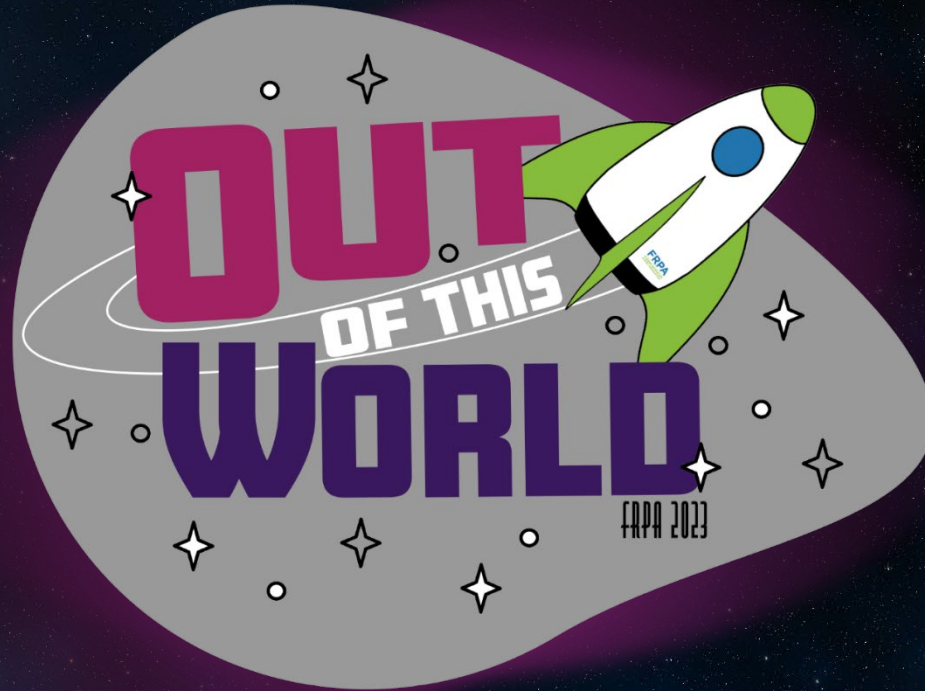
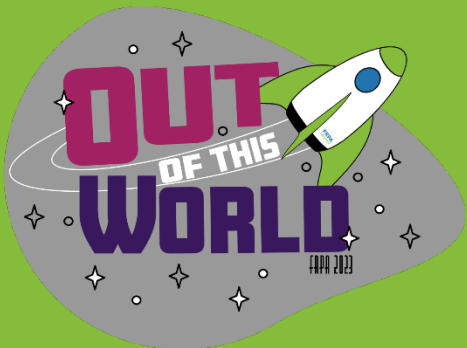


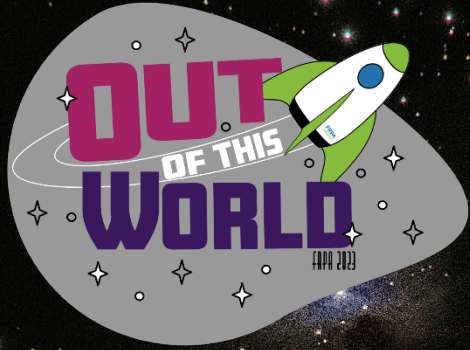
Welcome to the 2023 FRPA Conference!



August 28 - 31, 2023 | Orlando, FL

Resilient Parks & Communities: Addressing Resiliency Through Design





Chris Hite, FASLA, PLA
Kody Smith, PLA
Sheeba West, PLA

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ksmith@dixhite.com
swest@dixhite.com

LEARNING OBJECTIVES

1. Design park spaces to multi-task for maximum benefit environmentally, socially, and economically.
2. Understand the importance of Parks as Green Infrastructure to address Community Resilience.
3. Designing parks to adapt to inland flooding and storm surge.



Schedule

9:15-10:00 Course Content

10:00-10:15 Q & A

- Introduction
- Case Study One: Solary Park
- Case Study Two: Crest Lake Park



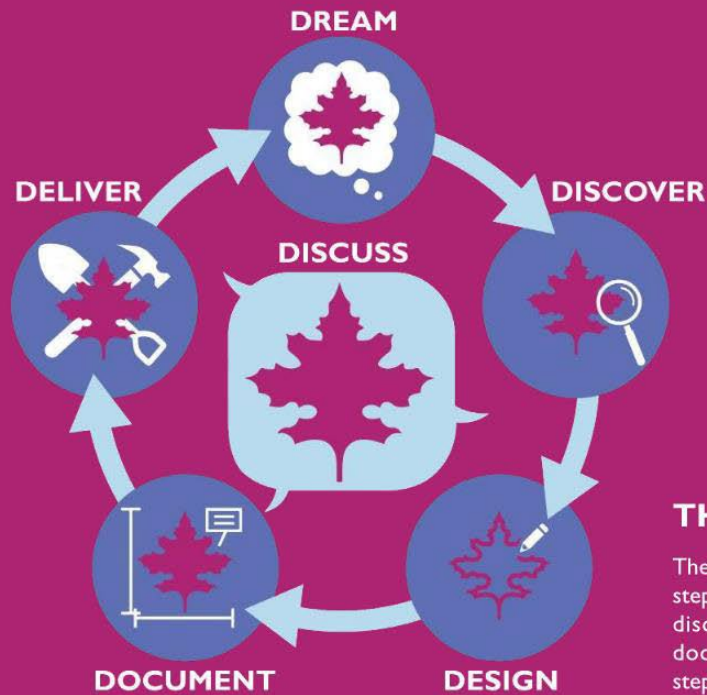
OUR PROCESS

Collaborative, insightful, and curious - who we are is how we work.

We're true believers in the power of the design process. To help clients meet their goals, we apply the "6D" approach: a transparent and scalable process that engages the entire design team in collectively identifying opportunities and constraints.

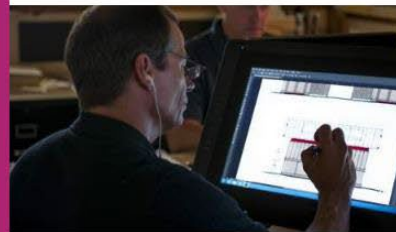
These steps provide a framework for project management, ensuring that outcome matches the intent and that the results fulfill the vision. As details of the project are uncovered, we adapt our approach to meet specific goals, deliverables, and timeframes.

Dix.Hite team members hold the 6D method integral to the firm's culture and creativity and have applied it successfully to numerous design projects.



THE 6D PROCESS

The name, "6D," refers to the steps in the process: dream, discover, design, discuss, document and deliver. Each step of the way, progress is checked against the dream, helping ensure that the outcomes meet the intent and that the results fulfill the vision.



DREAM

At the outset of the project, the Dix.Hite team seeks input from the client and stakeholders to understand needs and aspirations. We uncover the "why" of the project and identify common goals and potential solutions that will inform the design responses. The dream can be elicited through a variety of tools, including kickoff meetings, stakeholder surveys, public meetings, workshops or charrettes. Each remaining step of the 6D process is validated against the dream to ensure the final outcome meets the vision.

DISCOVER

During this phase, we collect and document the physical, environmental and cultural context that influences the study area. We create digital base data, observe existing conditions and document elements that may inform the next design phase. A SWOT analysis of strengths, weaknesses, opportunities and threats is often created to illustrate the findings. This phase ideally includes an evaluation of funding opportunities.

DESIGN

With the dream identified and existing conditions and opportunities understood, design begins. Potential solutions are communicated through diagrammatic plans, reports, graphics or other deliverables that address programmatic and spatial relationships, while taking into account critical path permit issues, schedule, existing policies and budget parameters.

DOCUMENT

The conceptual design is advanced to plans, sections, details and outline specifications. The team coordinates across disciplines to create one cohesive document submittal. This may include a statement of probable cost, updated permit schedule or phasing strategies.

DELIVER

The Dix.Hite team is committed to implementation and provides services to help clients navigate bidding, permitting, and construction. We take great professional pride in being with clients from the initial visioning session all the way through ground breaking and grand opening.

DISCUSS

Critical to the success of the process, this step validates the options. The design team, client and stakeholders come back together to review the design solutions and collaborate on modifications. This step occurs continually throughout the process.



re·sil·ience

/rəˈzɪliəns/

noun

1. the capacity to withstand or to recover quickly from difficulties; toughness.

"the remarkable resilience of so many institutions"

2. the ability of a substance or object to spring back into shape; elasticity.

"nylon is excellent in wearability and resilience"

A woman with blonde hair and sunglasses is holding a young child in her arms. They are standing on a paved path in a park. In the foreground, there is a large pile of light-colored, irregularly shaped rocks. The background shows a grassy area with other people, including a man in a blue shirt and a woman in a pink shirt, and some park equipment like a picnic table and a trash can. The scene is bright and sunny.

Environmentally

Socially

Economically



Solary Park

Environmentally

Sweetwater Creek Flow Way

Socially

Hub for Cross Seminole Trail,
Center of Future Uptown Oviedo

Economically

Catalyst for Future Mixed
Use Development



Crest Lake Park

Environmentally

Closed Basin Capturing Runoff
from Neighborhood

Socially

Gateway Park of Clearwater

Economically

BP Oil Spill Settlement
\$6.5 M / 39 Acre Park
CMAR

A person wearing light blue jeans and white sneakers stands on a dark asphalt surface. A vibrant rainbow is painted on the ground, passing through the person's legs and feet. The scene is used as a visual metaphor for the text about urban stormwater infrastructure.

“

...in many cases the first flush of stormwater in an urban area may have a level of contamination much higher than normally present in sewage...

”

Craig Campbell and Michael Ogden,
Constructed Wetlands in the Sustainable Landscape

impervious surfaces

What if urban stormwater infrastructure enhanced ecological functioning to serve as a civic asset rather than an environmental liability?

Credit: University of Arkansas Community Design Center

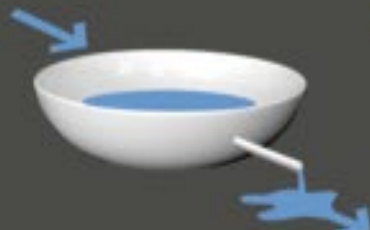


mechanical

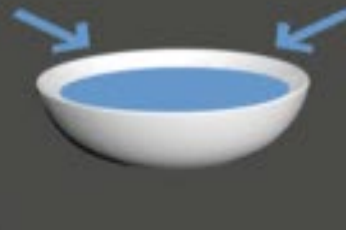
biological



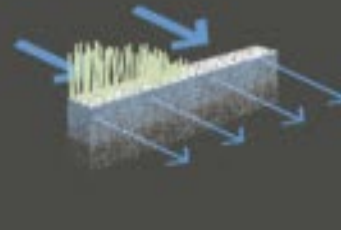
flow control



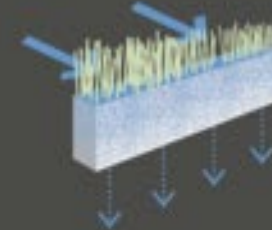
detention



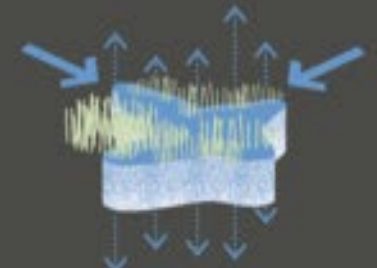
retention



filtration



infiltration



treatment

slow —————> spread —————>

flow control: The regulation of stormwater runoff flow rates.

detention: The temporary storage of stormwater runoff in underground vaults, ponds, or depressed areas to allow for metered discharge that reduce peak flow rates.

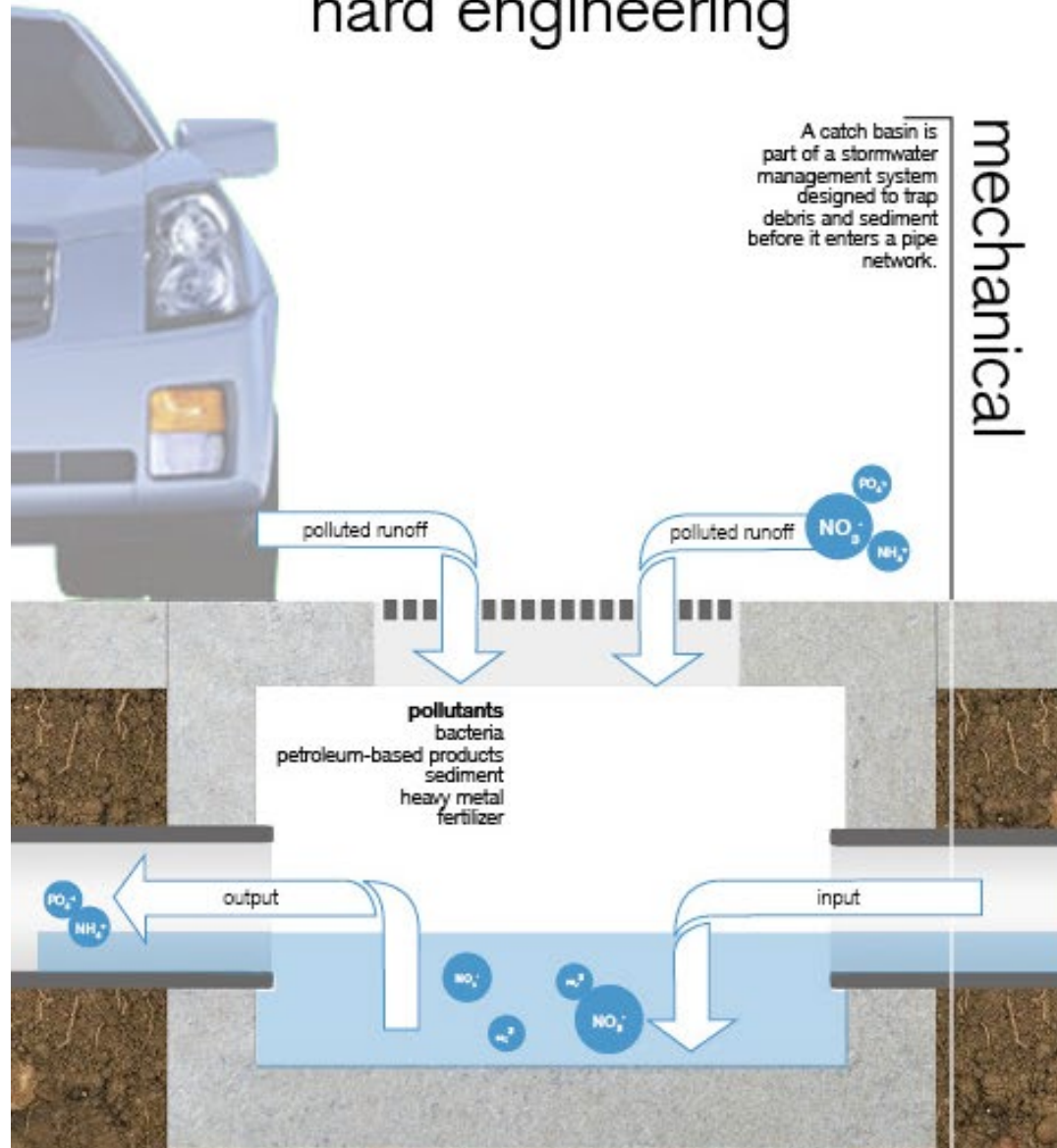
retention: The storage of stormwater runoff on site to allow for sedimentation of suspended solids.

filtration: The sequestration of sediment from stormwater runoff through a porous media such as sand, a fibrous root system, or a man-made filter.

infiltration: The vertical movement of stormwater runoff through soil, recharging groundwater.

treatment: Processes that utilize phytoremediation or bacterial colonies to metabolize contaminants in stormwater runoff.

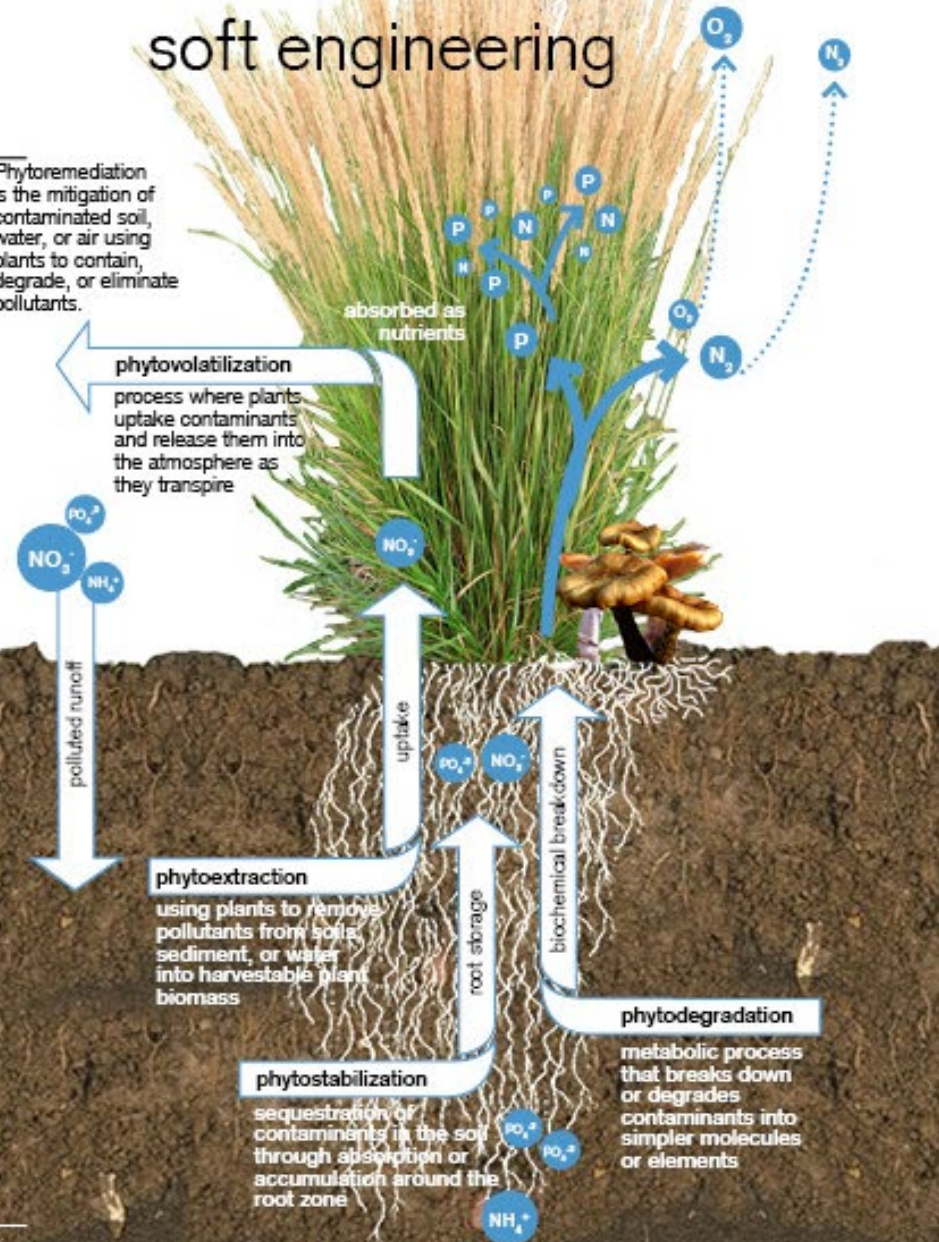
hard engineering



soft engineering

biological

Phytoremediation is the mitigation of contaminated soil, water, or air using plants to contain, degrade, or eliminate pollutants.





Publix at Hamlin, Winter Garden, FL



Lakewalk at Hamlin, Winter Garden, FL



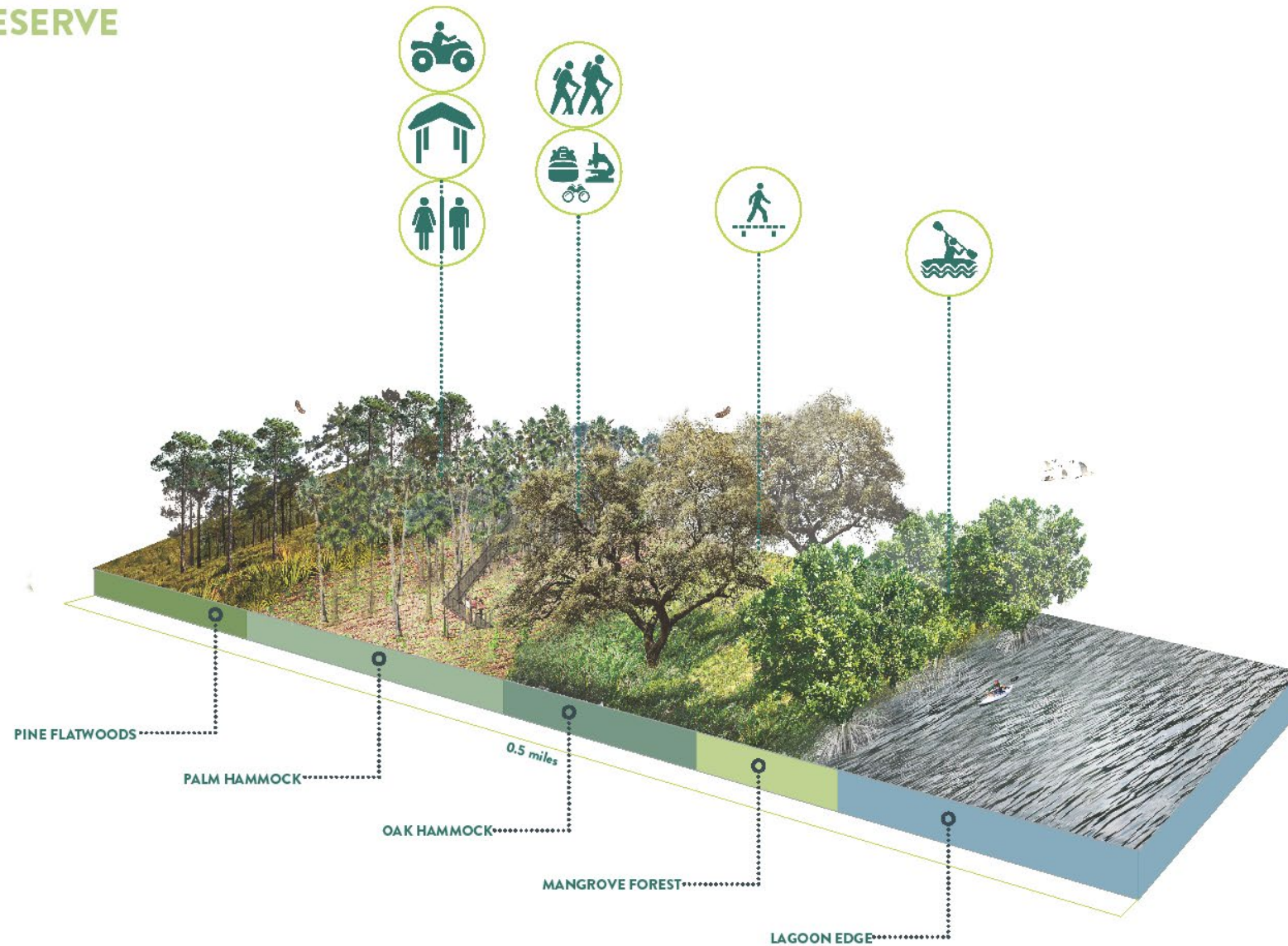
Starkey Ranch, Pasco County, FL

The Marsh



The Landings, Jacksonville, FL

TRANSECTING THE COASTAL OAKS PRESERVE





Solary Park

Oviedo, Florida

- Collaborative effort between Parks and Public Works with close cooperation with FDOT and Cross Seminole Trail (funding)
- 9-acre park with \$5M Budget, which included \$1M for arsenic remediation
- Built on City staff's idea of combining FDOT required stormwater and city's need for stormwater as a catalyst for future development
- Led to urban redevelopment plan for Uptown Oviedo
- Collaborated with engineering team to balance capacity and treatment in a dynamic manner
- Won Florida Stormwater Association Award for Stormwater Excellence

Solary Park

Oviedo, Florida

City of Oviedo

Collaborators:

Dix.Hite + Partners

Bentley Architects

VHB

DRMP

CEPRA Landscape

Beeman's Nursery

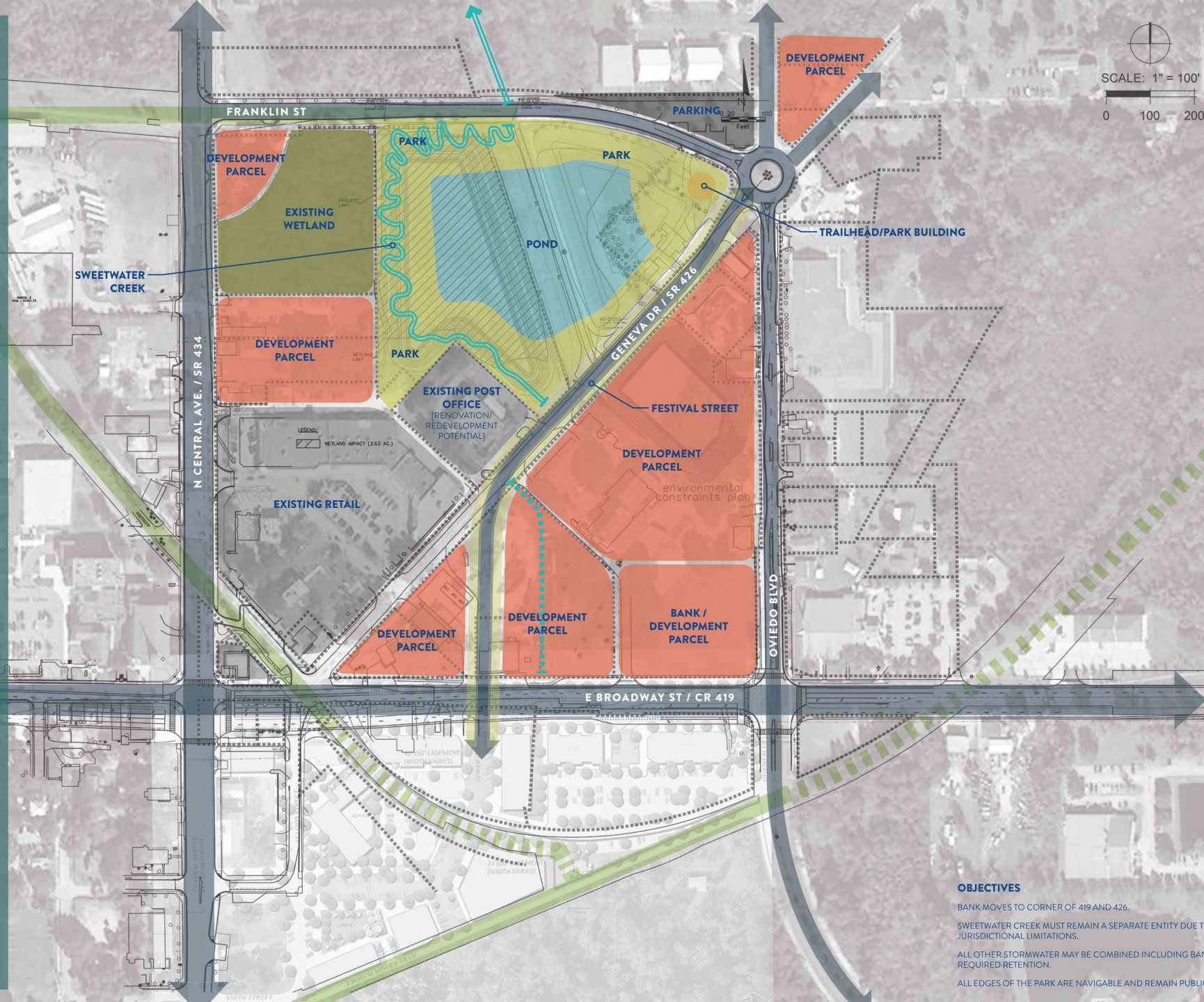
Jordan Construction & Development



RE-IMAGINE

Geneva Street is reimagined as a festival street with a residential/mixed use development defining the eastern edge. This scheme attempts to keep much of the existing property lines intact while creating an impetus and incentive for parcel redevelopment towards the park. A new retail/restaurant parcel at the roundabout creates an anchor/arrival from the north. Sweetwater Creek is re-directed to the west and becomes an artful conveyance along a new street off of 434.

COMPARABLE IMAGERY



OBJECTIVES

BANK MOVES TO CORNER OF 419 AND 426.

SWEETWATER CREEK MUST REMAIN A SEPARATE ENTITY DUE TO JURISDICTIONAL LIMITATIONS.

ALL OTHER STORMWATER MAY BE COMBINED INCLUDING BANK
REQUIRED RETENTION.

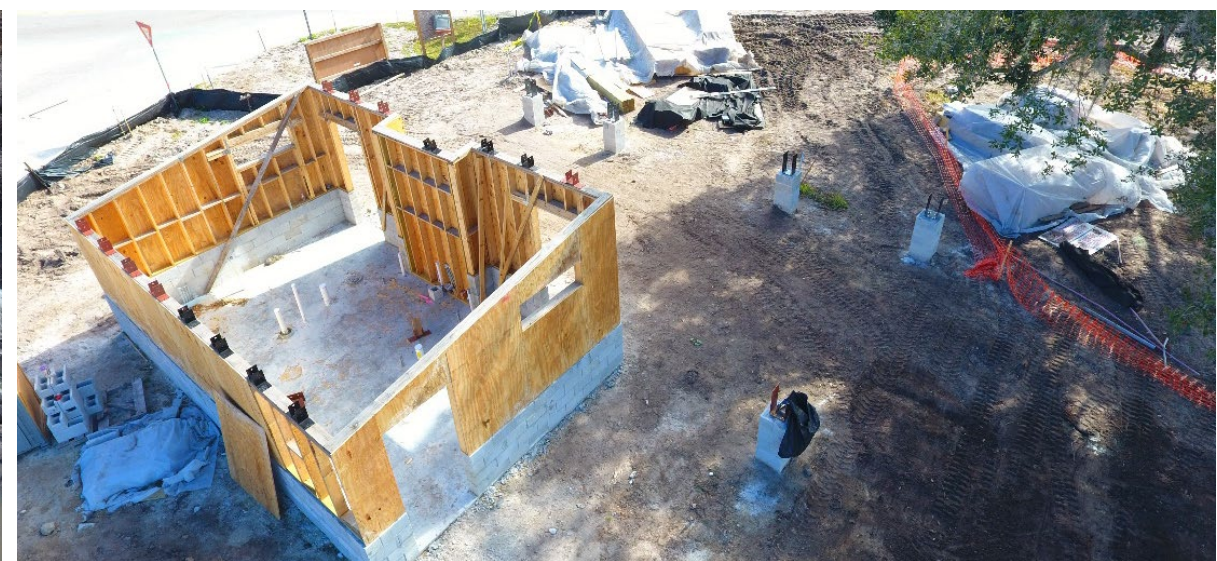
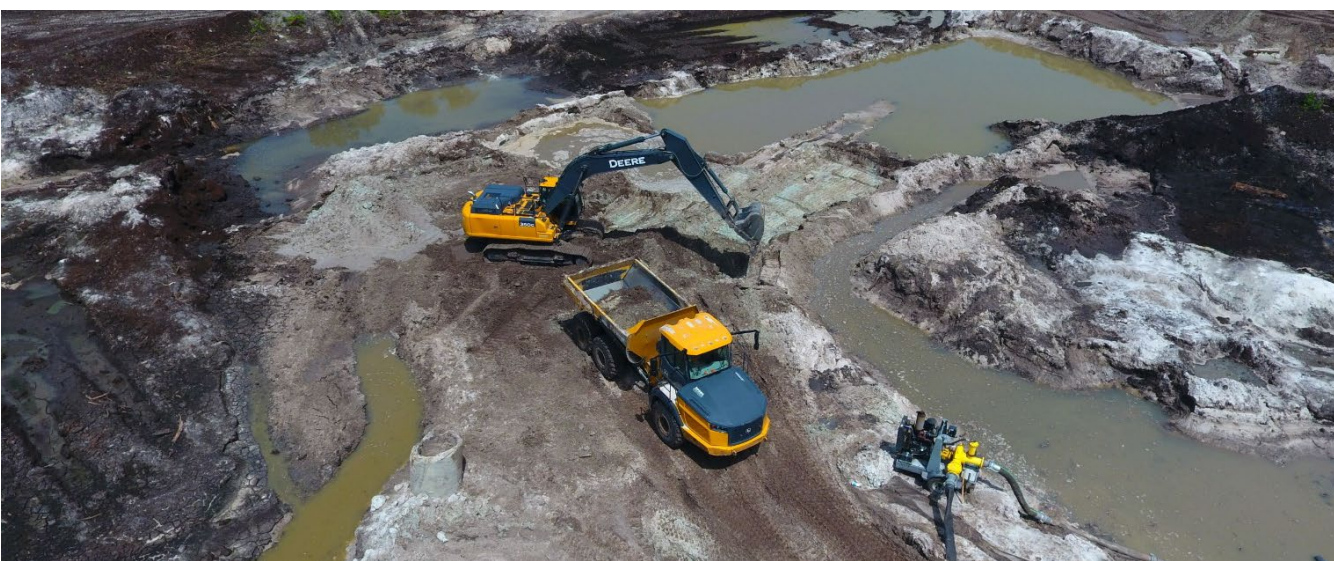
ALL EDGES OF THE PARK ARE NAVIGABLE AND REMAIN PUBLIC.



TRAILHEAD

CREEK WALK

INTERACTION AREA





















Solary Park, Oviedo, FL
Day one after Hurricane Ian.



Solary Park, Oviedo, FL

Six weeks after Hurricane Ian and one week post Tropical Storm Nicole.



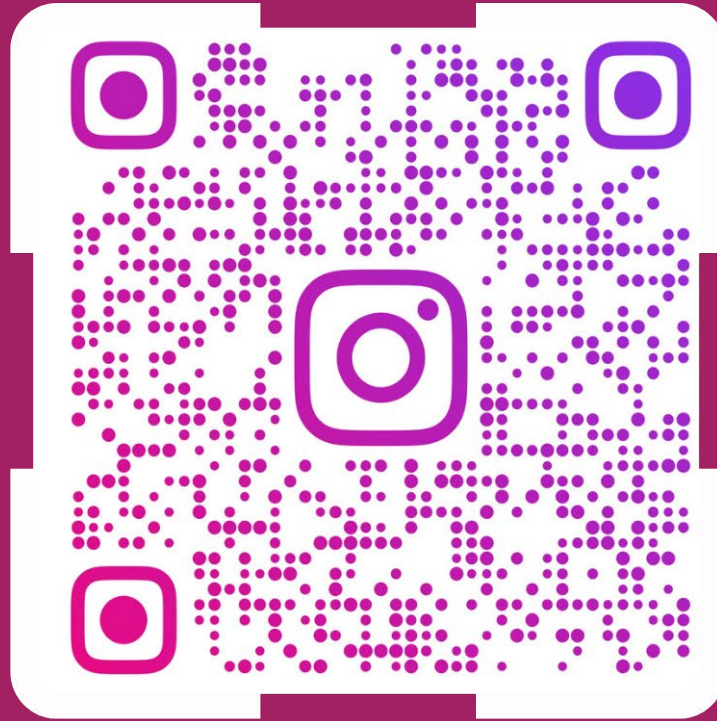
Solary Park, Oviedo, FL
Day one after Hurricane Ian.



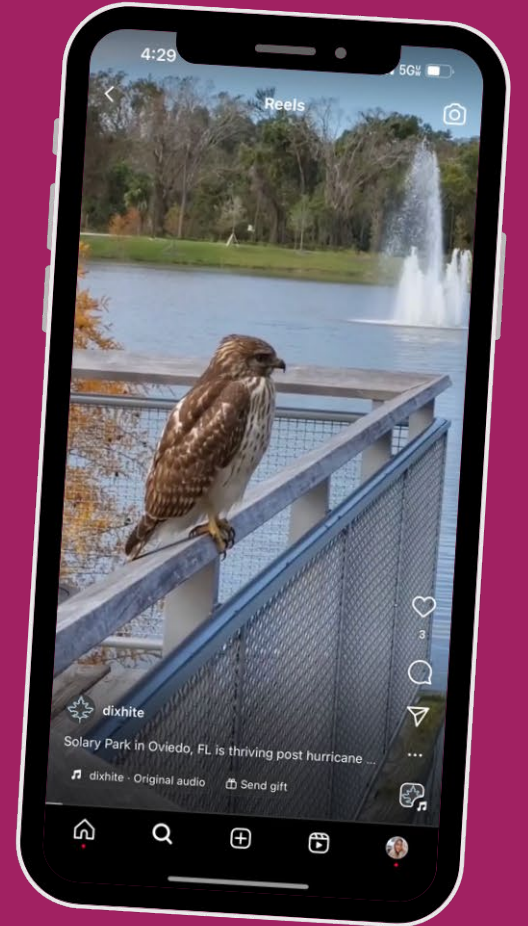
Solary Park, Oviedo, FL

Six weeks after Hurricane Ian and one week post Tropical Storm Nicole.

SCAN ME



TO SEE SOLARY PARK THRIVING POST HURRICANE SEASON





Crest Lake Park Restoration

Clearwater, Florida

- Joined the Project following the Master Planning process
- Worked with the City to evaluate the process to date and challenges/expectations associated with the budget
- Funded by BP oil spill settlement –
\$6.5 Million Budget / 39 Acre Park!
- Incorporated LID strategies to treat stormwater coming to the Lake from the surrounding communities
- Collaborated with City on RFP/Interview process for Construction Manager at Risk
- Collaborated with City and CMAR to provide a showcase park, built on budget and on time

Crest Lake Park Restoration

Clearwater, Florida

City of Clearwater

Collaborators:

Dix.Hite + Partners

Kimley-Horn

Florida Design Consultants

Exum & Associates

KPI Engineering

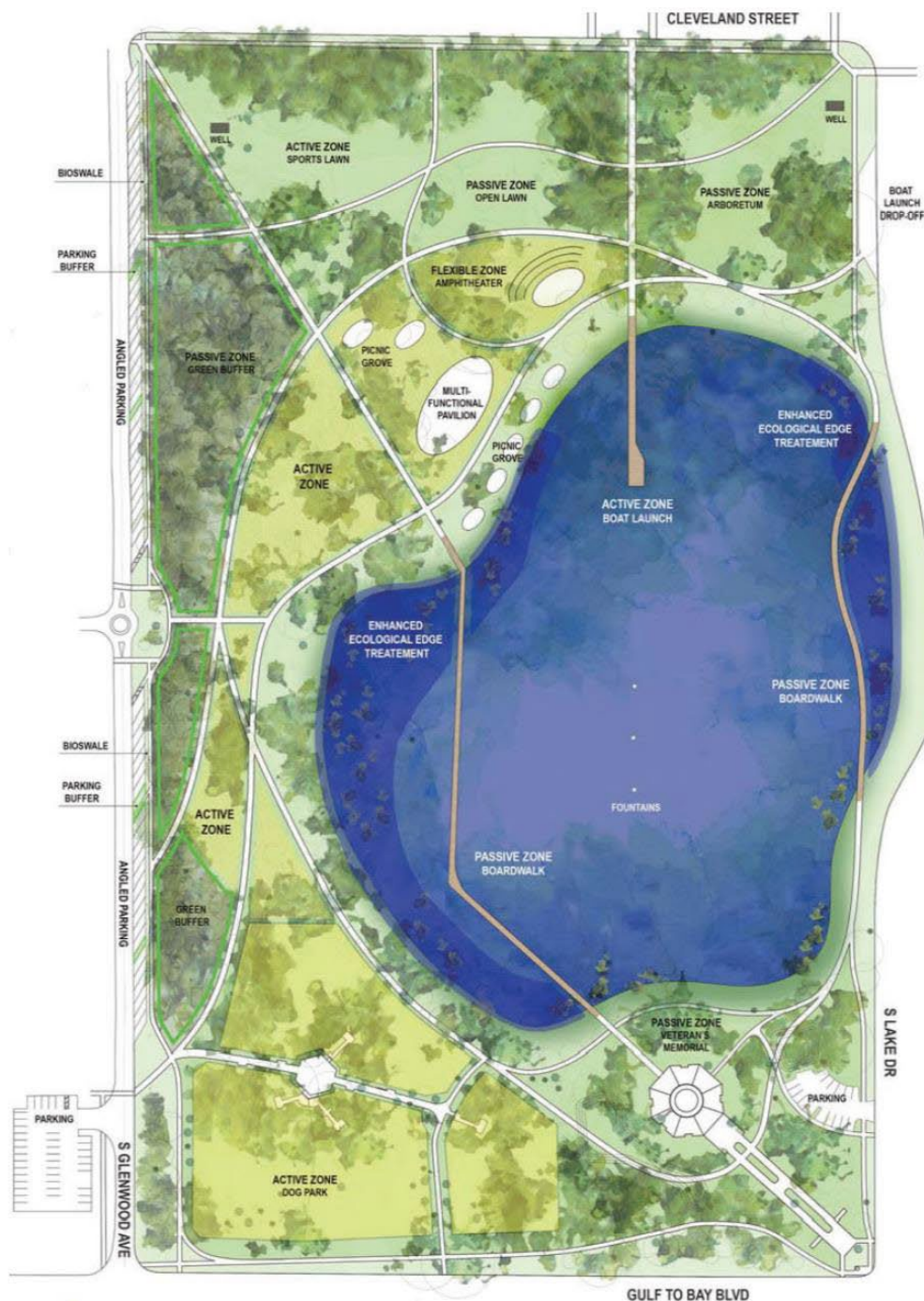
Freeport Fountains

Pro Turf Irrigation

Leesburg Concrete

Wharton Smith Construction





MASTER PLAN GOALS

- PROTECTION AND ENHANCEMENT OF THE LAKE'S EDGES BY CREATING ENLARGED WETLAND EDGES AND BALD CYPRESS GROVES
- INTEGRATION OF THE LAKE WITH THE PARK, WHILE NOT OVERDEVELOPING THE PARK
- INCREASE WATER ACCESS WHILE IMPROVING THE ECOLOGY OF THE LAKE, ESPECIALLY HABITAT FOR BIRDS
- CREATE SEVERAL OPTIONS TO STROLL AROUND THE LAKE
- CREATION OF ACTIVE ZONES, PASSIVE ZONES AND FLEXIBLE ZONES



45 meeting 1 | public analysis

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.

Crest Lake Park
PUBLIC ANALYSIS

MEETING 0001
Page 5

LOCATION: 407 S Saturn Ave, Clearwater FL, 33755

MEETING DATE: 10/06/2016

Display the name of park better.

Re-landscape large concrete planters.

No community center, this is a neighborhood zoned residential.

Small neighborhood passive park. Not to bring in too much traffic.

Community center will attract unwanted loitering.

Splash fountains for kids are a liability.

Enforce stronger litter laws.

100 year capsule.

Possibility of expanding park on the other side of Drew Street (north of park)

Concern that wooden structure, such as boardwalks, will require continual maintenance.

Water festival

Shade structures.

No large parking, keep neighborhood in mind.

Page 6

Graphs from Survey

1. In 2013, the City conducted a survey to find out what improvements residents thought were needed in Crest Lake Park. Below are the nine items that were identified then. Place a check mark in front of the items you are in agreement with.

Value

Percent

Count

Restrooms

95.4%

45

More green landscaping

54.2%

30

Walking water fountain

54.2%

30

Splashes for children

37.2%

21

Improved security and/or better lighting

54.2%

30

Healthier and better trees

44.2%

24

Better playground

25.0%

13

Removal of alligator

25.0%

13

Improve fishing

27.0%

15

Better dog waste area

44.2%

24

Clearwater

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W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.

Percent

Value

Count

Improve fishing

27.0%

15

Restrooms

95.4%

45

More green landscaping

54.2%

30

Walking water fountain

54.2%

30

Splashes for children

37.2%

21

Improved security and/or better lighting

54.2%

30

Healthier and better trees

44.2%

24

Better playground

25.0%

13

Removal of alligator

25.0%

13

Improve fishing

27.0%

15

Better dog waste area

44.2%

24

Clearwater

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, LLC

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.

Additional comments:

ZONE 1 (FLEXIBLE PARK)

Nice, grassy, wide open field for games and sports and picnicking (ex. Largo Central Park) (2).

Pavilion for community center- not enclosed building

Covered pavilions with grills for picnics, birthdays (3).

Covered pavilion for music groups to play. (2)

Place for special events/festivals - farmers market, arts and crafts (4).

Hot dog or drink stand by playground. (2)

Heavily landscaped walk or picnic area.

Sand volleyball courts

meeting 2 | meeting minutes

MEETING 002
Page 4

LOCATION: Crest Lake Park

MEETING DATE: 01/09/2017

ITEM

DESCRIPTION

STATUS

ACTION BY

DUE

4.02

One person suggested that nobody interrupts another person, that way we can hear everyone out and efficiently move along. There was a unanimous vote to agree.

4.03

Table 1:

There was a bald eagle in the park today.

Bathrooms are needed.

Lakeline is the best.

LOCATION: Crest Lake Park

MEETING DATE: 01/09/2017

STATUS

ACTION BY

DUE

4.04

One person suggested that nobody interrupts another person, that way we can hear everyone out and efficiently move along. There was a unanimous vote to agree.

4.05

Table 2:

There was a bald eagle in the park today.

Bathrooms are needed.

Lakeline is the best.

Clearwater

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W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.

meeting 2 | public analysis

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.

MEETING DATE: 01/09/2017

Second public meeting for Crest Lake Park

Clearwater

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THE LAKELINE

Clearwater

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, LLC

W ARCHITECTURE & LANDSCAPE ARCHITECTURE, INC.





PICNIC PAVILIONS



PATHWAYS



PERMANENT SHADE STRUCTURES WITH TEMPORARY MARKET



SHADING WITH SEATING



OBSERVATION PAVILIONS



SEATING



FABRIC SHADE STRUCTURES



PEDESTRIAN & BIKE PATHS







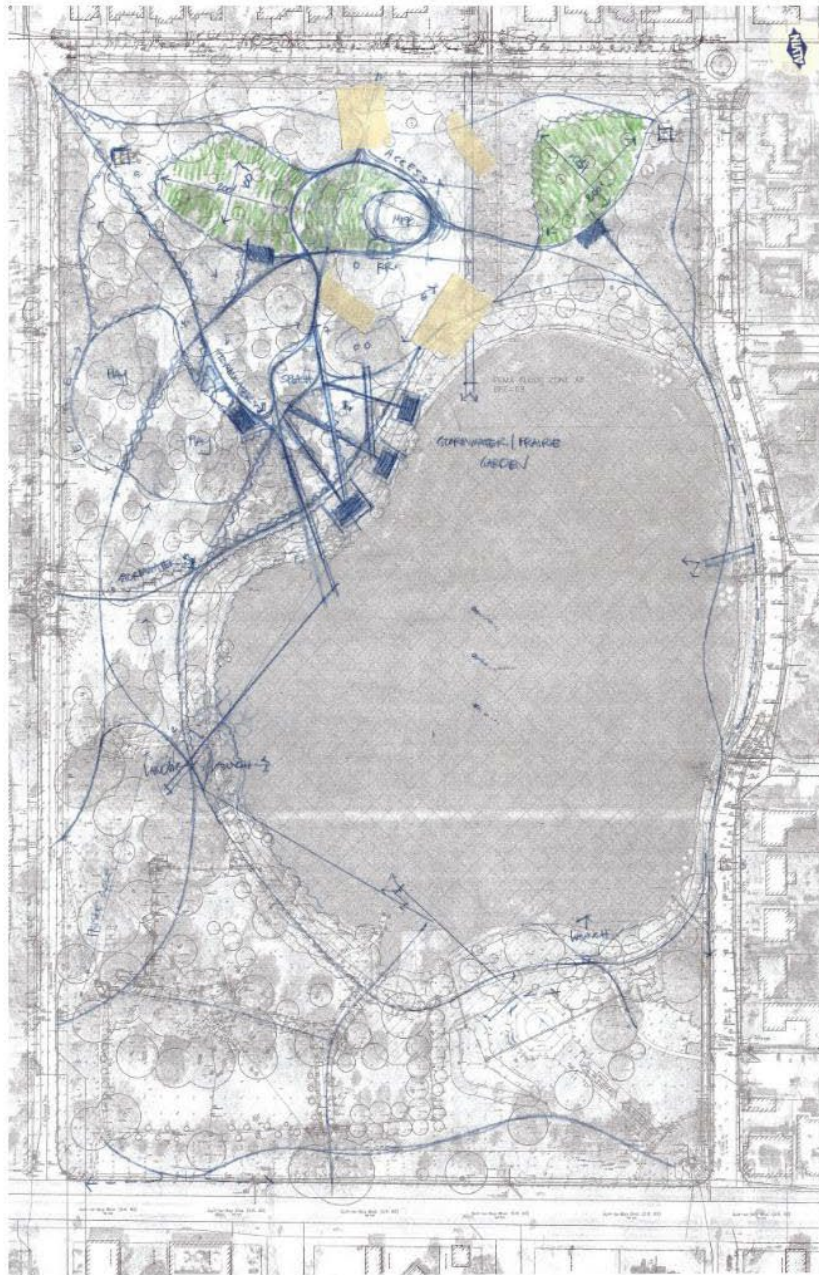
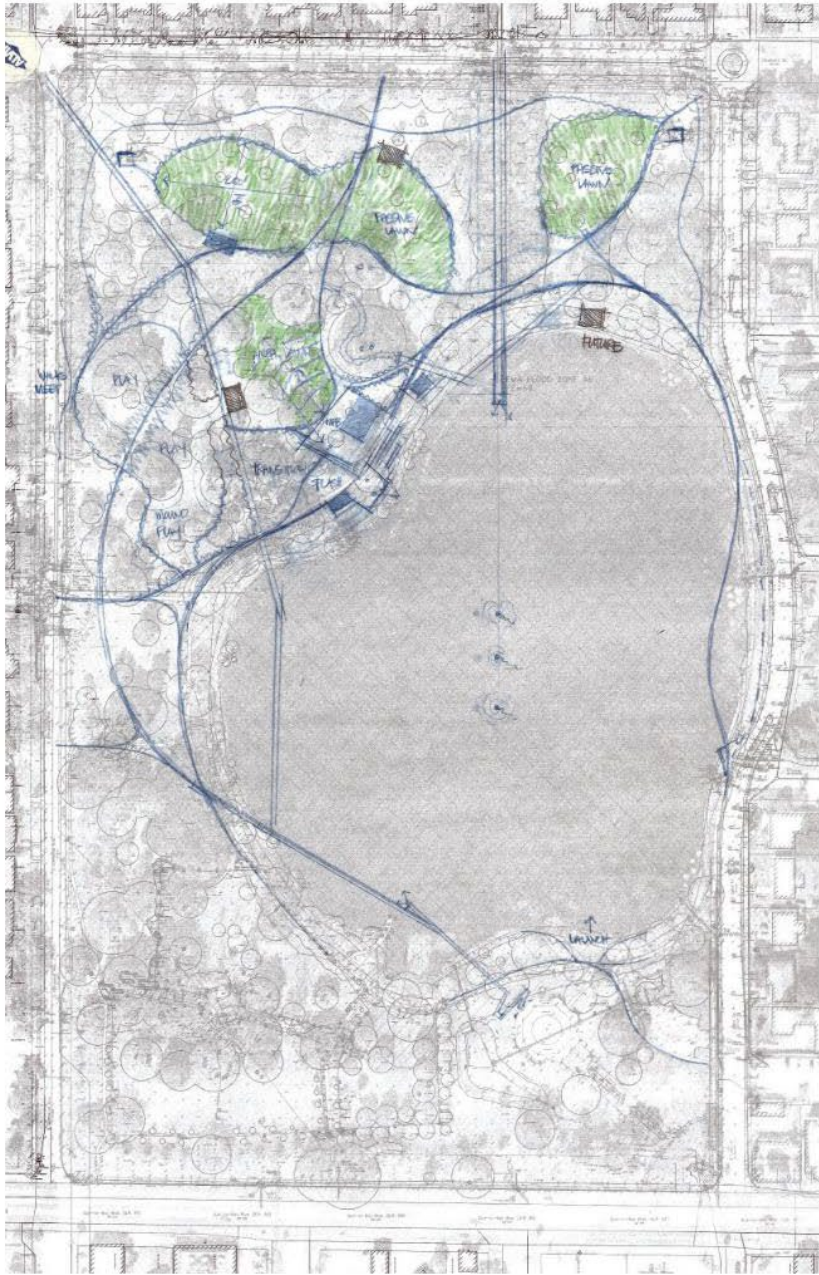


OPPORTUNITIES AND CONSTRAINTS



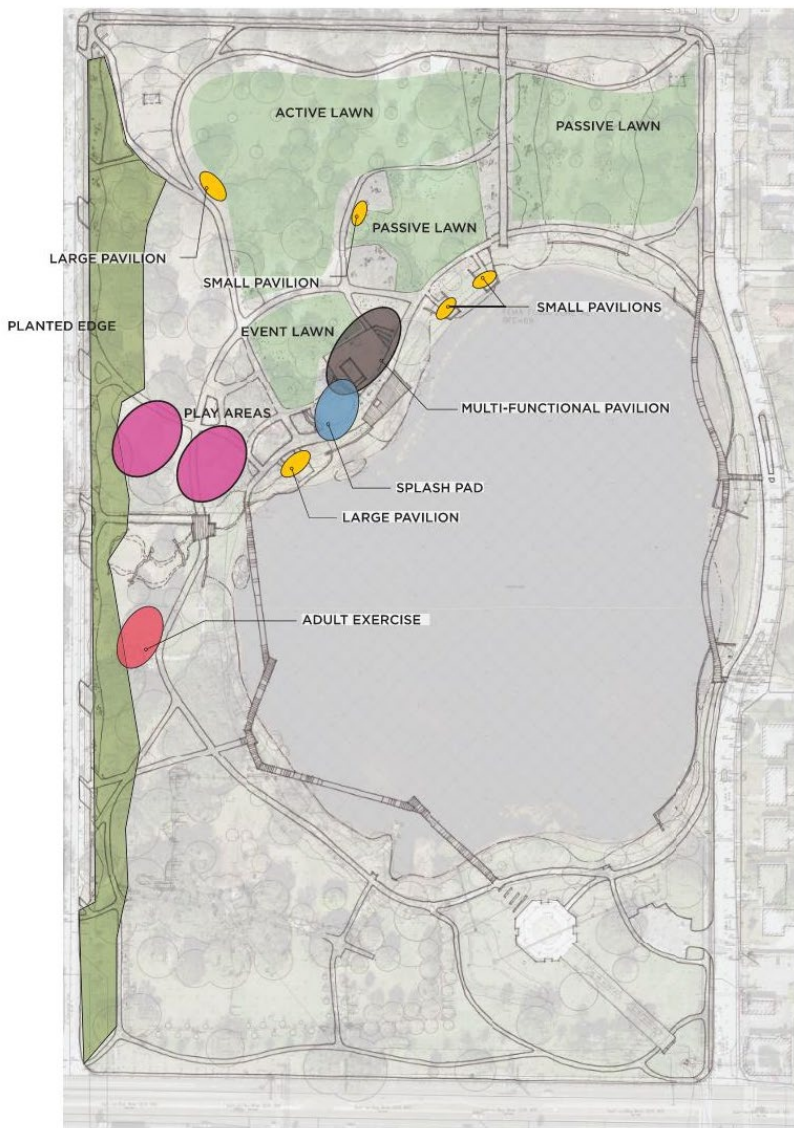


**CREATE AN APPROPRIATELY PROGRAMMED PARK THAT INTERACTS
WITH CREST LAKE, PROVIDES EXPERIENTIAL DIVERSITY, ENHANCES THE
ECOLOGY, AND CREATES WILDLIFE HABITAT.**





CONCEPTUAL MASTER PLAN



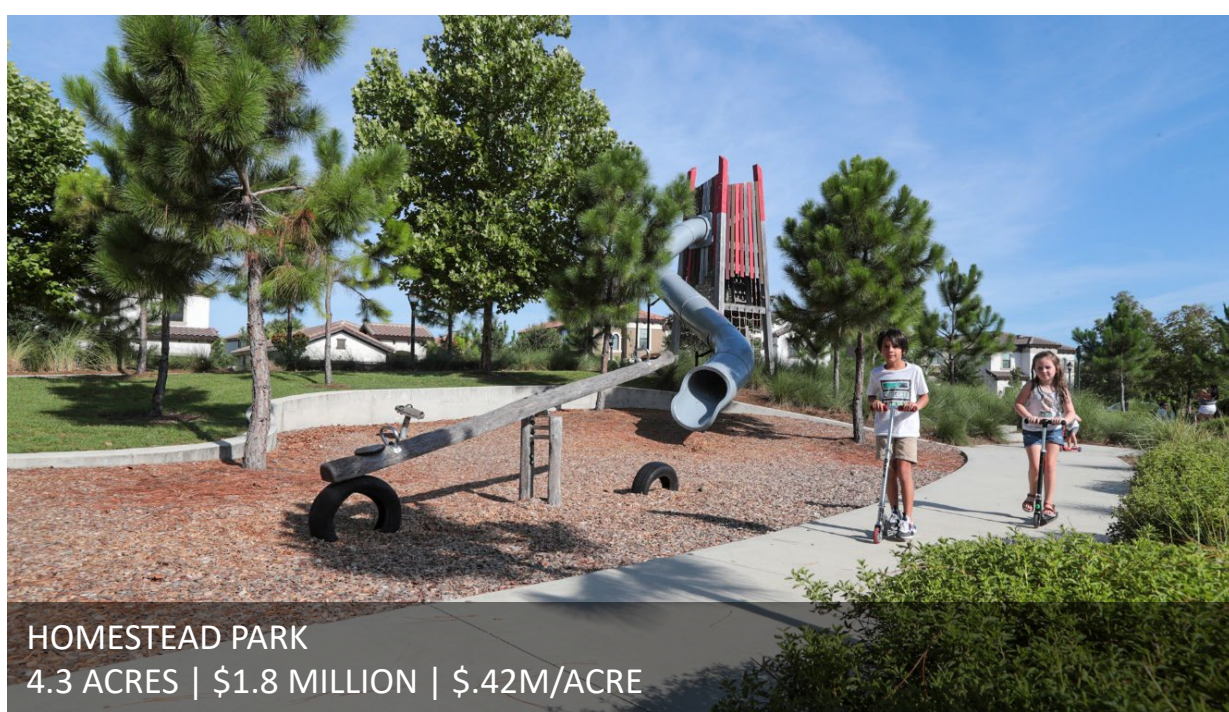
SCHEMATIC SKETCH PLAN



H



WHITFIELD PARK
3.1 ACRES | \$1.77 MILLION | \$.57M/ACRE



HOMESTEAD PARK
4.3 ACRES | \$1.8 MILLION | \$.42M/ACRE



CENTER LAKE PARK
7 ACRES | \$6.5 MILLION | \$.93M/ACRE



REITER PARK
7.5 ACRES | \$4.6 MILLION | \$.66M/ACRE

DESIGN APPROACH

COST TO INTENSITY (PARK CONSTRUCTION AND PROGRAMMING RELATIONSHIPS)

DEFINE AREAS OF HIGH INTENSITY ZONES (PROGRAMMING AND AESTHETICS), ESTABLISH EDGES AND RELATIONSHIPS TO THRESHOLD ZONES WHICH SERVE TO BLEND AND DISGUISE LOW INTENSITY AREAS.

HIGH INTENSITY ZONE



HIGH INTENSITY PROGRAM



ACTIVE CIRCULATION/PLANTING



PASSIVE CIRCULATION/MULCH

COST TO INTENSITY (PARK CONSTRUCTION AND PROGRAMMING RELATIONSHIPS)

TOTAL PARK AREA: 39 ACRES

(LAKE AREA) - 12 ACRES

TOTAL LAND AREA: 27 ACRES

|

4 ACRES X \$1 MILLION

9 ACRES X \$5.00/SF

14 ACRES < \$1/SF

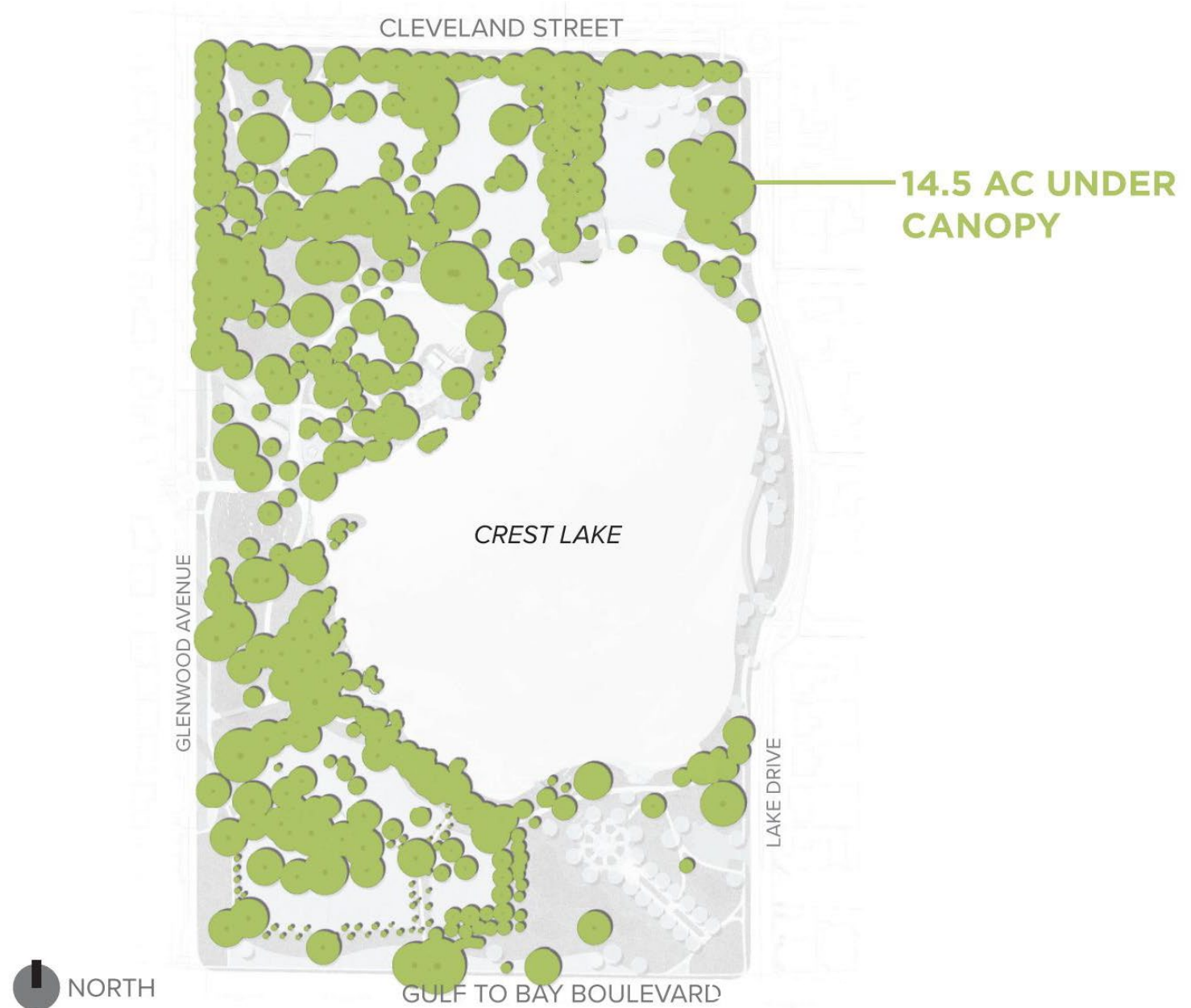
= \$6.5 MILLION





DESIGN APPROACH

LETTING THE CANOPY TELL THE STORY

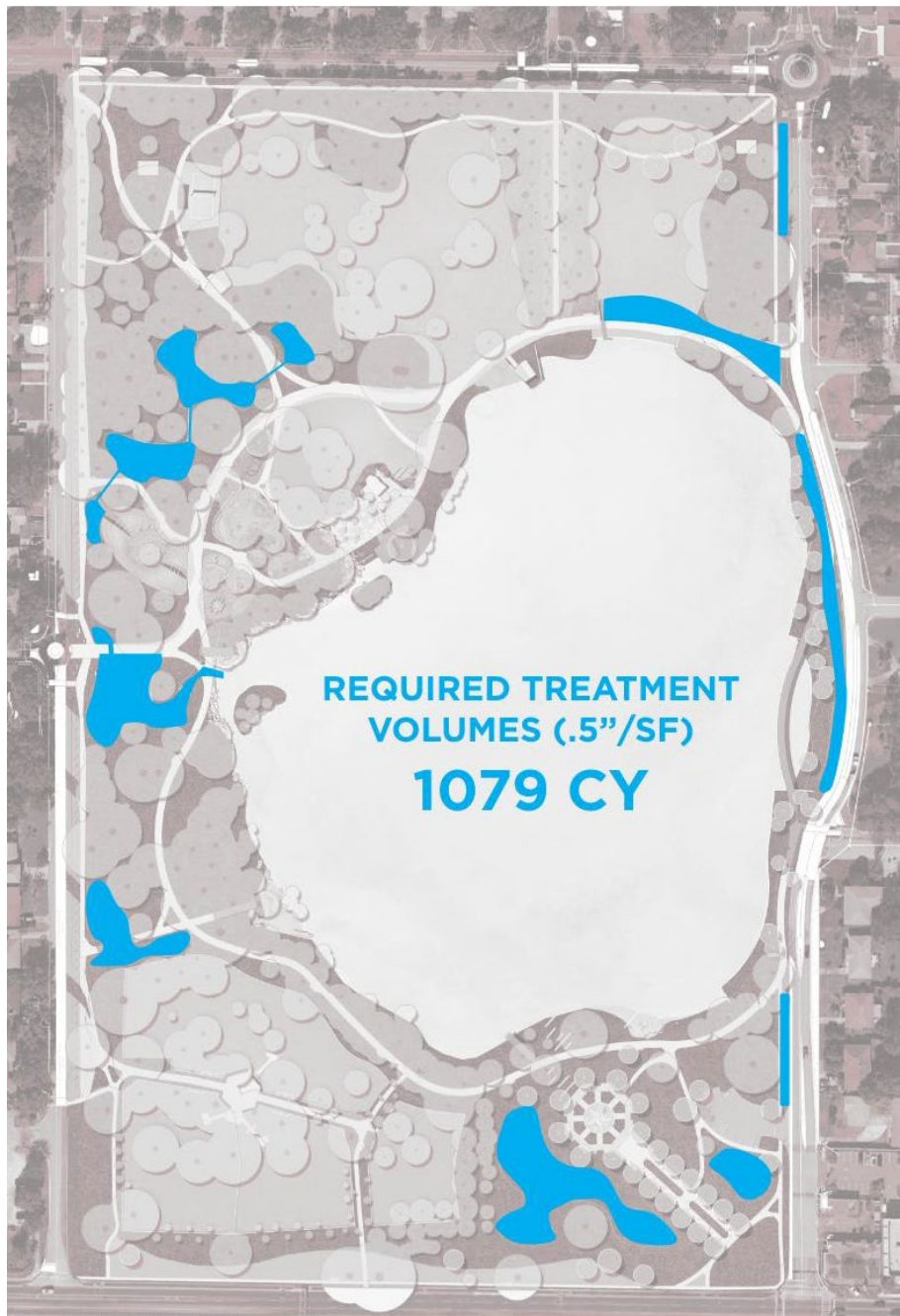
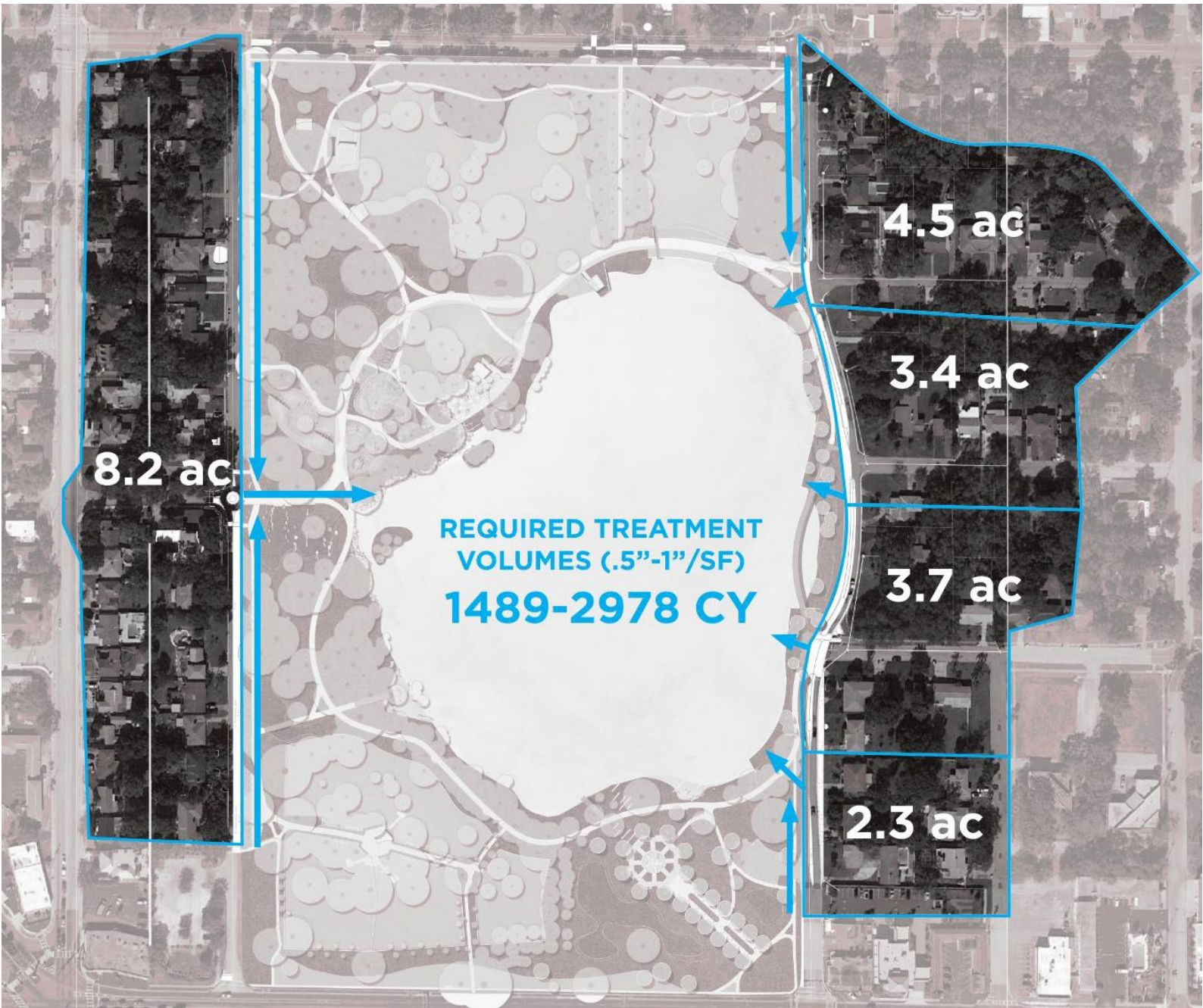


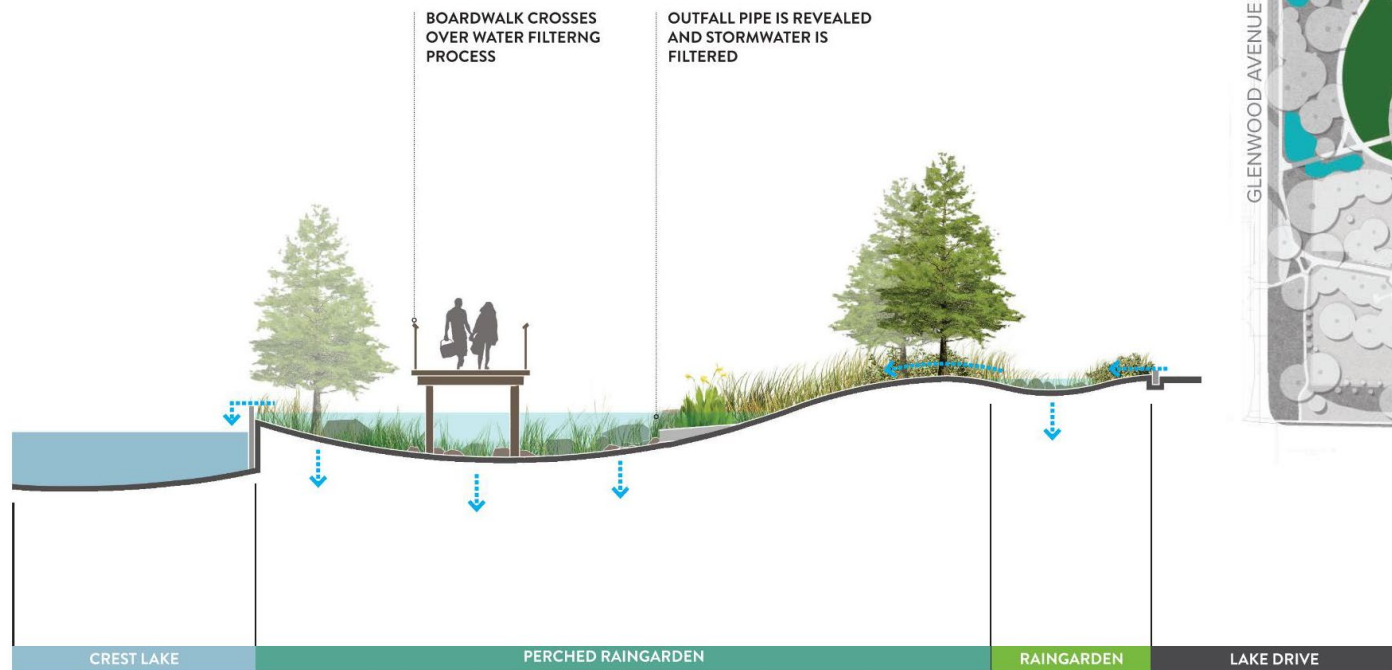
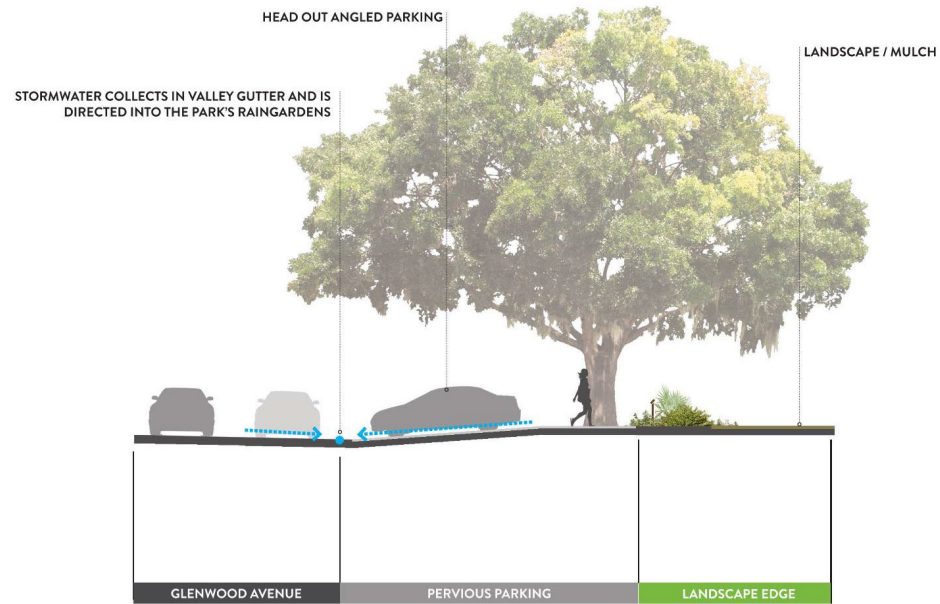
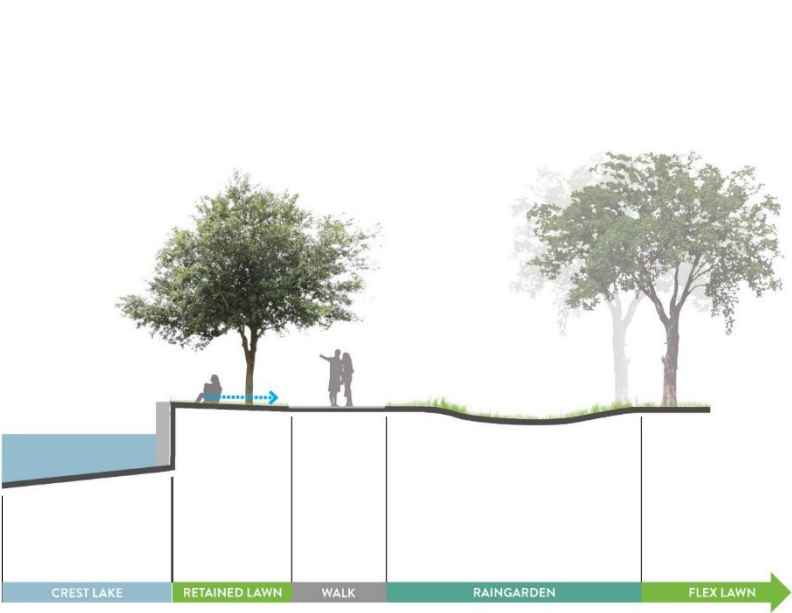




- PRIMARILY NON-NATIVE/NATIVE SPECIES WITH SELECT HISTORIC SPECIES
- NATIVE WITH SELECT HISTORIC SPECIES
- HIGH USE LAWN (ZOYSIA/BERMUDA)
- PASSIVE USE LAWN (BAHIA)
- NATIVE WITH SELECT HISTORIC SPECIES
- PRIMARILY MULCH WITH SELECT HISTORIC SPECIES







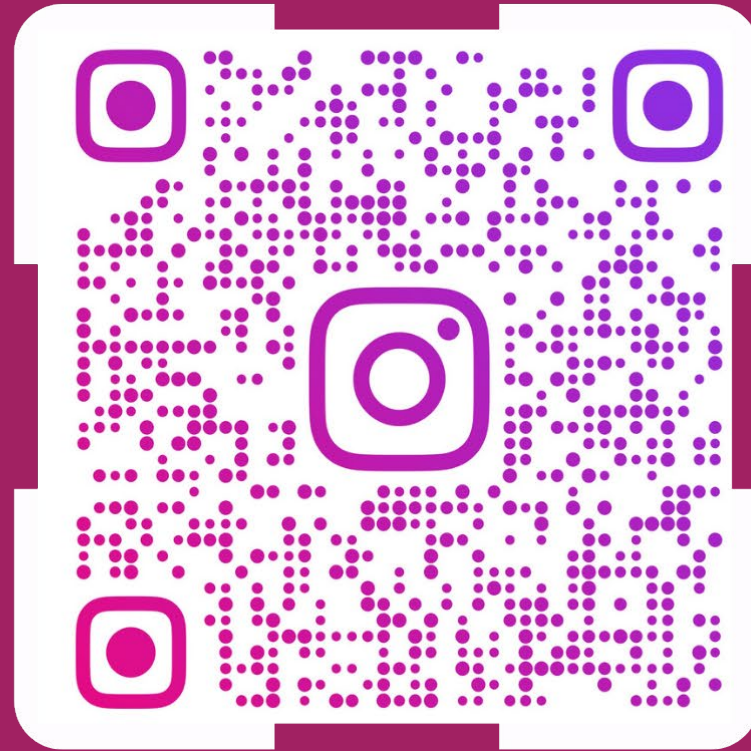




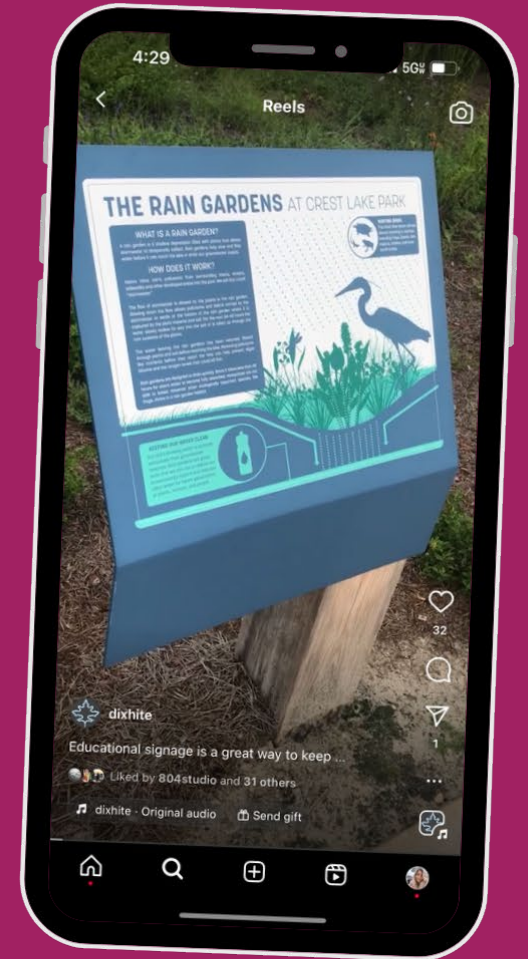




SCAN ME



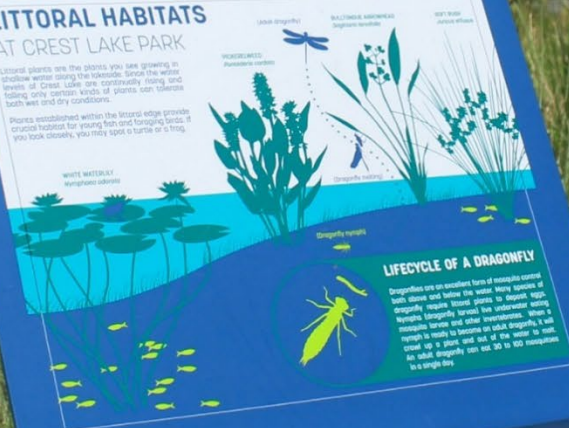
TO SEE THE RAIN GARDENS AT CREST LAKE PARK IN ACTION



LITTORAL HABITATS AT CREST LAKE PARK

Littoral plants are the plants you see growing in shallow water along the shoreline. Since the water levels at Crest Lake are continually rising and falling, only certain kinds of plants can tolerate both wet and dry conditions.

Plants established within the littoral edge provide crucial habitat for young fish and foraging birds. If you look closely, you'll see eggs of a turtle or a frog.



LIFE CYCLE OF A DRAGONFLY

Dragonflies are an ancient form of insect. They spend most of their lives in the water. Many species of dragonfly require warm, sunny, shallow water. Dragonflies lay their eggs in the water. When a nymph is born, it stays in the water. When a nymph is ready to become an adult dragonfly, it will crawl up a plant and out of the water. An adult dragonfly can live up to 100 days in a single day.

















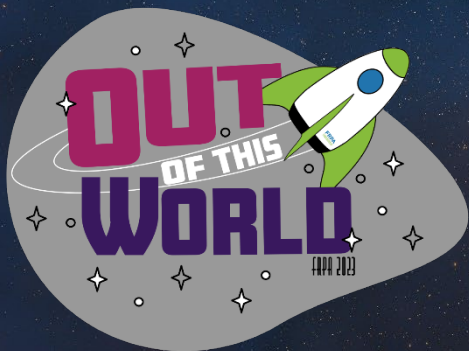








CHECK IN QR CODE





Thank You!

Chris Hite, FASLA, PLA

Kody Smith, PLA

Sheeba West, PLA

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swest@dixhite.com

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FLORIDA RECREATION
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