

"Trees are inseparable from the urban structure - trees are the only design element that can link an entire city together."

- Henry Arnold (1980)1



Courtesy of the LA Public Library



Courtesy of the LA Public Library

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PERSONAL STATEMENT





Rachael Dwork

This project began for me on a drive through this old part of town that was brand new to my perspective of Los Angeles. In hindsight, it almost seems serendipitous. I had lived in Los Angeles for almost 10 years, but I had not had an opportunity that brought me to the Lincoln Heights neighborhood. As I turned on Mission Road I was immediately drawn to the beautiful landscape that laid before my eyes: Lincoln Park. The Art Deco park boundary is incredibly beautiful and the picturesque lake beyond is serene. As I spent more time in the park I discovered its unique place in our city's history

and the relics that have lived inside the park for over a century. I was also amazed by the lack of preservation of its infrastructure. Many of the statues, trees, and architecture are defaced and covered with graffiti. It's clear that this park is loved and appreciated. Why is Lincoln Park so undeserving of drinking fountains, handrails, or bollards that prevent people from driving over what little landscaping there is? Tracking down the answer to this question and discovering what this park could be became my personal mission for this capstone. There is a lot of missing links in the story behind







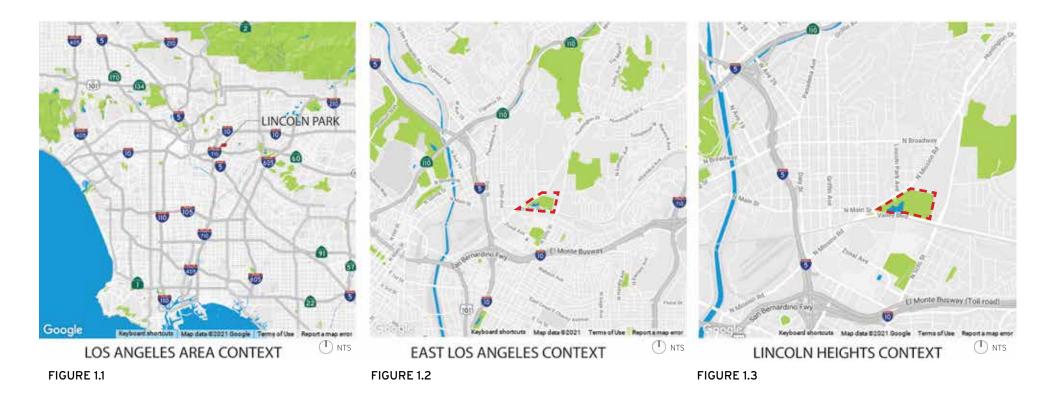
Courtesy of the LA Public Library

Lincoln Park and I've enjoyed connecting the dots that I've found. Going into this process, when I selected this park for my project, I had no idea I was going to discover a buried arroyo, a Victorian conservatory, or our first botanical garden. I was amazed to find photos of the California Fan Palms that now tower over the park were planted at the turn of the 20th century. It surprised me to learn that the Florence Nightingale statue was commissioned by David Edstrom as part of the WPA Federal Arts Project and that visitors used to ride around the park in ostrich-drawn carriages. I was most inspired by the quote on the statue

dedicated to one of the park's founders: Levi Newton Breed. "So long as there shall be a City of Los Angeles its people will here enjoy priceless benefits of light and air and beauty, a heritage from this man." Restoration is a romanticism of the past but without that sentiment, we risk losing our sense of place. Los Angeles is notorious for paving over its historically contributive architecture. I'm thrilled my project presented the opportunity to daylight something that was lost to LA and learn how I could reintroduce Lincoln Park to its natural identity.

PROJECT LOCATION

REGIONAL



Lincoln Park is located on the east side of Los Angeles 4 miles east of downtown in what is now known as the Lincoln Heights neighborhood (formerly "East Los Angeles" until 1917). Lincoln Heights is bordered by Montecito Heights and Cypress Park to the north, El Sereno to the east, Boyle Heights on the south by, and by the LA River, Chinatown, and Elysian Park on the west. Lincoln Heights is part of the original 1781 four-square

leagues granted to the Pueblo de Los Angeles. It is in fact, LA's first suburb outside of the original downtown settlement. Dating to the 1870s, the land was previously used for cattle and sheep ranching before John Strother Griffin purchased the area and developed it into single-family housing and founded one of the first horse-drawn streetcars. Many diverse, historic styles of architecture can be still be found in this neighborhood.

LOCAL

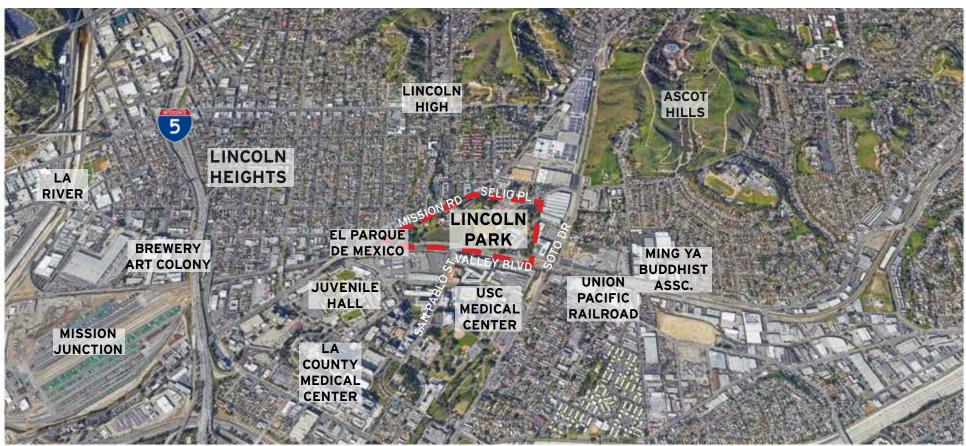


FIGURE 2

PARCEL PROFILE

ADDRESS: 3501 E Valley Blvd, Los Angeles, CA PARCEL SIZE: 50 acres - 1,816,990 ft² OWNERSHIP: City of Los Angeles DISTRICT: CD1 - Gil Cedillo ZONING: Open Space

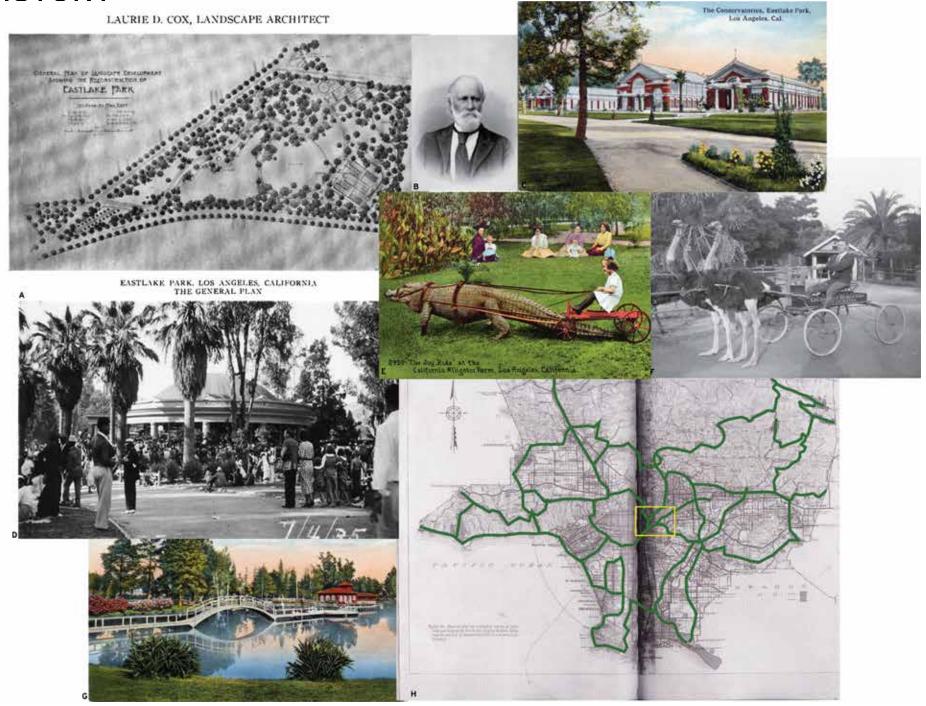
LINCOLN PARK AERIAL PHOTO

Lincoln Park is bounded by Selig Place to the north, light industrial factories to the east, Valley Boulevard to the south, and Mission Road to the west. The parkland of Lincoln Park is 50-acres and the Lincoln Park Lake is just under 5. The park itself is in close proximity to several

notable landmarks such as El Parque de Mexico, the USC Keck Medical Center, Church of the Epiphany, and The Brewery Art Colony. Public transportation access is served by Metro lines 76, 78, 79, and 378.

NTS

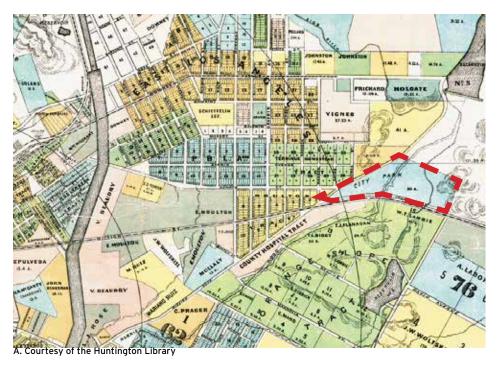
HISTORY

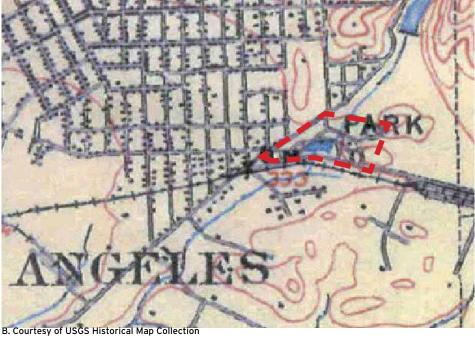


Lincoln Park itself has an impressive history. Prior to the Mexican and American occupation of California, the Tongva Tribes that inhabited the area and the Spanish Catholic missionaries traveled along what is now Valley Blvd to the Mission San Gabriel. After the Mexican-American war, the land passed through a handful of developers who found the parcel too swampy for major construction. In 1874, it was gifted to the City of Los Angeles by the Southern Pacific Railroad and John Strother Griffin. The park was first known as East Los Angeles Park, then Eastlake Park, but in 1917 the neighborhood voted to rename itself and the park after the local high school, Abraham Lincoln High. Depictions of how early residents of Los Angeles enjoyed the park revealed a gardenesque landscape with curvilinear paths and a variety of social activities. It was home to our first zoo, botanical garden, and amusement attractions. In 1912, the park was redesigned by LA Park Superintendent Laurie Davidson Cox. A gorgeous conservatory and boathouse that were added made Lincoln Park LA's most popular destination and the crown jewel of our park system. In response to increased urbanization, and fill the need for space dedicated towards recreation and cultural activities, it was recommended in the Olmsted-Bartholemew Plan to increase the park's size to 180-acres. To accomplish this, the City of Los Angeles would have acquired the old Ascot racetrack and other adjacent parcels that would have actually linked to Griffith Park. Between the 1930s and 1975, Lincoln Park received updates to amenities that reflected post-WWII values. Parking lots, a public bathhouse, and ball fields were added. The structure of the conservatory was, re-purposed for the Lincoln Park Recreation Center and the boathouse was condemned after major damage from earthquakes and vandalism. The Plaza de la Raza, a wonderful Latin cultural center, now occupies the restored boathouse. Sculptures and are among the few relics from the park's original construction remain today, however many of the trees, (most notably the California Fan Palms that line Mission Rd) date to the 1812 design by Laurie Davidson Cox.

THE ARROYO DE LOS POSOS

TRACING THE WATERWAY



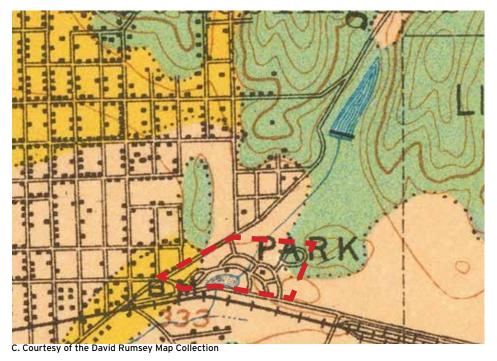


1884 LOS ANGELES by H.J. Stevenson, U.S. Dept. Surveyor

1893-94 LOS ANGELES, U.S. GEOLOGICAL SURVEY

Perhaps the most interesting information that I discovered was that an Arroyo named the Arroyo de los Posos formerly flowed southwest through the site until it met the LA River at the current location of the Cesar Chavez bridge. I've traced its existence through historic surveys of Los Angeles dating as far as the 1880s. The Arroyo received inflow from upland runoff in Montecito Heights and a creek that was later developed into Hollenbeck Park.

"CREEK OF THE GROUNDS"



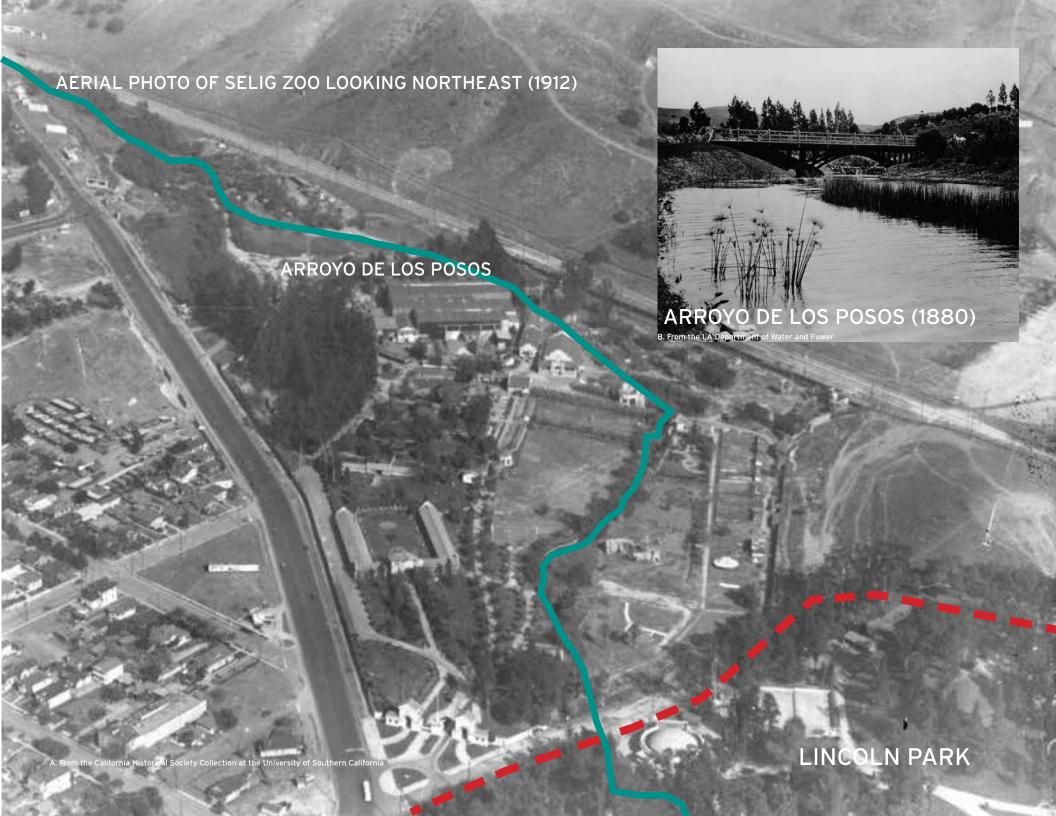
D. Courtesy of The Huntington Library

1903 LOS ANGELES SOIL SURVEY (MESMER)

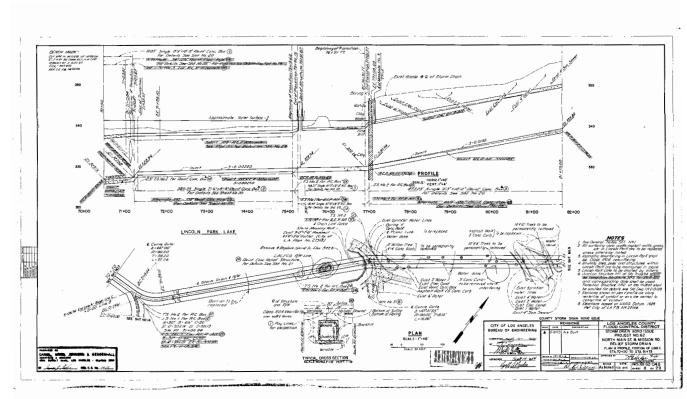
1894 LOS ANGELES Lithographed by B.W. Pierce, Stimson

"The Creek of the Grounds" was an important conduit of the original Pueblo Zanja Water Distribution System. A lack of understanding of our semi-arid desert environment where our water levels fluctuate drastically between

The Arroyo de los Posos, which translates to seasons led developers and engineers to contrive alternative water management concepts. In 1904, the arroyo was dammed for water storage and connected to the new water distribution system developed by John Strother Griffin and Prudent Beaudry.



CULVERTING THE ARROYO



A. Courtesy of LA County Public Works

After a series of historic floods and issues that arose from improper waste disposal by the LA County Hospital, the city officials and Army Corps of Engineers were deluded by the notion that forces of nature could be manipulated with a hard-engineered solution. This led to the complete channelization of the arroyo, along with most of our watershed.

The Arroyo de los Posos was covered in storm drains between two major projects in 1933 and 1955. The project to culvert the arroyo's confluence to the LA River in 1910 replaced a covered wooded bridge with one of LA's longeststanding concrete bridges: the Macy Street (now Cesar Chavez) Viaduct.

BRIDGES

Los Angeles, Cal.—A \$40,000 steel con-crete bridge will be built immediately over Arroyo de los Posos at Macy street; a bridge will also be built over the Los Angeles river

B. Courtesy of The Los Angeles Times Archives



C. Courtesy of KCET - L.A. as a Subject

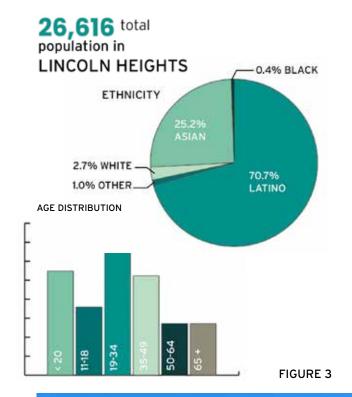


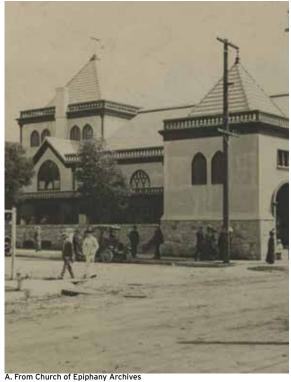




D. Southwest Contractor + Manufacturer (V3,# 24,1909)

LINCOLN HEIGHTS









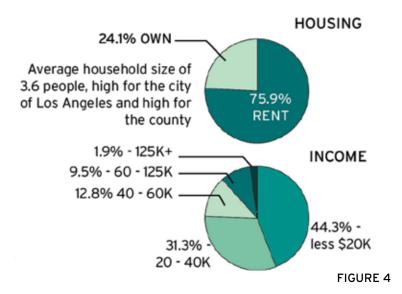


COMMUNITY BACKGROUND

Today, the Lincoln Heights neighborhood is still a densely populated, youthful area with high populations of Latino, Asian, and Pacific Islander residents. Because of its proximity to the rail yards and industrial corridor downtown, many first-generation immigrants have called this neighborhood home. The LA Conservancy will often refer to Lincoln Heights as "the Ellis Island of Los Angeles".2 In the 1960s, this neighborhood was considered a barrio. Both the Church of the Epiphany and Lincoln High School, shown to the left, were the heart of the Chicano blowouts of 1968. "What makes the neighborhood interesting is the variety of architectural buildings," says E. Michael Diaz, a former Los Angeles Conservancy board member and a past commissioner of the Los Angeles Historical Records & Landmarks Commission, who lives in Lincoln Heights. "It's a mix of Victorian, some art deco, some modern. It's that eclectic mix of buildings that makes it interesting." The business district of North Broadway is lined with many locallyowned restaurants and shops, named and operated by the primarily Spanish speaking residents. Lincoln Heights was home to the Avenue 26 Night Market until it was recently displaced due to its increased popularity.

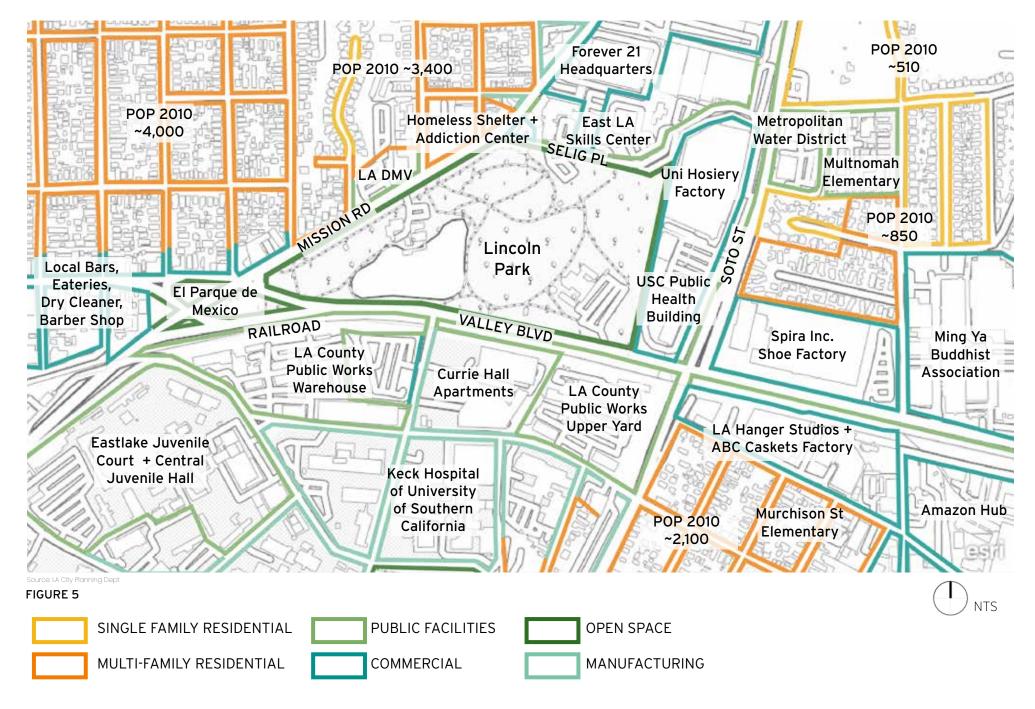


A. ulidigitalmarketing





ADJACENCIES + ZONING



PARK USERS













Lincoln Heights is known to be an unsafe neighborhood, but Lincoln Park does attract diverse user groups that enjoy the amenities and landscape of the park. The Covid-19 pandemic severely impacted the daily use of Lincoln Park with the closure of facilities and programs, however, the park was still used as a source of respite for neighborhood residents and the medical staff of the USC Hospital. The parking lot of the recreation center also became one of LA's most efficient Covid testing and vaccine administration centers over the

pandemic. Youth recreation programs have resumed at both the Lincoln Park Recreation and Senior Center as well as the Plaza de la Raza. On most days you'll observe a number of visitors taking advantage of this beautiful park. The meaning behind "[The] Magic of the City" in A Pattern Language comes to mind when you spend more time in the park "... serving as a catch basin to the population" and "magic within reach of everyone."⁴

AMENITIES INVENTORY







Las Memorias AIDS Monument (2004)



Lincoln Park Community, Senior Center, Pool (2019)



Baseball Fields (2021) "Dodger Dream fields"



Playground (2004)



Tennis Courts (No Info)



Lincoln Park Skate Park (2011)



FIGURE 6

FEATURES ARE HEAVILY USED AND APPRECIATED, HOWEVER, MOST ARE IN DISREPAIR OR VANDALIZED



SITE ANALYSIS

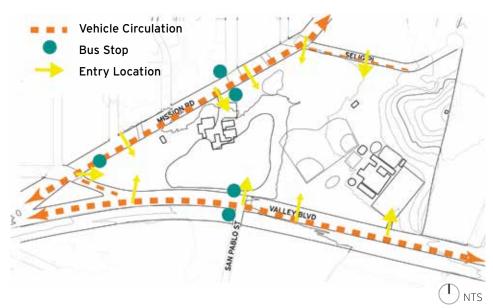


FIGURE 7.1 Access + Circulation Analysis

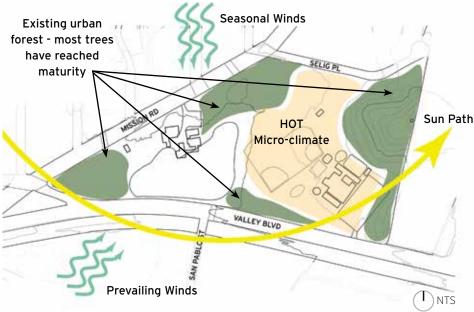


FIGURE 7.2 Climate Condition Analysis

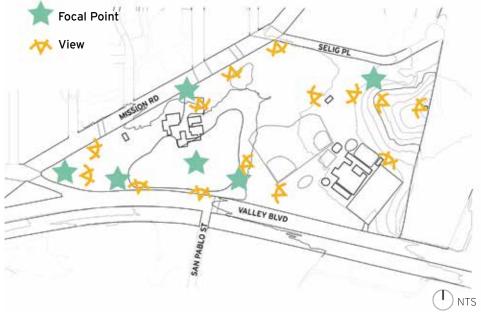


FIGURE 7.3 Focal Point + View Analysis

Los Angeles (90031) Crime Index

**Based on compiled Police Data by ADT

CATEGORY	LOCAL INDEX	VS. NATIONAL INDEX	
Assault	208	2.08x more than average	
Burglary	141	1.41x more than average	
Larceny	181	1.81x more than average	
Murder	627	6.27x more than average	
Motor Vehicle Theft	204	2.04x more than average	
Personal Crime	505	5.05x more than average	
Property Crime	149	1.49x more than average	
Rape	345	3.45x more than average	
Robbery	807	8.07x more than average	
Total Crime	292	2.92x more than average	

FIGURE 7.4 Local Crime Statistics

STORMWATER ANALYSIS



FIGURE 8

LINCOLN PARK LAKE TMDLS

- NITROGEN
- PHOSPHORUS
- MERCURY
- LEAD
- TRASH
- ORGANOCHLORINE
- PESTICIDES
- AMMONIA

TOTAL VOLUME: RUN-OFF INFLOW: POTABLE H20 FILL: EST. EVAPORATION:

19.6 ACRE-FEET

~ 9 ACRE-FEET PER YEAR 30.8 ACRE-FEET PER YEAR ~22.4 ACRE-FEET PER YEAR

NET LOSS:

13.4 ACRE-FEET PER YEAR



A. EXISTING SKIMMER



B. OVERFLOW DRAIN TO LA RIVER

The Lincoln Park Lake is not natural and it has no continuous inflow. The Arrovo de los Posos was piped under the park around 6 feet below grade. What supplies the 30.8 acre-feet of water level in what is essentially a detention pond comes from mostly potable water. The EPA released an assessment in 2012 of the condition in the Lincoln Park Lake with data that records levels of pollution at that time. Total Maximum Daily Loads (TMDLs) were not exceeded, however runoff, trash, and excess bird waste negatively affect the quality of the water. Any overflow from the lake and upland runoff flows through the storm drains identified directly to the LA river untreated. In our water-scarce environment, this concerned me.



CITY OF LA STORM PIPE

COUNTY OF LA STORM PIPE

MAINTAINED BY US ARMY CORPS

CITY STORM DRAIN

COUNTY STORM DRAIN

SUB -WATERSHED

DIRECTION OF WATER FLOW

GRADING + SOIL ANALYSIS



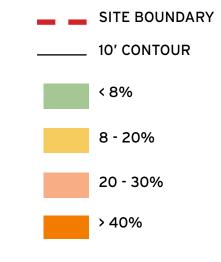
FIGURE 9

- **SOIL LIQUEFACTION ZONE
- **URBAN FARMING INCENTIVES

SOIL TYPES:

- ALTAMONT CLAY LOAM
- YOLO CLAY LOAM
- RAMONA CLAY LOAM

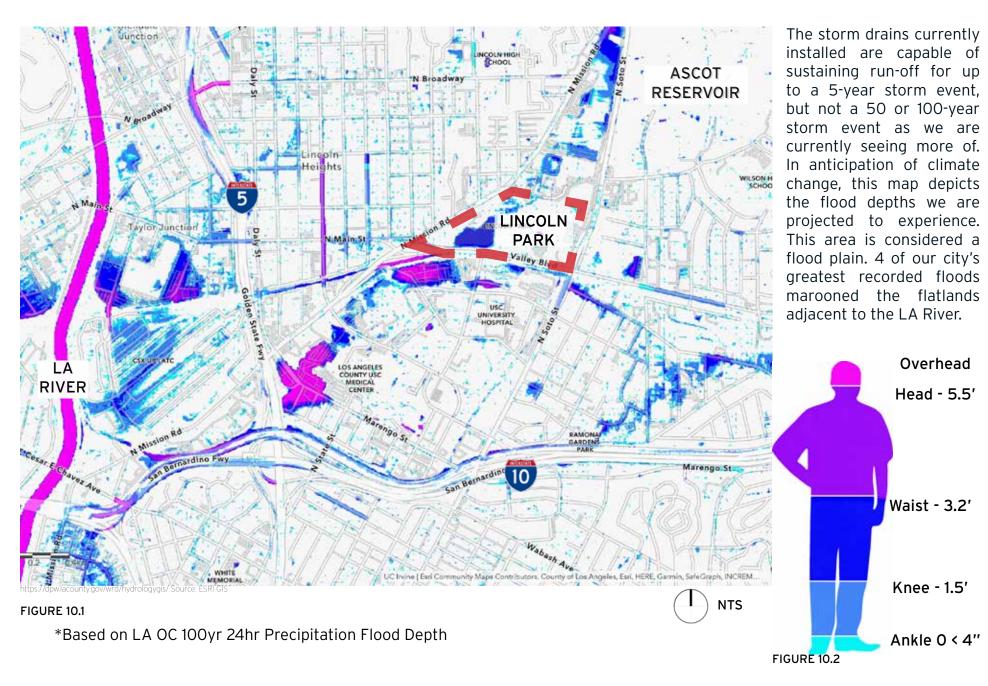




**HILLSIDE GRADING ZONE

There is a pretty significant grade change of 100' between the bottom of the lake and the top of the hill. According to ZIMAS, there are hillside zoning restrictions that will limit my design options on the slope. The pathways that lead to the top are not ADA compatible. Evidence of soil liquefaction can be observed in the crumbling condition of pathways as well as the lake bed liner. Prior to development, the natural geography of the park would be considered an apex of an alluvial fan. A 1916 soil survey indicates 3 distinct types of soil within the park. All types of soil contain high percentages of clay and organic matter that slow infiltration but provide rich fertility for growing crops.

FLOOD RISK ANALYSIS



PROJECT STATEMENT

Disparities in urban planning have significantly neglected cultural landscapes of Los Angeles. This design seeks to **RENEW** accessibility to nature for East Angelenos with a dynamic **RESTORATION** of the ecological infrastructure within Lincoln Park. The **REVIVAL** of this park's natural systems and features will **REVITALIZE** the overall sense of wellness and safety for the community of Lincoln Heights.





PROJECT JUSTIFICATION

- Historic site (147 years old) landmark preservation
- Identified as vital component of the Olmsted-Bartholomew "Green Necklace" plan for Los Angeles
- Rec center and pathways specified by LA County Parks Assessment for total replacement
- Mitigate heat, pollution, and potential flood damage
- Reconnect and engage dense, low-income, neighborhoods with ecological processes
- Repair and restore endemic ecosystems
- Revive buried watercourse to enhance stormwater management, biodiversity, and area aesthetics

DESIGN METAPHOR

HISTORY OF WATER AT LINCOLN PARK + IMPORTANCE OF WATER MANAGEMENT







East Lake Park, Detroit Photographic, 1904, Postcard



C. Courtesy of the LA Public Library



Courtesy of MIG



. John Gollings



F. Courtesy of Ethan Rohloff Photography

Cultural sustainability and preserving buildings in low-income neighborhoods are often overlooked in Los Angeles. Without an understanding and appreciation for our ecosystems and vibrant culture, we risk continued devaluation of our landscapes and losing our perception of place. This park is a city landmark worthy of preservation. To breathe new life into this beloved park, I drew on inspiration from the past. Photos and postcards from the earliest years of the park reveal a close connection between park visitors and the water. Interweaving design, art, and ecology, I want to focus on the history of water at Lincoln Park as

my figurative design metaphor and use its presence in the landscape to teach the community about sustainable water management. Some Los Angeles natives are completely unaware that a river flows through the city's core and a vast system of tributaries were channeled under our feet. Playing in the mud or enjoying a moment of silence in the woods is something children in urban East Los Angeles do not often experience. As Earth's most precious resource, we need to develop sustainable strategies for protecting the quality of our water and the health of our ecosystems.

PROJECT GOALS

There are many opportunities to accomplish my goals. To revive the natural functions, I could replenish the tree canopy to mitigate heat and pollution. Using mostly natives and adaptable species would enhance the quality of habitat and biodiversity. To renew accessibility, I should make entrances more convenient for pedestrians. Pathways and amenities need to accommodate people of all abilities. Edge conditions require a buffer. I'd like to retain historic relics like the Plaza de la Raza, sculpture, and the last portion remaining of the conservatory which is the shade structure. I also see opportunities to improve perceptual qualities by introducing more junctures for recreation, education. Based on my analysis, I felt my proposed design should be especially sensitive to the vibrant community of Lincoln Heights, as well as the environment. This led me to prioritize the following four goals for my site: **stormwater** management, ecosystem resilience, accessibility + cultural sustainability.

My inventory and analysis of the park led me to develop a program with established objectives to guide my design decisions. Celebratory of life and using the universal appeal of nature I was inspired by styles popular at the park's inception like art nouveau to design demonstration gardens reminiscent in the foundation, but more organically stylized to reflect climate change. Following nature's example, I will implement various biomanipulation techniques to improve water quality, visual amenity, and detention storage effectiveness. Focusing on best management practices and a holistic approach, I strive to be sensitive to local cultures and encourage community ownership to prevent gentrification of the neighborhood. Overall, I want to maximize the potential to effectively harvest, treat, and re-use stormwater runoff on-site. Lincoln Heights certainly has an underbelly, but there is a correlation between a decrease in violent crime with increased access to maintained green spaces.



FIGURE 11

PROPOSED PROGRAM



PROPOSED ELEMENTS

STORMWATER MANAGEMENT

Daylight Arroyo
Constructed Wetland
Permeable Hardscapes
Cisterns + Rain Tanks
Biofiltration Planters
Infiltration Areas
Connection to Downtown LA
Water Recycling Project



ACCESSIBILITY

Shade Structures
ADA Accessible Amenities
New Signage
Circulation Buffers
Painted Bike Lanes
Curb Extensions
Benches + Handrails
Enhanced Crosswalks
Sheltered Bus Stops



ECOSYSTEM RESILIENCE

Native + Adaptive Plant Palettes
Drought-tolerant Species
Demonstration Gardens
Urban Forest
Bird Management
Habitat-Zones
Water Reuse
Erosion Control



CULTURAL SUSTAINABILITY

Interpretive Trails
Educational Signage
New Recreation + Senior Center
Flexible Gathering Spaces
Community Gardens
Local Art Installations
Bandstand
New Skate Park
Outdoor Classroom + Gallery



FIGURE 13

LANDSCAPE OPPORTUNITIES







ECOSYSTEM RESTORATION







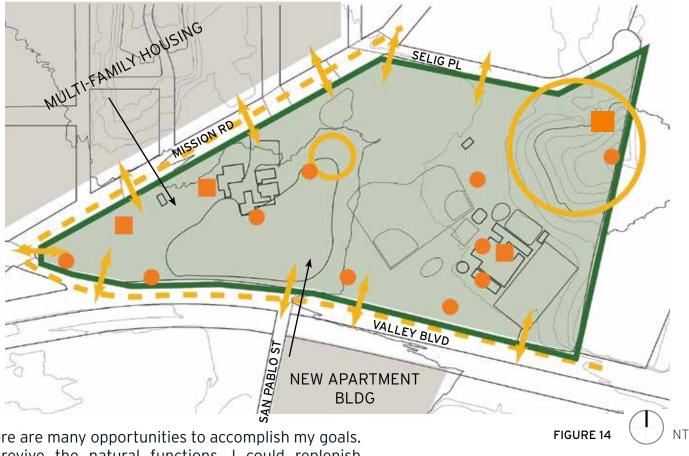
EASE ACCESSIBILITY







COMMUNITY ENGAGEMENT



There are many opportunities to accomplish my goals. To revive the natural functions, I could replenish the tree canopy to mitigate heat and pollution. Using mostly natives and adaptable species would enhance the quality of habitat and biodiversity. To renew accessibility, I should make entrances more convenient for pedestrians. Pathways and amenities need to accommodate people of all abilities. Edge conditions require a buffer. I'd like to retain historic relics like the Plaza de la Raza, sculpture, and the last portion remaining of the conservatory which is the shade structure. I also see opportunities to improve perceptual qualities by introducing more junctures for recreation, education, and community ownership.

ENTRANCE

BUFFER NEEDED

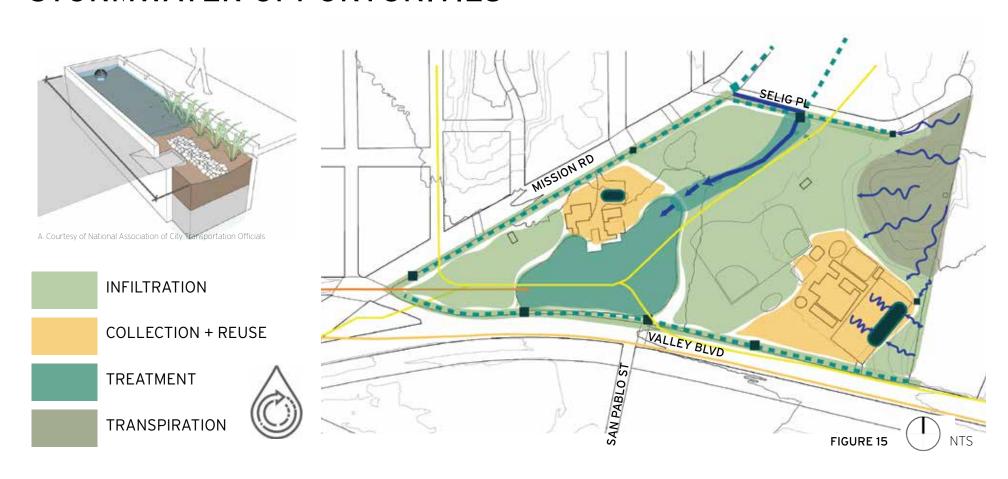
ADA COMPONENT

COMMUNITY OWNERSHIP

EDUCATIONAL/HISTORICAL

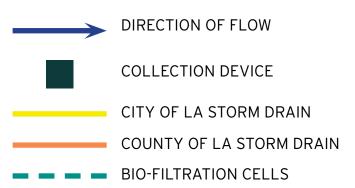
COMPONENT

STORMWATER OPPORTUNITIES



To revitalize stormwater management on site, I want to focus on capturing, treating, and re-using runoff received within the park and surrounding Lincoln Heights sub-watershed. To treat upland runoff, I could direct upland flow into bio-filtration cells that store water for re-use on-site. But taking advantage of Lincoln Park's most interesting features and the dynamic abilities of nature, my big

move will be to daylight the Arroyo de los Posos. Human access to the lake has destroyed its quality therefore I also propose to convert the lake into a constructed wetland and extend the northern shore to protect habitat but also provide scenic quality for visitors. This will cleanse runoff directed through the system before flowing to the LA River and the Pacific Ocean.



AN ALTERNATIVE WATER SOURCE

LA Sanitation has proposed a 2-phase plan to eventually connect Hollenbeck Lake and other inner-city park irrigation systems to the LADWP Downtown Recycled Water Project. I think there ROSE HILL is an opportunity to connect Lincoln Park Lake to the system by adding an extension to the Alameda 5 line shown in orange below. In combination with collecting and re-using upland runoff from the greater Lincoln Heights sub-watershed onsite this could drastically reduce the amount of potable water used to maintain the park. ENDALE CTION EL PARK WRP DOWNTOWN WRP of Southern alifornia Monte Busway (Toll road) gernardino Fwy FIGURE 16 LINCOLN HEIGHTS Elysian Park - Downtown SUB-WATERSHED **Water Recycling Projects BOUNDARY** Proposed Pipeline

CONSTRAINTS







SOIL LIQUEFACTION



IMPAIRED BODY OF WATER



The constraints I face are complex. I'm working with an impaired body of water, hillside zoning requirements, threats of liquefaction, the railroad adjacency, maintaining lines of sight for law enforcement, an overabundance of birds, homeless encampments, and working with a historic landmark. Excess nitrogen and phosphorous from fertilizers and bird waste have resulted in eutrophication or increased growth in algae. Algae levels no longer support stocking the water with fish, but catch and release are still allowed.

HISTORIC BUILDING

DENSE VEHICLE TRAFFIC

UNION PACIFIC RAIL LINES

LAW ENFORCEMENT SIGHT LINES

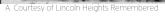
HOMELESS ENCAMPMENT

DESIGN INSPIRATION











C Courtesy of Las Pilitas







). Courtesy of Tallahassee.com

F. Courtesy of Florida Memor

E Courtesy of Ryan Davidson Photography

These intentions made me think of my own childhood in Tallahassee, Florida playing in the woods or tributary waterways of the Ochlockonee River. In stark contrast to California, the Florida panhandle is characterized by flat woods which are a combination of swamps, prairies, and marshes. I was also inspired by the history

of Lincoln Park and its original intent as a pleasureground with sinuous paths that wove around botanical gardens and once boasted the largest collection of cacti and orchids on the West Coast. I wanted to create a sense of wildness that inspires curiosity and offers respite from urbanization.

METHODOLOGY



STORMWATER MANAGEMENT

- Sustainable <u>Stormwater Management</u> Kevin Lipton
- · Restoring Neighborhood Streams Planning, Design, and Construction Ann Riley
- Green Streetscape Design with Stormwater Management Freek Loos
- Urban Street Stormwater Guide NACTO
- · Guide to Constructed Wetlands EPA



ECOSYSTEM RESILIENCE

- Toward an Urban Ecology Kate Orff
- <u>Trees in Urban Design</u> Henry Arnold
- The LA River Master Plan Landscaping Guidelines
- Guide to Urban Cooling Strategies Paul Osmond
- Selection of Native Wetland Plants for Water Treatment of Urban Runoff Rejmankova + Bayer

ACCESSIBILITY

- People Places: Design Guidelines for Urban Open Space Claire Cooper Marcus
- Urban Street Design Guide NACTO
- · The Image of the City Kevin Lynch
- 2010 ADA Standards for Accessible Design
- Form and Fabric in Landscape Architecture Catherine Dee

CULTURAL SUSTAINABILITY

- The Lincoln Heights Historical Preservation Plan
- A Pattern Language Christopher Alexander, et. al.
- Measuring Urban Design Metrics for Livable Spaces Reid Ewing
- The Death and Life of Great American Cities Jane Jacobs
- Happy City: Transforming Our Lives Through Urban Design Charles Montgomery

PRECEDENT: HOLLENBECK PARK

TAKEAWAYS

- IMPAIRED WATER BODY
- FABRICATED WETLAND
- STORMWATER MANAGEMENT
- OPEN PARK SPACE
- ALTERNATE H20 SOURCE

The primary objective of this ongoing project is to replace 74.1 acre-feet of water per year of potable water with an alternative, sustainable source. This restoration project has not yet begun, but it was helpful to read the FINAL CONCEPT REPORT - Hollenbeck Park Lake Rehabilitation and Management Stormwater prepared by ch2m, now Jacobs Engineering Group. Objectives and design recommendations for both phases of this project seemed applicable and potentially possible for Lincoln Park.

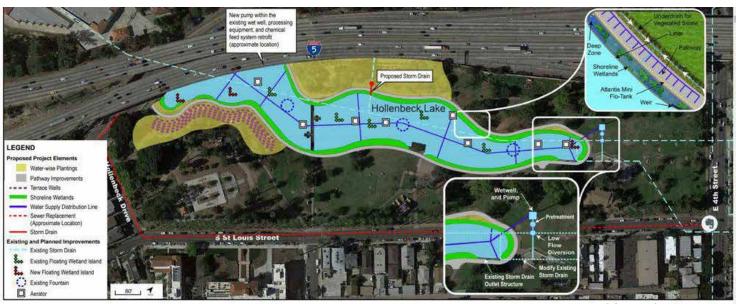
LA Sanitation LA Public Works

415 S Saint Louis St, Los Angeles, CA 90033 Size: 12 acres



HOLLENBECK PARK NOW BEFORE RENOVATIONS

A. Source: LA Sanitation



HOLLENBECK PARK RENOVATION CONCEPT PLAN

B. Source: LA Sanitation

PRECEDENT: BOOKER T. ANDERSON JR PARK

TAKEAWAYS

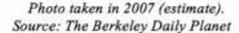
- URBAN STREAM RESTORATION
- DAYLIGHTED CULVERT
- NEIGHBORHOOD POLITICS
- RAILROAD ADJACENCY
- SITE CORRIDORS
- SOIL BIOENGINEERING
- FLOODPLAIN OVERFLOW

In my methodology research, I found Booker T. Anderson Jr. Park located in the East Bay Area. In a chain of parks, the Baxter Creek was daylit as an aesthetic to stormwater management and reintroduce nature in a high crime, inner-city environment. The segment through this park is slightly longer than the Arroyo de Los Posos, at just over 900 feet. This project also used interesting California native plant palettes and soil bio-engineering techniques like fascines (or live stakes) to stabilize the shoreline.

Urban Creeks Council Ann Riley 2000 - 2015

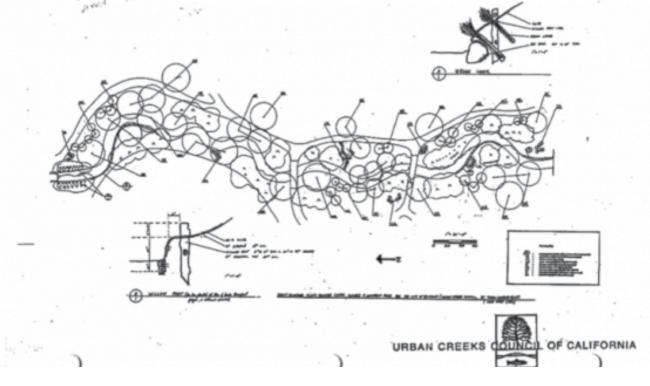
Carlson Blvd Richmond, CA Size: 22 acres



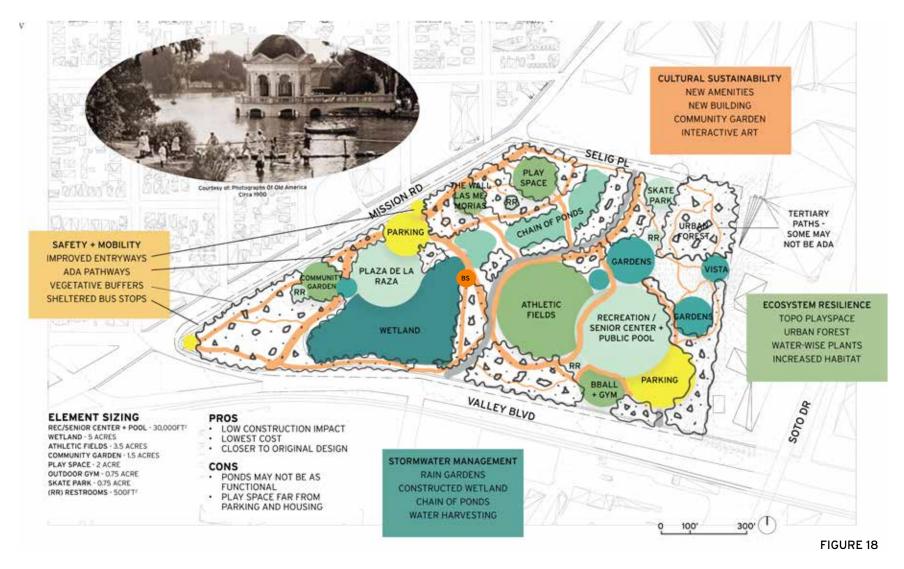




Aquatic vegetation shading stream and enhancing water quality. Source: Ken Schwab June 10, 2013



CONCEPT 1



In my first concept, to maintain historic integrity, I left most of the major amenities in their original iteration were it footprints. Pathways from previous designs were reintroduced. A series of wet/dry ponds or rain gardens would follow the watercourse of the Arroyo de los Posos that vary in depth leading up to wetland would capture water from within the within the park.

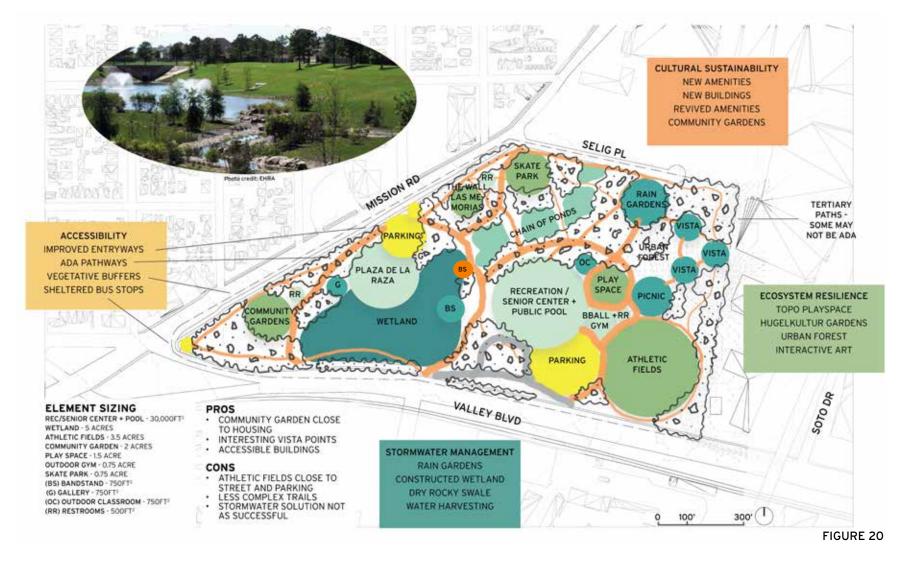
local park watershed. The benefits that I saw in this iteration were its minimal impact on the landscape, reduced construction costs, and the resemblance to the 1912 design by Laurie D. Cox. I was not confident in the stormwater management solution or the location of recreational and play elements within the park.

CONCEPT 2



In my second concept, I wanted to explore bringing the major amenities closer to the water. Taking advantage of the beautiful backdrop of the Plaza de la Raza and downtown LA over the lake I moved the Recreation and Senior Center over the water with an observation deck that could double as a flexible event space. To enhance the presence of the water, I elongated the shoreline of the lake and daylight the Arroyo in its historic footprint. Smaller amenities are relocated to improve community access. I also reintroduced the historic bandstand. Further soil typology research and evidence of soil liquefaction are what ultimately swayed me from this approach.

CONCEPT 3



For my third concept, I was keeping a "Zen View" in mind. The recreation center was swapped with the athletic fields bringing the building closer to the water for better interior views but set back so pathways can meander between the water and buildings. Moving the athletic fields closer to the hillside could allow me to incorporate more

topography into the user experience. Rather than sitting on hot, shadeless bleachers, spectators could lay out a blanket on the hill for an unobstructed view of the baseball games with the skyline of downtown LA in the background. The proximity of the athletic fields to parking and the hillside zoning requirements are likely to impede this iteration.

SCHEMATIC SITE PLAN



FIGURE 21

My final iteration combines what I felt were the most successful elements of my 3 concept designs. I sketched through the opportunities to relocate major elements, but in an effort to respect rather than manage the landscape, I leave most building footprints in their existing location. Renovations of other parks from this period in Los Angeles have

adapted a monotonous identity that erases the distinction and dignity these parks once possessed. To enhance the resilience of the landscape but also preserve the historic integrity of Lincoln Park I prioritized successful elements of the past both natural and structural.

LEGEND

A. VALLEY ENTRANCE	F. ARROYO DE LOS POSOS	K. COMMUNITY GARDEN
B. LINCOLN PARK WETLAND	G. PICNIC DELL	L. OUTDOOR GALLERY
C. PEDESTRIAN BRIDGE	H. GEORGE HILL LEARNING GARDENS	M. THE TREE FORTRESS
D. PLAZA DE LA RAZA	I. RECREATION + SENIOR CENTER	N. LINCOLN PARK SKATE PARK
E. WET/DRY POND	J. VISTA POINT	P. PARKING

ILLUSTRATIVE MASTER PLAN



PROPOSED MATERIALS







ANGELUS PERMEABLE PAVERS



POROUS CONCRETE



WOOD

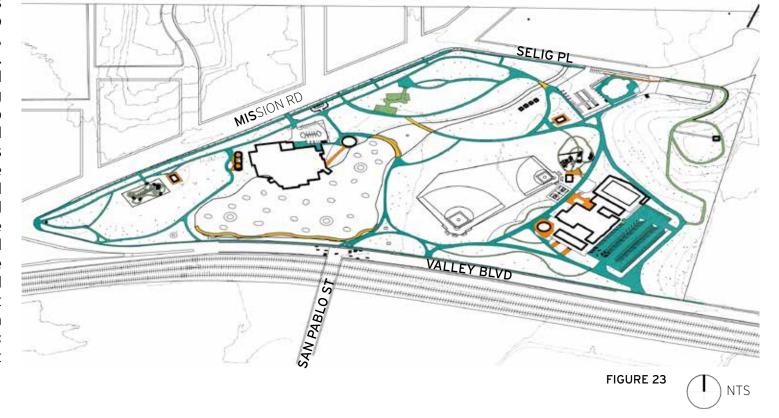


GABION



IRON HANDRAILS

The primary walking paths will be porous concrete to maintain stability for ADA users and allow permeability. These pathways wrap around the lake with small resting places positioned close to points of interest and framed views. Secondary pathways that meander through the gardens and hillside will be stabilized decomposed granite. Plazas and flexible spaces will appear elevated with blended permeable pavers. Lastly, bridges will be wooden with wrought iron handrails that have an iris design similar to the Iris douglasiana I want to plant around the wetland.



PROPOSED ART + SIGNAGE







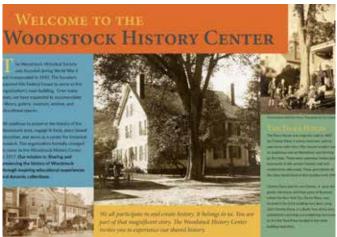
B. Stickleback by artist Alan Ross- Courtesy of MIG Welding UK



C. Courtesy of NY Daily News



D. Designed by: Pulse Design, Inc



E. Courtesy of Woodstock History Center

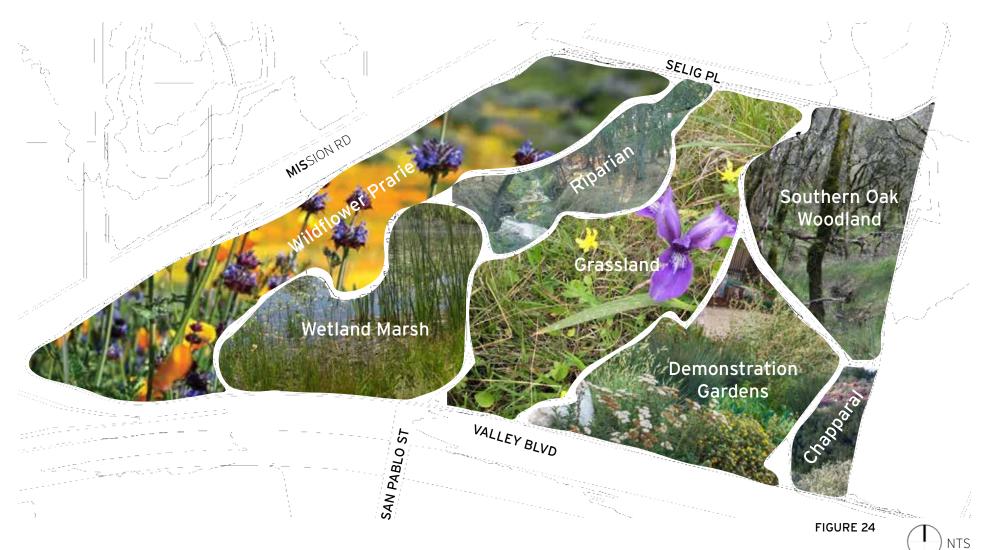


F. Courtesy of The Parks Trust

Public art is extremely important to both Latino and Asian cultures. To engage the community and encourage cultural sustainability, I would invite the neighborhood to contribute to the educational and interactive elements in Lincoln Park. This could

be in the form of sculptures, murals, or mosaics that decorate walls, benches or even the storm drains. Signage will educate users on the purpose of stormwater management, bird management, as well as Lincoln Park's history and ecology.

PROPOSED PLANTING



Strengthening the foundation around the waterways and nurturing biodiversity, I'm choosing to work with mostly knock-out Southern California grasses and natives including buckwheat, and Ceanothus. I will also use some adaptive species in the learning gardens and on the hillside like Lomandra for erosion control. Using a native plant

palette provides valuable shelter and food for local wildlife while supporting the declining pollinator species. Replenishing the existing urban forest with younger trees will sequester pollution and carbon. Native grasslands also serve as resilient carbon sinks making the park landscape more adaptive to climate change.

PLANTING PALETTES















Trees

- Aesculus californica
- Arbutus marina
- Cercis occidentalis
- Lyonothamnus floribundus ssp. Aspleniifolius
- · Quercus agrifolia

Trees

- Aesculus californica
- Cercis occidentalis
- Platanus racemosa
- Populus fremontii
- · Quercus agrifolia

Trees

- Cercis occidentalis
- Chilopsis linearis
- · Platanus racemosa
- · Populus fremontii
- · Quercus agrifolia

Trees

- · Arbutus marina
- Cercis occidentalis
- Chilopsis linearis
- · Platanus racemosa
- Quercus agrifolia

Under story

· Stipa pulchara

· Iris douglasiana

· Poa cita

Dodecatheon

clevelandii

· Clarkia unquiculata

· Eriogonum fasciculatum

Lupinus succulentus

· Agrostis pallens

var. polifolium

Penstemon

heterophyllus

Sisyrinchium bellum

· Danthonia californica

· Eschscholzia californica

Trees

- Heteromeles arbutifolia
- · Juglans californica
- · Quercus agrifolia
- Umbellularia

- Baccharis pilularis
- fasciculatum var.
- · Lomandra longifolia
- Opuntia treleasei

- carpesioides
- · Frangula californica
- Achillea millefolium

Trees

- · Arbutus marina
- Heteromeles arbutifolia
- · Chilopsis linearis
- · Quercus agrifolia
- · Quercus lobata

Under story

- · Achillea millefolium
- · Adenostoma fasciculatum
- · Arctostaphylos glauca
- Carpenteria californica
- · Leptodactylon californicum
- Dudleya cymosa
- Diplacus puniceus
- Frangula californica
- · Artemisia californica
- · Eriogonum fasciculatum var. polifolium

Exhibits

- Asian
- Australian
- North American
- South American
- South African
- Oaks
- Fire-resistant
- Medicinal
- **Alternative**

Under story

- Stipa pulchara
- Salvia clevelandii
- Lupinus succulentus
- · Penstemon heterophyllus
- Clarkia unguiculata
- · Rosa californica
- · Festuca californica
- Lasthenia glabrata
- Malacothamnus densiflorus
- · Erythranthe cardinalis
- · Nemophila menziesii
- Salvia apiana
- · Ceanothus 'Centennial
- · Eschscholzia californica

Under story

- Hordeum brachyantherum

- Schoenoplectus

- · Artemisia douglasiana
- Anemopsis californica
- Cyperus eragrostis

- · Lobelia cardinalis
- californicus
- · Iris douglasiana

- Under story

- Carex spissa
- · Elymus glaucus
- Eleocharis palustris

- Parnassia palustris
- Stachys ajugoides
- Equisetum hyemale

- · Carex praegracilis
- Muhlenbergia

- · Salix lasiolepis
- · Rosa californica
- · Leymus condensatus

- capillaris 'Lenca'
- Calliandra eriophylla · Calycanthus
- occidentalis
- Erythranthe guttata
- · Iris douglasiana
- Sisyrinchium bellum
- 'Canyon Prince' Carpenteria californica

- Quercus lobata

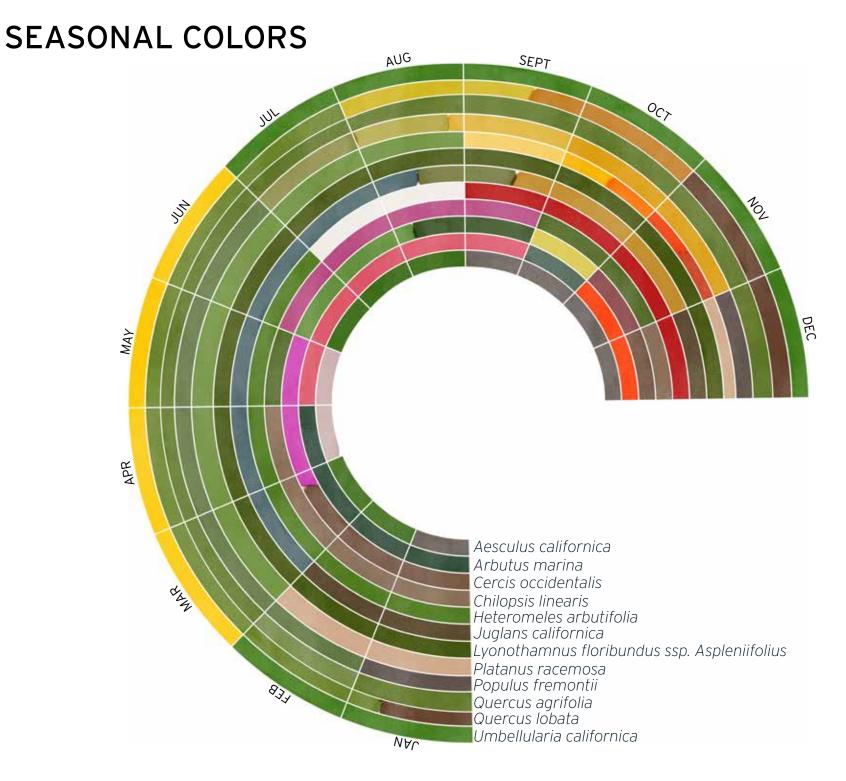
californica

- Under story
- Carex globosa Eriogonum
- polifolium
- · Lonicera hispidula
- Salvia spathacea
- · Stipa pulcha Venegasia
- · Ceanothus 'Concha'

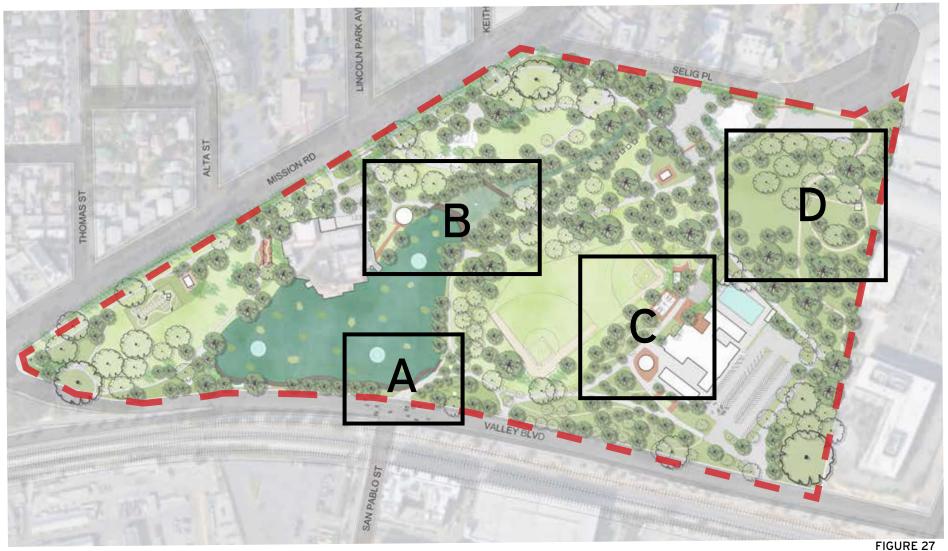
- Mediterranean
- Planting under

- Lawn

FIGURE 25



ENLARGEMENTS

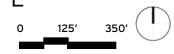


A. VALLEY BLVD ENTRANCE

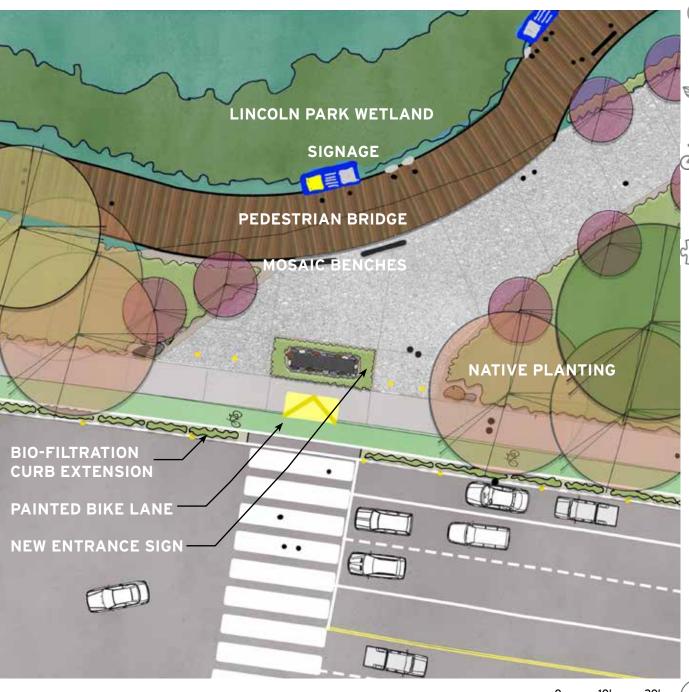
C. REC CENTER, GARDENS, REC CENTER

B. THE ARROYO + WETLAND

D. VISTA POINT + SLOPE



ENLARGEMENT A



STORMWATER MANAGEMENT

- LINCOLN PARK WETLAND
- BIO-FILTRATION CURB EXTENSIONS

ECOSYSTEM RESILIENCE

- NATIVE PLANT PALETTE
- DROUGHT TOLERANT SPECIES

ACCESSIBILITY

- · PEDESTRIAN BRIDGE
- PAINTED BIKE LANE
- · RELOCATION OF CROSSWALK
- CIRCULATION BUFFERS

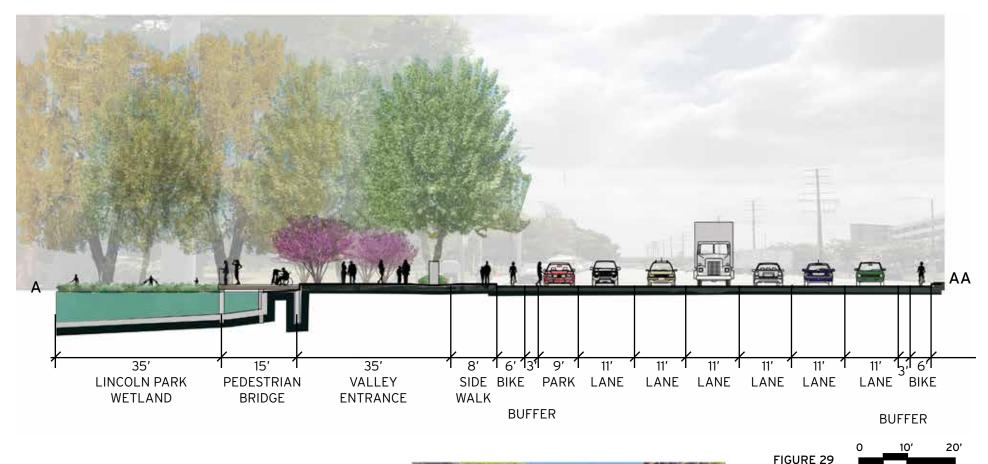
CULTURAL SUSTAINABILITY

- MOSAIC BENCHES
- EDUCATIONAL SIGNAGE

The crossing and adjacency conditions at this intersection were both exposed and dangerous. To renew accessibility, I propose shifting the crosswalk from the west to the east end of the intersection. This will create a more convenient crossing for the residents in the new complex and medical employees crossing here with a framed view of the wetland and Plaza de la Raza beyond. I also propose a curb extension with bio-filtration cells that captures and prevents debris from entering the wetland but also protects the newly painted bike lane and wheelchair

FIGURE 28

SECTION A - AA

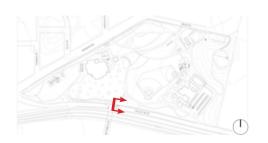


Here in section A-AA, I've illustrated the road diet I imposed to create space for the bike lanes and stormwater cells. The number of lanes did not change, but I thinned them from 14' to 11.' The sign I've modeled to compliment historic art deco signs located at Mission Rd and Lincoln Park Dr sculpted in the 1930s.



51



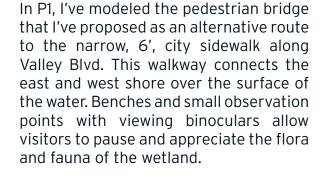


PERSPECTIVES



P1. VIEW OF PEDESTRIAN BRIDGE LOOKING EAST

FIGURE 30





P2. NEW ENTRANCE SIGN FROM INTERSECTION

FIGURE 31

In P2, I've modeled the view from the crosswalk into Lincoln Park from the Valley Blvd entrance. The Plaza de la Raza and fountains beckon users into the park beyond for a breath of fresh air or a moment of respite.



PERSPECTIVES



P3. BIO-FILTRATION CELLS BUFFER CYCLISTS AND PEDESTRIANS

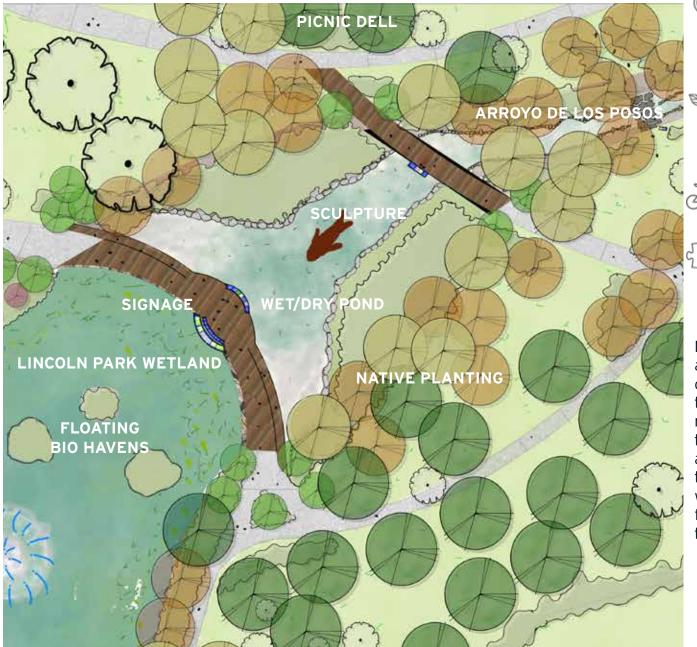
FIGURE 32

In P3, I depict a glimpse of the NACTO Urban Streetscape Design components I propose for Valley Blvd. The shifted crosswalk has newly painted stripes that clearly delineate the separation between different modes of transportation. Condensing the lane widths and shifting the parallel street parking out 9' on both sides of Valley Blvd creates space for

an established 6' bicycle lane. Painting the bike lake increases visibility and safety for both cyclists and motorists. The remaining 3' provide adequate space as a planted buffer with bio-filtration cells that absorb polluted runoff from the street before it enters the wetland.



ENLARGEMENT B





- · ARROYO DE LOS POSOS
- WET/DRY DETENTION POND
- LINCOLN PARK WETLAND
- PERMEABLE HARDSCAPES



ECOSYSTEM RESILIENCE

- NATIVE PLANT PALETTE
- IMPROVED HABITAT
- EROSION CONTROL
- BIRD MANAGEMENT



ACCESSIBILITY

- ADA ACCESSIBLE RAMPS
- NEW PATHWAYS



CULTURAL SUSTAINABILITY

- · COMMUNITY ART
- EDUCATIONAL SIGNAGE
- FLEXIBLE GATHERING SPACES

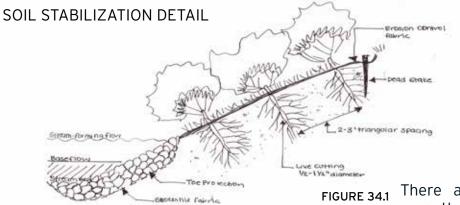
Mimicking the functions of a natural arroyo, I've created a 920' vegetated channel that accepts runoff directed through catchment devices at the northern edge of the park. Water is treated through phytoremediation as it flows through the arroyo to this dry/wet pond where the treated water will flow into the wetland via a flow control device or infiltrate into the soil for groundwater recharge.



0 30' 60' (

SECTION B-BB





В BB FIGURE 34 10′ 15′ 18′ 15′ 10′ VEGETATED **ARROYO VEGETATED RIPARIAN** RIPARIAN **BUFFER** DE LOS POSOS **BUFFER**

There are 4 opportunities to cross the arroyo in the park. This is a boulder crossing that links the picnic dell to a new playground. I thought this would provide a sense of adventure for the kids. I use boulders and gabion walls to anchor the bridges and also serve as check dams to control high flow events and filter trash. The original arroyo was probably double the width I propose, but after speaking with Jessica Hall of LA Creek Freak, I felt it would be a mistake to focus on a perennial flow in Southern California. In Ann Riley's book, Llearned L could use fascines or live stakes of native willow and cottonwood with coir to stabilize the banks on the arroyo.



ARROYO DE LOS POSOS



P1. VIEW OF BOULDER CROSSING LOOKING EAST



P2. ARROYO DE LOS POSOS LOOKING NORTH

FIGURE 36

FIGURE 35

In P1, I've modeled the boulder crossing over the Arroyo de los Posos. This is intended to be interesting whether there is a water level in the arroyo or not. In the wet season, sedges, rushes, and Juncus buffer entry into the waterway, and in the dry seasons, they cushion any little tumbles from the boulders.

In P2, I depict how the Arroyo de los Posos is expected to support the cadence of runoff received from an intense storm event.



PERSPECTIVES



P3. VIEW OF BOULDER CROSSING LOOKING SOUTH

FIGURE 37

For P3, I wanted to convey that this crossing should still be passable if we were to receive community to nature and climate change. record precipitation. In the Southern California Landscape, it is expected for the water level of the arroyo to drastically ecosystem. vary from year to year. This demonstrates

educational value by exposing It also inspires kids to observe and explore the diversity and adaptation of our dynamic



SECTION C-CC







B.prospectcontractors.com

C CC FIGURE 38 80' 30' 50' BRIDGE + WET/DRY LINCOLN PARK WETLAND **POND** GABION WEIR W/ FLOW CONTROL

The current depth on the lake is 4'. Since I propose removing the storm drains for the arroyo, I also recommend that they be removed here to replace the liner bed, but also grade both deeper and more shallow portions that create ideal conditions for aquatic life and microorganisms. I would also anchor floating biohavens and 3 fountains that aid water aeration and provide habitat. This section depicts the connection between the wetland and the detention pond. Runoff from the arroyo intended to primarily infiltrate into the water table for groundwater recharge in the detention pond. If water levels were to exceed 6' deep, overflow would enter the wetland via a flow control device.

DEVICE

LINCOLN PARK WETLAND



P1. VIEW OF WETLAND LOOKING SOUTH





P2. VIEW OF WETLAND FROM WALKWAY

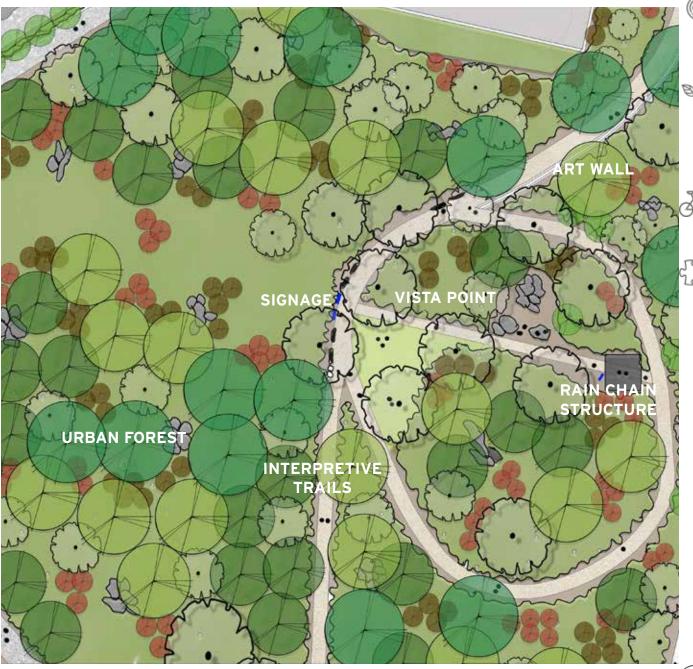
FIGURE 40

In P1, I've rendered a view over the Lincoln Park Wetland from the primary circulation bridge at the connection between the detention pond. The new bandstand would be constructed in its original building footprint and adjacent to the Plaza de la Raza. This proximity lends its photogenic value to performances and events.

In P2, I depict the bridge from the northeastern shore of the wetland with a view of the Plaza de la Raza beyond. Iris and grasses protect aquatic ecosystems from debris and prevent human interaction with the overabundant migratory bird species.



ENLARGEMENT C



STORMWATER MANAGEMENT

- TREE PLANTING (TRANSPIRATION)
- VEGETATION (INFILTRATION)
- PERMEABLE HARDSCAPES

ECOSYSTEM RESILIENCE

- URBAN FOREST
- NATIVE PLANT PALETTE
- DROUGHT TOLERANT SPECIES
- IMPROVED HABITAT
- EROSION CONTROL

ACCESSIBILITY

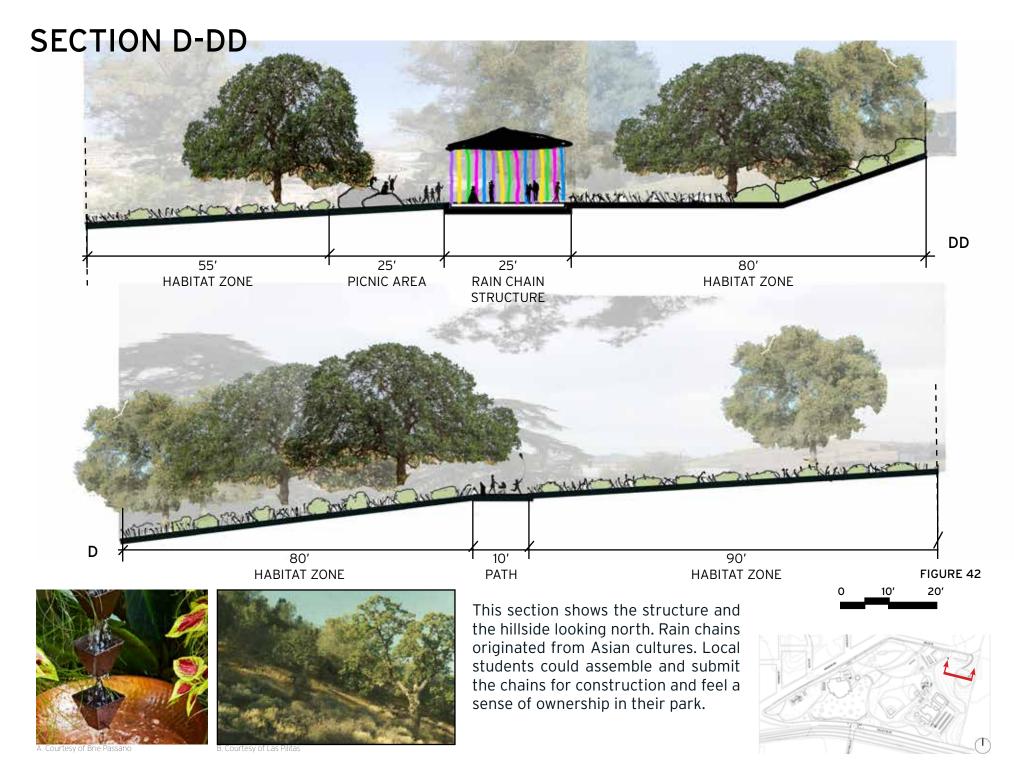
- ADA ACCESSIBLE RAMPS
- NEW PATHWAYS

CULTURAL SUSTAINABILITY

- COMMUNITY ART
- EDUCATIONAL SIGNAGE
- INTERPRETIVE TRAILS

Because of hillside zoning, I did not want to make complex, physical alterations. I did regrade a portion of the trail ADA accessible, though it is closer to 7-8%. To stabilize the soil and create habitat, I've planted a lot of Valley and Coast Live Oaks, Bay Laurel, Southern California Black Walnut, and Toyon. At the top of the hill, I installed a shade structure made of rain chains that frames a picturesque view of downtown LA.





VISTA POINT



P1. RAIN CHAIN STRUCTURE LOOKING SOUTHEAST

FIGURE 43

This perspective depicts how I anticipate users to enjoy the vista point at the top of the slope. There is a small picnic area adjacent to the rain chain structure so hikers could take a short break or enjoy lunch with a view. I'm using mostly grasses, forbs, and some sporadic

rocky outcrops with native cacti that detour people from veering off pathways. Educational signage informs visitors of the purpose behind the rain chains and provides recognition to the local children who submitted their community projects for the park.



DOWNTOWN LA VIEW



P2. VIEW OF PARK AND DOWNTOWN LOS ANGELES

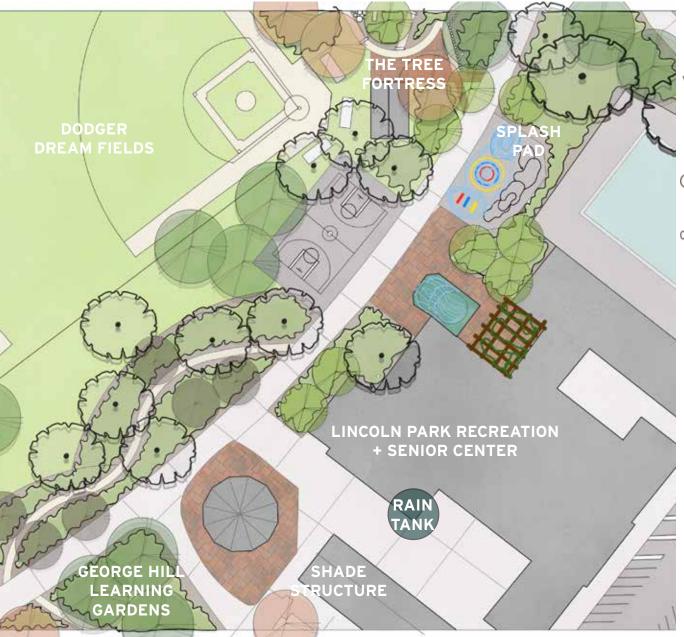
FIGURE 44

In P2, I depict the framed view of the impressive downtown Los Angeles skyline from the midpoint in the slope. This is intended to serve as a popular point for

photography and reflection. I consider this view a connection between the past and the present where users could observe our ever-evolving metropolis.



ENLARGEMENT D





- RAIN TANKS
- INFILTRATION AREAS
- PERMEABLE HARDSCAPES



ECOSYSTEM RESILIENCE

- NATIVE + ADAPTIVE PLANT PALETTES
- DROUGHT TOLERANT SPECIES
- WATER RE-USE



ACCESSIBILITY

- ADA ACCESSIBLE AMENITIES
- SHADE STRUCTURES



CULTURAL SUSTAINABILITY

- LANDMARK PRESERVATION
- EDUCATIONAL SIGNAGE
- LOCAL ART INSTALLATIONS
- FLEXIBLE GATHERING SPACES

I sketched through opportunities to relocate this structure, but ultimately, preserve foundations, to the bathhouse, and shade structure I left them in place. A water feature occupies what is left of a lily pond from the original construction. This will be supplied with water collected from the roof and hardscapes. Educational signage will inform visitors about the history of the park and why water management is important sustaining landscapes. our



0 30' 60'

SECTION E-EE

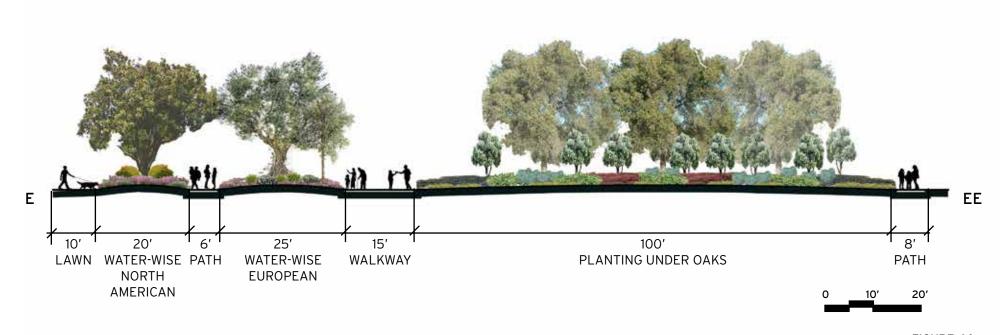


FIGURE 46





Most gardens display palettes that are endemic to the LA Basin. I took advantage of the placement of existing tree species to curate adaptive palettes from around the world. On the far left there was an existing Southern Magnolia that I've surrounded with waterwise shrubs native to my southern neck of the woods. There's a Mediterranean garden in the middle and a large planting under oaks exhibit to the right.



GEORGE HILL LEARNING GARDEN



FIGURE 47

P1. VIEW OF RECREATION CENTER FROM GARDENS

George Hill was a public servant of the City of Los Angeles who dedicated his spare time to the youth at the Lincoln Park Recreation Center before he passed. He was best known for telling stories about his travels from

around the world. In his honor, I resurrected the botanical gardens that surrounded the former conservatory and dedicated this living international classroom to him.



THE TREE FORTRESS



FIGURE 48

P1. VIEW OF PLAYGROUND AND HILL

"The instinct to climb up to some high place, from which you can look down and survey your world, seems to be a fundamental instinct." (Tree Places - Pattern Language) To encourage access to nature for children of all abilities, I've modeled an ADA-accessible tree house in an adventure playground.





LINCOLN PARK COMMUNITY GARDEN



P1. VIEW OF COMMUNITY GARDEN AND WETLAND

FIGURE 49

According to ZIMAS, there is an urban farming incentive inside Lincoln Park. In my analysis, I learned the Ramona Clay Loam and Yolo Clay Loam are rich in alluvial sediment creating ideal conditions for crop growth. Many of the neighborhood residents rent and do not have

the personal space to grow their own produce if they wanted to. Placing this garden close to the neighborhood would increase regular visitation by more residents and contribute to community ownership of the park.



LINCOLN PARK NIGHT MARKET



P1. VIEW OF THE LINCOLN PARK NIGHT MARKET

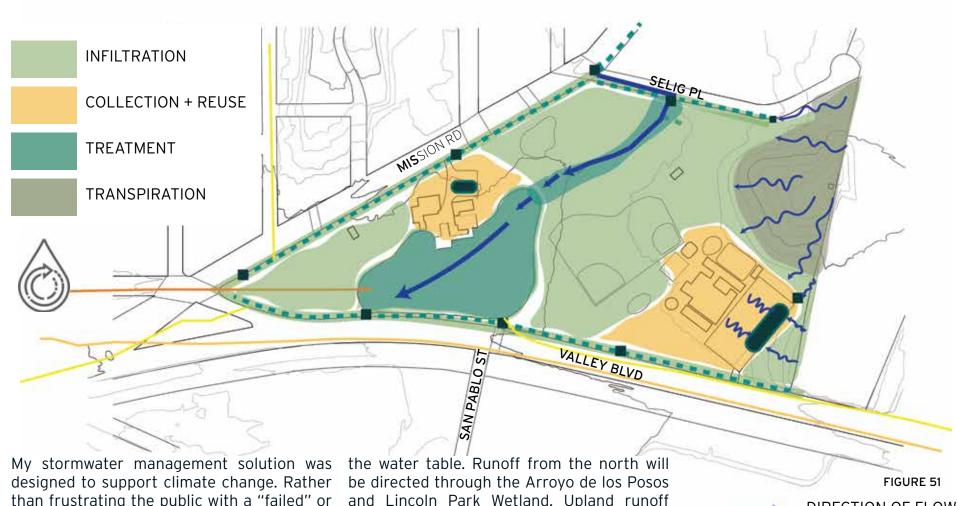
FIGURE 50

The parking lot for the recreation center was a valuable asset to the community as it provided vital services to the community during the pandemic. To enhance its flexibility, I would propose that the community relocate the

currently displaced Avenue 26 Night Market to this parking lot as its permanent home. This view shows the market at dusk while patrons line up in front of trucks to sample the creative culinary offerings and support local businesses.



STORMWATER MANAGEMENT



My stormwater management solution was designed to support climate change. Rather than frustrating the public with a "failed" or "dead" landscape that isn't actually dead, I want to demonstrate the functions of the water cycle over the park landscape. Dry and wet season runoff will be directed into catchment devices along the park's edges that cleanse the water through various bio-remediation techniques before either flowing to the LA River or infiltrating into

the water table. Runoff from the north will be directed through the Arroyo de los Posos and Lincoln Park Wetland. Upland runoff from the neighborhood to the east and roadways will be accepted into a chain or bio-filtration cells that line Mission Rd and Valley Blvd. Precipitation over the landscape will be encouraged to infiltrate or transpire from the urban forest. Internal infrastructure will be collect surface runoff in rain tanks or subterranean cisterns for re-use.

DIRECTION OF FLOW
BIO-FILTRATION CELLS
COLLECTION DEVICE
CITY STORM DRAIN

COUNTY STORM DRAIN

CONCLUSION









I conclude with photos of elements that have seen generations of Angelenos enjoy this park for 147 years, and I want to draw your attention to the photo in the top right. This is a dedication to Levi Newton Breed, who helped found this

park. This bench was installed in 1937. Although it's currently covered in graffiti and trash, it's still beautiful. The quote on the plaque and the art within the park is what moved me to take on this extremely challenging project.





ACKNOWLEDGMENTS

THANK YOU!!

I'd like to thank my amazing capstone professors for shepherding me through this incredibly rewarding process. Your patience and encouragement will always be appreciated.

I'd also like to thank Deborah Deets, Jessica Hall, the wonderful staff of the Lincoln Park Recreation and Senior Center for answering all of my questions.

And last, I want to thank my friends, family, cohort, and puppies for your love and support over the last 3 years.

Cover

A - https://silentlocations.com/2019/08/31/how-mary-pickford-filmed-daddy-long-legs-part-one/

Page 2

Quote: Arnold, Henry F. Trees in Urban Design. Van Nostrand Reinhold ., 1993. page 57

Page 3

A - https://tessa.lapl.org/cdm/ref/collection/photos/id/84448

Page 4

A - https://calisphere.org/item/7ddc3c4ad3b0158dea832abbc44fe277/

Page 6

A - Rachael Dwork

B - Rachael Dwork

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