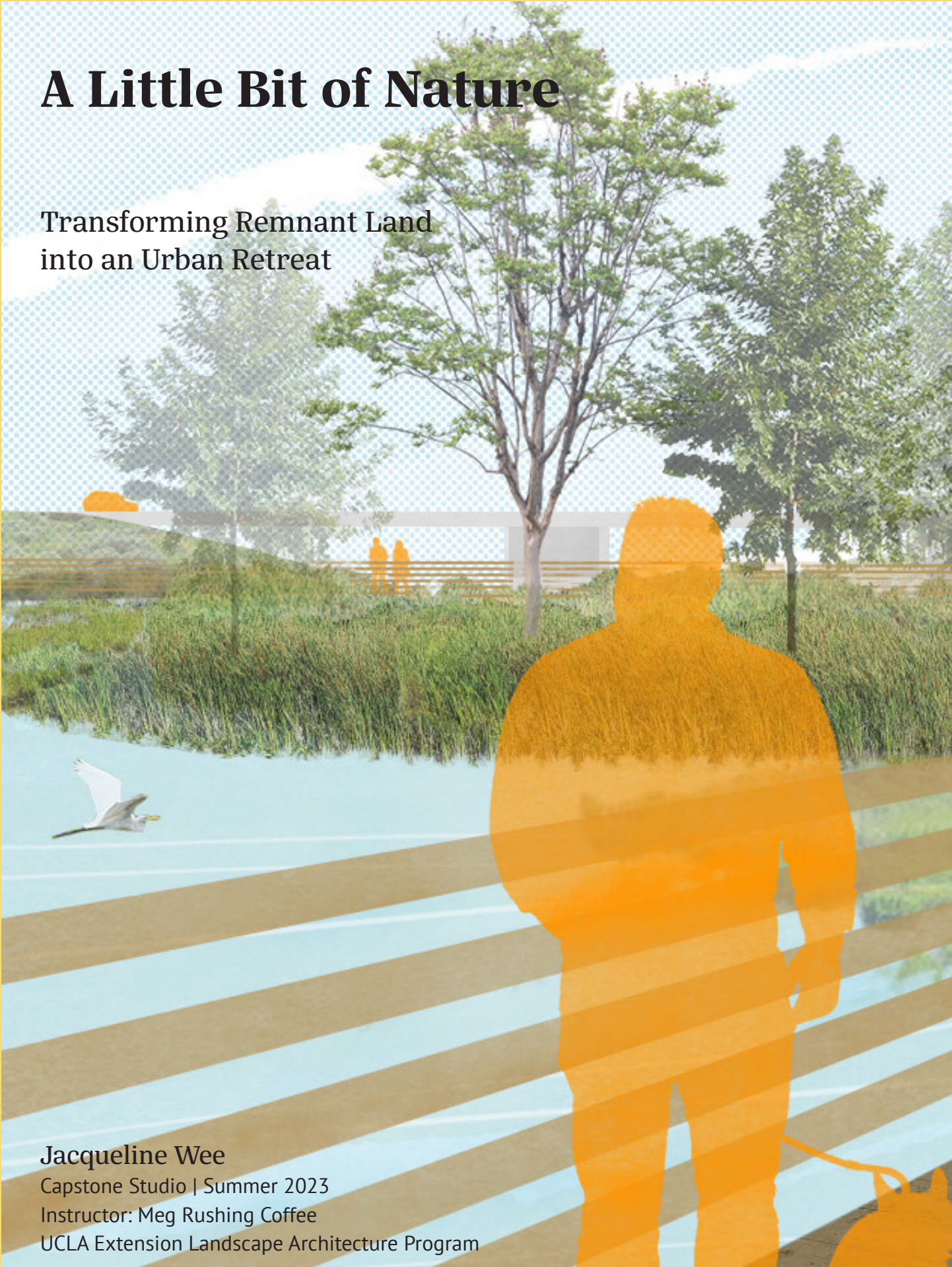


# A Little Bit of Nature

Transforming Remnant Land  
into an Urban Retreat



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Capstone Studio | Summer 2023  
Instructor: Meg Rushing Coffee  
UCLA Extension Landscape Architecture Program



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## Project Statement

By converting underutilized right-of-way land into a demonstration wetland and ecocentric park, this project aims to reintroduce nature into the developed urban setting to support biodiversity, strengthen the surrounding community, and spark environmental stewardship.



## Project Justification

When imagining a typical urban park, what often come to mind are large areas of turf with a sprinkling of active recreation facilities, such as sports courts and skate parks, and some path systems tying everything together. Conspicuously absent from that picture is the feeling of nature.

*Nature: the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations*

Considering the man-made reality of urban parks and community needs for specific types of recreation, it's understandable that the natural world has been omitted in many parts of the city. However, nature and natural systems in the urban setting can provide a wealth of benefits to both people and the environment.

In dense urban areas where land is a precious commodity, open spaces should address multiple dimensions of need to maximize their contribution. Natural systems can improve water quality and encourage groundwater recharge while supporting ecosystem needs such as climate regulation and habitat.

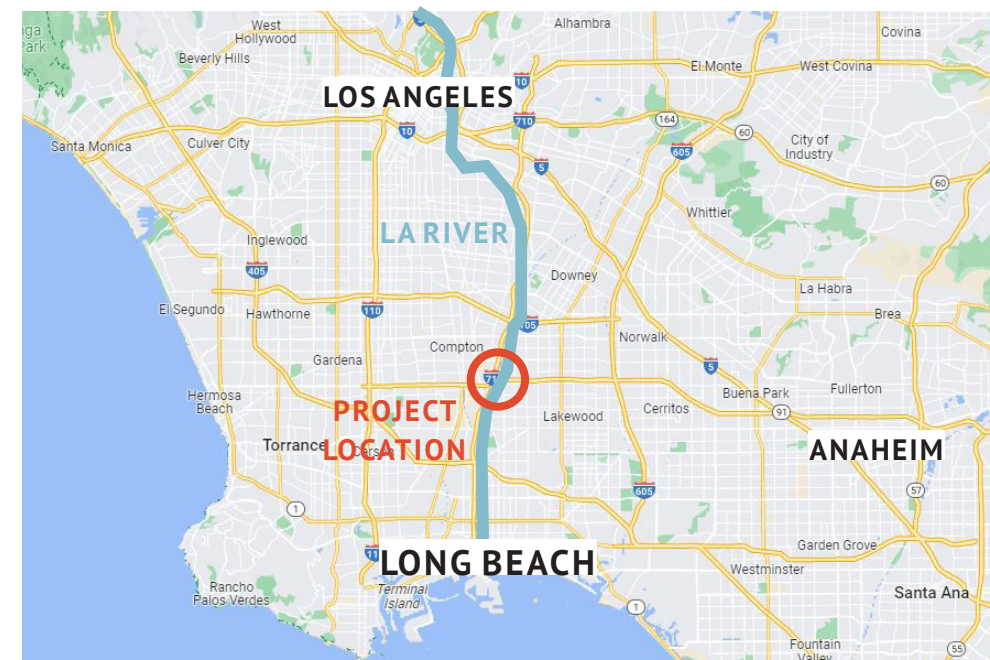
On the human axis, exposure to nature has been shown to have beneficial effects on health and wellness by promoting physical activity and reducing stress and anxiety. In children, nature exposure encourages curiosity and engagement, and it has a positive correlation with improved behavior and concentration.

Beyond regarding nature for its performance, however, there's the more philosophical issue that entails humankind's connection with the natural world. As our society loses touch with nature, we lose the sense of wonder that is sparked by discovery of nature's beauty. Not only

does this rob us of a basic human joy, but this also makes issues like environmental degradation and biodiversity loss something abstract and removed from our concerns rather than acutely felt as direct consequences of our actions.

The proposed project site is within the Hamilton neighborhood of North Long Beach, a community that has a high need

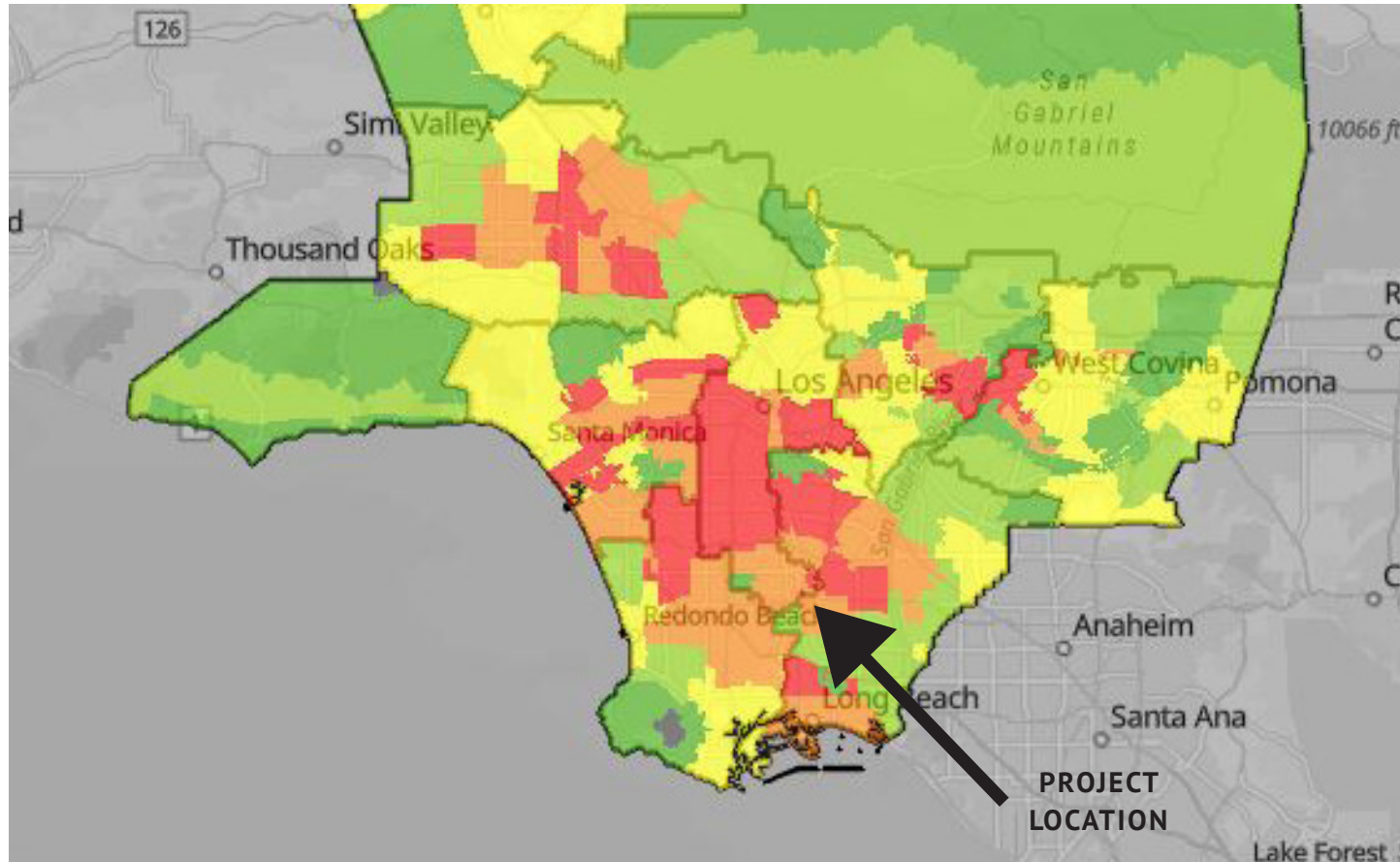
for open space. The lack of naturalistic park space is even more dire in lower-income neighborhoods, where people may be less likely to travel long distances for nature retreats because of inability to take time off work, the cost of travel, lack of automobile access, etc. Even without having to seek out far-off places, every person should have the opportunity to feel nature around them.



*An ecocentric park can improve environmental health and strengthen the surrounding community by providing a unique space that is connected to nature.*

# Project Justification

The proposed project fulfills a variety of planning needs, including the LA County Parks Needs Assessment, Long Beach General Plan, LA River Master Plan, and Uptown Open Space Vision Plan.



## LA County Parks Needs Assessment

- **High** need area with only **1.1 acres per 1,000** residents compared to county average of 3.3 acres
- Considered a Priority area for **Environmental Restoration**



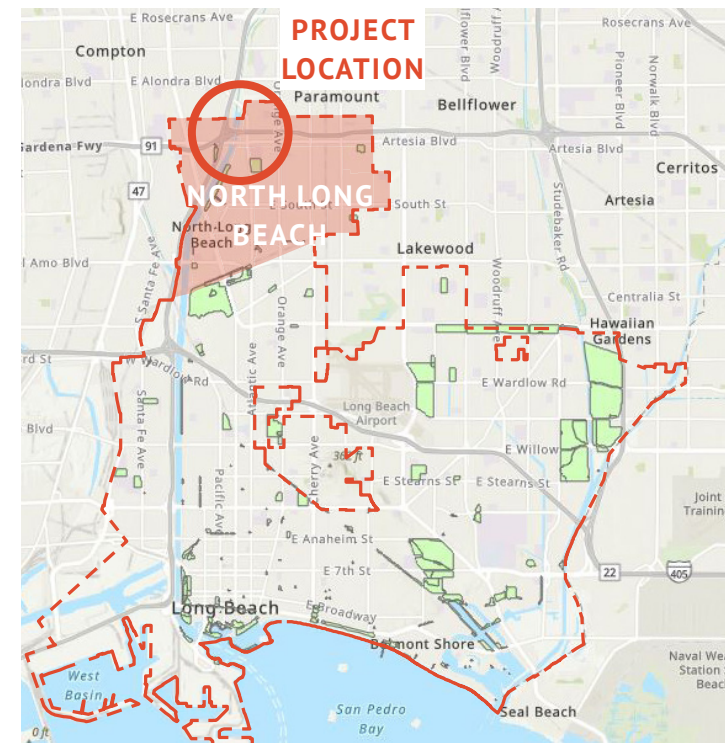
## Long Beach General Plan

- Goal: Increase Access to, Amount of, and Distribution of Green and Open Space
- Goal: Preserve, Protect, Restore, and Reconnect with Natural Resources



### Open Space PlaceType

- Location considered Open Space PlaceType
- Purpose is to promote the emotional and physical health of urban residents through contact with natural environments



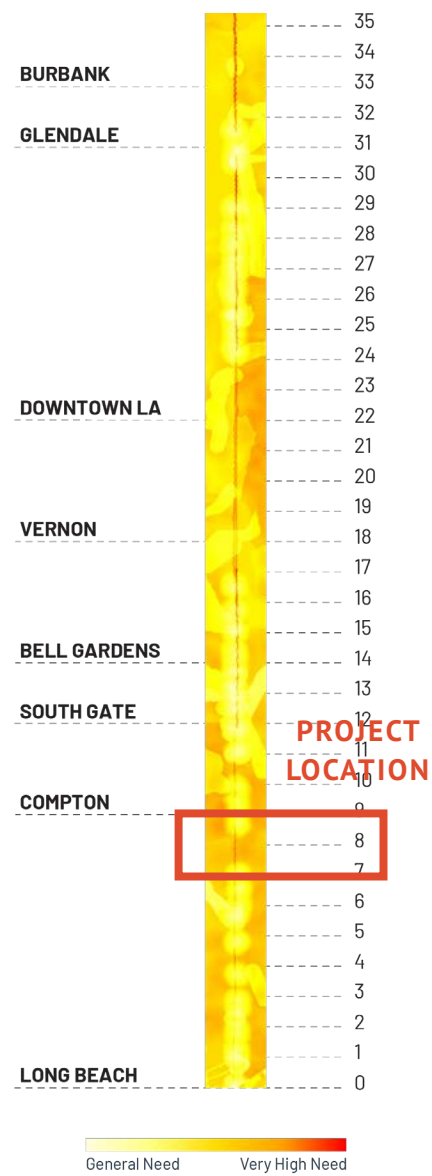
### Neighborhood-Serving Centers and Corridors PlaceType

- Location adjacent to Neighborhood-Serving Centers and Corridors PlaceType
- Purpose is to promote a neighborhood's unique identity, focus on healthy goods and services, enhance pedestrian and bicycle connections to neighborhoods, provide community gathering places, and provide convenient access to transit

### Long Beach Park Distribution

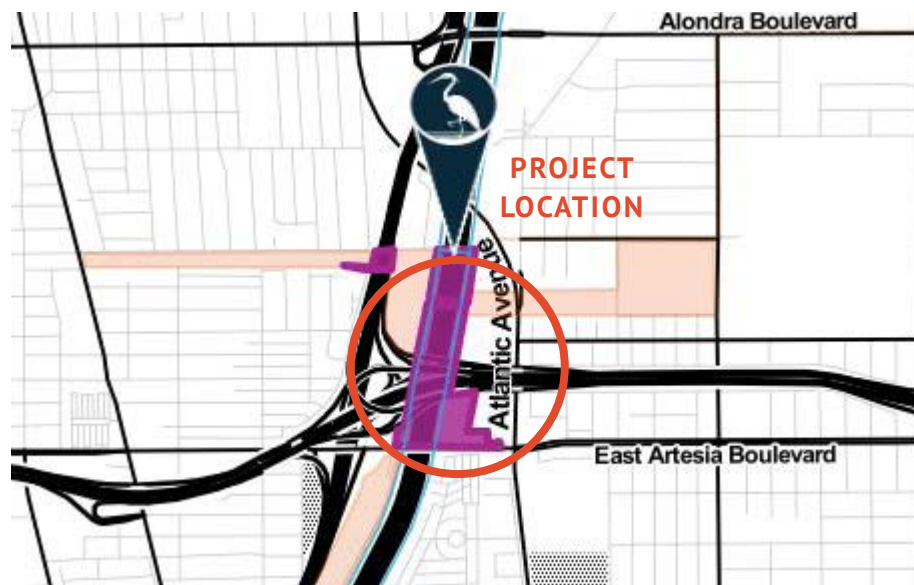
- Project contributes to General Plan park target of **8 acres** per 1,000 residents
- Long Beach City average is **4.4 acres** per 1,000 residents.
- At **1.2 acres**, North Long Beach lags far behind.

# Project Justification



## LA River Master Plan

- Part of an area identified as a candidate project site
- **High needs for Parks and Trails, River Access, Arts and Culture, Engagement and Education, Water Supply**
- Moderate needs for Ecosystem and Water Quality
- Site located at a gap in river access



## Uptown Open Space Vision Plan

- Identified in a community workshop with 635 North Long Beach residents as a potential park space
- Site ranked number **7 out of 55** opportunities



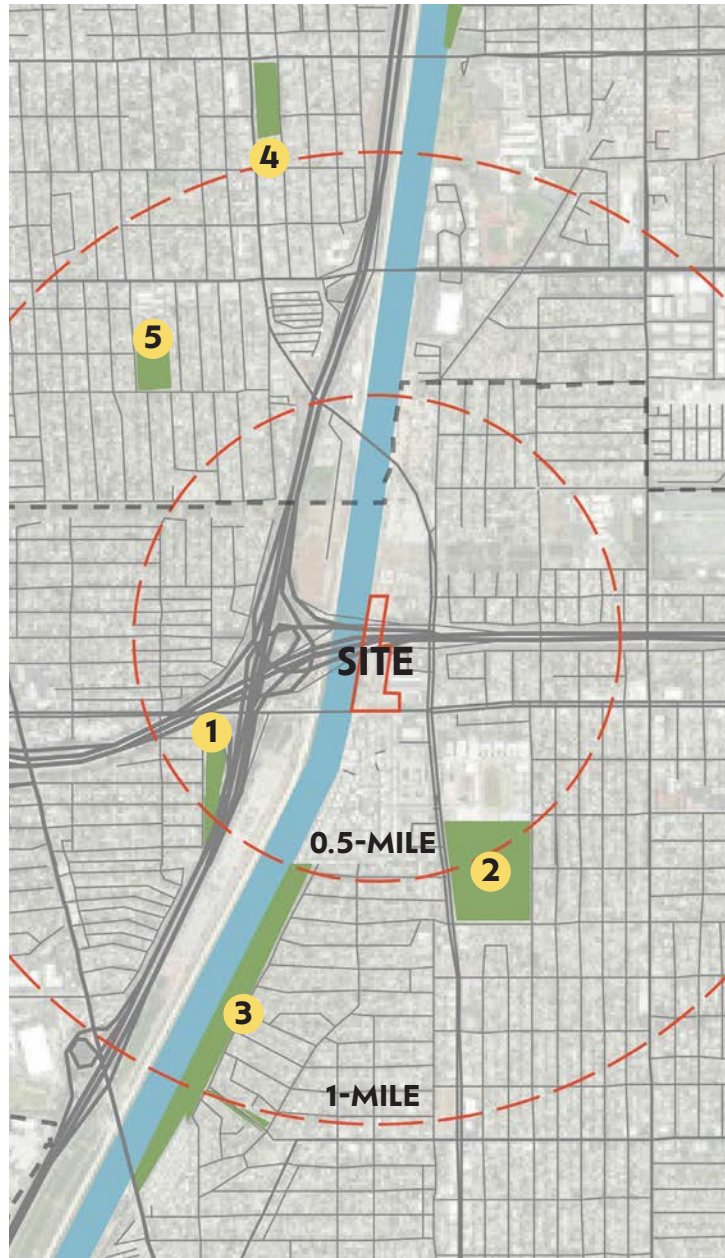
**HAMILTON**



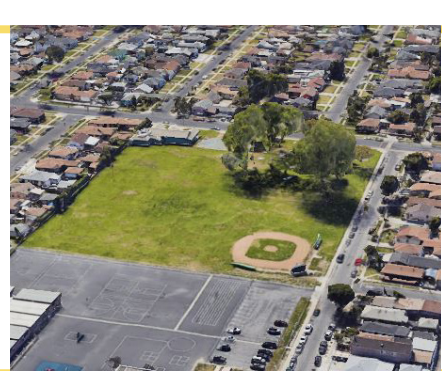
WALKING TRAIL
 DOG PARK
 PICNIC AREA

- Top three desired amenities for the Hamilton neighborhood are **walking trail, dog park, and picnic area.**

# Project Justification

Beyond fulfilling planning needs, the proposed project can give the nearby community a different type of outdoor experience. Nearby parks are all heavily programmed, and they consist primarily of large areas of turf with minimal other types of landscaping. A park with more passive recreation that provides ecosystem services would fill a gap in the community.



1	<b>Coolidge Park</b> 6 acres Neighborhood Park		<b>Amenities</b> Basketball Court Community Center Dog Park Picnic Area	Playground Restrooms Softball Field
2	<b>Houghton Park</b> 25 acres Regional Park		<b>Amenities</b> Baseball Field Basketball Court Community Center Outdoor Fitness Equipment	Picnic Area Playground Restrooms Skate Park Soccer Field Softball Fields Tennis Courts Veterans Memorial Volleyball Court Walking Trail
3	<b>DeForest Park</b> 50 acres Community Park		<b>Amenities</b> Basketball Court Community Center Playground Sand Volleyball Court	Softball Field Racquetball Court Restrooms Recreation Center Tennis Court Walking Trail Wetlands
4	<b>East Rancho Dominguez Park</b> 5 acres Community Park		<b>Amenities</b> Barbecue Basketball Court Community Center Gymnasium	Multipurpose Field Picnic Area Tennis Court Restrooms
5	<b>Kelly Park</b> 4 acres Neighborhood Park		<b>Amenities</b> Baseball Field Basketball Court Community Banquet Room Multipurpose Field	Picnic Area Playground

# Goals and Objectives



Support  
Biodiversity

Habitat for local wildlife

Water quality improvements

Ecological connectivity



Strengthen  
Community

Community-driven programming

Exercise opportunities

Resting points

Improved park access and connectivity



Spark  
Stewardship

Opportunities to connect with nature

Nature-based play

Nature education

# Design Methodology

The design methodology is comprised of a three-prong approach that encompasses ecology, water, and people.

## Ecology

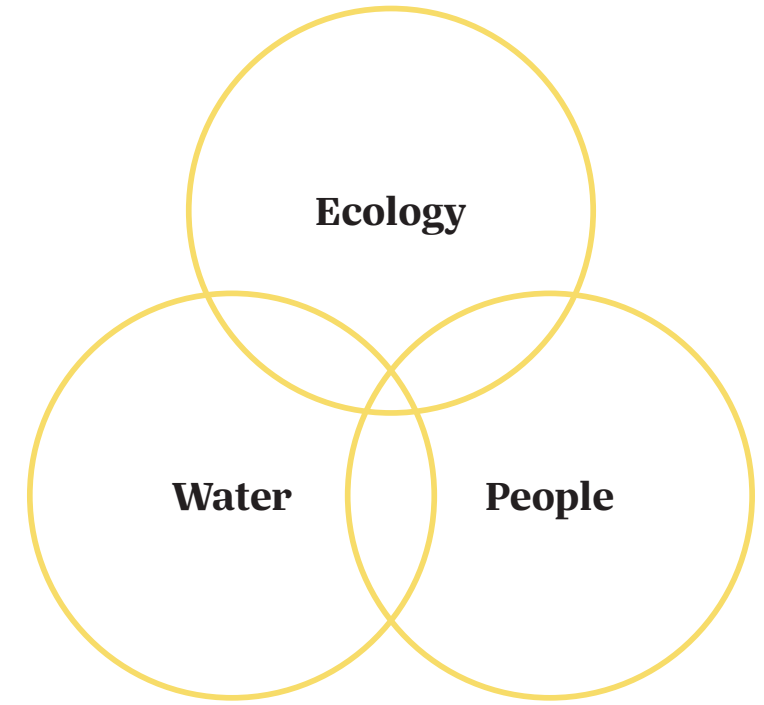
- *Principles of Ecological Landscape Design*
- *Millennium Ecosystem Assessment: Ecosystems and Human Well-being: General Synthesis*
- *LA River Master Plan (Biodiversity Profiles)*

## Water

- *Low Impact Development: A Design Manual for Urban Areas*
- *Treatment Wetlands*

## People

- *Design for Ecological Democracy*
- *LA River Master Plan (Kit of Parts)*



# Design Methodology

## Ecology

### Principles of Ecological Landscape Design

- Design landscapes to provide ecosystem services
- Work with regional soils
- Select plants with different niches to grow together
- Meet plant water needs through contouring and drainage
- Shape patches for ecological function

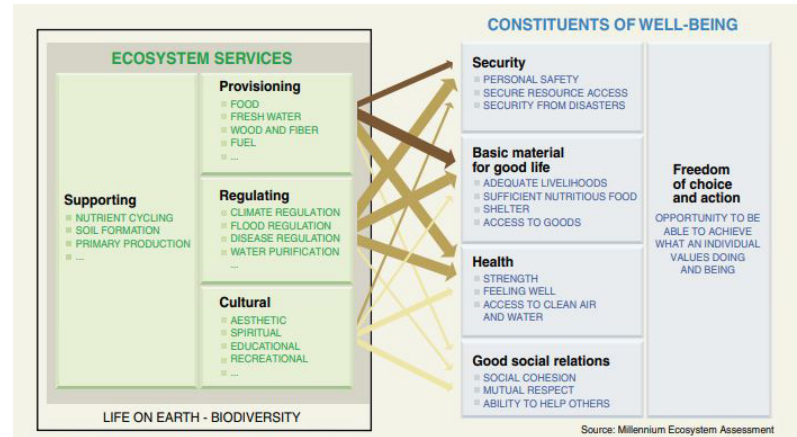


Image source: Millennium Ecosystem Assessment

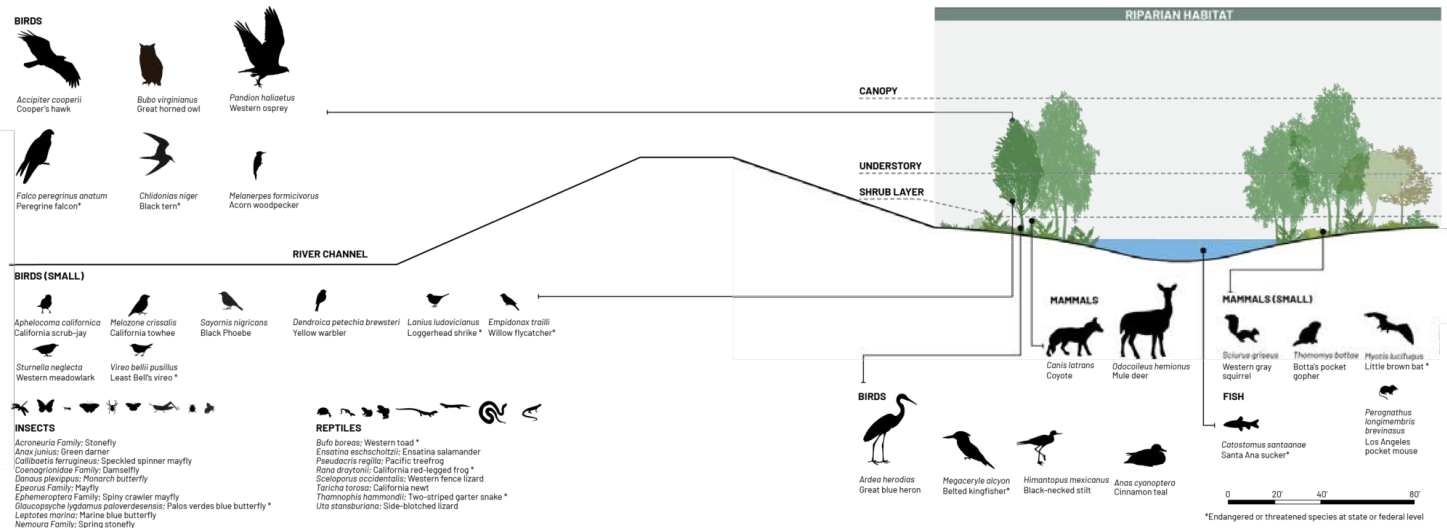


Image source: LA River Master Plan

### LA River Master Plan Biodiversity Profiles

- Concrete Channel Conditions
  - Algae as food source for birds
- Riparian Landside Right-of-way
  - California Walnut Woodland
  - Southern Coast Live Oak Riparian Forest
  - Southern Cottonwood-Willow Riparian Forest
  - Southern Sycamore Riparian Woodland
- Upland Landside Right-of-way
  - Chaparral
  - Climate Adapted Trees
  - Coast Live Oak Woodland
  - Coastal Sage Scrub
  - Desert Scrub
  - Valley Oak Woodland

## Water

### Low Impact Development: A Design Manual for Urban Areas

- Permeable paving
- Pixellated parking
- Surface materials

### Treatment Wetlands

- Sizing free water system wetlands
  - Percentage of contributing watershed
  - Storm detention
  - Annual average performance
  - Detailed dynamic modeling

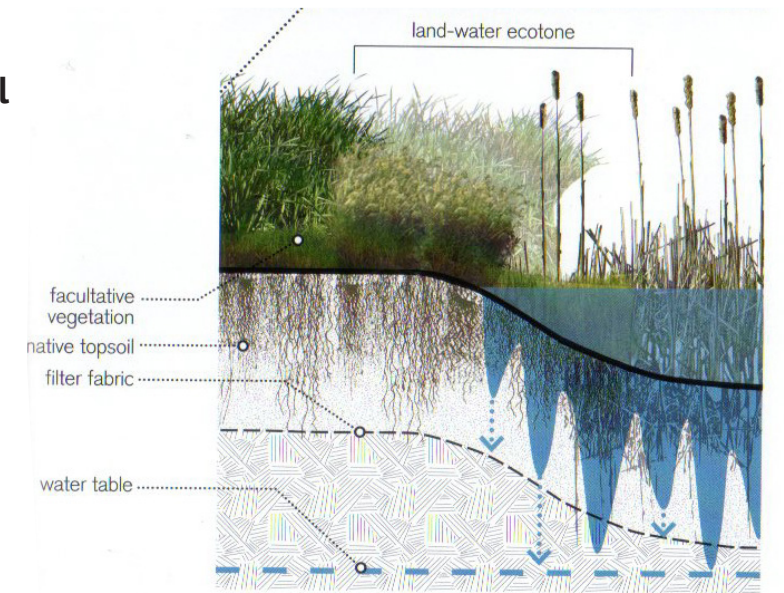


Image source: Low Impact Development: A Design Manual for Urban Areas

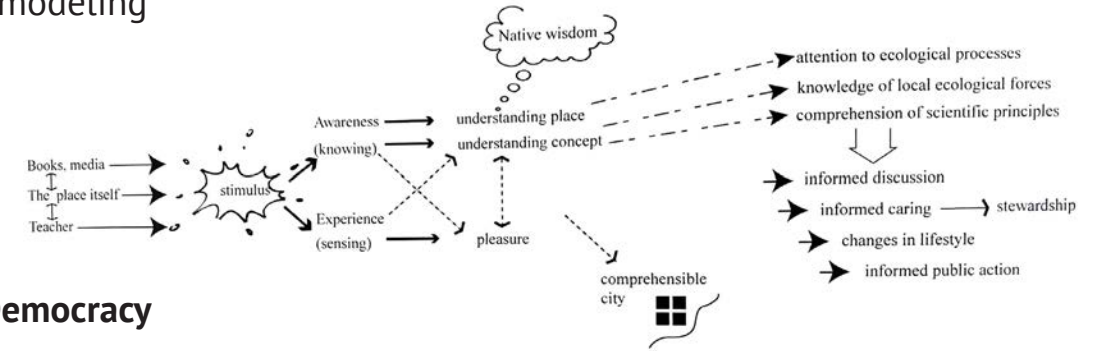


Image source: Design for Ecological Democracy

## People

### Design for Ecological Democracy

- Enabling Form
  - Centeredness, Connectedness, Fairness, Sensible Status Seeking, Sacredness
- Resilient Form
  - Particularness, Selective Diversity, Density and Smallness, Limited Extent, Adaptability
- Impelling Form
  - Everyday Future, Naturalness, Inhabiting Science, Reciprocal Stewardship, Pacing

### LA River Master Plan Kit of Parts

- Trails and Access Gateways
- Off-Channel Land Assets

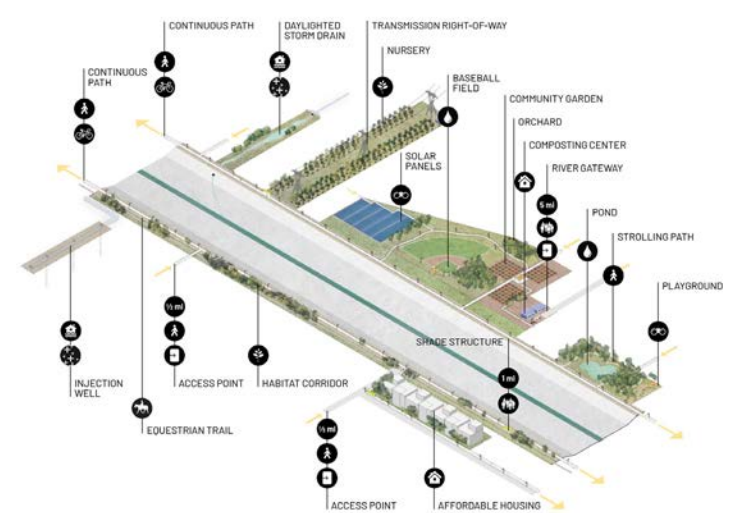


Image source: LA River Master Plan





## Precedents

### South Los Angeles Wetland Park

Los Angeles, CA

Size: 9 acres

Completed: 2011

Designer: Psomas, Mia Lehrer + Associates

Budget: \$12.4 million

Funding: Proposition O

Former land use: Brownfield (bus yard)

#### Key Takeaways

- Taps into existing drainage system
- Additional water pre-treatment system
- Plan for extreme weather conditions
- Provide shade
- Ensure educational content is in both English and Spanish
- Set intentional objectives for community engagement and education



Before



After



Boardwalk



### Ballona Freshwater Marsh

Los Angeles, CA

Size: 26 acres+25 acres riparian corridor

Completed: 2008 (Phased over 7 years)

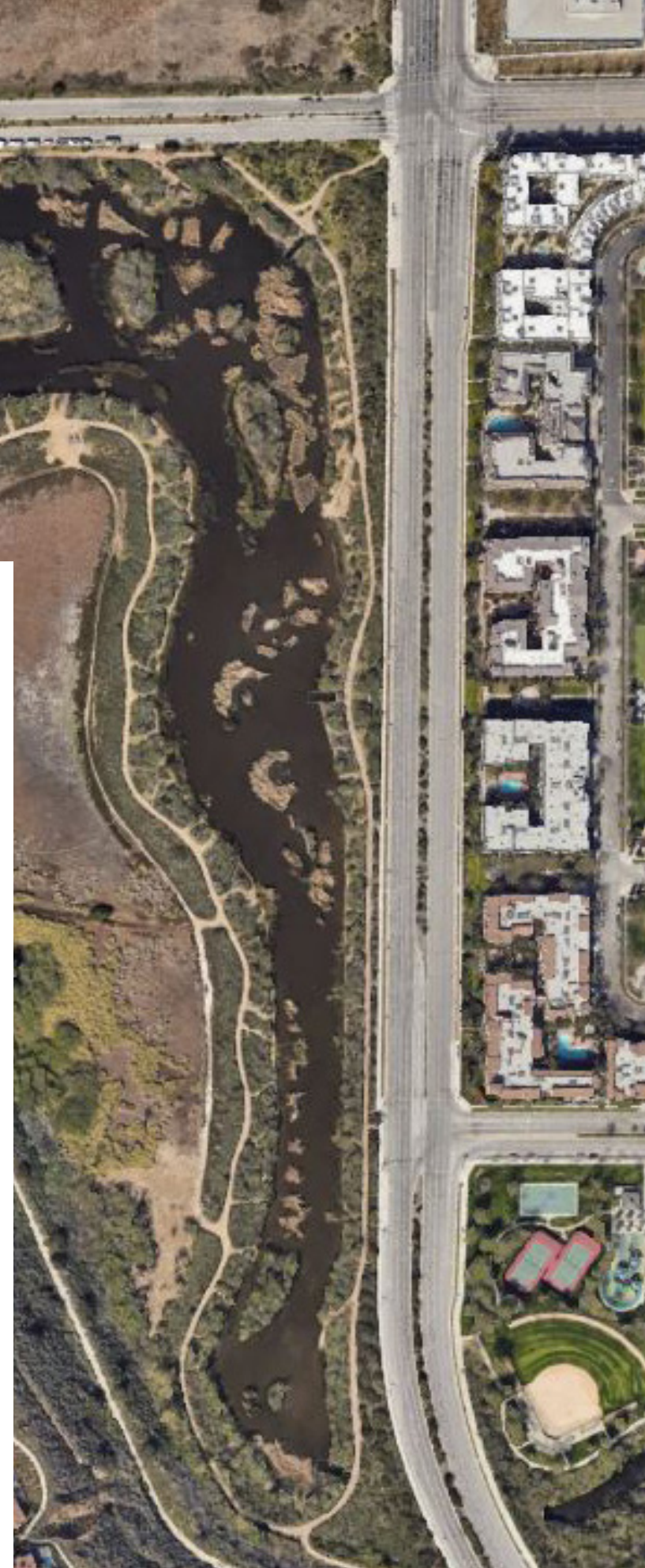
Designer: Unknown

Cost: >\$30 million

Former land use: Agriculture (celery field), previously high tidal marsh

#### Key Takeaways

- Similar watershed/contributing drainage area
- Design for concentrated areas of intensive maintenance
- Maintenance may include community education and engagement to promote good stewardship
- Restoring habitat can lead to rapid repopulation by bird communities
- Work together with upstream systems for maximized water quality improvements



# Precedents

## Dominguez Gap Wetlands

Long Beach, CA

Size: 37 acres+15 acres spreading grounds

Completed: 2008

Designer: CH2MHill + LA County

Cost: \$7.1 million

Former land use: Spreading grounds, previously flood control basin

Funding source: LAC Flood Control District, State Water Resources Control Board, Coastal Conservancy, Rivers and Mountains Conservancy



Nature trail with wildflowers

### Key Takeaways

- Successful conversion of detention basin with pump station to wetlands
- Selected plant species are successful
- Provides wildlife habitat
- Connection to LA River bicycle path
- Water quality performance seems successful, but measurable data is elusive
- Incorporate better wayfinding both within and outside the site

## Chino Creek Wetlands and Educational Park

Chino, CA

Size: 22 acres

Completed: 2007

Designer: Inland Empire Utilities Agency, Educational signage: Jaenichen Design and Richard Turner

Cost: Unknown

Former land use: Buffer zone of wastewater treatment plant

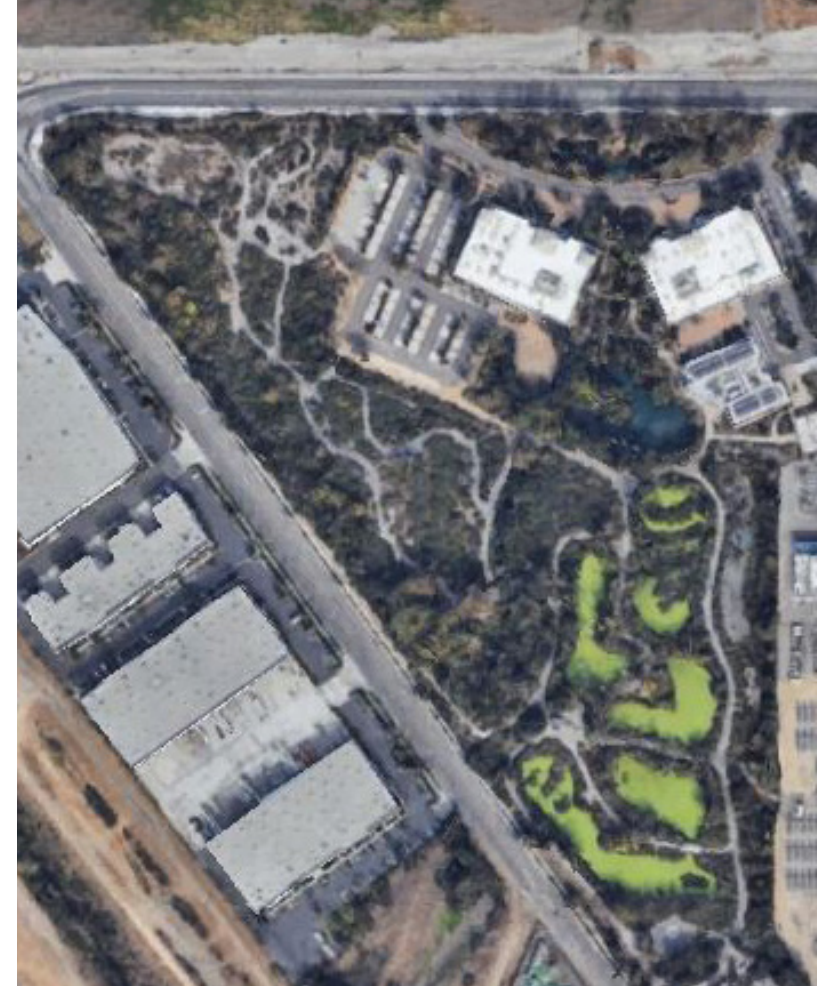
Funding source: Partially funded by State Water Resources Control Board

### Key Takeaways

- Robust educational content
- Active community engagement through educational programming
- Online presence extends reach of park
- Interactive elements
- Community gathering amenities
- Demonstration wetlands include different types of water quality improvement systems
- Algae growth may need to be monitored



View of the ponds



Entry bridge

# Precedents

## Underpass Parks



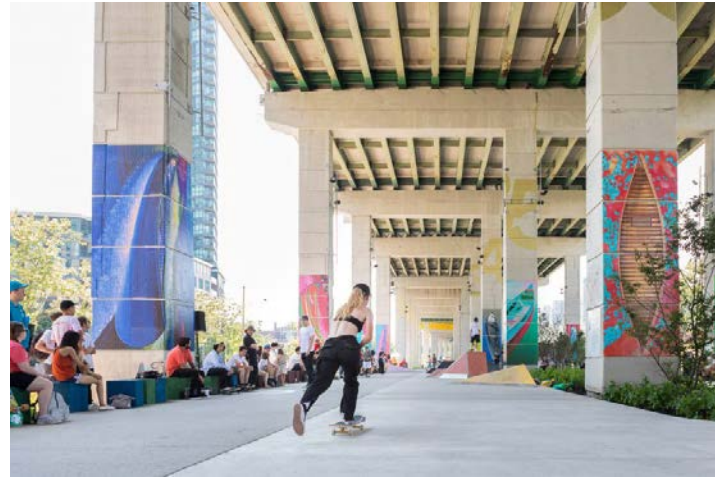
Splash Pad



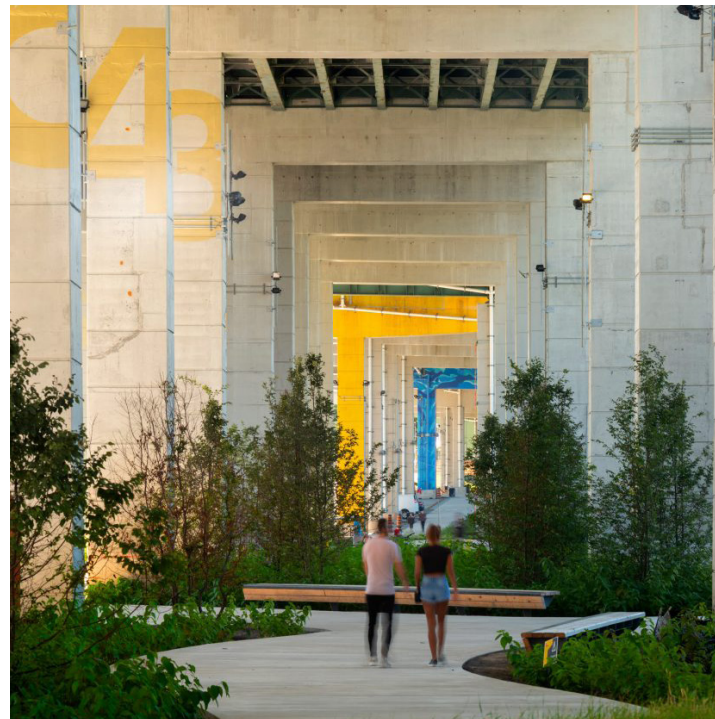
Seating



Climbing wall



Skate park



Planted pathway



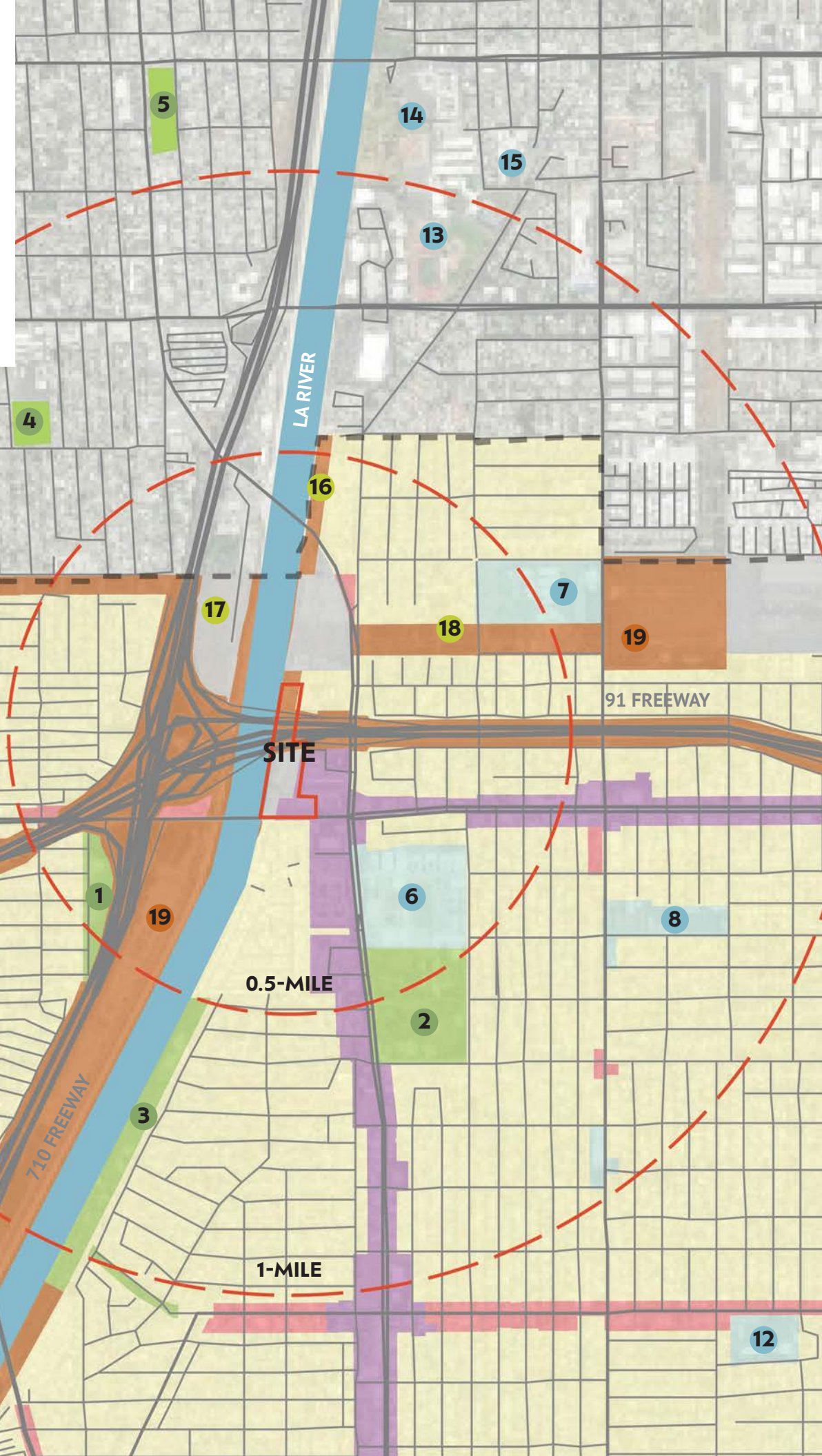
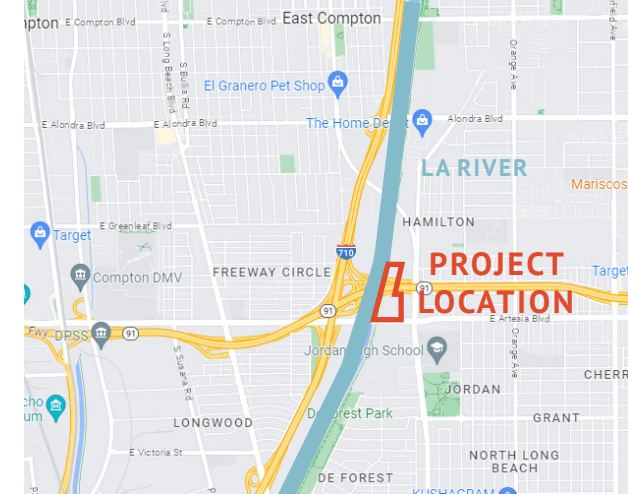
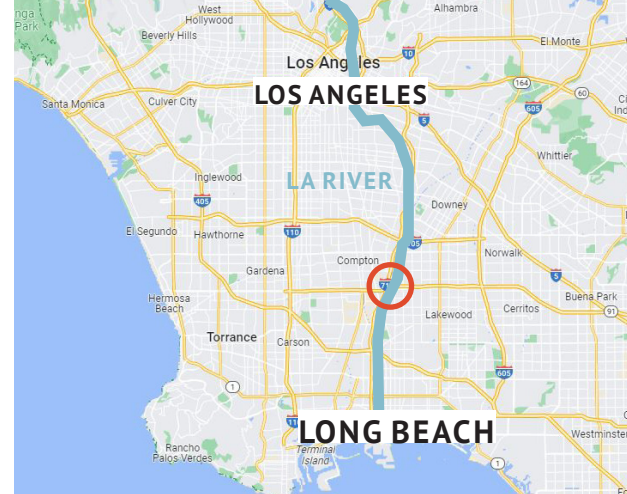
Dog Park

## Program Element Comparison Chart

Program Element	South LA Wetlands	Ballona Freshwater	Dominguez Gap+Molina	DeForest	Chino Creek	Augustus F Hawkins	Marsh Park	Compton Creek Natural Park
Size (acres)	9	26	37+3.5	35+15	22	8.5	4	3
Wetland Pond Area (acres)	1.9	20	9.2	5.8	3.5	0.4	N	N
Contributing Drainage (acres)	525	1,040	2,000	970	N/A	8.5	N/A	N/A
Trail (miles)	0.5	1.5	2.2	2.6	1.7	0.5	0.15	0.15
Parking (acres)	0.8	N (0.35 street)	0.41	+0.26	1.8	0.5	0.5	0.2
Bioswale	Y	N	N	N	Y	N	Y	Y
Bridge	2	N	N	2	1	N	N	1
Picnic Space (sf)	2,000	N	+2000	+600	3,000	4,000	1,500	2,500
Visitor Center	N	N	N	Y	Y	Y	N	N
Community Center (sf)	N	N	N	2,000	N	N	Pavilion: 5,000 sf	Plaza
Boardwalk (lf)	N	N	N	430	N	N	N	N
Outdoor Classroom/ Amphitheater (sf)	2,000	N	N	N	4,000	500	2,300; 1,000	2,500
Restroom	N	N	500	+Y	Y	Y	Y	Y
Play Area (sf)	N	N	+7,300	+3,900	N	N	2,000	N
Other						Community Garden: 7,000		Community Garden: 17,000

# Context

The site straddles the 91 freeway along the LA River and is surrounded by public right-of-way easements. The surrounding areas consist of residential, industrial, and mixed-use zones, and there are several schools in the vicinity.



## Location Maps

### Parks

- 1 Coolidge Park
- 2 Houghton Park
- 3 DeForest Park
- 4 Kelly Park
- 5 East Rancho Dominguez Park

### Schools

- 6 Jordan High School
- 7 Hamilton Middle School
- 8 Grant Elementary School
- 9 Starr King Elementary School
- 10 Jordan Plus High School
- 11 Colin Powell Academy School K-8
- 12 Harte Elementary School
- 13 Manuel Dominguez High School
- 14 Mark Keppel Elementary School
- 15 Clinton Elementary School

### Recreation

- 16 72nd Street Arena (Equestrian)
- 17 Compton Hunting and Fishing Club
- 18 North Long Beach Community Garden

### Utility

- 19 High Voltage Transmission Lines

### Zoning

- Residential
- Commercial
- Mixed Use
- Industrial
- Institutional
- Park
- Public Right-of-Way

# Users

Primary users of the park will be people and wildlife. The park will serve the neighboring communities of North Long Beach, Paramount, and Compton.



Wildlife



Families



Community Groups



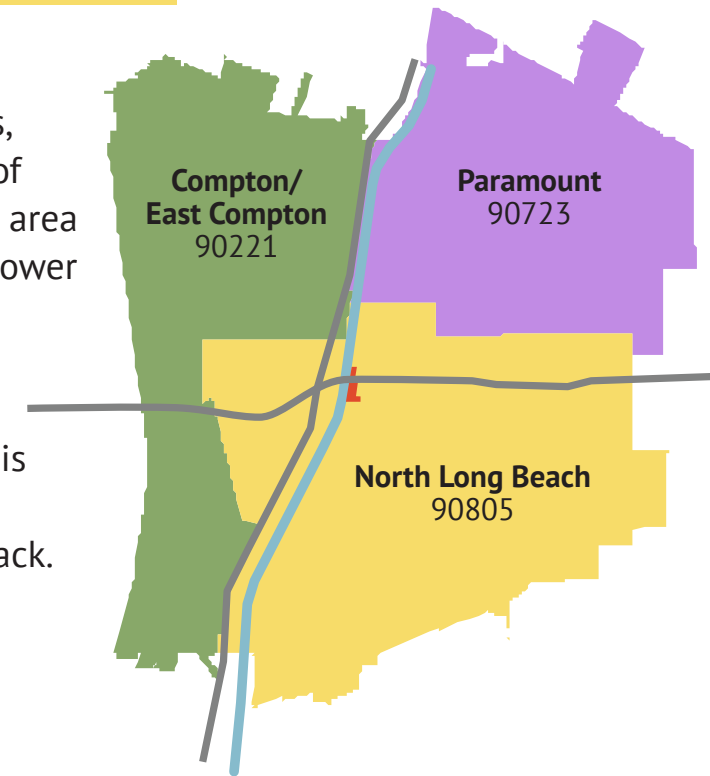
Hobbyists



Maintenance

# Demographics

Compared to LA County averages, the population of the surrounding area is younger and lower income, and households are more crowded. The community is predominantly Hispanic and Black.

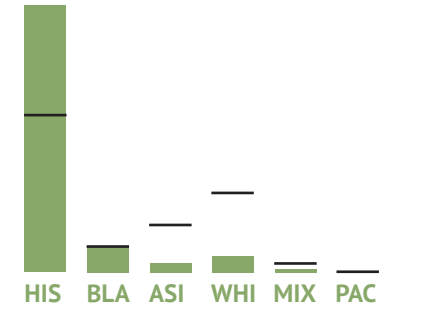


**Compton/East Compton**  
 Population: 50,660  
 Median Age: 33  
 Under 18: 27%  
 Sex: 51% male | 49% Female  
 Per capita income: \$19,223  
 Median household income: \$57,610  
 Below poverty line: 15.8%  
 Persons per household: 4  
 Non-single unit housing: 31%

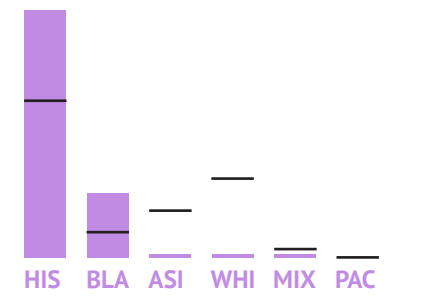
**Paramount**  
 Population: 53,938  
 Median Age: 31.6  
 Under 18: 27%  
 Sex: 50% Male | 50% Female  
 Per capita income: \$21,073  
 Median household income: \$60,493  
 Below poverty line: 14.4%  
 Persons per household: 3.7  
 Non-single unit housing: 46%

**North Long Beach**  
 Population: 96,840  
 Median Age: 32.7  
 Under 18: 26%  
 Sex: 48% Male | 52% Female  
 Per capita income: \$22,578  
 Median household income: \$57,262  
 Below poverty line: 18.9%  
 Persons per household: 3.4  
 Non-single unit housing: 44%

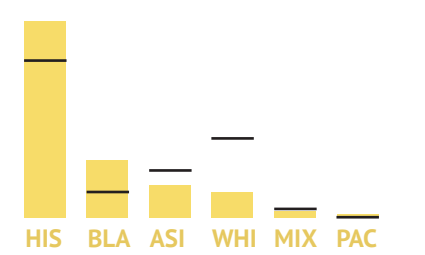
**LA County**  
 Population: 9,829,544  
 Median Age: 37.8  
 Under 18: 21%  
 Sex: 50% Male | 50% Female  
 Per capita income: \$38,388  
 Median household income: \$77,456  
 Below poverty line: 14.2%  
 Persons per household: 2.9  
 Non-single unit housing: 46%



**MEDIAN AGE**  
33  
**MEDIAN HOUSEHOLD INCOME**  
\$57,610  
**PERSONS PER HOUSEHOLD**  
4



**MEDIAN AGE**  
31.6  
**MEDIAN HOUSEHOLD INCOME**  
\$60,493  
**PERSONS PER HOUSEHOLD**  
3.7

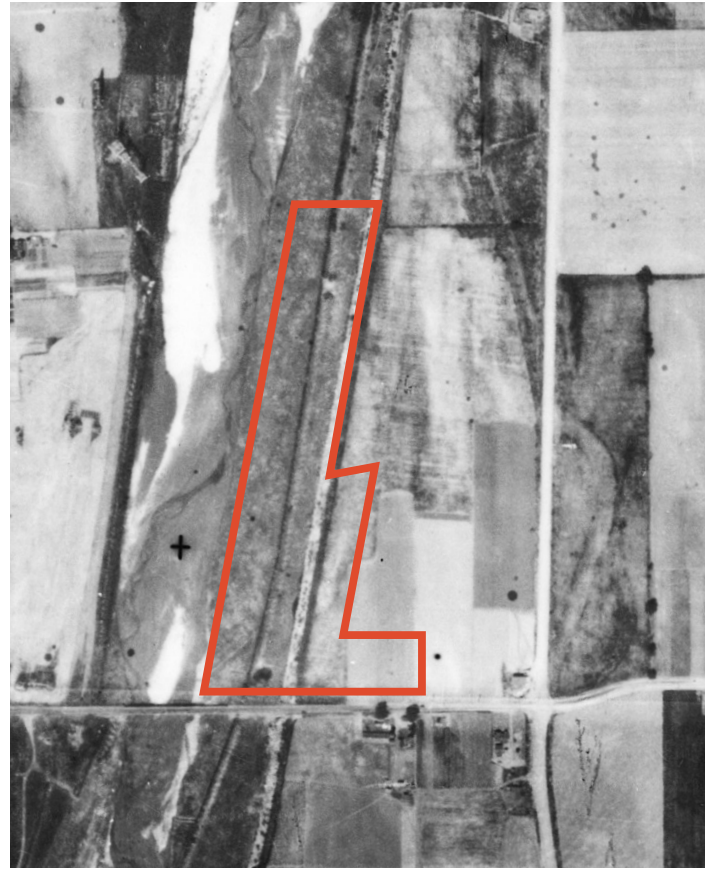


**MEDIAN AGE**  
32.7  
**MEDIAN HOUSEHOLD INCOME**  
\$57,262  
**PERSONS PER HOUSEHOLD**  
3.4

\*Black lines indicate LA County Averages

# History

The site and surrounding area have changed from flood plain and agricultural land in 20s-30s to a channelized river with a mix of residential and commercial/industrial development nearby.



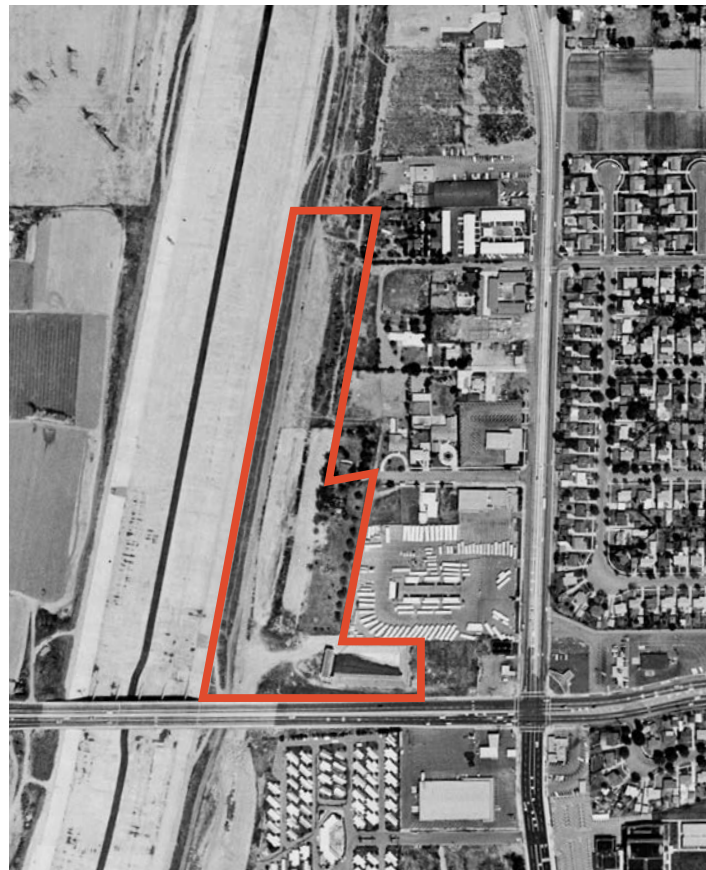
1928: Agricultural land



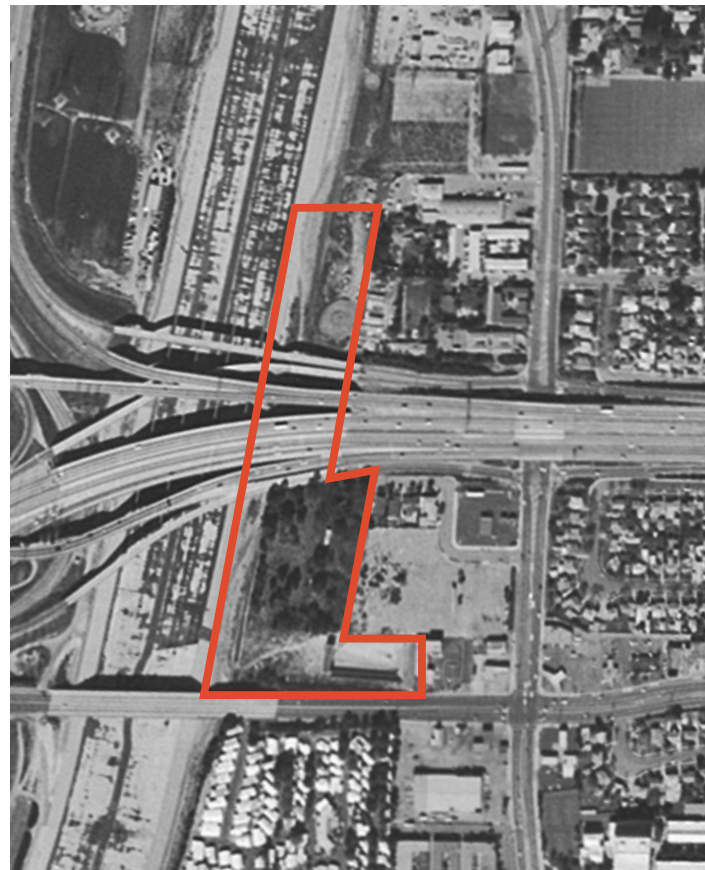
1947: Residential areas developing in the vicinity



1956: LA River channel under construction



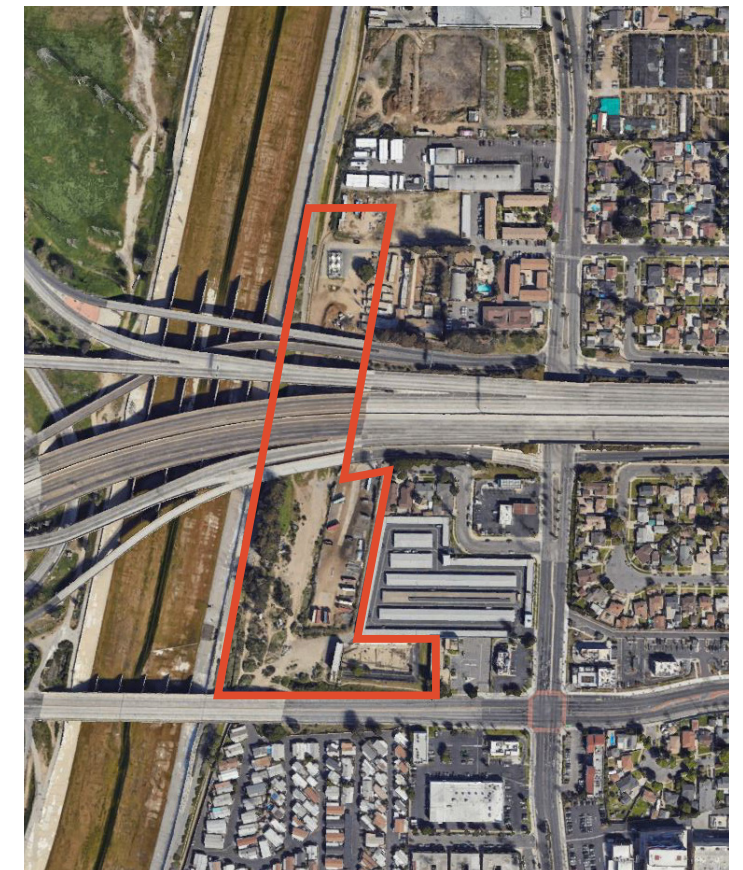
1960: LA River channelization complete



1980: 91 Freeway completed (in the 70s)



2007: Existing park gone



Present

# Site Inventory

## Site Inventory

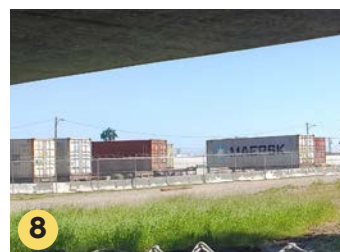
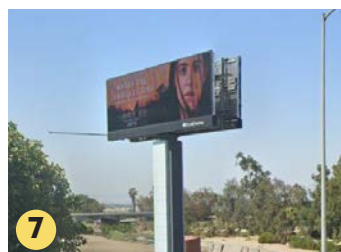
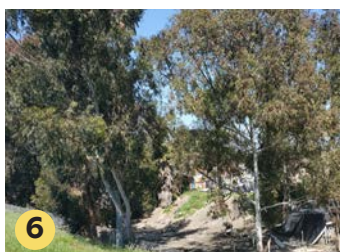
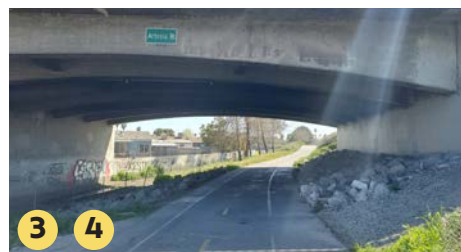
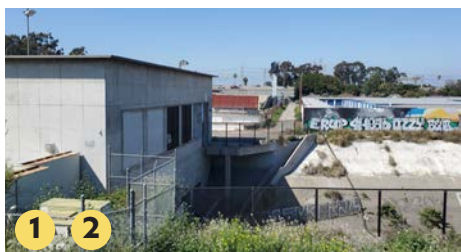
- 1 Pump Station
- 2 Pump Forebay
- 3 LA River Bikeway
- 4 Artesia Blvd Underpass
- 5 91 Freeway Underpass
- 6 Eucalyptus Grove
- 7 Billboard
- 8 Shipping Container Storage
- 9 Water Treatment Infrastructure
- 10 Pump Station Service Road

## Surrounding Context

- 11 Public Storage Facility
- 12 Golden State Humane Society
- 13 Gas Station
- 14 Villa Park Mobile Home Community
- 15 Organic Harvest Gardens Microfarm
- 16 Atlantic Bridge Community Transitional Housing
- 17 Residential Housing

## Land Ownership

- APN: 7115002901  
City of Long Beach
- APN: 7115001001  
Clear Channel Outdoor, Inc.
- APN: 7115001903  
LA County Flood Control District
- APN: 7116019905  
LA County Flood Control District
- APN: 7116019906  
LA County Sanitation District
- APN: 7116019901  
LA County Sanitation District
- 91 Freeway  
Caltrans



# Site Inventory

## Photos



A: Walking west on Artesia Blvd



D: 91 Freeway underpass and bike path



B: High point at center of site



E: North of the 91



C: View looking north across entire site



F: Artesia Blvd bridge at LA River



# Site Analysis

## Water

The contributing drainage area to the site is roughly 1,000 acres. All the stormwater runoff from this area is routed to the pump station, and then it gets pumped out into the LA River.



Pump station

STORMWATER  
OUTLET

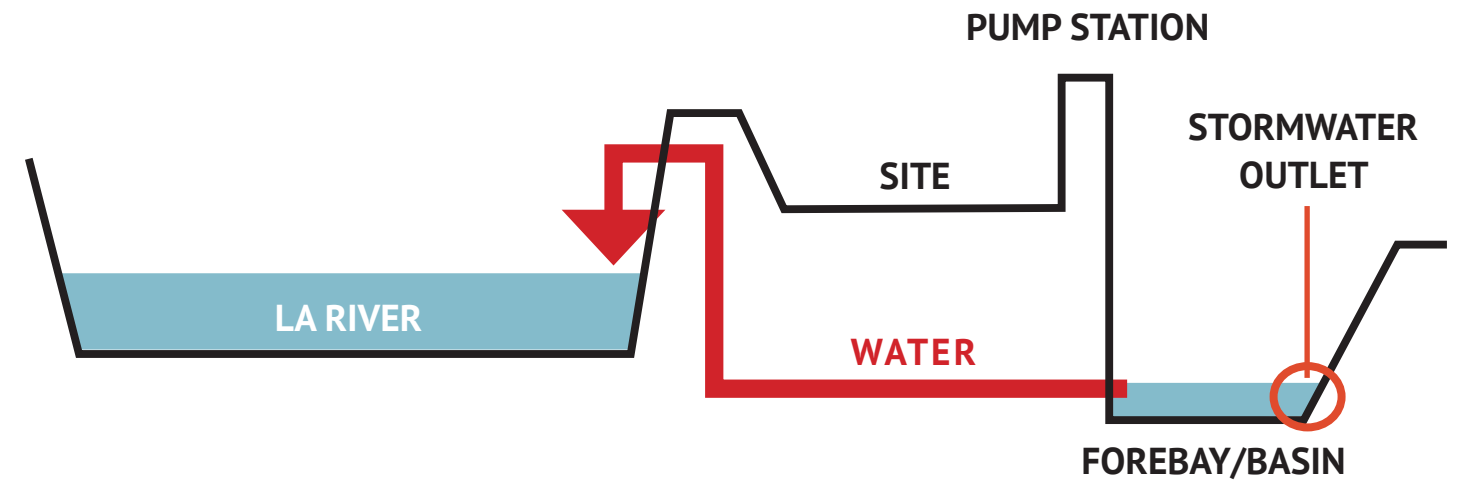
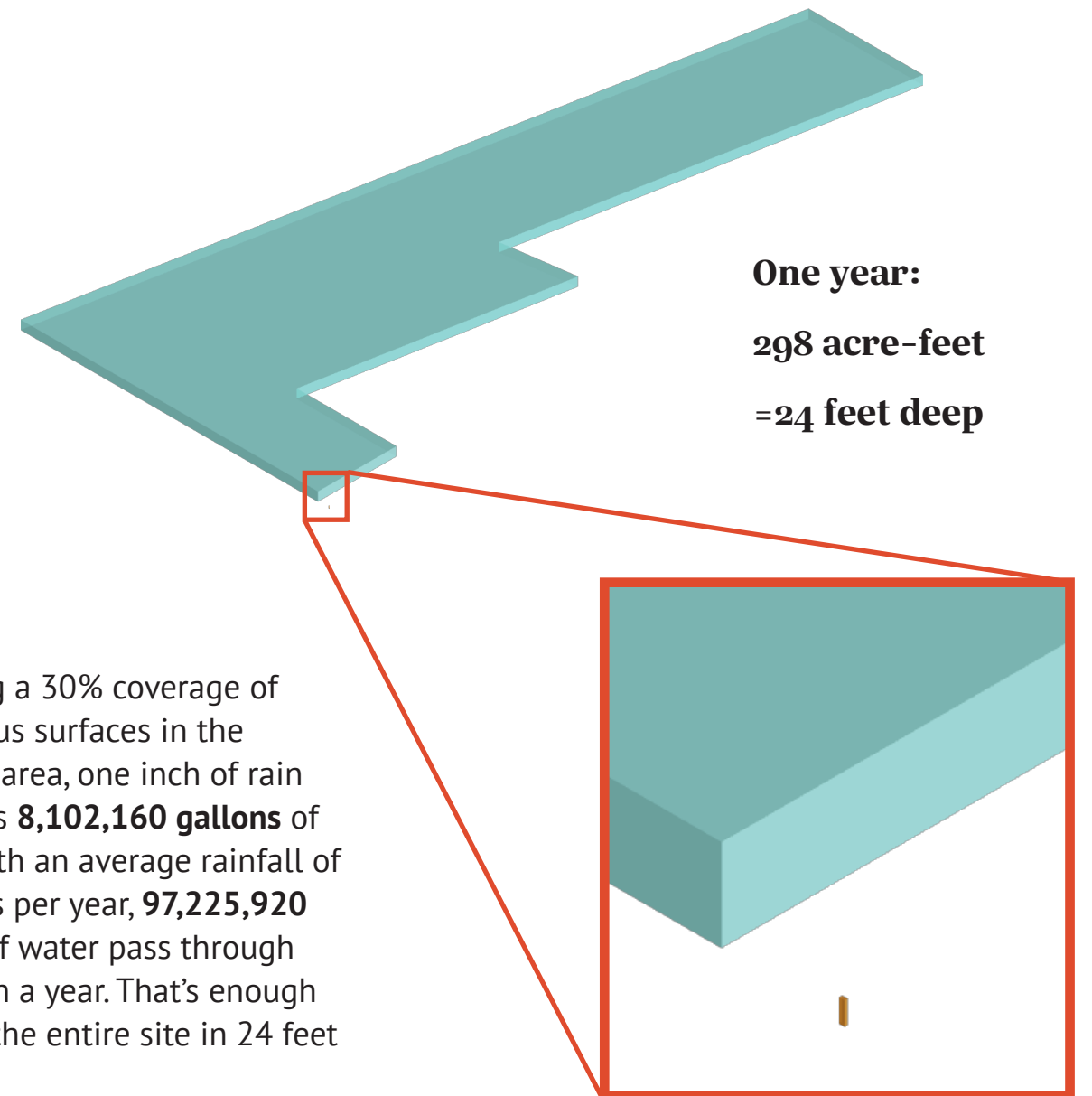
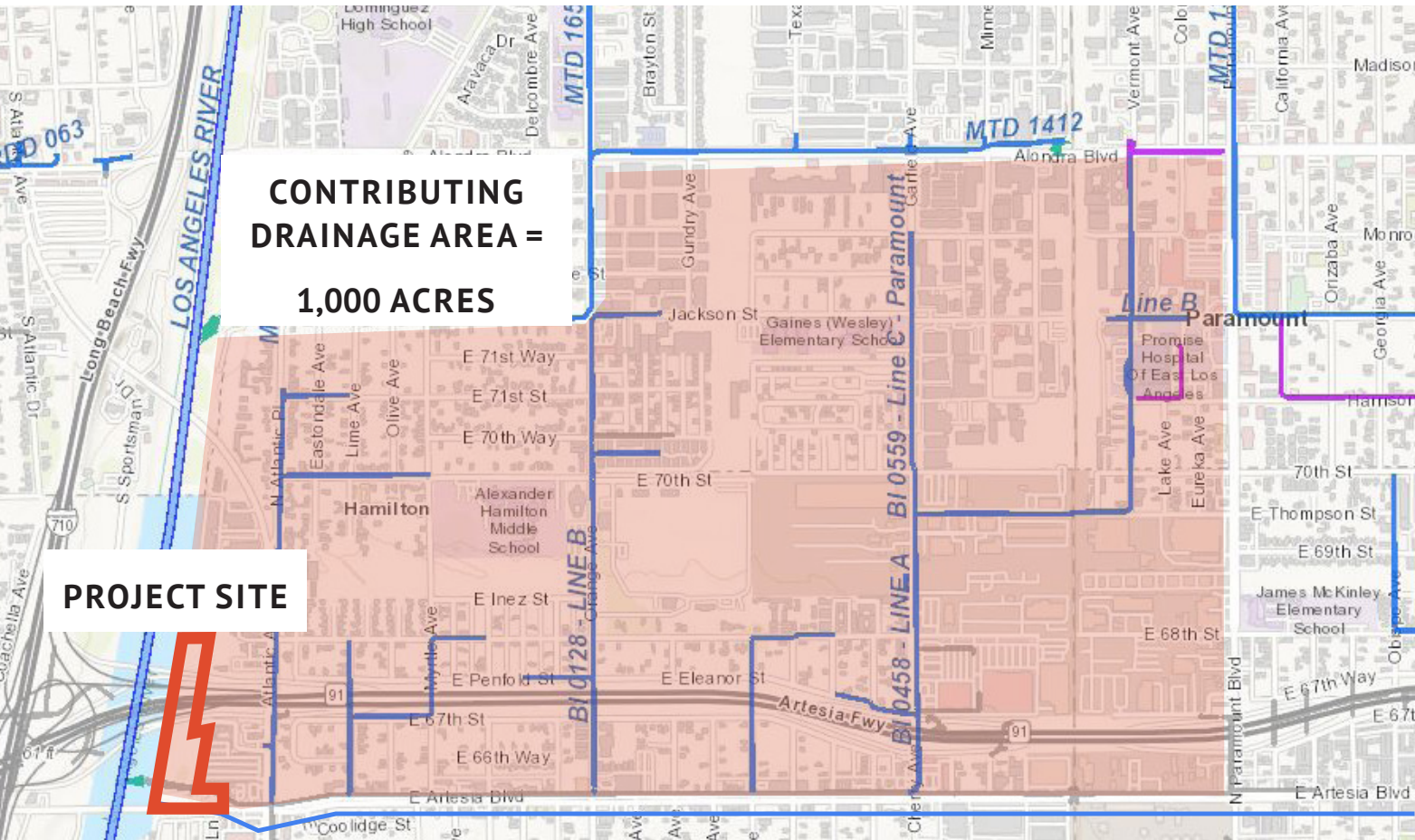


Diagram showing how water gets pumped into the LA River

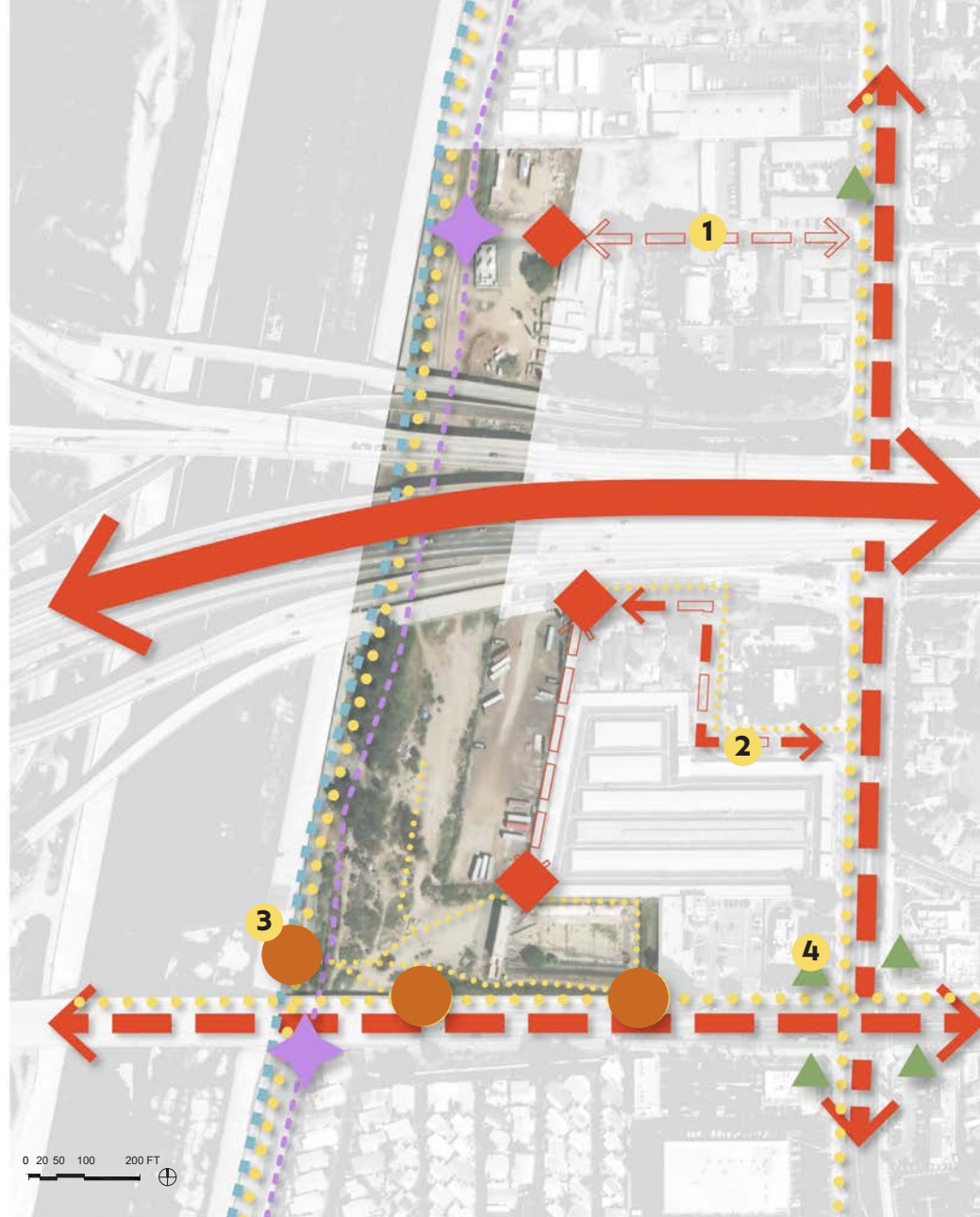


Assuming a 30% coverage of impervious surfaces in the drainage area, one inch of rain generates **8,102,160 gallons** of water. With an average rainfall of 12 inches per year, **97,225,920 gallons** of water pass through the site in a year. That's enough to cover the entire site in 24 feet of water.

# Site Analysis

## Circulation & Access

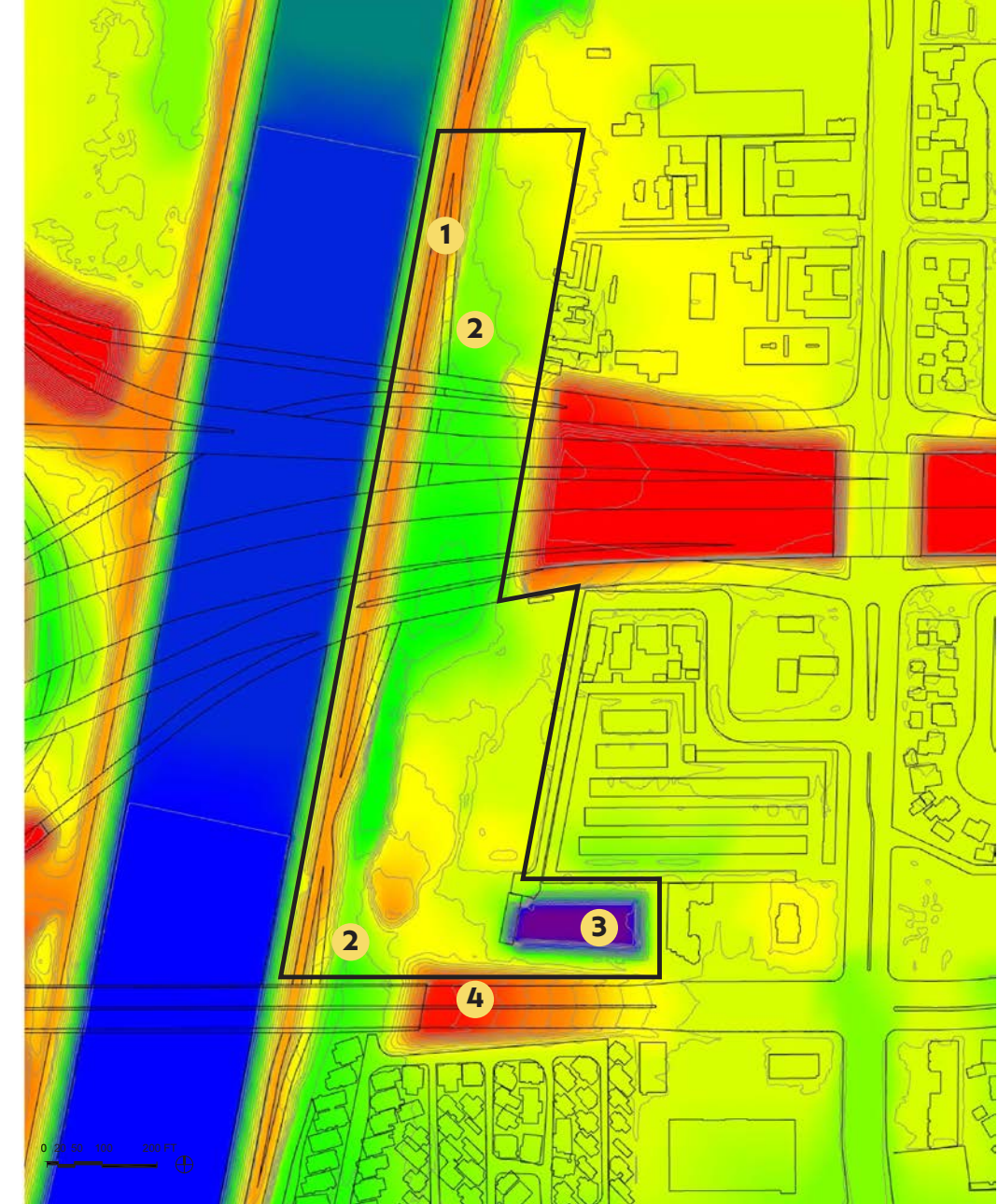
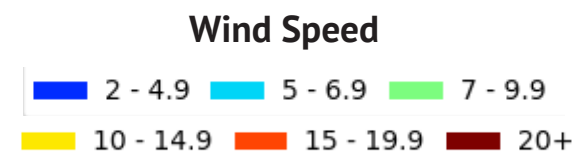
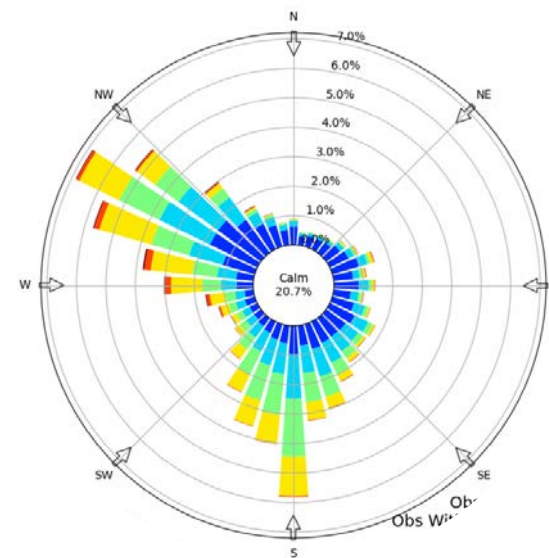
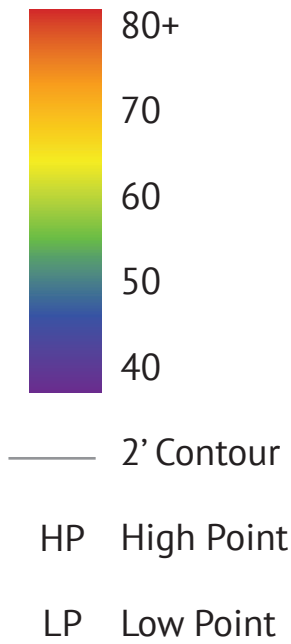
- Freeway
- Arterial Road
- Local Road
- Service Road
- Pedestrian Circulation
- Bicycle Trail
- Equestrian Trail
- Vehicular Access Point
- Pedestrian Access Point
- Equestrian Access Point
- Bus Stop



- 1** Public access is difficult from small, private road
- 2** Potential vehicular access from a quiet local road
- 3** Access from LA River trail through chain link fence is ambiguous
- 4** Proximity to major intersection with bus stops from all directions

# Site Analysis

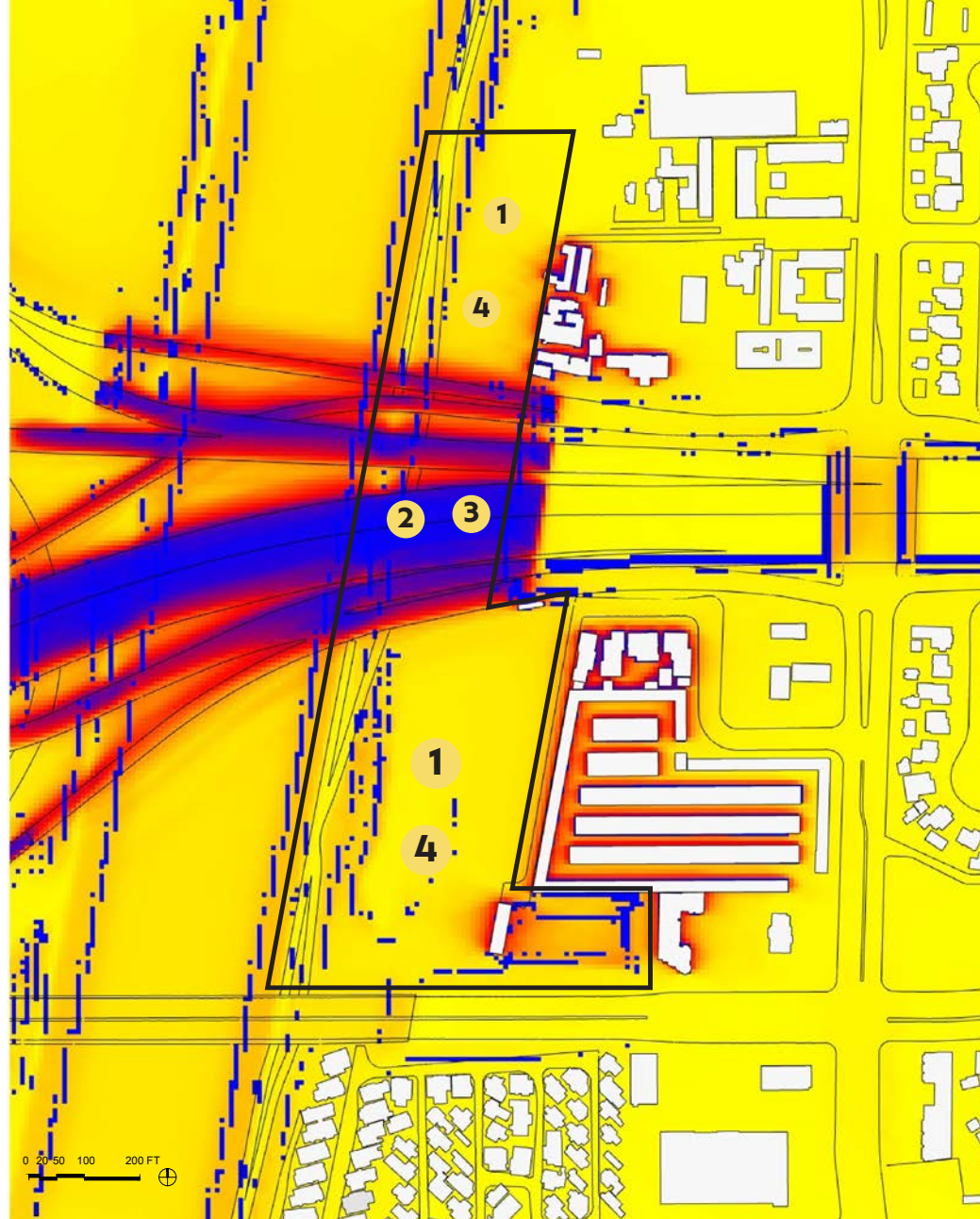
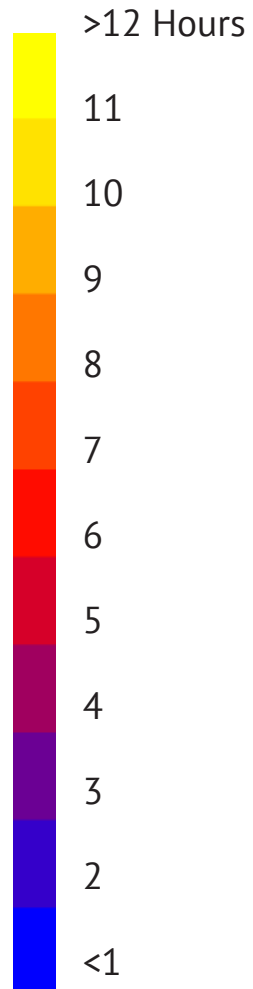
## Topography & Wind



- 1** Embankment protects from strongest winds
- 2** Potential access points to/from LA River trail where elevation drops
- 3** Deep and steep basin is difficult to naturalize
- 4** Street access is difficult because site is at lower grade than surroundings

# Site Analysis

## Sun Hours



- 1 Add additional shade for comfort in full sun areas
- 2 Limited plant choices in heavy shade
- 3 Potential as cooler microclimate
- 4 Potential for varied types of planting in full sun

# Site Analysis

## Special Status Wildlife

Current conditions are not favorable to wildlife. With restored vegetation, a variety of special status birds, reptiles, and insects could potentially inhabit the site. The site could also provide habitat for a larger variety of local wildlife and serve as a stopping point for migratory birds.



**Yellow Warbler**  
Breeds in riparian woodlands: cottonwoods, willows, alders, other small trees and shrubs



**Loggerhead Shrike**  
Open habitats with sparse shrubs and trees



**Cooper's Hawk**  
Dense stands of live oak, riparian deciduous, or other forest habitats; areas near water used most frequently



**Peregrine Falcon**  
Forages for birds including waterfowl and shorebirds, typically in coastal areas and wetlands



**San Diego Horned Lizard**  
Occupies coastal sage scrub, chaparral, and other open habitats



**Two-Striped Garter Snake**  
Found near permanent and ephemeral fresh water



**Monarch Butterfly**  
Roosts in wind-protected tree groves with nectar and water sources nearby

# Site Analysis

## Opportunities & Constraints



### Biodiversity

Opportunities

Constraints



- 1 Enhance planting along LA River
- 2 Use full sun areas to maximize diversity of plantings
- 3 Reroute water pump to onsite wetland pond to provide riparian habitat and filter water
- 4 Limited potential for planting in deeply shaded area under freeway
- 5 Low invert elevation of stormwater outlet makes pump necessary for flood control

# Site Analysis

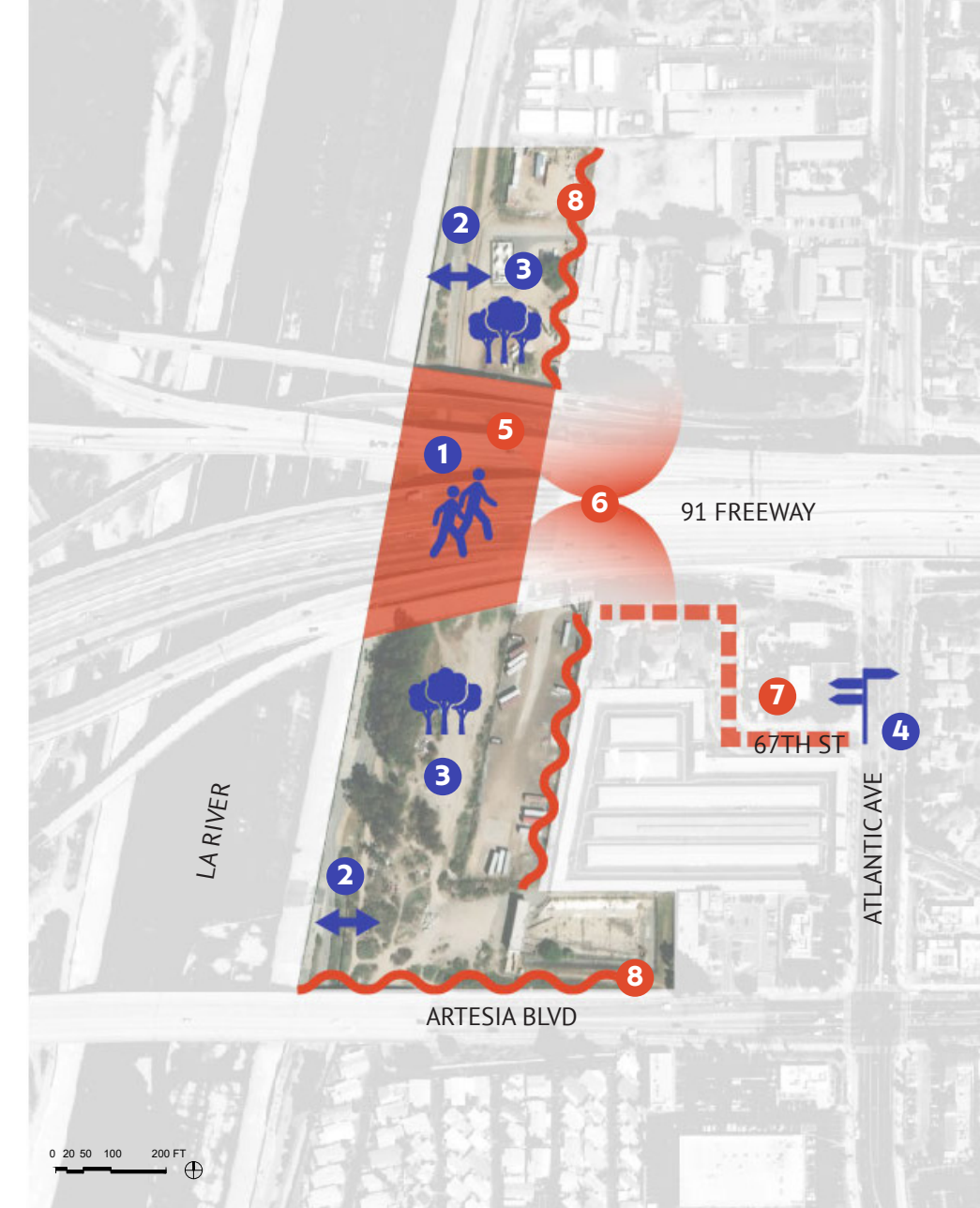
## Opportunities & Constraints



### Community

Opportunities

Constraints



- 1 Incorporate high-use program elements to draw people to and through space
- 2 Add access points to/from LA River Trail
- 3 Plant trees to intercept pollutants and provide shade
- 4 Guide visitors through wayfinding signage from street
- 5 Noise and poor visibility create unpleasant conditions and potential safety issues
- 6 Air quality issues from freeway
- 7 Access from local road may be hard to identify
- 8 Lower grade and difficulty accessing site prevents connection to surrounding neighborhood and LA River

# Site Analysis

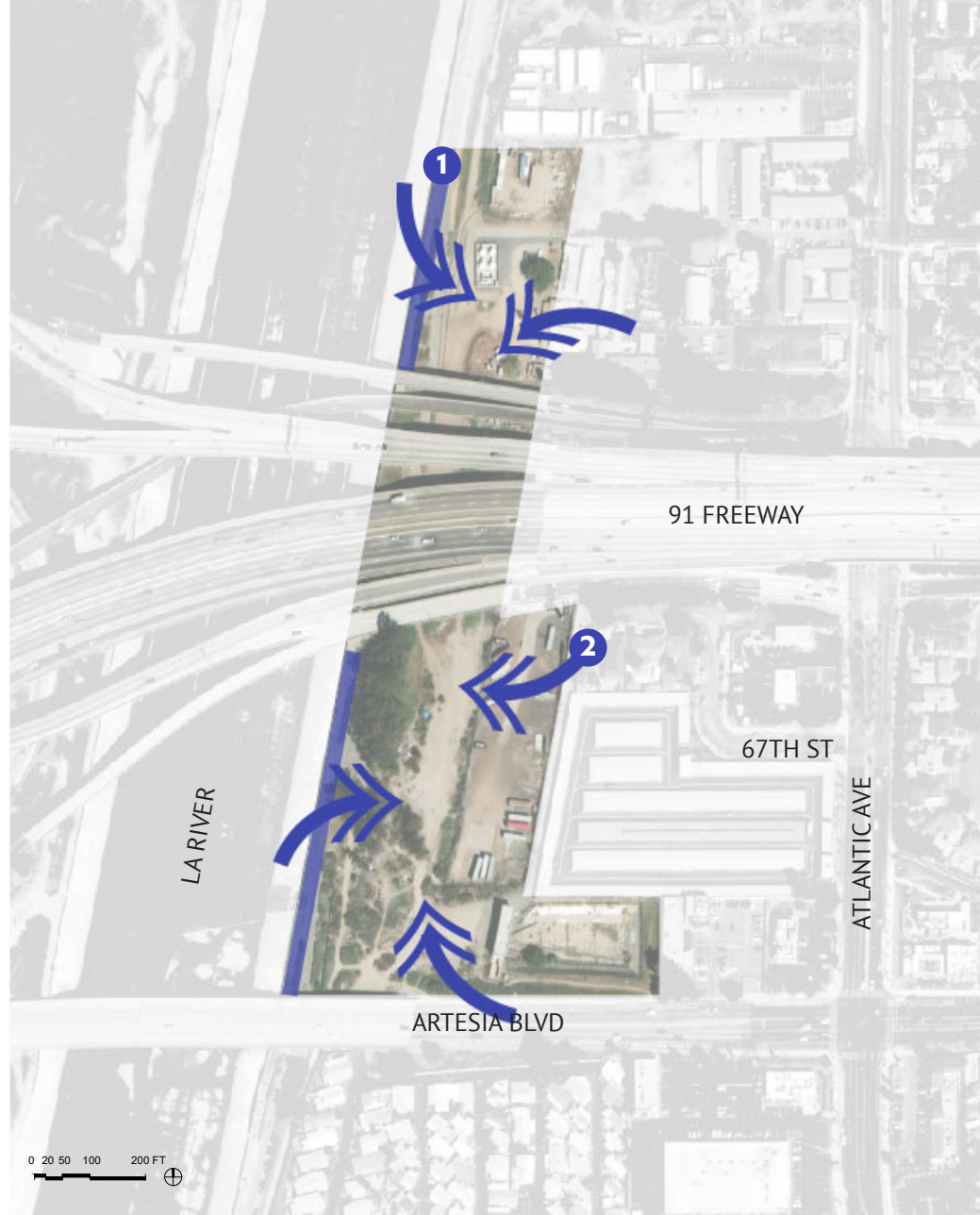
## Opportunities & Constraints



### Stewardship

 Opportunities

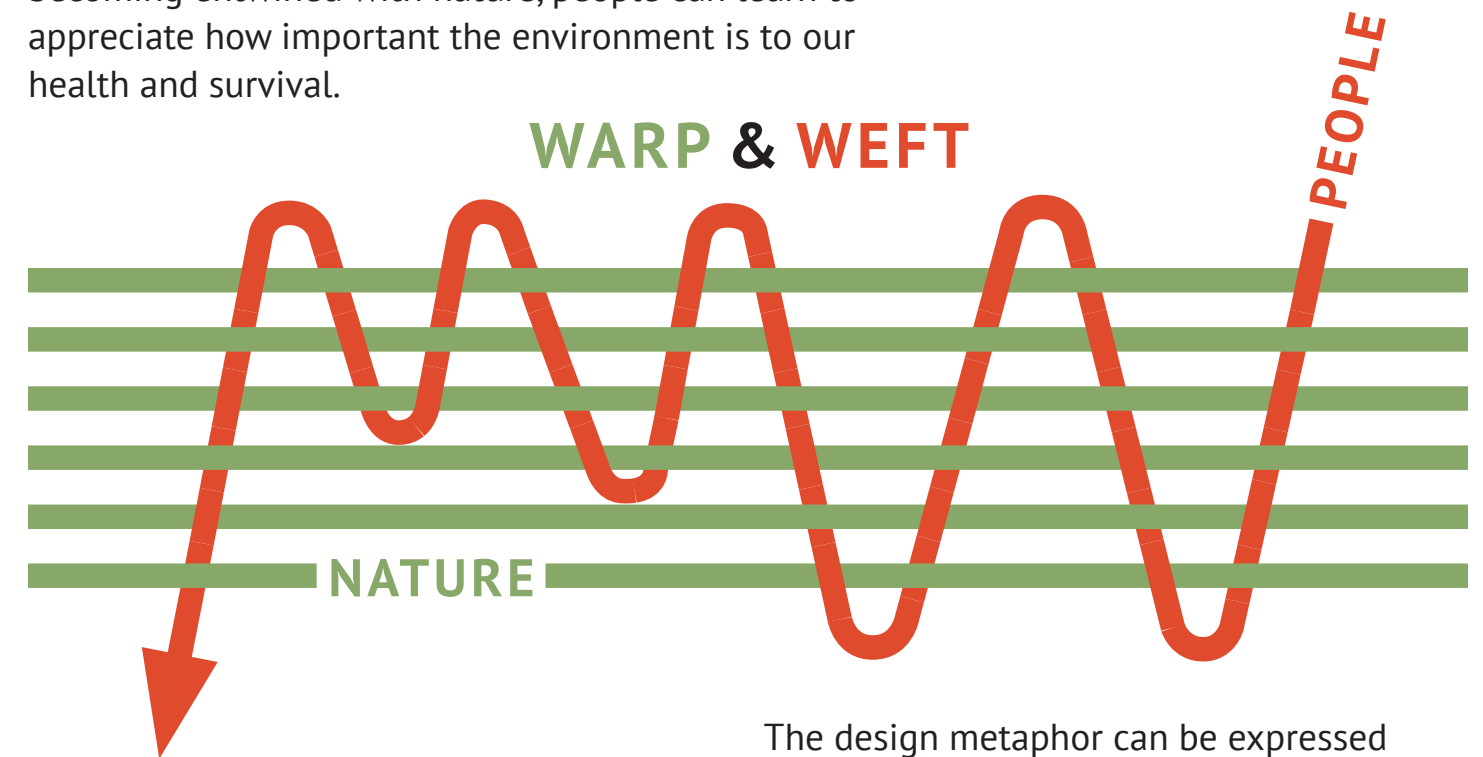
 Constraints



- ① Encourage visitors to observe the flow of the LA River
- ② Bring people into interior of site for natural experience

# Design Metaphor

The design metaphor for the site is Warp & Weft, which is based on the idea that people are reliant upon nature for our basic needs—such as textiles, which we use every day. The concept of the site is to weave nature and people together. A warp is the strong foundational element that forms the basis of any kind of weaving, in this case the restored natural environment. A weft is the thread that's interlaced through the warp, in the case the community. By becoming entwined with nature, people can learn to appreciate how important the environment is to our health and survival.



The design metaphor can be expressed onsite through organization of circulation and programming and be reinforced through use of woven materials.



Circulation & Programming



Materials



# Program



**Habitat Restoration**



**Picnic Area**  
2,000-4,000 SF



**Dog Park**  
0.5-1 acres



**Walking Trail**  
0.5 mile



**Observation Bridge**



**Wetland**  
1-4 acres



**Equestrian Trail**



**Bike Station**



**Seating**



**Nature Play**  
4,000-7,000 SF



**California Native Plant Communities**



**Wayfinding**



**Parking Lot**  
0.25-1 acres



**Restroom**



**Interpretive Signage**

# Design Concepts

Three initial concept explorations incorporating the design metaphor:

## Concept 1: Threads

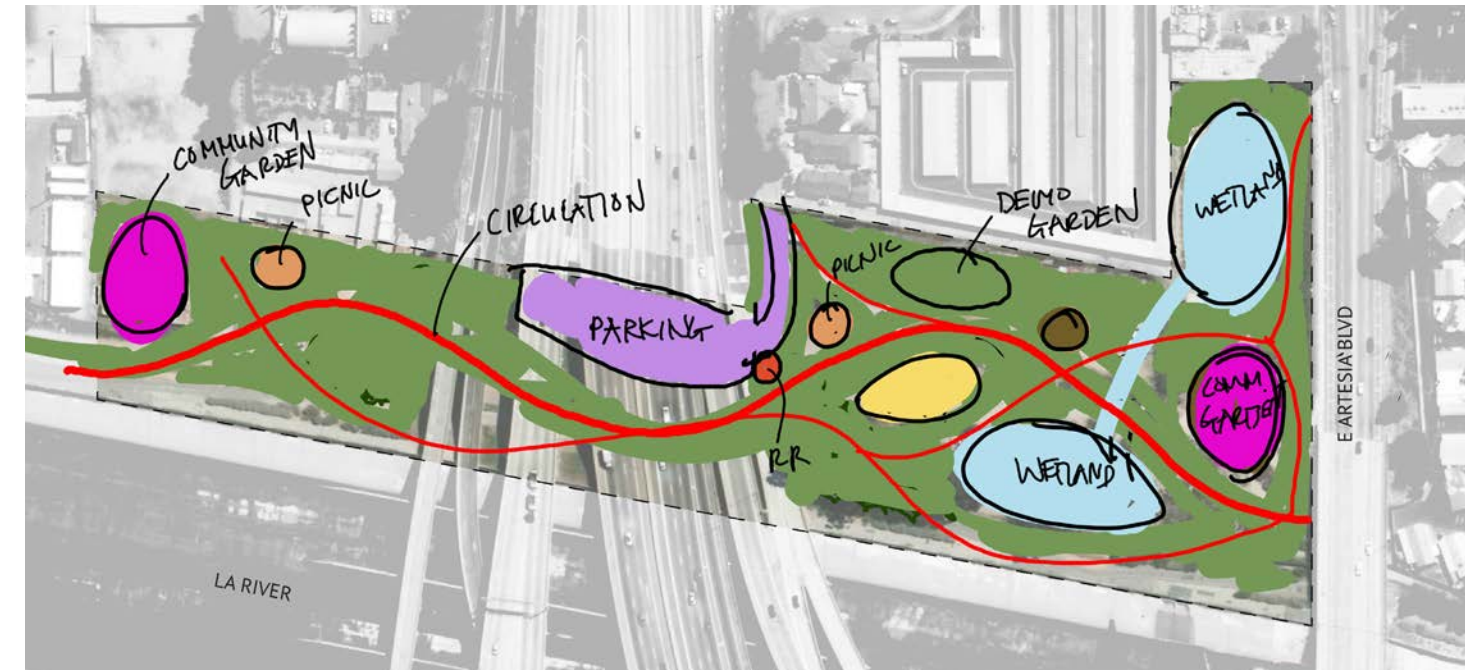
The circulation path weaves throughout the site, and the program elements are interspersed throughout.

## Concept 2: Concentration

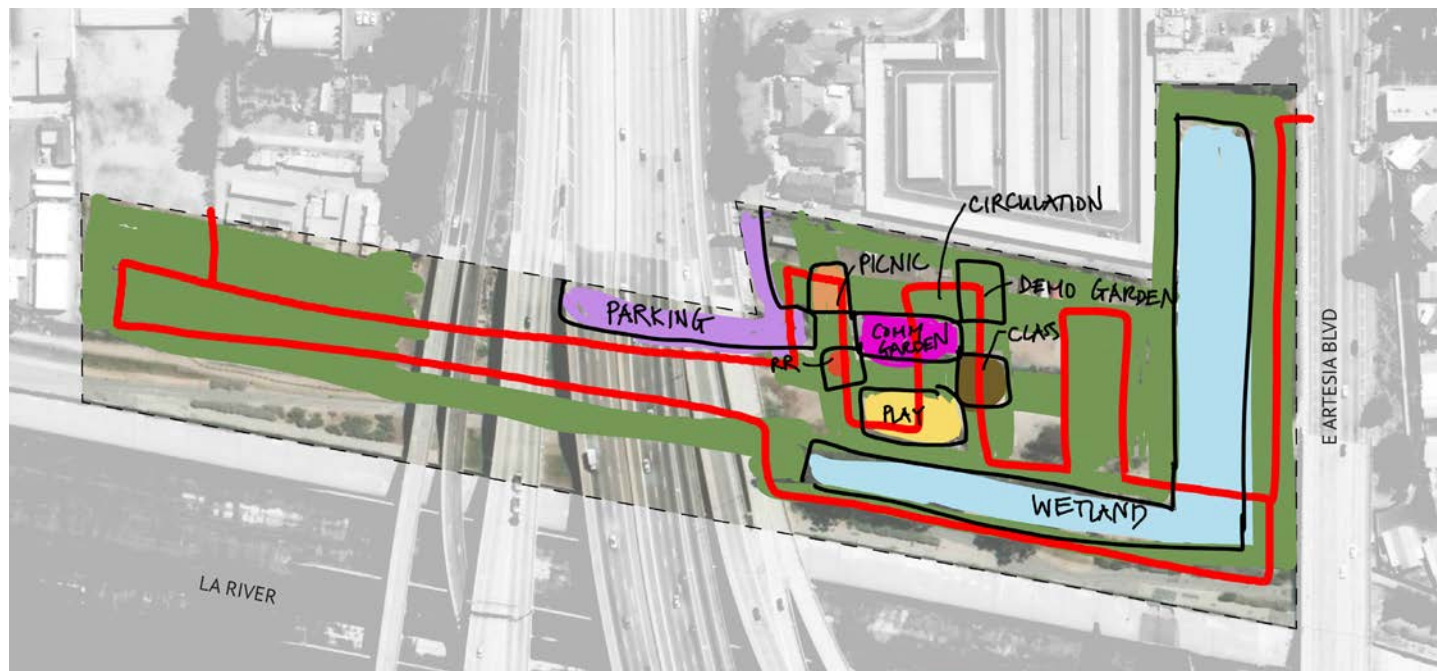
Major program elements are concentrated into a single area, and the primary circulation weaves through them.

## Concept 3: Diversion

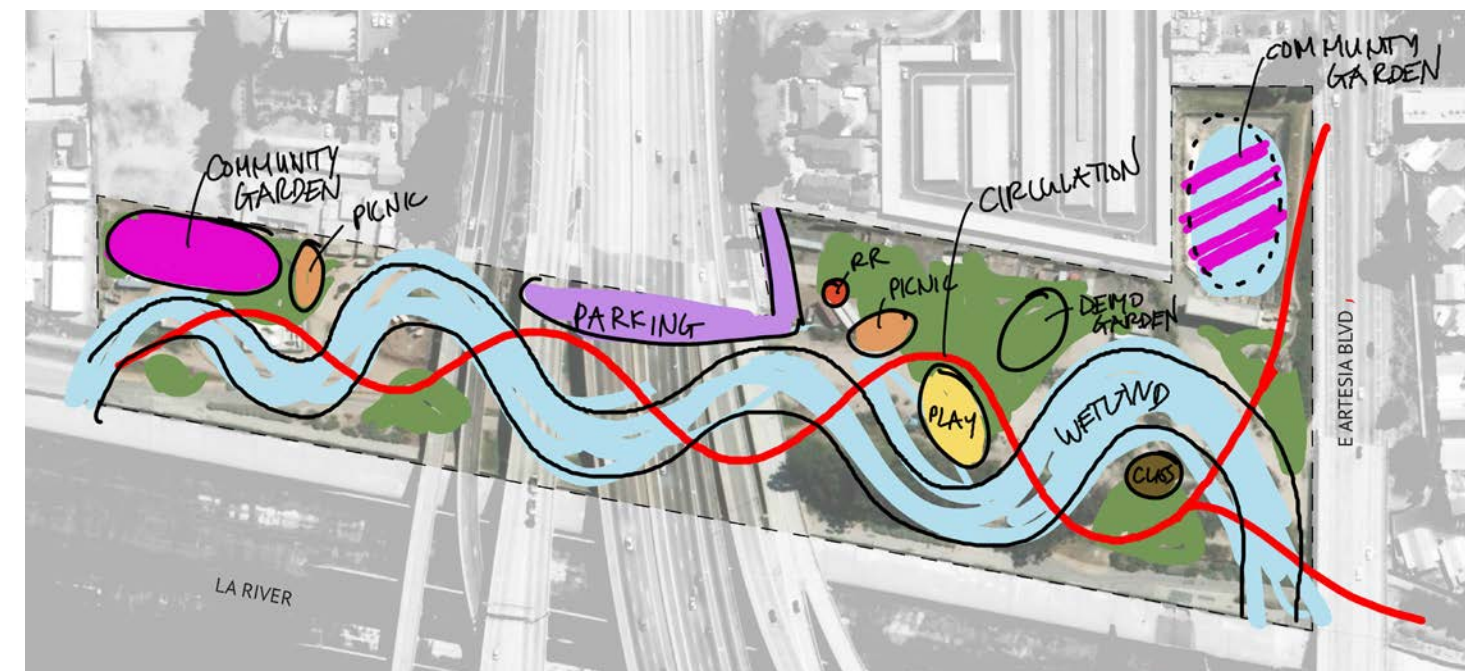
Circulation, water, and planting are entwined, and water would be diverted from the LA River to run through the site.



Concept 1: Threads



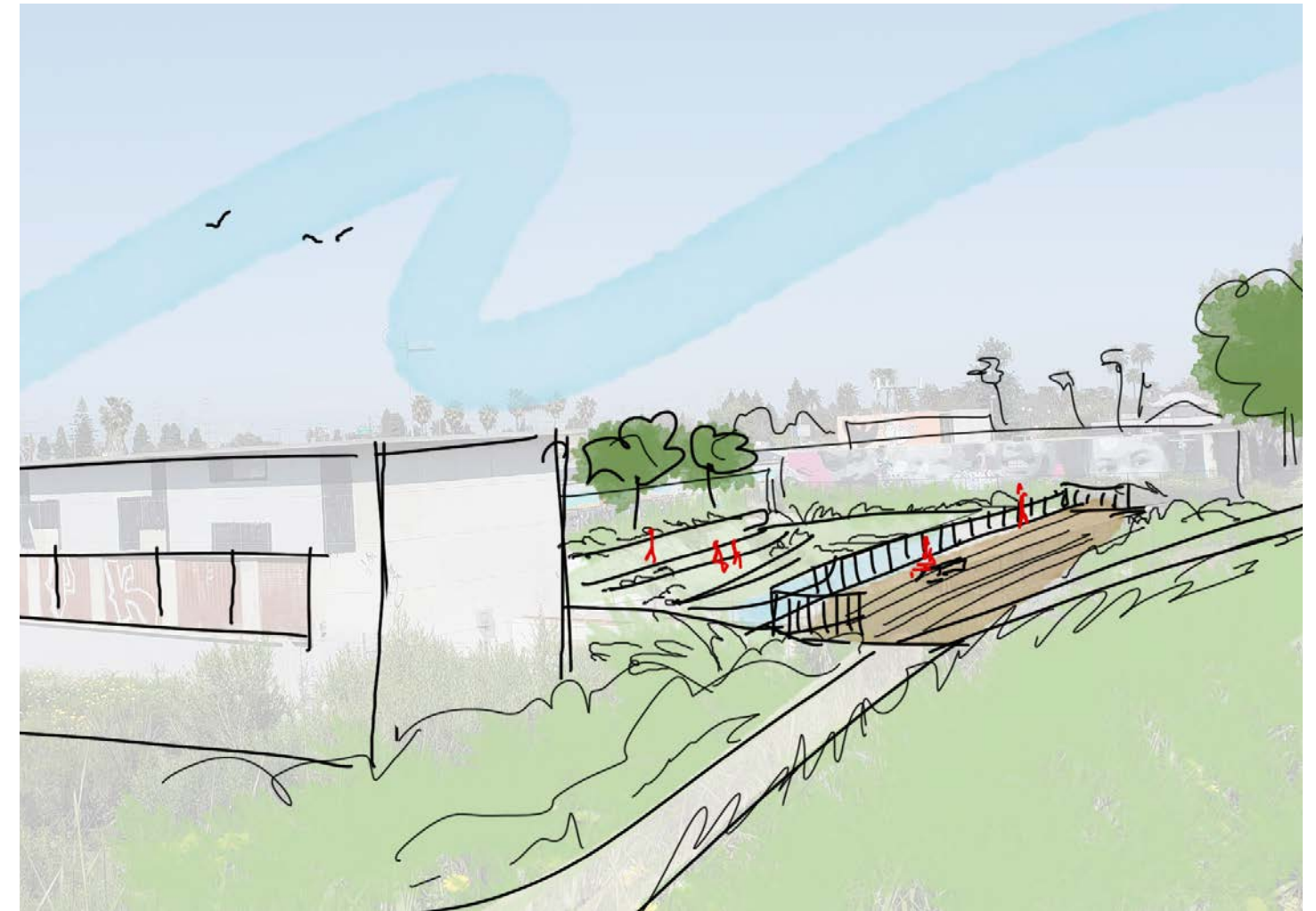
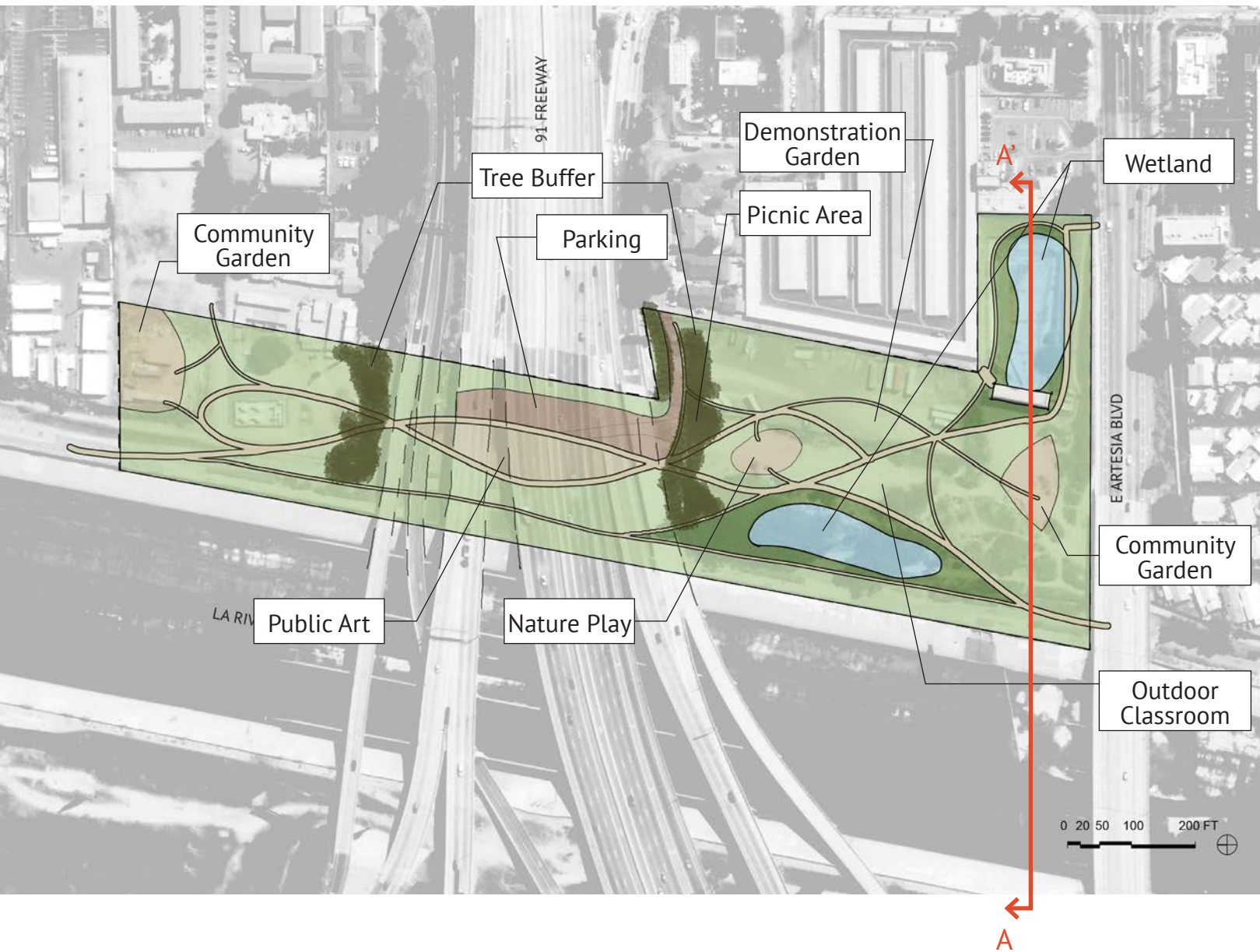
Concept 2: Concentration



Concept 3: Diversion

# Design Concepts

## Concept 1: Threads

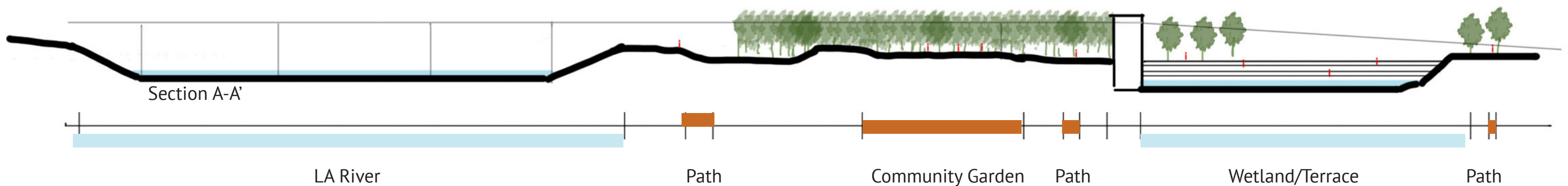


### Pros:

- Minimal grading
- Keep existing infrastructure
- Covered, shaded parking
- Parking close to more active programming
- Nature play and outdoor classroom close to wetland environment
- Activities dispersed throughout park

### Cons:

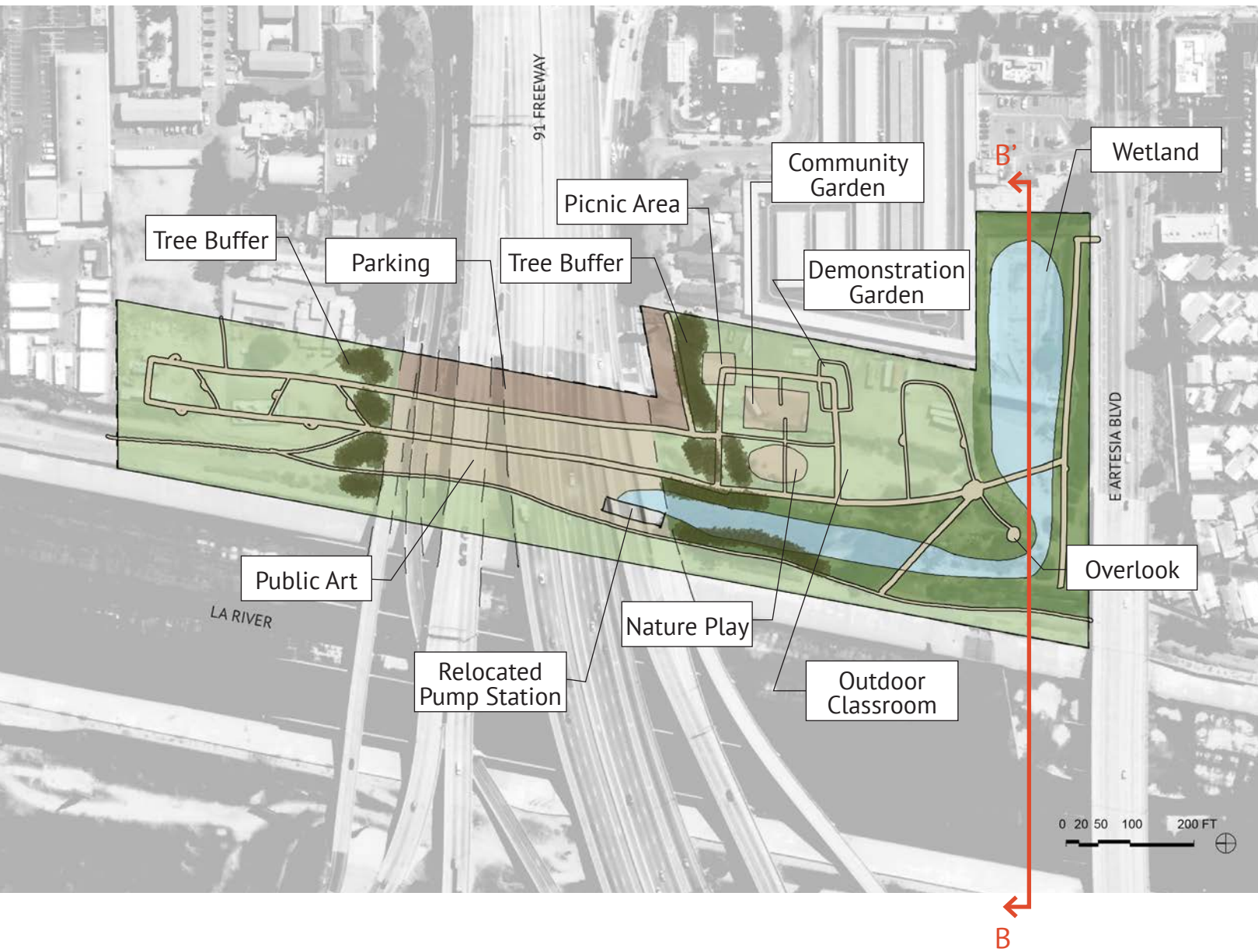
- Community garden far from parking
- Play and picnic areas relatively close to freeway
- Tree buffers near freeway may make underpass even darker
- Smaller riparian planting area





# Design Concepts

## Concept 2: Concentration

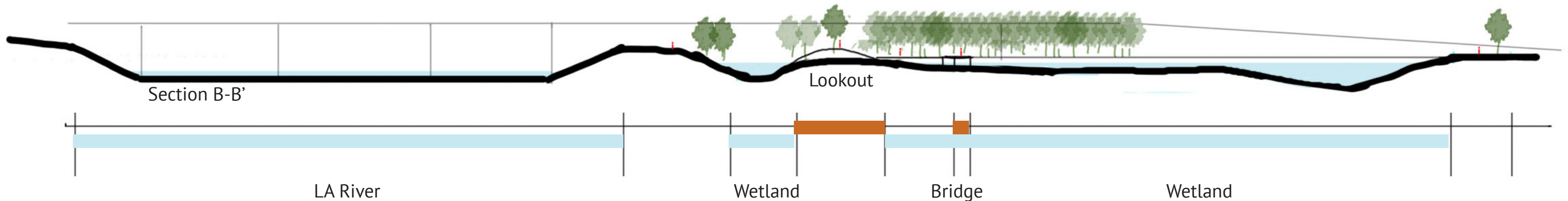


### Pros:

- Grouped programming close to parking
- Covered, shaded parking
- Larger naturalistic immersion areas at far ends of park
- Generally follows existing contours of site
- Memorable entry from LA River over a bridge
- Varied vantage points
- Larger riparian habitat areas

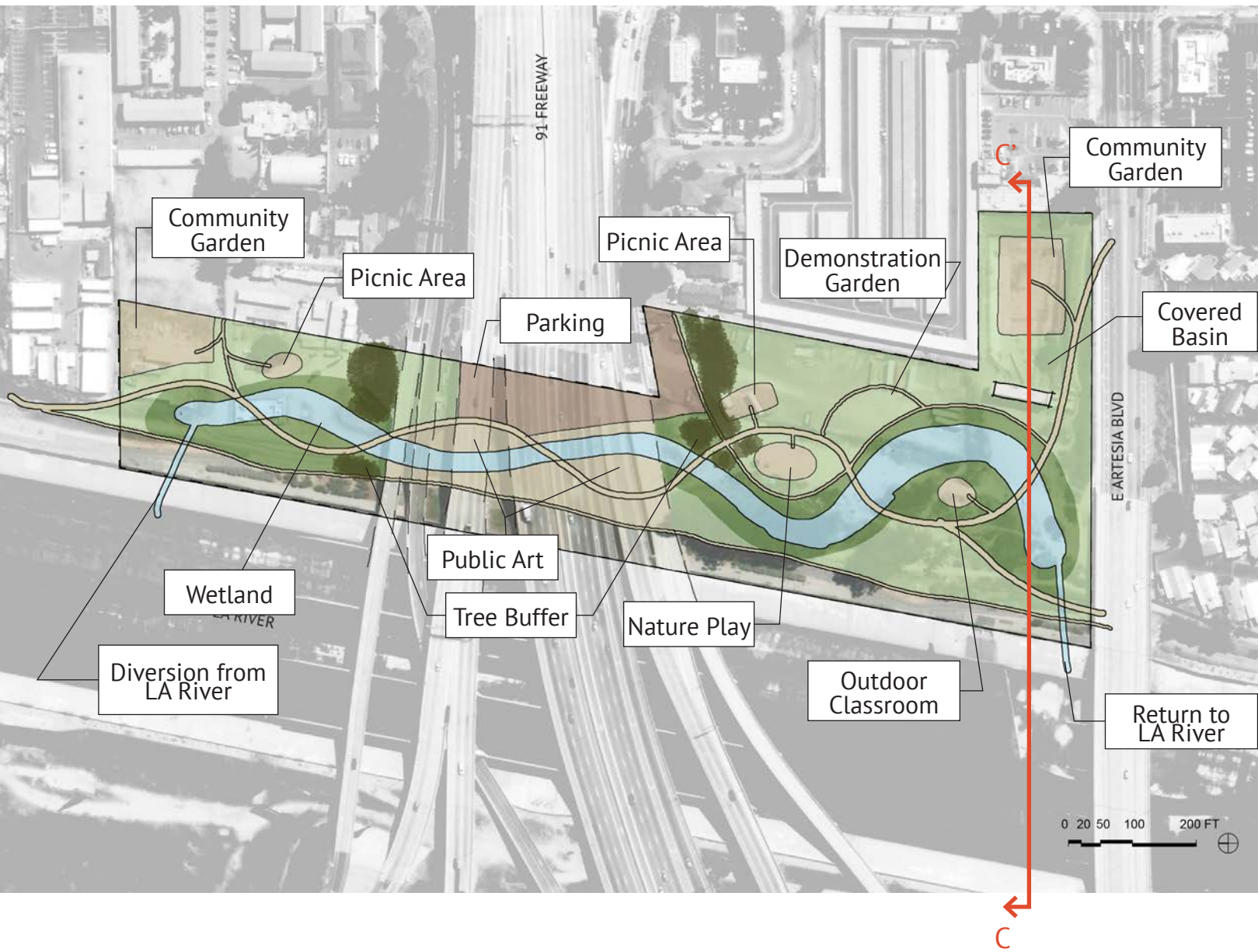
### Cons:

- Pump station must be relocated
- Steep grading necessary to drain to new pump station location
- Supplemental water source may be necessary
- Majority of programming relatively close to freeway
- Conflict of community garden with general park users



# Design Concepts

## Concept 3: Diversion

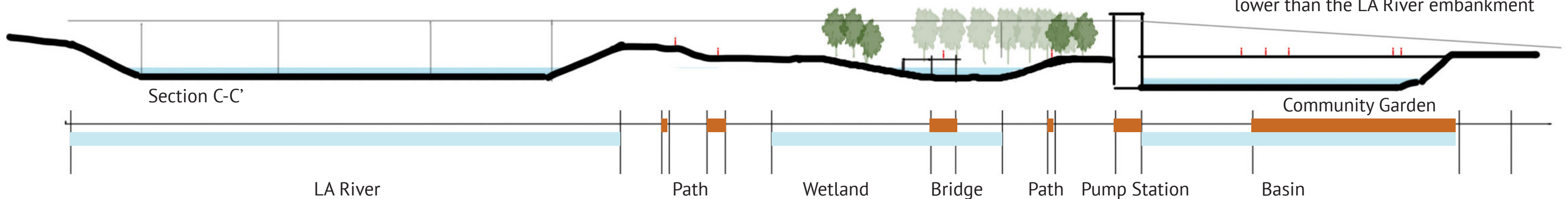


### Pros:

- Includes water quality improvements to upstream sources
- Water infiltration
- Existing basin and pump station remain functional
- Maximum riparian habitat and connectivity
- Covered, shaded parking

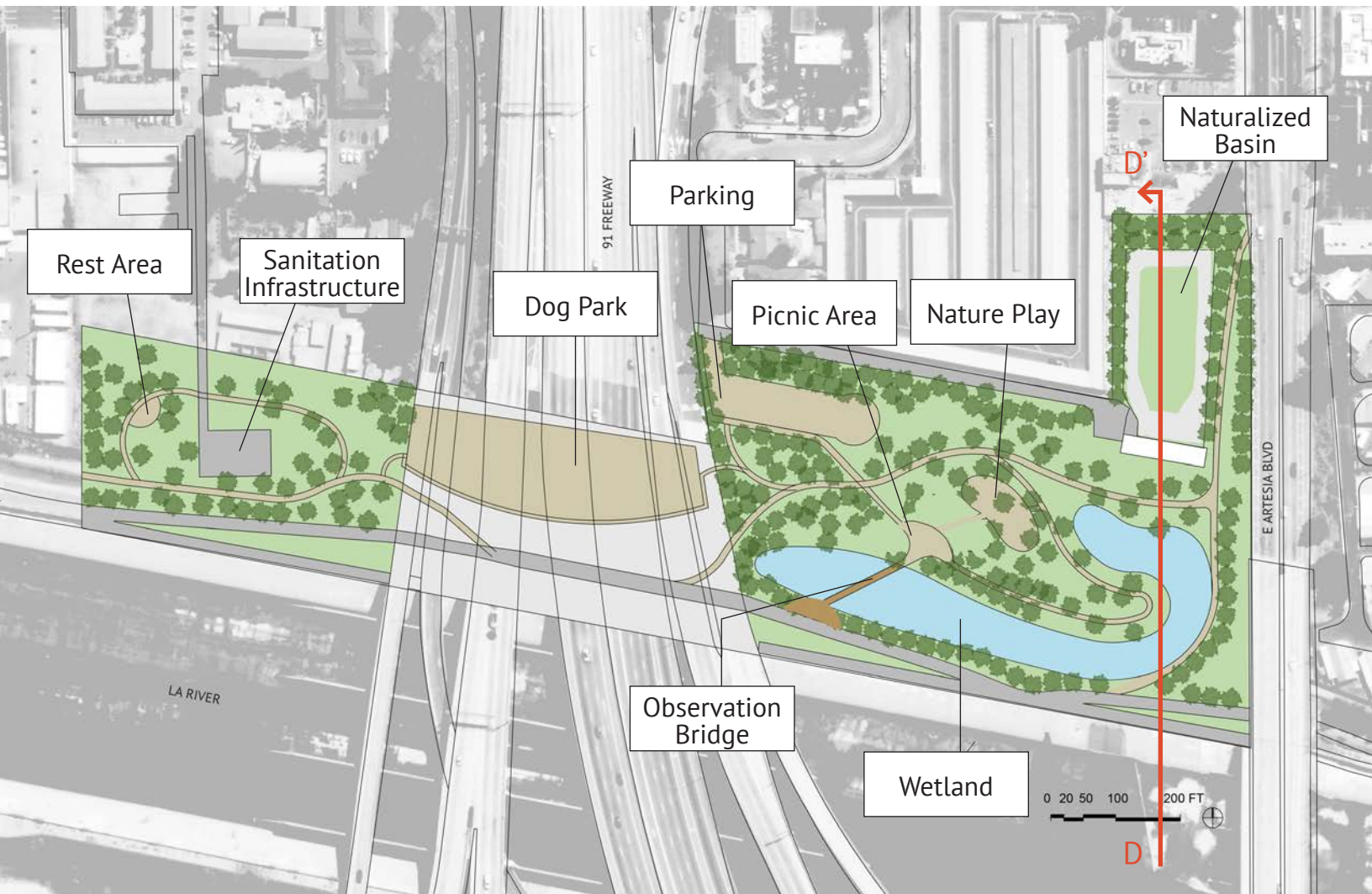
### Cons:

- Heavy grading
- Majority of park will be sunken even lower
- Diversion method from LA River necessary to provide water
- Play and picnic areas relatively close to freeway
- Entrances from LA River are at extreme ends of the park
- Flood control risk because the site is lower than the LA River embankment



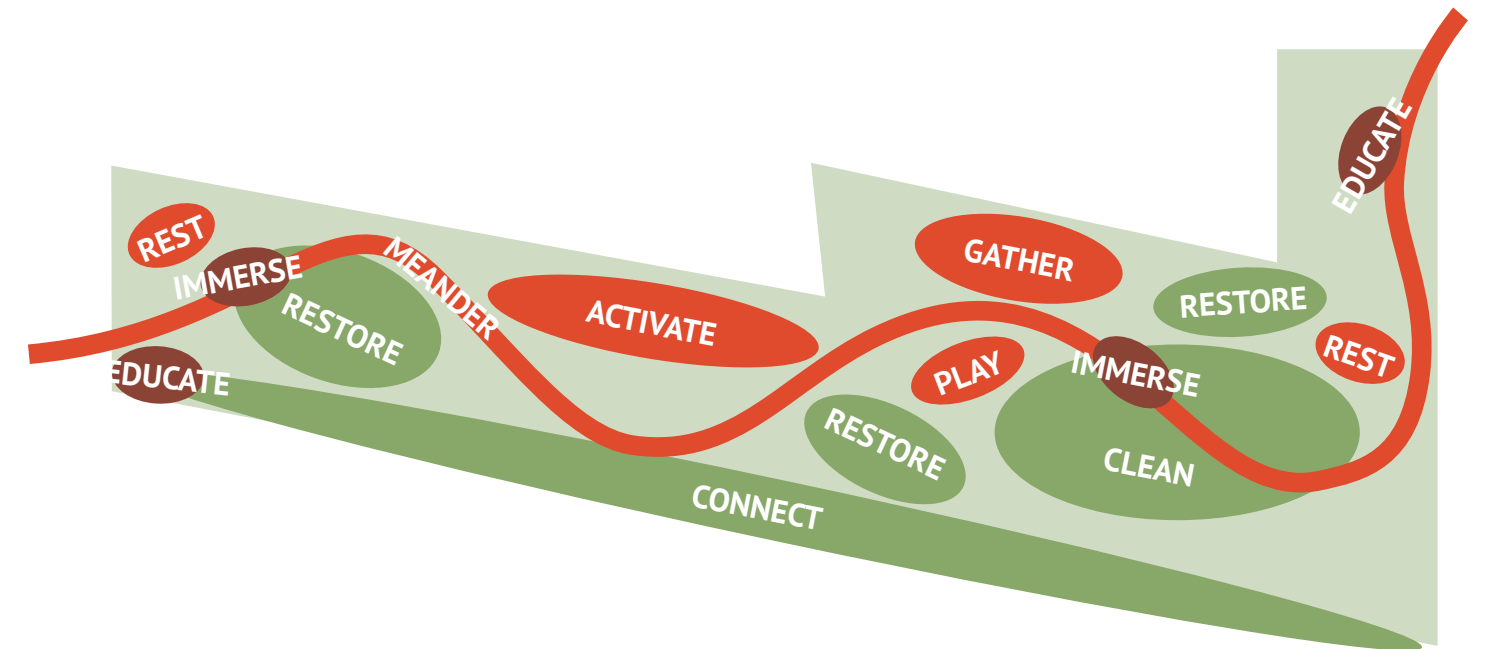
# Design Concepts

## Refined Concept

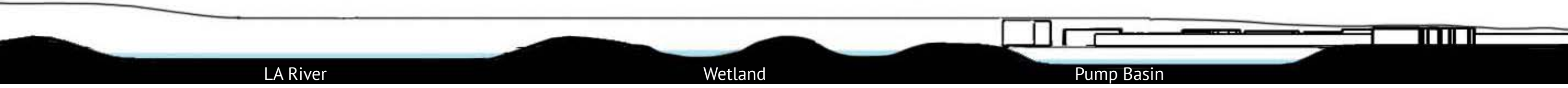


# Concept Diagram

In the final concept, community elements are woven through the restored natural environment. There are opportunities to spark environmental stewardship at the interface of people and nature.



Elevation D-D': Existing



Elevation D-D': Proposed

# Illustrative Plan



The site has been transformed from barren remnant land to a nature haven. Stormwater runoff is diverted at the pump station to a constructed wetland, which retains and filters the water onsite. Circulation paths weave throughout the site, bringing people through large restored areas of planting, where they can experience a little bit of nature in their own neighborhood.

- 1** Equestrian Trail Entrance
- 2** LA River Trail
- 3** Observation Area
- 4** Existing Water Treatment Infrastructure
- 5** Dog Park
- 6** Multi-Use Path

- 7** Pedestrian/Equestrian Path
- 8** 67th Street Main Entrance
- 9** Parking
- 10** Restroom
- 11** Play Area

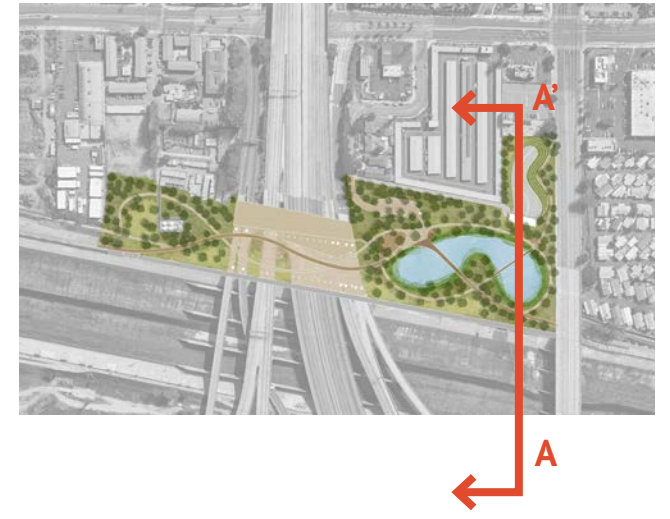
- 12** Picnic Area
- 13** Bike Station
- 14** Wetland
- 15** Observation Bridge
- 16** Existing Pump Station
- 17** Low Flow Channel

- 18** Terraced Basin
- 19** Artesia Entrance
- 20** Mobile Home Community Entrance

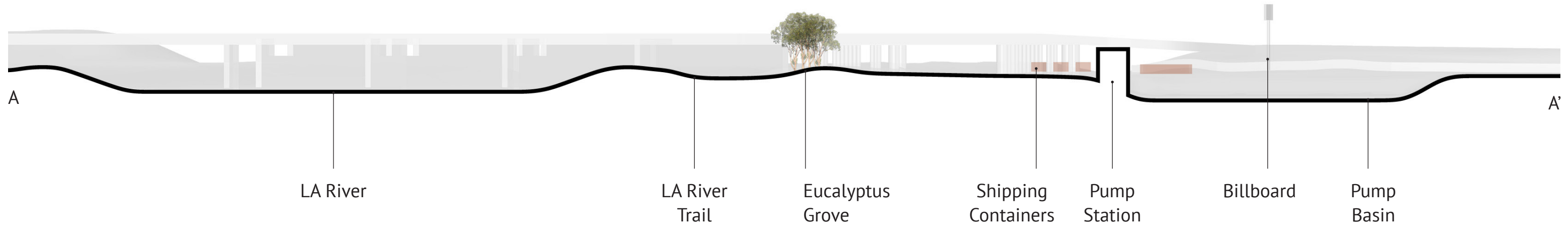


# Wetland Sections

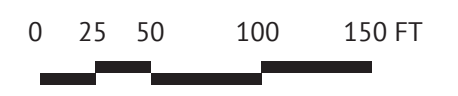
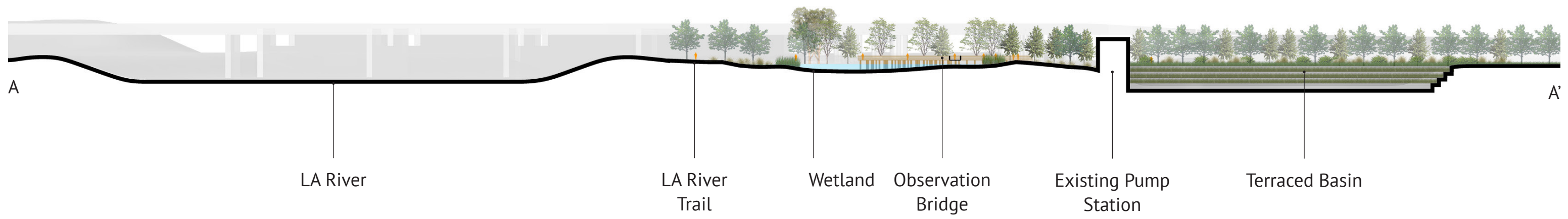
Comparing the existing and proposed sections shows how much more vibrant this site can be. The proposed Section A illustrates the terraced and planted pump basin and the depth of the wetland pond compared to the basin and LA River.



## Section A-A' Existing

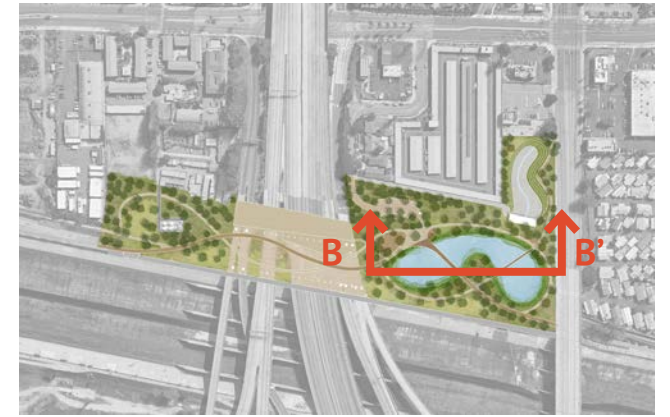


## Section A-A' Proposed

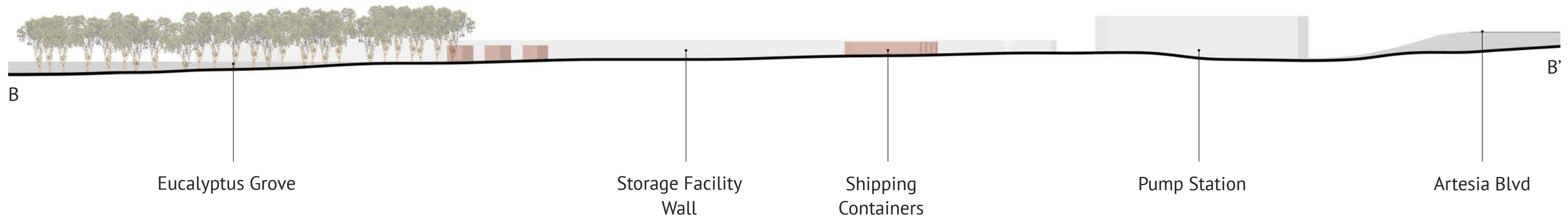


# Wetland Sections

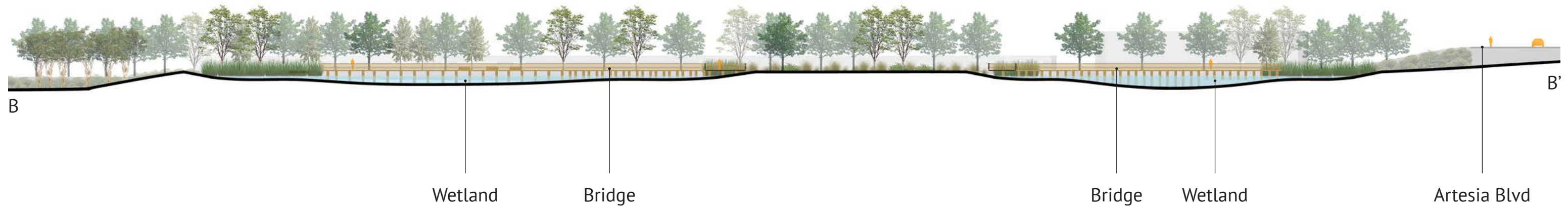
Comparing the existing and proposed sections shows how much more vibrant this site can be. The proposed Section B illustrates the two connected pools of the wetland and observation bridges running across them.



## Section B-B' Existing

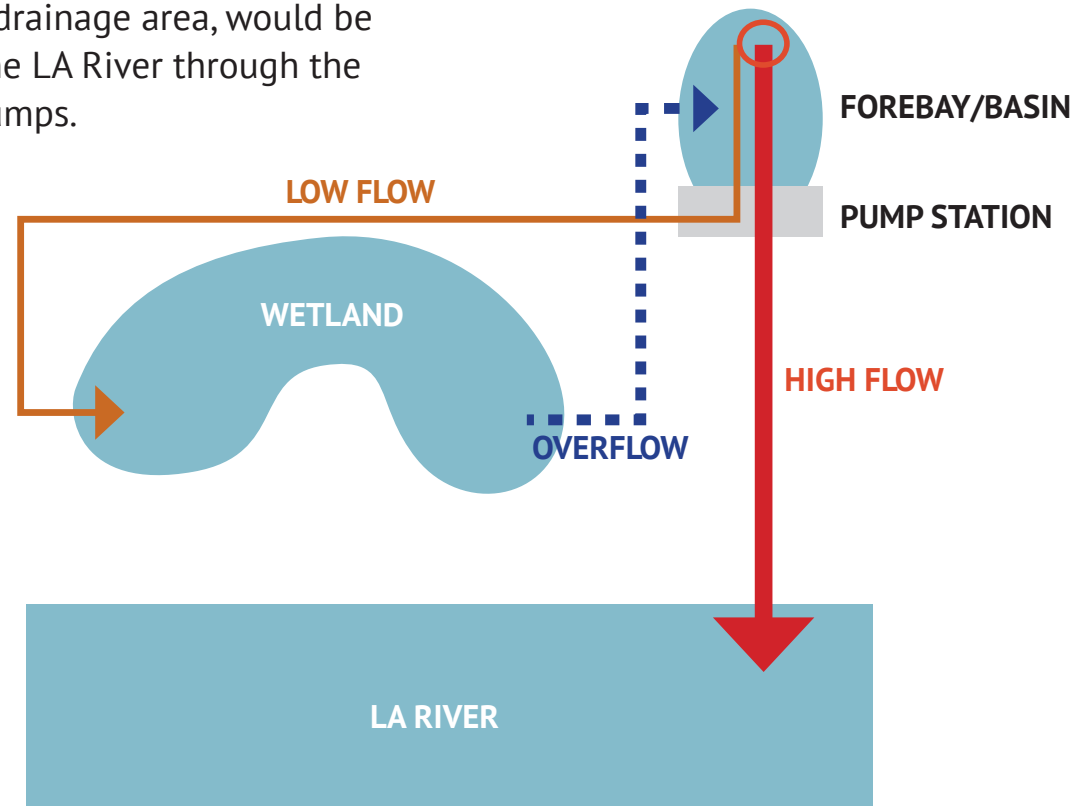
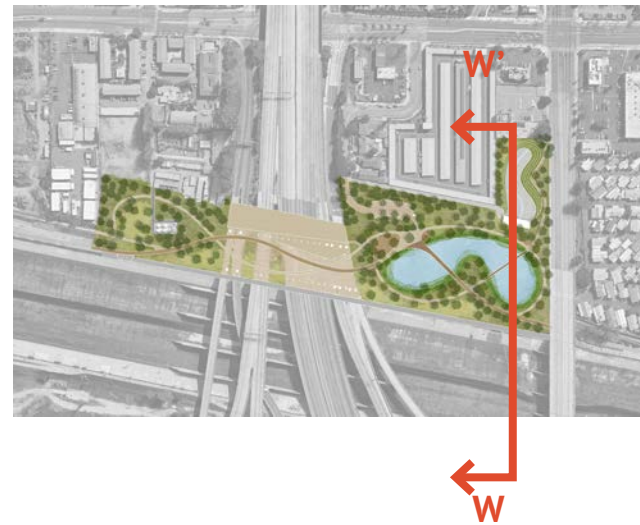


## Section B-B' Proposed



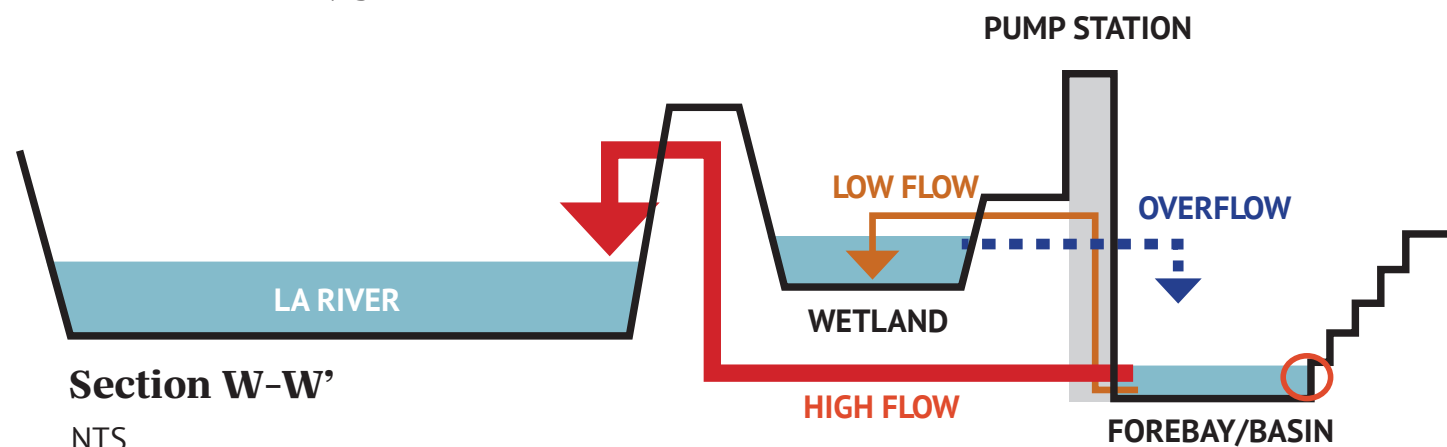
# Water Flow Diagram

In dry months, runoff enters into the pump station basin, and the low-flow polluted water is pumped into the wetland to capture and clean it using one of the six existing water pumps. During the wet season, overflow water drains back into the basin. The overflow water, in addition to high-volume runoff from the contributing drainage area, would be pumped out to the LA River through the remaining five pumps.



**Plan**

NTS



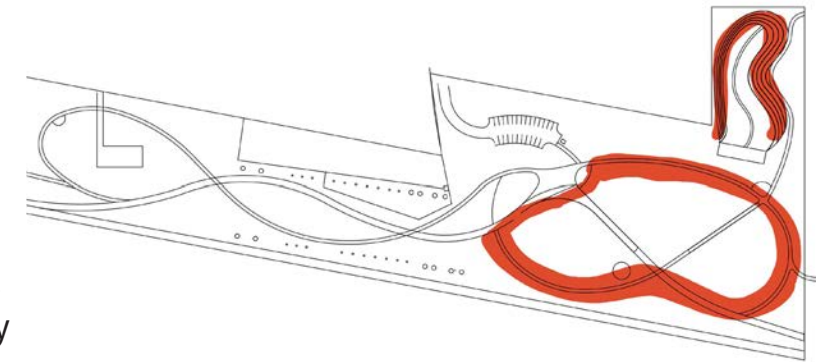
**Section W-W'**

NTS

# Plant Communities

## Riparian

Riparian planting forms the backbone of the constructed wetland. In addition to providing ample habitat to birds, riparian plants can filter polluted stormwater, cleaning up the water that eventually gets released into the LA River.



*Artemisia douglasiana*  
Mugwort



*Baccharis emoryi*  
Emory's baccharis



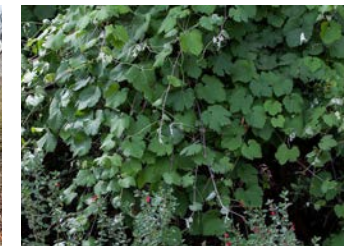
*Carex praegracilis*  
Clustered field sedge



*Juncus mexicanus*  
Mexican rush



*Muhlenbergia rigens*  
Deergrass



*Vitis girdiana*  
Wild grape



*Platanus racemosa*  
Western sycamore



*Populus fremontii*  
Freemont cottonwood



*Salix gooddingii*  
Goodding's willow

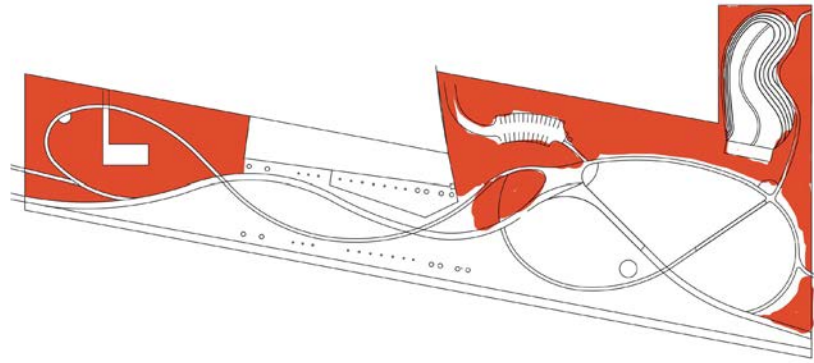


*Salix laevigata*  
Red willow

# Plant Communities

## Coastal Sage Scrub

Drought-tolerant with high habitat value for local wildlife, coastal sage scrub forms the majority of the restored planting areas. Plants that flower and fruit at different times of year ensure food supply for birds, mammals, and insects.



*Acmispon glaber*  
Deerweed



*Artemisia californica*  
California sagebrush



*Baccharis pilularis*  
Coyote brush



*Encelia californica*  
Coast sunflower



*Eriogonum fasciculatum*  
California buckwheat



*Heteromeles arbutifolia*  
Toyon



*Mimulus aurantiacus*  
Bush monkeyflower



*Salvia apiana*  
White sage



*Salvia leucophylla*  
Purple sage

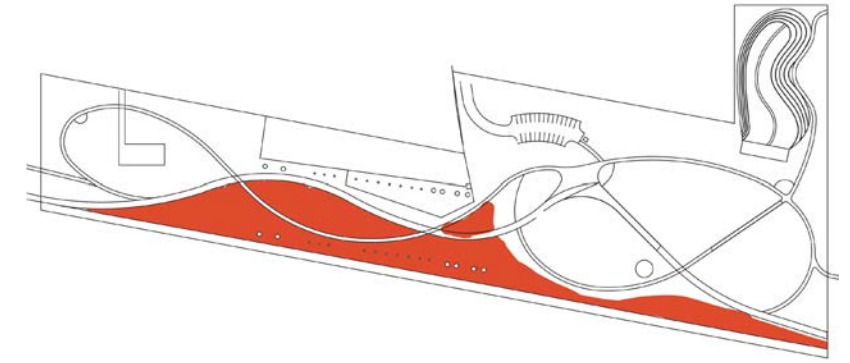


*Salvia mellifera*  
Black sage

# Plant Communities

## Grassland/Oak Savanna

Native grasses and annual flowers are planted along the LA River embankment, providing open space habitat for wildlife and seasonal blooms for human visitors. The intermixed borders of grassland and sage scrub communities provide more varied habitat conditions.



*Bromus carinatus*  
California brome



*Elymus condensatus*  
Giand wildrye



*Elymus triticoides*  
Creeping wildrye



*Eschscholzia californica*  
California poppy



*Lupinus bicolor*  
Miniature lupine



*Melica imperfecta*  
Smallflower melic



*Poa secunda*  
Deergrass



*Stipa pulchra*  
Purple needlegrass



*Stipa lepida*  
Foothill needlegrass



*Quercus agrifolia*  
Coast live oak



# Entrance Plaza

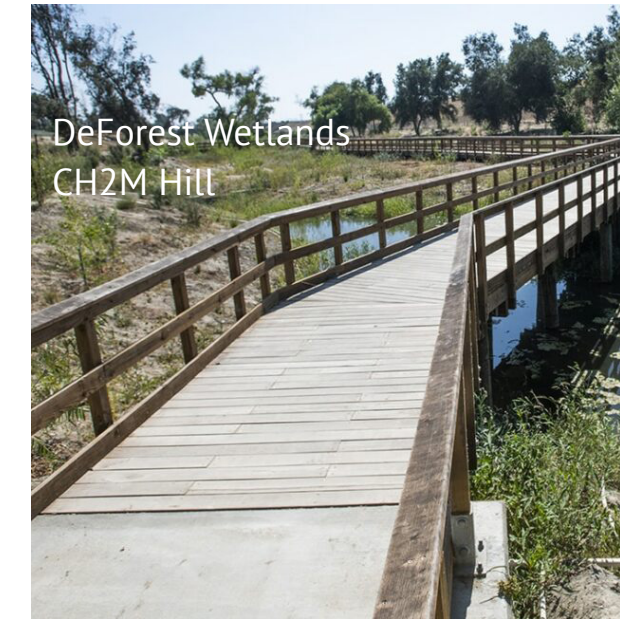
## Enlargement



The main entrance plaza contains a hub of community-oriented spaces. Visitors can park and enjoy the amenities in the main plaza area or walk, bike, or jog through the rest of the park.

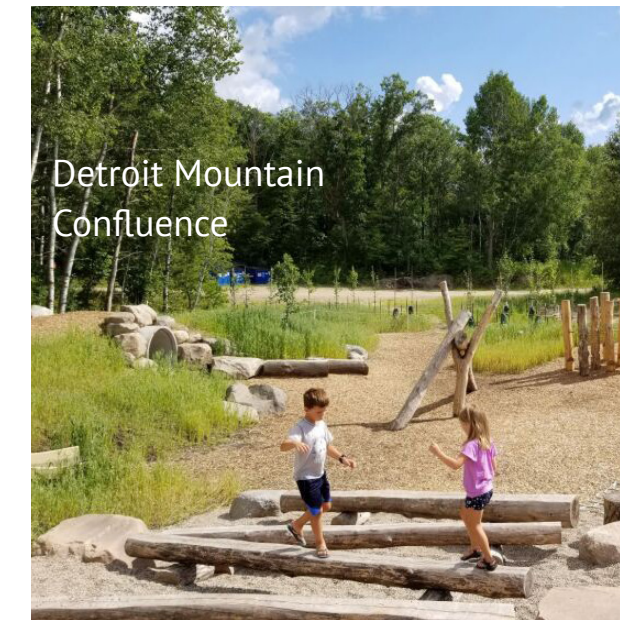
- 1 Parking Lot
- 2 Restroom
- 3 Main Plaza
- 4 Picnic Area
- 5 Nature Play
- 6 Bike Path
- 7 Pedestrian Path
- 8 Pedestrian/Equestrian Path
- 9 Dog Park Entrance

### Inspiration



DeForest Wetlands  
CH2M Hill

Observation Bridge

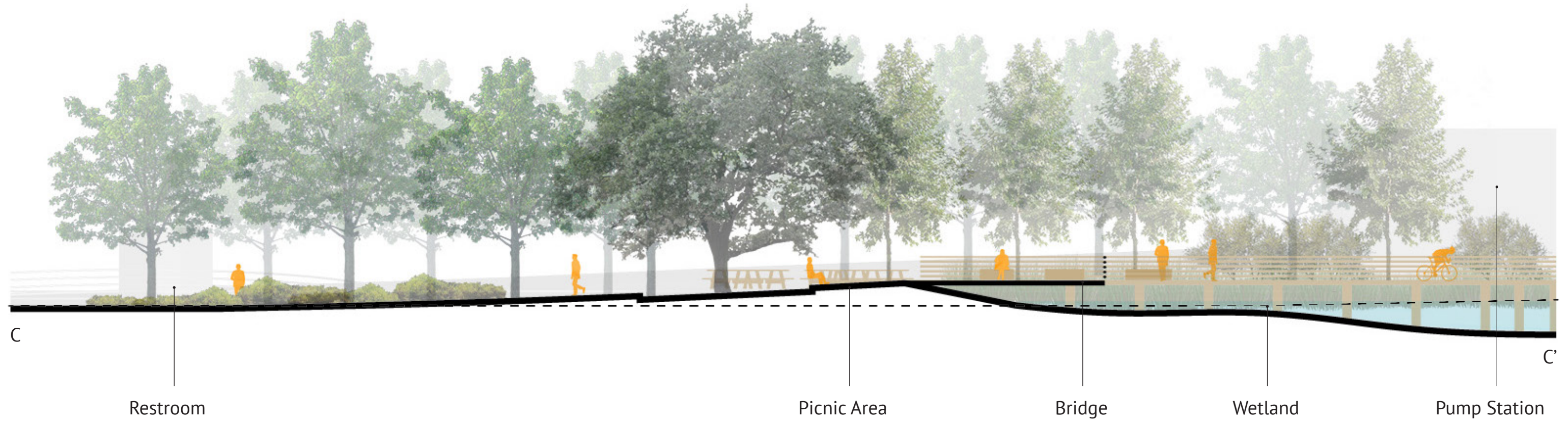


Detroit Mountain  
Confluence

Nature Play



# Entrance Plaza



## Section C-C'

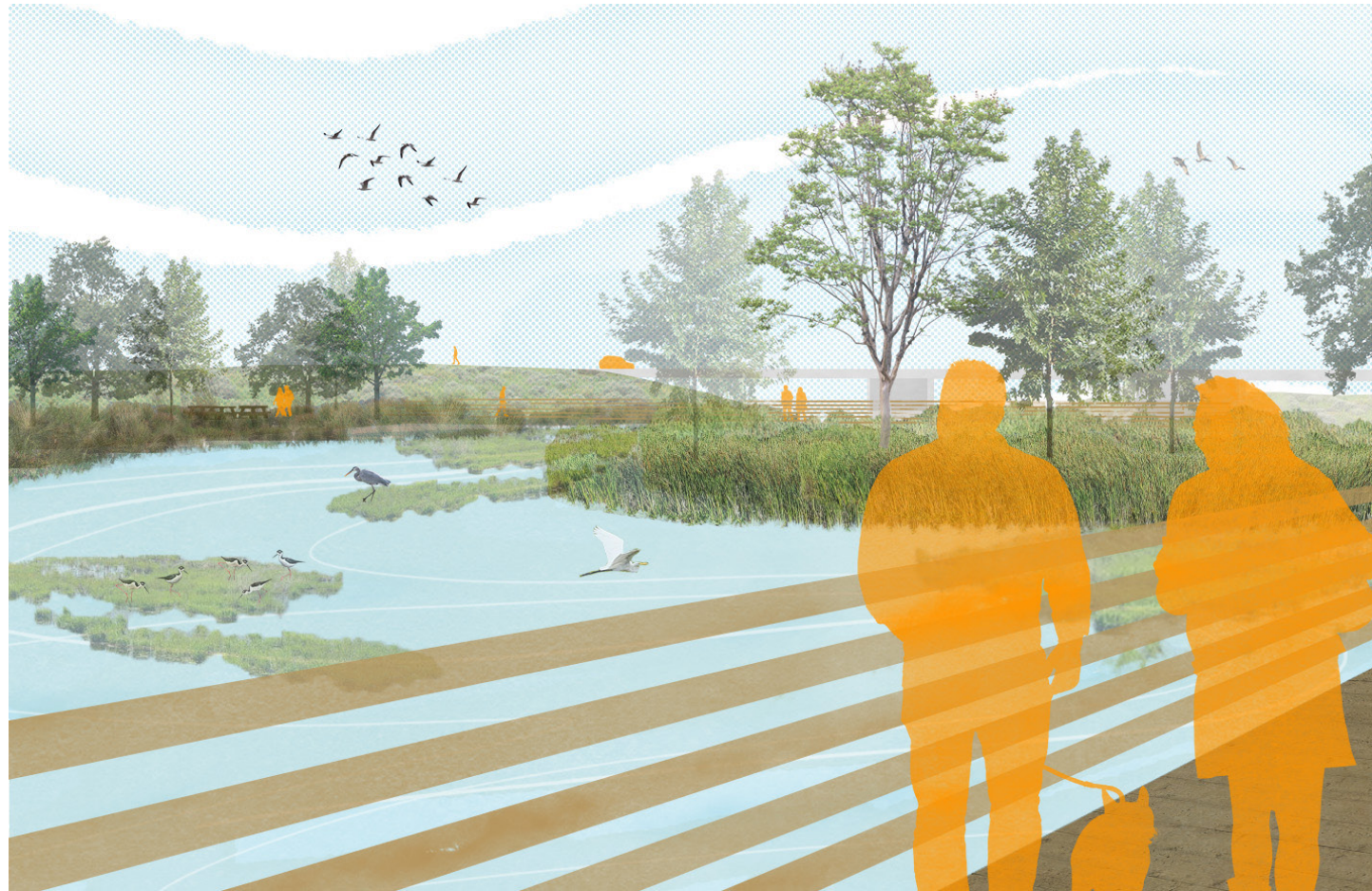


Section C shows the relatively even grade across the entrance plaza. The wetland pond is sloped gradually at the edges to create a flat shelf that maximizes ideal conditions for riparian planting. From there, the bottom continues to slope steeper and deeper to maintain a permanent pool of water in dryer conditions.



# Entrance Plaza

## Vignettes



A: View from observation bridge, looking over wetland area



B: View from picnic area, looking north



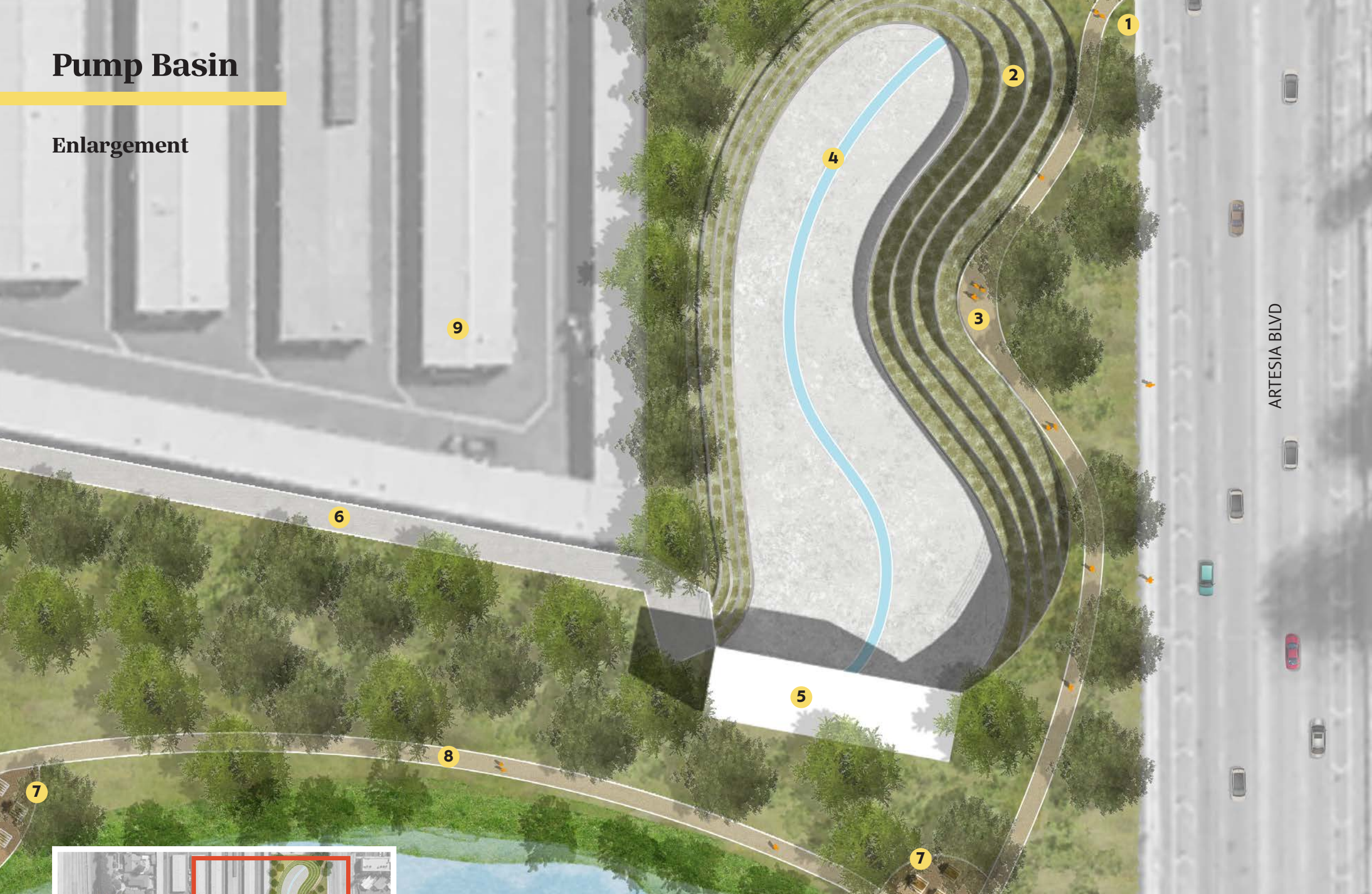
As soon as visitors enter the site, they are immersed in a natural experience. Although the hum of the urban environment continues in the background, they can see and smell nature around them and observe the abundant wildlife.



C: View entering site from the LA River bike path Jacqueline Wee | Capstone Studio | Summer 2023 | 69

# Pump Basin

## Enlargement



The pump station basin has been terraced and planted in order to soften the feel of this necessary flood-control infrastructure. The shape of the basin echoes the shape of the wetland pond, creating a visual connection between the two water systems.

- 1 Artesia Entrance
- 2 Terraced Planting
- 3 Interpretive Overlook
- 4 Low Flow Channel
- 5 Existing Pump Station
- 6 Existing Service Road
- 7 Picnic Area
- 8 Pedestrian Path
- 9 Public Storage Facility



## Inspiration



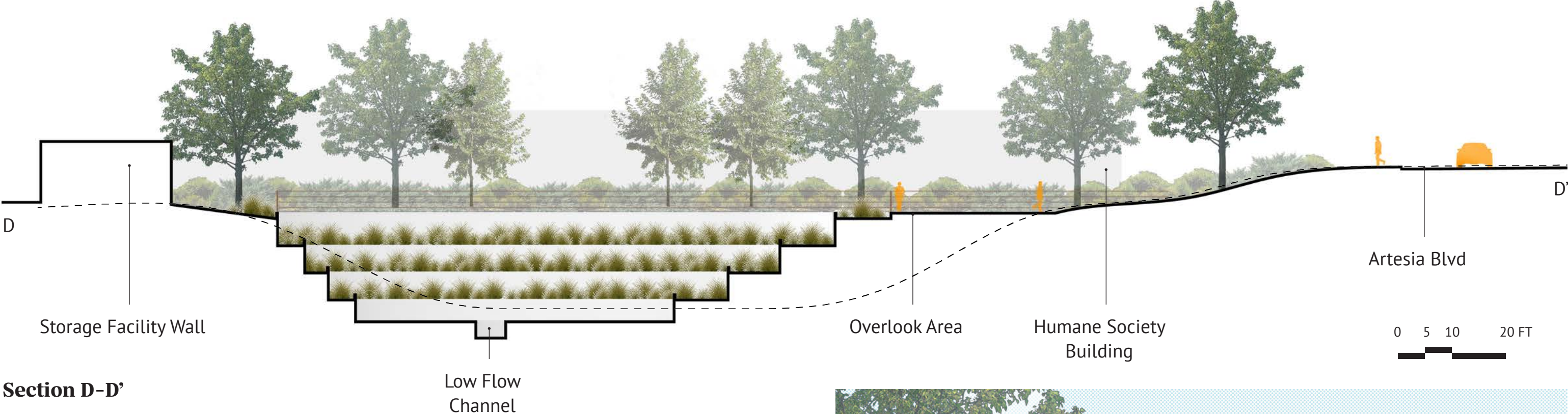
39th Ave Greenway  
DHM Design

Terraced Basin

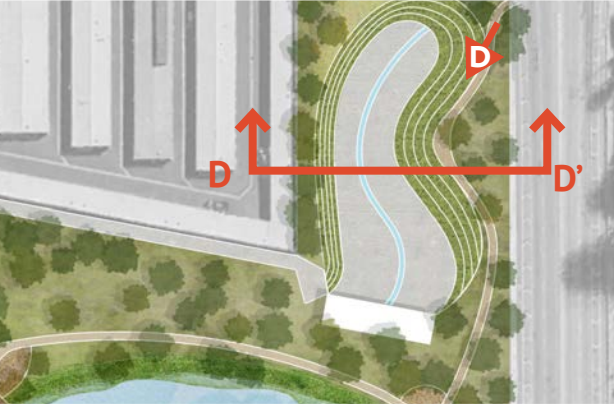


Interpretive Signage

# Pump Basin



Section D-D'



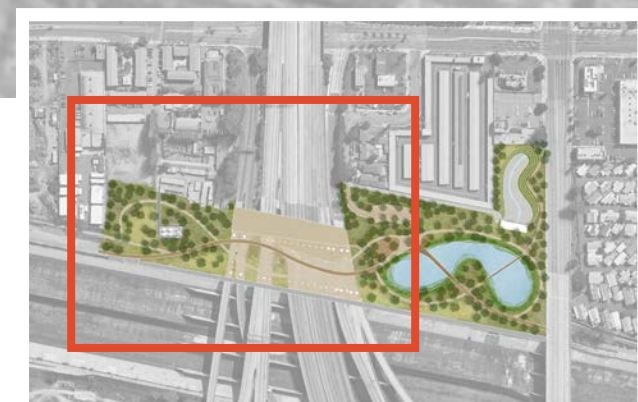
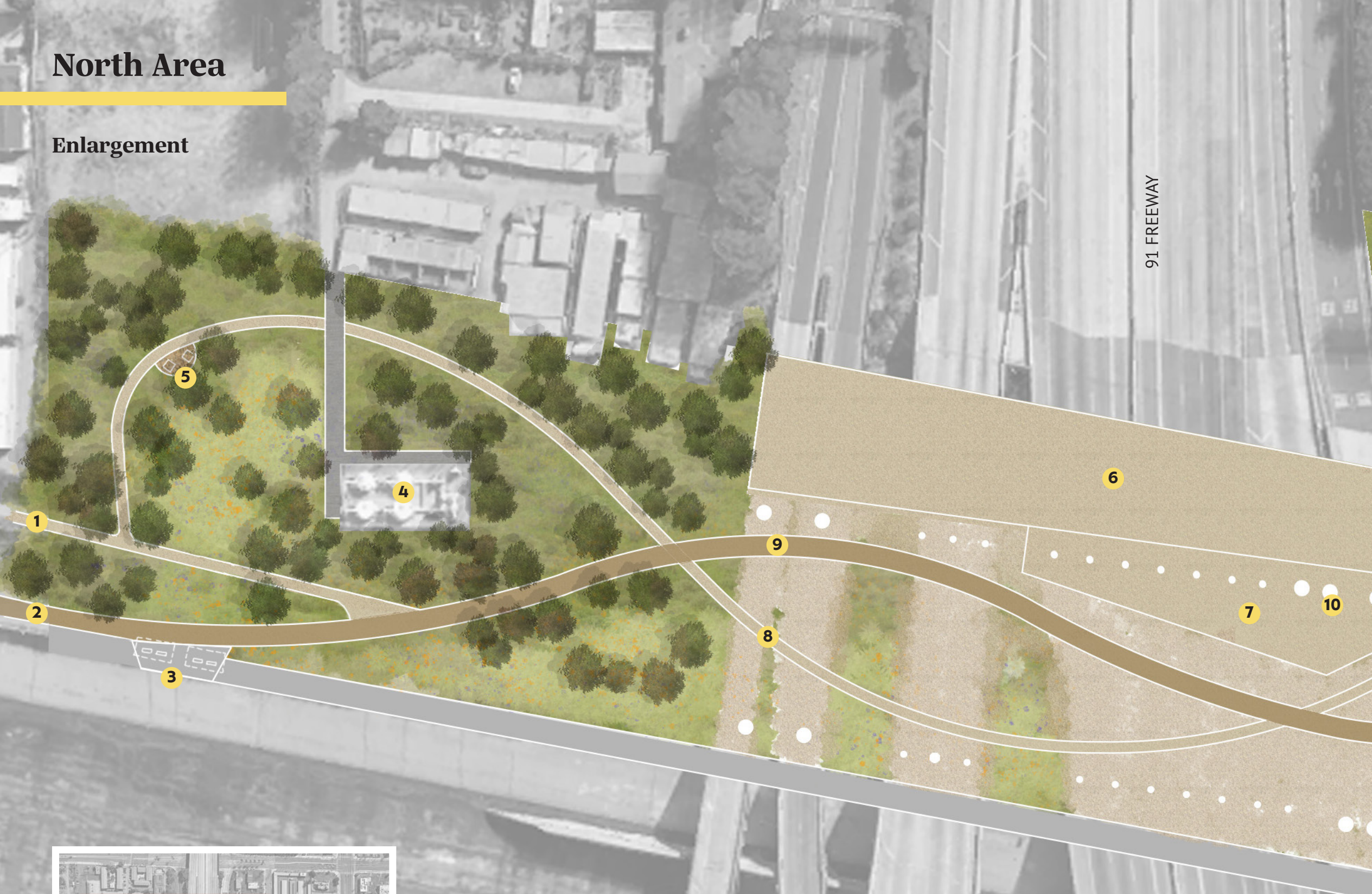
At an interpretive overlook, visitors can learn how stormwater enters the site at the basin and circulates through the wetland pond.



D: View entering the site from Artesia Blvd

# North Area

## Enlargement



The north part of the park is quieter, with the opportunity to be immersed in large swaths of planting. A large dog park can regularly bring people through this area, which helps increase the feeling of safety in the underpass. The bike and equestrian paths flip next to the dog park to minimize conflict between animals.

- 1 Equestrian Trail Entrance
- 2 LA River Trail
- 3 River Observation Area
- 4 Existing Water Treatment Infrastructure (screened)
- 5 Picnic Area
- 6 Large Dog Area
- 7 Small Dog Area
- 8 Equestrian/Pedestrian Path
- 9 Multi-Use Path
- 10 Existing Concrete Posts

## Inspiration



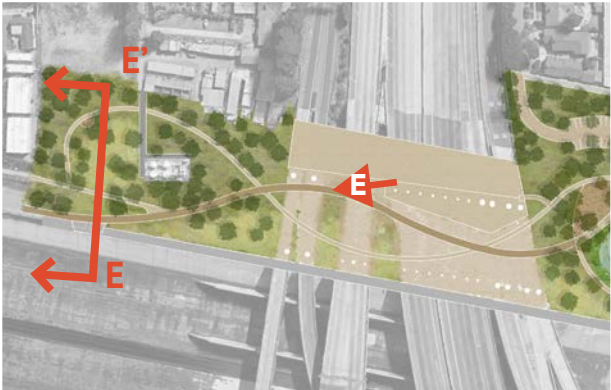
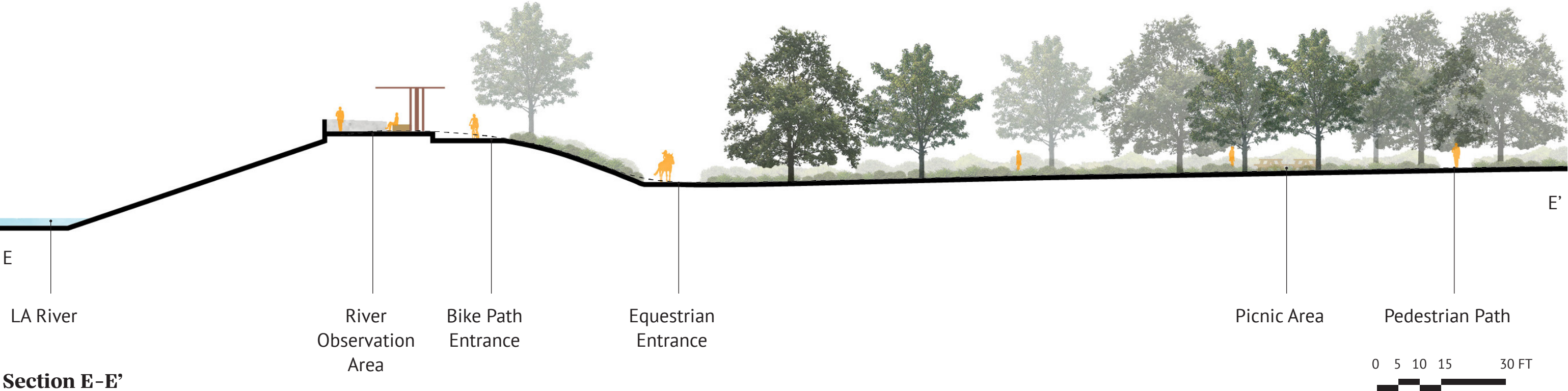
River Overlook



Screened Infrastructure



# North Area

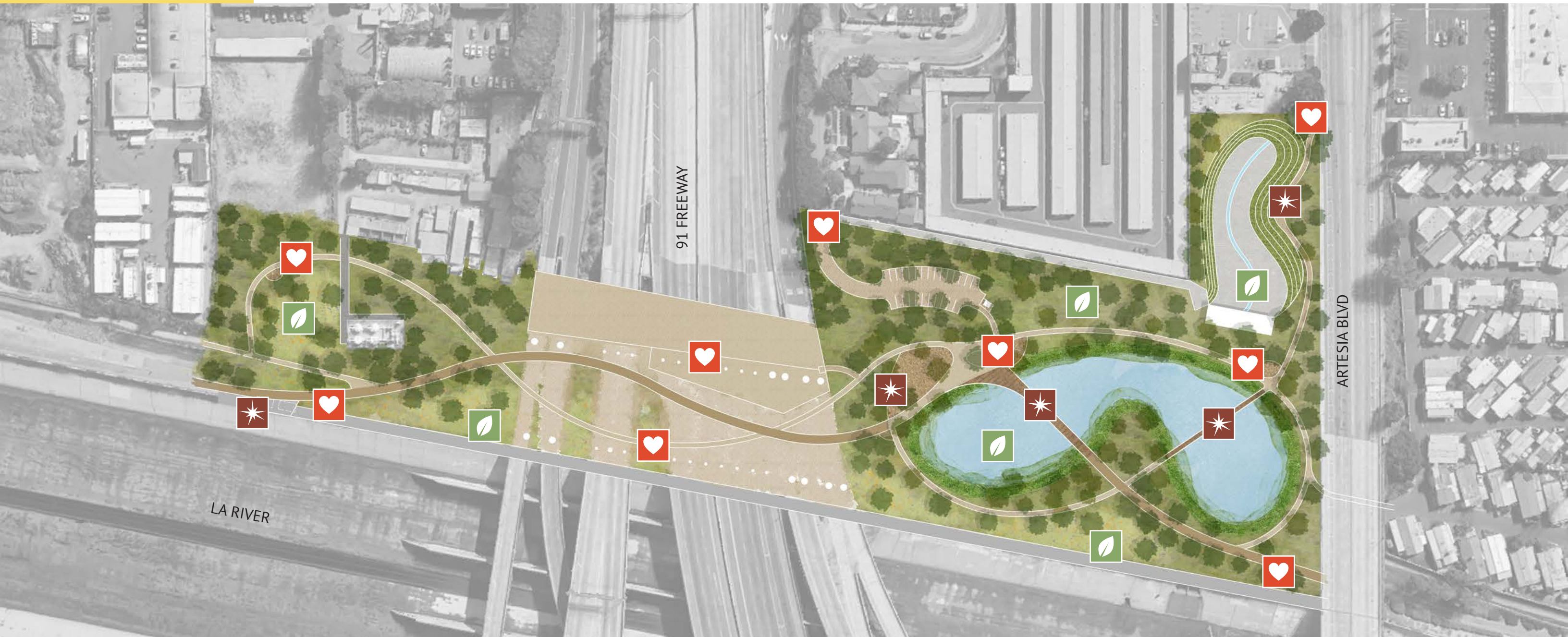


At the river observation area, visitors can see the water level and flow of the LA River change over the seasons. Interpretive signage can inform them about how the wetland pond helps clean the water before it is pumped into the LA River.



E: View from the multi-use path, exiting the underpass

# Conclusion



## Support Biodiversity

Large areas of different plant communities provide habitat for local wildlife. A constructed wetland and reworked basin improve water quality. Planting within the site itself and along the LA river contribute to overall ecological connectivity.

## Strengthen Community

This park incorporates picnic areas, a dog park, and a walking trail, which are the top desired amenities identified by the community. The walking trail and quiet resting points help contribute to community health, and additional access points help connect the park to the surrounding community.

## Spark Stewardship

At the interface of people and nature, there are play areas, views of natural beauty, and educational signage to inspire people to appreciate nature and to become good stewards of the environment.

0 50 100 200 FT



By giving local residents opportunities experience and meander through a little bit of nature in their own neighborhood, this park can become a community asset and cultivate an appreciation for the natural world.





# Reference List

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## Books

- Design for Ecological Democracy
- Landscape Ecology Principles in Landscape Architecture and Land-Use Planning
- Last Child Left in the Woods
- Low Impact Development: A Design Manual for Urban Areas
- Principles of Ecological Landscape Design
- The Sense of Wonder
- Treatment Wetlands

## Reports, Handbooks, Plans

- Constructed Wetlands Help Achieve Water Quality and Conservation Goals at Ballona
- Joint Dominguez Gap and DeForest Treatment Wetlands Project Draft Environmental Impact Report
- LA County Parks Needs Assessment
- LA River Master Plan
- LAF Performance Guidebook
- Long Beach General Plan
- Millennium Ecosystem Assessment
- Uptown Open Space Vision Plan

## Websites

- Ebird
- Google Earth
- iNaturalist
- LAF Landscape Performance Series

## Other

- Audubon Society
- US Census