

Asian American Resource Center / Rutherford Campus Stormwater Improvements

Preliminary Engineering Summary

AARC Workgroup
April, 14 2021



Presenters:

- Lee Sherman, PE, Watershed Protection Department
- Greg Montes, Parks and Recreation Department

Agenda:

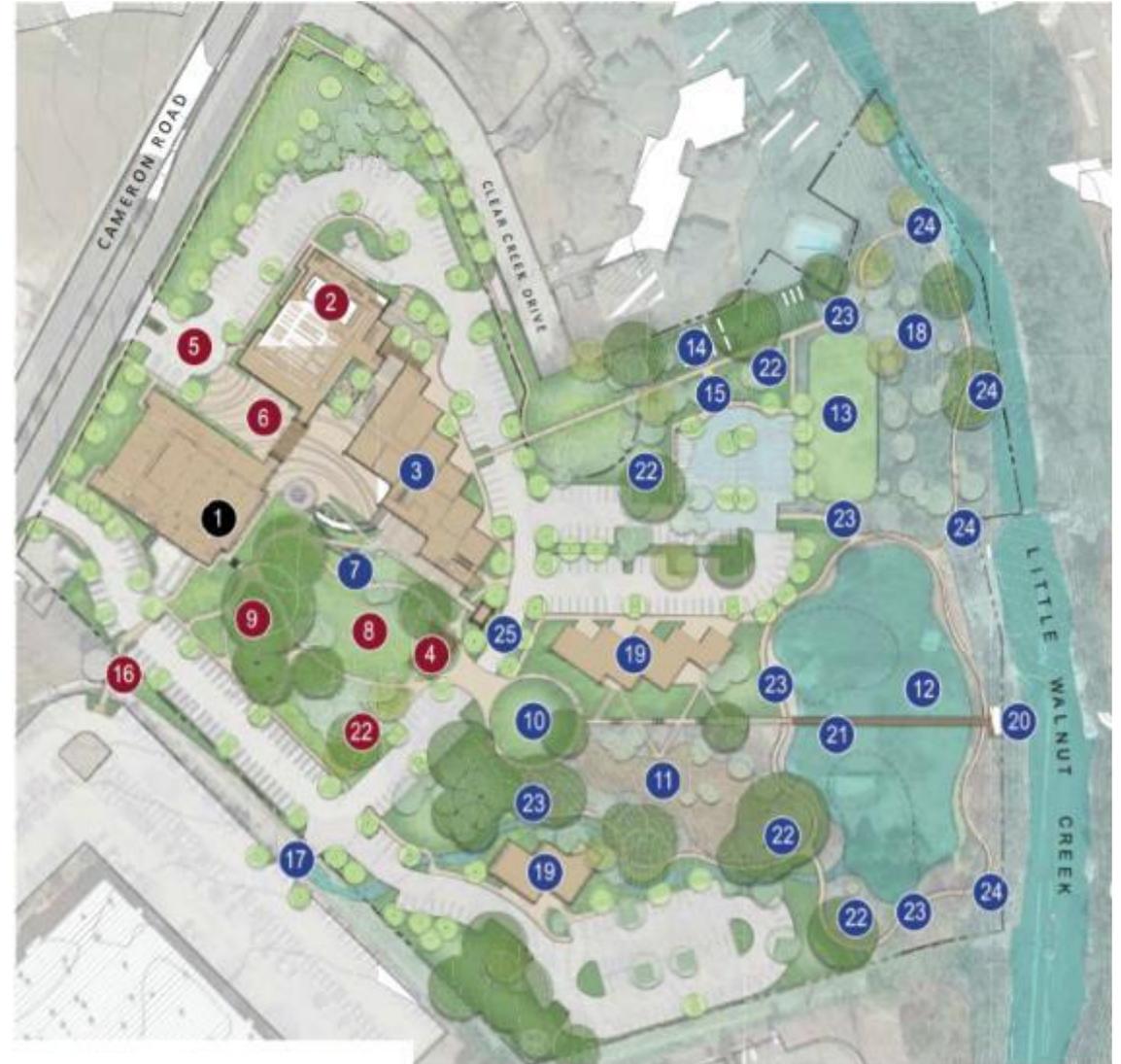
- Summary of previously completed work
- Introduction to this project
 - Project Origin
 - Project Elements
 - Project Schedule
 - Brief Q&A (please hold questions until the end)

AARC Workgroup Meeting April 14, 2021



AARC Vision Plan

- Vision Plan
- Stakeholder process
- Approval
- WPD involvement



Overall Master Plan

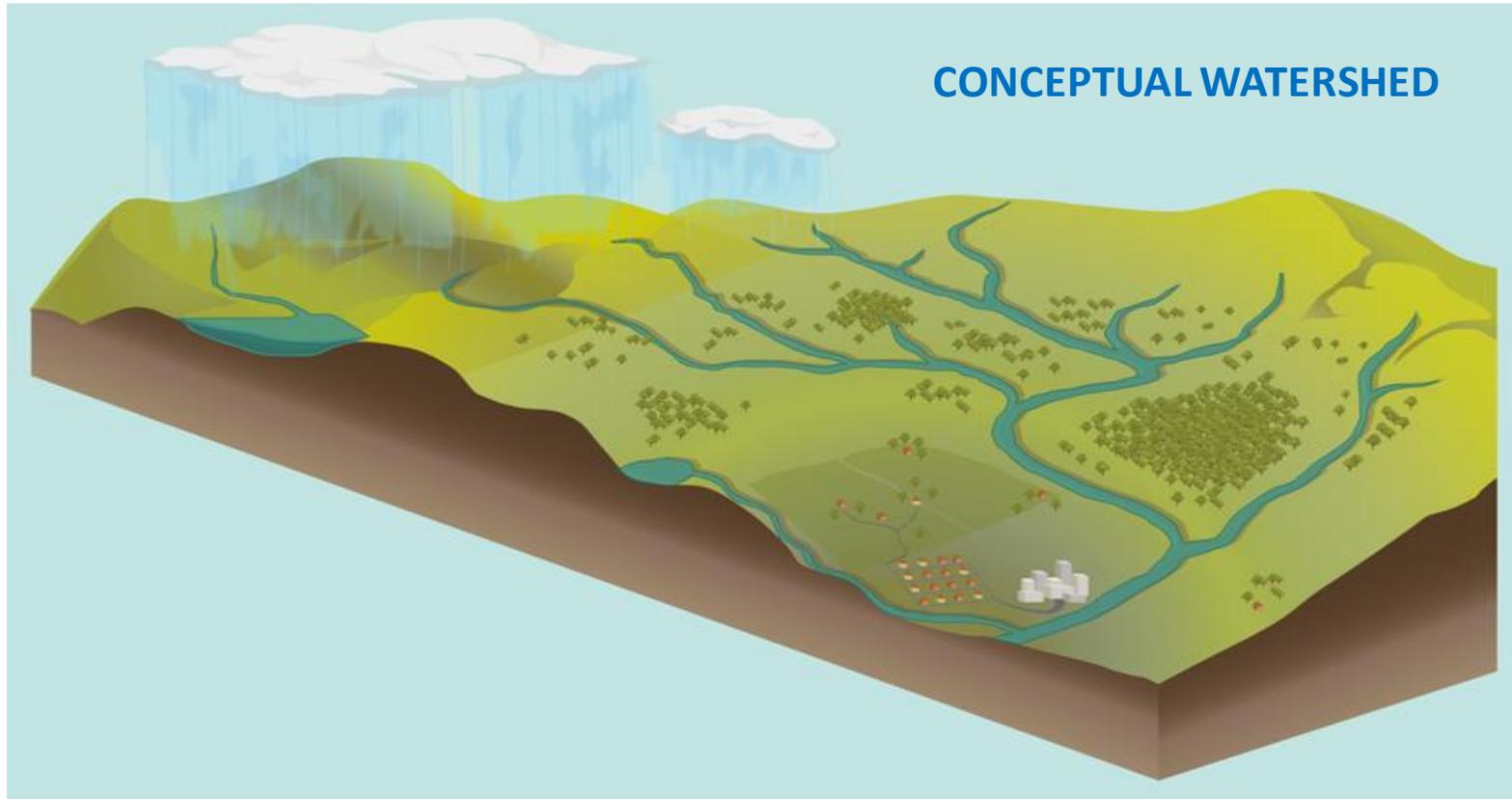


Proposed Partnership Park Improvements



- Partnership City of Austin (COA) project
- Builds portions of the AARC Vision Plan
 - Add pedestrian bridge and other recreational amenities to conserve limited bond funds
 - Increases traffic and community use of historically under-utilized park area
- Opportunity for water quality and drainage improvement

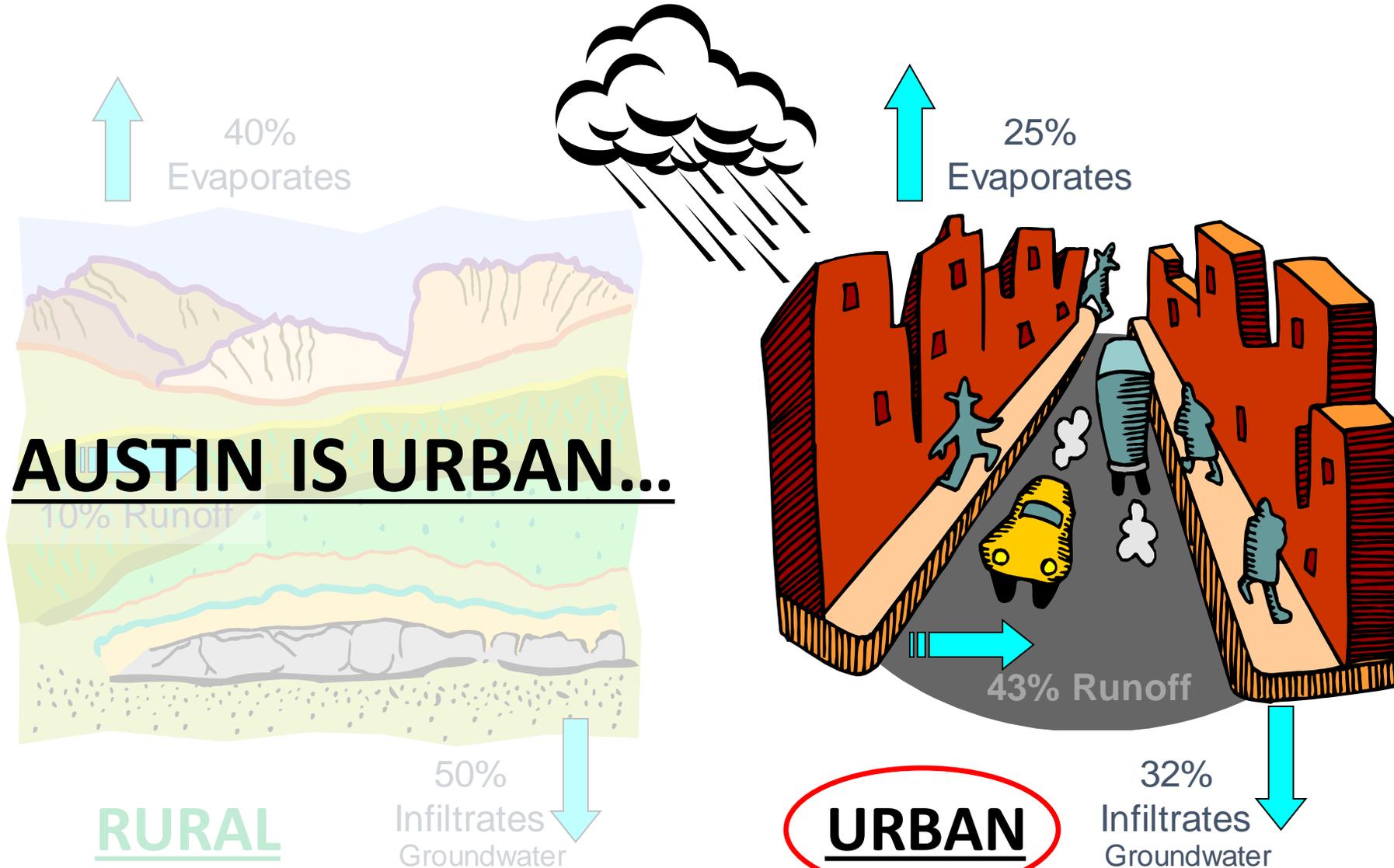
Introduction



WHAT IS URBANIZATION?

- Paving of land surfaces via construction of roadways, parking lots, buildings...
- When rain falls, less water can soak into the ground
- More water runs off to fill storm drains, creeks and rivers with **more flow, faster**

Introduction



Introduction



Flooding

Example: Shoal Creek near 15th Street

Introduction



Erosion

Examples: Fort Branch Creek, Boggy Creek

Introduction



Water Quality

Example: McKinney Falls (Williamson Creek)

Benefits

Water Quality

- Infiltrates 1.7M gallons of water annually
- More natural and cleaner water will flow to Little Walnut Creek
- Litter removal
- Public education opportunity for water quality and stormwater management
- Improved habitat for wildlife, pollinators, etc.

Flood

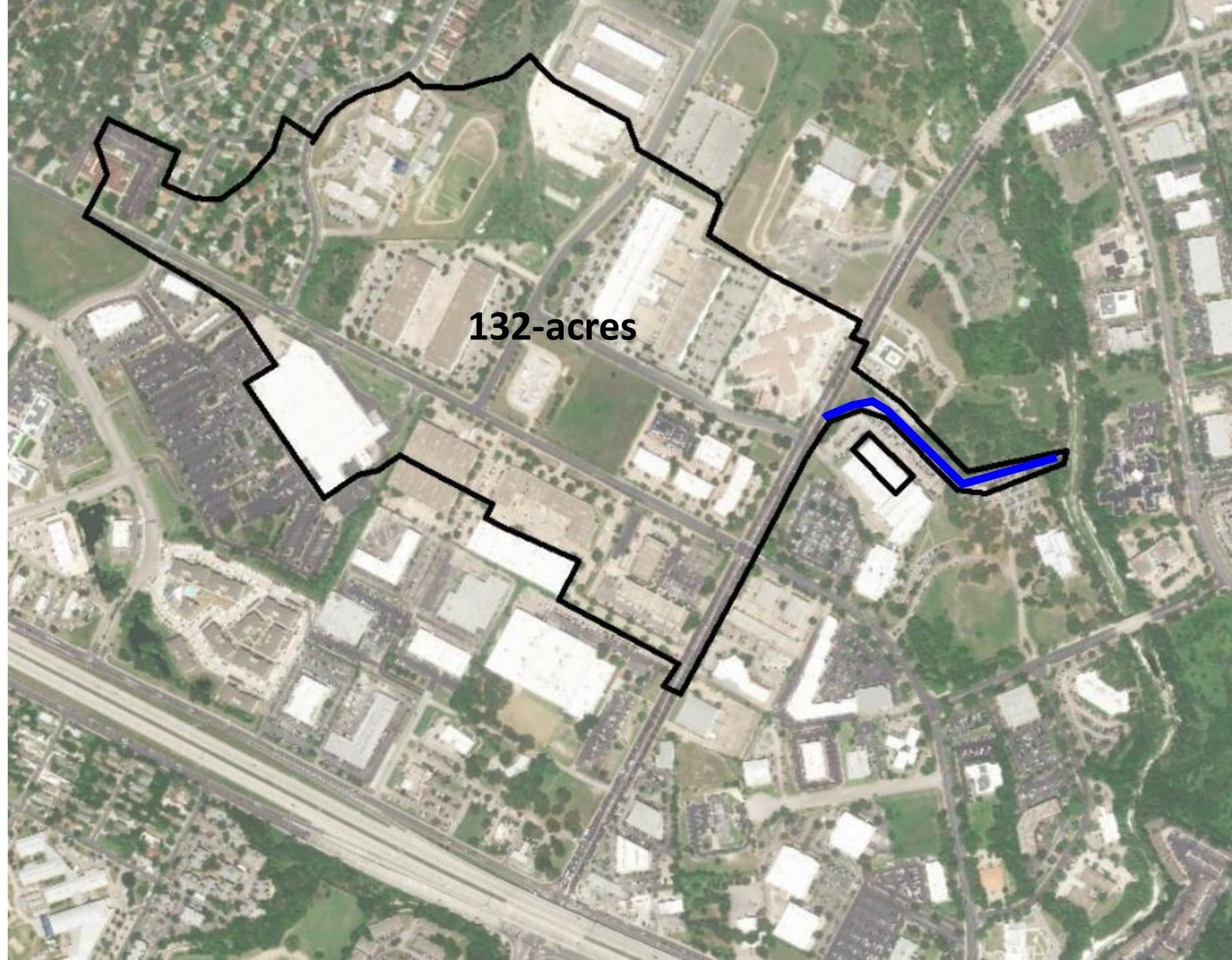
- Resolves a flooding issue associated with the Rutherford campus

AARC Vision Plan

- Provides flood detention needed for AARC expansion
- Provides the permanent water feature desired in the vision plan
- Pedestrian bridge to connect the Rutherford parking to the AARC
- Nature play areas and landscaping consistent with Vision Plan
- Trails and habitat create connection to nature
- Improve aesthetics of concrete channel

AARC / Rutherford Tributary Watershed

- Little Walnut Creek Watershed
- Top 20 Overall WQ Problem Score
- Nutrients, improved riparian habitat, stream stability



Multi-Functional Green Infrastructure

Guiding Project Principles

1. Improve water quality, absorb storm events, and mitigate urban impacts to LWA

Water Quality Improvements

Infiltration Improvements

2. Encourage active recreation and wellness

3. Honor and represent the multitude of Asian identities the AARC serves

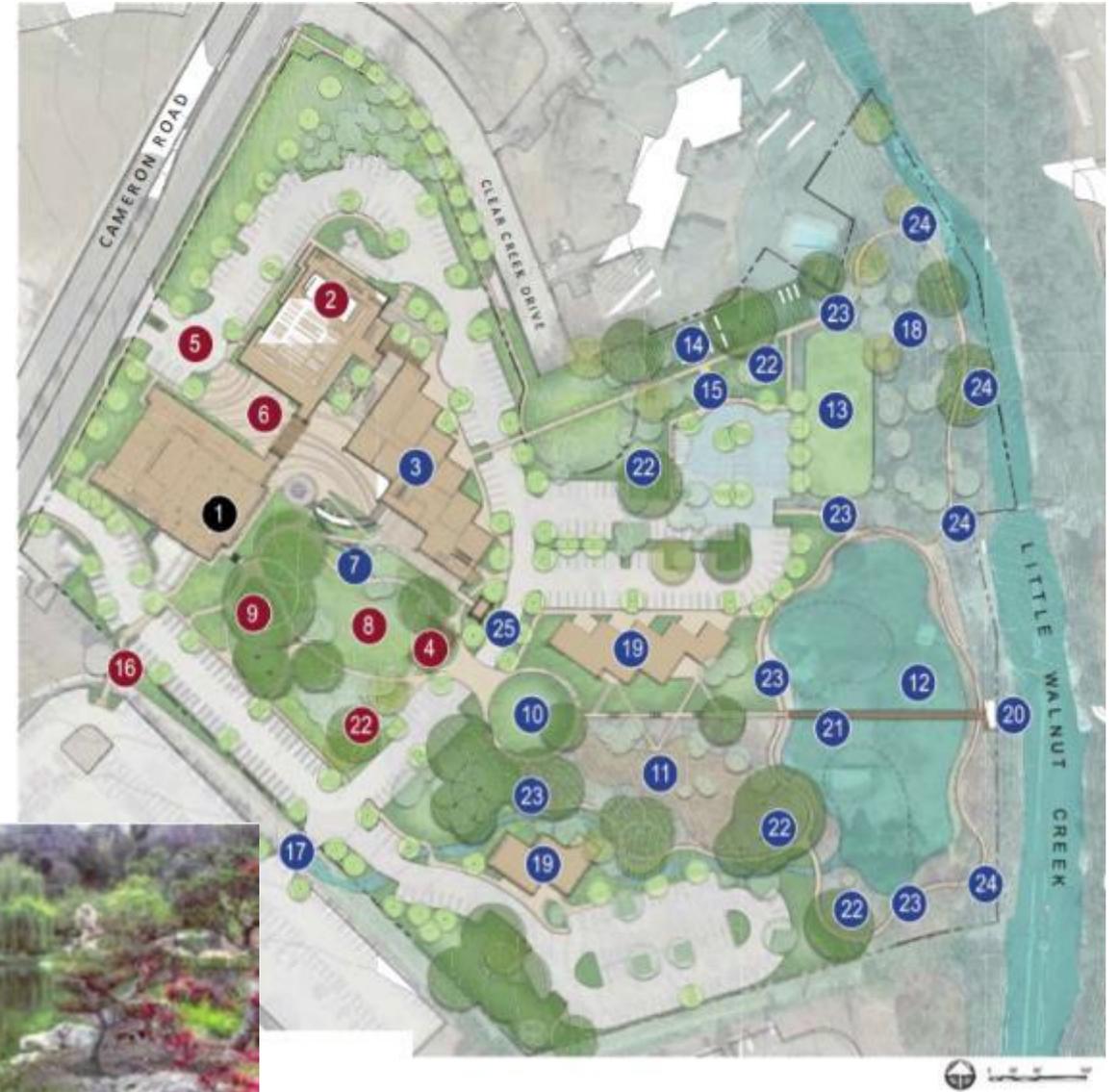
4. Preserve tree canopy and foster ecosystem health

5. Balance recreation and biodiversity goals with manageable maintenance



AARC Vision Plan

- Gardens
- Outdoor Reflection and Expression



Rutherford Channel

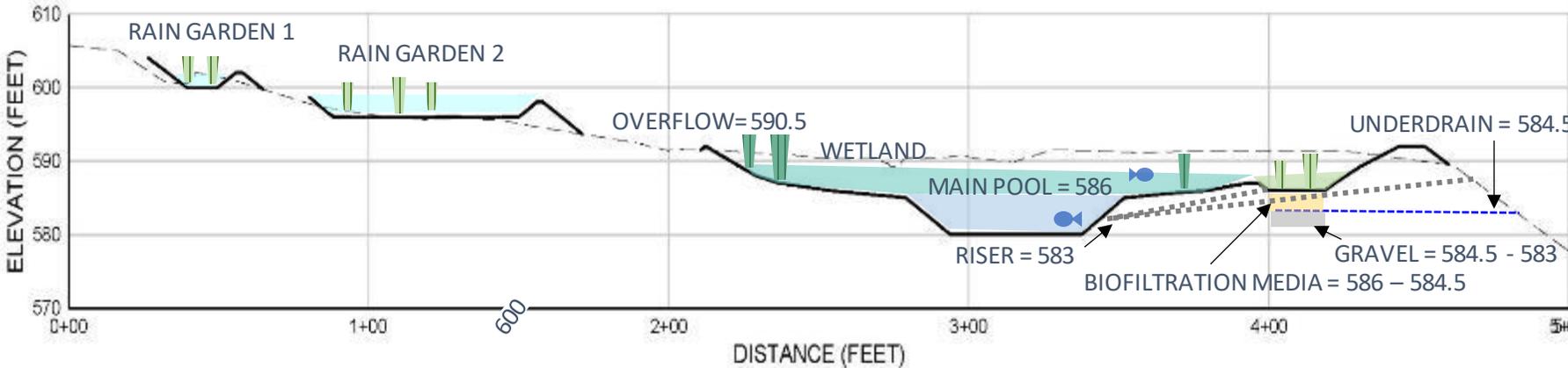
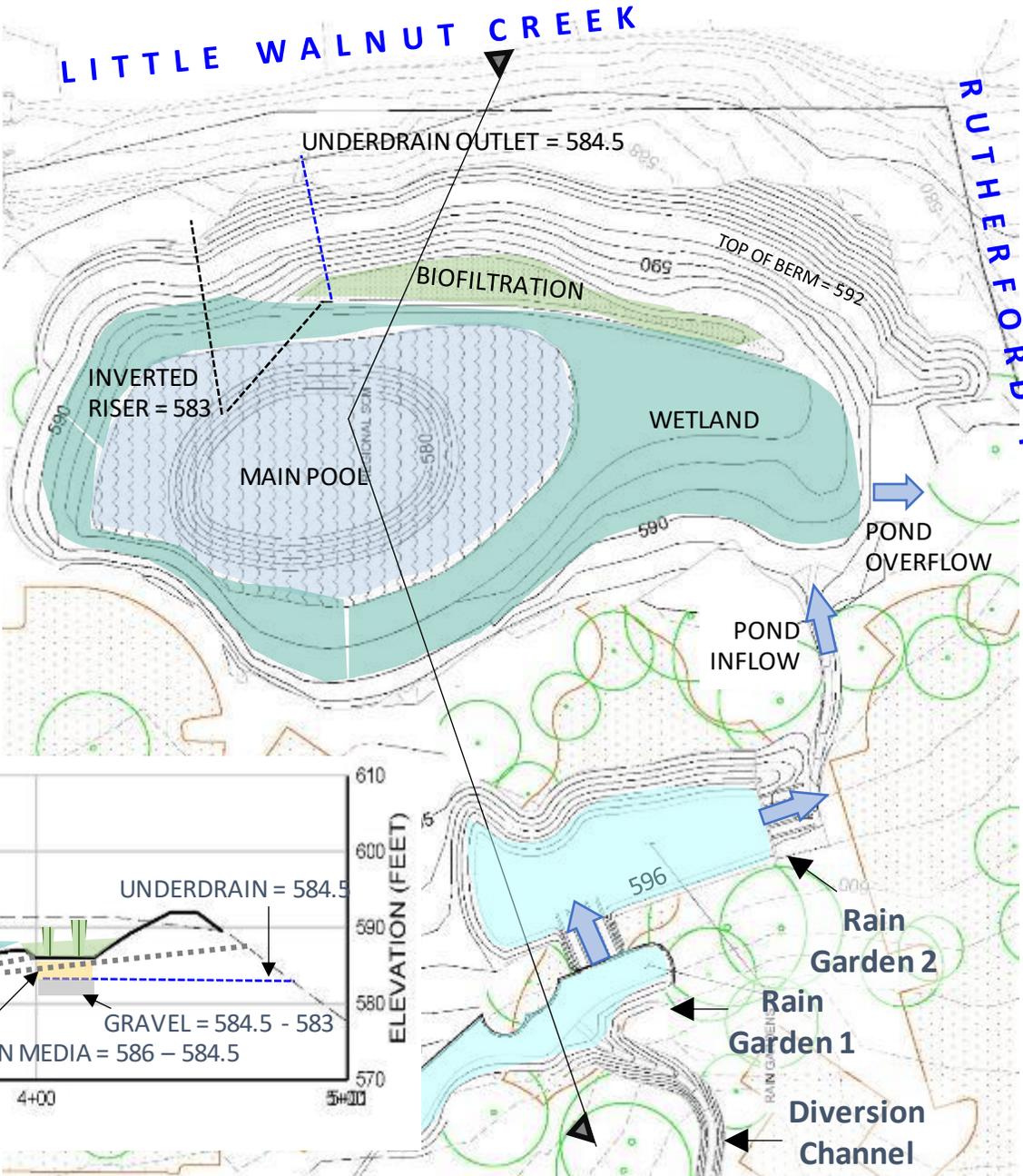


Overview of Proposed Features



Proposed Solution: Wetland + Biofiltration

- Permanent water feature
- Wetland plantings to attract wildlife, WQ, and aesthetics
- Predominately shallow (1', with 6' deep micropool)
- "Mosquito Fish" and healthy habitat to control mosquitos
- Biofiltration area
- Two shallow rain gardens along diversion channel (9" deep)
- Extended detention provides water quality and flood benefits



Rutherford Channel Improvements

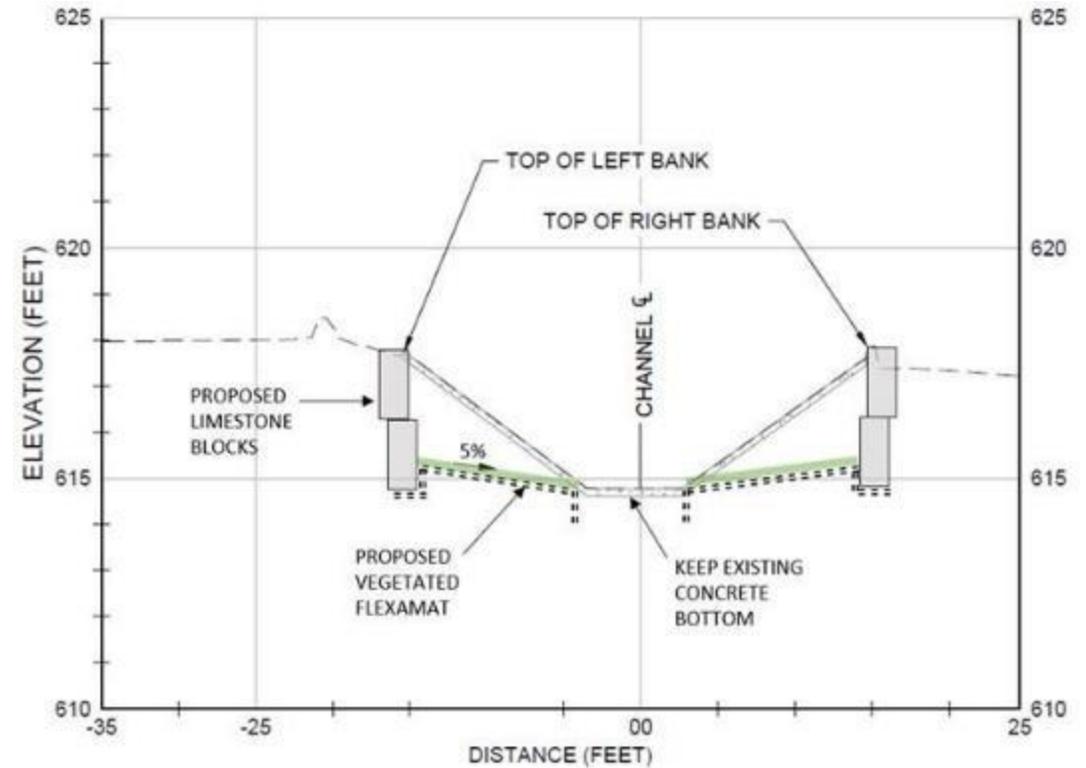
- Remove concrete-lined sideslopes
- Replace with stacked limestone blocks and vegetated tied concrete block matting
- Retain existing concrete bottom

Constraints

- Existing trees
- AARC/Rutherford Campus Parking
- Wastewater and electric utilities
- Flood conveyance

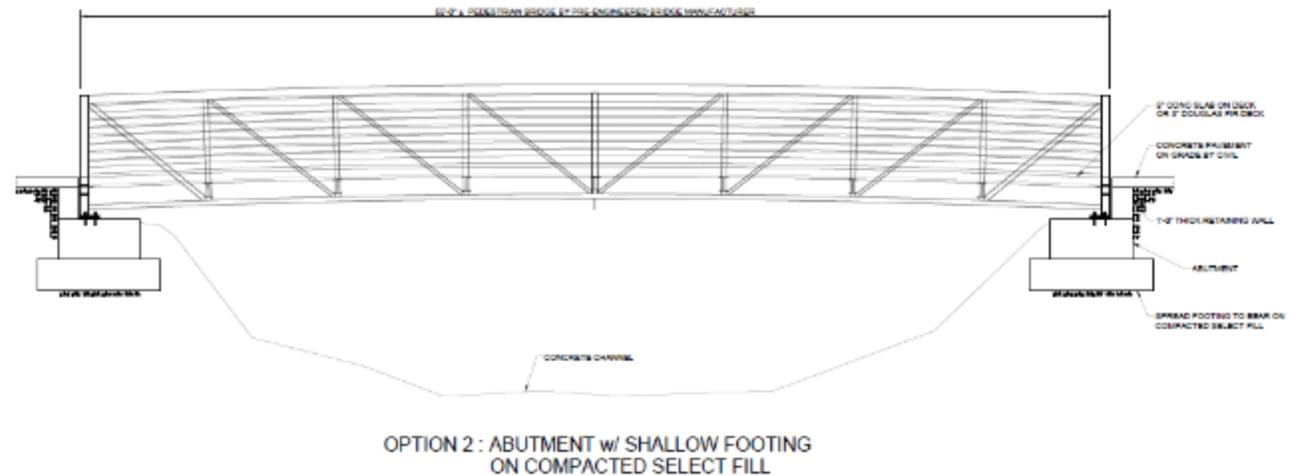
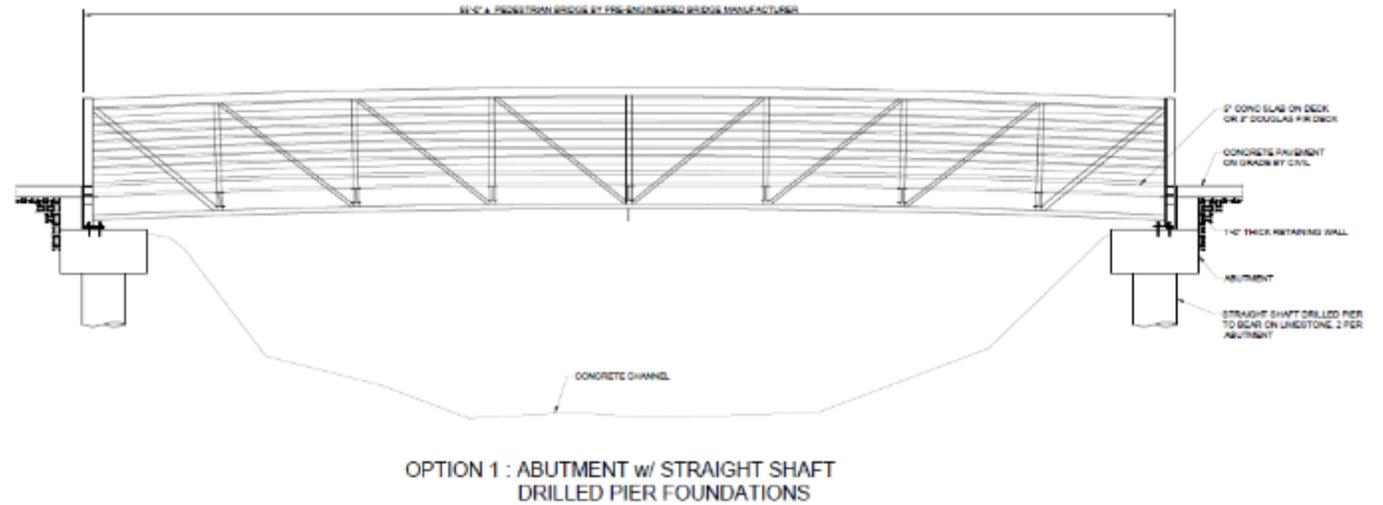
Benefits

- Create riparian habitat and natural aesthetic
- Protect against erosion
- Enhance infiltration and pollutant removal
- Maintain flood conveyance



Pedestrian Bridge

- Address safety hazards with AARC members parking at Rutherford Campus
- Educational opportunity with signage and Rutherford Channel restoration
- Anticipating Subchapter E compliance for Site Plan – must increase connectivity



SITE PLAN

- 1 Rutherford Channel Divertor
- 2 Forebay
- 3 Forest Adventure Trail
- 4 Exercise Lawn
- 5 Diversion Channel
- 6 Upper Raingarden
- 7 Nature Plan Grated Runnel Path
- 8 Lower Raingarden
- 9 Pre-Master Plan Build-out Planting
- 10 Amphitheater Seating
- 11 Wet Pond
- 12 Wetland Shell
- 13 Low Water Crossing
- 14 Diversion Channel
- 15 Forebay Maintenance Access
- 16 Little Walnut Creek Overlook

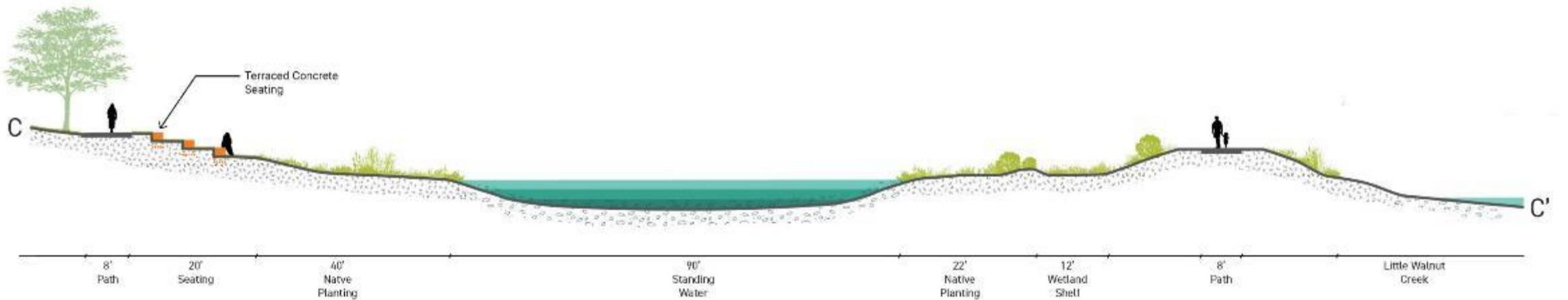
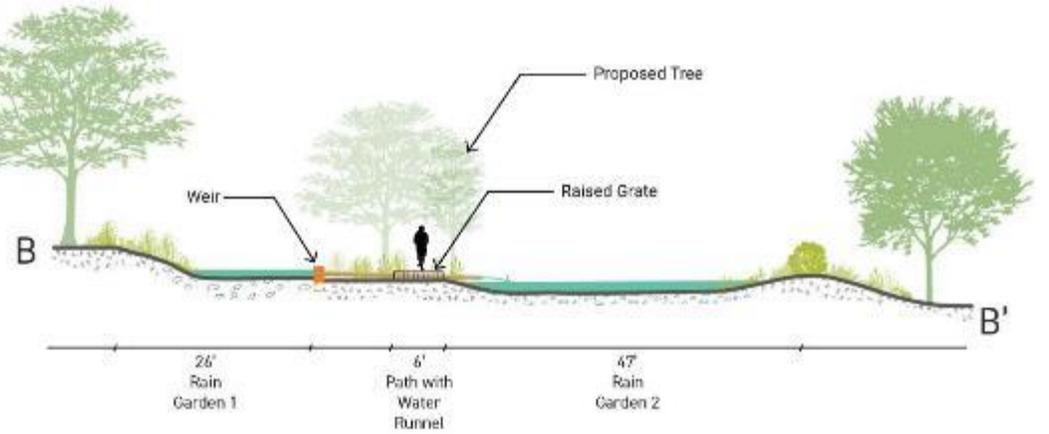
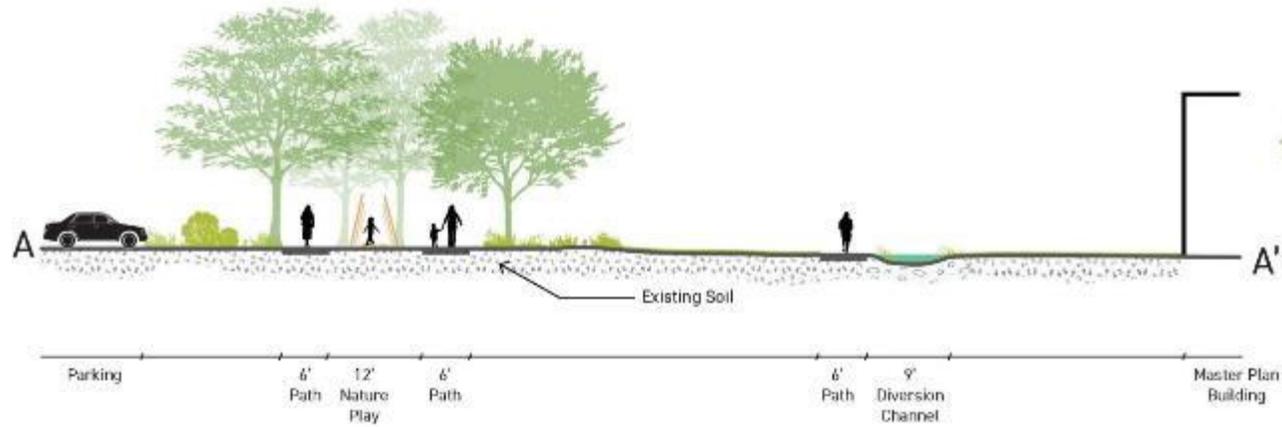


ASIAN AMERICAN RESOURCE CENTER

Option 3 | December 2020

- | | | | | |
|----------------|---------------------------------|----------------------|-------------------------|------------------|
| Proposed Tree | Herbaceous Rain Garden Planting | Wall | Flexmat | Underground Pipe |
| Existing Trees | Wetland Planting | Concrete Seating | 10' ADA Accessible Path | 0 50' |
| Water Flow | Habitat | Master Plan Building | 8' Path | |

SECTIONS



Approximate Schedule

- Preliminary engineering wrapping up in FY 21
 - Stakeholder process remains
 - Coordination with AARC – input?
- Design phase in FY22
- Permitting in FY23
- Construction in FY24

****Tentative - Subject to Change****

Questions

