



# Hahamongna Watershed Park

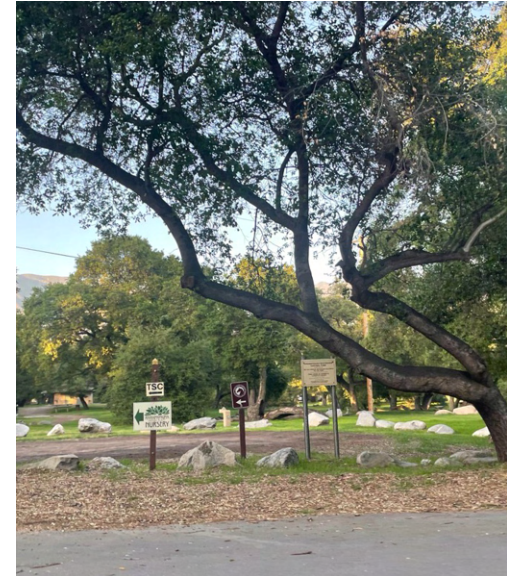
A Vision for Renewal

Heather Wu - Capstone 2025

# TABLE OF CONTENTS

<b>Statement.....</b>	<b>3</b>	<b>Concept Development .....</b>	<b>33 - 37</b>
<b>Location.....</b>	<b>4</b>	Design Metaphor.....	34
<b>Land Acknowledgment .....</b>	<b>5</b>	Bubble Diagrams.....	35
<b>History.....</b>	<b>6</b>	Final Design Metaphor.....	36
<b>Justification .....</b>	<b>7</b>	Concept Development - Process.....	37
<b>Goals &amp; Objective .....</b>	<b>8</b>	<b>Final Design .....</b>	<b>38 - 63</b>
<b>Project Boundary .....</b>	<b>9</b>	Illustrative Plan .....	39 - 40
<b>Existing Conditions .....</b>	<b>10</b>	Program Elements.....	41 - 44
<b>Site Photos.....</b>	<b>11 -12</b>	Solutions.....	45 - 48
<b>Research and Site Analysis.....</b>	<b>13 - 32</b>	Enlargements, Sections, Perspectives	49 - 61
Design Methodology.....	14 - 16	<b>Conclusion .....</b>	<b>62</b>
Precedent Case Studies.....	17 - 19	<b>Bibliography .....</b>	<b>63 - 66</b>
Users.....	20		
Regional Site Analysis .....	21 - 26		
Site Analysis.....	27 - 30		
Constraints and Opportunities...	31 - 32		





**This project reimagines the West Main Entrance of Hahamongna Watershed Park as a vibrant hub celebrating Indigenous heritage, watershed ecology, and serving as a center for education and recreation. By restoring the oak woodlands, transforming underused areas, enhancing layout and wayfinding, and creating engaging community spaces, this redesign will make the park more welcoming and accessible—inviting visitors to explore, learn, and develop connections to the land, water, and cultural heritage.**



## HAHAMONGNA WATERSHED PARK

4550 Oak Grove Drive, Pasadena, California 91013

Size: 1,300 Acres

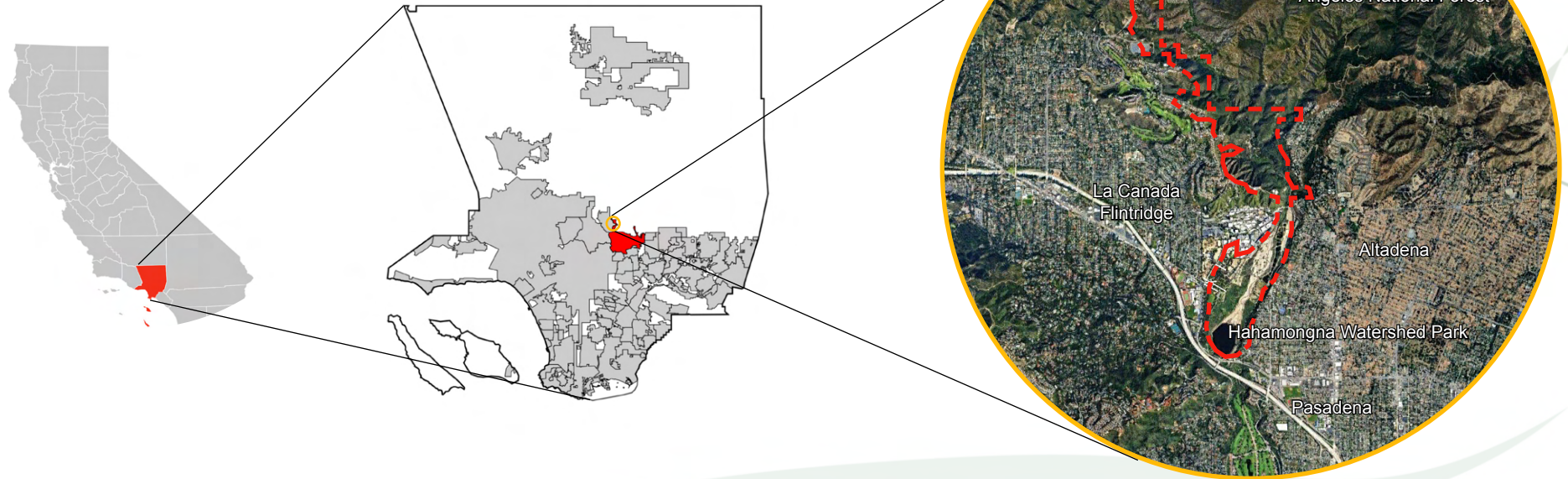
Owners - City Of Pasadena

Parcel/Accessors No. - 5823-003-911

Zoning - Open Space

City District - District 1

**This 1300-acre park in the Arroyo Seco extends from Devil's Gate Dam north into the San Gabriel Mountains.**



# LAND ACKNOWLEDGMENT

## Gabrielino-Tongva Land Acknowledgment

Hahamongna Watershed Park lies on the ancestral homelands of the **Gabrielino-Tongva people**. The name Hahamog'na, commonly anglicized to Hahamongna and spelled Xaxaamonga in their native language, meaning Flowing Waters, Fruitful Valley, reflects their deep ties to this land. **We honor and pay respect to the Tongva as the original stewards of these oak woodlands, creeks, and watersheds.** We recognize the presence and resilience of the Tongva people and support their cultural preservation.

## Brief History

For thousands of years, the Tongva lived in thriving villages across the Los Angeles Basin, including Hahamongna at the base of the San Gabriel Mountains. **This site was chosen as a permanent village because of its abundant flowing waters, fertile valley soils, oak woodlands for food and shelter, and its position as a trade gateway between the mountains and coastal plains.** The Tongva cared for the land through ecological stewardship, and sustained vibrant trade and cultural networks. Despite colonization, the Tongva community endures today, carrying forward their traditions and connection to this place.



# INDIGENOUS & SITE HISTORY

**6,000 BC to 1700s**

Ancestors of the Tongva people inhabited 4,000 Sq miles in region called Tovaangar - now known as Greater Los Angeles Basin for millennia, the Arroyo Seco being a key travel/ trade corridor, linking the San Gabriel Mountains to the plains.



**1769-1771**

The Portola expedition passes through and the stream is named Arroyo Seco. **Mission San Gabriel is founded and began forced relocations of Tongvas to the mission and renamed them Gabrielenos.**



**1874 - 1886**

Spanish settlers colonized "Alta California" and brought horses and ranches to the fruitful valley. The Indiana Colony arrives; Pasadena is incorporated. The land is fully transformed under American settlement.



**1930s - 1940s**

**Tongva Burial grounds found during dam and reservoir construction, confirming deep indigenous roots.**

Jet Propulsion Laboratory (JPL) founded on the east side of the Arroyo Seco.



**1975**

Ed Headrick Designed and constructed the worlds first permanent public Disc Golf Course in the Oak Woodlands of Oak Grove Park.



**2022 -2025**

**Tongva communities achieve land return milestones in the San Gabriel Valley, reconnecting people to ceremony, culture, and stewardship.**



The People's Land



**Pre 1700s**

**A major Tongva village - named Hahamong'na, meaning "flowing waters, fruitful valley", was founded and stands at the upper Arroyo Seco near Millard Canyon/Devil's Gate (present-day Hahamongna Watershed Park).**



**1834 - 1840s**

After mission secularization, Mexican ranchos—like Rancho San Pascual—claim Tongva lands, including what is now Pasadena. Forcing Gabrieleno (Tongvas) into slave labor or peasant class. **Last Tongva towns destroyed.**



**1920**

**The Los Angeles Flood Control District built Devil's Gate Dam - reshaping the flows of the Arroyo and the Hahamongna Basin.**



**1952**

**Rose Bowl Riders came to existence in Oak Grove Park with the help of the City of Pasadena.**



**1992**

**Pasadena renames Oak Grove Park to Hahamongna Watershed Park, restoring the Indigenous name to the landscape.**



# JUSTIFICATION



Understated Entrance



Frisbee Golf Course



Steep Terrain and Shared Roads



Scattered Picnic Areas

The west entrance of Hahamongna Watershed Park is where most visitors begin their journey, once home to the Tongva, sustained by ancient oak woodlands and the Arroyo Seco. These living systems offer powerful opportunities for watershed education and connection to Indigenous heritage. Yet despite its 1,300 acres, the park shares little of these stories, and poor circulation, scattered programming, and limited wayfinding leave its potential untapped.

## Why a Redesign Is Needed?

Redesigning the main entrance and recreational zones offers a vital opportunity to:

- **Honor Tongva Heritage:** Celebrate Indigenous History and the Sacred Oak Woodlands that sustained the Hahamongna village.
- **Reconnect with Place:** Highlight the relationship between Oak Woodlands, the Arroyo Seco, and the Watershed's identity.
- **Enhance Visitor Experience:** Improve access, wayfinding, and create a welcoming arrival.
- **Restore and Activate Land:** Revitalized the oaks woodlands, revive habitats, and transform underused areas into connected, purposeful spaces.
- **Inspire Stewardship:** Foster awareness of the watershed, biodiversity, and cultural heritage in line with Pasadena's Master Plan.



Underutilized Spaces



# GOALS & OBJECTIVES



## EXPLORE

Create an accessible and intuitive visitor experience rooted in the landscape's heritage.

- Redesign the entrance as a clear, welcoming gateway that reflects the Tongva History and Oak Woodland character.
- Add unified wayfinding signage, maps, and trail markers.
- Improve ADA access and gathering areas.
- Introduce low-impact group and educational gathering.
- Integrate natural play and learning areas inspired by indigenous culture.



## LEARN

Inspire awareness of the park's ecological and cultural significance.

- Serve as a Stewardship Gateway connecting visitors to the Tongva heritage, Oak Woodland ecology, and watershed health.
- Add interpretive signage on Tongva heritage, roles of the Oaks, and water conservation.
- Showcase rain gardens and bioswales as interactive tools for watershed education.
- Create a heritage walk through the Oak woodlands integrating indigenous narratives and ecological interpretation.



## ENGAGE

Foster community involvement and environmental connection.



- Create a multi-use visitor center for orientation, education, and community events.
- Engage visitors with immersive experiences in nature & improve access to existing amenities.
- Build lasting partnerships with Indigenous groups, schools, and community organizations.



# PROJECT BOUNDARY - WEST MAIN ENTRANCE REDESIGN



## LEGEND:

-  Hahamongna Watershed Park (300 of 1300 Acres)
-  Project Boundary (20 Acres)

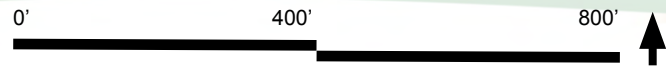


# EXISTING CONDITIONS - FACILITIES



## LEGEND

- Main Entrance - Foothill Blvd & Oak Grove Drive
- La Canada School Entrance
- Oak Picnic Area
- BBQ pits
- Equestrian Centers
- Parking
- Main Parking Lot
- Overflow Parking
- Green Waste Dump
- Bridle Trail Tunnel
- 24 Hole Frisbee Golf Course
- Restroom
- Dried Creek Bed
- Fenced Off Oak Woodland
- Decommissioned USFS Site
- Native Plant Restoration Area - Trail
- Athletic Field
- Amphitheater



Google Earth





**Main Entrance**

The current main entrance is understated and has a unattractive chain link fence that does not provide a grand sense of arrival and show any cultural or historical references.

**Opportunities :** New signage and San Gabriel Mountain look out and Arroyo Seco Viewing Area.



**Picnic Area Right by Main Entrance**

The space immediately after passing through the entrance is currently a picnic area, BBQ Pit, and parking. It is located right across the street from La Canada High School .

**Constraints:** Disconnected from lower Oak Woodland  
**Opportunities:** Can have potential educational programming opportunities.



**Wayfinding Signage**

**Constraints:** Signage is far and inbetween and really small and hard to read. The space is hard to navigate.  
**Opportunities:** Educational and directional signage will change how users interact with the space and increase use just by allowing users to know what programs are available visually.



**Site Plan**



**Overflow Lot**

Dirt overflow lot in Oak Woodland  
**Constraints:** Lot gets really muddy during heavy rain.  
**Opportunities:** An area without protected Oaks and can become a built gathering area.



**Frisbee Golf, Picnic, Oak Woodland**

Large Oak Grove picnic area and frisbee golf course.  
**Constraints:** The frisbee golf course is located throughout the site.  
**Opportunities:** Restore and Honor the Oak Woodlands.



# SITE PHOTOS



**Lower Oak Woodland Picnic Tables**

Scattered Picnic Tables and Horseshoes Game

**Constraints:** Scattered and dilapidated Picnic tables, Dying and fallen Oaks.

**Opportunities:** New organized picnic area with natural play areas and trails.



**Dried Creek Bed**

2 dried creek bed runs through the woodland, it looks forgotten and not a feature of the site.

**Constraints:** Compacted and invasive grasses.

**Opportunities:** Dried creek bed restoration, habitat restoration, educational opportunity, better water infiltration.



**Fenced off Oak Woodland**

Abandoned fenced off Oak woodland with a beautiful creek right across from the USFS site.

**Constraints:** Fenced off, blocking circulation invasive grasses, dying and fallen Oak Trees.

**Opportunities:** Oak Woodland restoration, protection, and biodiversity ecological education.



Site Plan



**Decommissioned USFS Site**

5 Acres - of land 7 buildings - Large parking lot, green spaces

**Constraints:** Buildings need a full remodel.

**Opportunities:** Adaptive reuse of site, Visitor Center, demonstration gardens, outdoor classroom.



**Large lawn of the USFS site**

**Opportunities:** This large space provides outdoor gathering spaces and classrooms opportunities. Potential demonstration space for rain gardens and water capture systems, climate resilience education.





## RESEARCH AND SITE ANALYSIS



# DESIGN METHODOLOGY



## Design Principles of Frederick Law Olmsted:

- **A Genius of Place**
- Unified Composition
- **Orchestration of Movement**
- Sustainable Design & Environmental Conservation
- **A Comprehensive Approach**

The Indigenous Significance, Oak Woodlands and Watershed will create the overarching theme of the site, they will function as the background to which all the programming will move around, creating a comprehensive united site using sustainable design.



## Los Angeles County Oak Woodlands Conservation Management Plan Guide

### Restoration and Management Guidelines:

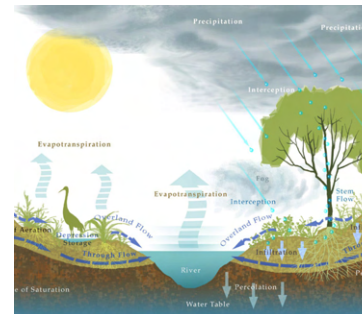
- **Retaining mature oaks and fallen oaks to preserve habitat complexity.**
- Controlling invasive species that threaten native biodiversity.
- Implementing erosion control measures and promoting natural regeneration.
- **Designing landscapes that support native species and maintain natural hydrology.**

## Low Impact Development (LID)

LID helps reduce pollution from runoff by filtering and treating stormwater before it flows into waterways.

- **Reduced Runoff:**  
LID decreases the volume and peak flow of stormwater runoff, minimizing the risk of flooding and erosion.
- **Groundwater Recharge:**  
By promoting infiltration, LID helps replenish groundwater supplies.
- **Cost Savings:**  
LID can reduce the need for expensive traditional stormwater infrastructure like large pipes and detention basins.
- **Enhanced Aesthetics:**  
LID practices can create more visually appealing and natural-looking landscapes.
- **Environmental Benefits:**  
LID can provide habitat for wildlife and improve the overall health of the ecosystem.

LID provides more standardized guidelines to build sustainable stormwater management techniques that can provide a design backbone for my site.



## The Watershed Approach

- **Build Healthy Living Soil**
- **Capture Rainwater As A Resource**
- **Select Local, Climate Appropriate Plants**
- Use Highly Efficient Irrigation Only When Necessary

The site itself is a giant watershed and continuing to apply water capture techniques across the newly designed areas such as rain gardens, bioswales, seasonal wetlands, and will continue the spirit of the watershed conversation.



# DESIGN METHODOLOGY - FREDERICK LAW OLNSTED

## Design Principles of Frederick Law Olmsted:

**A Genius of Place** - *The design should take advantage of unique characteristics of the site, even its disadvantages. The design should be developed and refined with intimate knowledge of the site.*

The site features five unique habitats, each with distinct plants and geographical features that will guide the design. Our project scope focuses on the Oak Woodlands—which will be carefully integrated into the design.

**Unified Composition** - *All elements of the landscape design should be made subordinate to an overarching design purpose. The design should avoid decorative treatment of plantings and structures so that the landscape experience will ring organic and true.*

Materials in the built areas will feature cohesive earth tones, river rock, boulders, permeable surfaces, and wood to create a unified, natural aesthetic.

**Orchestration of Movement** - *The composition should subtly direct movement through the landscape. There should be separation of ways, as in parks and parkways, for efficiency and amenity of movement, and to avoid collision or the apprehension of collision, between different kinds of traffic.*

A well-defined hierarchy of pathways and circulation routes will guide both pedestrian and vehicular traffic efficiently, while seamlessly blending into the landscape.

**Orchestration of Use** - *The composition should artfully insert a variety of uses into logical precincts, ensuring the best possible site for each use and preventing competition between uses.*

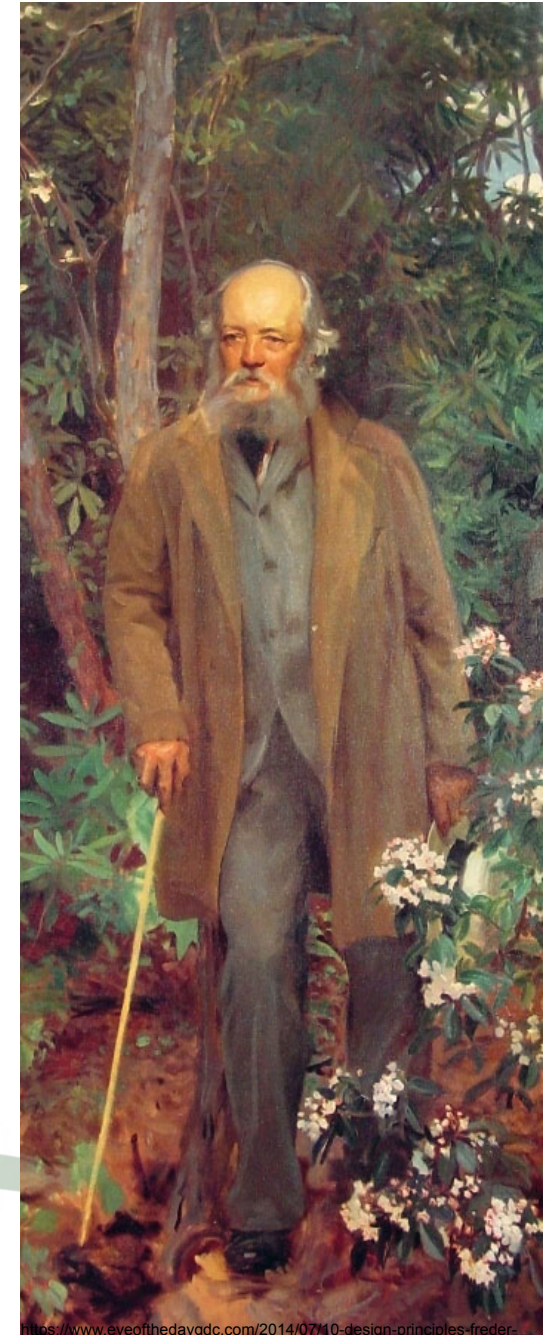
The park's current design features a disjointed mix of recreation areas and activities, often separated by large distances or overlapping, making some spaces feel forgotten. By creating a centralized area with improved pedestrian pathways and wayfinding, the goal is to offer a more user-friendly experience, helping visitors easily navigate and fully appreciate what the park has to offer.

**Sustainable Design & Environmental Conservation** - *The design should allow for long-term maintenance and ensure the realization and perpetuation of the design intent. Plant materials should thrive, be non invasive, and require little maintenance. The design should conserve the natural features of the site to the greatest extent possible and provide for the continued ecological health of the area.*

Native plantings and restoration efforts will extend into the newly designed areas, along with succession planting of Coast Live Oaks and other trees, to prevent the loss of species due to aging or disease.

**A Comprehensive Approach** - *The composition should be comprehensive and seek to have a healthful influence beyond its boundaries. In the same way, the design must acknowledge and take into consideration what surrounds it. It should create complimentary effects. When possible, public grounds should be connected by greenways and boulevards so as to extend and maximize park spaces.*

Hahamongna Watershed Park is part of the larger Arroyo Seco Watershed network of open spaces, which includes the Angeles National Forest and Arroyo Seco river parks. Hiking trails and bike paths connect these areas, and the new visitor center at Hahamongna will showcase how these interconnected systems work together. Adding maps and signage to highlight these connections will help visitors better understand the watershed as a whole.



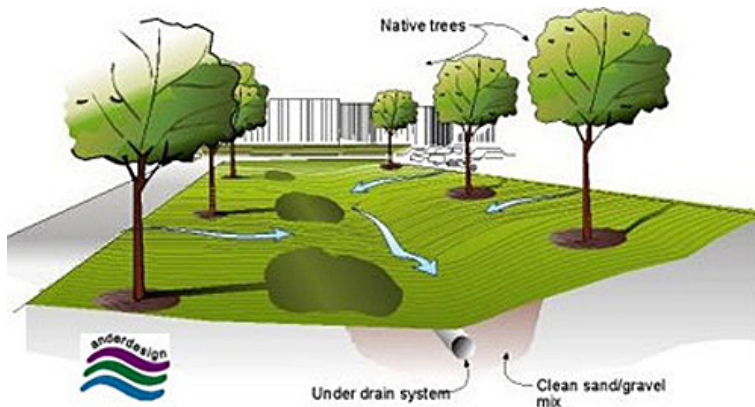
# DESIGN METHODOLOGY - THE WATERSHED APPROACH + LID

## Low Impact Development Key Features:

- Utilizes green infrastructure like bioswales, rain gardens, and permeable pavements to recharge ground water.
- Aims to reduce runoff volume and improve water quality.
- Enhance aesthetics
- Often implemented at the site or neighborhood scale.

## Benefits:

- Cost savings by limiting expensive infrastructure.
- Enhances groundwater recharge.
- Reduces urban flooding and erosion.
- Supports habitat for native plants and wildlife.

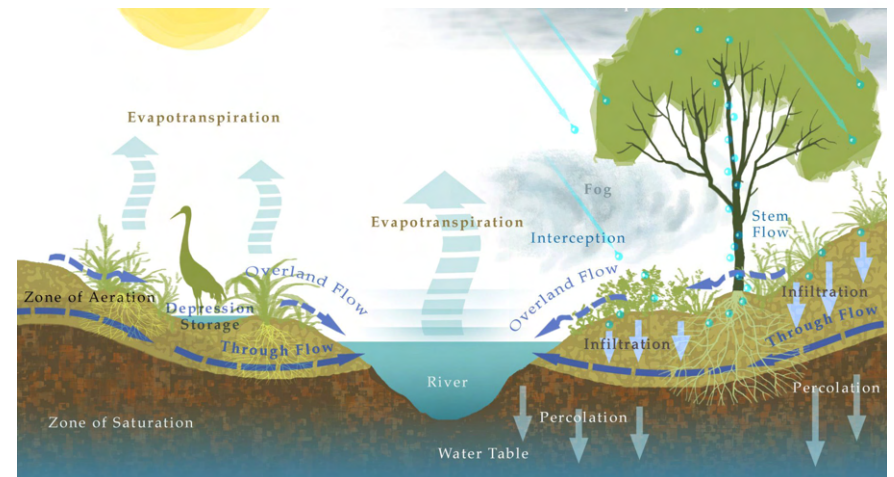


## Watershed Approach Key Features:

- Prioritizing soil health: Sponge - Like Soil Structures infiltrate and absorb more water.
- Rainwater harvesting: Utilizes green infrastructure like bioswales, rain gardens, and permeable pavements.
- Native Plant Selection
- Fire Resistant Landscaping - by incorporating fire - resistant plants and materials and defensible spacing
- Sustainable Irrigation Practices
- Avoidance of Invasive Species

## Benefits:

- Landscapes become more sustainable, resilient, and aligned with California's environmental needs. This holistic strategy not only conserves water, but also enhances biodiversity and supports ecological health.



Both Low Impact Development and Watershed Approach share similar design principles, but the watershed approach takes a more holistic strategy to look at not only the water conservation of a site, but how it holistically functions as an ecosystem. This project will take a combination of these water conservation principles to create a holistic approach to water conservation and ecological health.



# PRECEDENT CASE STUDY 1: BELLEVUE BOTANICAL GARDEN VISITOR CENTER, WASHINGTON



**Project Name:** Bellevue Botanical Garden Visitor Center  
**Completion year:** 2014

**Project area:** 9850 sqft  
**Project location:** Bellevue, Washington

**Design company:** Olson Kundig

**Lead Architects:** Jim Olson, FAIA

**Principal / Project Manager:** Kevin Kudo-King, AIA, LEED® AP

**Project Architects:** Martina Bendel and Misun Gerrick

**Collaborator:** Chengdu Meixia Architectural Design Co., Ltd

## Takeaways:

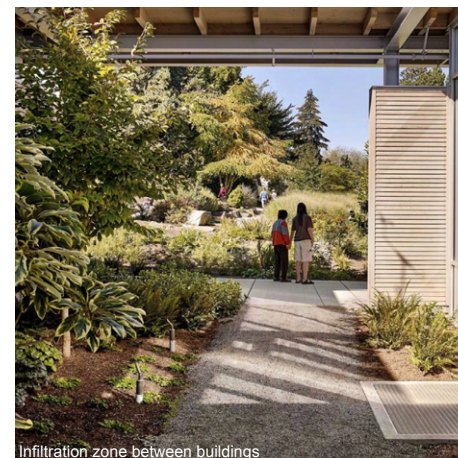
- Rain Garden and infiltration between buildings
- Green Wall Buffers
- Native Planting
- Multi Use Flexible Spaces - expandable spaces - sliding walls and doors.
- A store for educational goods



Outdoor Labs and Classrooms



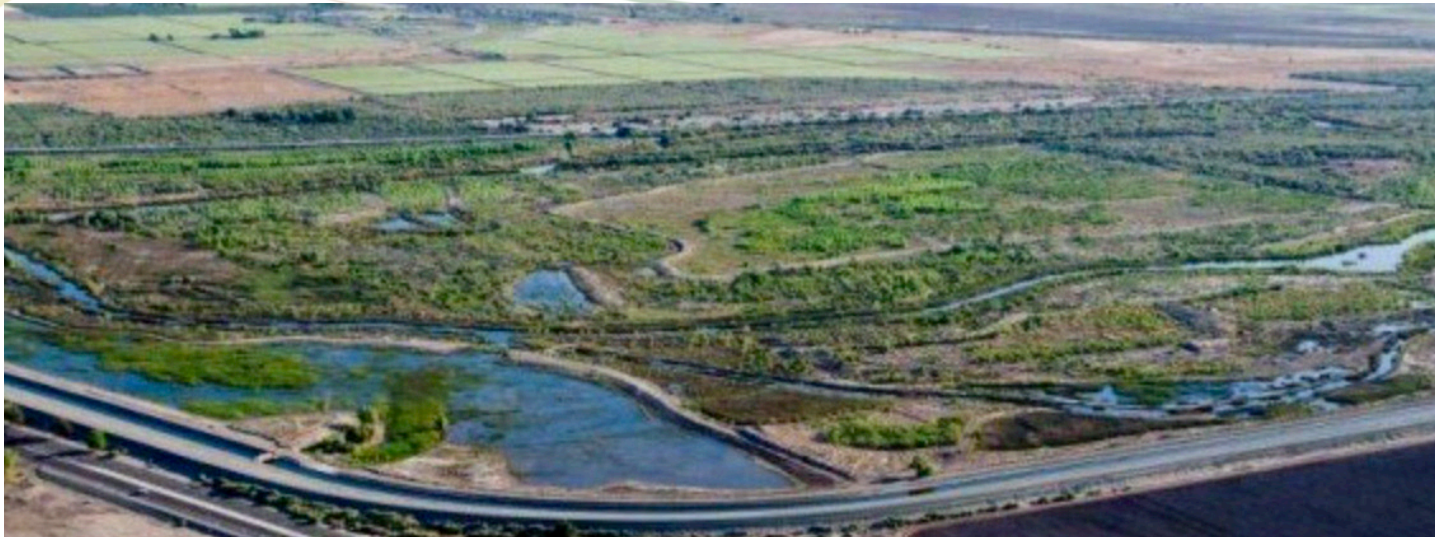
Visitor Gift Shop



Infiltration zone between buildings



# PRECEDENT CASE STUDY 2: YUMA EAST WETLANDS, PHASES 1 AND 2



**Project Name:** Yuma East Wetlands, P. 1&2  
**Completion year:** 2010  
**Project area:** 350 Acres  
**Project location:** Yuma, Arizona 85364  
**Former Use:** Greyfield  
**Collaborators:** Quechan Indian Nation

### Takeaways:

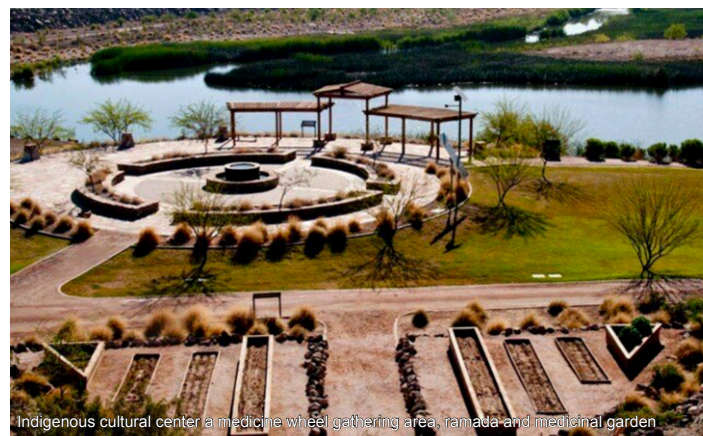
- Utilize native planting to increase biodiversity and restore the land.
- Removal of invasive fire starting species of plants.
- Reuse excavated materials to create other site features.
- Create cultural and historic sensitive sites with the collaboration with indigenous tribal members.



Lookout created with excavated materials



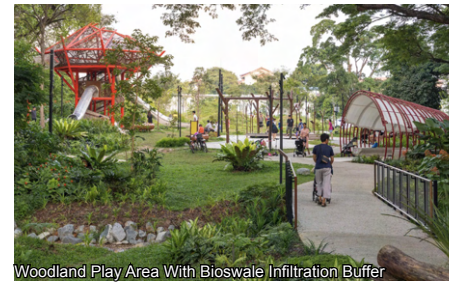
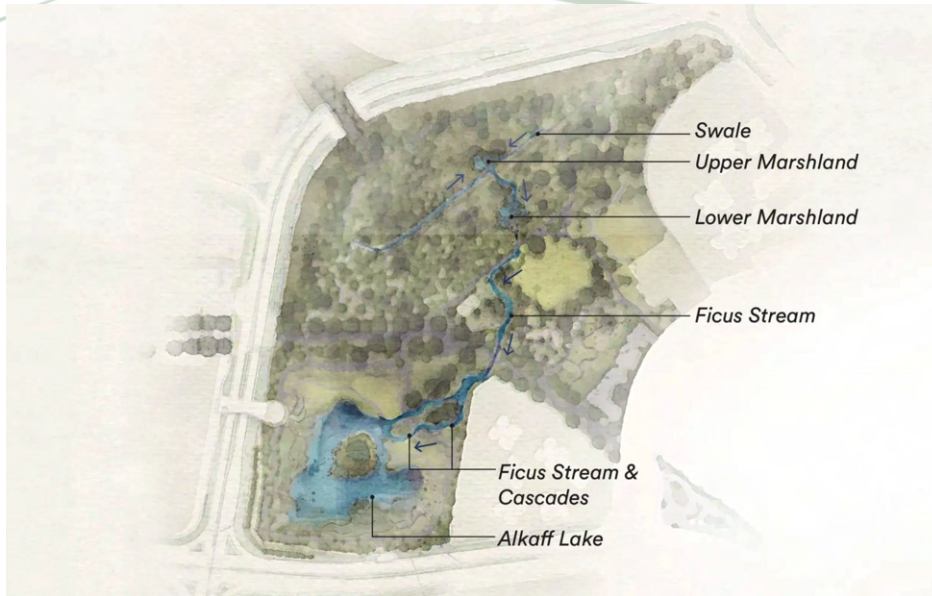
Paved pathways for ADA and bicycle usage



Indigenous cultural center a medicine wheel gathering area, ramada and medicinal garden

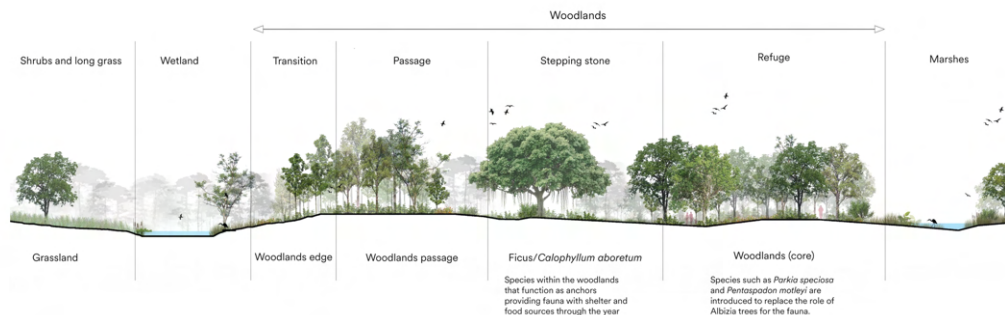


# PRECEDENT CASE STUDY 3: BIDADARI PARK, SINGAPORE

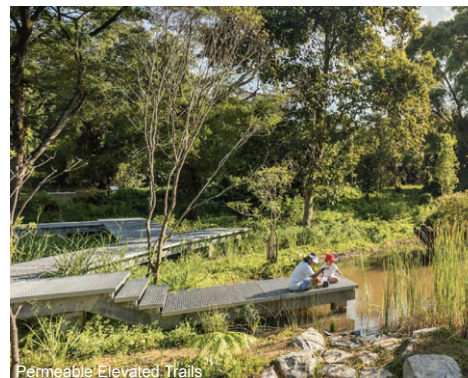


**Project Name:** Bidadari Park  
**Completion year:** 2024  
**Project area:** 130,000 sqm  
**Project location:** Singapore  
**Design company:** Henning Larsen  
**Collaborators:** CPG Corporations  
**Civil & Structural Engineering:** Corporations

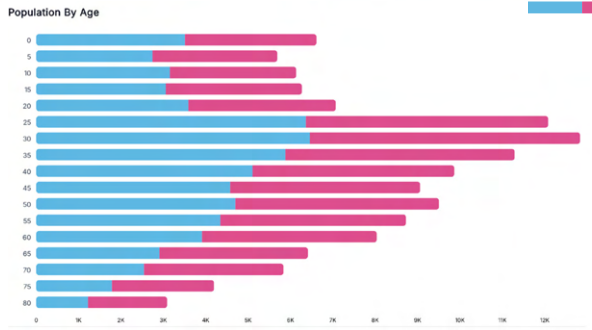
**Takeaways:**  
 Heritage walk, water conservation and recreation can all coexist all at once and lend a hand to one another. Blending the space cohesively into one functional public space.



- Working with the topography of the site for storm water management
- Heritage Walk to respond to historic importance
- Large swales that act as educational sites as well as storm water management
- Trails with activity nodes
- Preserve key wildlife refuges
- Educational Trails
- Educational Play Areas
- Permeable Trail Materials - Metal Grate



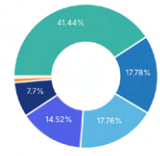
## PASADENA



Male Female

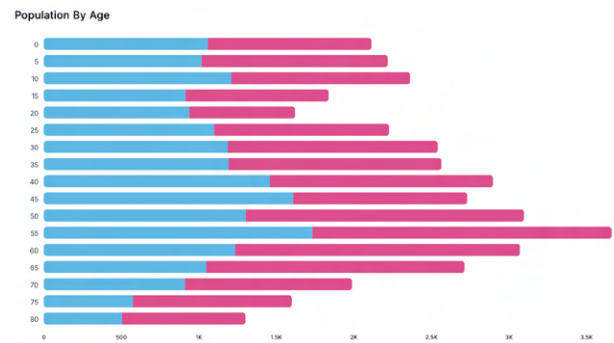
Population by Race

All Hispanic Non-Hispanic



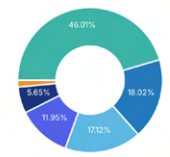
RACE	POPULATION	PERCENTAGE (OF TOTAL)
White	56,555	41.44%
Other race	24,264	17.78%
Asian	24,230	17.76%
Two or more races	18,821	14.52%
Black or African American	10,501	7.7%
Native American	992	0.73%
Native Hawaiian or Pacific Islander	99	0.07%

## ALTADENA



Population by Race

All Hispanic Non-Hispanic



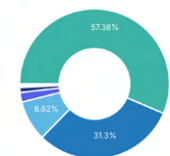
RACE	POPULATION	PERCENTAGE (OF TOTAL)
White	19,287	46.07%
Black or African American	7,555	18.02%
Two or more races	7,376	17.12%
Other race	5,011	11.95%
Asian	2,370	5.65%
Native American	522	1.25%

## LA CANADA FLINTRIDGE



Population by Race

All Hispanic Non-Hispanic



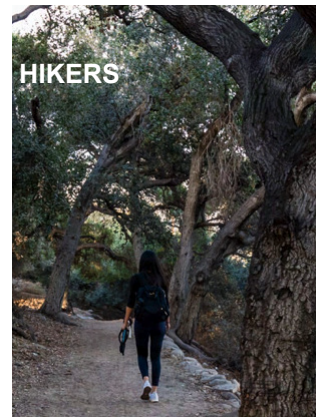
RACE	POPULATION	PERCENTAGE (OF TOTAL)
White	11,529	57.38%
Asian	6,289	31.9%
Two or more races	1,733	8.62%
Other race	359	1.79%
Black or African American	163	0.81%
Native Hawaiian or Pacific Islander	11	0.05%
Native American	10	0.05%

**Conclusion:** The typical user of Hahamongna Watershed Park is White or Asian, in their 40's, Middle to High Income, and have Children.

Despite research indicating families being one of the parks main user group, the park lacks the right amenities to serve this user group. **The current main user groups are Equestrian Riders, Hikers, and Frisbee Golfers.**

The redesign will focus on create more inclusive recreational. opportunities for all.

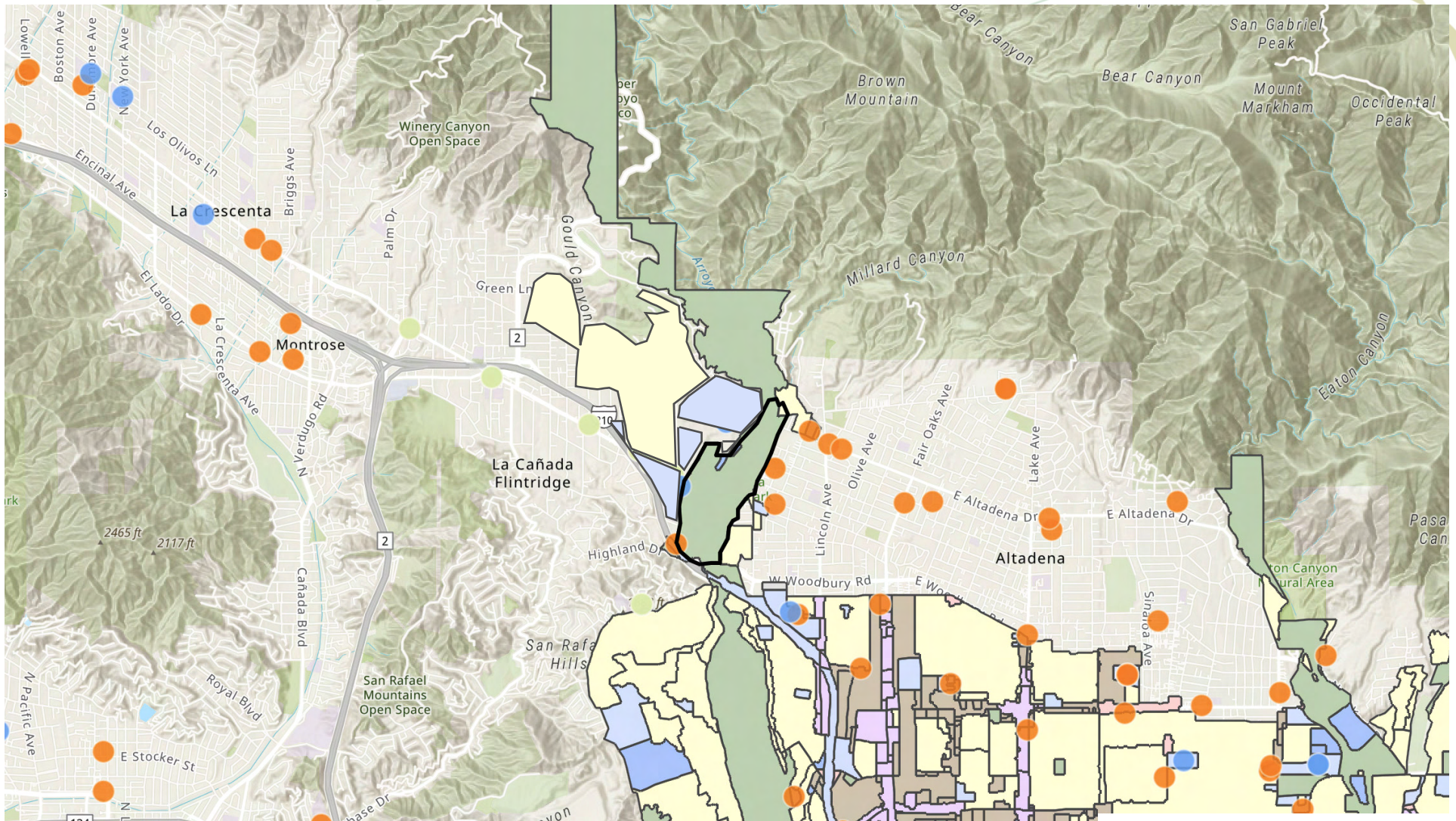
### Current Main Users:



### Potential Users:



# REGIONAL SITE ANALYSIS - SITE ZONING & CONTEXT



## LEGEND

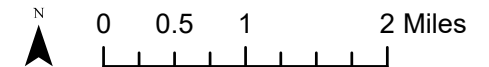
### Zoning

#### Zoning Designation

- Single-Family Residential
- Multi-Family Residential
- Commercial

- Industry
- Public, Semi-Public
- Planned Development
- Open Space
- Specific Plan
- Context

- Hahamongna Boundary
- Public High Schools
- LCF Private Charter
- Private and Charter Schools

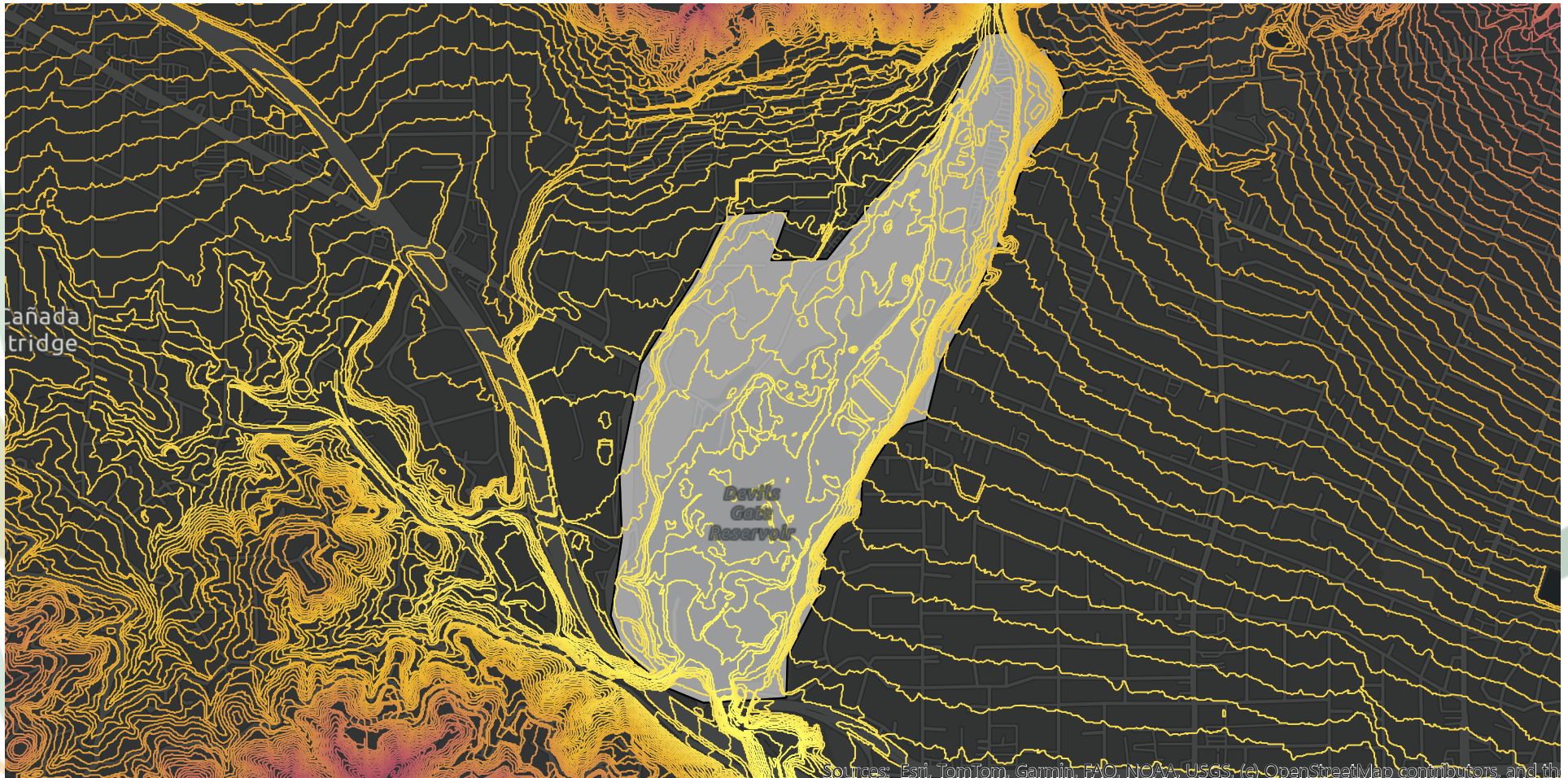


### Key Takeaways:

- Hahamongna Watershed Park connects two open spaces, Angeles National Forest and Arroyo River Parks
- Adjacent to mainly single family residences



# REGIONAL SITE ANALYSIS - TOPOGRAPHY

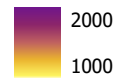


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the

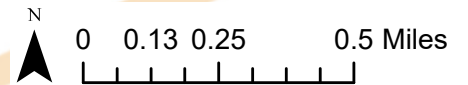
## LEGEND

LARIAC Contours  
10ft

Elevation



Hahamongna Boundary

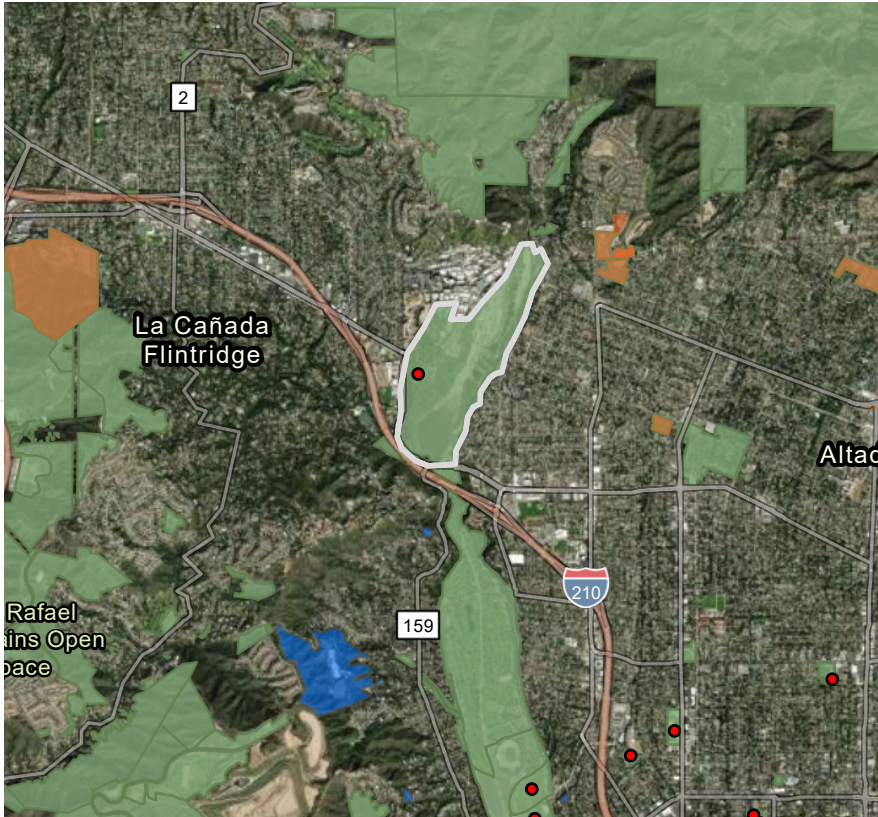


The **Topography** of the area shows that Hahamongna Watershed Park is like a canyon, the West, South and East side of the park have higher elevation changes sloping into the flatter area within the center of the park. The elevation also slopes down from North to south. This elevation change shows how the watershed functions, water flows from the North East side of the Park downward south towards the reservoir.



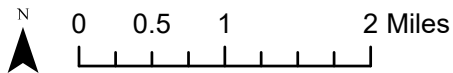
# REGIONAL SITE ANALYSIS - OPEN SPACE AND PARKS & SIG. ECOLOGICAL AREA

## OPEN SPACES AND PARKS



### LEGEND

- Sport Fields
- Historic Monuments
- Department of Parks and Recreation Facilities (Accessible Parks)
- Countywide Parks and Open Space
- Hahamongna Boundary



Los Angeles County has an extensive network of open spaces. Including natural preserves, recreational areas and parks.

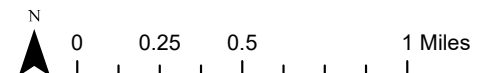
**Accessibility** is a major issue in California Parks - within our state park system, there are designated accessible restrooms, campsites, and visitor centers, and the number is increasing. There is a lack of accessibility in the Hahamongna Watershed Park and the redesign will keep accessibility in mind, with accessible trails, facilities, and activities for all.

## SIGNIFICANT ECOLOGICAL AREA



### LEGEND

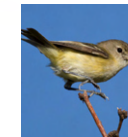
- Significant Ecological Area
- Significant Ecological Area (Incorporated City)
- Hahamongna Boundary



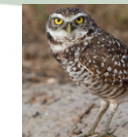
**Significant Ecological Areas (SEA):** are official designated areas within LA county with irreplaceable biological resources. The objective of SEA programs is to conserve genetic and physical diversity in biological areas.

The park is home to several endangered species:

Bell's Vireo



Burrowing Owl

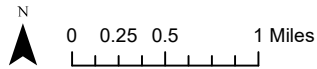


Arroyo Toad



# REGIONAL SITE ANALYSIS - LAND USE, DRAINAGE, & FIRE

## LAND USE AND DRAINAGE



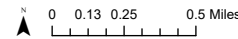
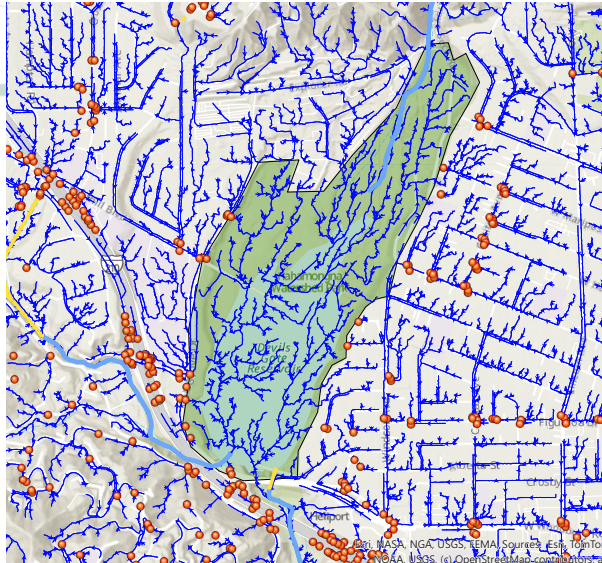
### LEGEND

- |   |                                  |
|---|----------------------------------|
| <b>Streams and Rivers</b>                             | <b>Land Cover Classification</b> |
| Stream/River:<br>Hydrographic Category = Ephemeral    | Tree Canopy                      |
| Stream/River:<br>Hydrographic Category = Intermittent | Shrubs                           |
| Stream/River:<br>Hydrographic Category = Perennial    | Ground Cover                     |
|   | Bare Ground                      |
|   | Impervious                       |
|   | Water                            |
|   | Hahamongna Boundary              |



Ephemeral Swale

## DRAINAGE AND CATCH BASINS



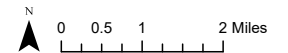
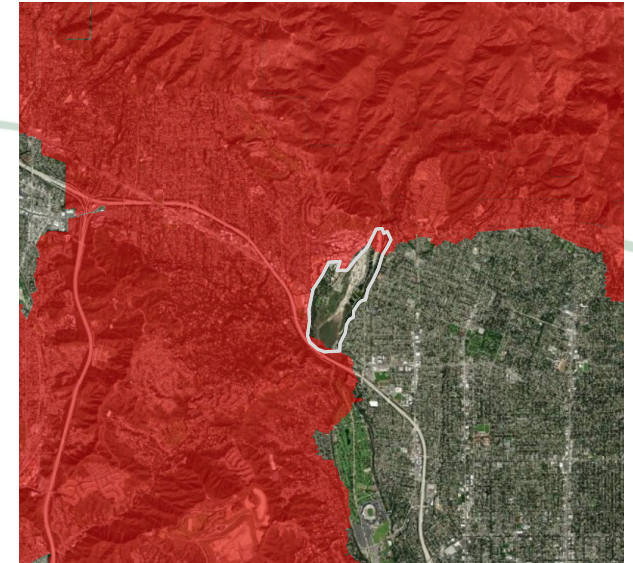
### LEGEND

- Catch Basin
- Natural Drainage
- Open Channel
- Drainage Stream
- ▭ Hahamongna Boundary



Catch Basin

## FIRE HAZARD SEVERITY ZONE MAP



### LEGEND

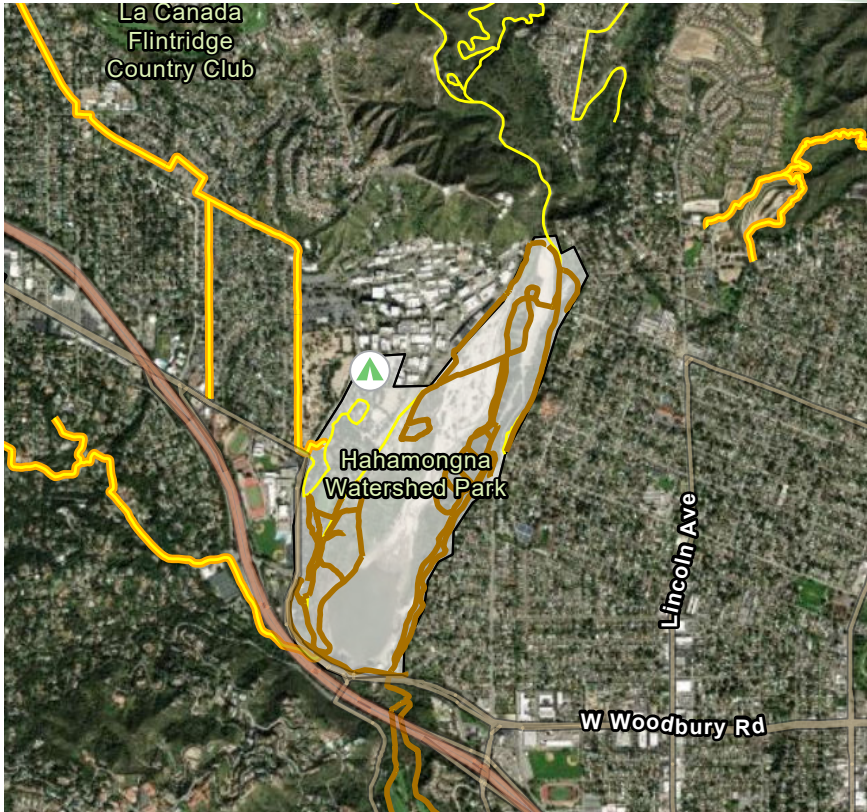
- Very High
- High
- Moderate
- ▭ Hahamongna Boundary

Hahamongna is in a high fire risk zone and has not burned in the last 50 years. Being next to an affluent neighborhood like La Canada Flintridge and being the home of JPL factors into the fire response to this site.



# REGIONAL SITE ANALYSIS - TRAILS & PUBLIC TRANSIT

## HIKING TRAILS AND CAMPGROUNDS



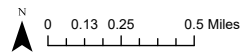
### LEGEND

- Hahamongna Boundary
- LA County DPR Multi Use Trail
- ▲ Campgrounds
- Arroyo Trail
- Countywide Trails
- USFS Trails boundary expansion
- Hiking Trails boundary expansion
- Bike Trails boundary expansion

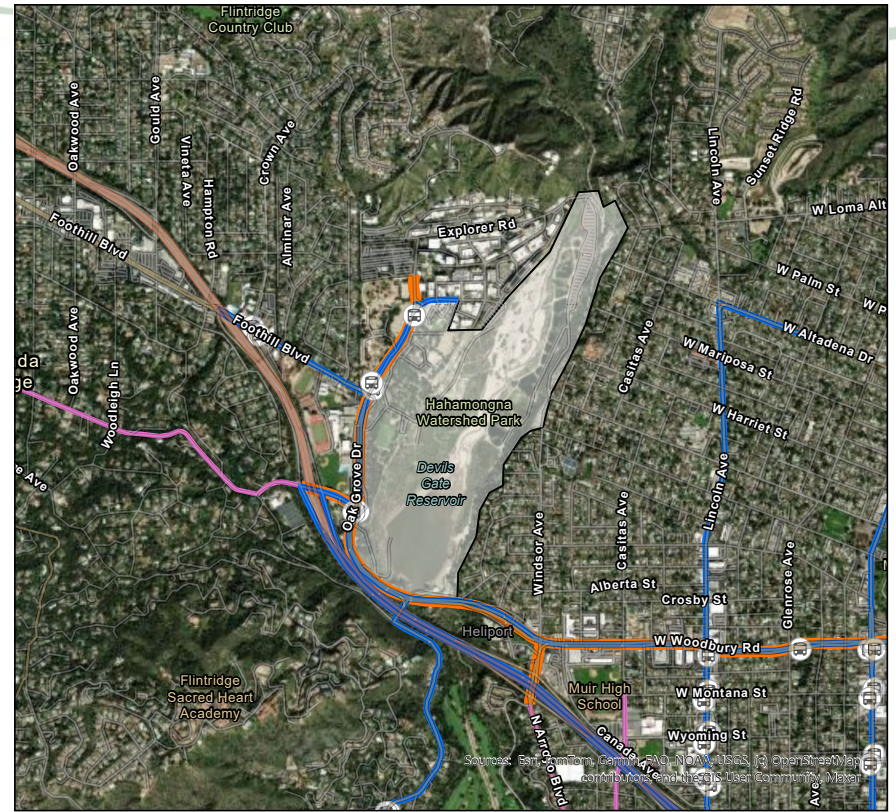
Hahamongna Watershed Park is the start of a few major trails that lead up into the Angeles National Forest and down into the Arroyo Seco.



Trail



## PUBLIC TRANSPORTATION AND BIKE PATHS



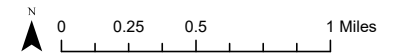
### LEGEND

- Pasadena Transit Bus Stop
- Bus Routes

### Bikeways

#### Types of Bikeways

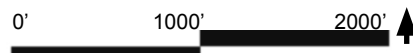
- Bike Path (Class 1)
- Bike Lane (Class 2)
- Bike Route (Class 3)
- Hahamongna Boundary



Bus Stop



# SITE ANALYSIS - HABITAT ZONES



## LEGEND

- Arroyo Seco**
  
- Oak Woodlands**  
 -80% Coast Live Oak – (*Quercus agrifolia*)  
 -Toyon – (*Heteromeles arbutifolia*), Canary Island Pine – (*Pinus canariensis*), California Ash (*Fraxinus dipetala*) Mexican Elderberry – *Sambucus nigra* ssp. *cerulea*, Mix of Eucalyptus, Chinese Elm – *Ulmus parvifolia*
  
- Alluvial Scrub**  
 - Southern willow scrub - Arroyo Willow (*Salix lasiolepis*), Black Willow (*S. gooddingii*), Red Willow (*S. laevigata*), Shining Willow (*S. lucida* ssp. *lasiandra*), and Narrow-leaved Willow (*S. exigua*)  
 -Western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), Southern California black walnut (*Juglans californica*), California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), Brome grasses (*Bromus* spp.), Chaparral mallow (*Malacothamnus fasciculatus*), Mexican elderberry (*Sambucus nigra* ssp. *cerulea*), Mule fat (*Baccharis salicifolia*)
  
- Chaparral**  
 Scalebroom (*Lepidospartum squamatum*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) Black sage (*Salvia mellifera*), White sage (*Salvia apiana*), Brome grasses (*Bromus* spp.), Western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*) Southern California black walnut (*Juglans californica*) Brittlebush (*Encelia farinosa*) Chaparral yucca (*Yucca whipplei*) Chaparral mallow (*Malacothamnus fasciculatus*) Hairy yerba santa (*Eriodictyon crassifolium*) Laurel sumac (*Malosma laurina*) Lemonadeberry (*Rhus integrifolia*) Sugar bush (*Rhus ovata*) Mexican elderberry (*Sambucus nigra* ssp. *cerulea*) Mule fat (*Baccharis salicifolia*) Poison oak (*Toxicodendron diversilobum*) Birch-leaf mountain-mahogany (*Cercocarpus betuloides* var. *betuloides*) Prickly pears (*Opuntia* spp.) Deerweed (*Acmispon glaber*, formerly *Lotus scoparius*) Bladderpod (*Peritoma arborea*, formerly *Isomeris arborea*), hoaryleaf ceanothus (*Ceanothus crassifolius*), other ceanothus or California-lilac species (*Ceanothus* spp.) leaf mountain-mahogany, poison oak, holly-leaf cherry (*Prunus ilicifolia* ssp. *ilicifolia*)
  
- Riparian Areas - Spreading Basins**  
 -Western sycamore (*Platanus racemosa*), Southern California black walnut (*Juglans californica*), Brome grasses (*Bromus* spp.)  
 - Ruderal vegetation
  
- Riparian Areas - Freshwater Marsh**  
 -Southern willow scrub  
 -Fremont cottonwood (*Populus fremontii*)  
 -Mule Fat Scrub
  
- Concrete/ Dirt Parking**
  
- Bare Dirt - Left over sediment removal site**
  
- Devil's Gate Reservoir**



# SITE ANALYSIS - WEST ENTRANCE



Limited Signage



Main Entrance



Obstructed Viewshed of San Gabriel Mountains

Unseen potential of a viewshed can provide significance of place and lookout.



Co Canada Flintridge Single family Residences  
- Families  
- Home owners  
- White/Asian

Freeway Community connection  
Foothill Blvd.

La Canada High School  
School connection

Fenced in Oak Woodland  
Dying Oak Woodland with invasive plants.

Oak Woodland Picnic Area with BBQ area, shady, but with many dying and broken Oaks. Can be turned into indigenous heritage walk.

**Key Notes:** Coast live Oaks  
River rocks, water infiltration  
Areas found across space, Dirt/  
Dusty Trails, Invasive plants,  
Chain link fencing, fallen/broken  
trees, Green litter (broken branches  
dying plants / trees found)  
HOT In Exposed Areas - Shady  
under oaks. Steep edges w/  
narrow walking trails to lower  
level. Multi used trails - Biker/  
Pedestrian.



Decommissioned USFS Site

Existing buildings can be used for Visitor Center, Offices, Outdoor Classroom



Frisbee Golf Course

Overlaps multiple large areas of the park and can be relocated to a less intrusive space.

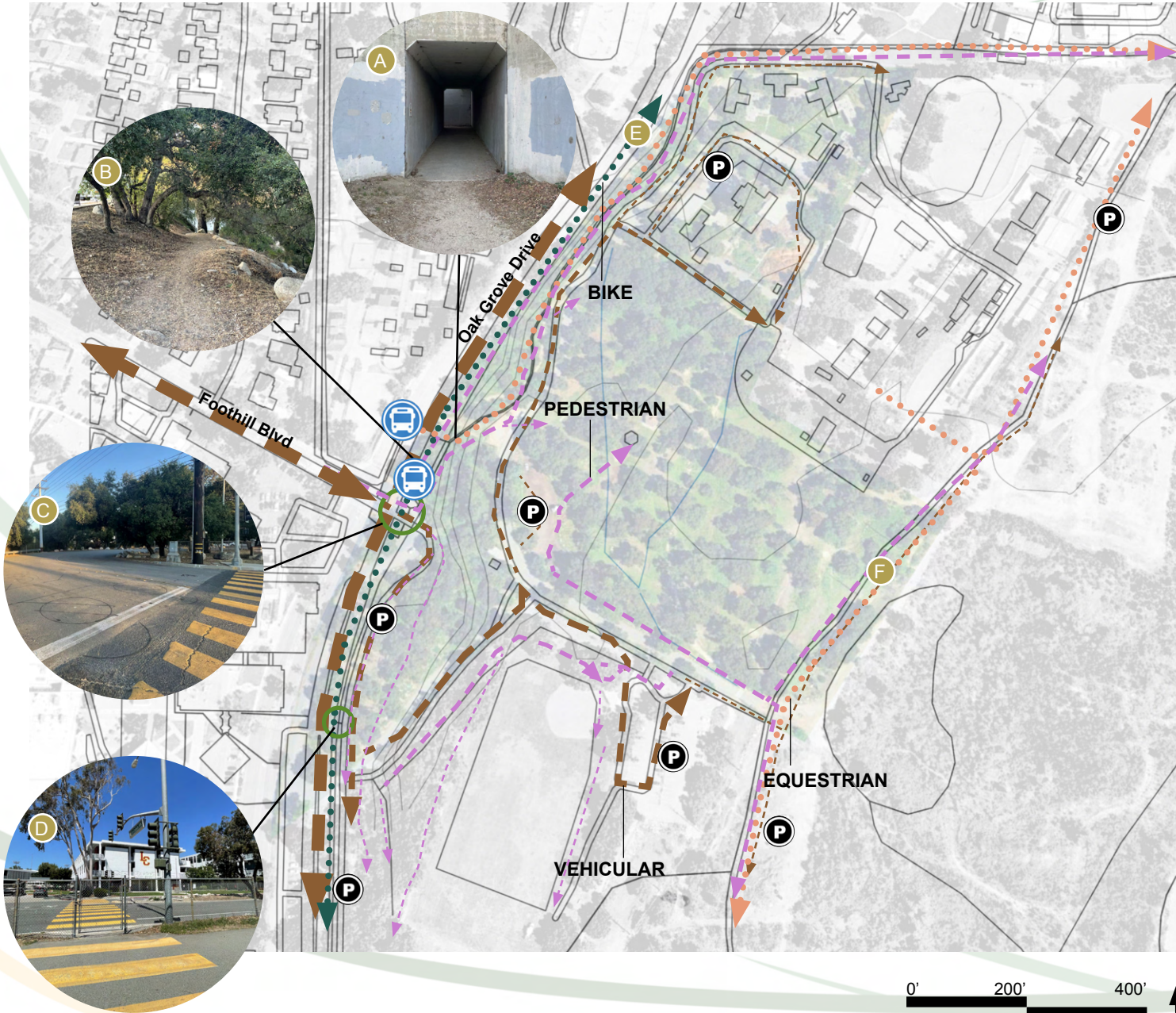


Dried Creek

Forgotten overgrown space, can be seasonal wetland, infiltration, and habitat-focused education.



# SITE ANALYSIS - WEST ENTRANCE CIRCULATION



## Circulation Legend

- Vehicular
- Pedestrian
- Equestrian
- Bike

Bus Stop

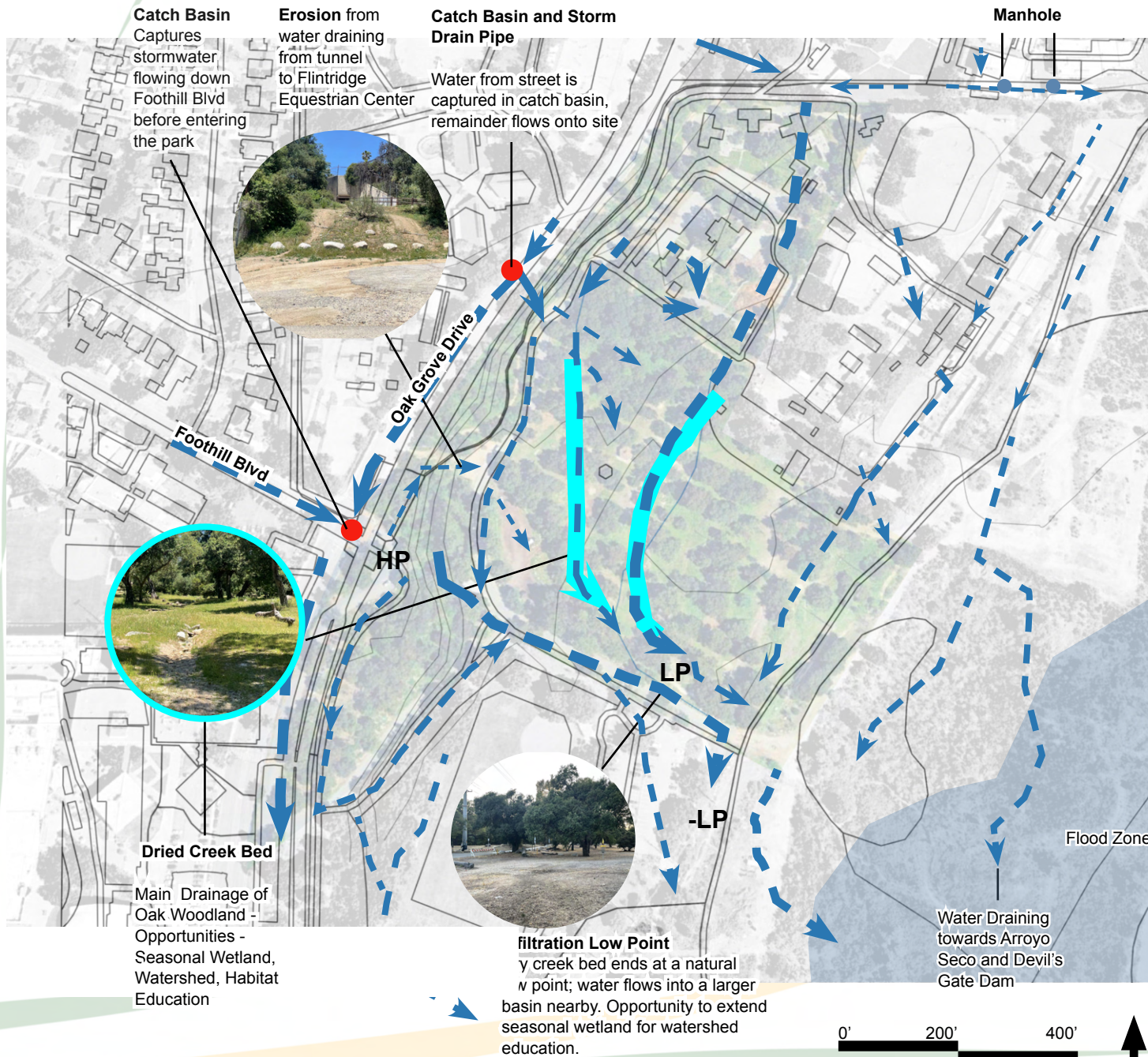
Parking Areas

- A** Equestrian Pedestrian entry through Tunnel under Oak Grove Drive.
- B** Pedestrian trail down to bottom level. Steep terrain limits ADA access.
- C** Only one main entry for Vehicles. Mix used Vehicular and Pedestrian Circulation - unsafe.
- D** La Canada High School Pedestrian Entrance.
- E** Unprotected Bike Lane. No Bikes allowed inside Park.
- F** Shared Pedestrian and Equestrian path. Occasionally Vehicular circulation.

Connections to other Hiking Trails



# SITE ANALYSIS - WEST ENTRANCE HYDROLOGY



Drainage in the West Main Entrance area flows from the higher elevations along the site's northwest and western edges—about 20 - 30 feet above the lower areas—draining southeast toward the Arroyo Seco and Devil's Gate Dam.



**Site Location**

Hahamongna Watershed is a part of the larger Arroyo Seco Watershed. The Arroyo Seco is the tributary of the Arroyo Seco Watershed and runs through the site.



# SITE ANALYSIS - TREE CANOPY COVERAGE



**Extensive Tree Canopy coverage - 90% Coast Live Oaks in varying degrees of health.**

**Coast Live Oaks (*Quercus agrifolia*) or Wiit in the Tongva Language is a sacred tree.**

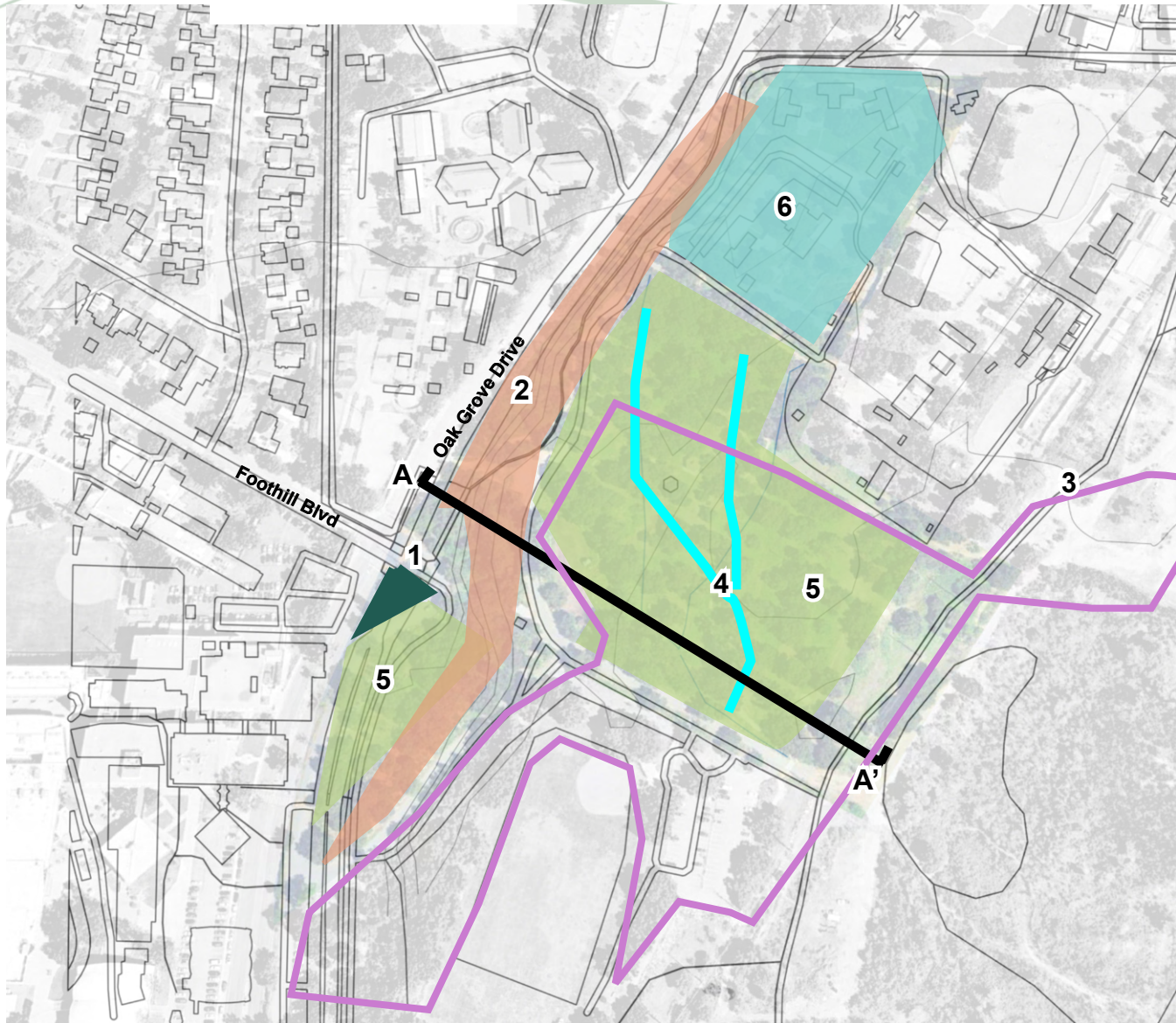
The trees were living ancestors, providers of food, shelter, and provided cultural continuity.

Types of Trees Found on site:

- Coast Live Oak (*Quercus agrifolia*)
- Western Sycamore (*Platanus racemosa*)
- Mexican elderberry (*Sambucus nigra*)
- Toyon (*Heteromeles arbutifolia*)
- Canary Island Pine (*Pinus canariensis*)
- Chinese Elm (*Ulmus parvifolia*)
- Shamel Ash (*Fraxinus uhdei*)



# CONSTRAINTS



**1. Limited car access Via Oak Grove Drive only,** Circulation Overlap is dangerous for the user, particularly the pedestrian.



**2. Steep terrain limits accessibility,** eroded trails, and limited way finding signage make access unsafe and navigation confusing. No Ada Trails to lower levels.



**3. Frisbee golf course (20 acres)** overlapping uses, overlapping into parking lot and damages protected oaks. It can be relocated.



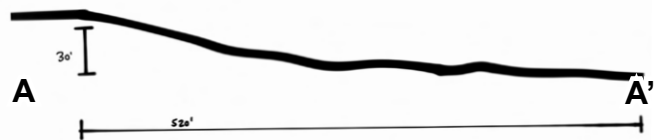
**4. Natural drainage existing,** need to **maintain existing flow of water.**



**5. Protected Oaks** limit built programming and new circulation.



**6. USFS vacant facilities (decommissioned buildings)** may be difficult and expensive to renovate up to code.





1. Opportunity to have **North Vehicular Entry** directly into Visitor Center and Office facilities.



2. The decommissioned USFS site is the only area with existing infrastructure, making it **ideal for adaptive reuse as a Visitor Center, outdoor classrooms, and offices.**



3. The **flat upper oak woodland** at the west entrance offers a shaded, welcoming space for gatherings and orientation.



4. Opportunity to **Restore, Revitalize and Protect Oak Woodland** - and provide education around Oaks and indigenous uses.



5. **Dried creek bed** to be used as a basis for **orientation, circulation, education** and improve storm water infiltration.



6. Overflow Parking lot is one of the only **Oak - less open spaces**, can be turned into a **built gathering area.**



7. **Frisbee Golf Course** to be **relocated** to an area outside of Oak Woodland to protect Oaks.



8. **Create Trail Hierarchy** by separating Pedestrian, Vehicular, bike, and equestrian circulation.

9. **Reveal Indigenous history and the living watershed** through interpretive signage, educational trails, a heritage walk, bioswales, and a natural play area.



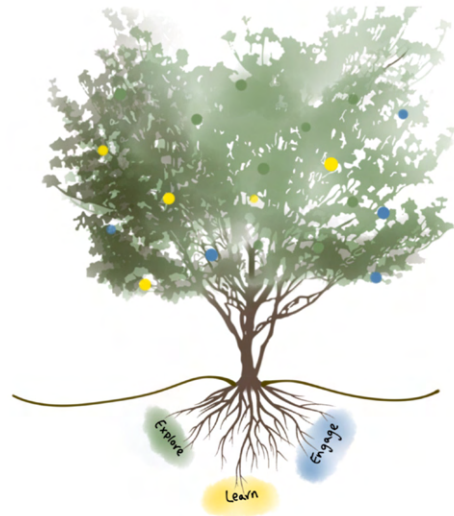


## CONCEPT DEVELOPMENT



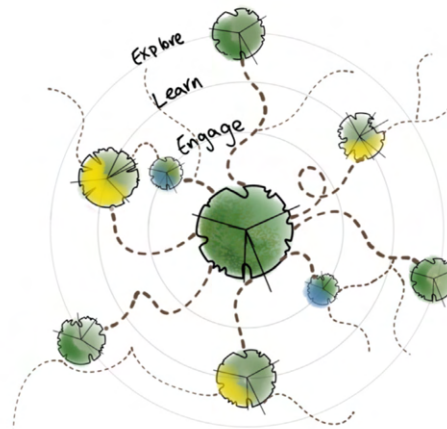
# DESIGN METAPHORS

Goals:



### The Keystone Tree

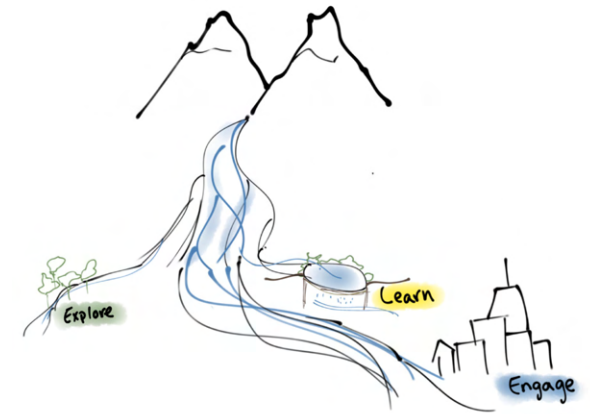
Like a **keystone species** in an **ecosystem**, this metaphorical tree **anchors and nurtures** everything around it, **drawing strength from three essential roots: Explore, Learn, and Engage.**



### The Oak Woodland

#### “ The Mother Tree”

Like a thriving Oak Woodland, the **“Mother Tree”** represents the **heart of the park**—rooted in the goals of Explore, Learn, and Engage. From this *central tree*, **seeds of inspiration** are planted, **growing into a diverse forest of programs, experiences, and spaces.**



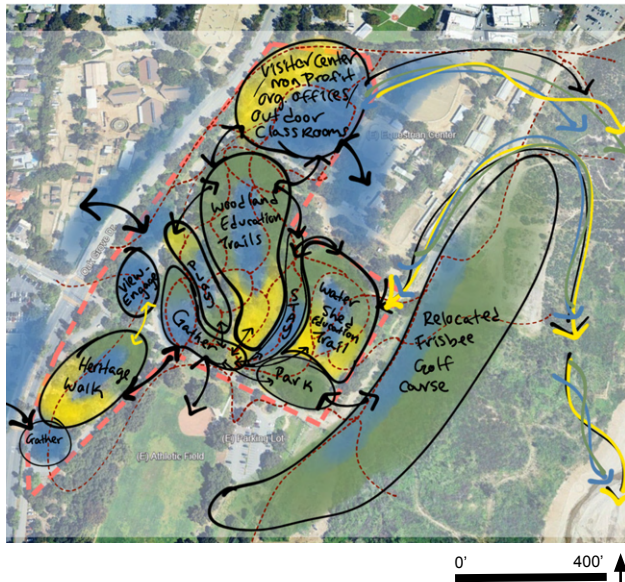
### The Watershed

Like a living watershed, **the park is nourished by the flow of water from the mountains**—each stream and channel offering **new opportunities to Explore, Learn, and Engage.** Just as water shapes the land, **these experiences ripple through the park**, connecting people to its natural systems, cultural stories, and recreational possibilities.

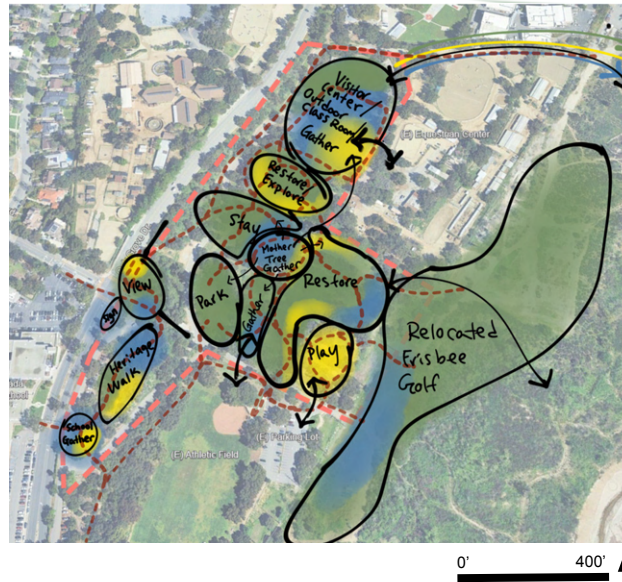


# CONCEPT DEVELOPMENT - BUBBLE DIAGRAMS

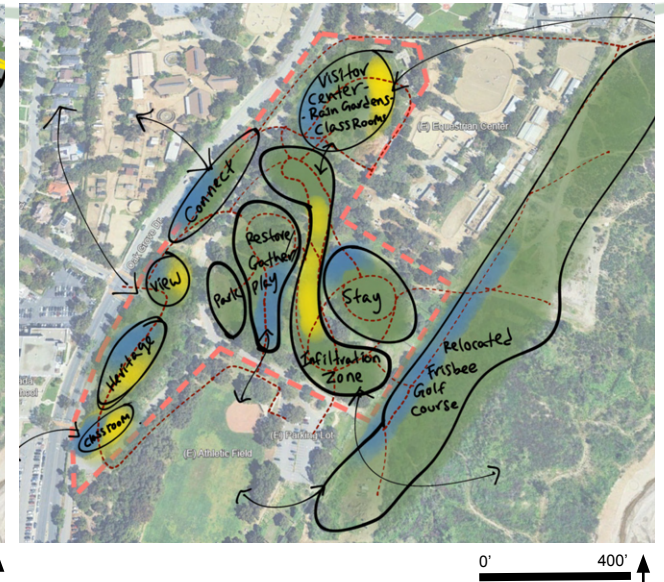
Bubble Diagram 1



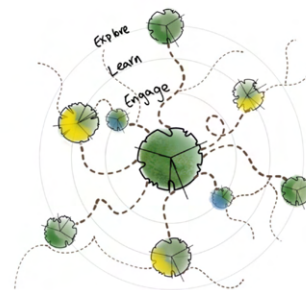
Bubble Diagram 2



Bubble Diagram 3



The Keystone Tree symbolizes the roots that sustain life. In Hahamongna, Indigenous heritage, oak woodlands, and the living watershed form this keystone, from which three trails branch out—inviting visitors to explore, learn, and engage through culture, ecology, and recreation.

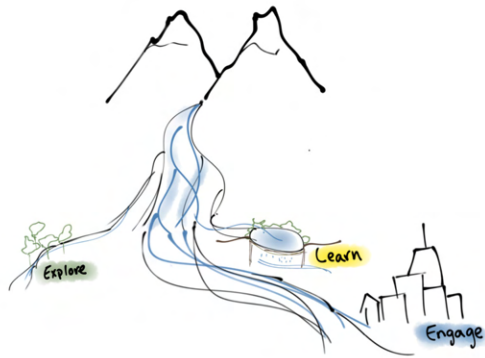


The Mother Tree Gathering Circle, rooted at the park's heart, nurtures programs and spaces. From its core, branches of exploration, learning, and engagement extend outward, deepening connections and activating the park.

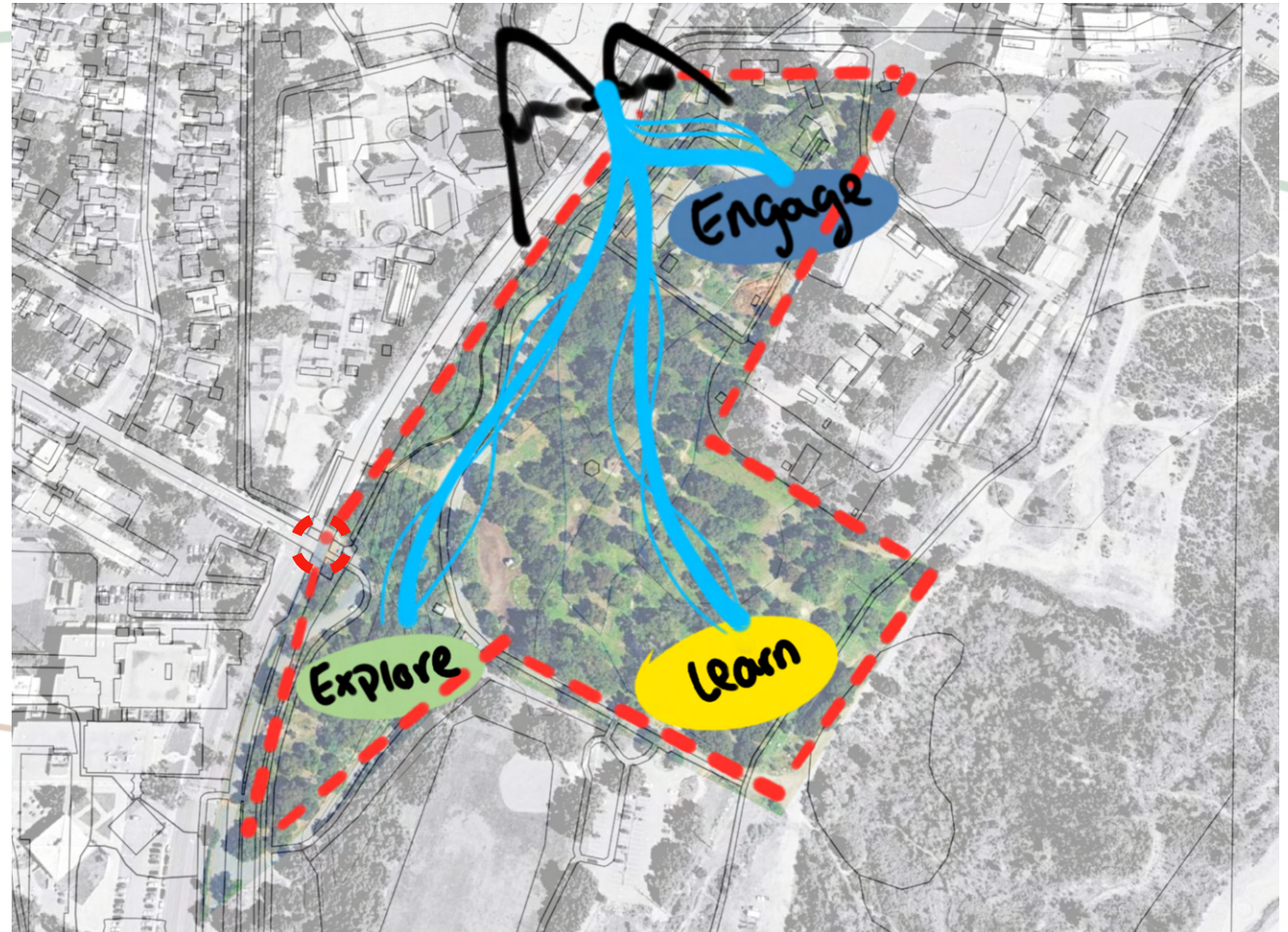


Movement through the park flows like a stream, guiding visitors to Explore, Learn, and Engage. These pathways link natural systems, cultural heritage, and recreation into one unified journey.





The Watershed

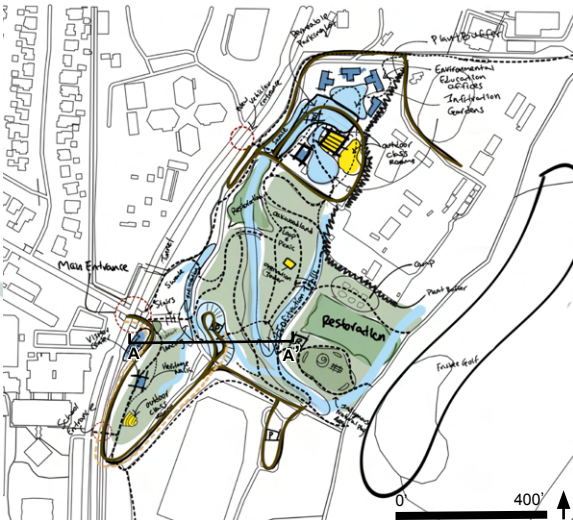


**Movement** through the park mirrors the **flow of streams**— Starting at the top of our figurative watershed, the new visitor center entrance, guiding visitors from the through a series of opportunities to **Explore, Learn, and Engage**.

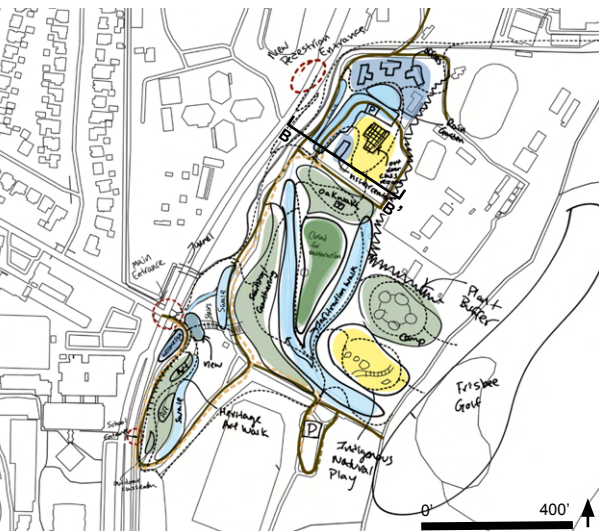


# CONCEPT DEVELOPMENT - PROCESS

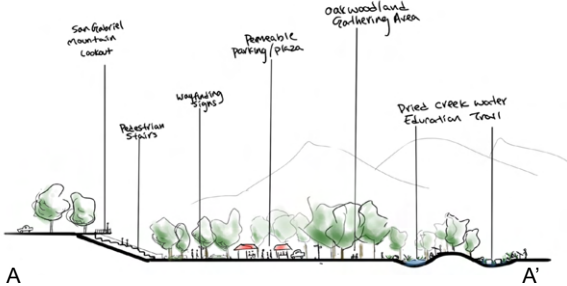
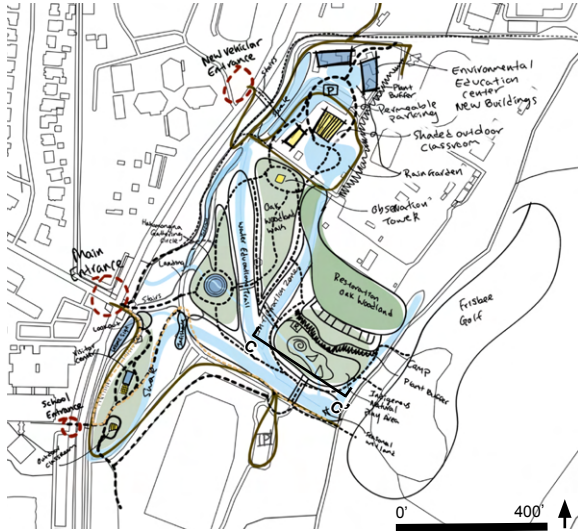
## Design Concept 1



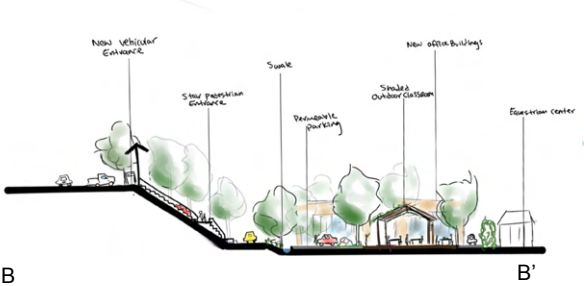
## Design Concept 2



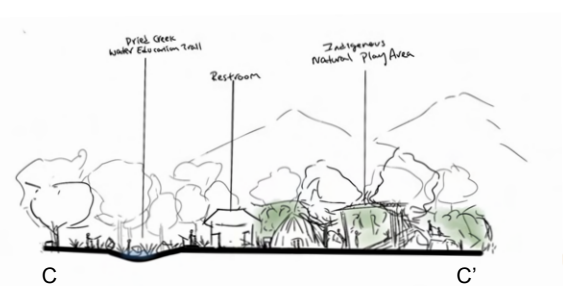
## Design Concept 3



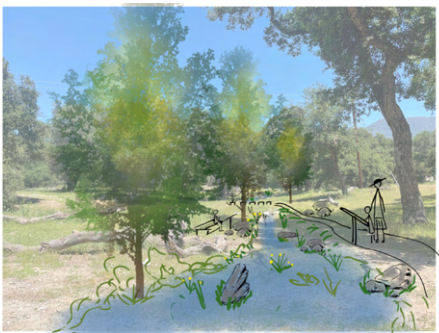
A A'



B B'



C C'



Dried Creek Educational Trail



Outdoor Classroom



Natural Play Area



The page features a large, abstract graphic design consisting of several overlapping, flowing lines in shades of green and yellow. These lines originate from the bottom left and curve upwards and to the right, creating a sense of movement and organic form. The lines are semi-transparent, allowing them to overlap and create darker shades where they intersect. The overall aesthetic is clean, modern, and nature-inspired.

## FINAL DESIGN



# ILLUSTRATIVE PLAN

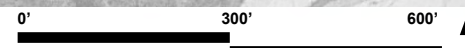


# ILLUSTRATIVE PLAN



## LEGEND

- A** Lookout and Historic Gathering Area
- B** Stairs to Lower Oak Woodland
- C** Tovaangar Garden Gathering
- D** ADA Trails to Lower Levels
- E** Shaded Gathering / Picnic Area
- F** Indigenous Cultural Natural Play Area
- G** Seasonal Wetland Rock Garden
- H** Dried Creek Bed Educational Trails
- I** Oak Restoration Area
- J** New Vehicular Entrance to Facilities
- K** Visitor Center/ Cafe
- L** Outdoor Classroom
- M** Offices
- N** Solar Panel Parking Shade Structures
- O** Bird Observation Tower
- P** Restroom
- Q** Water Infiltration Zones
- R** Heritage Walk



# PROGRAM ELEMENTS - NATURAL PLAY



Site Plan



**Location:** In the Oak Woodland by the parking lot and alluvial plain trails. Fallen trees and boulders can be adaptively reused to create natural play areas. The area is shaded and close by facilities like parking and the restroom.

## 20,000 Square Feet

**Natural play areas turn learning, stewardship, and nature appreciation into something playful, inclusive, and deeply rooted in place—making them a perfect addition to a park as meaningful as Hahamongna.**

The west entrance of the park is located in La Canada Flintridge which is a suburb with 42% of households with family and children under the age of 18. There is currently no playground on site of the park, this space will create community engagement with the site for all families.

Natural play areas **reinforce ecological connection.** Use natural materials like logs, rocks, and native plants to help children connect directly with the local landscape. Encourage sensory interaction with the environment, promoting appreciation for native habitats and biodiversity. Minimize environmental impact compared to synthetic playgrounds.

### Encourage Imaginative, Unstructured Play.

**Reflect the Park's Natural Identity** - Visually blend into the landscape, maintaining the park's scenic and peaceful feel.

**Support Educational Programming** Provide opportunities for **interpretive play**—learning about local wildlife, watershed systems, and Indigenous stories through play-based features.



# PROGRAM ELEMENTS - RAIN GARDEN / BIOSWALES



1 Acre

**Bioswales and rain gardens** are essential features in sustainable landscape and watershed design—especially in parks like Hahamongna Watershed Park—because they help **mimic natural hydrology while providing ecological, educational, and aesthetic benefits.**

**Manage Stormwater Naturally** by capturing and slowing runoff from rain and irrigation before it overwhelms storm drains. Allow water to infiltrate into the soil, reducing flooding and erosion. Reduce pollution by filtering out sediments, heavy metals, and oils from roadways and hard surfaces.

**Recharge Groundwater** and help restore the natural water cycle by directing water into the ground instead of letting it run off. Supports local aquifer recharge, which is especially critical in Southern California’s dry climate.

**Create Habitat**  
Provides habitat for pollinators, birds, amphibians, and beneficial insects. Use native plants that support local biodiversity and are drought-tolerant. Serve as micro-wetlands in urban or semi-urban areas, increasing ecosystem variety.

**Enhance Climate Resilience**  
Reduce the urban heat island effect with vegetated, shaded areas. Lower irrigation needs by capturing water where it’s needed. Buffer climate impacts like heavy rainfall or prolonged dry periods.

**Educate and Inspire with visible examples of green infrastructure in action.** Teach visitors about watershed health, sustainability, and native planting. Invite public involvement through community planting days and educational signage.



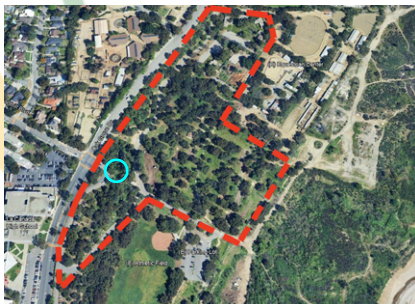
Site Plan



**Location:** The dried creek beds in the Lower Oak Woodland, many areas around the USFS site are transformed into a **living, breathing bioswales and seasonal wetlands—a vibrant corridor of native plants that captures stormwater, supports wildlife, and showcases Low Impact Development (LID) techniques.**



# PROGRAM ELEMENTS - GRAND ENTRANCE VIEWING AREA



Site Plan



## 3,000 Square Feet

A viewing area near one of the entrances of a park serves as a powerful spatial and experiential element.

**First Impressions Matter.** A viewing area sets the tone for the visitor experience, it creates a memorable sense of arrival and signals that the park is a place of significance.

**It invites people to pause, orient, and appreciate the landscape before diving into activity.**

Applying Genius of Place Principle of Fredrick Olmsted to the beginning of the site sets the tone and connects visitors to the landscape.

Framing the ecological beauty and the scale of the watershed encourages a sense of awe and appreciation and stewardship of the site.

**The viewing area will include interpretive signage of indigenous history, watershed function and local ecology, maps and orientation material.**

It will organize movement and gathering, it acts as the transitional space from urban to natural environment.

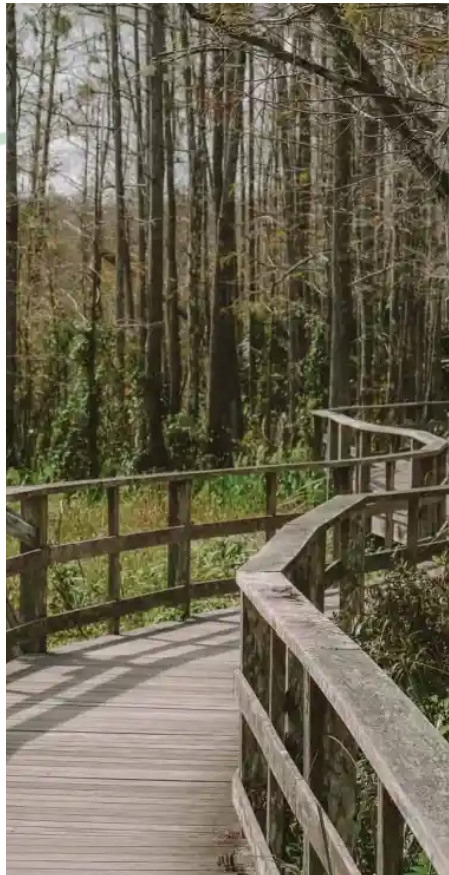
Creating an viewing area will show **views of the San Gabriel Mountains, where the watershed begins, and parts of the Arroyo Seco and the Oak Woodlands, painting a clearer sense of place for visitors.**



Location of viewing area off of Oak Grove Drive and Foothill Blvd. Viewing area of the San Gabriel mountains will show the top of the watershed. Trees were be strategically relocated to create viewshed.



# PROGRAM ELEMENTS - OAK WOODLAND NATURE WALK



.7 Acres

An **Oak Woodland Nature Walk** is more than just a path through the trees—it's a **powerful opportunity to connect people with the natural** and cultural richness of the land. **Elevated pathways in a restored oak woodland play a vital role in balancing ecological protection with public access.**

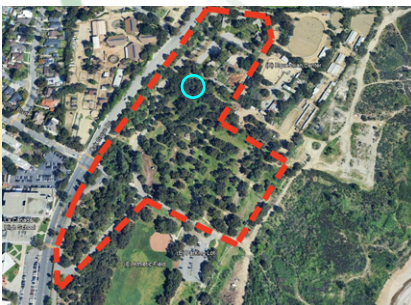
**Celebrate a Keystone Ecosystem** - the Coast Live Oaks and native understory plants support hundreds of species—birds, insects, mammals, and fungi. Demonstrates the importance of preserving native habitats in urban edges and foothill zones.

**Protect and Restore Sensitive Ecology** - A designated walk helps guide visitors through the woodland without trampling roots, seedlings, or sensitive wildlife areas. Encourages the regeneration of native species while preventing further degradation. Elevated or well-routed trails reduce soil compaction and erosion and are ADA accessible.

**Create Living Education Spaces** - the walk serves as an outdoor classroom for teaching about native plants, wildlife, water cycles, and fire ecology. Walkways include interpretive signage, audio guided programs, focused on ecology, restoration, and climate resilience.

**Inspire Stewardship and Engagement** - Fosters a sense of connection, care, and responsibility toward the park and its ecosystems.

This program element connects with all three goals of exploring, learning, and engaging with the environment



Site Plan



**Location:** The once fenced in dilapidated Oak Woodland is restored and revitalized. The Nature walk will allow visitors to see the process of a healing woodland without disrupting the sensitive ecology of the space.



# SOLUTION: CIRCULATION



## CIRCULATION LEGEND

- EXPLORE**
- Vehicular**
- Pedestrian**
- Equestrian**
- Bike**

**Bus Stop**

**Parking Areas**

**ADA Parking**

**Existing Entrances**

**New Vehicular Entrance**

**Way Finding Signages**

### Materials:

**Permeable Paving - Parking & Paths**

**DG Trails**

**"Class A" Flame Spread Index Wood Boardwalk**



ADA Accessible Boardwalk



Permeable Stairs

ADA Accessible Path to Lower Oak Woodland

Tongva Heritage Walk

Bike Path to Lower Oak Woodland

Relocated Frisbee Golf Course



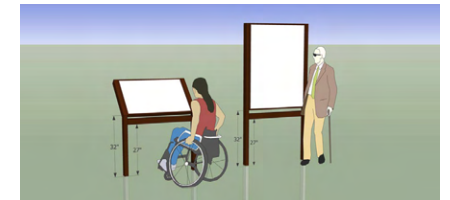
# SOLUTION: ACCESSIBILITY & INCLUSION - SIGNAGE



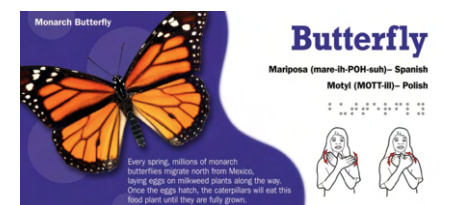
## LEGEND:

Accessibility Signage Locations 

## Accessible Height Signages



## Braille Signages



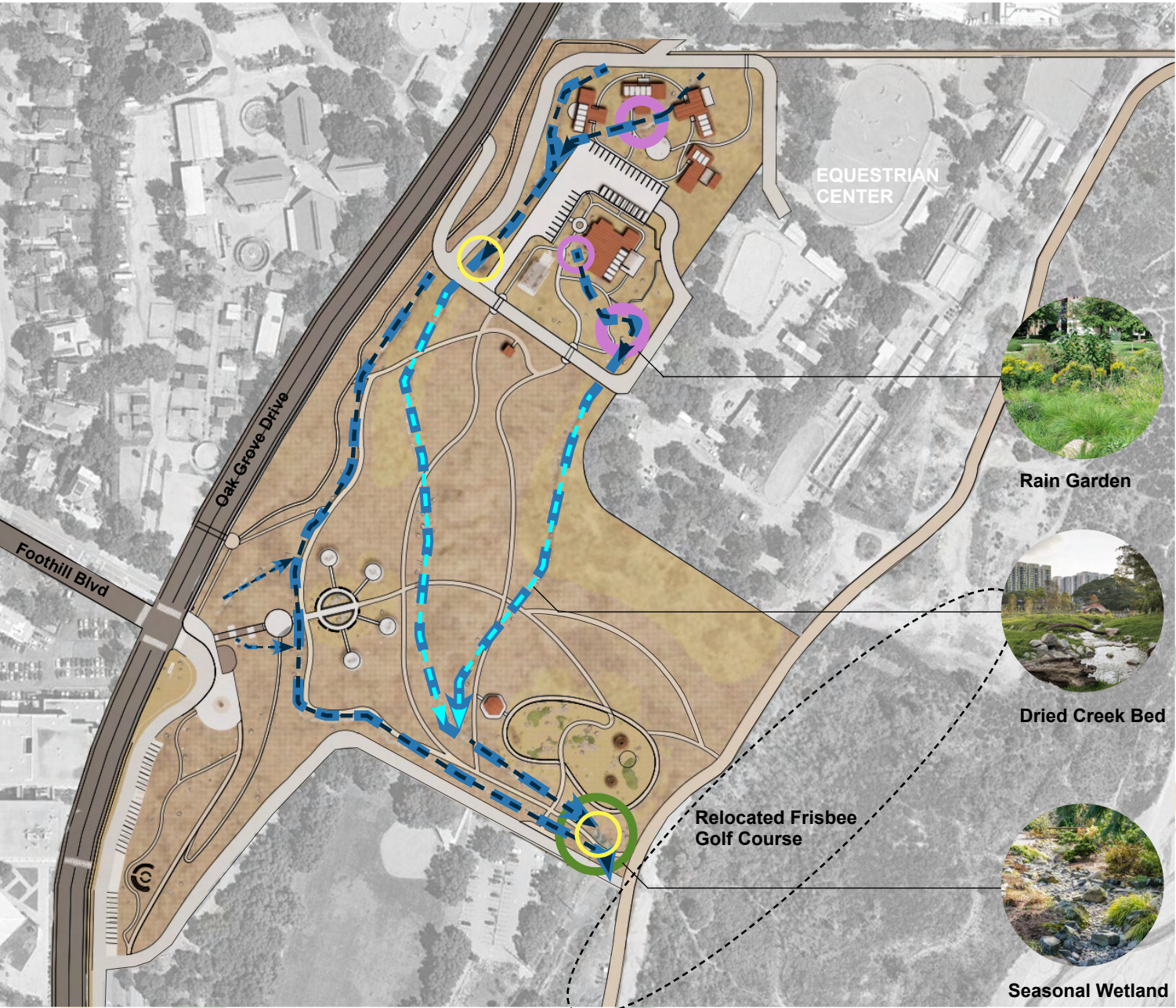
## Tactile Signages



## Audio Signages



# SOLUTION: HYDROLOGY



## HYDROLOGY LEGEND

- Water Flow
- Swales
- Dried Creek Beds

- Retention Basin
- Seasonal Wetland
- Rain Garden



Rain Garden



Dried Creek Bed



Seasonal Wetland

Collecting over 2,710,717 Gallons of rain water annually.



# SOLUTION: TREE DIVERSITY

## Existing Trees



**Existing Trees: 90% Coast Live Oak *Quercus Agrifolia***  
15% other:

- Western Sycamore (*Platanus racemosa*)
- Mexican elderberry (*Sambucus nigra*)
- Toyon (*Heteromeles arbutifolia*)
- Canary Island Pine (*Pinus canariensis*)
- Chinese Elm (*Ulmus parvifolia*)
- Shamel Ash (*Fraxinus uhdei*)

## New Trees



**Succession Planting Coast Live Oaks - 20 Trees**    **Introduction of New Oak Species: 15 Trees**

**Succession Planting: Riparian 30 trees:**

- Western Sycamore (*Platanus racemosa*)
- Mexican Elderberry (*Sambucus nigra*)

- Engelmann Oak (*Quercus engelmannii*)
- California Black Oak (*Quercus kelloggii*)
- Valley Oak (*Quercus lobata*)



**Introduction of New Trees: 20 Trees**

- Western Red Bud (*Cercis occidentalis*)
- White Alder (*Alnus rhombifolia*)



# ENLARGEMENT 1 - ENVIRONMENTAL EDUCATION CENTER



## LEGEND

- A** Secondary Vehicular Entrance
- B** Visitor Center/Cafe With Solar Roof
- C** Outdoor Classroom/ Gathering Area
- D** Offices
- E** Rain Garden and Trails
- F** Outdoor Gathering Area
- G** Water Retention Zone
- H** Permeable Parking Lot with Solar Canopy
- I** Equestrian Trail
- J** Bird/ Animal Observation Tower
- K** Oak Woodland Restoration Areas
- P** Perspectives

## KEY MAP



# SECTION PERSPECTIVE 1 - OUTDOOR CLASSROOM



# PERSPECTIVE 1 - OUTDOOR GATHERING + OFFICES



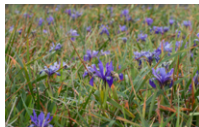
**Plant Material:**



*Quercus agrifolia*



*Platanus racemosa*



*Iris douglasiana*



*Chondropetalum tectorum*

**Inspo and Materials:**



Outdoor Gathering



Rain Gardens



Mulch



Permeable Paving



# PERSPECTIVE 2 - OUTDOOR CLASSROOM



## Plant Material:



*Platanus racemosa*



*Cercis occidentalis*



*Muhlenbergia rigens*



*Salvia mellifera*

## Inspo and Materials:



Outdoor Learning



Pollinator Gardens



Movable Furniture



Permeable Paving



# PERSPECTIVE 3 - OAK WOODLAND RESTORATION ZONE



## Plant Material:



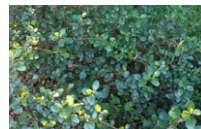
*Quercus agrifolia*



*Quercus engelmannii*



*Salvia spathacea*



*Ribes viburnifolium*

## Inspo and Materials:



Protected Zone



Habitat Promotion



Educational Signage



ADA Accessible Path



# ENLARGEMENT 2 - NATURAL PLAY & SEASONAL WETLAND



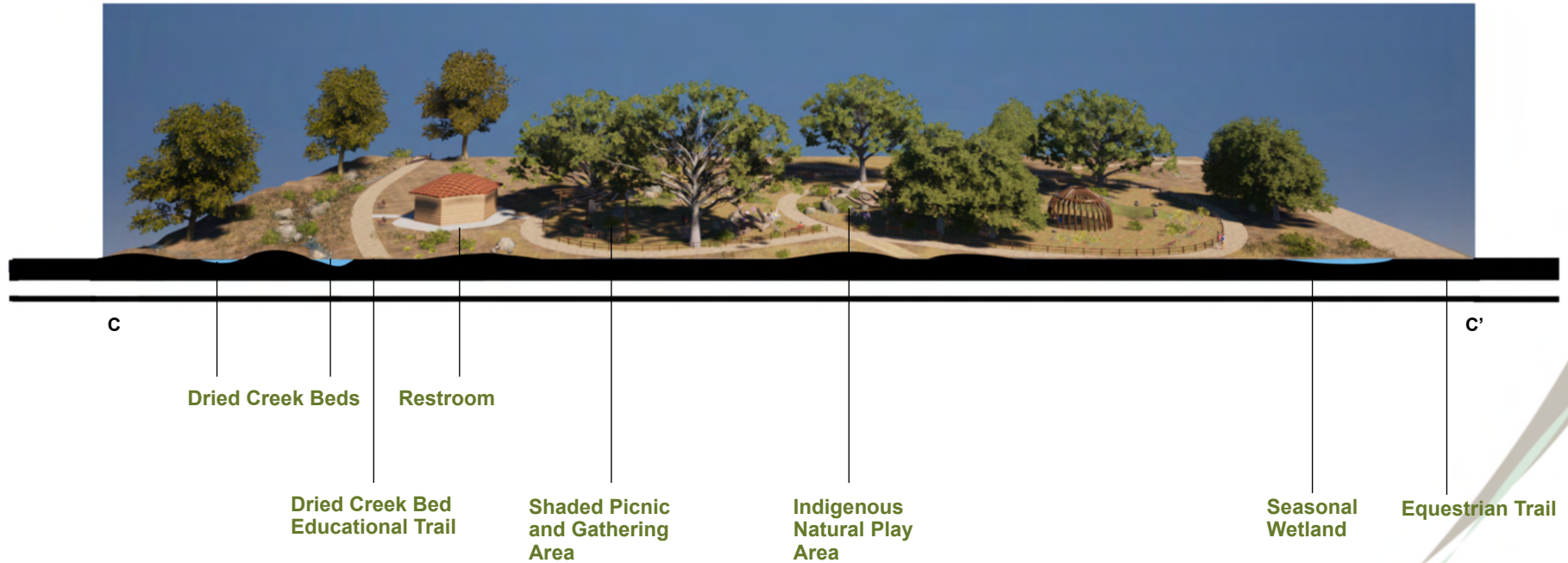
## LEGEND

- A Indigenous Cultural Natural Play Area
- B ADA Board walk
- C Restroom
- D Seasonal Wetland Infiltration Zone
- E Dried Creek Bed Educational Trail
- F Shaded Seating and Picnic Area
- G Existing Parking Lot
- P Perspectives

## KEY MAP



# SECTION PERSPECTIVE 2 - NATURAL PLAY AREA



c

c'

Dried Creek Beds

Restroom

Dried Creek Bed Educational Trail

Shaded Picnic and Gathering Area

Indigenous Natural Play Area

Seasonal Wetland

Equestrian Trail

KEY MAP



Inspo:



0' 100' 200'



# PERSPECTIVE 4 - SEASONAL WETLAND



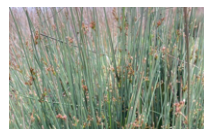
## Plant Material:



*Platanus racemosa*



*Cercis occidentalis*



*Juncus patens*



*Solidago velutina*

## Inspo and Materials:



Bridge over Swale



Wild Grasses



Educational Signage



"Class A" Flame Spread Index Wood Boardwalk



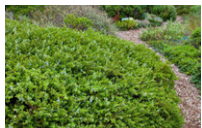
# PERSPECTIVE 5 - NATURAL PLAY WITH RESTROOM



## Plant Material:



*Quercus Agrifolia*



*Baccharis pilularis*

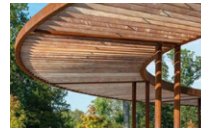


*Epilobium canum*



*Achillea millefolium*

## Inspo and Materials:



Shade Structure



Interactive Activities



Stump Steps



Boulders



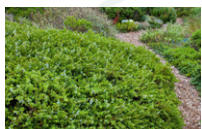
# PERSPECTIVE 6 - NATURAL PLAY



## Plant Material:



*Quercus Agrifolia*



*Baccharis pilularis*



*Epilobium canum*



*Achillea millefolium*

## Inspo and Materials:



Tongva Kiiys Huts



Log Climbing Gym



Educational Signage



Woodchips



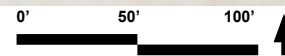
# ENLARGEMENT 3 - UPPER OAK WOODLANDS & TOVAANGAR GARDEN



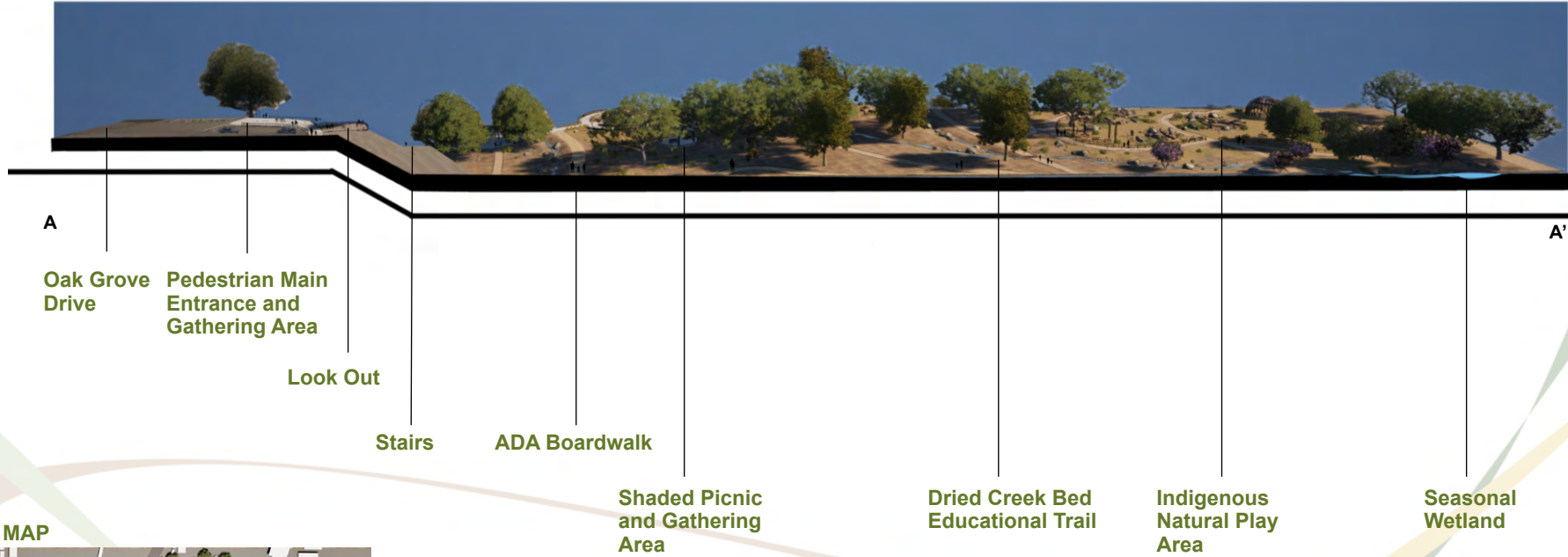
## LEGEND

- A** Pedestrian Entrance - Lookout and Gathering Area
- B** Stairs to Lower Oak Woodland
- C** Outdoor Classroom/ Gathering Area
- D** ADA Trails to Lower Levels
- E** Shaded Gathering / Picnic Area
- F** Water Retention Zone
- G** Tongvaangar Garden
- H** Heritage Walk
- P** Perspectives

## KEY MAP



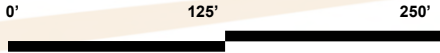
# SECTION PERSPECTIVE 3



KEY MAP



Inspo:



# PERSPECTIVE 7 - TOVAANGAR GARDEN GATHERING AREA



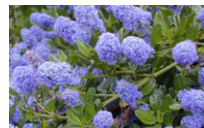
## Plant Material:



*Quercus Agrifolia*



*Artemisia californica*



*Ceanothus*



*California Wild Flowers*

## Inspo and Materials:



Gathering Circle



"Class A" Flame Spread Index Wood Bench

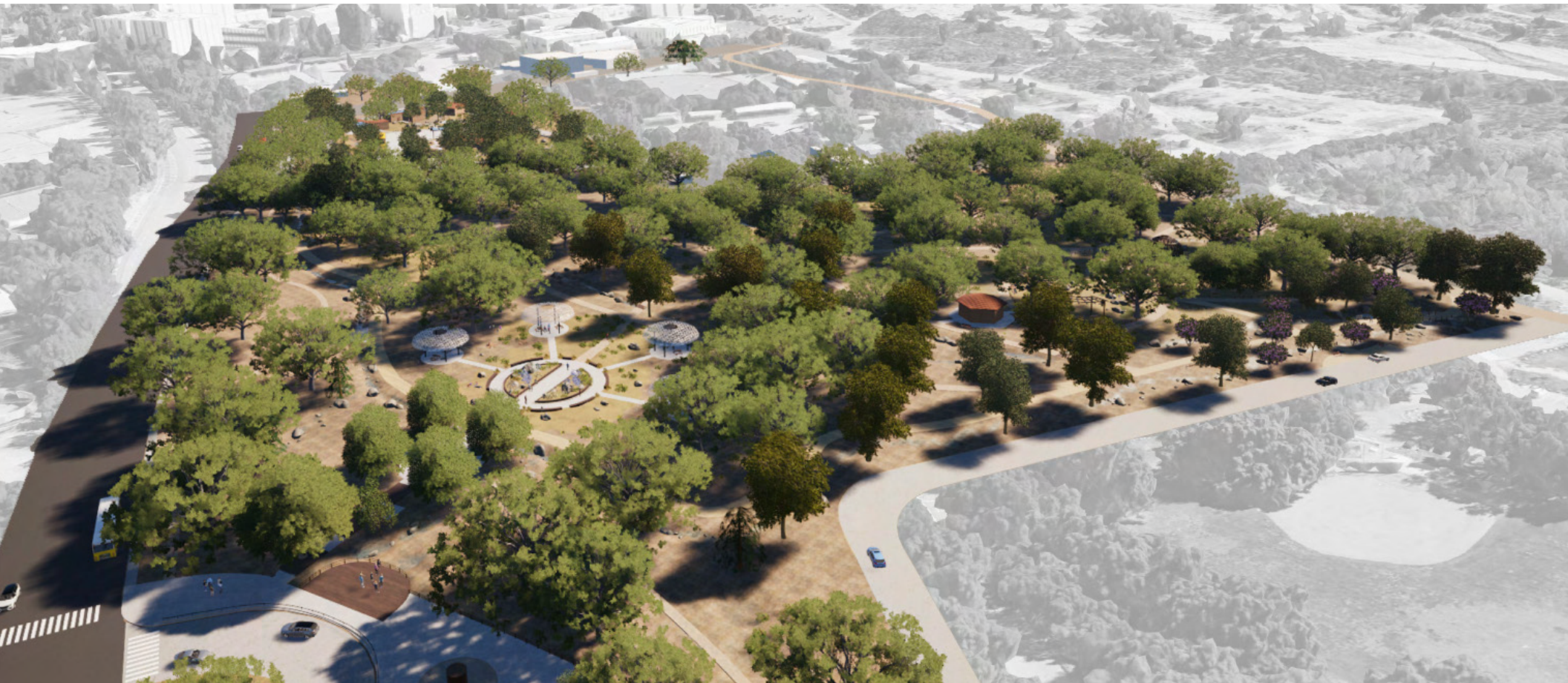


Shade Structure



Permeable Paving





## EXPLORE

- Over 9,000 feet of ADA accessible trails with wayfinding features.
- Indigenous Cultural Features: Entrance Mural, Heritage Walk, Tovaangar Garden Gathering Area, Indigenous Natural Play Area.
- 20,000 Sqft Natural Play and gathering.

## LEARN

- Over 2,000 feet of Educational Trails: Dried Creek Bed Trail, Oak Woodland Restoration Trail, Heritage Walk, Rain Garden Trail.
- Two outdoor classrooms.
- 40,000 Sqft of Rain Garden, Seasonal Wetland demonstration areas.

## ENGAGE

- 10,000 sqft of Office Space
- 4,000 Sqft Visitor Center
- 30,000 Sqft Outdoor Gathering Space
- 120,000 Sqft of Oak Woodland Restoration Zone



1. ADA Tactile Signs. (n.d.). Pulse Design Outdoor Interpretive Signs. Retrieved August 21, 2025, from <http://www.pulsedesign.com/ada-tactile-signs>
2. ArcGIS - Zoning Map, Pasadena CA. (n.d.). Retrieved April 13, 2025, from <https://www.arcgis.com/home/webmap/print.html>
3. ArcGIS - Contours - <https://egis-lacounty.hub.arcgis.com/datasets/lacounty::lariac-contours-10ft/about>
4. ArcGIS - Fire Zone - <https://egis-lacounty.hub.arcgis.com/datasets/lacounty::fire-hazard-severity-zones/about>
5. ArcGIS - Stormdrain - <https://egis-lacounty.hub.arcgis.com/maps/lacounty::ladpw-storm-drain-system/about>
6. ArcGIS - Landuse and Zoning - <https://geohub.lacity.org/maps/356cca09a3054f5da0b0eb6387f6d827>
7. ArcGIS - SEA <https://egis-lacounty.hub.arcgis.com/datasets/lacounty::significant-ecological-area-sea/about>
8. ArcGIS - Trails <https://egis-lacounty.hub.arcgis.com/datasets/countywide-multi-use-trails-hosted-public>
9. ArcGIS - Pasadena Transit <https://www.arcgis.com/apps/PublicInformation/index.html?appid=c4d963e937c14784a40aa11c7e6c9a99>
10. Arroyo Seco Canyon Project | Arroyo Seco Foundation. (n.d.). Retrieved April 10, 2025, from <https://www.arroyoseco.org/ascp/>
11. asasher. (2022, June 30). Outdoor Learning Activities for Children. CCEI A StraighterLine Company. <https://www.cceionline.com/outdoor-learning-activities-for-children/>
12. Asian And White Mixed Family—Mother, Father, Son And Daughter. By Cavan Images. (n.d.). Fine Art America. Retrieved June 26, 2025, from <https://fineartamerica.com/featured/asian-and-white-mixed-family-mother-father-son-and-daughter-cavan-images.html>
13. Bellevue Botanical Garden Visitor Center by Olson Kundig – moool. (n.d.). Retrieved June 10, 2025, from <https://moool.com/en/bellevue-botanical-garden-visitor-center-by-olson-kundig.html>
14. Beyond Juncus: Fresh Planting Ideas for Rain Gardens. (n.d.). California Landscape Design. Retrieved June 8, 2025, from <https://www.californialandscapedesign.org/beyond-juncus-fresh-planting-ideas-for-rain-gardens>
15. Bidadari Park - <https://moool.com/en/bidadari-park-by-henning-larsen.html>
16. Bioswales Filters Contaminated Groundwater Saving Rivers & The Ocean. (2020, July 5). <https://oceanblueproject.org/bioswales-raingarden-facts-photos/>
17. Brookline, M. A. 99 W. S., & Us, M. 02445 P. 617 566-1689 C. (n.d.). Olmsted Theory and Design Principles—Frederick Law Olmsted National Historic Site (U.S. National Park Service). Retrieved April 14, 2025, from <https://www.nps.gov/frla/learn/historyculture/olmsted-theory-and-design-principles.htm>
18. Bus\_Stops (FeatureServer). (n.d.). Retrieved May 3, 2025, from [https://services2.arcgis.com/zNjnZafDYCAJAbN0/arcgis/rest/services/Bus\\_Stops/FeatureServer](https://services2.arcgis.com/zNjnZafDYCAJAbN0/arcgis/rest/services/Bus_Stops/FeatureServer)
19. California Native Plant Society. (2024). Ancient oaks: Living witnesses of California’s history. CNPS. <https://www.cnps.org/flora-magazine/ancient-oaks-25426>
20. Descanso Gardens. (n.d.). Oak forest. Descanso Gardens. <https://www.descansogardens.org/gardens-and-collections/explore-the-gardens/oak-forest>
21. Dodd, C. K. (2013). *Anaxyrus californicus*. In *Frogs of the United States and Canada*. Johns Hopkins UP. <https://books.google.com/books?d=PH3graQZvOUC&q=anaxyrus californicus diet&pg=PA1958>
22. Doran, I. (2023, December 9). The Erasure of Tongva. ArcGIS StoryMaps. <https://storymaps.arcgis.com/stories/9b411934f6ef4f39871f49103feabc77>
23. Downtown Wayfinding Signage Program | Town of Estes Park. (n.d.). Retrieved May 12, 2025, from <https://estespark.colorado.gov/wayfinding>
24. DPW/National\_Hydrography\_Dataset\_USGS (MapServer). (n.d.). Retrieved May 3, 2025, from [https://arcgis.gis.lacounty.gov/arcgis/rest/services/DPW/National\\_Hydrography\\_Dataset\\_USGS/MapServer](https://arcgis.gis.lacounty.gov/arcgis/rest/services/DPW/National_Hydrography_Dataset_USGS/MapServer)
25. DVIDS - Graphics. (n.d.). DVIDS. Retrieved May 8, 2025, from <https://www.dvidshub.net/graphic/27790/value-wetlands-infographic>
26. Earthroots Field School. (n.d.). Every plant is a story. Earthroots. <https://earthrootfieldschool.org/every-plant-is-a-story>
27. Ellinger, M. (2021, January 15). The Seven S’s of Olmsted Design. Olmsted Network. <https://olmsted.org/the-seven-ss-of-olmsted-design/>
28. Events. (2025, June 14). Triangle Pop-Up | Raleigh NC Pop-Up Events. <https://www.trianglepopup.com/events>
29. Exploring Exploration: A Field Scientist’s Perspective | CanopyMeg. (n.d.). Retrieved June 8, 2025, from <https://canopymeg.com/2017/01/23/exploring-exploration-a-field-scientists-perspective/>
30. Find My District—City of Pasadena. (n.d.). Retrieved April 13, 2025, from <https://www.cityofpasadena.net/find-my-district/>
31. Freitas, S. (2014, July 25). 10 Design Principles of Frederick Law Olmsted. Eye of the Day Garden Design Center. <https://www.eyeofthedaygdc.com/2014/07/10-design-principles-frederick-law-olmsted/>
32. Gabrielino/Tongva Nation of the Greater Los Angeles Basin – NAHC Digital Atlas. (n.d.). Retrieved September 3, 2025, from <https://nahc.ca.gov/cp/tribal-atlas-pages/gabrielino-tongva-nation/>
33. General 1. (n.d.). Tongva.Land. Retrieved September 3, 2025, from <https://www.tongva.land/tribal-history>
34. Governor Declares Growing Drought Emergency Throughout California, Pasadena Faces Its Water Future in Meeting Today – Pasadena Now. (n.d.). Retrieved May 12, 2025, from <https://pasadenanow.com/main/governor-declares-growing-drought-emergency-throughout-california-pasadena-faces-its-water-future-in-meeting-today>
35. Habitats That Form Our World. (n.d.). Retrieved August 11, 2025, from [https://www.cpp.edu/biotrek/ethnobotany-learning-center/habitats-that-form-our-world.shtml?utm\\_source=chatgpt.com](https://www.cpp.edu/biotrek/ethnobotany-learning-center/habitats-that-form-our-world.shtml?utm_source=chatgpt.com)
36. Hahamog’na: Native Tongva People. (2010, October 5). PBS SoCal. <https://www.pbssocal.org/shows/departures/hahamogna-native-tongva-people>
37. Hahamongna Watershed Park—Visit Pasadena. (n.d.). Visit Pasadena. Retrieved April 10, 2025, from <https://www.visitpasadena.com/directory/hahamongna-watershed-park/>
38. Hiking Apps and Articles—New Mobility. (n.d.). Retrieved May 12, 2025, from <https://newmobility.com/accessible-hiking-apps/>
39. History. (n.d.). Rose Bowl Riders. Retrieved May 9, 2025, from <https://www.rosebowlriders.org/history>
40. History: Devil’s Gate Reservoir Restoration Project. (n.d.). Retrieved May 9, 2025, from <https://pw.lacounty.gov/swe/devilsgate/history>
41. Holmes, D. (2023, November 21). Springdale Green Boardwalk | Austin, Texas, USA | dwg. World Landscape Architecture. <https://worldlandscapearchitect.com/springdale-green-boardwalk-austin-texas-usa-dwg/>
42. How Community Organizations Can Unite Together To Support Students—Student Hires. (2024, October 20). <https://studenthires.com/how-community-organizations-can-unite-together-to-support-students/>
43. How to Create Accessible Wayside Exhibits—106 Group. (n.d.). Retrieved August 21, 2025, from <https://106group.com/how-to-create-accessible-wayside-exhibits/>
44. [https://commons.wikimedia.org/wiki/File:California\\_county\\_map\\_%28Los\\_Angeles\\_County\\_highlighted%29.svg](https://commons.wikimedia.org/wiki/File:California_county_map_%28Los_Angeles_County_highlighted%29.svg). (n.d.).
45. [https://en.wikipedia.org/wiki/Tongva#/media/File:California,\\_Southern,\\_Gabrielino\\_\(San\\_Gabriel,\\_Mission\\_or\\_Tongva\),\\_Late\\_19t\\_-\\_Bowl\\_-\\_1929.267\\_-\\_Cleveland\\_Museum\\_of\\_Art.jpg](https://en.wikipedia.org/wiki/Tongva#/media/File:California,_Southern,_Gabrielino_(San_Gabriel,_Mission_or_Tongva),_Late_19t_-_Bowl_-_1929.267_-_Cleveland_Museum_of_Art.jpg). (n.d.).
46. <https://gabrielinotongva.org>. (n.d.).
47. <https://www.college.ucla.edu/events/restoring-the-ancient-tongva-village-of-kuruvungna-in-west-los-angeles/>. (n.d.).
48. [https://www.cpp.edu/biotrek/ethnobotany-learning-center/habitats-that-form-our-world.shtml?utm\\_source=chatgpt.com](https://www.cpp.edu/biotrek/ethnobotany-learning-center/habitats-that-form-our-world.shtml?utm_source=chatgpt.com). (n.d.).



# BIBLIOGRAPHY

49. [https://www.instagram.com/p/CEnpQC2BoDY/?img\\_index=1](https://www.instagram.com/p/CEnpQC2BoDY/?img_index=1). (n.d.).
50. <https://www.landscapeperformance.org/case-study-briefs/yuma-east-wetlands-phases-1-and-2>
51. <https://www.pbssocal.org/shows/departures/hahamogna-native-tongva-people>. (n.d.).
52. <https://www.totallandscapecare.com/business/article/15040295/news-roundup-canadian-project-praised-for-biophilic-design>. (n.d.).
53. International, B. (2016). Athene cunicularia. IUCN Red List of Threatened Species, 2016, e.T22689353A93227732. <https://doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22689353A93227732.en>
54. Interpretive signage tips—The Interpretive Design Company. (n.d.). Retrieved June 2, 2025, from <https://interpretivedesign.com.au/faqs/interpretive-signage-tips/>
55. Kennard, K. (2022, December 8). Outdoor learning in the early years. *Early Education*. <https://early-education.org.uk/outdoor-learning-in-the-early-years/>
56. Kids Nature Play in Colorado. (n.d.). Colorado Landscape Architecture | Design Concepts. Retrieved June 6, 2025, from <https://www.dcla.net/nature-kids-discovery-zone>
57. Layer: Countywide Trails (ID:22). (n.d.). Retrieved May 4, 2025, from [https://services.arcgis.com/RmCCgQtiZLDCtblq/arcgis/rest/services/PNA\\_Plus\\_Map\\_Layers/FeatureServer/22](https://services.arcgis.com/RmCCgQtiZLDCtblq/arcgis/rest/services/PNA_Plus_Map_Layers/FeatureServer/22)
58. Lloyd, A. (2017, October 9). A brief history of LA's indigenous Tongva people. *LAist*. <https://laist.com/news/la-history/a-brief-history-of-the-tongva-people>
59. Low Impact Development | California State Water Resources Control Board. (n.d.). Retrieved April 14, 2025, from [https://www.waterboards.ca.gov/water\\_issues/programs/low\\_impact\\_development/](https://www.waterboards.ca.gov/water_issues/programs/low_impact_development/)
60. Microdesign | Ecological – moool. (2024, August 21). <https://moool.com/en/microdesign-ecological.html>
61. Nasa-logo-web-rgb.png 1,816×1,455 pixels. (n.d.). Retrieved April 14, 2025, from <https://www.nasa.gov/wp-content/uploads/2023/04/nasa-logo-web-rgb.png>
62. Oak Grove Disc Golf. (n.d.). Visit Pasadena. Retrieved May 8, 2025, from <https://www.visitpasadena.com/blog/this-pasadena-park-is-where-disc-golf-learned-to-fly/>
63. Oak Management Guidelines. (n.d.). UC Oaks. Retrieved May 10, 2025, from <https://oaks.cnr.berkeley.edu/site-values/>
64. October 23, I. K. '22 & 2019. (2019, October 23). New Classroom Takes Learning Outdoors. *The Columns*. <https://columns.wlu.edu/new-classroom-takes-learning-outdoors/>
65. Odom, J. (2022, January 20). Effective Stormwater Management: Installing Bioswales. *The Edge from the National Association of Landscape Professionals*. <https://blog.landscapeprofessionals.org/effective-stormwater-management-installing-bioswales/>
66. Once Upon a Watershed. (n.d.). Coast live oak. *Once Upon a Watershed*. <https://www.onceuponawatershed.org/coastliveoak>
67. OSBP at Jet Propulsion Laboratory—NASA. (n.d.). Retrieved May 9, 2025, from <https://www.nasa.gov/osbp/osbp-at-jet-propulsion-laboratory/>
68. Parks, C. S. (n.d.). Accessible Features in California State Parks. *California State Parks*. Retrieved June 10, 2025, from <https://www.parks.ca.gov/AccessibleFeatures>
69. Pasadena, California Population 2025. (n.d.). *Worldpopulationreview.Com*. Retrieved June 2, 2025, from <https://worldpopulationreview.com/us-cities/california/pasadena>
70. Pomona, California State Polytechnic University. (n.d.). Habitats that form our world. *Ethnobotany Learning Center*. <https://www.cpp.edu/biotrek/ethnobotany-learning-center/habitats-that-form-our-world.shtml>
71. Public Information Map. (n.d.). Esri. Retrieved May 3, 2025, from <https://www.arcgis.com/apps/PublicInformation/index.html?appid=c4d963e937c14784a40aa11c7e6c9a99>
72. Save Hahamongna. (n.d.). Retrieved April 10, 2025, from <https://savehahamongna.org/hahaeirtoolkit.htm>
73. Spreading Grounds: Essential Water Conservation Facilities in LA County. (n.d.). *LA County Public Works*. Retrieved May 8, 2025, from <https://pw.lacounty.gov/core-service-areas//core-service-areas/water-resources/spreading-grounds/>
74. Stever, D. (n.d.). What Is A Rain Garden, Exactly? (3 Types of Rain Gardens + 2 Myths + 6 Benefits). Retrieved June 9, 2025, from <https://www.klausinggroup.com/blog/what-is-a-rain-garden-exactly-3-types-of-rain-gardens-2-myths-6-benefits>
75. *The Design Principles of Frederick Law Olmsted* (U.S. National Park Service). (n.d.). Retrieved April 14, 2025, from <https://www.nps.gov/articles/000/the-design-principles-of-frederick-law-olmsted.htm>
76. *The Plants of Tovaangar—TreePeople*. (n.d.). Retrieved August 11, 2025, from [https://treepeople.org/the-plants-of-tovaangar/?utm\\_source=chatgpt.com](https://treepeople.org/the-plants-of-tovaangar/?utm_source=chatgpt.com)
77. *The Surprising Benefits of Teaching a Class Outside*. (n.d.). Retrieved June 26, 2025, from [https://greatergood.berkeley.edu/article/item/the\\_surprising\\_benefits\\_of\\_teaching\\_a\\_class\\_outside](https://greatergood.berkeley.edu/article/item/the_surprising_benefits_of_teaching_a_class_outside)
78. *The Tongva*. (2015a, September 14). *SANTA MONICA BAY AUDUBON SOCIETY BLOG*. <https://smbasblog.com/the-tongva/>
79. *Vast Open Space and Hiking Trails at Hahamongna Watershed Park in Pasadena—Travel Pockets*. (n.d.). Retrieved June 26, 2025, from <https://www.thetravelpockets.com/new-blog/hahamongna-watershed-park>
80. Wernick, K. (2018, March 28). *The Watershed Approach to Landscaping*. *California Native Plant Society*. <https://www.cnps.org/gardening/the-watershed-approach-to-landscaping-7431>
81. *Zoning Map, Pasadena CA*. (n.d.). Retrieved April 14, 2025, from <https://studiohedr.maps.arcgis.com/apps/mapviewer/index.html?webmap=2c3295b27e0649a181db3512bf0940d4>
82. *Tongva History Garden*. (n.d.). *Tongva era garden plants*. <https://tongvalhistorygarden.wixsite.com/garden/tongva-era-garden-plants>
83. *Tongva Taraxat Paxaavxa Conservancy*. (n.d.). *Our story*. Retrieved June 6, 2025, from <https://www.tongvapeople.org>
84. Anderson, M. K. (2005). *Tending the wild: Native American knowledge and the management of California's natural resources*. Berkeley, CA: University of California Press.
85. Johnston, B. E. (1962). *California's Gabriellino Indians*. Los Angeles, CA: Southwest Museum.
86. Lightfoot, K. G., & Parrish, O. (2009). *California Indians and their environment: An introduction*. Berkeley, CA: University of California Press.
87. McCawley, W. (1996). *The first Angelinos: The Gabriellino Indians of Los Angeles*. Banning, CA: Malki Museum Press.



# IMAGE CITATIONS

PG 4

[https://commons.wikimedia.org/wiki/File:California\\_county\\_map\\_\(Los\\_Angeles\\_County\\_highlighted\).svg](https://commons.wikimedia.org/wiki/File:California_county_map_(Los_Angeles_County_highlighted).svg)  
[https://commons.wikimedia.org/wiki/File:LA\\_County\\_Incorporated\\_Areas\\_Pasadena\\_highlighted.svg](https://commons.wikimedia.org/wiki/File:LA_County_Incorporated_Areas_Pasadena_highlighted.svg)  
Google Earth

PG 5

<https://www.gabrieleno-nsn.us/>  
Map - Samantha Morales Johnson

PG 6

Map - Sutimiv -Pa'alat -  
<https://barrioboychik.wordpress.com/2018/11/22/the-first-displacement-the-indigenous-people-of-boyle-heights/>  
<https://www.gabrieleno-nsn.us/>  
<https://www.rosebowlriders.org/>  
<https://www.jpl.nasa.gov/who-we-are/slice-of-history>  
<https://pw.lacounty.gov/swe/devilsgate/history>  
<https://www.tongva.land/>

PG 8

<https://www.scholastic.com/parents/family-life/creativity-and-critical-thinking/development-milestones/how-children-explore-age-age.html>  
<https://canopymeg.com/2017/01/23/exploring-exploration-a-field-scientists-perspective/>

PG 9 - 10

Google Earth

PG 14

<https://olmsted.org/blog/2023/06/20/frederick-law-olmsted-his-essential-theory/>  
<https://flowstobay.org/data-resources/plans/sustainable-streets-master-plan/burlingame-donnely-avenue-rain-garden/>  
G3, Green Gardens Group. <https://www.cnps.org/gardening/the-watershed-approach-to-landscaping-7431>

PG 15

<https://olmsted.org/blog/2023/06/20/frederick-law-olmsted-his-essential-theory/>

PG 16

Courtesy Pierce County, Washington / WSU Extension, <https://www.wbdg.org/resources/low-impact-development-technologies>  
G3, Green Gardens Group. <https://www.cnps.org/gardening/the-watershed-approach-to-landscaping-7431>

PG 17

<https://mooool.com/en/bellevue-botanical-garden-visitor-center-by-olson-kundig.html>

PG 18

<https://www.landscapeperformance.org/case-study-briefs/yuma-east-wetlands-phases-1-and-2>

PG 19

<https://mooool.com/en/bidadari-park-by-henning-larsen.html>

PG 20

<https://worldpopulationreview.com/us-cities/california/pasadena>  
<https://www.visitpasadena.com/directory/hahamongna-watershed-park/>  
<https://fineartamerica.com/featured/asian-and-white-mixed-family-mother-father-son-and-daughter-cavan-images.html>  
<https://studenthires.com/how-community-organizations-can-unite-together-to-support-students/>

PG 21 - 25

ArcGIS

PG 23

<https://www.inaturalist.org/taxa/17356-Vireo-bellii>  
<https://www.inaturalist.org/taxa/19975-Athene-cunicularia>  
<https://www.inaturalist.org/taxa/64971-Anaxyrus-californicus>

PG 26 - 32

Google Earth

PG 29

<https://www.arroyoseco.org/watershed.htm>

PG 31

<https://columns.wlu.edu/new-classroom-takes-learning-outdoors/>  
<https://estespark.colorado.gov/publicworksprojects>

PG 35 - 37

Google Earth

PG 37

<https://cadmapper.com/>

PG 39

Google Earth

PG 40

<https://columns.wlu.edu/new-classroom-takes-learning-outdoors/>  
<https://greenworkspc.com/ourwork/westmoreland-park-nature-based-play>  
Google Earth

PG 41

<https://www.dcla.net/nature-kids-discovery-zone>  
Google Earth

PG 42

Photo courtesy of Saxon Holt. <https://www.californialandscapedesign.org/beyond-juncus-fresh-planting-ideas-for-rain-gardens>  
<https://mooool.com/en>  
Google Earth

PG 43

<https://www.seatoskygondola.com/attractions/viewing-platforms/>  
<https://interpretivedesign.com.au/faqs/interpretive-signage-tips/>  
Google Earth

PG 44

<https://worldlandscapearchitect.com/springdale-green-boardwalk-austin-texas-usa-dwg/>  
<https://redaroundtheworld.com/2020/07/31/corkscrew-swamp-sanctuary-boardwalk/>



# IMAGE CITATIONS

PG 45

<https://dotdash.com.au/>  
<https://www.pinterest.com/hhhhh1988/>  
[https://www.tripadvisor.com/Attraction\\_Review-g57282-d8518483-Reviews-Eshqua\\_Bog\\_Natural\\_Area-Hartland\\_Vermont.html](https://www.tripadvisor.com/Attraction_Review-g57282-d8518483-Reviews-Eshqua_Bog_Natural_Area-Hartland_Vermont.html)  
<https://www.readingrock.com/hydrabric-iii-permeable-pavers>  
[https://www.roofingdirect.com/shop/mrp-ipe-wooden-deck-tile-pallet-of-150/?srsltid=AfmBOoo7TawwUaZC9oktBT7QXzePG7NTpselxBVp\\_KBo-5ybTNej\\_m4](https://www.roofingdirect.com/shop/mrp-ipe-wooden-deck-tile-pallet-of-150/?srsltid=AfmBOoo7TawwUaZC9oktBT7QXzePG7NTpselxBVp_KBo-5ybTNej_m4)

PG 46

<http://www.pulsedesign.com/ada-tactile-signs>

PG 47

<https://moool.com/>  
<https://www.pinterest.com/search/pins/?q=bioswale&rs=typed>  
<https://www.flickr.com/photos/48875472@N06/4688406561>

PG 50

<https://columns.wlu.edu/new-classroom-takes-learning-outdoors/>

PG 51

<https://www.inaturalist.org/>  
<https://www.readingrock.com/hydrabric-iii-permeable-pavers> [https://architectureau.com/products/?utm\\_source=AAU\\_Product\\_Selector&utm\\_medium=Redirect&utm\\_campaign=Selector\\_Closure](https://architectureau.com/products/?utm_source=AAU_Product_Selector&utm_medium=Redirect&utm_campaign=Selector_Closure)  
Photo courtesy of Saxon Holt. <https://www.californialandscapedesign.org/beyond-juncus-fresh-planting-ideas-for-rain-gardens>

PG 52

<https://www.inaturalist.org/>  
<https://www.google.com/image>  
<https://www.readingrock.com/hydrabric-iii-permeable-pavers>  
[https://architectureau.com/products/?utm\\_source=AAU\\_Product\\_Selector&utm\\_medium=Redirect&utm\\_campaign=Selector\\_Closure](https://architectureau.com/products/?utm_source=AAU_Product_Selector&utm_medium=Redirect&utm_campaign=Selector_Closure)  
<https://www.olsonlewis.com/news/outdoor-classrooms-in-the-time-of-a-pandemic>

PG 53

<https://www.inaturalist.org/>  
<https://floridahikes.com/ringhaver-park/>  
<https://guernseypress.com/news/2022/07/29/felled-oak-tree-is-regrowing>

PG 55

<https://www.dcla.net/nature-kids-discovery-zone>  
<https://www.santamonica.gov/places/parks/tongva-park>

PG 56

<https://www.inaturalist.org/>  
<https://www.163.com/dy/article/EJTOFO0G0516DUEV.html>

PG 57

<https://www.inaturalist.org/>  
<https://www.pinterest.com/charlie11301985/>  
<https://www.163.com/dy/article/EJTOFO0G0516DUEV.html>  
<https://www.landscapeperformance.org/case-study-briefs/ricardo-lara-linear-park>

PG 68

<https://www.inaturalist.org/>  
<https://www.pinterest.com/pin/366973069658738158/>  
<https://www.landscapeperformance.org/case-study-briefs/ricardo-lara-linear-park>  
<https://www.flickrriver.com/photos/33756661@N07/3615287546/>  
<https://www.kentuckylawncare.com/product/wood-chips-playground-bulk-landscape-material/>  
PG 63  
<https://lecaillouauxhiboux.fr/article/ardeche-aventure-automne-automne-autour-du-mont-gerbier-de-jonc>  
<https://www.pinterest.com/hhhhh1988/>

PG 61

<https://www.inaturalist.org/>  
<https://moool.com/>  
<https://www.elorafergustoday.com/local-news/indigenous-gathering-circle-taking-shape-with-planting-event-7177448>  
<https://www.pinterest.com/pin/366973069658691448/>  
<https://www.readingrock.com/hydrabric-iii-permeable-pavers>





THANK YOU