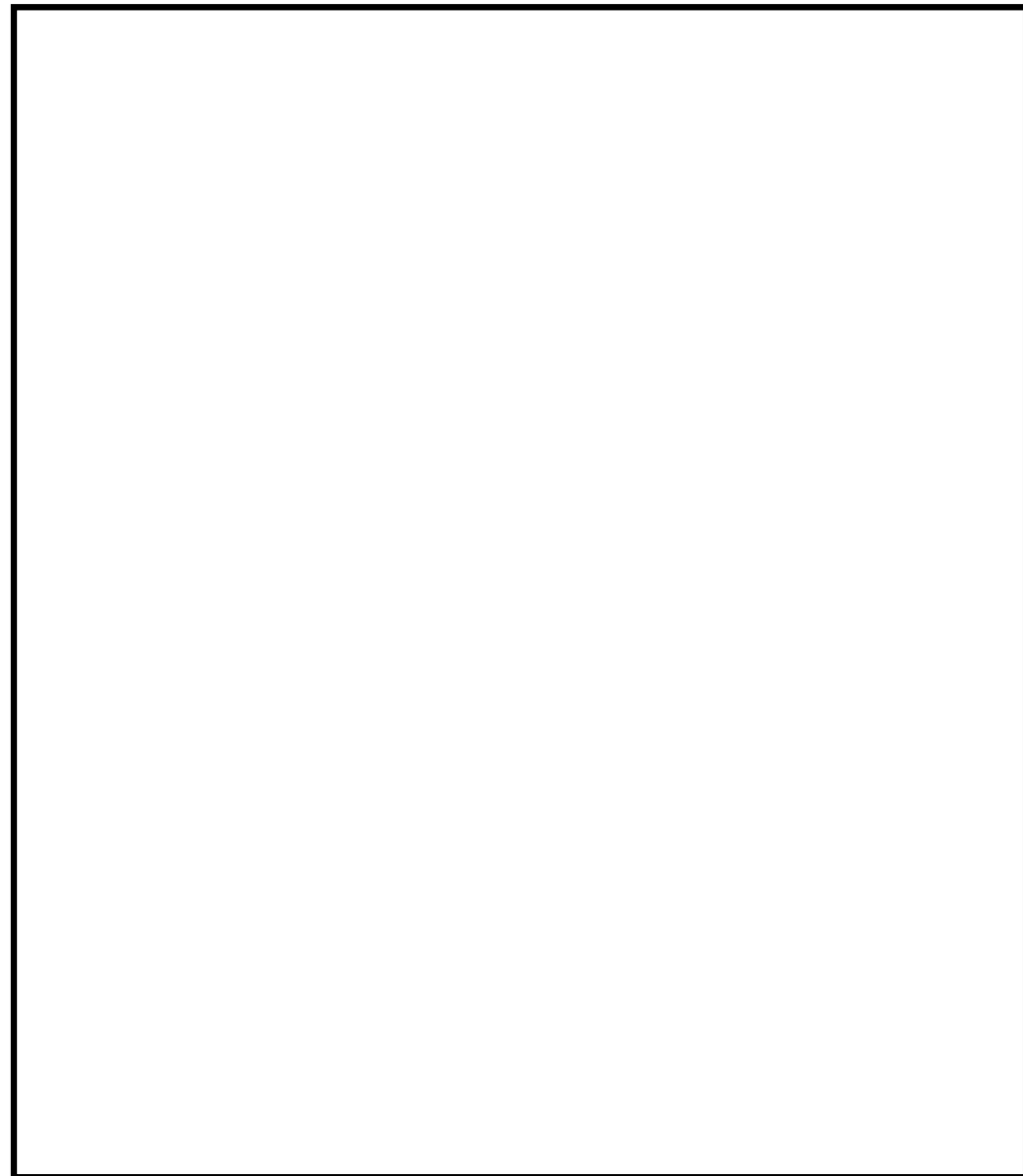
FUTURE VISION

Types of activities you would like to see along the creek & locations you have in mind

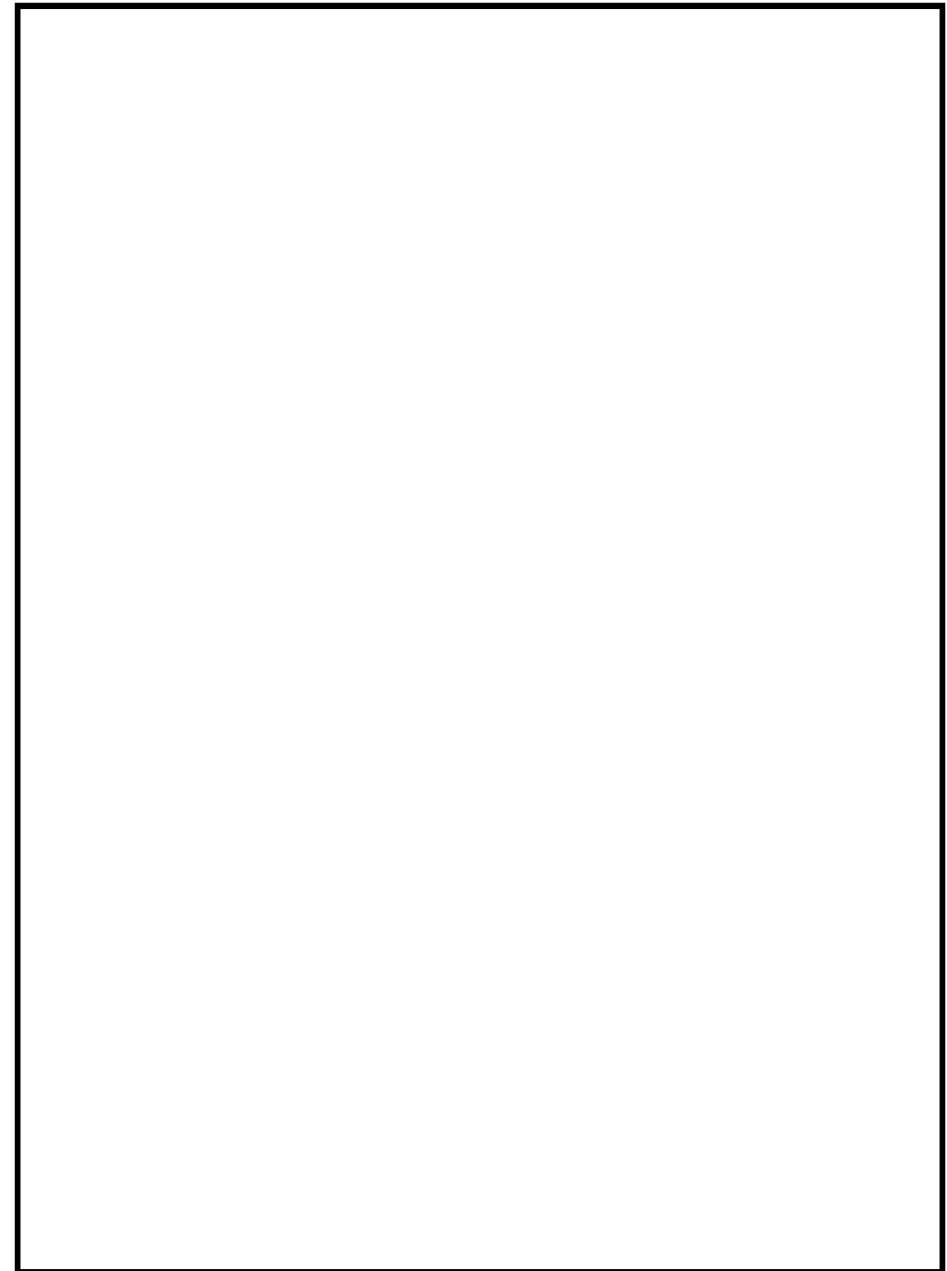
4 NOTES

FUTURE VISION

*Ways you and your neighbors can
be stewards of the creek*



*Ways you and your neighbors can collectively
work towards implementing a shared vision*





CONGRATULATIONS, YOU COMPLETED THE TOOLKIT!

... but you're not done yet. Please share the results of your conversation back so they can be included in the community vision!

Ways to share your conversation toolkit results:

- Email a photo or scan to info@centralwilliamsoncreek.org
- Mail to Community Powered Workshop, 1023 Springdale Road, #13F, 78721

If you have any additional questions or concerns please contact us at info@centralwilliamsoncreek.org

.....

This toolkit was developed by Community Powered Workshop in partnership with Public, Green & Wild, The Nature Conservancy, and the National Park Service.

This partnership came from a resident-identified need for a comprehensive community vision for public access to the growing stock of publicly owned land along Williamson Creek for the benefit of neighborhood residents.



Creek Stomp Journals

The Creek Stomp Journal was provided to create a common method for documenting hikes along the creek to share with neighbors and inform the vision planning process.



MY CREEK STOMP JOURNAL

Multi-functional green spaces are critical components of urban resilience and they contribute largely to the health and well-being of nearby residents. Those residents and community leaders (you!) have an important role to play in the future of this community greenspace.

Community members from across the Central Williamson Creek area are actively engaged in a planning process to envision a healthy and resilient future for the Greenway.

This *Creek Stomp Journal* was created to provide a common method for documenting hikes along the creek to share with neighbors and inform the vision planning process. Your submissions will be shared on the project website: www.centralwilliamsoncreek.org.

We invite you to use this journal to record your creek stomps and send them back to us however is most convenient for you:

email: info@centralwilliamsoncreek.org
mail: 1023 Springdale Road, #13F, 78721
or call to coordinate pick up at 512-220-4254



centralwilliamsoncreek.org

Please visit www.centralwilliamsoncreek.org for other ways to get involved including:



VIRTUAL
EVENTS



COMMUNITY
CONVERSATION
TOOLKITS



COMMUNITY
PHOTOS
find us on the iNaturalist app



YOUR GREENWAY,
YOUR STORIES
record your story today!

Have suggestions for other ways you'd like to get involved with the Greenway planning process? Let us know at info@centralwilliamsoncreek.org!

MY CREEK STOMP JOURNAL

DATE/TIME:

ENTRY &
EXIT POINTS:

TRANSIT
TYPE:

DIFFICULTY:

DISTANCE:

AMENITIES:

CONDITIONS

Creek dry ☐ ☐ ☐ ☐ ☐ wet

Obstacles few ☐ ☐ ☐ ☐ ☐ many

Trail poor ☐ ☐ ☐ ☐ ☐ clear

Navigation easy ☐ ☐ ☐ ☐ ☐ hard

Bikeable easy ☐ ☐ ☐ ☐ ☐ hard

Activity none ☐ ☐ ☐ ☐ ☐ a lot

Wildlife none ☐ ☐ ☐ ☐ ☐ a lot

Vegetation invasive ☐ ☐ ☐ ☐ ☐ native



What do your neighbors need to know about this part of the creek?

NOTES ABOUT YOUR CREEK STOMP:

What was the best & worth part of your Creek Stomp today? What do you hope for the future of this part of the creek?

MY CREEK STOMP MAP

Where did you explore today & what did you experience?

PLACES YOU...
have suggestions
have challenges
find unique
explore

CENTRAL WILLIAMSON CREEK
centralwilliamsoncreek.org



MY CREEK STOMP JOURNAL

DATE/TIME:

ENTRY &
EXIT POINTS:

TRANSIT
TYPE:

DIFFICULTY:

DISTANCE:

AMENITIES:

CONDITIONS

Creek *dry* ☐ ☐ ☐ ☐ ☐ ☐ *wet*

Obstacles *few* ☐ ☐ ☐ ☐ ☐ ☐ *many*

Trail *poor* ☐ ☐ ☐ ☐ ☐ ☐ *clear*

Navigation *easy* ☐ ☐ ☐ ☐ ☐ ☐ *hard*

Bikeable *easy* ☐ ☐ ☐ ☐ ☐ ☐ *hard*

Activity *none* ☐ ☐ ☐ ☐ ☐ ☐ *a lot*

Wildlife *none* ☐ ☐ ☐ ☐ ☐ ☐ *a lot*

Vegetation *invasive* ☐ ☐ ☐ ☐ ☐ ☐ *native*



What do your neighbors need to know about this part of the creek?

NOTES ABOUT YOUR CREEK STOMP:

What was the best & worth part of your Creek Stomp today? What do you hope for the future of this part of the creek?

MY CREEK STOMP MAP

Where did you explore today & what did you experience?

PLACES YOU...
have suggestions
have challenges
find unique
explore



MY CREEK STOMP JOURNAL

DATE/TIME:

ENTRY &
EXIT POINTS:

TRANSIT
TYPE:

DIFFICULTY:

DISTANCE:

AMENITIES:

CONDITIONS

Creek dry ☐ ☐ ☐ ☐ ☐ wet

Obstacles few ☐ ☐ ☐ ☐ ☐ many

Trail poor ☐ ☐ ☐ ☐ ☐ clear

Navigation easy ☐ ☐ ☐ ☐ ☐ hard

Bikeable easy ☐ ☐ ☐ ☐ ☐ hard

Activity none ☐ ☐ ☐ ☐ ☐ a lot

Wildlife none ☐ ☐ ☐ ☐ ☐ a lot

Vegetation invasive ☐ ☐ ☐ ☐ ☐ native



What do your neighbors need to know about this part of the creek?

NOTES ABOUT YOUR CREEK STOMP:

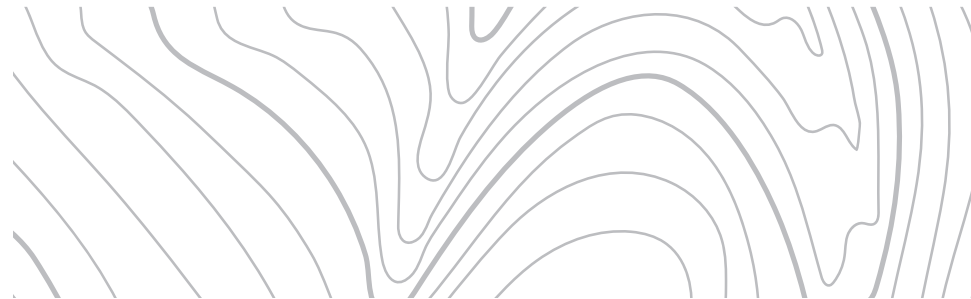
What was the best & worth part of your Creek Stomp today? What do you hope for the future of this part of the creek?

MY CREEK STOMP MAP

Where did you explore today & what did you experience?

PLACES YOU...
have suggestions
have challenges
find unique
explore





“The Peace of Wild Things”

*When despair for the world grows in me
and I wake in the night at the least sound
in fear of what my life and my children's lives may be,
I go and lie down where the wood drake
rests in his beauty on the water, and the great heron feeds.
I come into the peace of wild things
who do not tax their lives with forethought
of grief. I come into the presence of still water.
And I feel above me the day-blind stars
waiting with their light. For a time
I rest in the grace of the world, and am free.*

by Wendell Berry



Appendix F

NATURE TRAIL AND TRACK GUIDANCE NEAR TREES


Courtesy of the Austin Heritage Tree Foundation

“Nature” Trails Are Not Used Mostly By Children And Parents In Neighborhood (Occasional Use)

Heavy Use and Heavy Environmental Impact:
Huge Mountain Bike Race Held Yearly At Pace Bend Park, Besides Every Day Use.

Large Groups Of Mountain Bikers In Greenbelts.

austinridgeriders • Follow
Pace Bend Park



ARR designs, builds and maintains most of the “nature” trails (“single-track”).

Some AAR volunteer events only have 5 volunteers.

Mountain bikers ride these trails, whether or not they are ARA members.

Some are from out of town.

Heavy impact in environmentally sensitive areas, due to trail design and use:

Trees and creeks are used as challenges to make trail exciting.

Some mountain bikers follow rules of not riding after rains, some love the mud.

Some stay in trail. Some like to make feeders.

The Austin Ridge Riders is YOUR local not-for-profit Mountain Bike Club. ARR builds and maintains the sweet singletrack we all enjoy. If you are not yet a member of ARR, SIGN UP TODAY! <http://www.austinridgeriders.com/membership/>

Austin Heritage Tree Foundation – 04.10.19

“Nature” Trails In Austin Are Typically Designed To Go Through Trees (Obstacle Challenge)

Hundreds Of Mountain Bikers Ride Through Trees And On Their Root Zones

Ex: Pace Bend Park

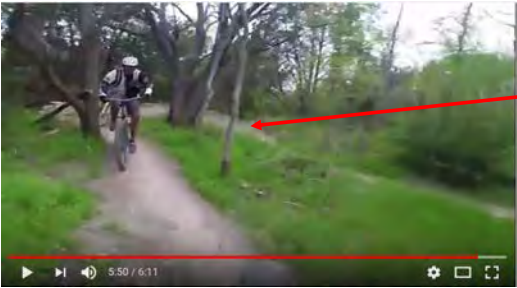


FEEL THE PAIN! - Pace Bend Mountain Bike Race Day VLog 7



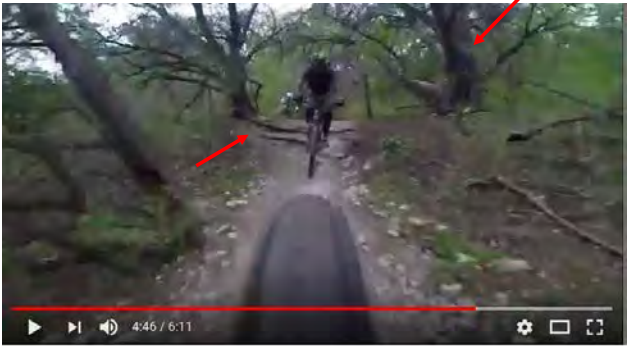


Impact on CRZ: “Nature” Trail Over Many Roots Of Heritage Trees
Ex: Walnut Creek Metropolitan Park



Notice another trail 3 ft. away on other side of heritage tree.
3/4 CRZ impacted

“Nature” trails impact CRZ of heritage trees, not just that of cedars, invasives, or less valuable trees






03 23 14 Austin Ridge Riders Group Ride

“Nature” Trails In Austin Are Typically Designed To Use Creeks For Challenge

Hundreds Of Mountain Bikers Ride Along Creek Banks And In The Creek Bed

Ex: Walnut Creek Metropolitan Park





Another Example: Riding In Another Creek Bed, For A Long Distance
Walnut Creek Metropolitan Park

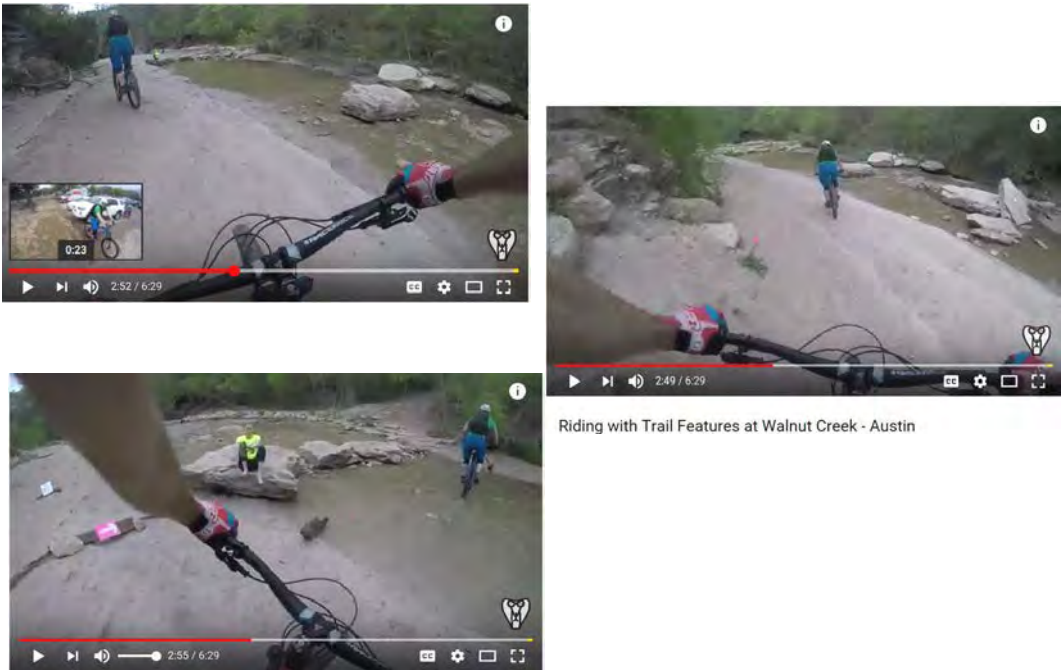


Mountain Biking Trail Guidelines Focus On Some Erosion Controls Along The Trail
But Riding In Creek Bed and Along Creek Bank Also Cause Erosion

Sustainable And Environmentally Focused Trail Design Guidelines Are Needed



Then Finally Crossing the Creek After A Long Trail Section Riding In the Creek Bed.
A Good Trail Design Crosses Creek Right Away To Minimize Impact and Erosion



ARR Improved One Case (For Ride and Trees), But It Would Be Much Better
To Go Around Trees



PARD Doesn't Allow Pruning, Sawing, Cutting, Etc.
Anything Above 2 inches

Austin Ridge Riders Mountain Bike Club shared a post.
November 25, 2018 at 6:14 PM

Thanks everyone who participated in the ARR Cranksgiving 2018 at Pace Bend Park Trails. It was an incredible day. A special thank you to the volunteers who helped put on such a fun event.

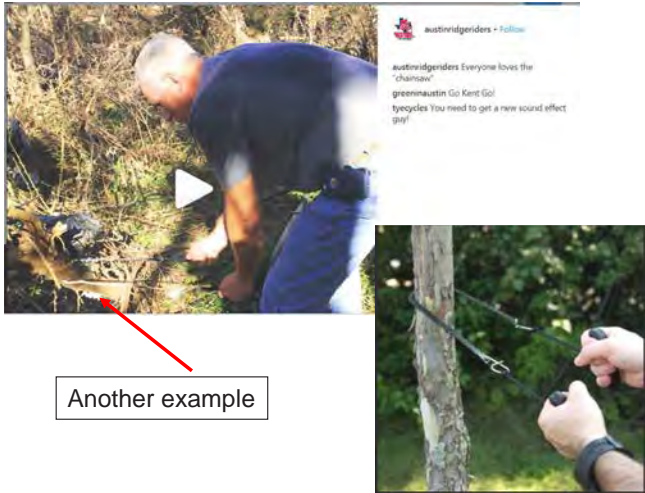
Charlie Riou November 25, 2018 at 6:03 PM

Patti Tsai & Nikko Bivens showing the limb who's boss at Austin Ridge Riders Cranksgiving. 🤪

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This is large branch of an oak tree being cut with a flexible pocket chain saw by 2 participants in AAR's Pace Bend Park race.

There are other instances in City property.



Another example

“Nature” Trails Everywhere In Walnut Creek Park:
Yellow Dotted And Yellow Lines Are Trails As Well



Examples Of “Nature” Trails That Impact The Environment Severely

Pace Bend Park trail: Trail very close to trees. In some spots trail through trees.

“2017 ARR Pace Bend Race” <https://youtu.be/lhAsT37L-po>

Walnut Creek Park trail: At 2:42 trail goes through trees. At 4:01 trail right by creek edge, then crosses creek. At 4:46 trail in between large oaks. At 5:50 trail again through large trees even though there is another trail 3 ft away from tree. ¾ of CRZ impacted.

“03.23.14 AAR Group Ride” <https://youtu.be/JdrwBdNYiBE>

Walnut Creek Park trail: From 2:14 to 2:55 bikes riding on dry bed instead of just crossing creek.

“Riding with trail features at Walnut Creek Park”
<https://youtu.be/uTX3nQ8J6E8>

