Landscape Reparations: Reviving Economy and Urban Ecology in South Los Angeles

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PROJECT STATEMENT

Through the design of an eco-industrial park on a former brownfield, the project seeks to create a green innovation hub to support economic self reliance, to heal an impaired watershed, and to inspire community well being through a restorative commons within a vibrant, local, urban ecology.

ECO INDUSTRIAL PARK

Reconciling economic performance with respect for the ecology and environment.

URBAN ECOLOGY

The relationship of living organisms with each other in an urban environment. Includes economic, social, and natural systems.

RESTORATIVE PRACTICES

Develop community and manage conflict by repairing harm and building relationships.[1]

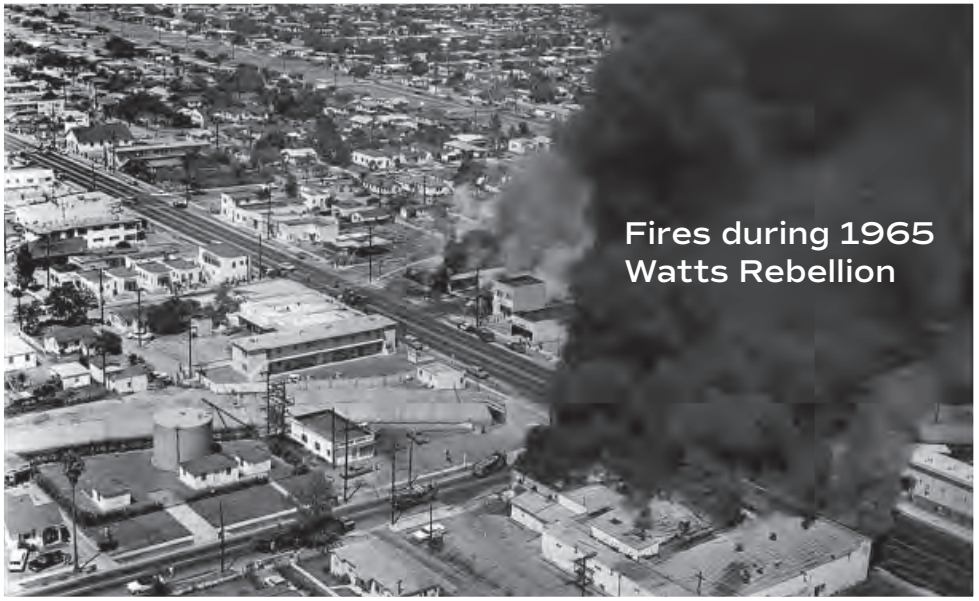
RESTORATIVE COMMONS

Foster civic stewardship of natural resources and restores community health & resiliency.[2]

PROJECT JUSTIFICATION: Premise

Healthy Local Economy + Vibrant Ecology = Restored Community

- The Lanzit Site is zoned for light industry and can support green industry for local job creation and economy.
- The impaired Compton Creek near the site is an underutilized, potential greenway.
- Point & non point pollution from nearby local owned auto businesses strongly impact the LA River and the ocean.
- The Society of Economic Restoration states that when ecosystems are restored, community bonds are restored through the process. [3]
- Drawing physical, cultural, and historical connections in the landscape instills pride and ownership in community.
- Biophylic design coupled with economic well being can reduce violence and improve lives.
- Creek restoration & the community watershed management strengthen community bonds.



Very little has been rebuilt since 1965. Above, aerial of the 1965 “Watts Rebellion” above courtesy of the LA Times. Below, 3D Google Earth image of Central Avenue and Lanzit site in background.

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JUSTIFICATION & Personal Statement: Reparations

"The state of the labor market is, quite frankly, a humanitarian and civic crisis. If we do not respond with equal urgency, the corrosion of human potential will continue, and another explosion will just be a matter of time."

Chris Tilly, Professor, Urban Planning, UCLA Luskin School of Public Affairs, Former Director, UCLA Institute of Research on Labor and Employment.[4]

REDLINING & CLIMATE CHANGE

As the nation reckons with a history of abusing the land and marginalized communities, displacement through gentrification, governmental inaction toward toxic sites, and lack of inclusion in the economy continue to impact Black and Brown communities. As a result of mid century redlining practices, many communities of color live within the most degraded lands and suffer the strongest impacts of our extreme weather events. We have arrived at the moment that we must confront the realities and ongoing impacts to these communities at the front line of climate change.

Addressing the pressing need for living wage jobs is at the top of the Green New Deal agenda and invites the exploration of entrepreneurship, small urban manufacturing, and green industry on formally active industrial lands. The reconciliation of urban industry and the urban ecosystem is part of this challenge and of regional and nationwide relevance.

Ralph Albernathy, James Foreman , Rev. Martin Luther King Jr., Rev. Jesse Douglas, and John Lewis leading march from Selma to Montgomery, Alabama, following Bloody Sunday. Photo by Steve Schapiro, courtesy of Corbis, Getty Images.

REPARATIONS

I grew up in the years following the passing of the Civil Rights Act. My father marched in Civil Rights solidarity marches, with a cane and brace from his disability with polio. My mother is Brazilian and we honor our African roots that are intertwined in our DNA with other roots. The violence of structural racism that we have not weeded out of our socio-economic systems and our landscapes is personal to me and to many of us beyond the front lines. The poverty and hunger I have seen in Watts is only equivalent to what I have witnessed on the streets of Rio de Janeiro. The current unraveling of the Voters Rights bill in 18 states, is a broken promise to us all.

Until all of our children have an equal opportunity to fulfill their destiny and to reach their true potential, our system is broken.

Through a lens of ecological justice I will seek to address the holistic urban ecosystem and to confront place based disadvantage. The reparations due Black (and Brown) communities and the lands they live within is multi-fold and part of our national conversation. In this context, the project seeks to address the urgent issue

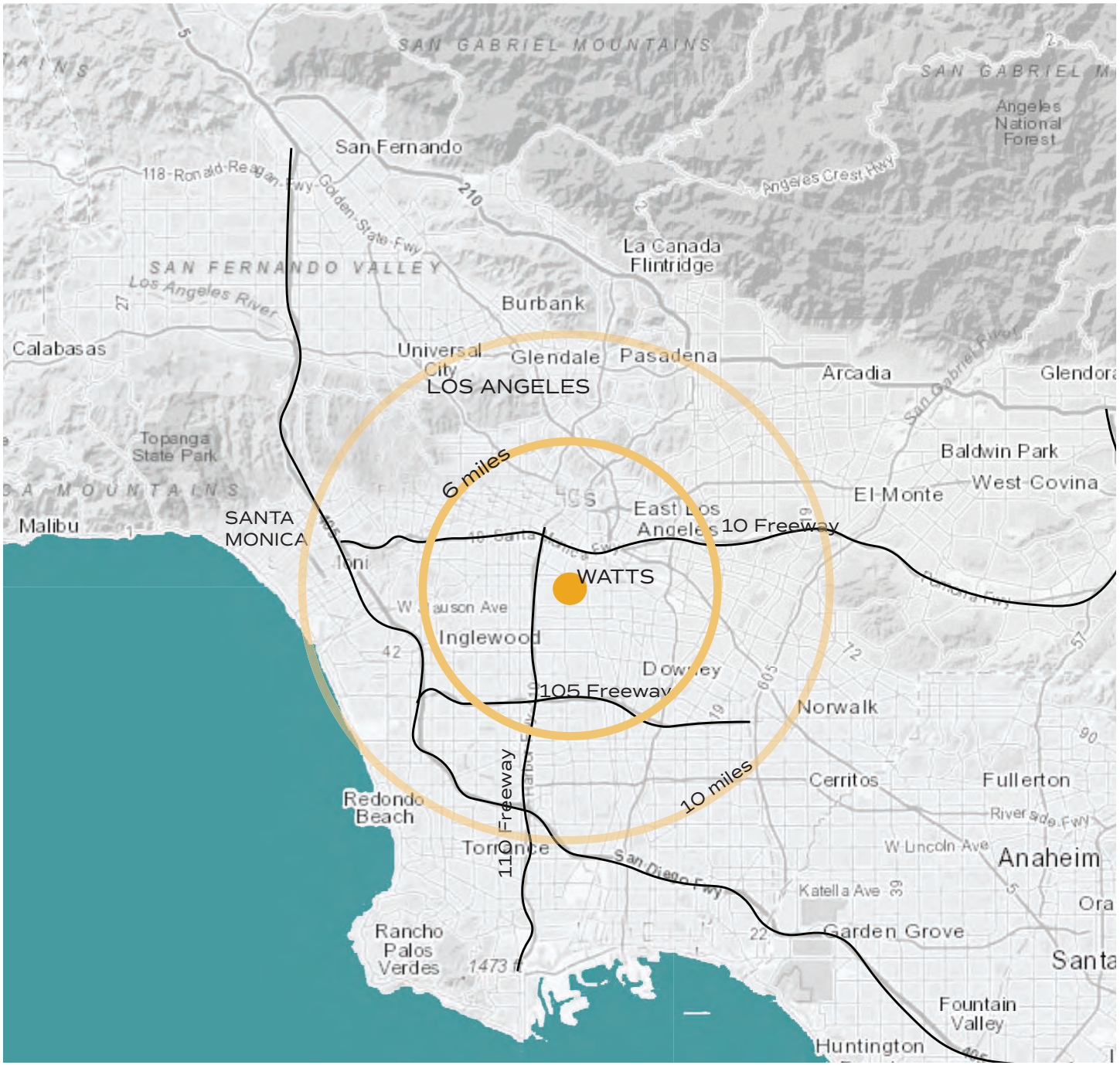
James Foreman , civil rights leader and contemporary of Martin Luther King, first brought up the topic of reparations in the Summer of 1979. Fair Use Photo

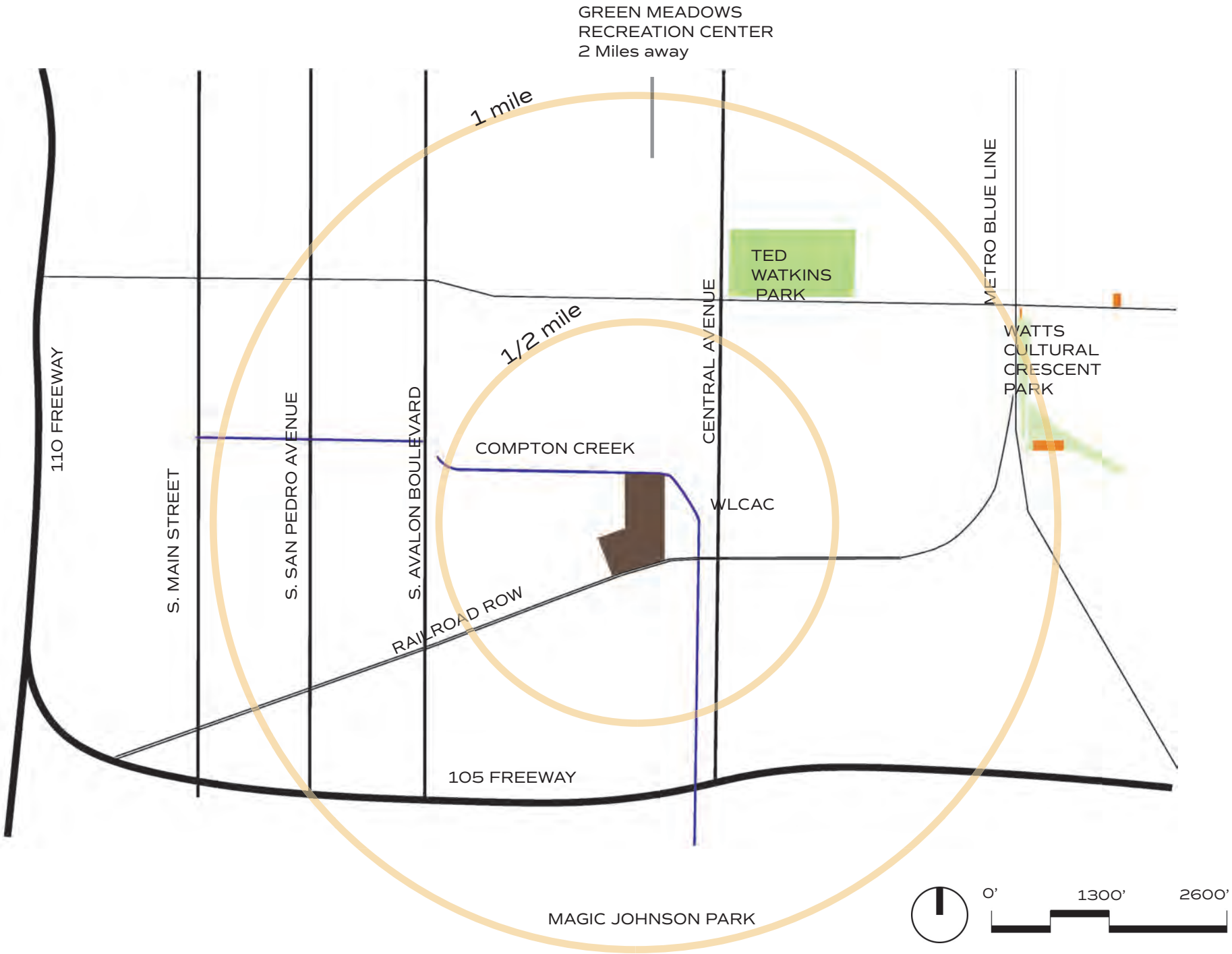
"Won't reparations divide us? Not any more than we are already divided. The wealth gap merely puts a number on something we feel but cannot say—that American prosperity was ill gotten and selective in its distribution."
Ta Nahesi Coates[5]

of the "corrosion of human potential" by designing for a future of holistic economic, ecological, and social justice on a site representative of today's plight but also tomorrow's potential.

This project is an expression of my hopes for the potential of a Green New Deal to heal our lands, to unite our communities, and to repair our national spirit.

THE SITE: Location





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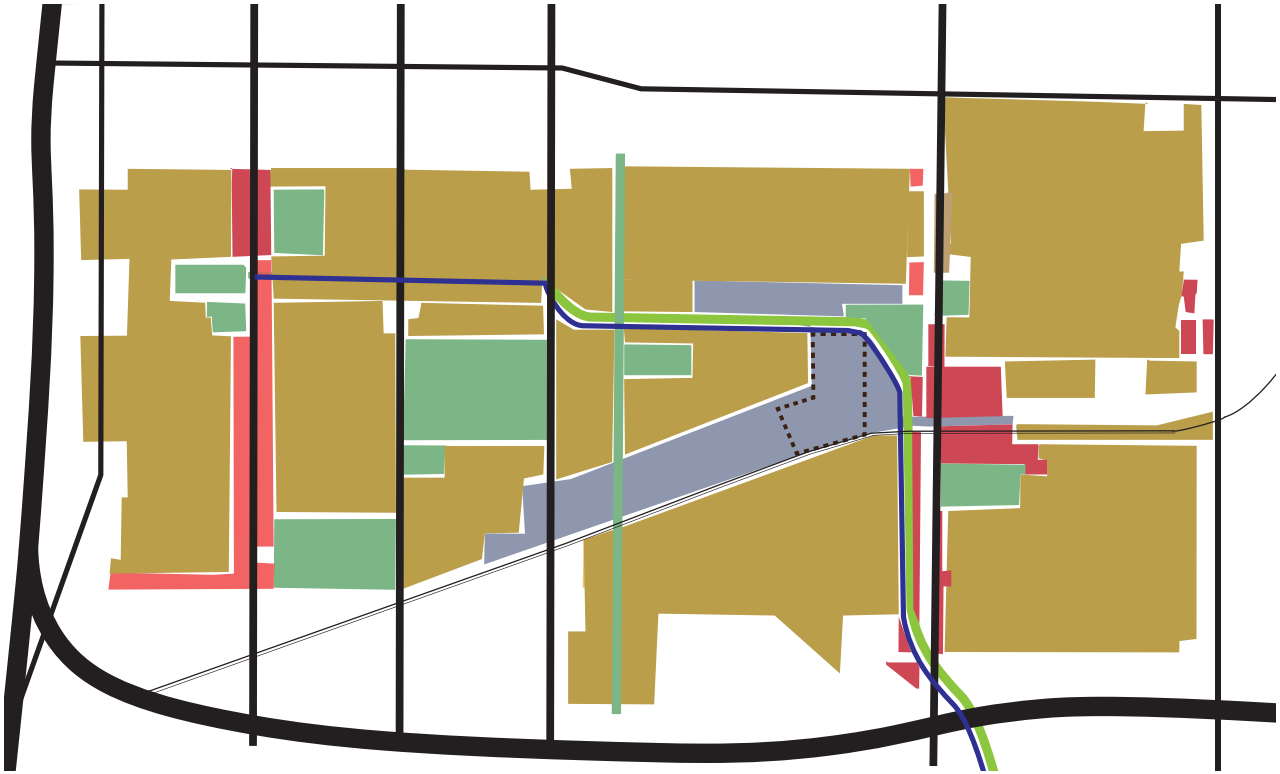
SITE INVENTORY: Zoning

The site is suitable for the project because of its size (9,9 +3.2 acres), adjacencies to those it would serve (Single & Multi Family residences, 2 high schools, 2 elementary schools, 1 middle school), and it is zoned for light industry. During the South East Community Plan process, the community chose to keep light industry zoning for the purpose of job creation. The City RFP calls for multi-uses, including green space, and the city council representative's staff recommended "thinking outside of the box."

During the Southeast Plan process, residents opted to keep light industrial zoning to allow for job creation.



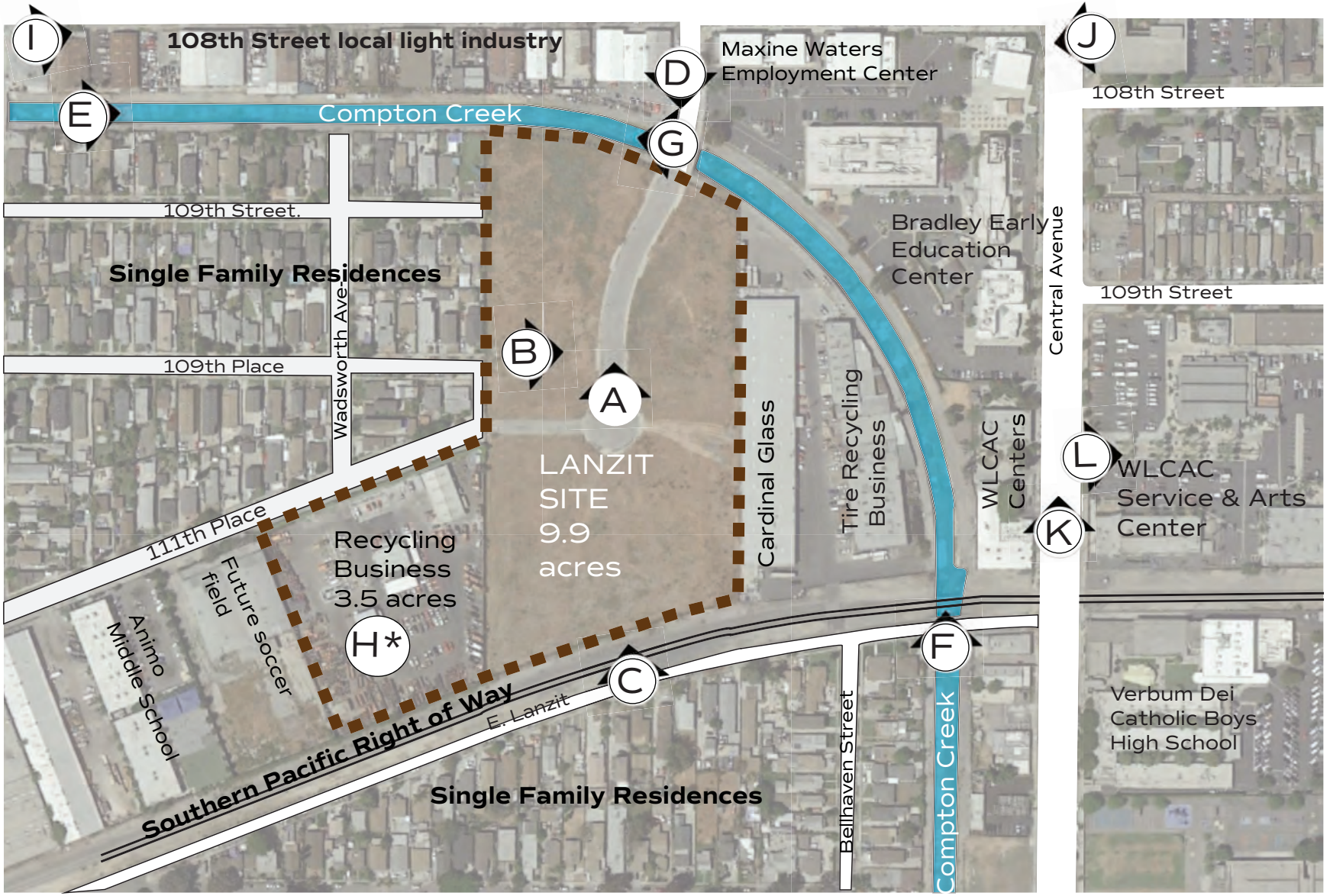
LEGEND

- PROJECT SITE
- Compton Creek
- Residential
- Commercial
- Light Industrial
- Public Facility
- Open Space

0' 1500' 3000'

From LA City Planning Interactive Map Southeast Plan

THE SITE: Adjacencies



The Project Site

* Aerial photo.

0’ 250’ 500’

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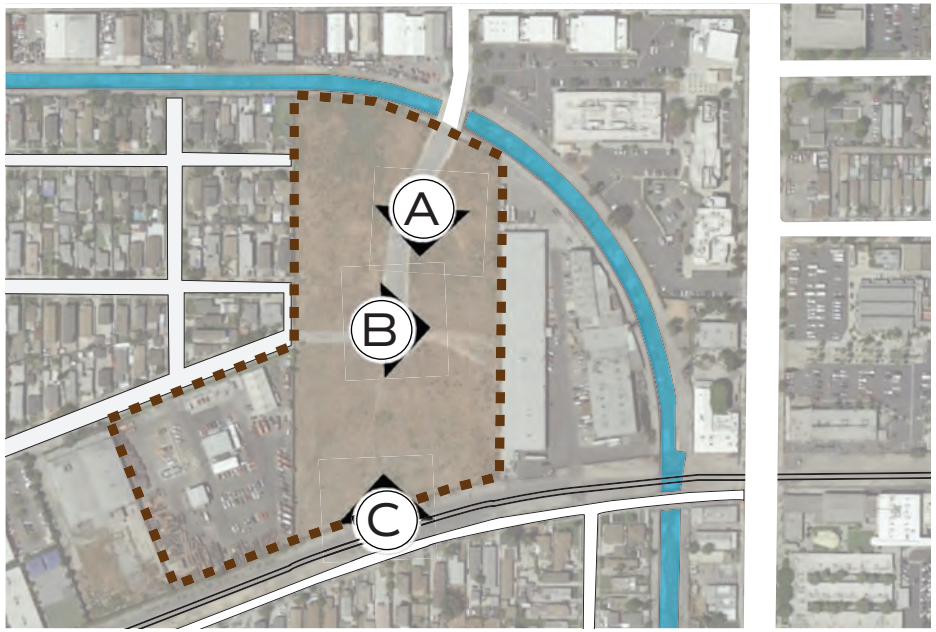
PHOTOS: Site

A. Views need to be created rather than framed.

B. This non-native grassland is a rare savannah in the urban environment.

C. From railroad right of way- connection to informal pathway.

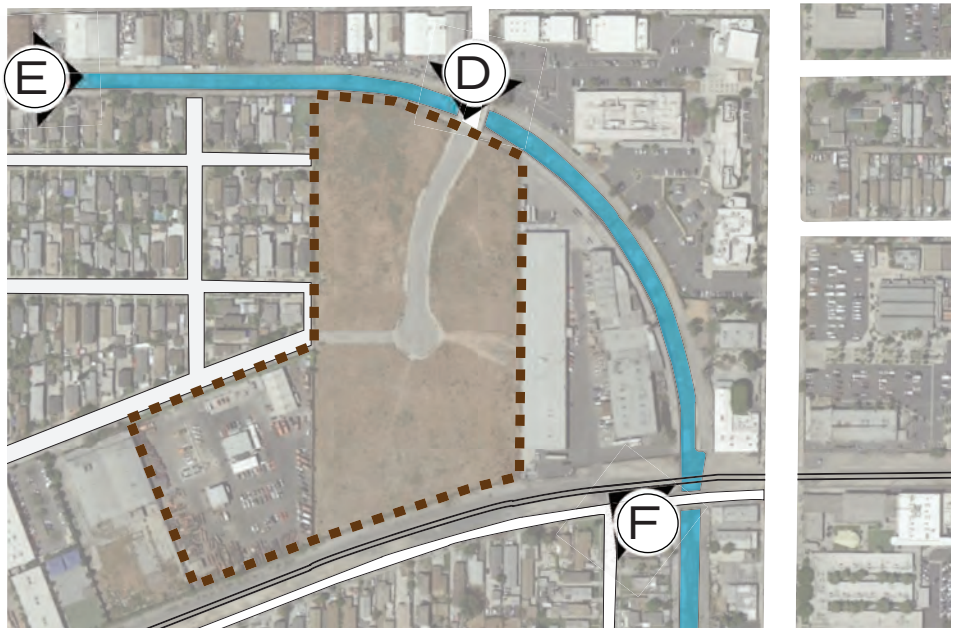


PHOTOS: Creek & Edges

D. Bridge is opportunity for grand entrance.

E. Creek right of way is a potential greenway.

F. Creek and Railroad crossing. No sidewalk.



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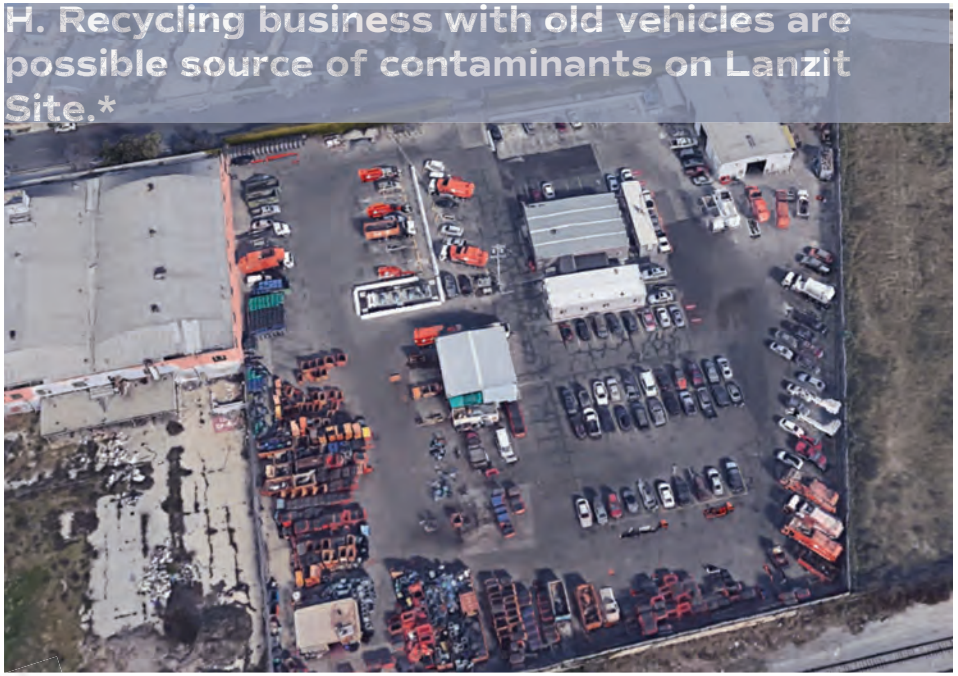
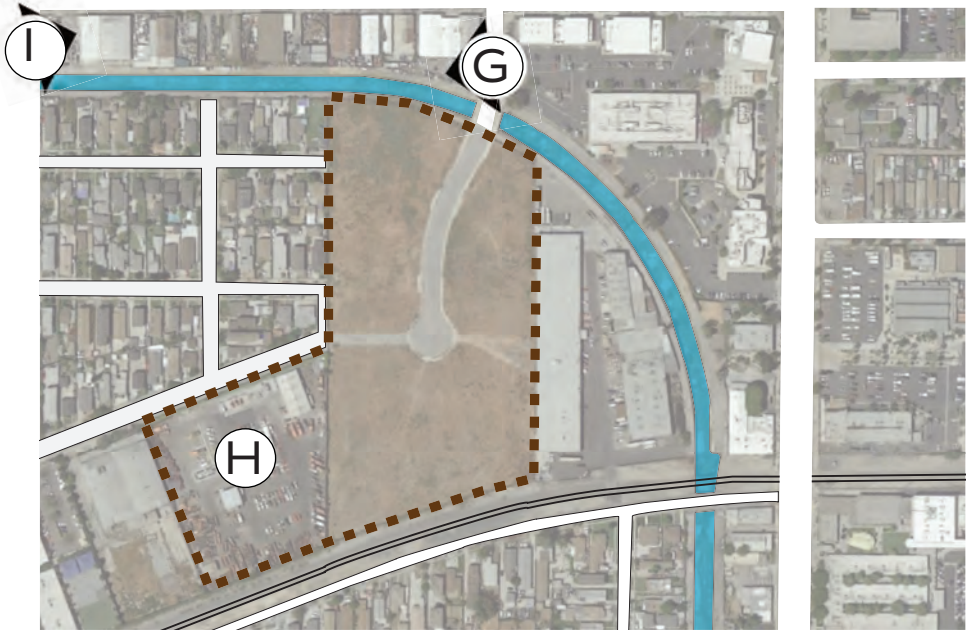
PHOTOS: Industrial Adjacencies

G. Old cars parked along creek right of way outside auto repair/painting businesses.

H. Recycling business with old vehicles are possible source of contaminants on Lanzit Site.*



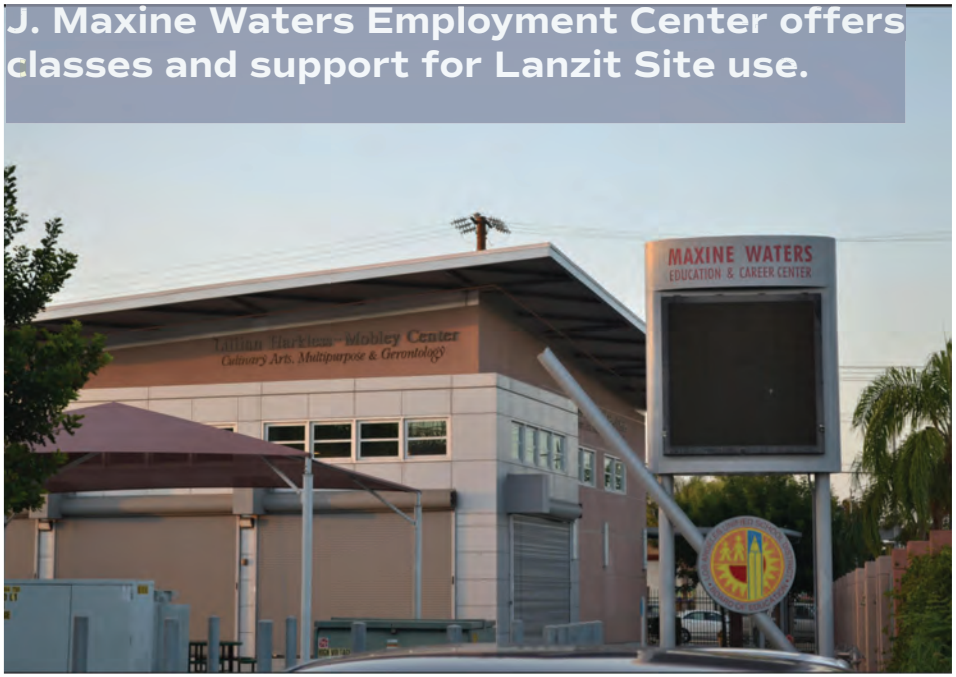
I. 108th Street with historic kuonset huts and metal buildings would benefit from facade program and trees.



* Aerial photo.

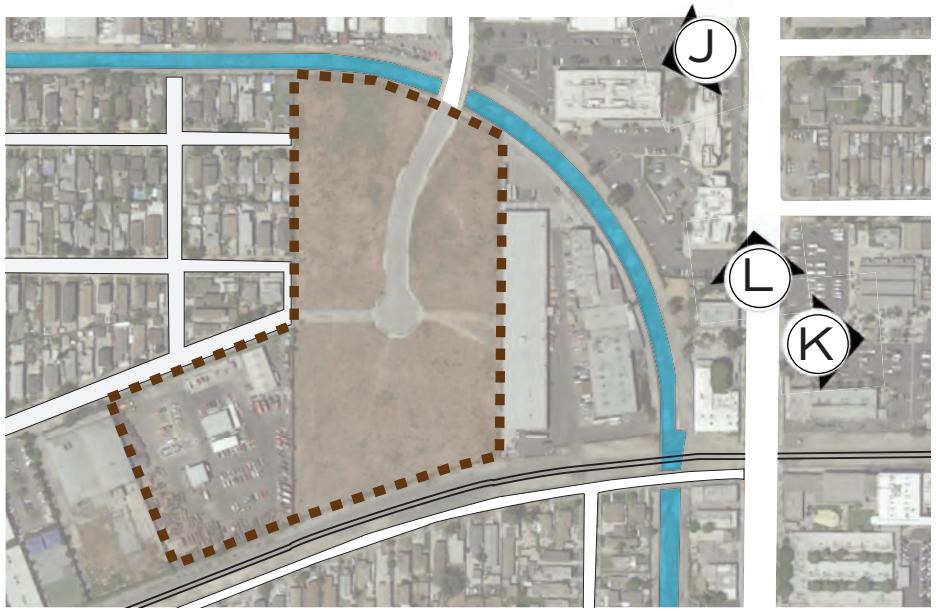
PHOTOS: Central Avenue

J. Maxine Waters Employment Center offers classes and support for Lanzit Site use.



K. WLCAC is the oldest service provider in Watts since 1965.

L. Central Avenue is the main thoroughfare and divides Watts & Green Meadows.



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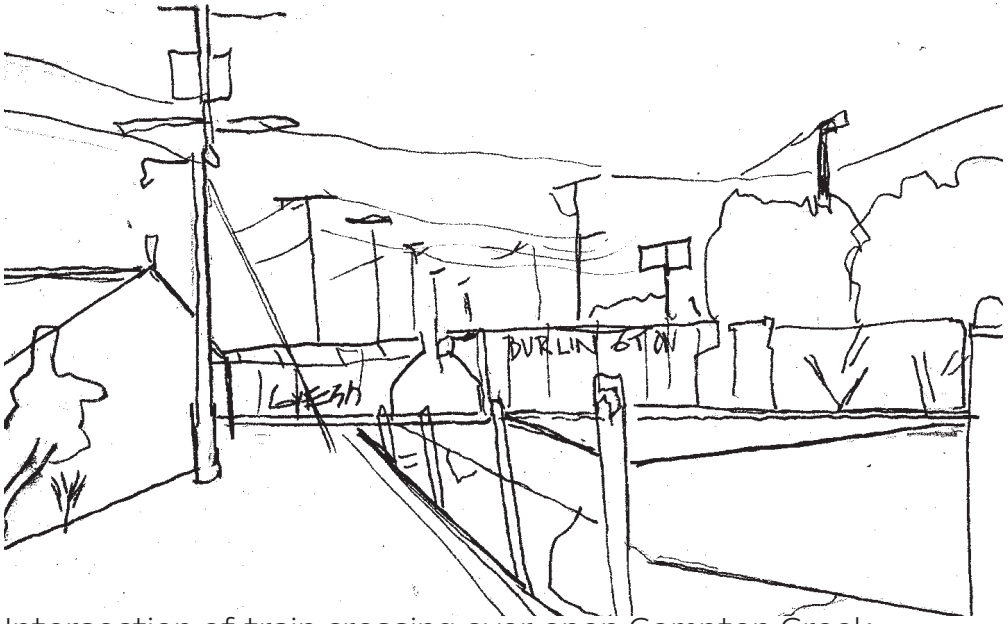
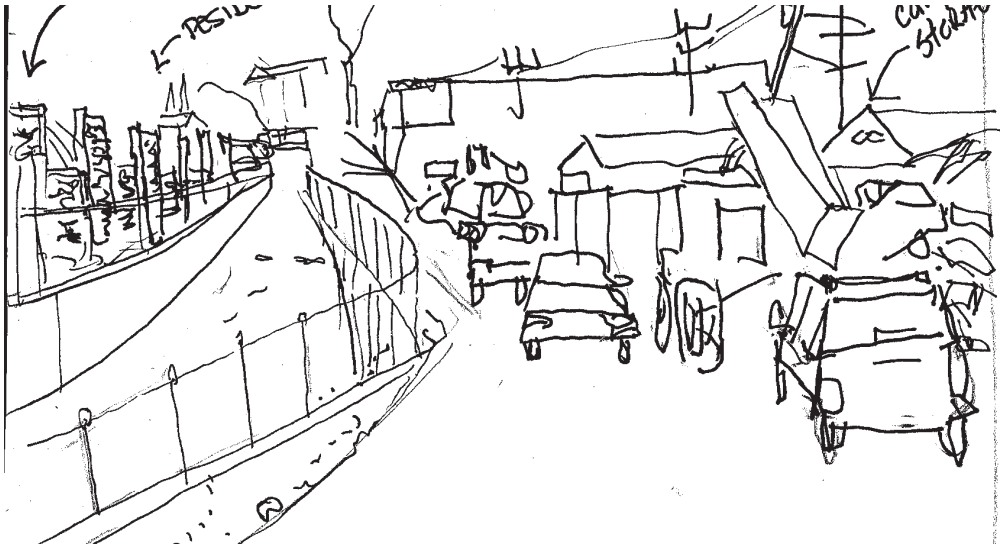
SITE INVENTORY: Sketches & Field Notes

Field Notes: 108th Street has no curb cuts for trees. Wide sidewalk, street too wide. Little traffic, lots of speeding. Metal buildings, quonset huts since. Potential light industry/arts & crafts zone. Store front beautification.

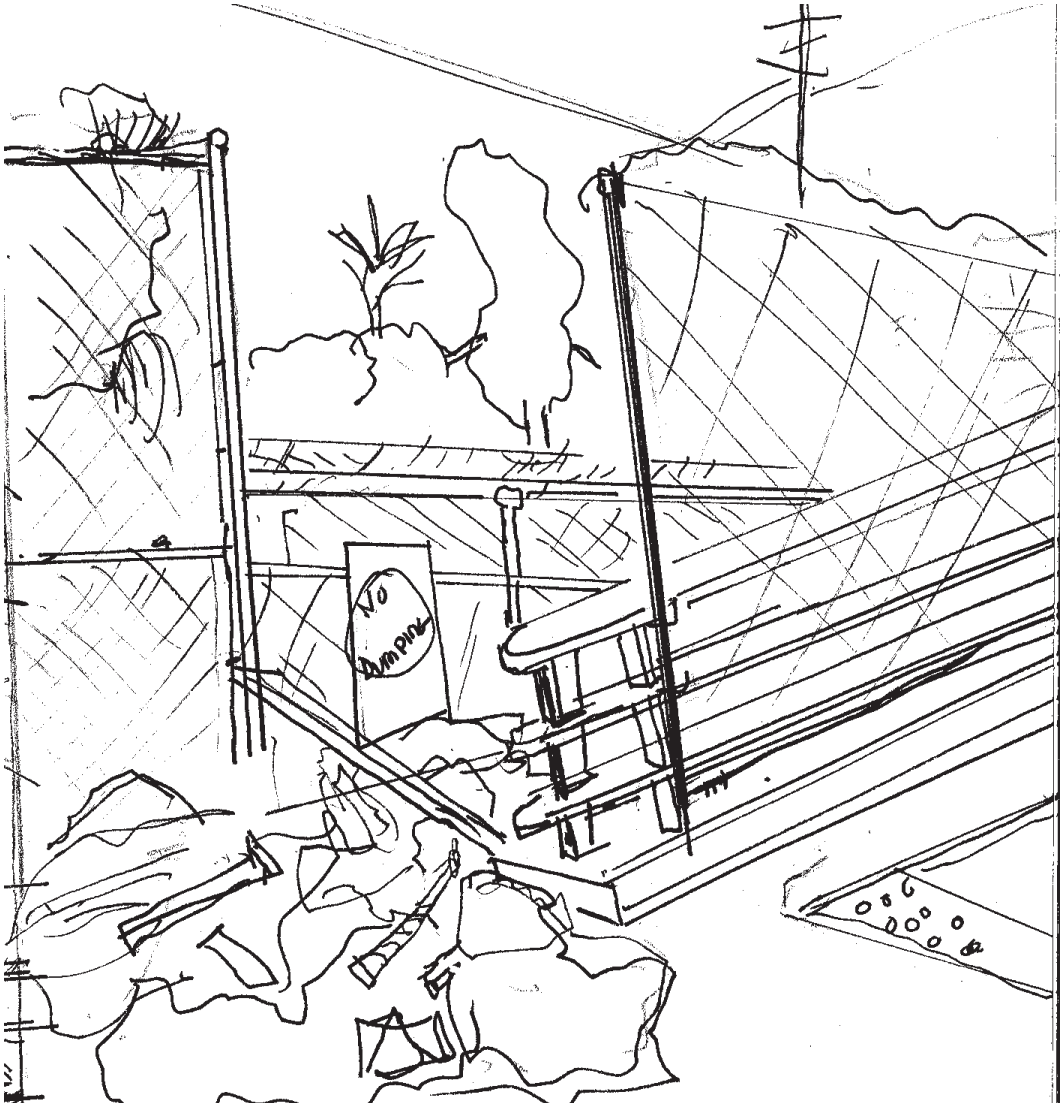
Creek ROW, 25’ on north (Industrial) side, 21’ on South (Residential) side. Old cars in right of way on industrial side. Indoor junk yard possible? Lanzit Site near residences with wrought iron and brick fence. Wrought iron broken into on 108th Street and 109 Place. Unhoused living on site.



Intersection of train crossing over open Compton Creek Channel. Creek pollution



SITE INVENTORY: Sketches & Field Notes



Dumping near McKinley Street Bridge. Inequities in street services, a 450% increase in requests to remove debris from 2016-2020, and a hiring freeze in LA Sanitation Department are all factors in toxic dumping. This debris includes household chemicals.

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HISTORY: Watts & Green Meadows

1843-90's
Rancho La Tajauta

1843 Governor Manuel Micheltorena grants Anastacio Avila 3,560 acres (today's Watts and Willowbrook). Named after Tongva place Tajauta.[6]

1870's White American influx brings subdivision of ranchos.[7]

1890's Green Meadows known for alfalfa and blackberry farms.[8]

Map of Rancho La Tajauta. Shown are four waterways reaching to the ocean and two woodland areas.

Farming regions become subdivided homesteads in the 1900s.

Green Meadows Elementary, 1870's.

Watts Historic Train Station, 1904

1870s - 1907
Subdivision & Incorporation

1904 Railroad brings development to area. Watts incorporated as separate city named after the train station. Japanese farmers, Mexican laborers, Swedish and Italian immigrants and Black Pullman car porters all lived in harmony among the small affordable houses. Black people are confined to two areas in Watts called "Charcoal Alley" and "Mudtown."[9]

Racial covenants limit the Black population to a small area around Central Avenue leading to overcrowding and poor living conditions.

"Lilacs grew on every doorstep. There was a guitar in every house."
Arna Bontemps, God Sends Sunday New York: Harcourt, 1931.

1915-1926
First Great Migration

Pre-1915 Affluent, college educated Black Americans move to Los Angeles. [9]

Post 1915 Black serviceman, skilled laborers and jazz musicians migrate to Los Angeles.[10]

Black owned clubs reached from 120th to Washington Boulevard on Central Avenue.[11]

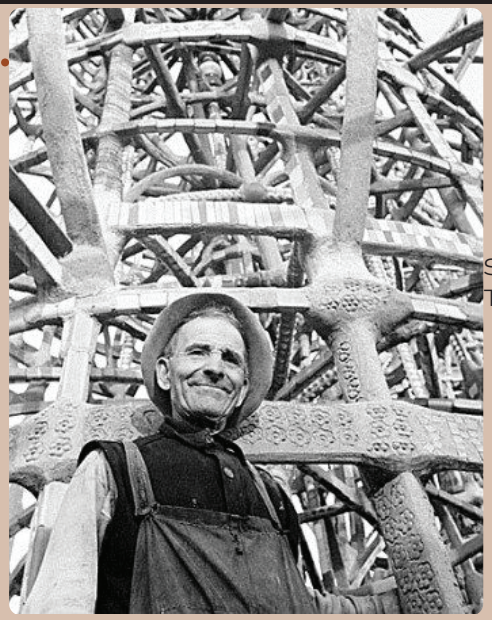
1926 Watts merged with LA City. As the Black population increased, the KKK, which had also migrated to LA, feared a the election of a Black mayor and influenced the white vote to merge with LA City.[9]

1940's-1950's
Second Great Migration

1930-45 Weapons manufacturing factories built in South Central. 200,000 Black people migrate to Los Angeles, doubling population.[11]

1940 Due to racial covenants by 1940 70% of Black population confined to Central Avenue. Overcrowding leads to poor living conditions.[11]

1950's Public Housing built on farmland. Japanese return from internment to Watts and Little Tokyo (known as Bronzeville during WW2.)[9]



Sabato "Sam" Rodia. Watts Towers, 1950's. By Bettman

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HISTORY: Watts & Green Meadows

1960's
Oppression & Isolation

1955-1966 Police Chief Parker's notorious reign. He is responsible for the militarization of LAPD, racial profiling, and he had an aversion to racial intermingling.[11]

Hwy 110 & I10 built through Black neighborhoods.

1961 End of Red Line Service isolates people from job rich areas.[9]

1965
Watts Rebellion

August 11, 1965 The first and largest civil rights uprising until 1992. 34 people died (mostly Black), 1032 injured, 3,952 arrested, 600 buildings destroyed. Spread across 46 square miles. [11]

Noah Purifoy, *Untitled.*

Santa Monica Highway Construction divided Black neighborhoods.

AZ Smith cleaning up Smitty's Barber Shop after Watts Uprising.

1965-75
Watts Renaissance

- Watts & South LA become center of Civil Rights Movement.
- Studio Watts Workshop, Watts Towers Art Center, Pan Afrikan People's Orkestra use the arts and direct action to inspire social change. Black assemblage art movement is born in Watts.
- Documentary Wattstax "captures the magic and optimism of this period." [11]

1980's-90's

Plant Closures & Defunding of Arts

1980's

- Privatization of art institutes drains local art programs of necessary funding.
- Crack cocaine hits the streets in 80's as a "quick fix" to job losses.[11]
- Latino population rose while Black population dropped.

April 1991-92 Plant closures led to loss of 108,000 local jobs and black poverty. The last plant closes in 1992, leaving 2,600 more people without jobs.[11]

April 29, 1992 Rodney King beating by police and their subsequent acquittal leads to the LA Rebellion.

Children play in the Watts Cultural Crescent Park near the Watts Towers.

Cycles of oppression, rebellion, funding & defunding continue.

2000-2020

Unfulfilled promises & Gentrification

1994 The corporate board of "Rebuild LA" Program taps corporate money to rebuild South LA but fails to fulfill promises. [12/13]

2008 Great Recession: largest loss of homes and jobs since the Depression.

2014 All 8.7 million jobs lost nationwide in Great Recession are recovered but are lower paying. [14]

2020 Urban renewal developer investments in South Central lead to rent increases of up to 32% and skyrocketing evictions. [14]

2021 George Floyd death at hands of police leads to Summer of Protest decrying police brutality.

"Unity Murals by the Mural Movement in Chicago.

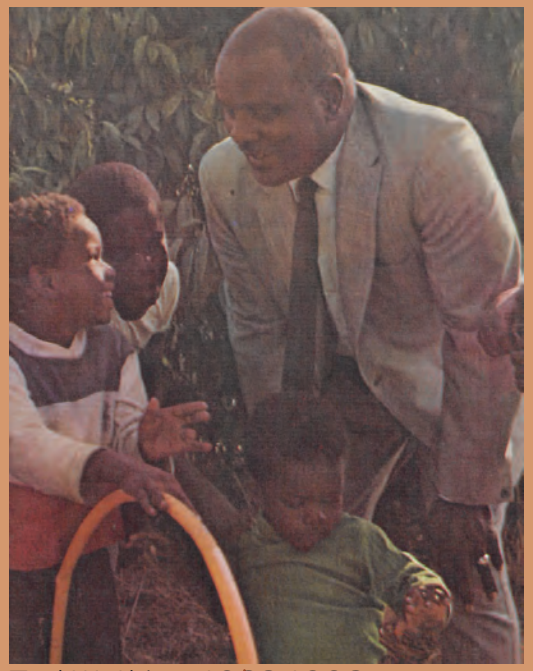
HISTORY: History of WLCAC

"They used to call it the reservation."

Ted Watkins from "A Practical Man"

1935
Fleeing Racism

At 13 years old, **Ted** Watkins arrives in Watts after escaping the KKK in his hometown of Meridian, Mississippi.[15]



Ted Watkins. 1922-1993

1960's-1970's
Rising from the Ashes

1965 Ted Watkins founds the WLCAC with a $2 million loan from UAW.

August 1965 Watts Rebellion covers an area 20x the size of Watts. [15.] WLCAC begins job training program.

Summer 1967 Over 150 civil rights rebellions in the US. [16]

1969 Rockefeller Foundation funds the paramedical training center. [16]

Early 1970's WLCAC opens a credit union, builds the Senior Citizens Park and an urban farm under the power lines, and establishes community owned businesses such as a poultry farm, two gas stations, and a laundrymat.

1950's
Organizer

- Ted Watkins works at the Ford Motor Company and is the first Black man to join the Union.
- Becomes an international organizer for the union and tenant organizer in the projects.
- Watkins and his wife Bernice are members of the NAACP and the United Civil Rights Committee. [17]

Watts 1960's.

Saugus Urban Residential

WLCAC Paramedic Training Program, 1970's
Courtesy of Rockefeller Foundation

1980's - 2020

"Don't Move, Improve"

1992 LA Rebellion 1992.

McCoy Villa built: State of the Art housing complex for un-housed families.

2019 Mudtown Farms built. Cutting edge urban agriculture center.

Ted Watkin's son Tim, leads WLCAC in its mission to improve the quality of life for residents of South LA. WLCAC is the largest property owner in Watts and the oldest service provider. Programs include housing, employment, youth leadership and job training programs.

The Art Center includes Civil Rights Museum with dioramas of the lunch counter and never published photos from the Civil Rights era.

1970's

Franklin Square & Saugus

1972

- Spearheads building of MLK Jr. Hospital in 1972. WLCAC
- trains and employs 300 young men and women in construction to build and repair houses purchased from LAX expansion which are then sold for $1 to community members.[15]
- founds the Community Development Corporation to foster economic regeneration of the community and Black self reliance and economic security.

1973 Nixon administration cuts Department of Labor funding and WLCAC is forced to cut back on programs including the paramedic training.[16]

"Lead, follow or get out of the way."

"My dream for Watts is that it becomes a community where anyone can work, live or play. That we no longer have a need for guns, not only in the hands of law enforcement officers, but in the hands of youngsters who have given up so much hope that they're willing to die for crumbs," he said. "I want this to be a place that's safe, that's loving, that's caring, and that's prepared to be hospitable to visitors." [17]

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USERS


LEAD GREEN
MANUFACTURER


WLCAC


FORMERLY
INCARCERATED


WORKERS


FAMILIES,
SENIOR
CITIZENS


STUDENTS

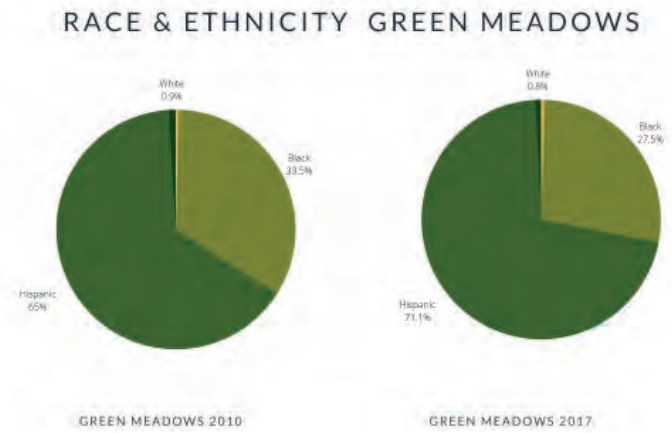

INNOVATORS

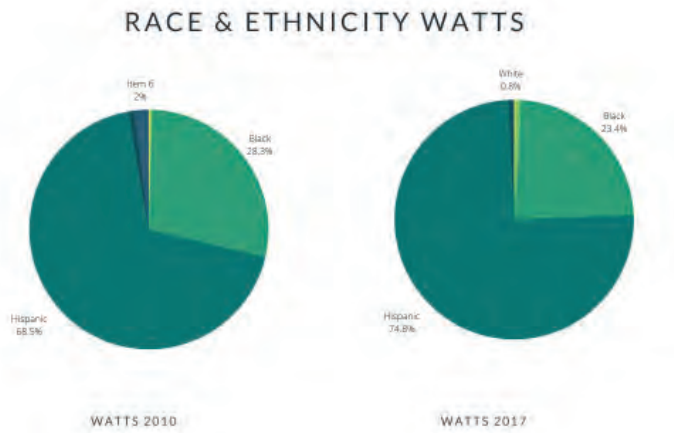
DEMOGRAPHICS

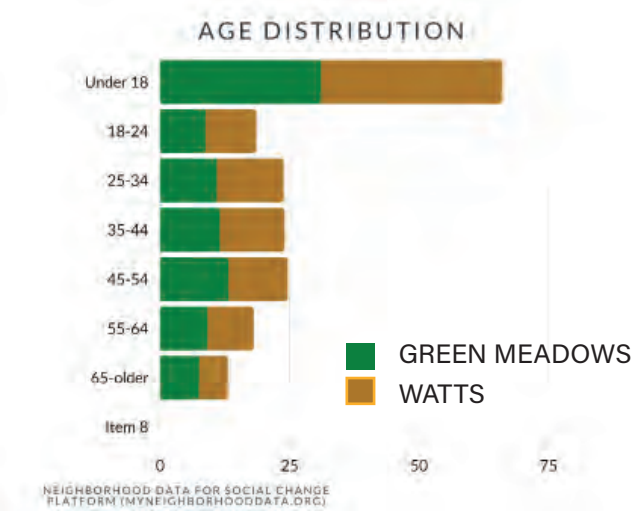
DEMOGRAPHICS

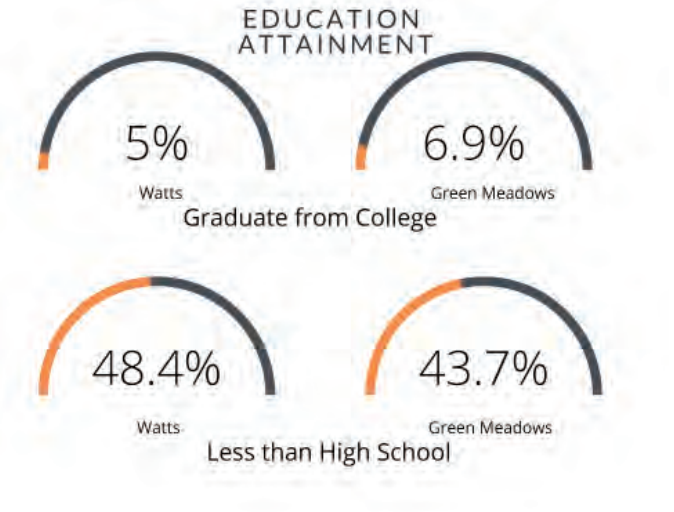
Watts & Green Meadows are young communities and predominantly Hispanic & Black. Education attainment is low.

- The majority of residents are under 18. Green Meadows and Watts have very similar age distribution.
- Race distribution is majority Hispanic and Black. The Hispanic population is growing while the Black population is diminishing.
- Several school age children could benefit from extra curricular STEAM programming. Parents in community meetings have spoken in favor of such programs.
- Local jobs with living wages that do not require a college education are needed.









Demographics from Myneighborhooddata.org unless otherwise indicated.

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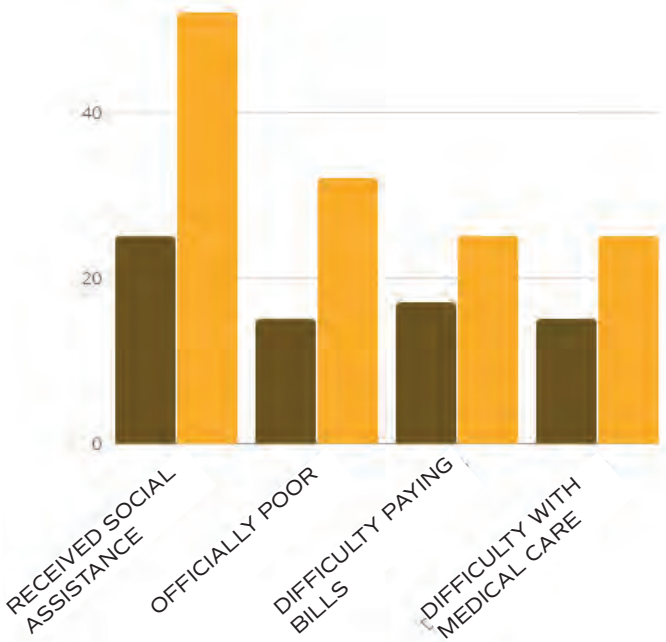
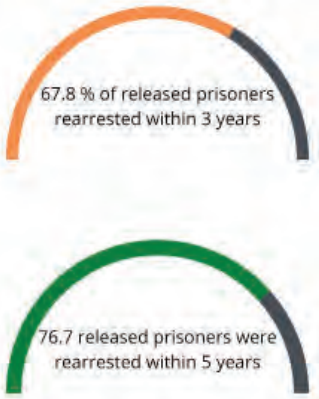
DEMOGRAPHICS: Community Cost of Incarceration

Incarceration & Recidivism:

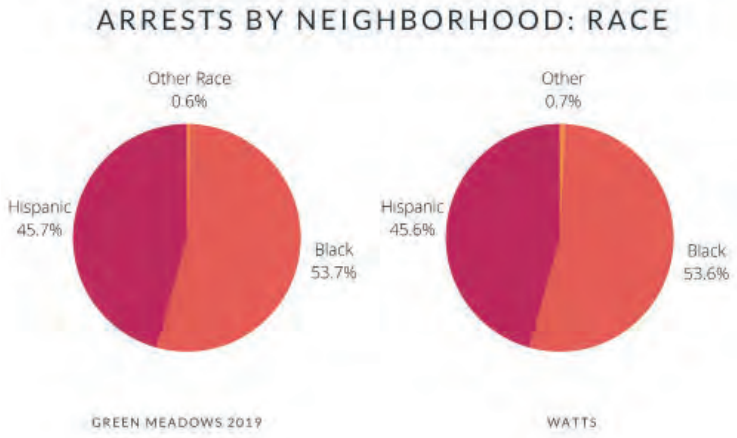
- LA County operates the largest jail system in the nation & imprisons more people than any other nation in the world.
- Incarceration of Eastern South Central residents cost the LA City and County a combined $85 million between 2012-2017.
- This region saw 61,000 arrests during this time.[18]

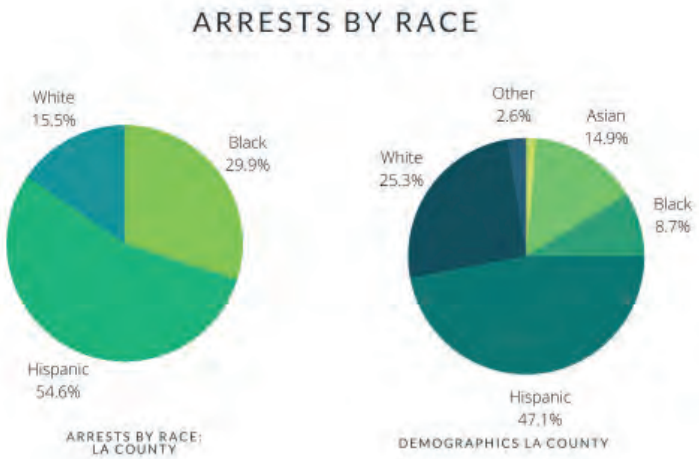
Steady, quality employment is shown to have a strong impact on preventing recidivism, reducing crime and improving the lives of the formerly incarcerated, their families and society.[19]





Quality jobs reduce recidivism and support both the formerly incarcerated and the community.





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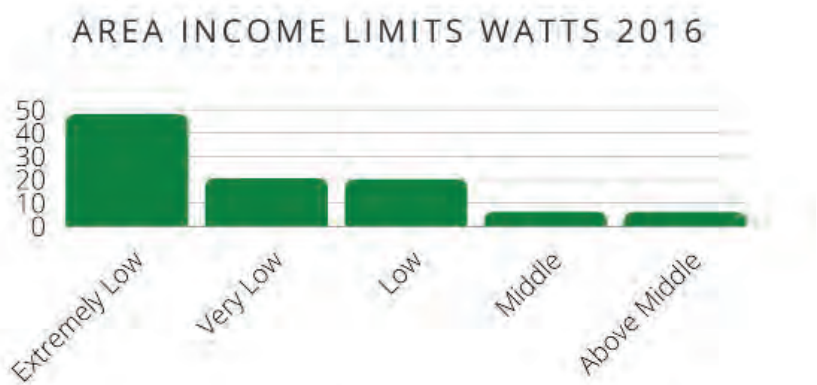
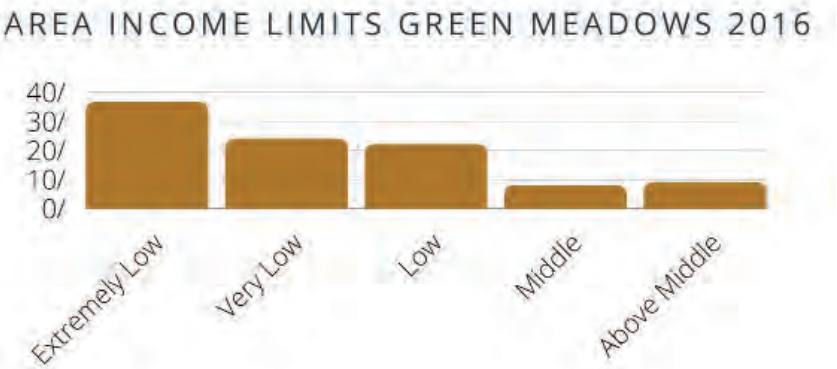
DEMOGRAPHICS: Low Wages

POOR WAGES

- Wages in South Central are lower than they were in the 1960's[3]
- The area is job poor and the majority of jobs are low wage, with 67-84% of families living below the poverty line[21].
- During the COVID shutdown, 87,000 jobs were lost in both District 8 (Green Meadows) and 15 (Watts). [21]





Unemployment and scarce job opportunities deeply affects both communities.

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COMMUNITY ENGAGEMENT: Long term commitment

"All neighborhoods reflect social and political decisions throughout history. OakLAB is about design-skills working with communities' residents to explore, experiment and evaluate approaches to increase the likelihood of successful transformative change and a re-generative future."
Oak!Lab Website[22]

Two years before Capstone seminar, I started to research Watts and Green Meadows. I was inspired by the work of C.L. Bohannon, Ph.D., Professor of Landscape Architecture at Virginia Polytechnic and State University, who has led students through the university's long term community engagement process with commitments focused on the community rather than the project. I was also inspired by the work of June A. Grant, R.A., NOMA, who has refined the long commitment format with her firm Blink Lab's Oak!Lab's work in Oakland, California.

The first vision was to engage students in an after school course in Landscape Architecture to inspire their future studies in the profession. Through my participation in ASLA's sub-committee Youth Outreach for Landscape Architecture (YOLA) and an 11 week course taught to LAUSD students by Stephanie Landregan, FASLA, director of UCLA Extension's Landscape Architecture Program, and myself, I worked on the format for both long term and short term youth engagement. Due to COVID-19 restrictions, in person outreach possibilities were limited but there is potential for future outreach.

The second vision stemmed from C.L. Bohannon's advice to go to meetings and hear about the current concerns. I attended my first Watts Neighborhood Council Meeting in September, 2019 and started to work with community members on saving the Watts Cultural Crescent Park from a housing development. This led to my documentation of a National Park Service Historic American Landscape (Short Format) which involved long, historically enriching meetings with long time community members and advocates. I intend my commitment to be a long term and there are more opportunities for engagement. One essential part of the methodology is designing with love and love reveals itself through long term commitment.

My window into the Green Meadows community was thanks to the Los Angeles Neighborhood Land Trust's Park Equity Leadership Academy in the Spring of 2021. The 12 week course for the Harbor Gateway neighborhoods that included Green Meadows gave me a chance to hear the stories, concerns, hopes and dreams of incredible community members, as well as hearing from local representatives and design professionals from MIG working on local projects.

Though there was no specific community engagement for this student project, the program elements for all goals comes from two years of listening, attending meetings and on-going volunteerism. The programs were derived from WLCAC's past bid and vision for a future response to the RFP, the Watts Community Survey, Rios/Primestor's Watts engagement for the Jordon Downs Community Center, and LANLT's PELA Academy.

COMMUNITY CHALLENGES

**LIMITED EMPLOYMENT +
DEGRADED ENVIRONMENT
=COMMUNITY DISRUPTION**

OPPORTUNITIES

**LOCAL ECONOMY +
HEALTHY ECOLOGY
= HOLISTIC HEALING**

IMPACTS

- POVERTY
- DIVISION & DISCONNECT
- GANGS & VIOLENCE
- INCARCERATION
- HEALTH IMPACTS
- DESPONDENCY

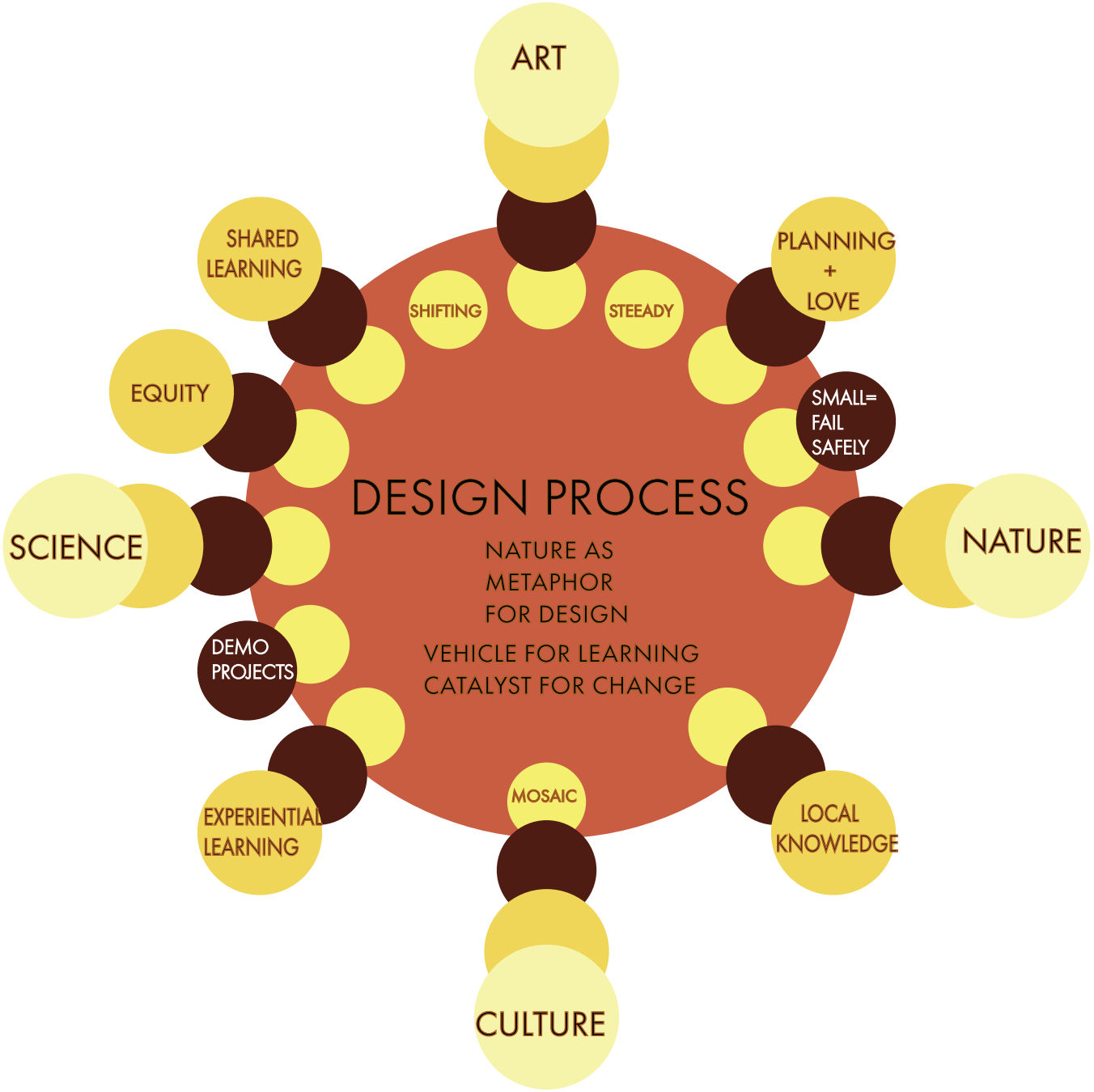
PROJECT GOAL OUTCOMES:

- VACANT LOT ACTIVATION
- WORK FORCE DEVELOPMENT
- YOUTH LEADERSHIP PROGRAMS
- COMMUNITY GREEN SPACE
- HEALTHY ACTIVE LIVING
- CLEAN, SAFE ENVIRONMENT
- CULTURAL HISTORIC CONNECTIONS
- UNITY

Neighborhood needs and challenges assessment from the Watts Community Survey [23]

Alyssa Leal Moffitt
Capstone Studio, Summer 2021
Meg Coffee, Jim Pickel, Pamela Brief

METHODOLOGY: Industrial Ecology/Ecological Design



The overarching design methodology is derived from the article "***Industrial Ecology as Ecological Design: Opportunities for (re) Discovery"*** by Nina-Marie Lister. * Dr. Lister is a Professor and the Graduate Director of the School of Urban Regional Planning of Ryerson University in Toronto.

Industrial ecology is a specific discipline focusing on economic and material cycles. Ecological design looks at nature as a "metaphor for design" and is an method of interlinking the domains of nature and culture in the broader societal context. By "engaging in the social dimension"(Lister, p.16), I explore the potential of an eco industrial park to become "an agent of ...personal and societal transformative changes."(p.16) [24]

An eco industrial park in South LA on rare open space needs to fit into the two neighborhoods like the missing piece of a puzzle. The Lanzit Site sits in a crucial spot along the impaired Compton Creek with all of its potential to provide connection and nature immersion. It is within walking distance of local schools and young people who deserve to decide the future they would like to steer towards. It is a tabula rasa that has the potential to support a mosaic of programs that bring diverse people together to experiment with economic, social and environmental models that are "small enough to fail" and thereby make room for failure as a step to success.

The landscape typologies and ecosystems are allowed to fluctuate- to become dry grasslands one year or wetlands another. Phytotechnology utilizes proven, non native species and experiments with potential California natives to cleanse groundwater and stormwater.

Art installations are mixed with cultural and ecological history to allow for different voices within landscapes that demonstrate diversity and a "shifting, steady mosaic" that is the new understanding of ecology. (Lister, p. 16)

Novel ecology in itself moves away from ecological design as a strict model of a reconstructed, utopic past and looks to how diverse plant communities can work together.

Collaboration is essential on all levels- it is the economic model of sharing machinery in a small urban manufacturing center, and the experimental play in the nature playground. It is the backbone of the urban farm. And collaboration is the starting point with multiple and ongoing community engagement at its heart.

"(Re) discovery, (re) creation, (re) consideration, (re) affirming" (Lister, p. 26) and reconciling differences between cultures, neighbors, and disciplines like art & science are all part of the design process that is defined as "planning + love. " (Lister, p. 24)

Goals and programs were derived from the community and then were reaffirmed in traditional design methodology. (see appendix). One particular quote from *The Timeless Way of Building* by Christopher Alexander rang true to the societal issues of the area, for a multitude of reasons:

"The artificial separation of house and work creates intolerable rifts in peoples inner lives. Children grow up where there are no men."

DESIGN METAPHOR: DNA & Double Helix

The double helix is a symbol of stability, and strength. It is a form found in nature: sunflowers, vines, tendrils, the nautilus, and DNA. Plant root's response to conquering barriers is to twist and turn in order to create a tightly woven formation of a double helix.

It is a symbol of unity and diversity: we are unique and also interconnected, radically woven into one grand whole.

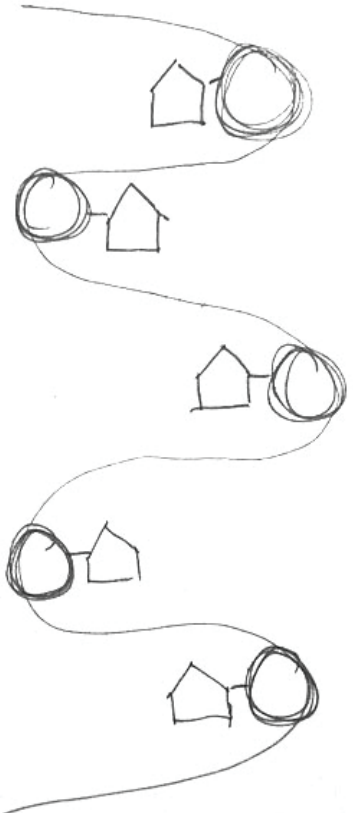
This is a metaphor of the essential goal: to weave the communities together while recognizing the diversities and to strengthen individuals as well as community.

Old chains of sequences: the school to prison pipeline or stormwater run off to creek impairment are replaced with new chains of sequences like STEAM after school programs to leadership to college and phytoremediation chains from run off to irrigation.

DNA TWISTING

SINUOUS FORMS

DNA BONDING



PROGRAMS & PEOPLE WORKING IN UNISON

DNA CHAIN OF SEQUENCE

CHAIN OF SEQUENCES

Double helix in art

DNA Park: inspiration for metaphor

Patterns of railroad tracks

Sinuous form of healthy creek

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GOALS: Listening to Community

The process of defining goals was initiated through listening to community voices and then followed by research to support the relevance and to define objectives & programs.

The project goals are broad reaching and as a result the inventory and the precedents are specific to those goals. These goals are separate yet intertwined, with programs supporting each other like the components of a well integrated urban ecology.

The process of listening to community followed by research validated the belief of many professionals that the community is the expert. The method of listening requires a methodology of its own. I chose the method of the International Institute of Restorative Practices. I discovered IIRP through Chaka Forman, the son of two civil rights leaders and the restorative justice coordinator at Mark Twain Middle School where my son's attended. Mark Twain was infamous for decades for having a hostile environment and had been abandoned by the Venice/Mar Vista community on Los Angeles' Westside. Through the combined dedication of a group of parents from the local elementary school and Dr. Ford, the outstanding principal, the school became the fastest growing LAUSD school within two years. One of the most impressive programs was the Restorative Practices program that took a long, relational approach to building community rather than addressing issues at the back end with punitive approaches.

I believe that the listening techniques that takes us out of our need to have an answer (or to be an expert) and lets us focus on a actively listening to others is the heart of the community engagement process.

I attended the IIRP four day workshop for restorative practice counselors in September 2019. I received a powerful education on the School to Prison Pipeline and the passion of LA County Office of Education directors to break this chain of sequence through restorative practices.

The centerpiece of the Lanzit Site project became the Healthy Watershed Goal after attending a community Better Watts Initiative meeting in Watts on June 13, 2021 at the WLCAC Center. BWI was founded by Physicians for Social Responsibility in January, 2016 and has evolved into a collective of PhD. students in physiology and science that are leading research and advocacy efforts around community health impacts stemming from pollution in the air, water and soil. After hearing community members speak of their decades long struggle to get the attention and action of officials around lead in the water and soil and high levels of air pollution, I returned home to re-read research on groundwater contamination on the Lanzit Site and creek impairment issues. I began to wonder if this site played a bigger part in the neighborhood groundwater contamination and if so, what role could the Lanzit site play in this aspect of reparations..

GOAL: Green Innovation Hub

Cluster economic opportunities around green industry to foster job creation, entrepreneurship, and innovation that will lead to economic self reliance, ownership, and inclusion in the future of green technology.

GOAL: Vibrant Local Urban Ecology

Connect the site to the larger community and to green transportation alternatives to the greater city. Inspire social cohesion and connection by bringing vitality to the streets.

GOAL: Community Well Being

Reflect community pride in the landscape.
Provide safe, restorative spaces for solitude, for gathering, for playing, for reconciliation and for celebration

GOAL: Healthy Watershed

Design a biomimicry of a healthy, circular, hydrologic system to support novel ecology, create habitat, and protect the Compton Creek and the Pacific Ocean downstream. Inspire Creek stewardship with a beautiful, transparent, stormwater system and through community programs.

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GOAL: Green Local Economy

OBJECTIVES

ANCHOR GREEN INDUSTRY*

SMALL URBAN MANUFACTURERS R&D

INCUBATOR COMMUNITY KITCHEN URBAN FARM

INDUSTRIAL ARTS EDUCATION/MAKER CENTER

PROGRAMS

- Multi story industrial building. 25,000 sq. ft, 47' tall. Total sq. ft: 150,000 sq. ft.
- Parking underground. Min. 210 cars.
- Shared rail/Truck loading dock

- Multi story industrial building. 25,000 sq. Ft, 47' tall. Total sq. Ft: 150,000 sq. Ft.
- Parking underground. Min. 210 cars.
- Shared rail/Truck loading dock

- Incubator building: 50,000 sq ft. (2 stories, 31' height)
- 2 acre urban farm and orchard.
- 2200 sq. ft. commercial kitchen.
- Street front marketplace.

- Industrial Arts- 17,000 sq ft.
- Outdoor work patio: 6,000 sq. ft.

Share building with incubator

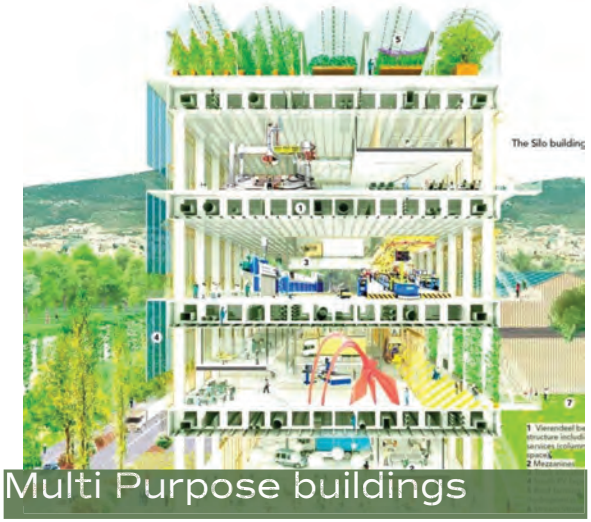
*Lead investor that attracts more tenants & investment.

CASE STUDIES: Eco Industrial Park

The Innovation Park,
Reggio Emelia, Italy.
Architect: Andrea Oliva 25 acres

50% Green Space

Torrent Estadella,
Barcelona, Spain.
Architect: Eduard Balcells
& Honorata Grzeikowska



Multi Purpose buildings

The Crucible,
Oakland, California
Founded by Berkeley Art Students,
1999.

Education & community art

Program and circulation integration with community

Neighborhood Stormwater Management

Youth leadership & mentorship

Eco Industrial parks integrate into the urban ecology and support social, hydrological, educational & economic systems in unison.

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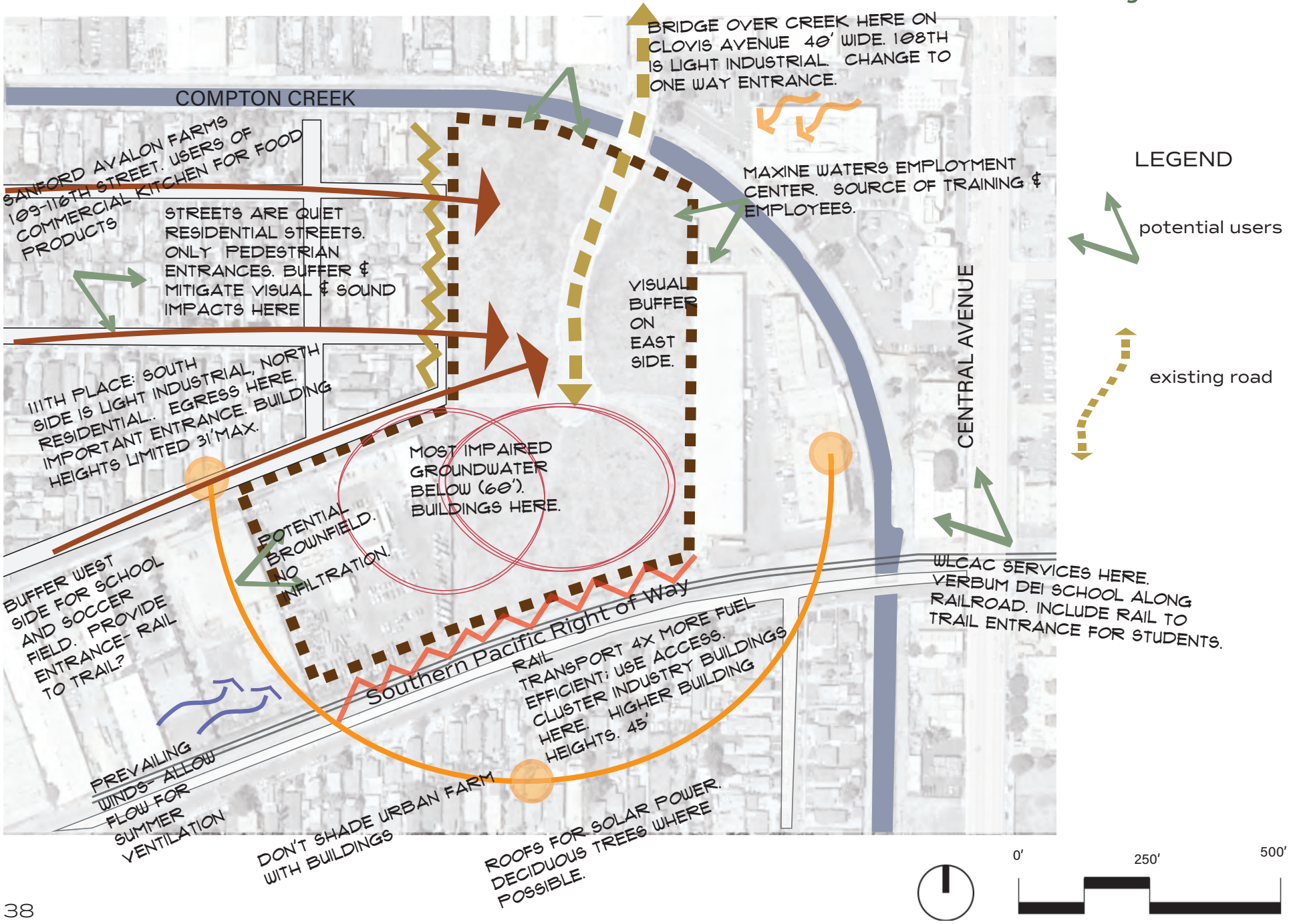
OPPORTUNITIES & CONSTRAINTS: Green Industry



PROGRAMS: Urban Manufacturers/Incubator

PROGRAM Research

ANCHOR GREEN INDUSTRY : Minimum 150,000 sq ft. Separate loading docks, up to 3. Access to truck road (possibly through westside). Possible use of railroad. Minimum size loading zone, 400 sq. ft. Source WLCAC.

INCUBATOR/INDUSTRIAL ARTS: 17000 square feet 2 floors (From The Crucible, SF)- Wood shop, Metal Shop, electronics lab, textile soft shop, software hub, machine, glass blowing, foundry, jewelry, leather, blacksmith workshop, coworker & Comaker space. Open 9am-11 pm 7 days a week. Staff: shop staff and teachers approximately 8-10 teachers and 10 staff. 180-2 at different times. Approximately 8 classes taught at one time with approx. 10 students each. Studio labs approximately 10 people, 5 labs. [25]

SMALL URBAN MANUFACTURING HUB: 13,000 sq feet (from Humanmade, SF) [26]

FOOD COMMONS URBAN FARM: 60-75,000. Varies. value is on community education and cohesion rather than output. Sun and shade (under rooftop solar for micro greens & lettuces). i.e. Gotham Greens. 170,000 sq feet)=20 million heads of lettuce a year. [27]

ORCHARD: Varies. Far from paths due to fruit dropping (and slippage). Good draining soil, protection from winds.

NEEDS OF COMMUNITY KITCHEN: 2,200 sq ft. licensed commercial kitchen. Good light- 8 prep stations, 4 sinks, 4 tables. $30 hourly rental. Cold, frozen and dry storage reserved and priced separately, $90 per month.

La Cocina Municipal Marketplace: 7000 sq feet 6 restaurants.

Incubator: approximately 30-35 entrepreneurs, 2-5 years in the program.

OUTCOMES SF COMMUNITY KITCHEN: Since 2007, incubated 120+ businesses, graduated 55 entrepreneurs, supported launch of 33 brick and mortar restaurants. [28]

PROGRAMS: WLCAC Program

PAST BID

1. ON GOING ENVIRONMENTAL REMEDIATION
2. FLEXIBLE DESIGN OF BUILDINGS
3. SILVER LEED STATUS
4. COMMUNITY SERVICES
5. SMALL MANUFACTURERS
6. NON PROFIT FOOD SERVICE PROVIDER. Staff: 121
7. PHOTOVOLTAIC ASSEMBLY FACILITY. Staff=100
8. FREIGHT FORWARDING AND WAREHOUSING FIRM

NEW PROGRAMS

1. URBAN FARM
2. WALK-TO-WORK MODEL
3. LOCAL CONSTRUCTION AND HIRING POLICY
4. UNIQUE EMPLOYMENT AND ATTENDANCE SCHEDULING TO SUPPORT FORMERLY INCARCERATED & NEW WORKERS.
5. ON SITE HEALTH CARE
6. UTILIZE RIGHT OF WAY BEHIND 108TH STREET BUSINESSES FOR DELIVERY/PICK UP INGRESS AND EGRESS
7. FACADE PROGRAM FOR BUSINESS ON 108TH TO CAPITALIZE ON THE UNIQUE STYLE OF THE QUONSET HUTS
8. WAREHOUSING & FREIGHT MAY BE TOO MUCH TRAFFIC FOR THIS LOCATION UNLESS RAIL ORIENTED.

GOAL: Healthy Watershed

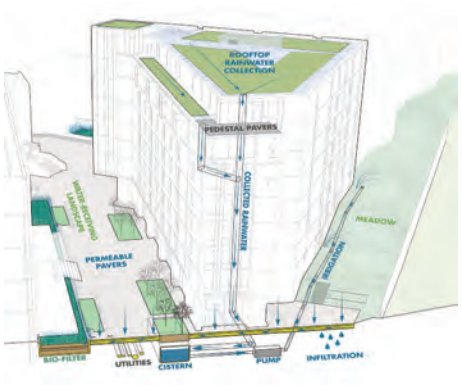
OBJECTIVES

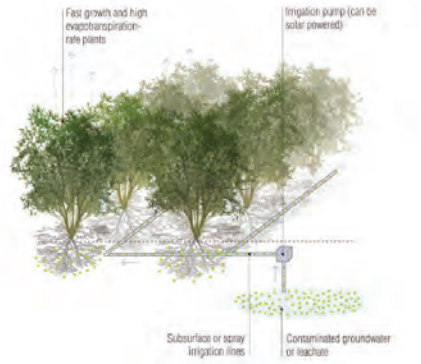
LANDSCAPE BASED STORM WATER MANAGEMENT

REDUCE INDUSTRIAL IMPACT AT CREEK EDGE

INSPIRE CREEK STEWARDSHIP

CLEANSE CONTAMINATED GROUNDWATER PLUME





PROGRAMS

- Capture and treat all stormwater, runoff, and waste water from sub basin.
- Storage: 40 acre feet = 1" rain event (50 year).

- Industrial bioswales along auto business/creek edge.
- Divert runoff to site for treatment.[29]

- Engineered stormwater creek and wetland. 1/2 acre
- Transparent biomimicry to inspire community stewardship of Compton Creek
- Neighborhood stewardship programs.

- Ongoing phytoremediation research and implementation.
- Student citizen science programs.
- Signage and community education.
- Extend phytoremediation to neighborhood.

CASE STUDIES: Wetlands vs. Engineered Pond

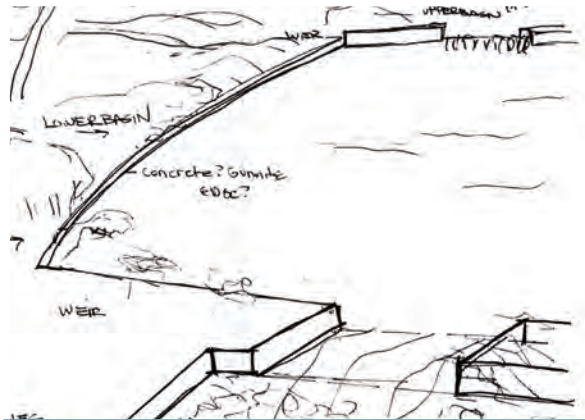
South LA Wetlands park
Los Angeles
Psomas & Studio MLA [30]

4 of 9 acres dedicated to wetland

Mixed-use doesn't allow for 4 acres of surface wetland.

NY Botanical Gardens Native Garden Wetland, Bronx, NY
Sheila Brady, Oehm van Sweden

Underground cistern & sand & gravel pump for circulation



Surrounding landscape cleanses the run off before entering pond.

Waller Creek, Austin, Texas
Michael Van Valkenburgh & Associates

Engineered 'ecological machine' allows for multiple land uses

Biomimicry may inspire stewardship of the adjacent Compton Creek.

An engineered biomimicry of a California vernal pond allows for multiple uses of land for green space and economic development.

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SITE INVENTORY: Drainage Basin

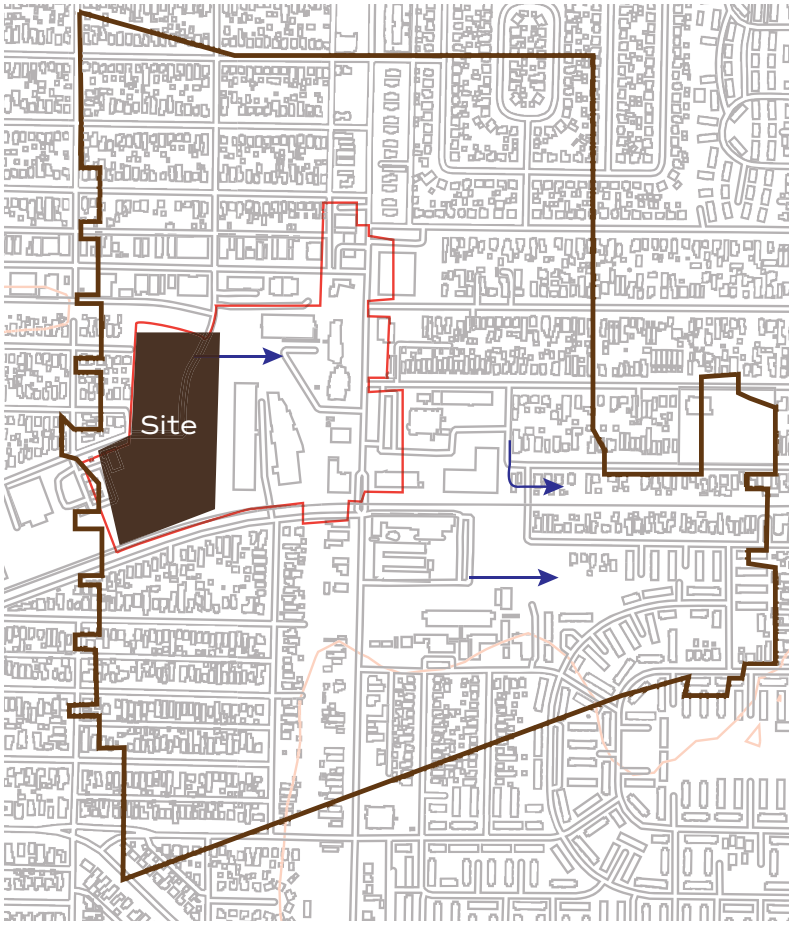
The Site can cleanse and store stormwater from the sub basin within cisterns of 10 or 20 feet underground for irrigation and creek flow. A stormwater fountain or engineered water feature above could demonstrate natural processes.

Penmar Park in Venice has a cistern that stores 2.75 million gallons of water is 180 feet wide, 20 feet deep. It is the largest stormwater storage tank in the city. The water is used to irrigate the park.[31]

Drainage basin: 654.5 acres.
At 20 feet cistern depth, need 1,425,501 sq feet (33 acres) of landscape space at 20' depth.
712,750.5 sq feet (66 acres) at 10' of cistern depth.

Sub basin: 40.78 acres (1,776,376.8). At 20 feet depth cistern, need 2 acres (88,819 sq feet).
at 10 feet depth need 177,637.68 sq feet (4 acres)

The Lanzit site could potentially clean and store peak runoff from the **entire sub basin of 41 acres.**



The stormwater design formula from *Sustainable Stormwater Management* by Thomas Liptan [32] yielded similar results as LID recommended formula q=Cia for peak rate runoff. Lid Sizing for a peak rate runoff for a 50 year, 24 hour rain event. requires **2.4 acre feet of storage.**

Runoff for creek watershed above the Lanzit Site requires approximately **2 more acre feet of storage** but there are green space storage opportunities upstream identified in the Community Stormwater Masterplan on page 60.

Thomas Liptan's calculation for designers (Impervious catchment area/sizing depth= Landscape area) requires 1.75 acre feet and is just for the first 1" of runoff.

The landscape could potentially require up to 5 million gallons a year. 2" of rainfall on 40 acres yields approximately 4.5 acre feet, or 1.46 million gallons. With capture, treatment & storage, even years of low rain fall would support the landscape water needs on site.

SITE INVENTORY: Compton Creek & the Local Watershed

LEGEND

- PROJECT SITE
- Compton Creek
- 41 Acre Sub basin
- Stormwater flow
- Commercial
- Local Auto Repair & Painting Businesses
- Potential capture/infiltration sites
- Open Space

The Lanzit Site is the center of the local watershed- the 41 acre sub basin. The Compton Creek daylights 1 mile upstream from the Lanzit Site, passing through residential areas. The local auto businesses are the first industrial impacts to the Compton Creek. A model for 'greening in place,' or avoiding displacement, in this case of locally owned businesses, is found in the Trust for Public Land's LA Verdugo Pass Report[29] that calls for subsurface wetlands and bioswales on these industrial edges to cleanse runoff and mitigate contamination of the creek.
The Lanzit Site is the largest open space near the Compton Creek and its utilization is essential for stormwater management.

The Lanzit Site offers an opportunity to divert runoff and prevent impairment of the Compton Creek within the watershed.

0' 1500' 3000'

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SITE INVENTORY: Groundwater Contamination Plume

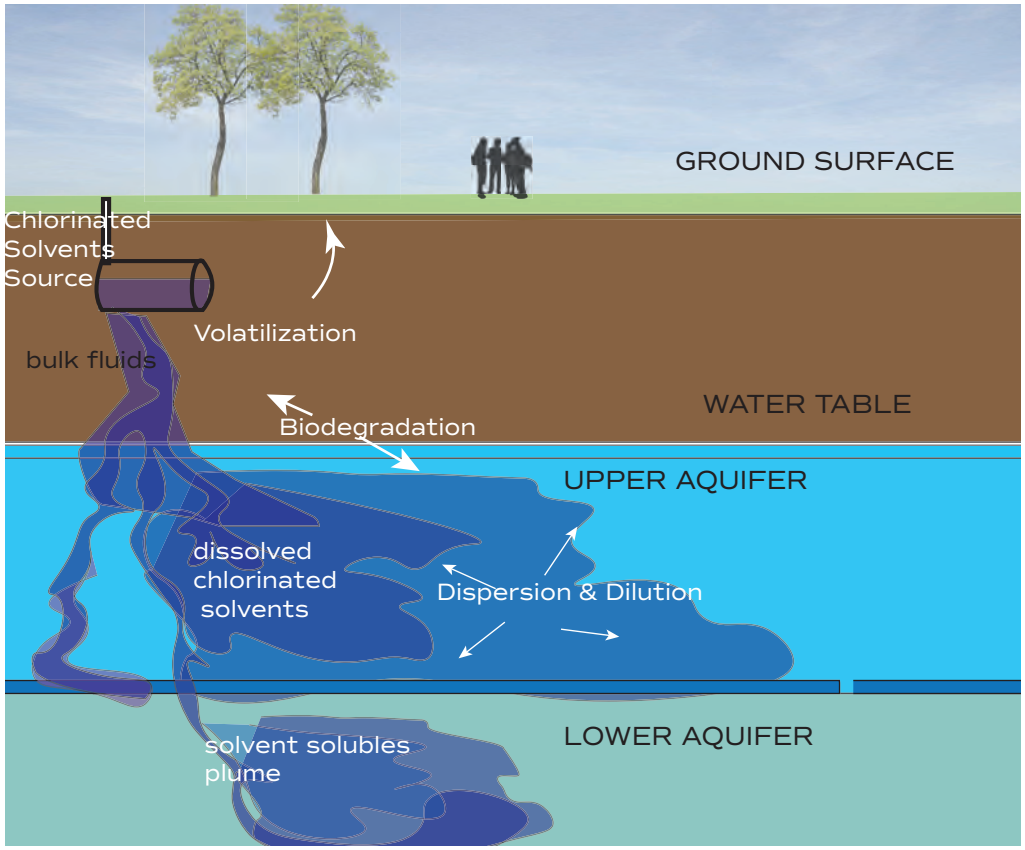
What is a groundwater contamination plume?

A groundwater contamination plume is the concentration of contaminants in the groundwater that is in the shape of a plume. Solvents and an underground oil tank from the site's usage as a CalTrans maintenance yard leaked and eventually made its way to the groundwater below. The contaminated soil was removed but solvents in the water are difficult to remove. Annual testing shows that there is still VOC contaminants in the groundwater above EPA permitted levels. The groundwater is at 60' and below and it is unpredictable how far a plume can disperse, dilute and spread. Spreads can be miles wide.

The Watts Community has water toxicity concerns, from lead leaching from old pipes to potential contamination from industrial uses. Calls for government response from the Watts Community are not forthcoming.

- Chlorinated solvent plume on Lanzit Site from Cal Trans usage of site 1947-1991. Flammable solvents & oil were stored on site and underground.
- Community wide contaminated water.
- Plume spread is unpredictable.
- Community concern and calls for government response not met.
- Need for deeper research into California native plants and phytoremediation efficacy.

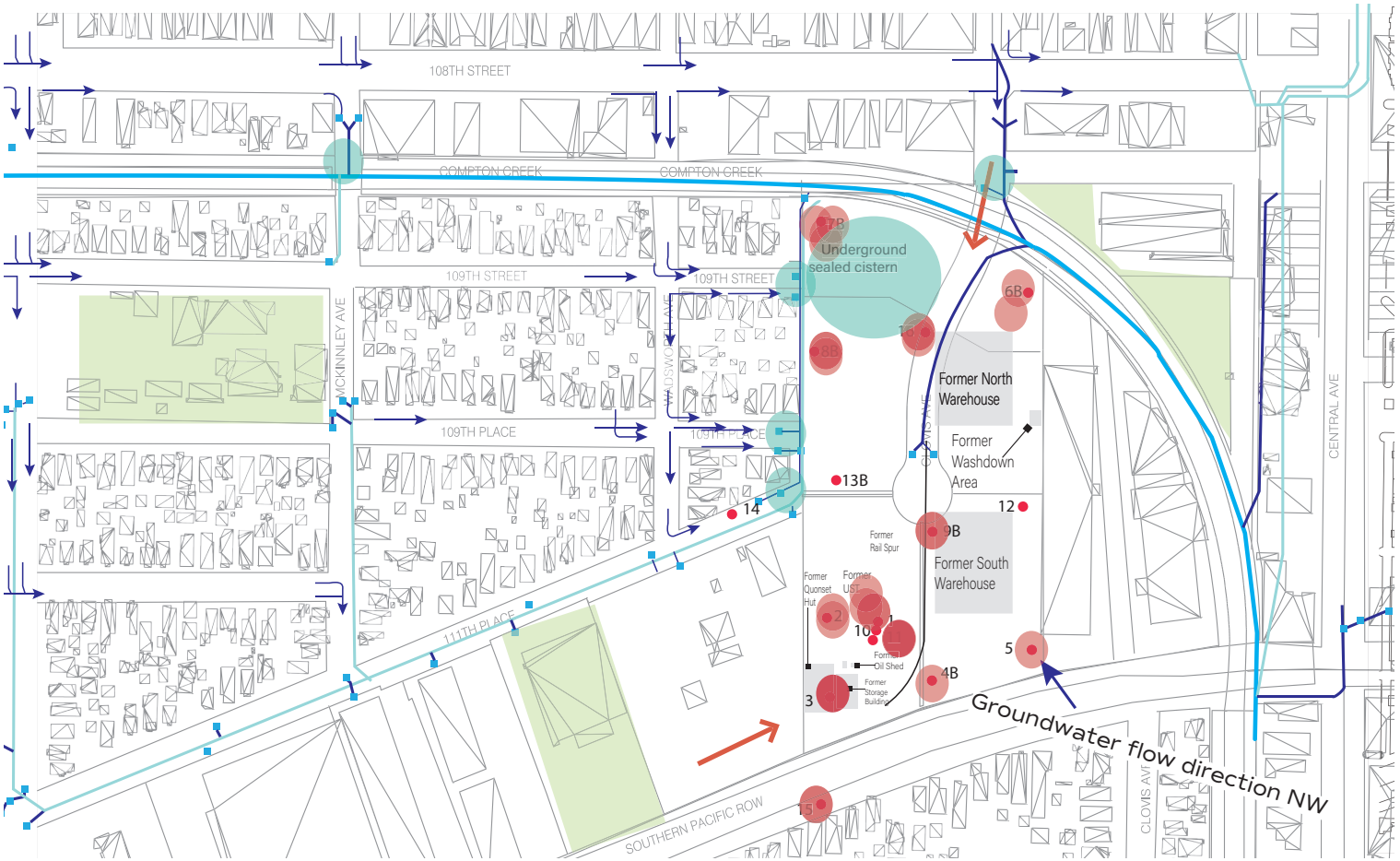
Transparent remediation of contaminated water may bond the community over shared concerns.



Concentration of VOC's at site wells
Benzine-3
Bromodichloromethane-7B
Chloroform- 1, 3, 6B, 7B, 8B, 11, 16
Dichloroethane-3
Dichloroethene- 1-3, 7B-9B, 10, 11, 16
Trichloroethene- 1, 2, 4B, 5, 6B-9B, 10, 11, 15, 16
Vinyl chloride- 1, 2, 3, 10, 11
Methyl tert-Butyl Ether-15

All groundwater data from the 2021 Groundwater Report of the Lanzit Site. [32]

SITE INVENTORY: Groundwater impairment



Sources of impairment are listed as the industrial area on 108th Street, the railroad right of way and the western parcel currently used as an unmitigated recycling center.

LEGEND

- Directional flow of storm-water SE
- Main line
- Connector
- Groundwater wells with Contaminants over EPA levels.
- Directional source of contaminants
- Location former Caltrans buildings.
- Available open space for stormwater treatment or infiltration.
- Potential points for redirection/ bioswales or storage.

0′ 250′ 500′

45

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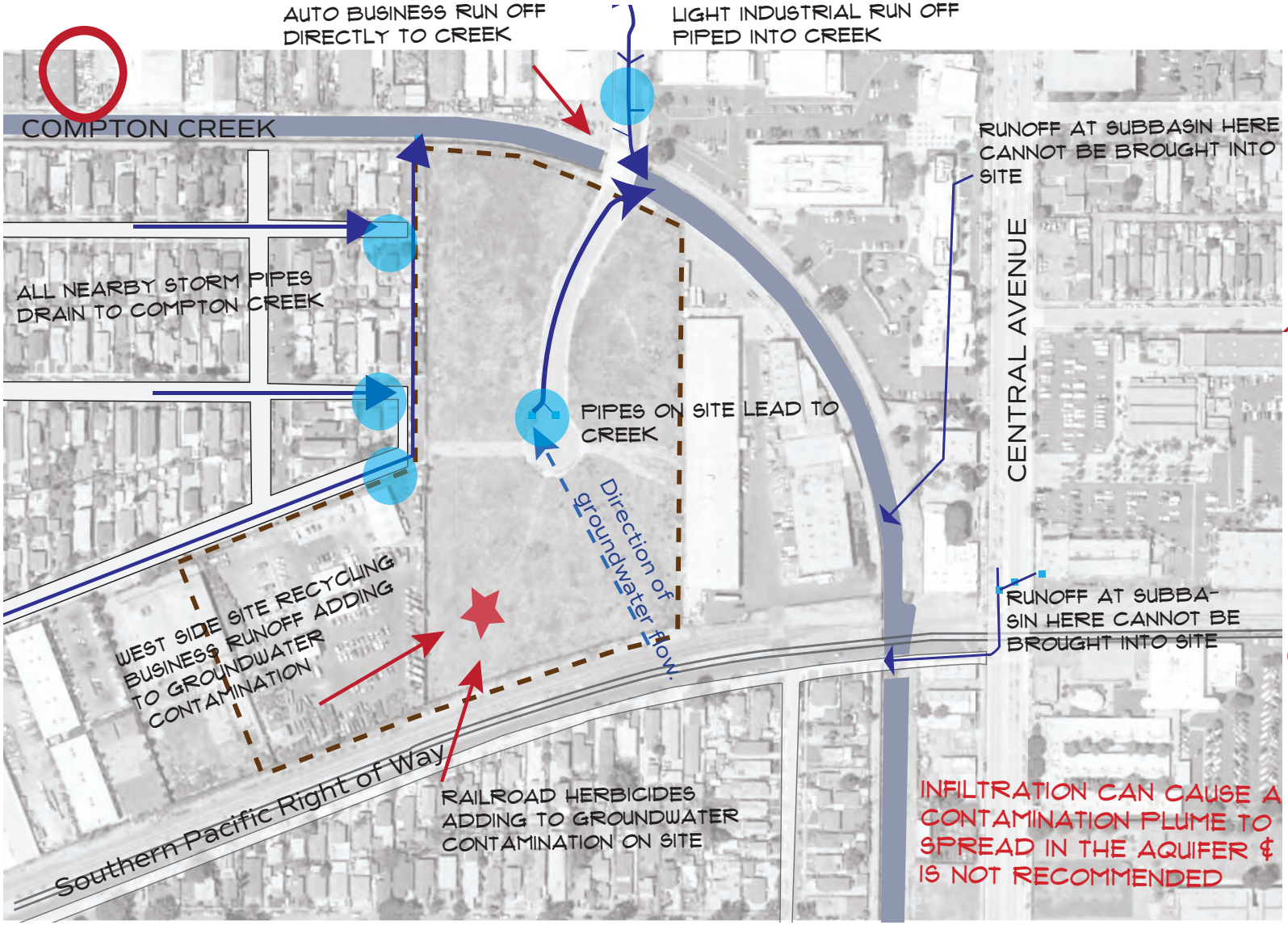
CONSTRAINTS: Contamination Chain



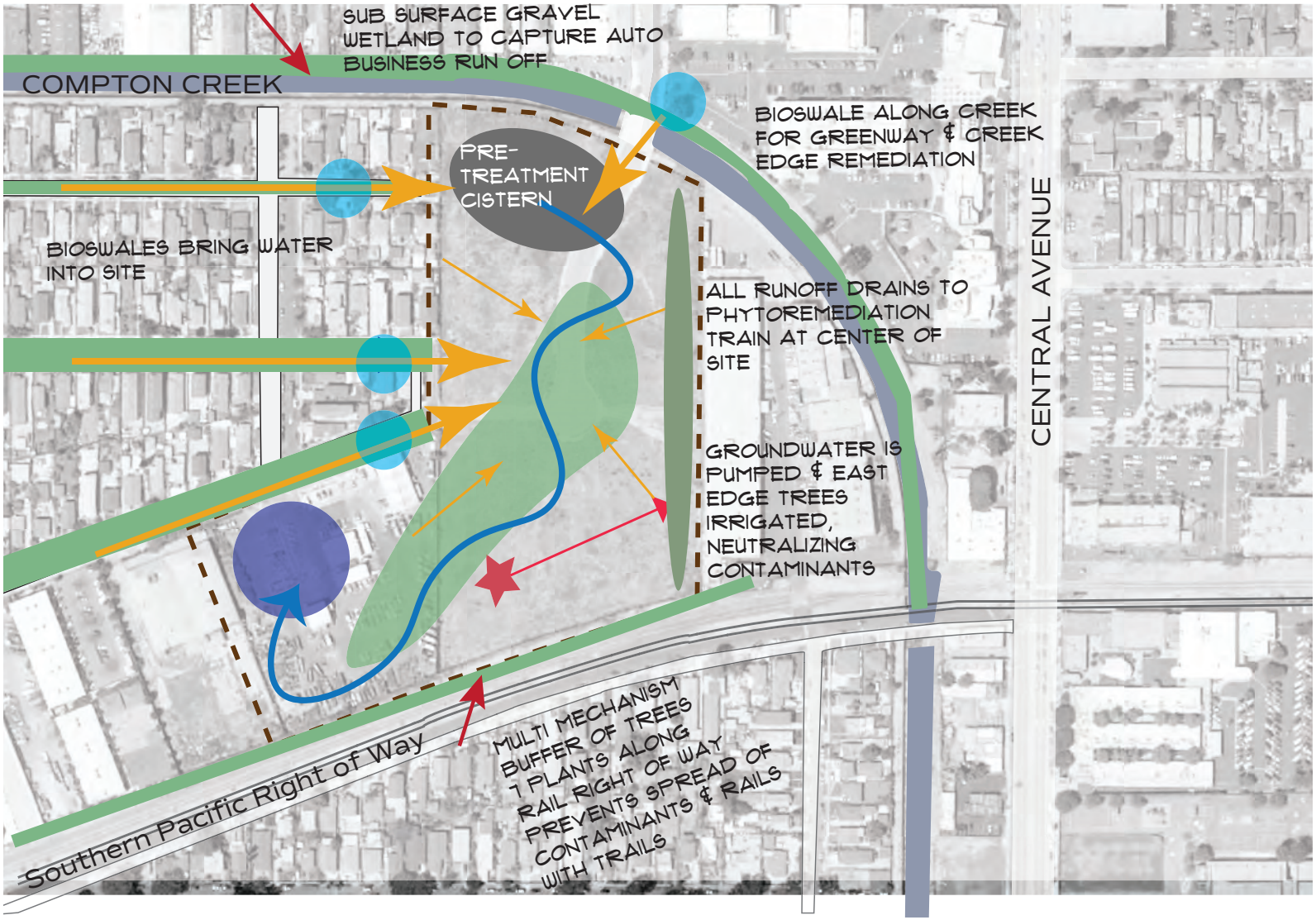
LEGEND

- Contamination plume center
- Source of groundwater contamination
- Storm pipe flow direction
- Diversion opportunity
- Potential location inside junk yard

GROUNDWATER 60' OR LOWER. TOO LOW FOR MOST PHYTOTECHNOLOGIES. ONLY PHYTOIRRIGATION POSSIBLE.

0' 250' 500'

OPPORTUNITIES: Phytoremediation Chain



LEGEND

- Contamination plume center
- Phyto-remediation train
- Trees outside of public access area
- Diversion opportunity
- Treated water storage for irrigation. inundation piped to creek.
- Stormwater runoff

0′ 250′ 500′

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GOALS: Community Well Being

OBJECTIVES

SOCIAL COHESION/ SOCIAL CAPITAL

SAFETY

CULTURAL REFLECTION

RESTORATIVE COMMONS

PROGRAMS

- Community Engagement.
- Space for celebration, exercise and play.
- On site services & alternative medicine clinic: 4000 sq feet.
- CPTED/Biophyllic design principles. *
- Gathering plaza for restorative practices, festivals, fairs. 7,500 sq ft.
- Exercise machines & paths for stress reduction & well being.
- Collective Memory Art Garden. 1 acres
- Amphitheater performance area. 16,000 sq ft.
- Natural playground. 1 acre.
- Skate snake run.5000 sq ft.
- Bicycling path and parking.
- Car free interior campus.
- Truck road for weekend car and motorcycle shows.

* The word “Biophilia” was first introduced by a psychoanalyst named Erich Fromm who stated that biophilia is the “passionate love of life and of all that is alive... whether in a person, a plant, an idea, or a social group.” In design it refers to inte grating natural elements and processes in the environment. CPTED stands for Crime Prevention Through Environmental Design and supports the concept that biophyllic design reduces plays a role in crime reduction.

PHOTOS: Cultural Reflection in the Landscape

Watts Towers Art Center landscape

Watts Towers Art Center

WLCAC Mudtown Farms

Noah Purifoy

Frank Romero ‘Los Caballeros de la Noche”

Kenzi Shiokava

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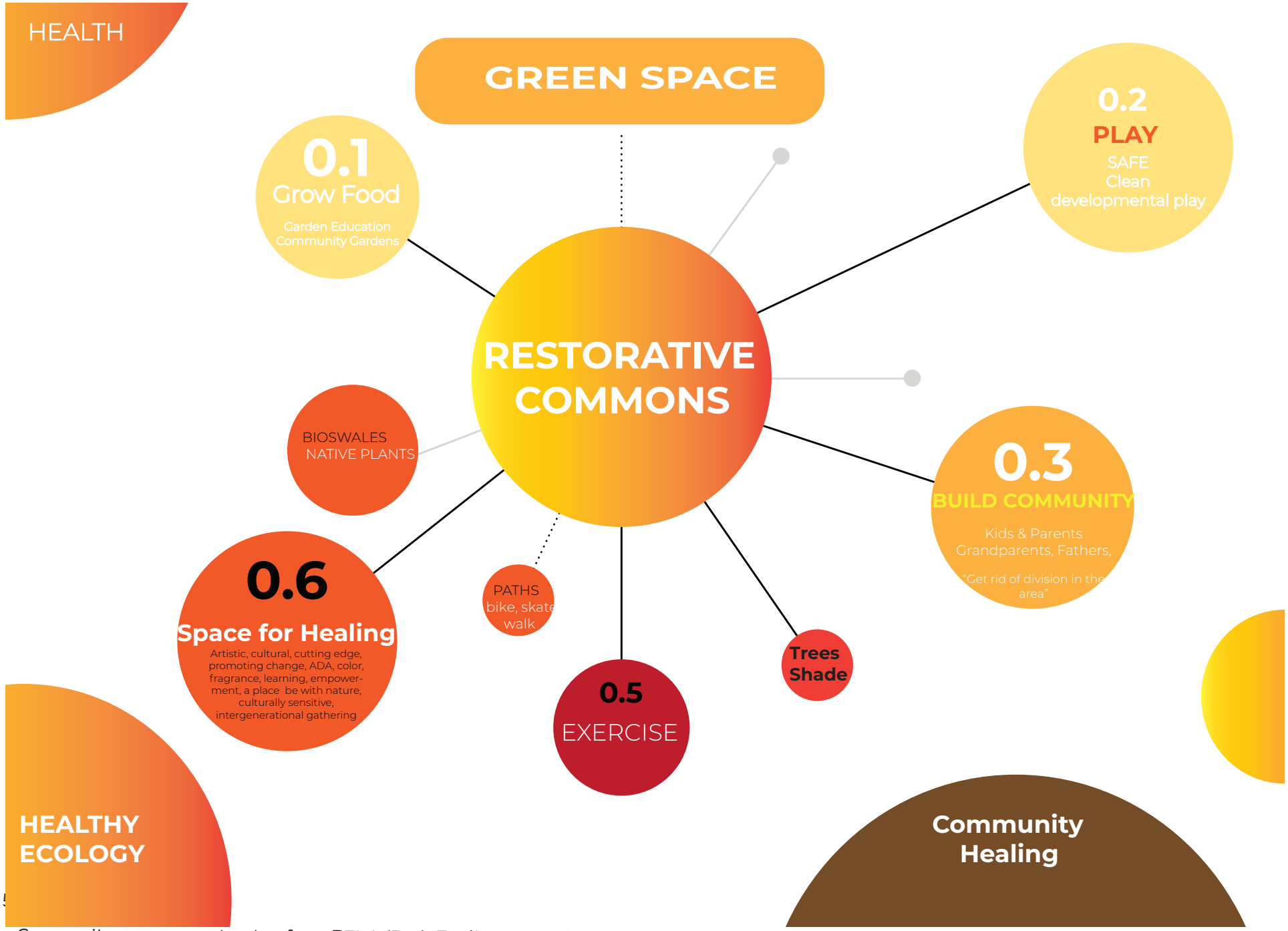
COMMUNITY ENGAGEMENT: Restorative Commons



Community engagement notes from PELA (Park Equity Leadership Academy) for Broadway Manchester (Green Meadows) led by Neighborhood Land Trust. In lieu of project specific community engagement for research purposes only. Also Freedom Plaza engagement by RIOS/Primestor.

RESTORATIVE COMMONS: Community is the expert

(Notes from Rios/Primestor Watts Comunity Center for Freedom Plaza/Jordon Downs

1. History & traditions incorporated into space.
2. Places for Children to "really play."
3. Elderly take care of grandkids. Need a safe place to walk & sit while kids play.
4. Space for healing.
5. Social justice/community empowerment.
6. Transparency & trust, artistic, cultural, revolutionary, promoting change.
7. Night Sky compliant lighting, color, fragrance.
8. Getting rid of division in the area.
9. Learning, empowerment.
10. Lots of trees & shade.
11. Herbs that mean something. Lavender, sage, jasmine, peppermint.
12. Kids to have confidence in themselves. "They want to make their parents proud."
13. Access to food.
14. Semi Circle- outdoor fire.
15. Motivational quotes.
16. Maker Space.
17. Art by Local Artists.
18. Intergenerational gathering.
19. Community entertainment. Movies outside.
20. "We are all proud of Watts. It always comes up." "Representation of what we have been through as a whole."

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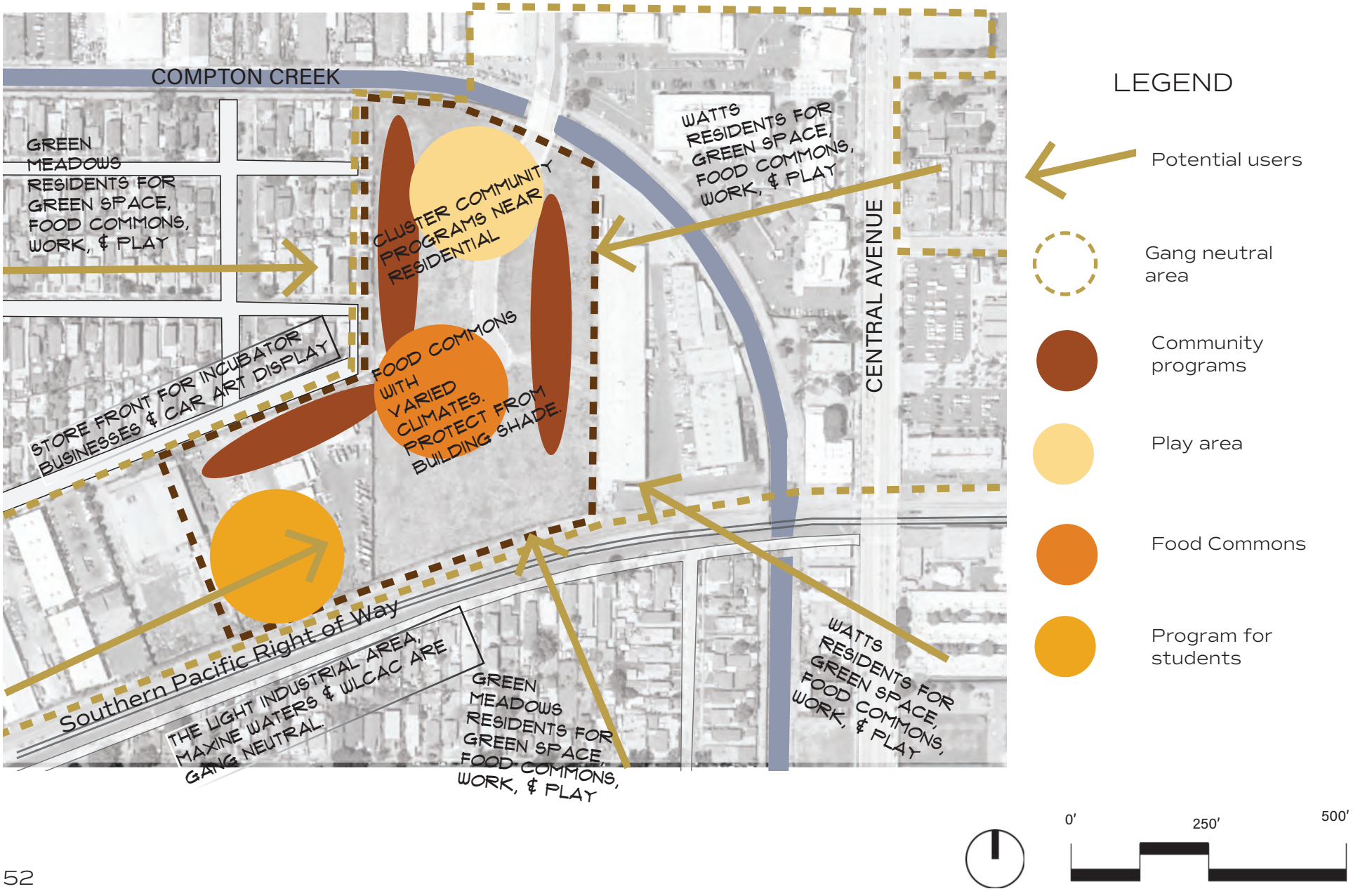
Capstone Studio, Summer 2021
Meg Coffee, Jim Pickel, Pamela Brief

OPPORTUNITIES & CONSTRAINTS: Restorative Commons



Restorative Commons

The vision for restorative commons was formulated by a consortium of professionals from the fields of health design and urban resource management in 2007 at the Meristem Forum “Restorative Commons for Community Health.” It is based on the understanding that “nature calls to something very deep in us” as does the desire to tend to nature. (Oliver Sacks, pg. 1-3). There is simultaneously a realization that “the urban ecosystem cannot function without citizen engagement.” (p.16 Campbell, Weissen).[33]

The theory of a restorative commons is symbiotic to the methodology of industrial ecology as industrial design by working within a cooperative, whole systems design framework. It is reflective of the design metaphor, the DNA double helix, by integrating cultural patterns and traditions, including intergenerational knowledge, into the collective landscape.

The principle elements of a restorative commons is that it be accessible to vulnerable populations, responsive to the needs of a neighborhood, provide opportunities for social engagement, economic empowerment, access to nature, and stewardship.

In the NPS Restorative Commons publication, Dr. Judith Heerwagen touches on the benefits of nature: Sunlight (promotes neurological health and affects alertness) outdoor green space (reduced symptoms of ADHD in children), gardening (recovery from stress), and nature play (stimulates imaginative play - a cornerstone of cognitive and social development), to name a few. (p. 46-48)

Food Commons

“Food security is inextricably tied to economic wellbeing.”
Sylvain Roy , “The Role of Food Security in Economic Recovery: Futureproofing and Building Resilience.” [34]

“The Food Commons is a ..whole systems approach to localized food economies.” (p. 32). It is “ a form of insurance against a potential big-system failure” (p.43), which loomed dangerously close during the Covid-19 shutdown. Here I make space for a micro local exploration of what a Food Commons could look like in South Los Angeles. There are growing grounds and a community kitchen for small businesses to create value added food products, that when combined with WLCAC’s Mudtown Farms and the nearby Stanford Avalon farms, becomes a cornerstone in a network of a local food economy.

The principle of a value chain is at the heart of a Food Commons where the greatest consideration is the “economic, environmental and community benefit to all ..” who are involved in the growing, picking, packaging, and consumption of food. The programs taken from Food Commons 2.0 are a demonstration Farm/Community Garden, Learning Center, Food Business incubator kitchen, Community Health Center and job training for food entrepreneurs. (p.49) [35]

GOAL: Vibrant Urban Ecology

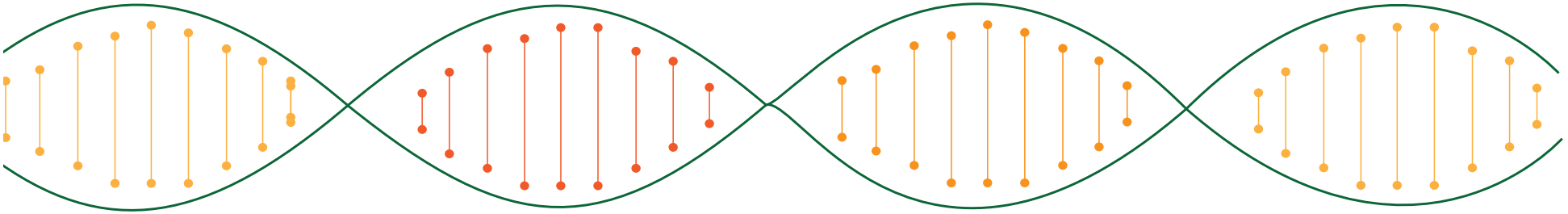
OBJECTIVES

GREEN CONNECTIVITY

CLIMATE CHANGE RESILIENCE

NOVEL ECOLOGY

BIODIVERSITY & WILDLIFE HABITAT



PROGRAMS

- Pedestrian focused campus.
- Connection to green ways along creek and railroad right of way.

- **Minimum 50% green** space. (6.5 acres).
- Continuous tree canopy.
- Carbon sequestration of 600 lbs of carbon a year.*

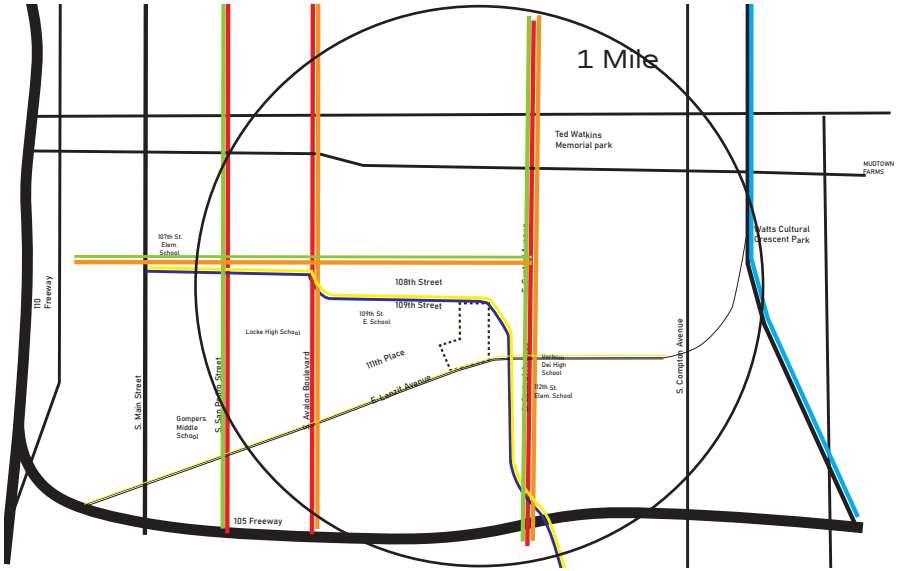
- 3 acres of California native & climate appropriate plantings.
- Utilize micro climates to create multiple landscape typologies.

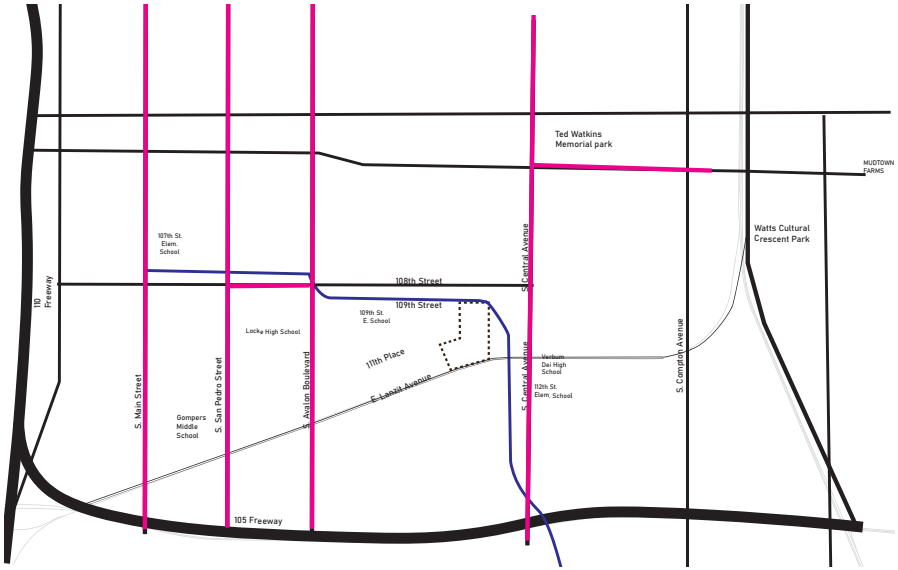
- Support biodiversity in an area with little green space.
- Provide habitat for California native birds and insects.
- Support pollinators and natural pest management in the Food Commons.

*From Landscape Performance Series, a 3" diameter tree sequesters approximately 2.3 lbs per year. Equal to 10 miles driven by a passenger car. https://www.landscapeperformance.org/fast-fact-library/carbon-sequestration-rates

SITE INVENTORY: Public Transit

Few bus routes and three High Injury Network Streets are indicative of the need for alternative transportation paths for biking, walking, and skating.





Information from NavigateLA website

LEGEND

- DASH Bus route-only N-S
- METRO Bus route
- A Line Metro
- Bike Lanes
- Informal bike/pedestrian route

*65% of all traffic deaths and severe injuries involving people walking occur on the HIN, which is just 6% of all LA streets.

Six of the streets in the vicinity are HIN streets. The 3 of 4 streets with bike lanes are also the HIN Streets. Many people bike and walk and some people use the railroad Right of way as an alternative pathway. The Compton Creek right of way is also a potential alternative path if safety and considered.

The A Line station is 1 mile away with no bus connection.

- *High Injury Network Street

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SITE INVENTORY: Open Space & Pollution Burden

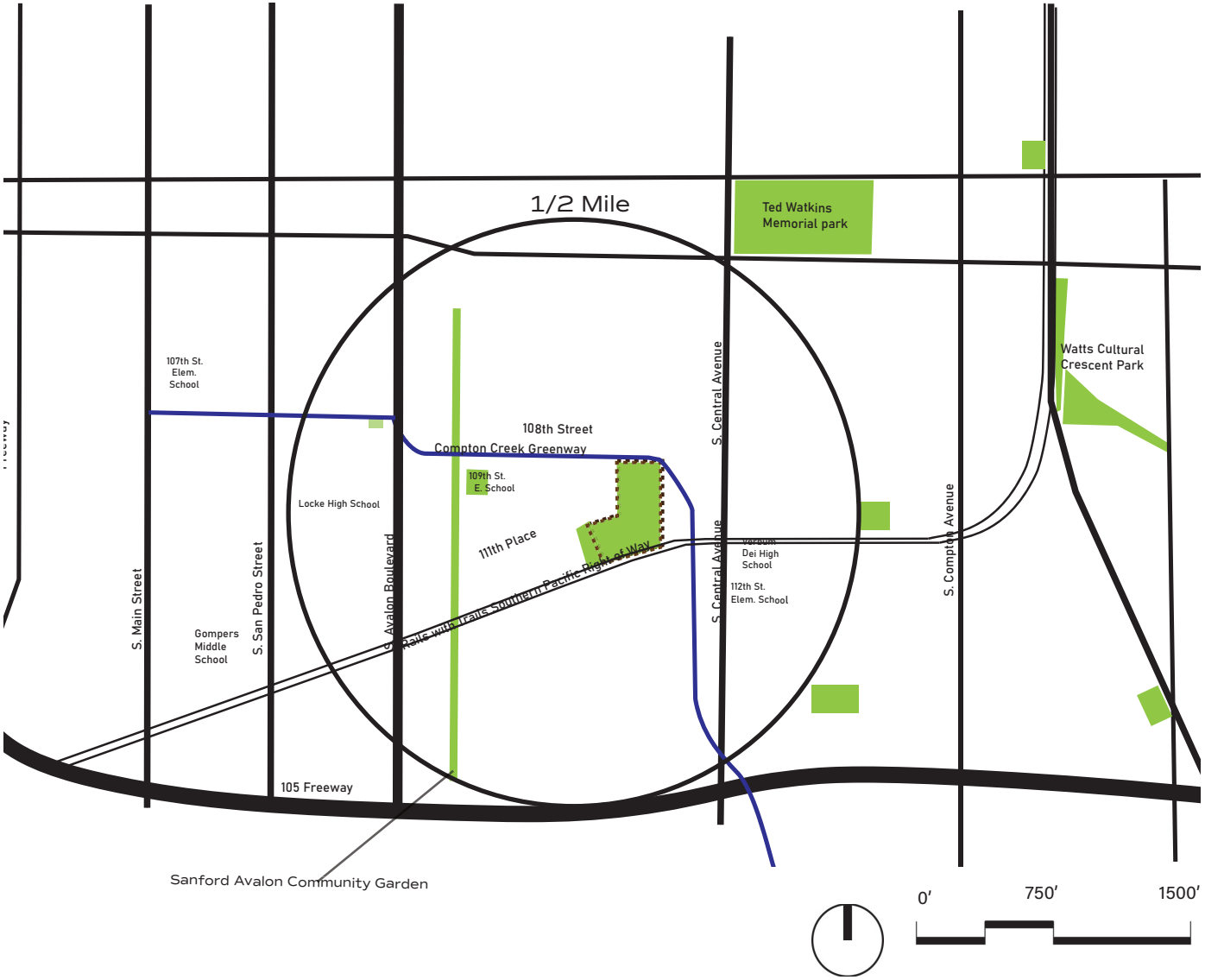
OEHHA's CalEnviroScreen grades the area of the site is within the highest level of pollution burden at 90-95 %. [37]

- 82% for concentration of chemical releases into the air. [36]
- Drinking Water toxicity levels: 79%
- Toxic Releases: 82%
- Particulate Matter 2.5: 82%.[14]

LA County Parks Assessment of 2016 grades the area at the highest level of park need.

- Only 1.1 acres per 1000 LA County average is 3 acres per 1000.[37]
- 57% of the population is within a half mile of walking distance to a park The Lanzit Site is not within 1/2 mile radius of a park. [37]
- High overall park need are based on poverty levels, park acres per 1000 and walking distance to nearby park.

Public green space is essential to the health and well being of the community. Green space is rare and pollution levels in air, water & soil are at crisis levels.



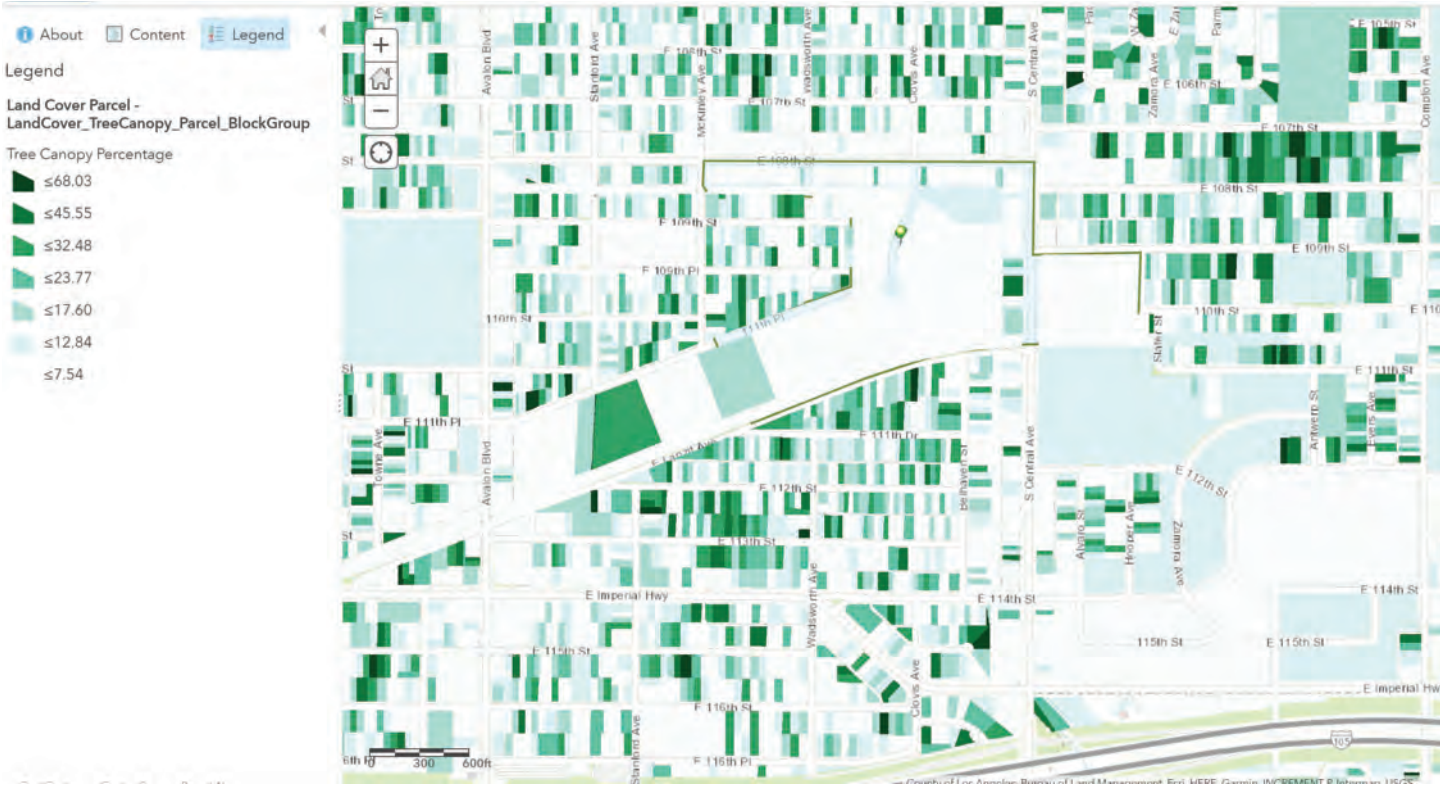
Statistics from Oehha Cal Enviro Screen & La County Parks Assessment 2016

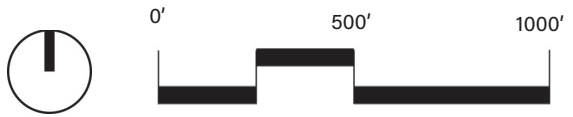
SITE INVENTORY: Urban Heat Island & Canopy

- Projected change in temp by 2050 = 36.5 Fahrenheit.
- Change to max temp 2050 = 37.5 Fahrenheit
- Avg max temperature 86.9 Fahrenheit.
- .5% tree canopy cover.
- Land cover: High level development, highly impervious.[20]
- Population Density: Watts 5009 per acre Green Meadows 3087 per acre. Watt is at 130% population density
- Tree coverage: less than 1%
- Number of tree species: 11.2 [38]

Through the Watts Rising TCC Grant, Tree People & Northeast Trees plan to plant over 1000 trees but soil toxicity may jeopardize tree health. A lack of diversity in trees jeopardizes the overall canopy resilience.

A diverse and resilient tree canopy is essential for combating a deadly rise in temperature.





Statistics from the Biodiversity Atlas of Los Angeles

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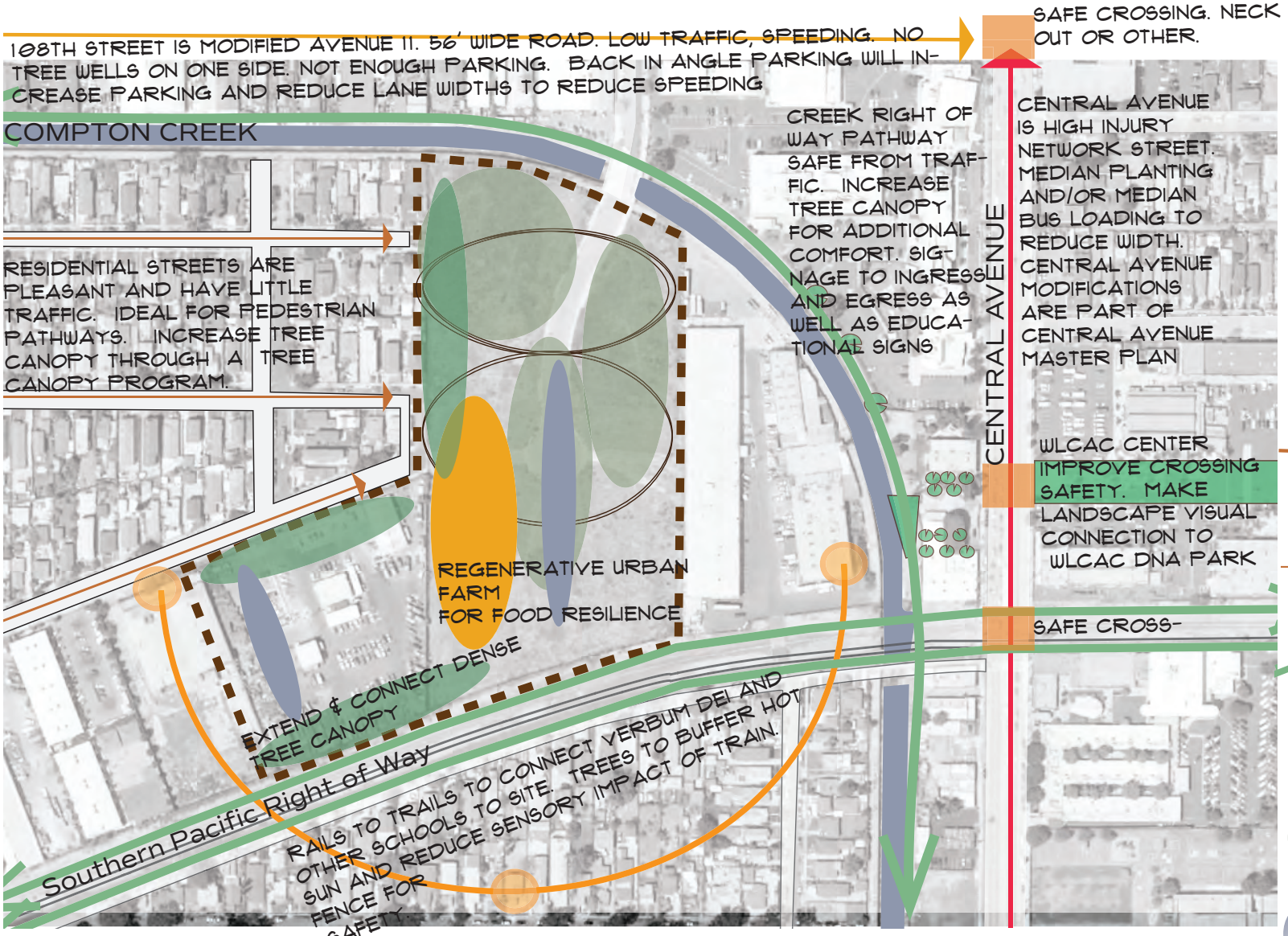
OPPORTUNITIES & CONSTRAINTS: Urban Ecology



LEGEND

- Raised crosswalk or corner bulb out
- Primary vehicular circulation
- Secondary vehicular circulation
- Terciary vehicular circulation
- Row greenway
- Tree canopy opportunity
- Habitat creation opportunity
- Water for habitat opportunity

0′ 250′ 500′

BIKE ROUTES ARE ONLY ON HIN OR HIGH TRAFFIC STREETS. NO DEDICATED LANES ON THESE STREETS. ALTERNATIVE PATHWAYS ON CREEK AND RAILROAD ARE USED AND NEED TO BE IMPROVED. PROTECTED BIKE LANE ON CENTRAL AVENUE OR SHARED BIKE AND BUS LANE. CENTRAL AVENUE EITHER HAS LOW TRAFFIC AND HIGH SPEEDS OR BOTTLENECK TRAFFIC DURING RUSH HOUR.. BICYCLE SAFETY IS NUMBER ON PRIORITY AS AFFORDABLE AND FAVORED TRANSPORT. NO BICYCLE SHARE PORTS IN WATTS.

URBAN ECOLOGY: Intertwining neighborhoods

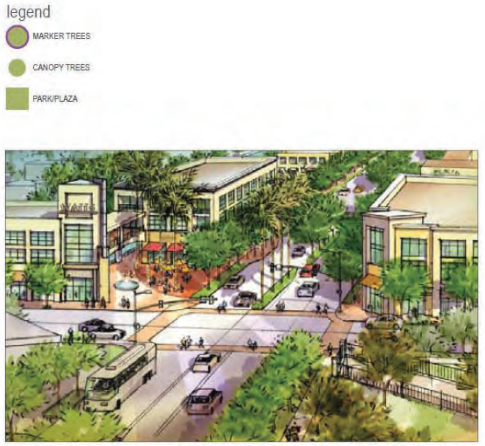
To truly heal the urban ecology, the Lanzit Site Project seeks to strengthen the two communities of Green Meadows and Watts by intertwining them and building social cohesion. The Central Avenue Master Plan and Corridor Study calls out districts, canopy master plans and green corridors which would unify the area.

In 2019, a collaborative of organizations received a $33.25 million Transformative Climate Communities Grant (TCC) from the State of California's Strategic Growth Council. [39] The goals of the grant include making streets safer for biking and walking, expanding the tree canopy, increasing community green space, and expanding urban agriculture. Tree planting plans from Tree People and Southeast Trees are referred to in the Greenway Masterplan.

The Stormwater System Masterplan calls out opportunities for greener school yards that would increase community park space with shared use agreements and support watershed stormwater management while improve learning environments for children.

The Districts and Connections diagram indicates where traffic speed interventions are needed and shows how Rails with Trails and the Compton Creek trail could achieve TCC goals.

And the Greenway system demonstrates the potential greening of the neighborhoods if all plans were to be completed.



Imperial Gateway showing the streetscape and connection to River Walk.

Existing DNA Park

From the Central Avenue Master Plan and Corridor Study

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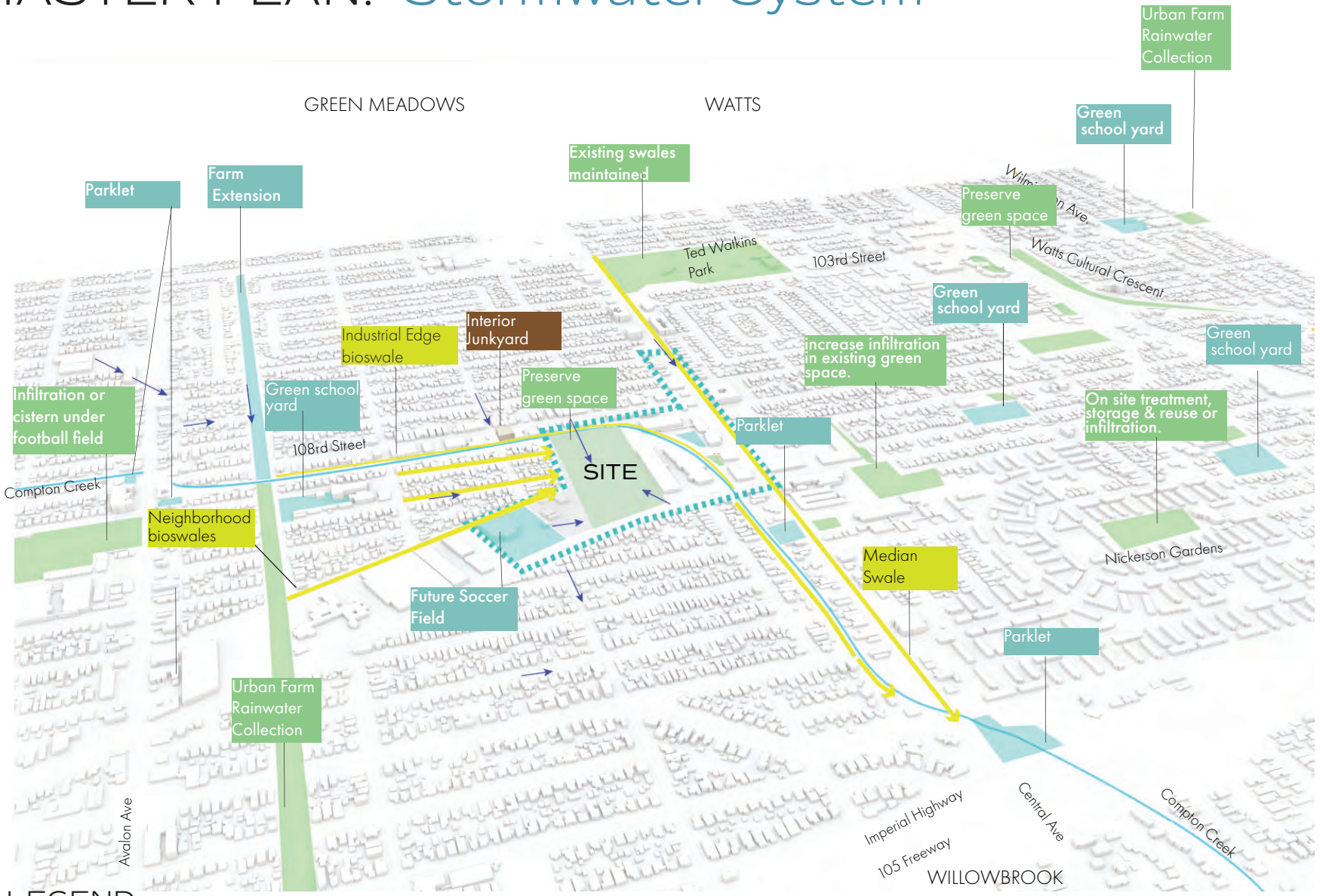
MASTER PLAN: Stormwater System

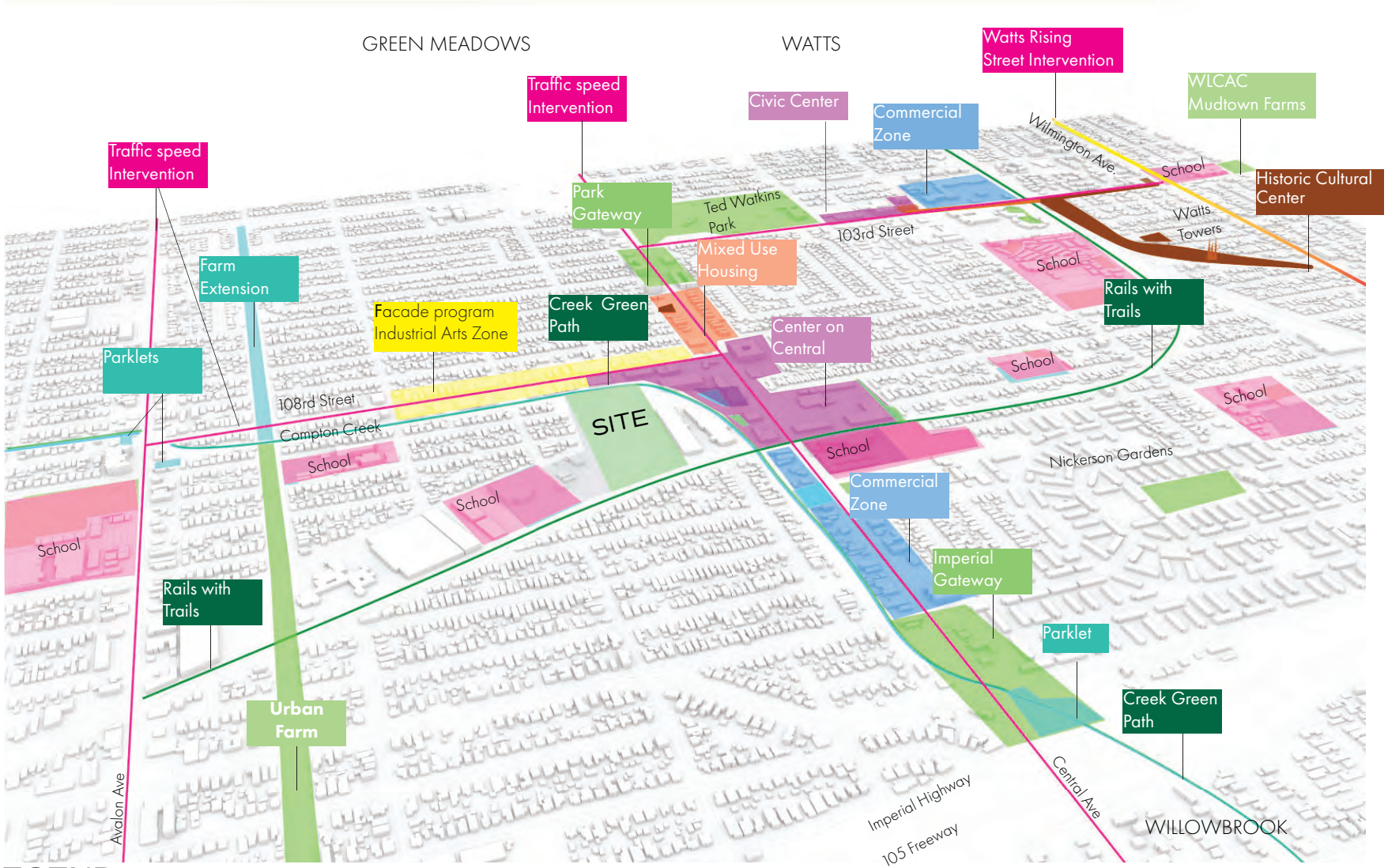


LEGEND

- Potential conversion of impermeable area to green space with capture and infiltration or storage
- 41 acre Sub Basin Watershed
- Landscape Treatment opportunities
- Existing Green space
- Interior Junkyard location

NTS

MASTER PLAN: Districts & Connections



LEGEND

- Schools
- Historic Zone
- Parkland
- Commercial Zone
- Civic Zone
- Mixed Use Housing
- Conversion to green space

NTS

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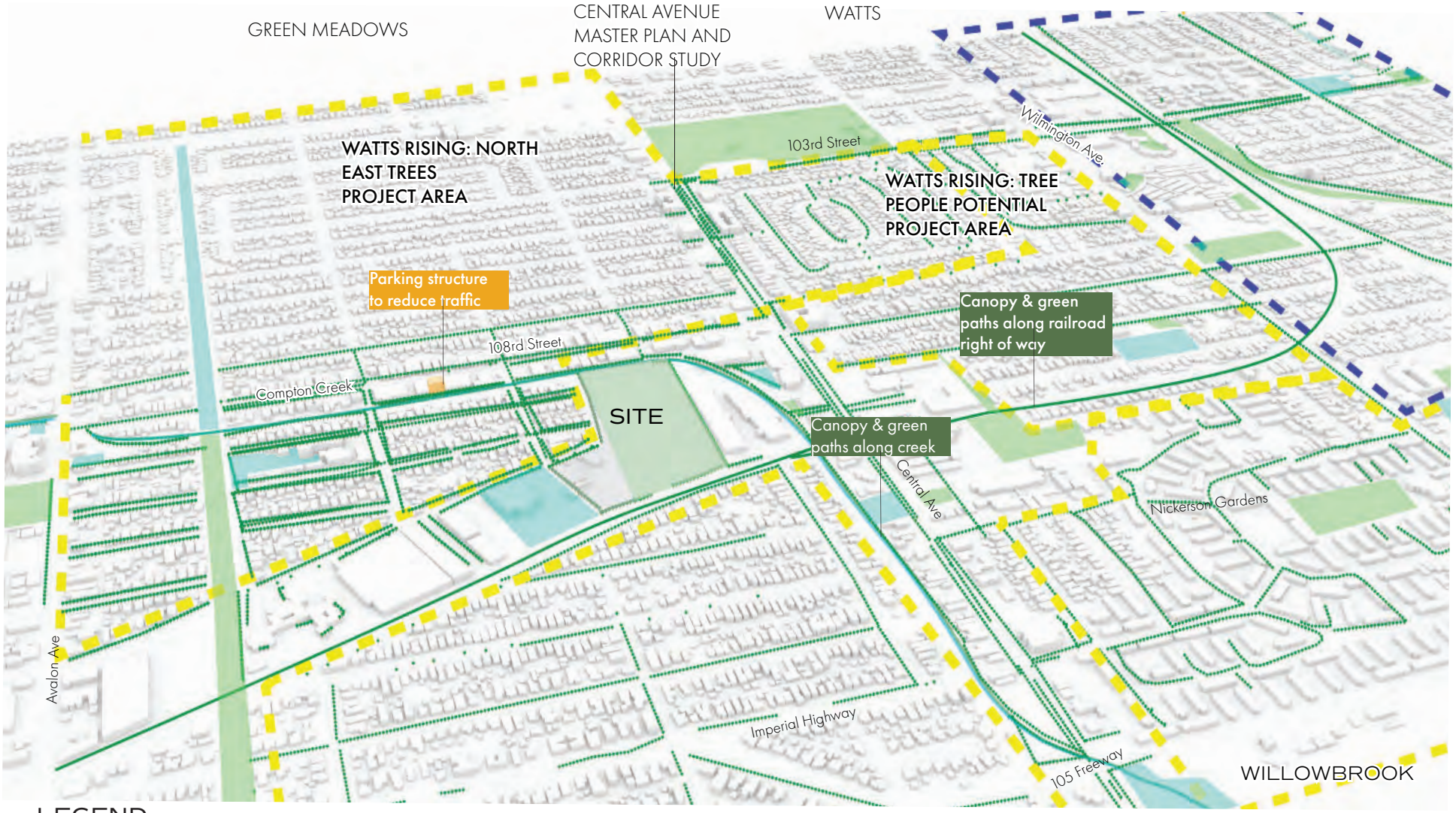
MASTER PLAN: Greenway System

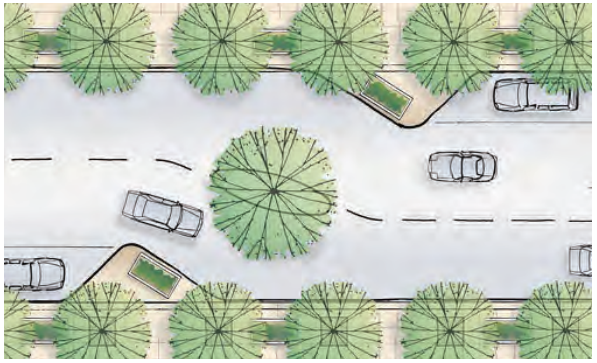


LEGEND

- Potential conversion of impermeable area to green space with capture and infiltration or storage
- Potential Tree Canopy Project Area
- Northeast Tree or Tree People Canopy Project Area

NTS

MASTER PLAN: Inspiration



TRAFFIC MITIGATION: Chicanes & Street Trees: slow traffic,narrow drivers visual field & create rhythm.

FACADE PROGRAM: Celebrate industrial past and innovative future with bespoke facades on metal buildings.

MEDIAN BIOSWALE: With energy dissipation weirs and grasses.

RAILS WITH TRAILS: Vegetation & fences protect pedestrians and beautify informal paths.

GREENER SCHOOL YARDS: Nature play for children, stormwater infiltration

INTERCONNECTED TREE WELLS & SWALE: With energy dissipation weirs and grasses.

INDOOR AUTO YARD: Eliminates oil spills and rust along the creek edge. Parts catalogued.

EGALITARIAN URBAN CANOPY: Dense tree canopy provides climate change resilience and pleasant pathways.

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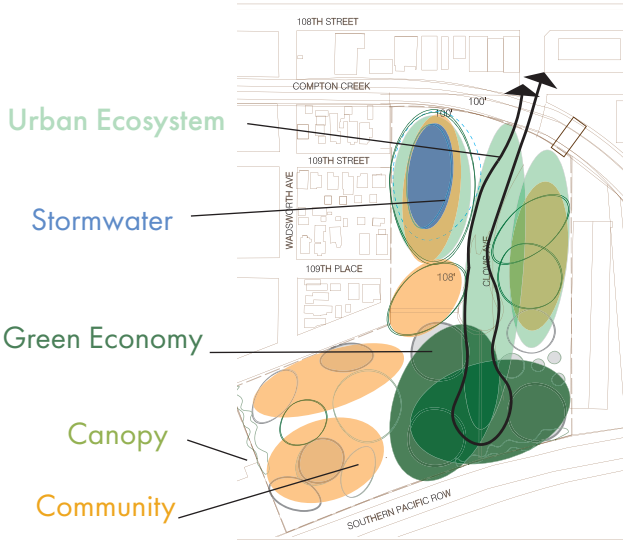
DESIGN PROCESS: Concept One

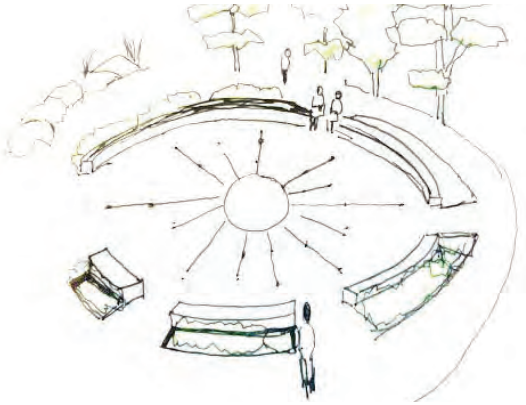
LEGEND



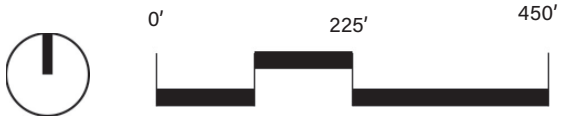
KEEPING EXISTING ROAD FOR VEHICULAR CIRCULATION.
Stormwater Management near creek.

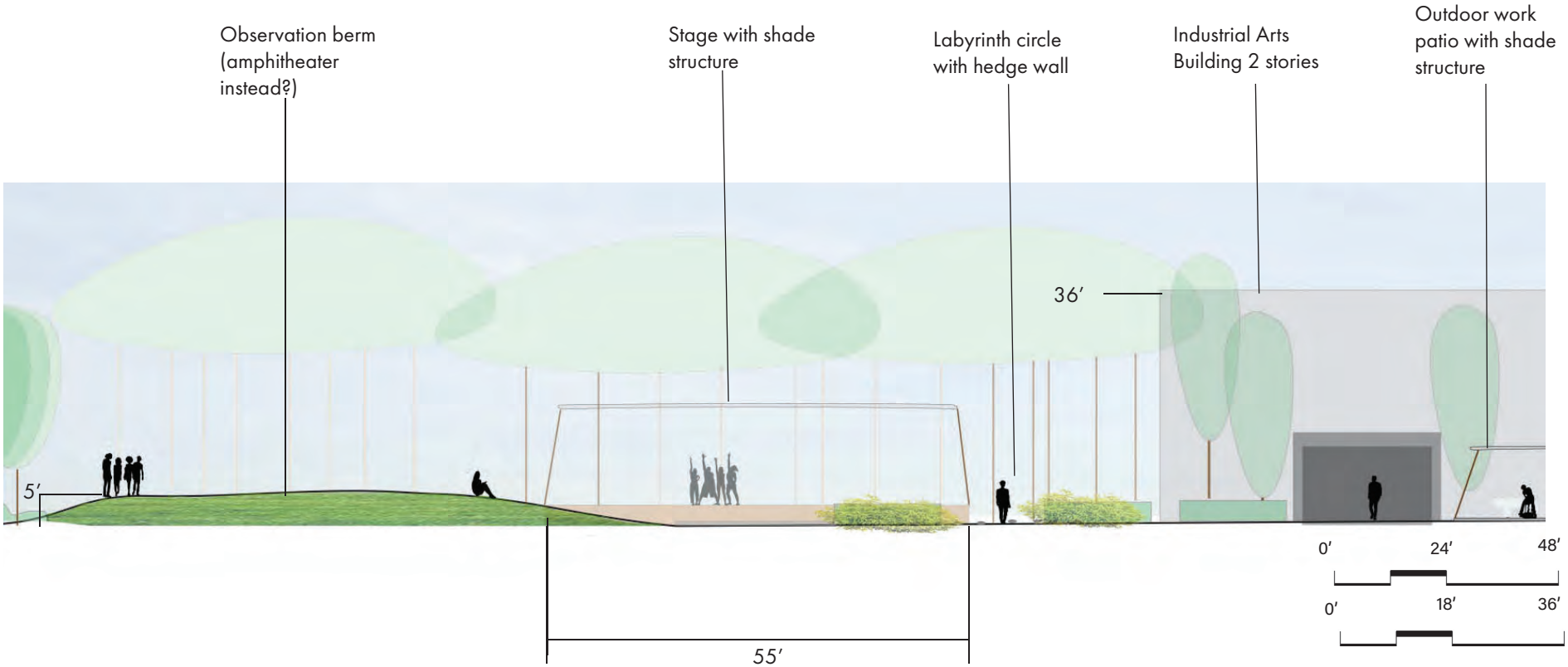
Larger focus on arts and community. Too large for needs in nearby community.

Cons: Too many turns for trucks which will increase breaking and pollution. Divided campus, stormwater management system is not large enough nor does it cover complete campus.



Utilize the existing road and cluster buildings together.





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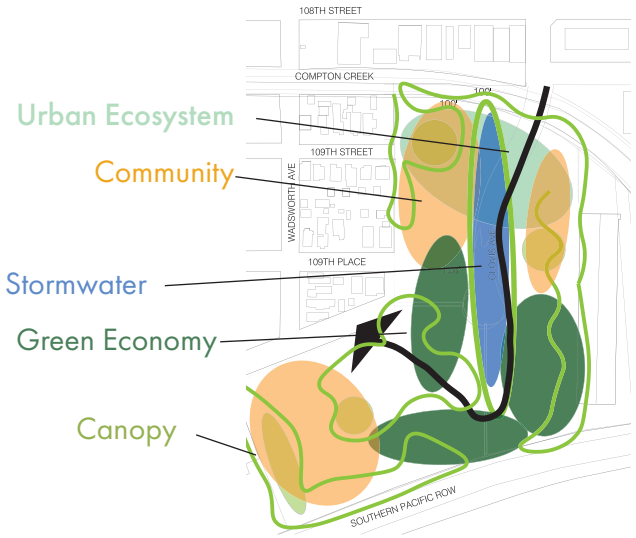
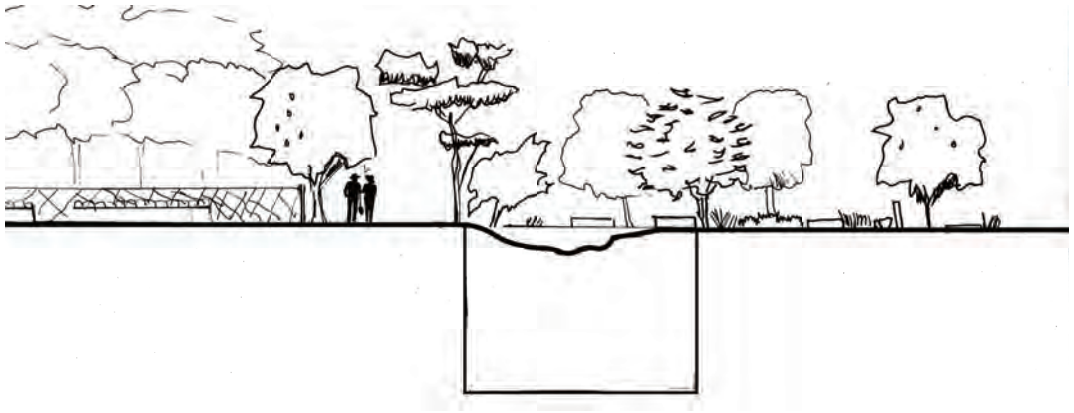
DESIGN PROCESS: Concept Two

LEGEND

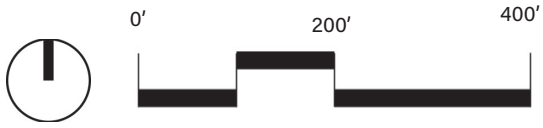


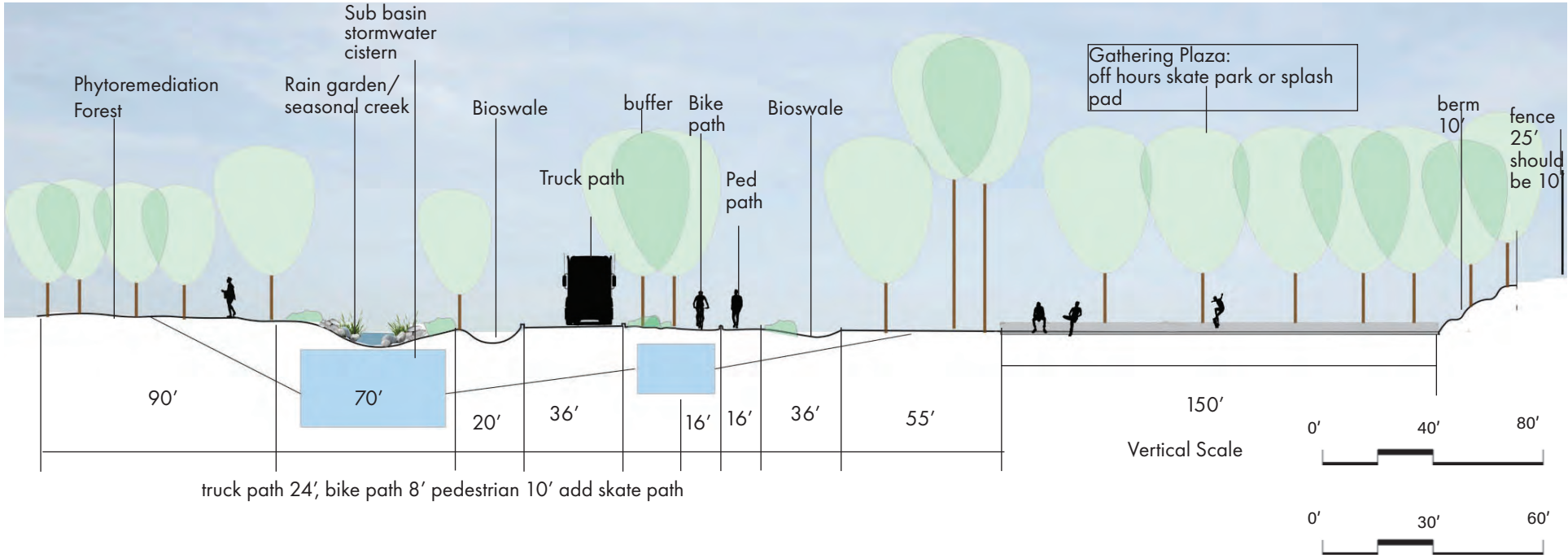
STRENGTHS: Orchard and farm by residences, circle of exercise equipment around playground,work vs civic space split. Stormwater/phytoremediation demonstration with pedestrian path in center. Gathering connection strong. Native garden contains nature playground and entrances. Healing circle.

WEAKNESSES: Too many pedestrian /truck intersections. Learning campus void in middle.



Create a double helix stormwater system and a park like campus.





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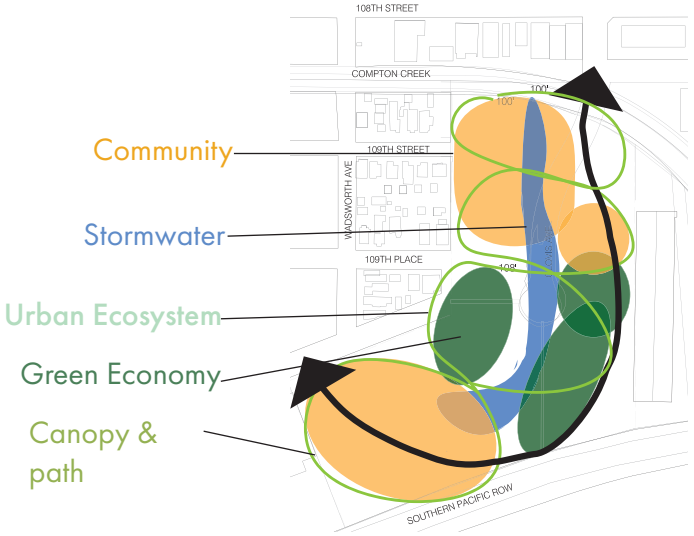
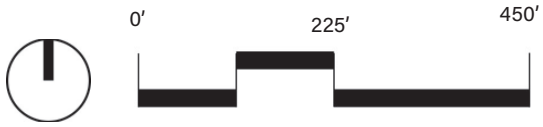
DESIGN PROCESS: Final Concept

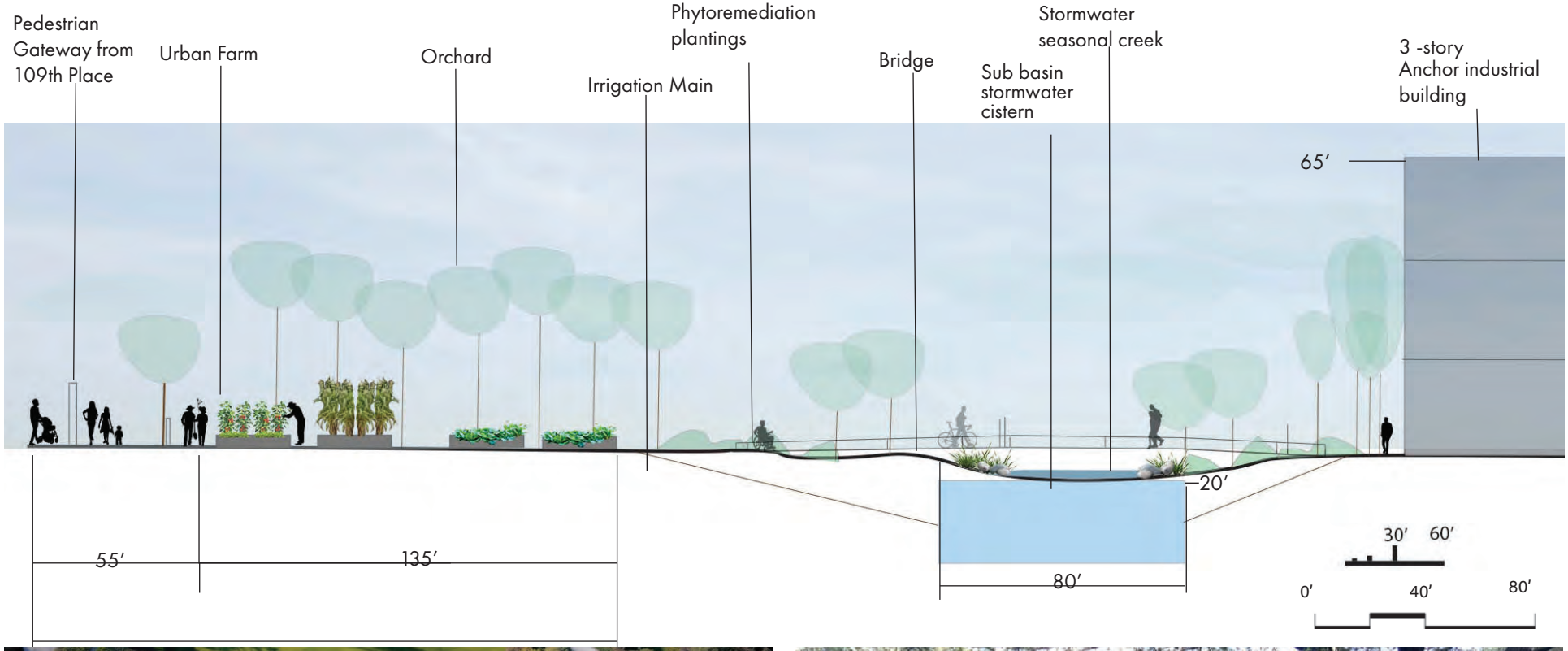
LEGEND

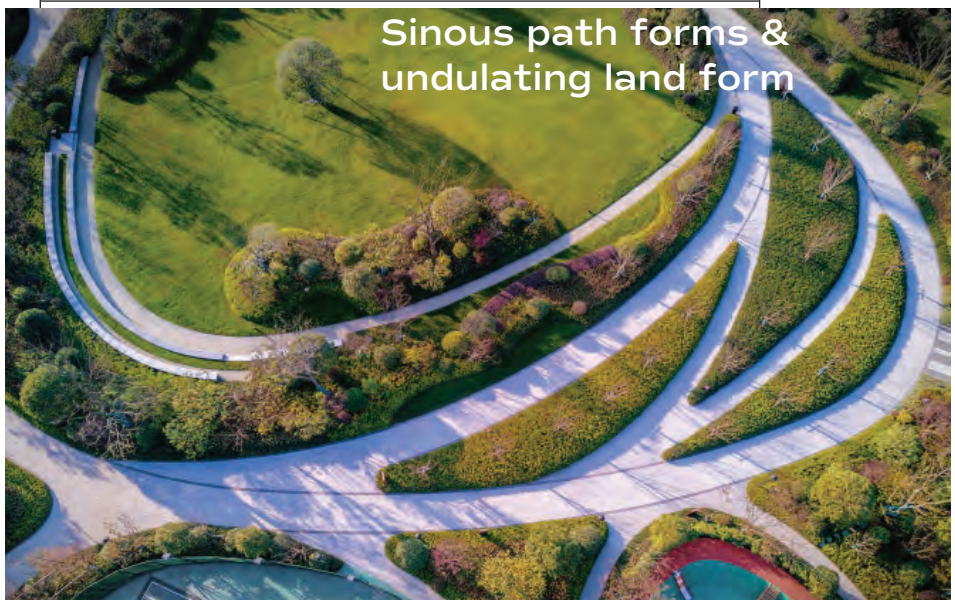


STRENGTHS: Campus mostly vehicle free. More stormwater mgmt. potential. Possible amphitheater and observation berms for performances and car shows. Berms on edges control views.

An anchor road on outer periphery reduces vehicles on campus. Double helix pedestrian path weaves campus together.







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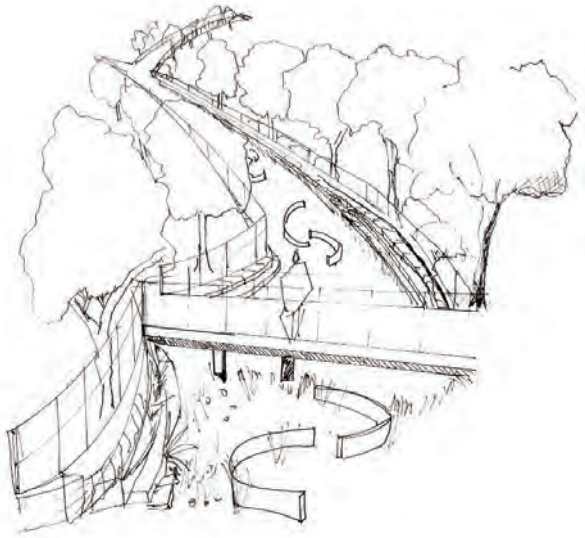
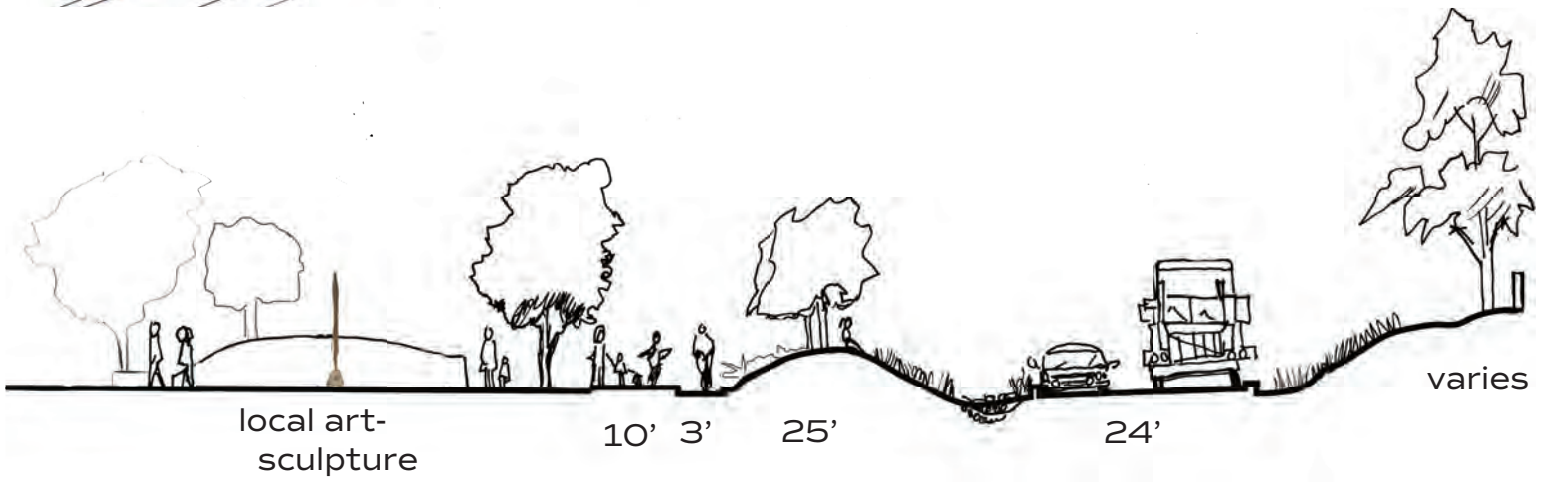
DESIGN PROCESS: Schematic 1



Phytoremediation Creek
& Rain Garden

Phytoremediation Creek
& Rain Garden

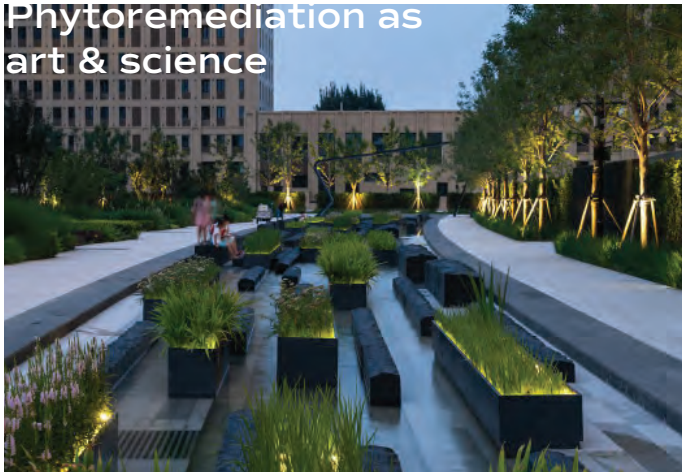


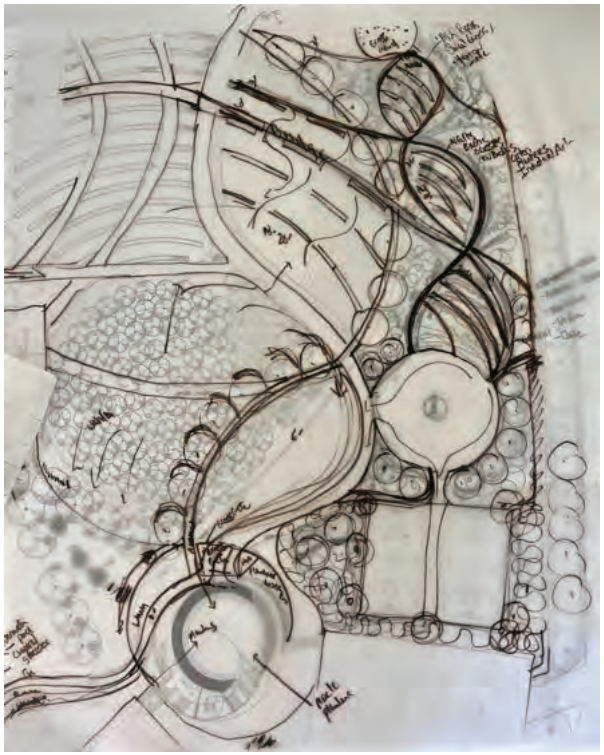
Preliminary section
of art garden, berm
and vehicular path.

The first schematic was heavily inspired by Martha Schwartz's design for Beiqijia Technology Business District in Beijing, China. I was seeking a solution for the revelation of a creek formation that has aesthetic interest in dry seasons and I was questioning the DNA form as a centerpiece. The metaphor had become more philosophical at this point.

However, the result was too abstract and the overall design lacked hierarchal structure. It also stopped short of managing the stormwater for the site and the environs. I was encouraged to return to the metaphor to strengthen the cohesiveness of the design, both in form and function.

Below is the preliminary hand drawing of the illustrative (shown on page 70) and the right of it is the exploration of the physical expression of the metaphor at the core of the project.



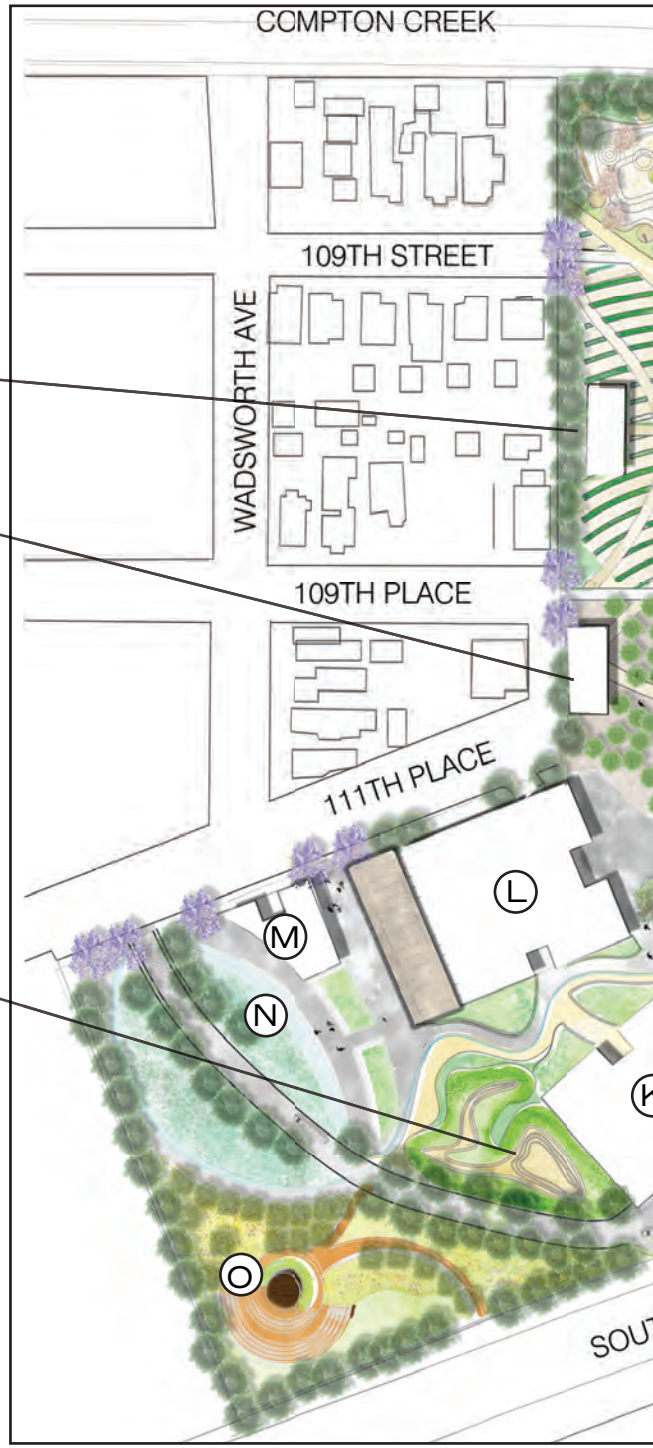


ILLUSTRATIVE PLAN

Green house and education center

Community vermiculture center

Skateboard snake run
with grass mounds



LEGEND

- (A) Natural playground.
- (B) Food Commons
- (C) Restorative Waters Vernal Pond
- (D) Collective Memory Garden
- (E) Vehicular Road
- (F) Gathering Plaza
- (G) Wetland
- (H) Atrium Rain Garden
- (I) Rail and Truck Loading Zone
- (J) Anchor Green Industry Building
- (K) Small Urban Manufacturing Building
- (L) Industrial Arts Education/Incubator Building
- (M) Alternative Health Clinic/Services
- (N) Stormwater Fountain
- (O) Detention Pond Amphitheater

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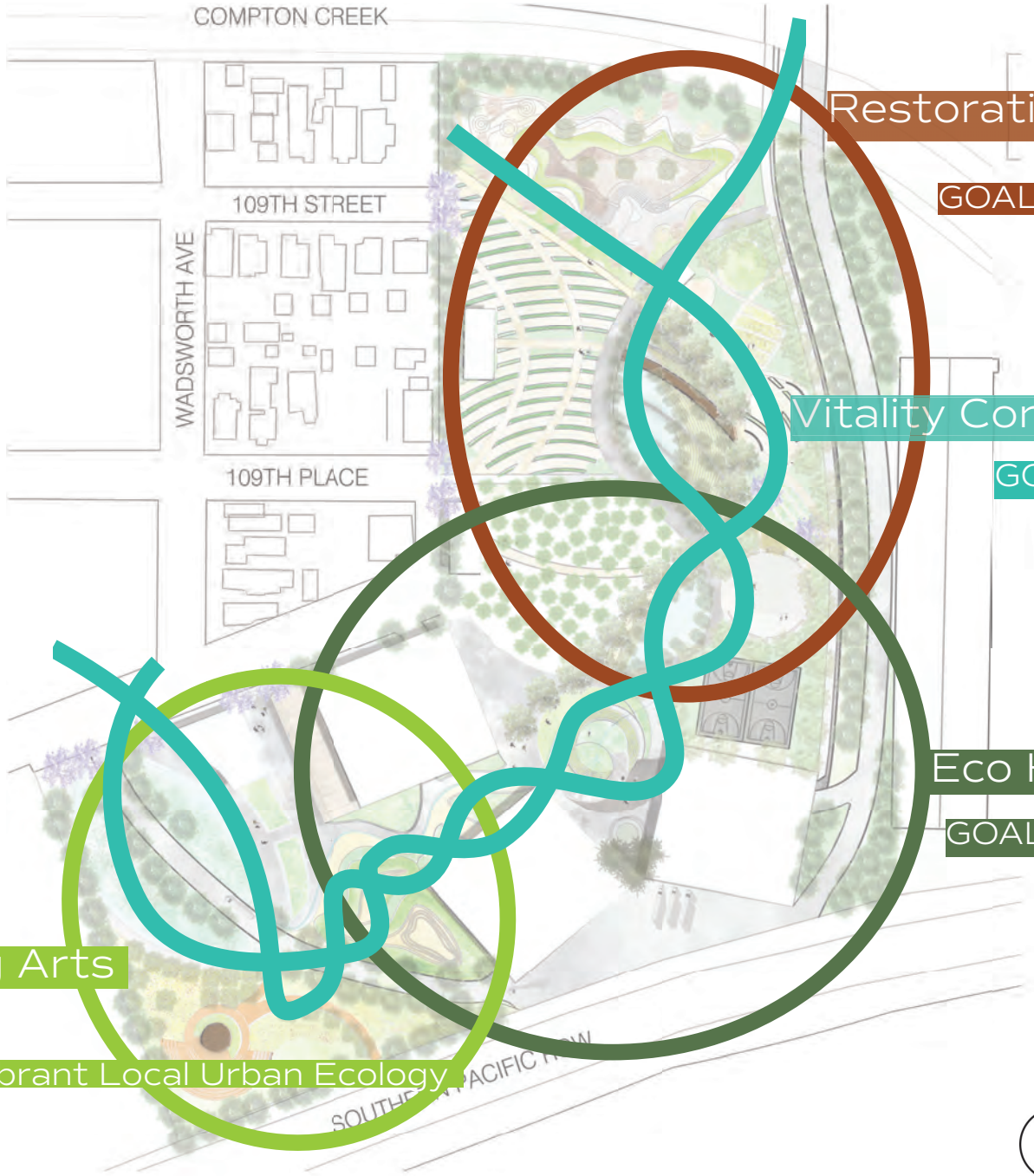
ZONES


COMPTON CREEK
109TH STREET
WADSWORTH AVE
109TH PLACE
Restorative Commons
GOAL: Community Well Being
Vitality Core
GOAL: Healthy Watershed
Eco Hub
GOAL: Green Local Economy
Healing Arts
GOAL: Vibrant Local Urban Ecology
0′
200′
400′

Programs are intertwined and work in unison to reach objectives.

The essence of the methodology derived from Nina Marie Lister's article "Industrial Ecology as Ecological Design" is a collaborative bonding of programs to support all goals. The Economic Hub not only provides first time jobs but also education for young people and those wanting to explore entrepreneurial venues or to explore industrial arts. The Food Commons supports well being by providing healthy food and social interaction and also supports entrepreneurial endeavors in the community kitchen.

The Vitality Core with the Restorative Waters Vernal Pond is the centerpiece of the stormwater management while also providing an introspective landscape and supporting wildlife habitat.

The programs as a whole are designed to form a microcosm of an urban ecosystem. The DNA of the communities is intertwined together to create resilience and to create new chains of sequences - a pipeline of fulfilled potential.

The eco industrial park thereby engages in "the social dimension" to surpass economic and ecological goals to become "an agent of...personal and societal transformative changes." [24]

ENLARGEMENT: Restorative Commons

80% 90% 100%

LEGEND

- (A) Blue Oaks Natural Playground
- (B) Exercise machines & path
- (C) Vehicular road /car & moto shows
- (D) Collective Memory Garden
- (E) Group exercise grass mound
- (F) Restrooms
- (G) Community Art Gallery
- (H) Outdoor installation gallery
- (I) Ecological History Garden
- (J) Cultural history Garden
- (K) Garden Education Center
- (L) Community Compost Center

VIGNETTE A: Clovis Bridge Entrance

Multiple programs are visible at the entrance: phytoremediation of the auto business runoff on the creek edge, the greenway path along the Compton Creek, and safe connections for bicyclists and pedestrians with a buffered vehicular entrance.

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Meg Coffee, Jim Pickel, Pamela Brief

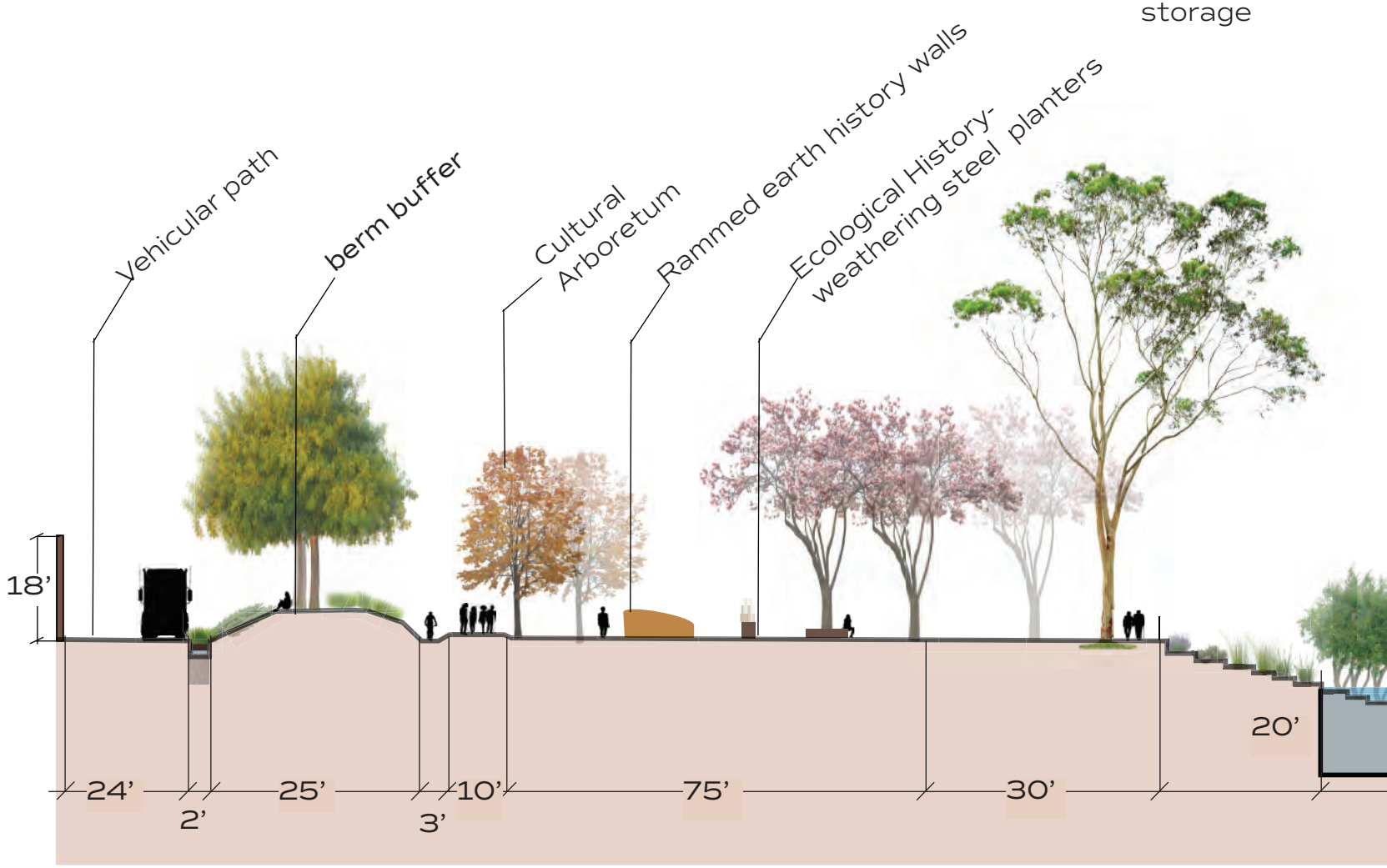
SECTION A-A': Art Garden to Food Commons

COLLECTIVE MEMORY GARDEN

1 acre

RESTORATIVE

20-130- ' wide
255' long
12' deep, 20' cist
storage

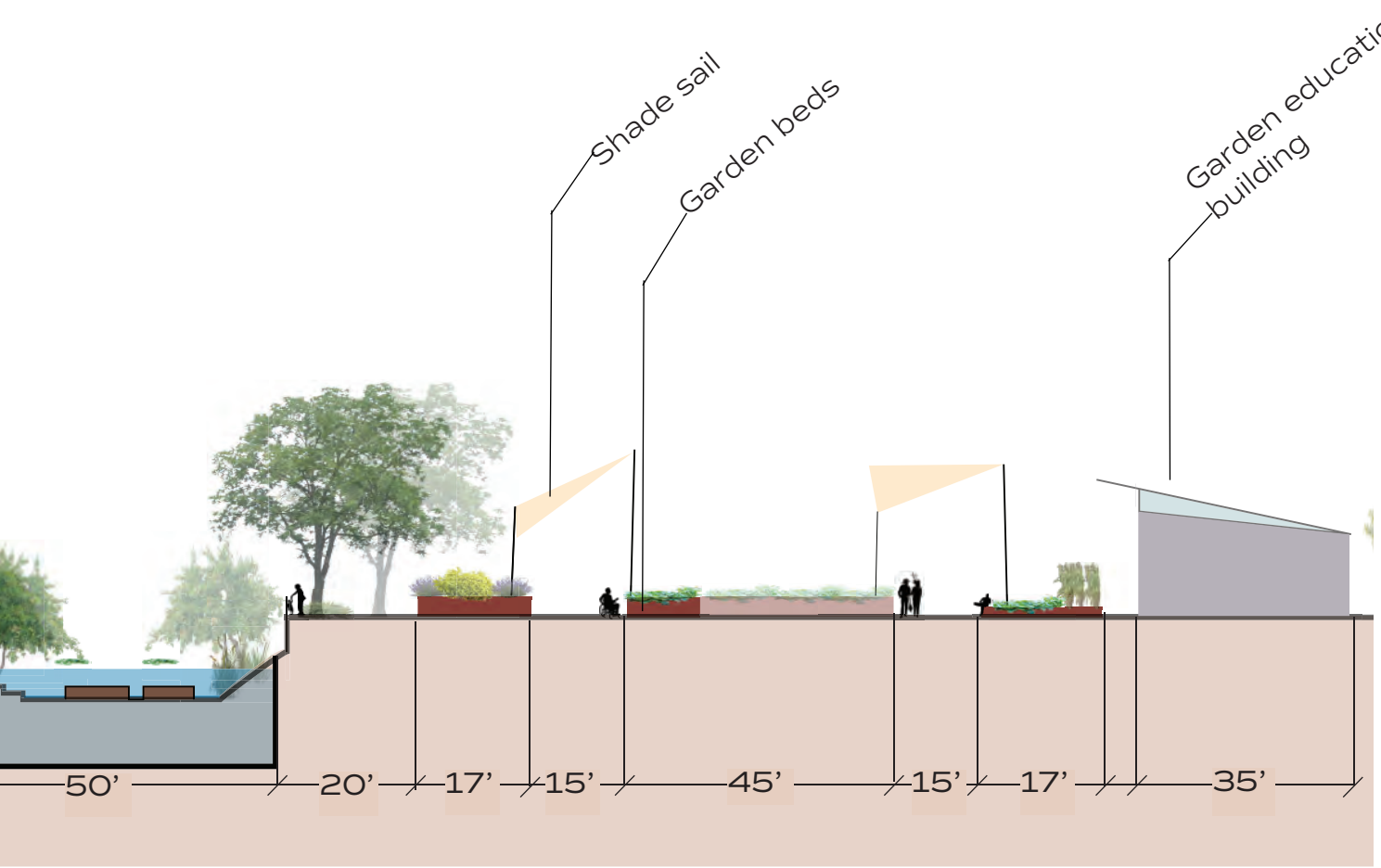


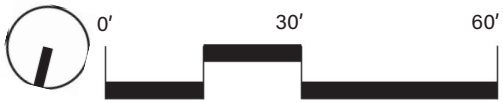
WATERS POND

ern = 10 acre feet

THE FOOD
COMMONS
URBAN FARM

2 acres





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VIGNETTE B : North Entrance & Blue Oak Playground

VIGNETTE C: Green Meadows Food Commons & Promenade


Urban Farm as destination


ADA accessible garden beds


Sensory & butterfly garden


Mounds & berms for orchards

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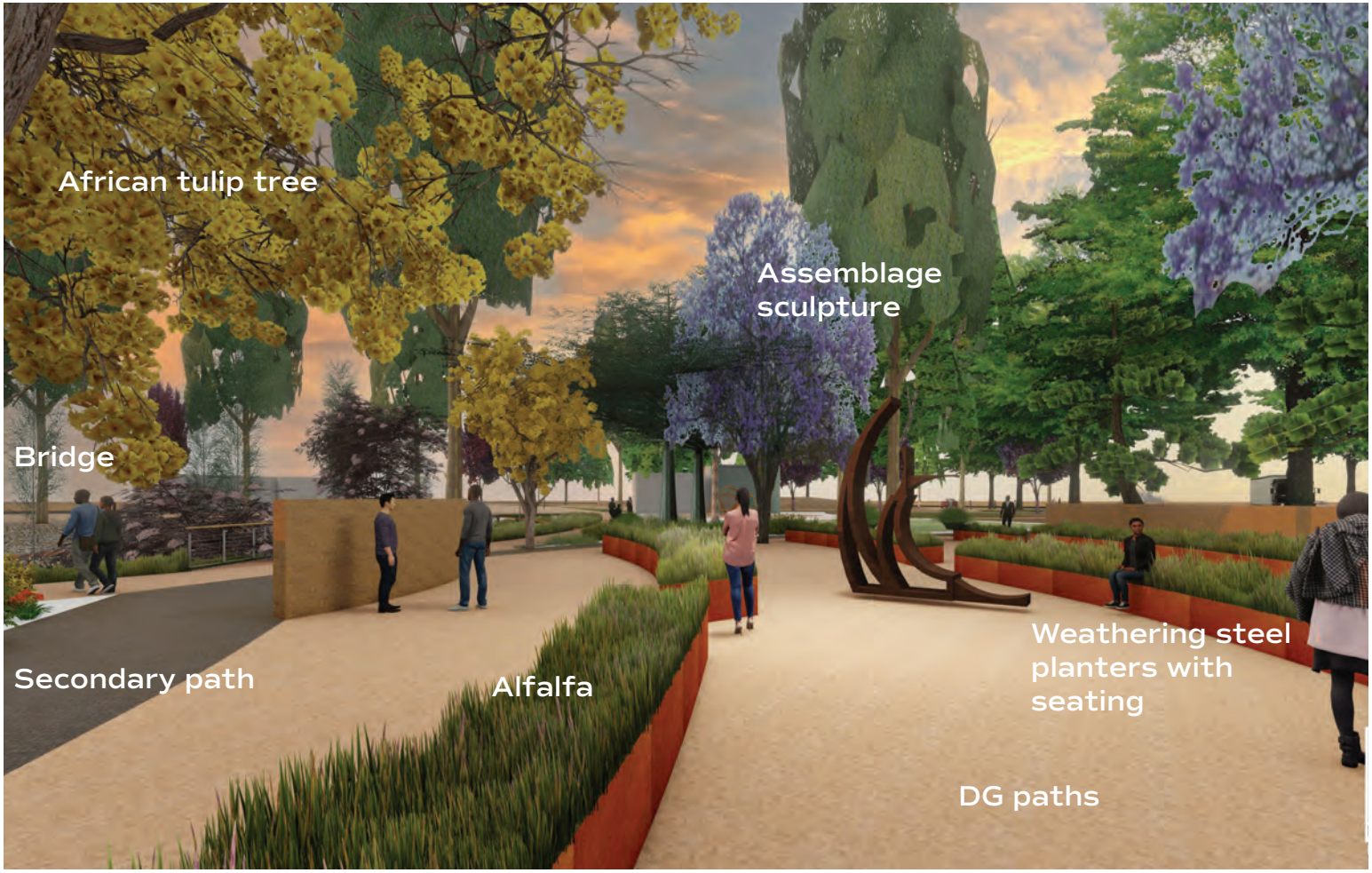
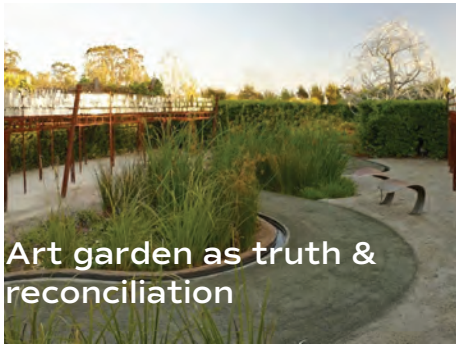
VIGNETTE D : Collective Memory Art Garden





PLANT PALETTE: Collective Memory Garden

INDIGENOUS AGE

Achillea millefolium
Yarrow

Astragalus nuttallii
Nutall's milkvetch

Sambucus mexicana
Mexican elderberry,

MULTI CULTURAL & INDUSTRIAL AGE

Fragaria vesca
California strawberries
Japanese farmers

Iris hybrids
native & exotic
Multi-culturism

Medicago sativa
Alfalfa
Ranching & alfalfa fields

CULTURAL ARBORETUM

Jacaranda
mimosifolia
blue jacaranda
Mexicans

Pinus thunbergii
Japanese Black pine

Japanese & Koreans

Spathodea
campanulata
African tulip tree
African-Americans

NOVEL ECOLOGY

Grevillea
'Peaches & Cream'
Peaches & cream
spider flower
Australia

Aloe plicatilis
Fan Aloe

South Africa

Yucca rostrata
'Sapphire Skies'
blue beaked yucca

Mexico

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ENLARGEMENT: Vitality Core

80% 90% 100%

LEGEND

- (A) Restorative Waters Vernal Pond
- (B) Bridge
- (C) Vernal meadow terraces
- (D) Mass gravity gabion walls
- (E) Floating wetlands
- (F) Chaparral buffer
- (G) Seating
- (H) Climate adaptive demonstration garden
- (I) Regenerative urban farm
- (J) Regenerative orchard

VIGNETTE E: Restorative Waters Vernal Pond

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PLANT PALETTE: Phytoremediation

CHAPARRAL

Baccharis pilularis
'Pozo Surf'
lowly coyote brush
Dioxins

Rhus integrifolia
lemonade berry*

Arctostaphylos
glauca*
big berry manzanita

GRASSLAND

Nasella pulchra
Purple needlegrass

Bouteloua gracilis
buffalo grass

Medicago sativa
alfalfa
strategic plantings

VERNAL POND

Carex praegracilis
clustered field sedge

Sporabolus airoides
dropseed sacaton

Festuca californica*
California fescue

TREE CANOPY

Pinus canariensis
Canary Island pine

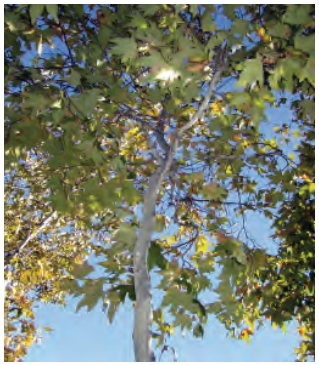
Quercus douglasii*
blue oak

Eucalyptus
sideroxylon 'rosea'
Red Ironbark

- Petroleum degradation
- Particulate Matter capture/carbon sequestration
- Herbicide degradation/ Hydraulic control
- Chlorinated Solvents Degradation & Hydraulic control

*Potential field research on California Native flora phytoremediation efficacy.

SUB SURFACE GRAVEL WETLAND



Platanus racemosa*
California Sycamore
hydraulic control

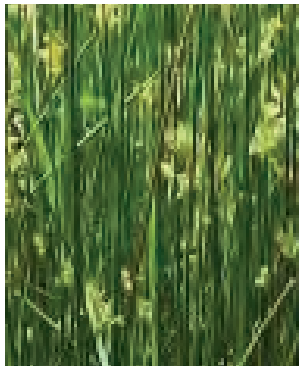
Danthonia californica
California oat grass

Leymus condensatus
'Canyon Prince'*
canyon prince wild rye

WETLAND (FLOATING & SURFACE)

Phragmite australis+
common reed

organics & nutrients



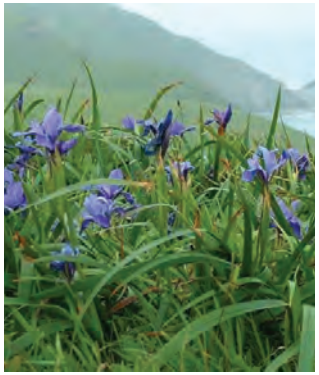
Juncus effusus*
soft rush

wastewater,heavy metals, ,must be removed & replaced

Scirpus cernuus
low bulrush

metal uptake

RAILS WITH TRAILS



Irises

Andropogon scoparius
little bluestem

Acacia abyssinica
Abyssinica acacia

groundwater phytostabilization

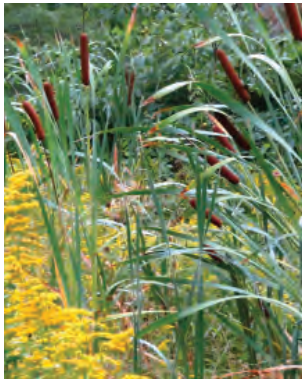
RIPARIAN

Eriodictyon crassifolium
Yerba mansa

PAH

Salix lasiolepis
arroyo willow

heavy metals



Typha latifolia
common cattail

+ inconclusive whether invasive in California according to cal-ipc.

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ENLARGEMENT: Economic Hub

70% 90% 100%

LEGEND

- (A) The Gathering Plaza
- (B) Basketball courts
- (C) Underground parking entrance
- (D) Rail & truck loading dock
- (E) Anchor Green Industry building
- (F) Small Urban Manufacturing building
- (G) Industrial Arts/Incubator/Commercial Kitchen
- (H) Arts & Crafts Patio
- (I) Olive Grove Dining Plaza
- (J) Crescent Lawn
- (K) Green Spiral Atrium Rain Garden

VIGNETTE F & G: Building & Parking Entrances

F. Entrance Anchor Green Industry Building

G. Bike & Underground parking entrance

Entrances are sheltered yet sun lit and rich with greenery. Seating encourages a conversation or a breath of fresh air during the work day.

The parking entrance has a dedicated bike parking elevator where bikes are stored safely underground.

The back entrances are rich in flora, with mixes of native and drought tolerant grasses, New Zealand flax, and air filtering Canary Island pines.

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VIGNETTE H: Green Spiral Rain Garden


Spiral sunken garden


Urban canyon


Underground microclimate


Atrium for natural ventilation & light

VIGNETTE I-J :Work & Family Gathering

O. The Olive Grove Dining Plaza

P. Crescent Lawn

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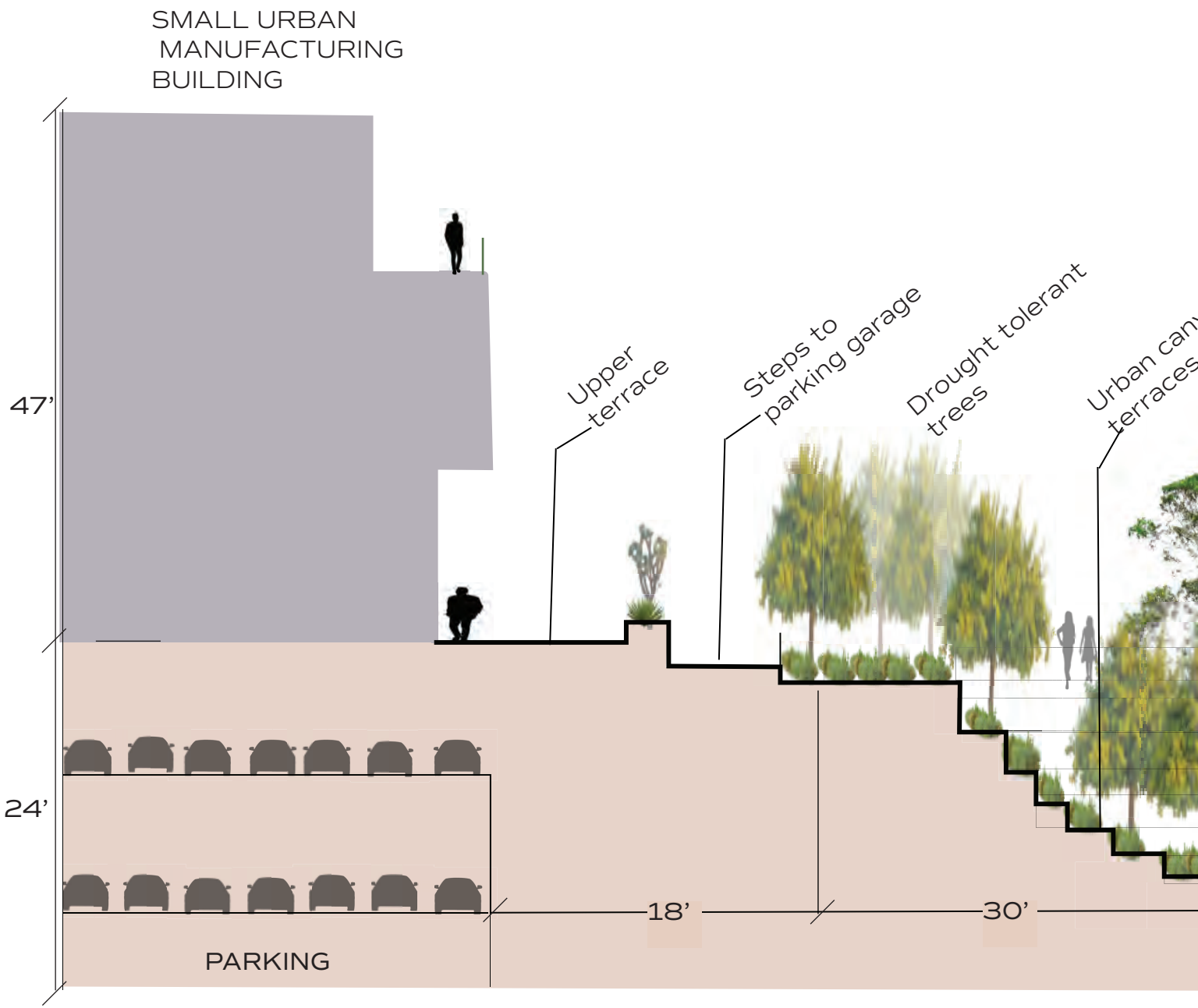
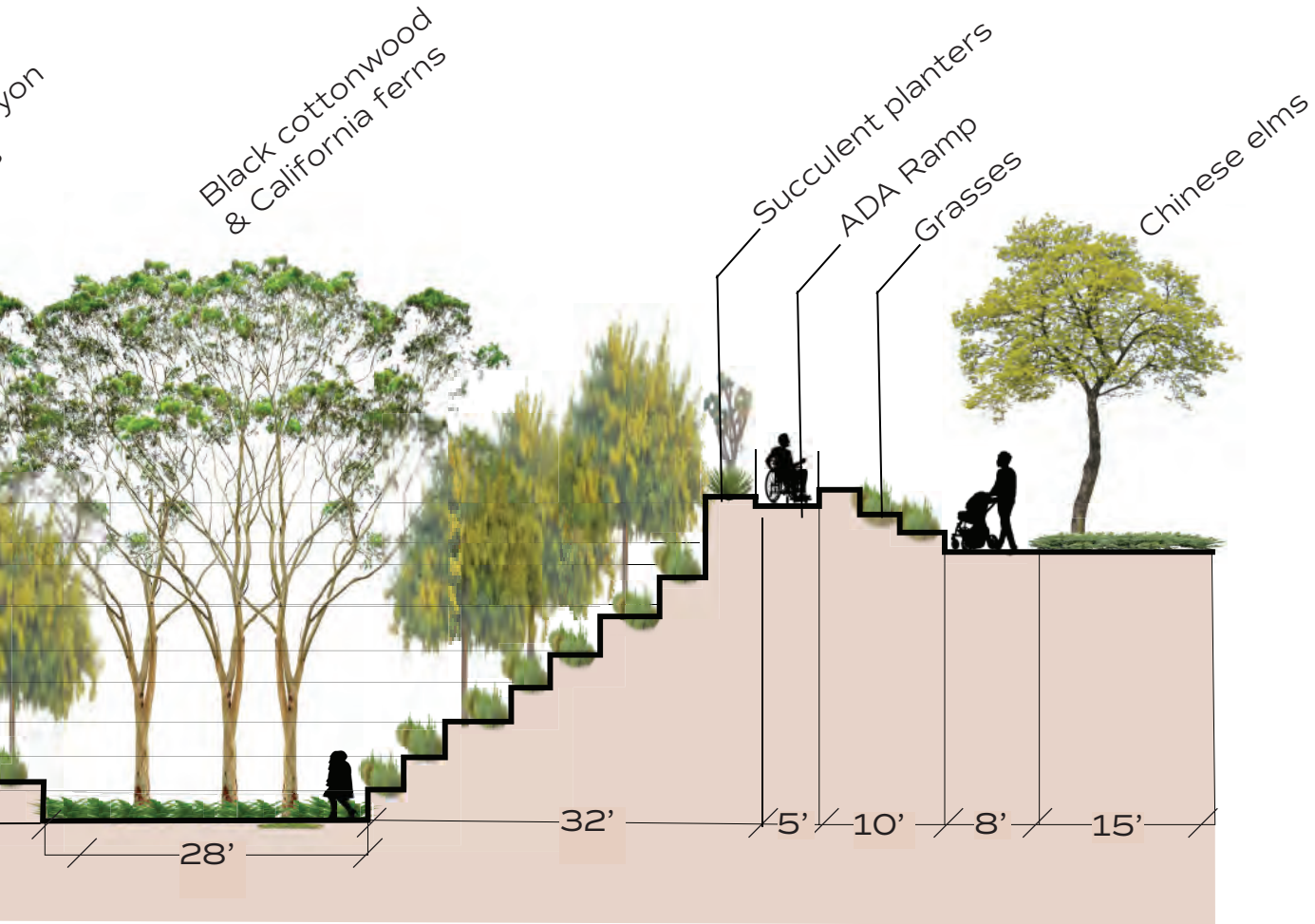
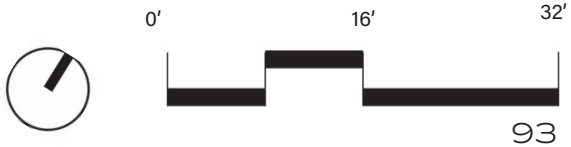
SECTION B-B': Green Spiral Atrium Rain Garden



GREEN SPIRAL
ATRIUM RAIN
GARDEN
80’ diameter





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VIGNETTE K &L: Rails with Trails & Loading Dock

H. Rails with trails

I. Truck & rail loading dock

VIGNETTE M-P: The Gathering Plaza

J. Weekday morning: temp work assignments

K. Saturday morning: farmers Market

L. Fog pad on a summer afternoon

M. Barbacoa community dinner

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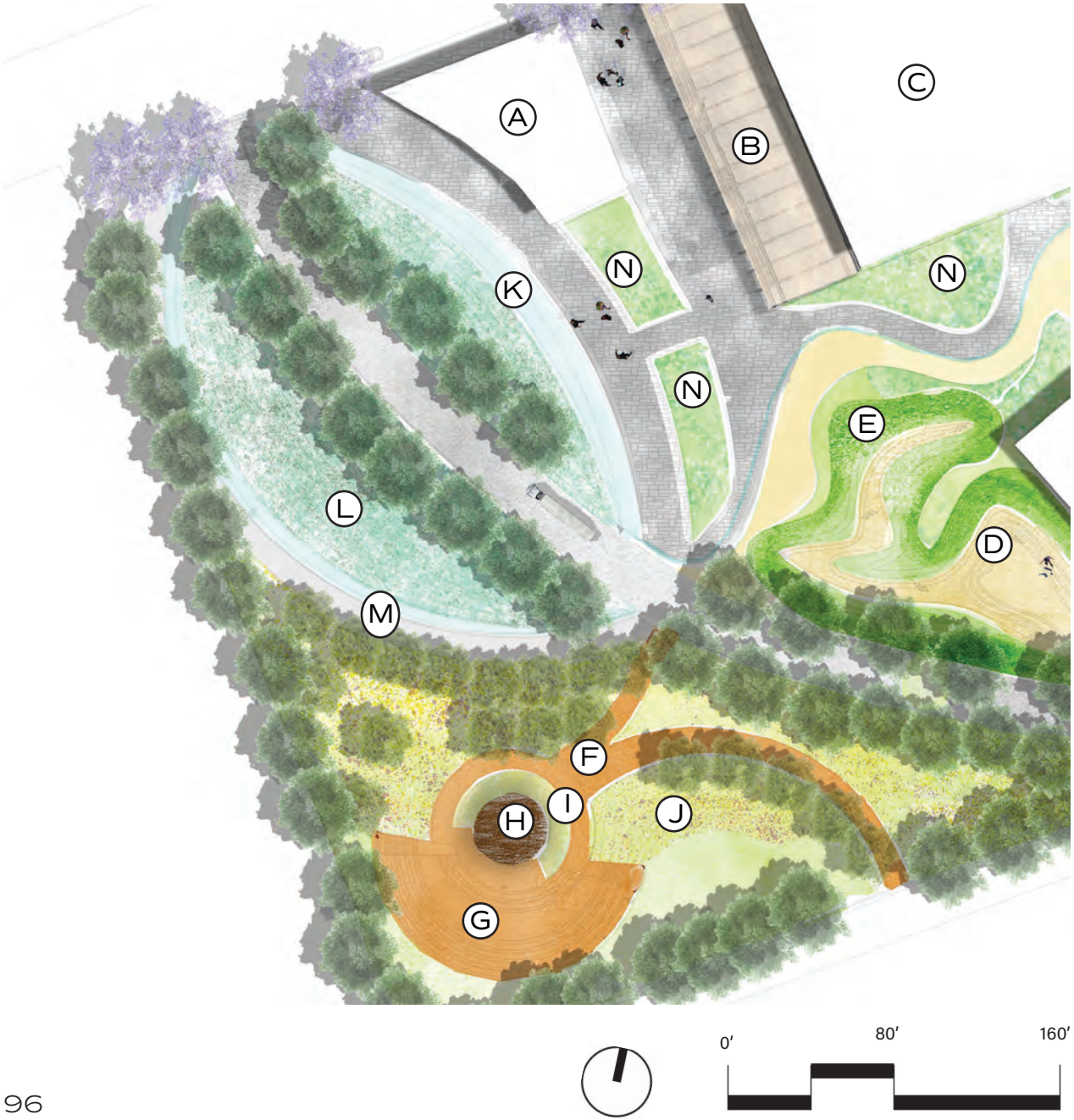
ENLARGEMENT: Healing Arts Zone

75% 80% 90% 100%



LEGEND

- (A) Alternative Health Clinic
- (B) Arts & Crafts Patio
- (C) Industrial Arts/Incubator/Kitchen
- (D) Snake run (skate obstacle course)
- (E) Zoysia tenuifolia mounded buffer
- (F) Rammed earth path
- (G) Raw Earth Amphitheater
- (H) Stage
- (I) Wild grasses detention pond
- (J) Wild flower hillside plantings
- (K) Stormwater fountain
- (L) Chaparral buffer
- (M) Vehicular path
- (N) Stormwater planters

VIGNETTE Q: The Snake Run

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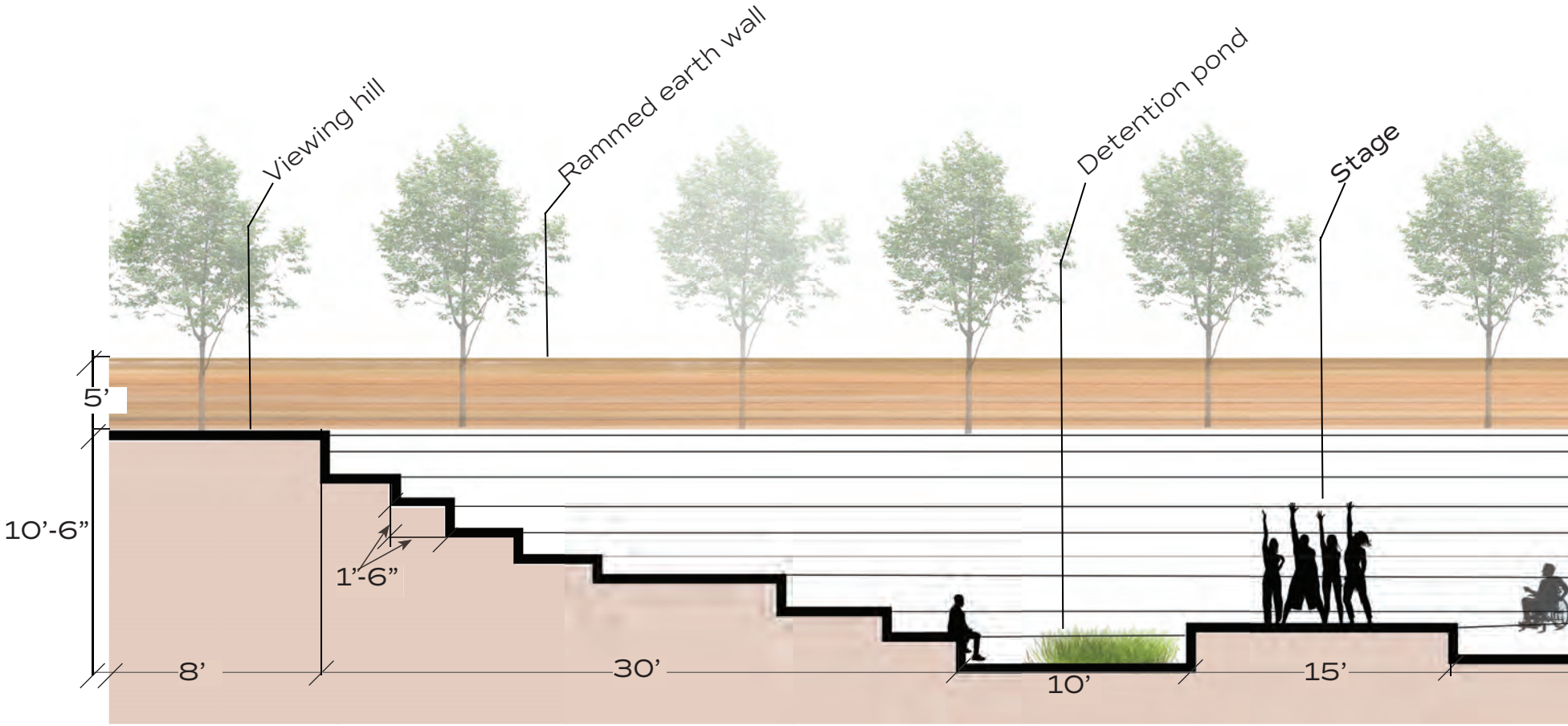
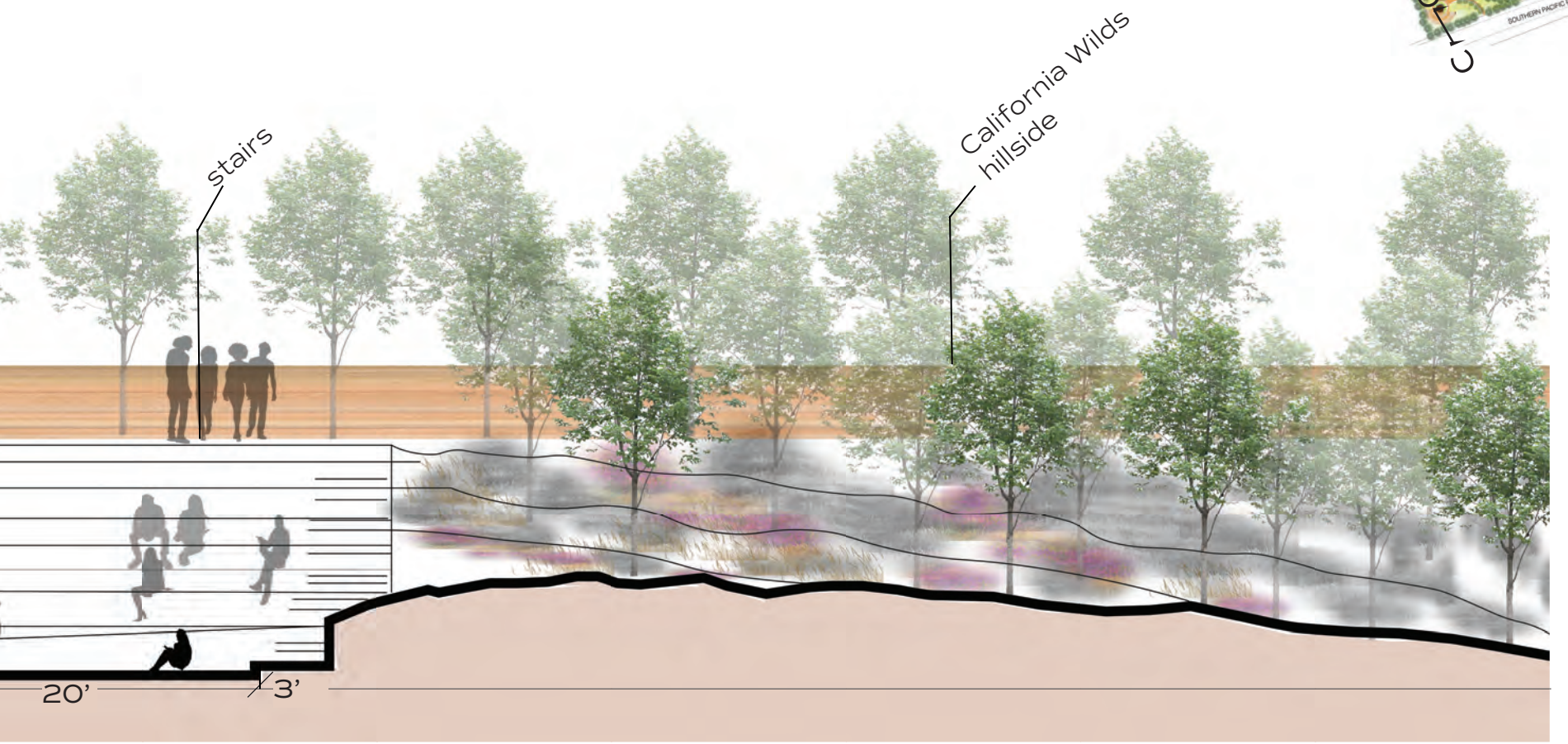
SECTION C-C': The Raw Earth Amphitheater





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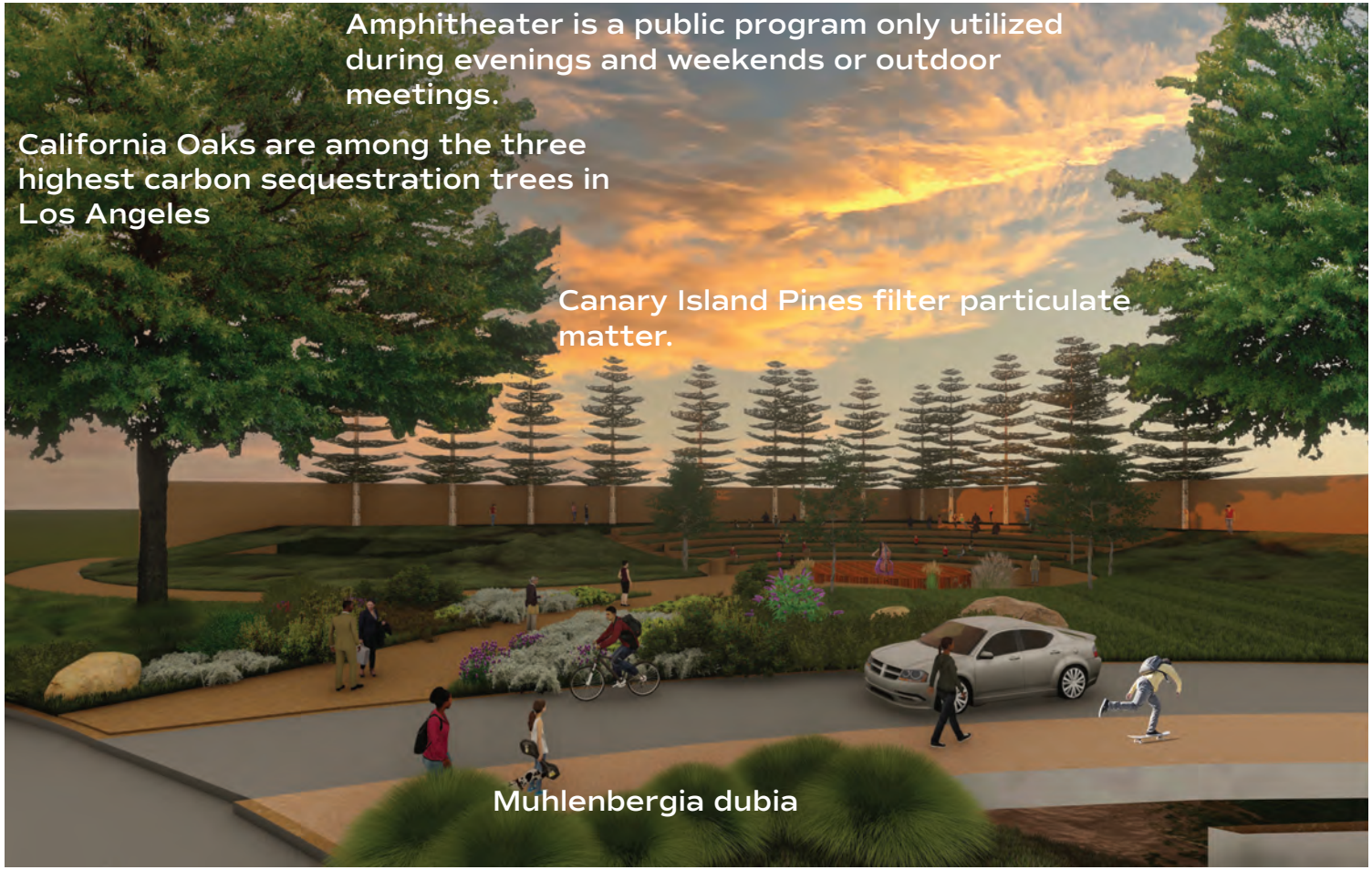
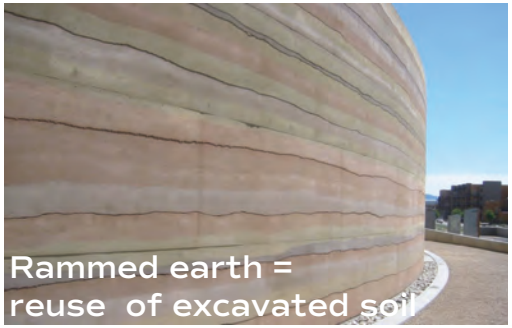
VIGNETTE R: The Raw Earth Amphitheater



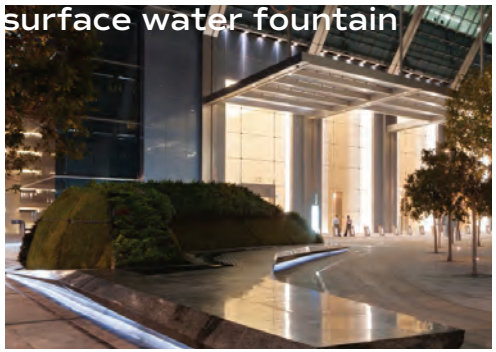

soft berm amphitheater


Detention pond & stage


Wild hillside plantings


Rammed earth = reuse of excavated soil

VIGNETTE S: Healing Waters Stormwater Fountain



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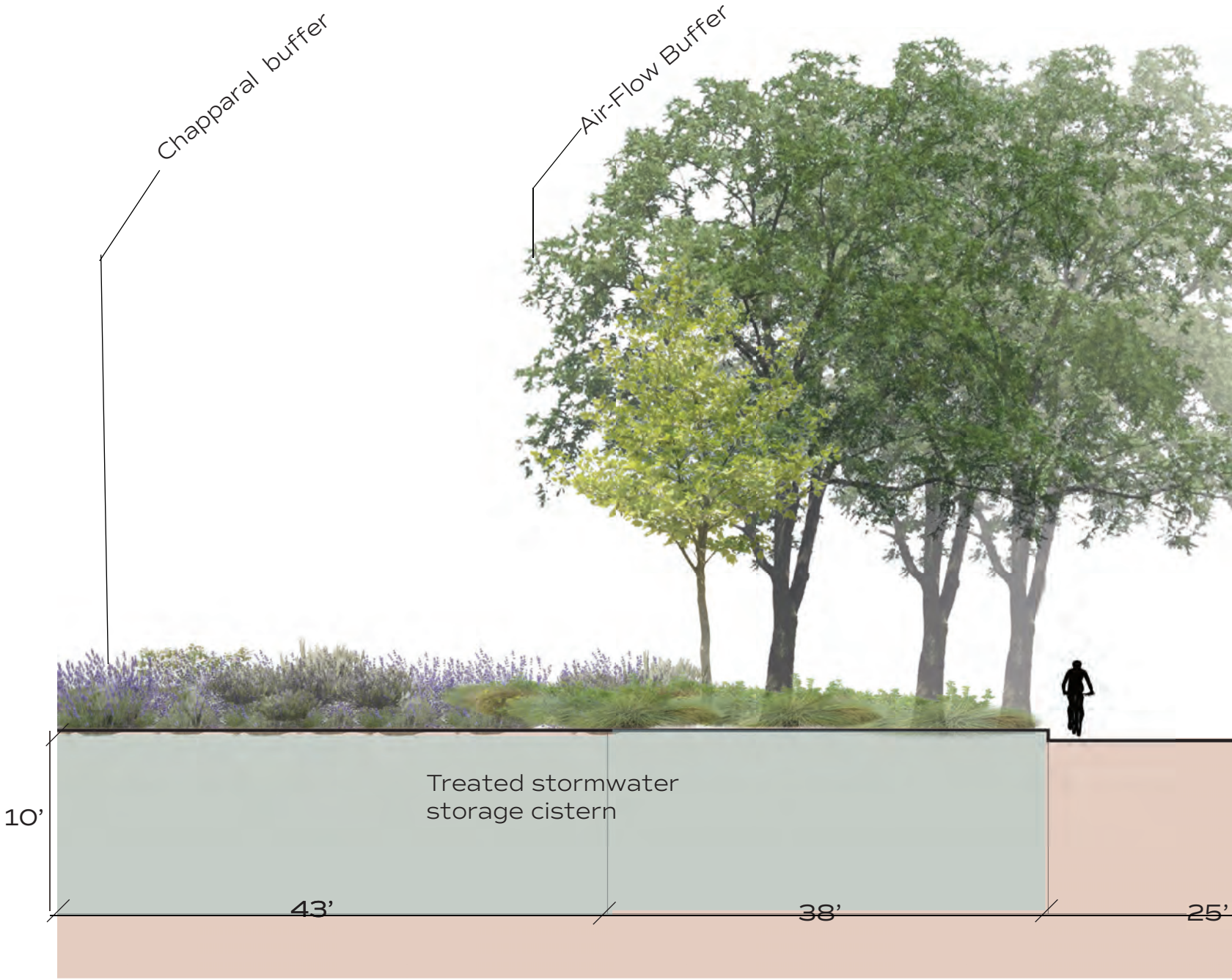
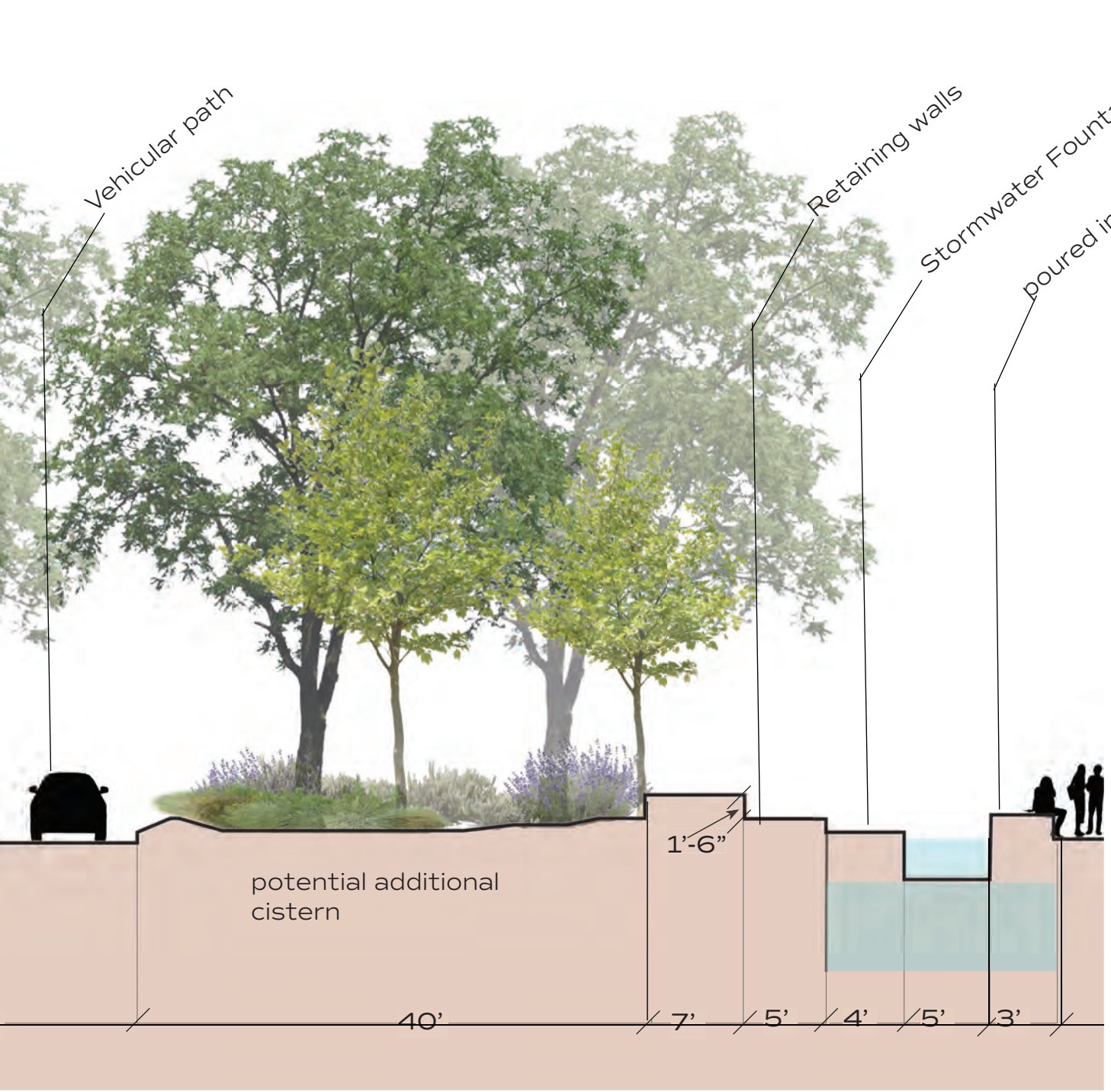
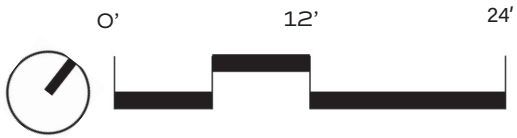
SECTION D-D': Stormwater Fountain







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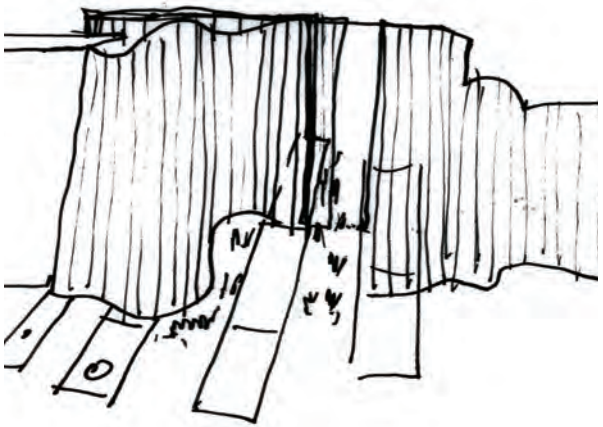
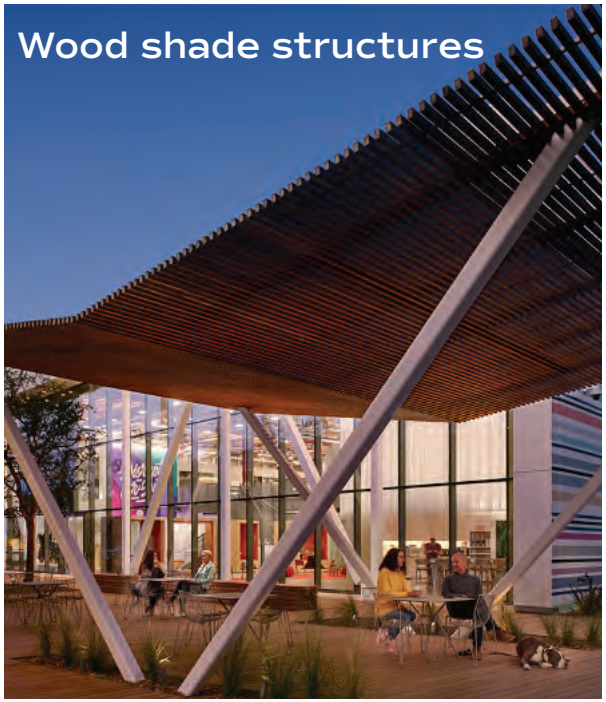
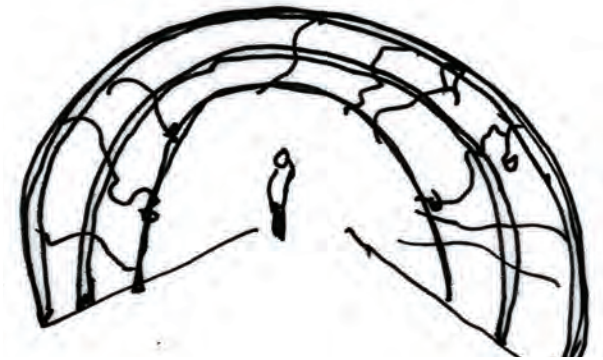
VIGNETTE T: 111th Place Entry Gate

MATERIALS: Gateways







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VIGNETTE T: 111th Place Entry Gate

CPTED: Safety & Social Cohesion

In June of 2020, I took the first half of the Crime Prevention Through Environmental Design (CPTED) Certification Course in preparation for this project. I had read a number of studies on the efficacy of greenery in reducing crime, most notably the 2001 study of public housing projects in Chicago by Frances Kuo and William Sullivan of the University of Illinois Urbana-Champaign. The study found that buildings with more vegetation saw 52% fewer total crimes and 56% fewer violent crimes. The overall theory is that greenery draws people outside which leads to stronger social networks, more active streets, and a general improvement of the quality of life, which in turn reduces crime. [40]

The four principles of CPTED are natural surveillance ("eyes on the street"), territorial reinforcement (sense of ownership), access control, and maintenance.

Natural surveillance covers visibility but also considers lighting quality. For example, white lighting is best for visibility and identifying color but blue light can disturb human sleep patterns which leads to increased stress, and therefore should be avoided. Site lines are also an important aspect.

Territorial reinforcement emphasizes symbolic rather than physical barriers. Fencing and walls are softened with landscaping to avoid a target hardening" appearance. Murals are encouraged as are colorful crosswalks to create a sense of community.

Natural access control focuses on guiding people physically through a space by the strategic design of streets, sidewalks, building entrances, and landscaping. Entrances should be celebrated and well lit, beautifully defined by landscape and overlooked by windows or balconies. Wayfinding is a key element of natural access control as are traffic calming techniques to avoid vehicular and pedestrian/bicyclist conflicts.

Maintenance invites positive uses and allows for continued use of space for its intended purpose. It also expresses care for the environment and a sense of ownership.

Shortly following my studies, George Floyd was killed at the hands of a police officer and the nation's outrage with police brutality exploded. Nationwide protests led to an ongoing conversation around policing. One of the programs in question was CPTED. As with many theories, there can be different interpretations, but overall I was introduced for several strategies for improving public life and for creating a sense of safety for all. There is a body of compelling research on the efficacy of environmental design in the reduction of crime and the influence of nature immersion on stress reduction and attention spans for children.[33]

I believe that in the hands of environmental designers, CPTED is a strong strategy for reducing the need for policing by contributing to safer environments and an overall improved quality of life. A holistic crime prevention program that includes youth programming, living wage jobs and quality health care, combined with a CPTED approach may prove to be far more efficient than increased policing.

MATERIALS: Paving Material

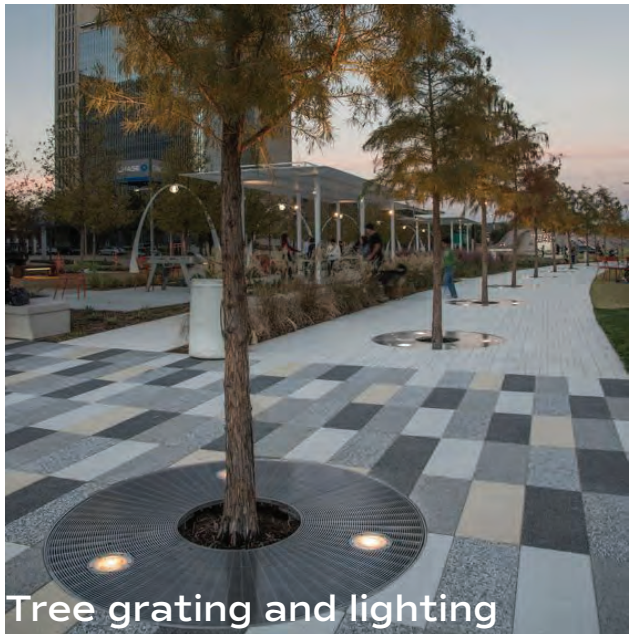

Organic polymer for earthen paths


Runnels


D.G. paths & pavers side by side

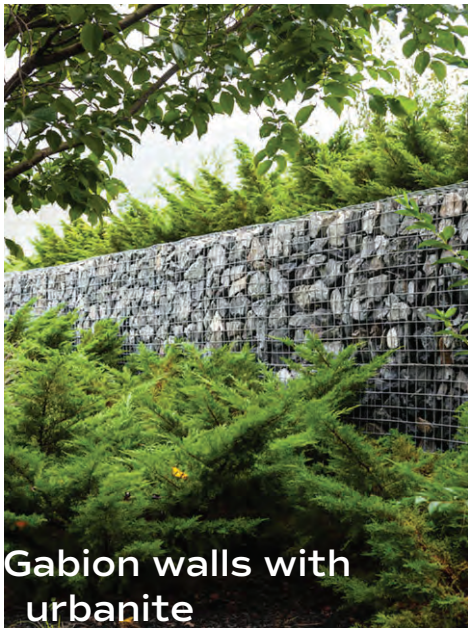

ART GARDEN: solar powered lights in paving


Volcanic granite pavers

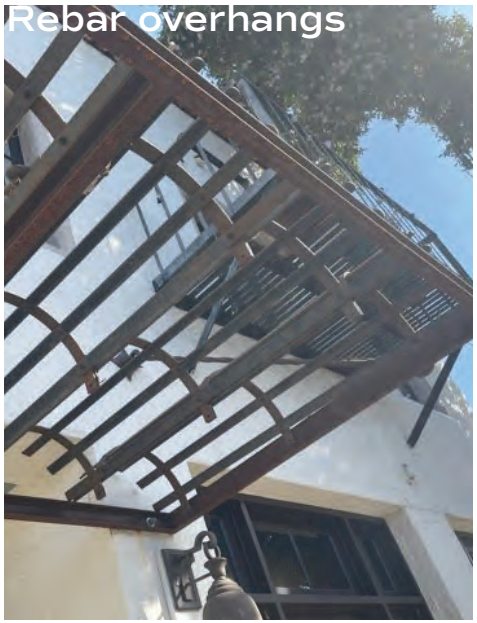

Tree grating and lighting

MATERIALS: Elements


Planters with integrated seating


Gabion walls with urbanite

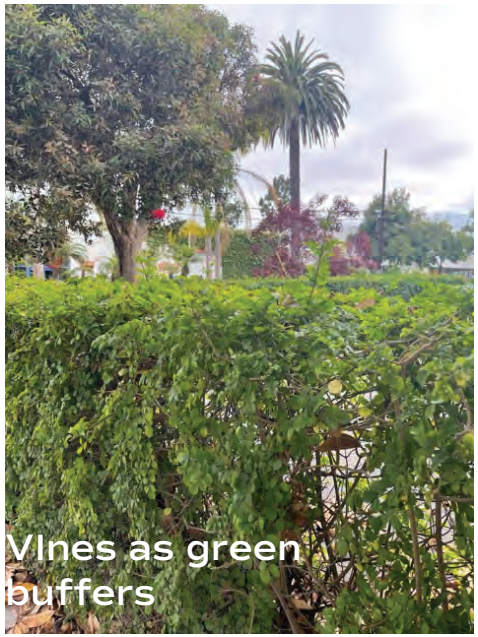

Planting in gabion


Rebar overhangs

Biceberg: bike storage


Weathering steel bike racks

Repurposed i beams


VInes as green buffers

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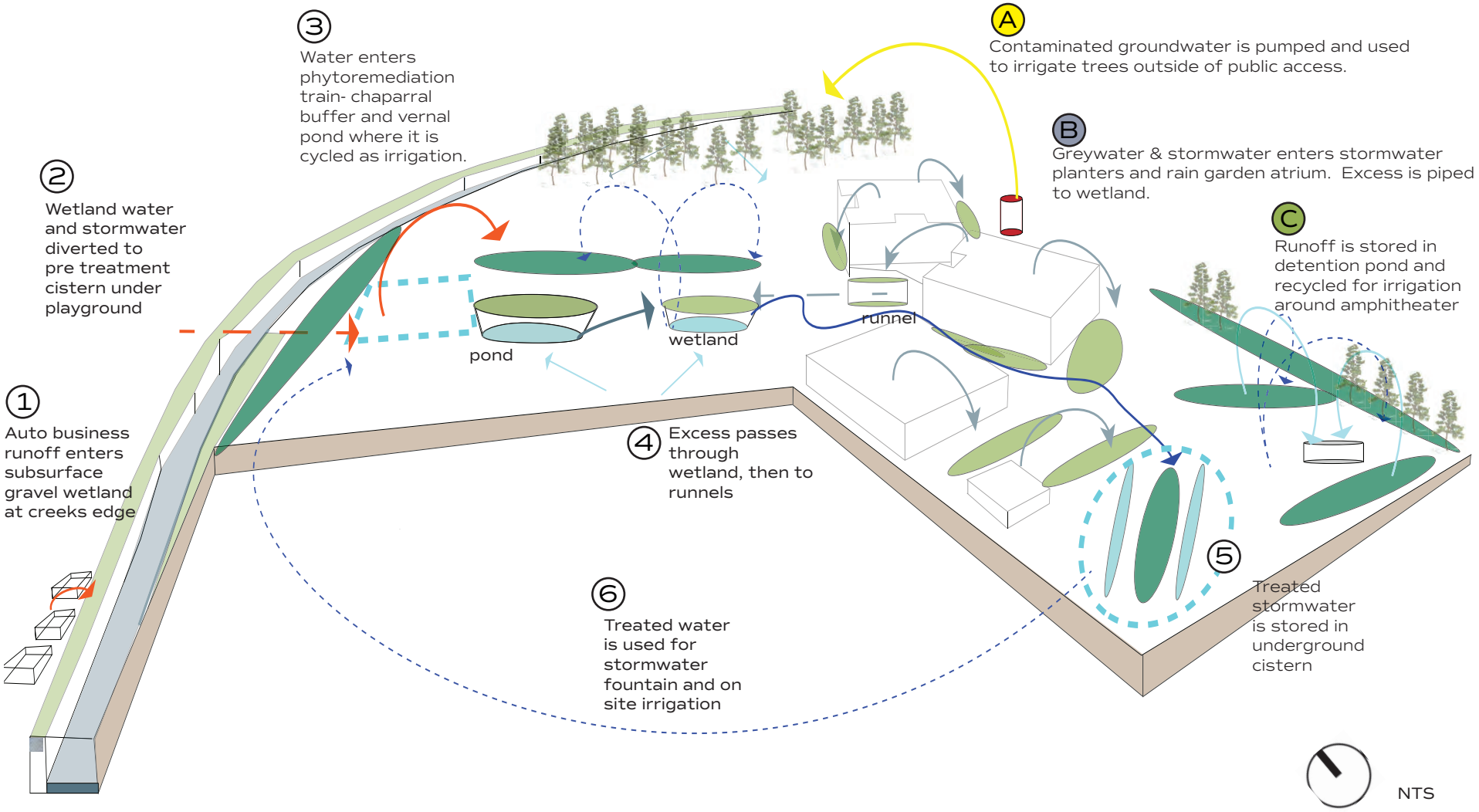
DESIGN ANALYSIS: Stormwater System



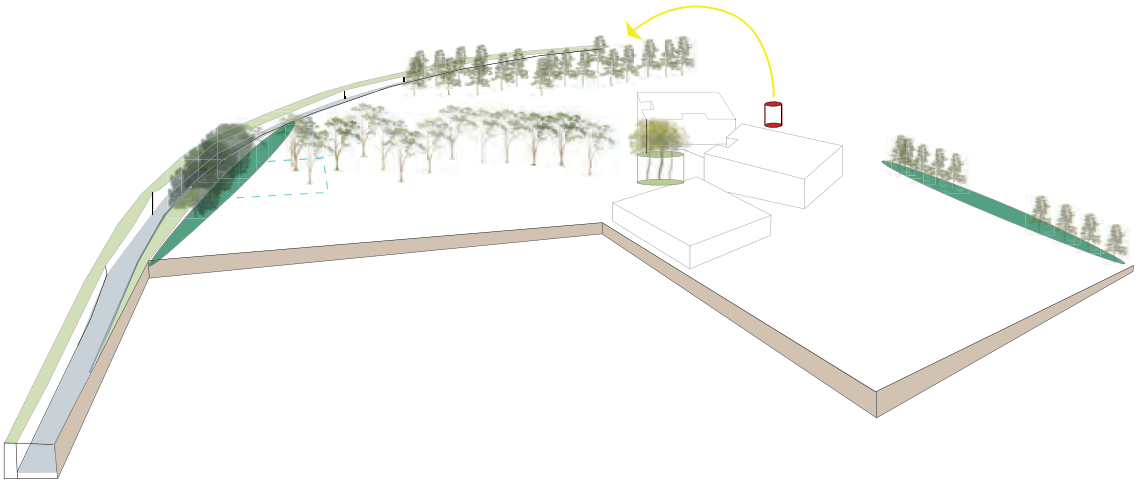
LEGEND

- Subsurface gravel wetland
- Water storage & filtration through landscape
- Stormwater fountain
- Stormwater runoff
- Industrial runoff
- Biofiltration
- Underground cistern
- Underground cistern
- Greywater
- Contaminated groundwater

DESIGN ANALYSIS: Multi-level Phytoremediation Train

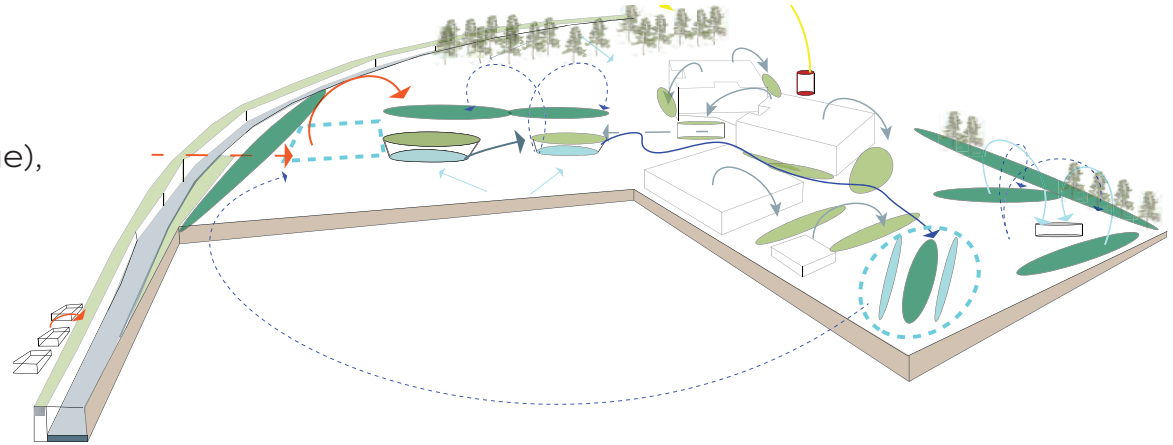
TREES:

Air Flow Buffers,
Bosques,
Phytoirrigation.



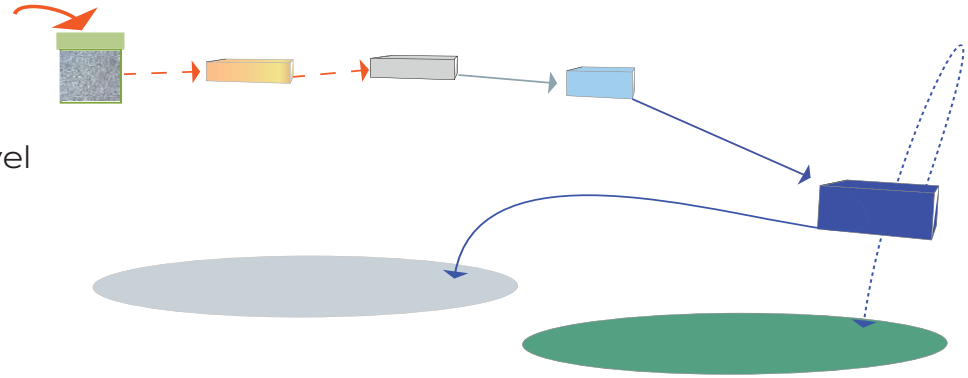
GROUND LEVEL:

Multi Mechanism buffer,
Vernal Pond (retention),
Floating wetland, wetland (storage),
greywater vertical garden,
stormwater planters,
stormwater fountain,
detention basin.



SUBSURFACE:

Subsurface gravel wetland,
pre-treatment cistern, sand & gravel
pumps (recirculation),
treated stormwater cistern for
irrigation or return to creek.



NTS

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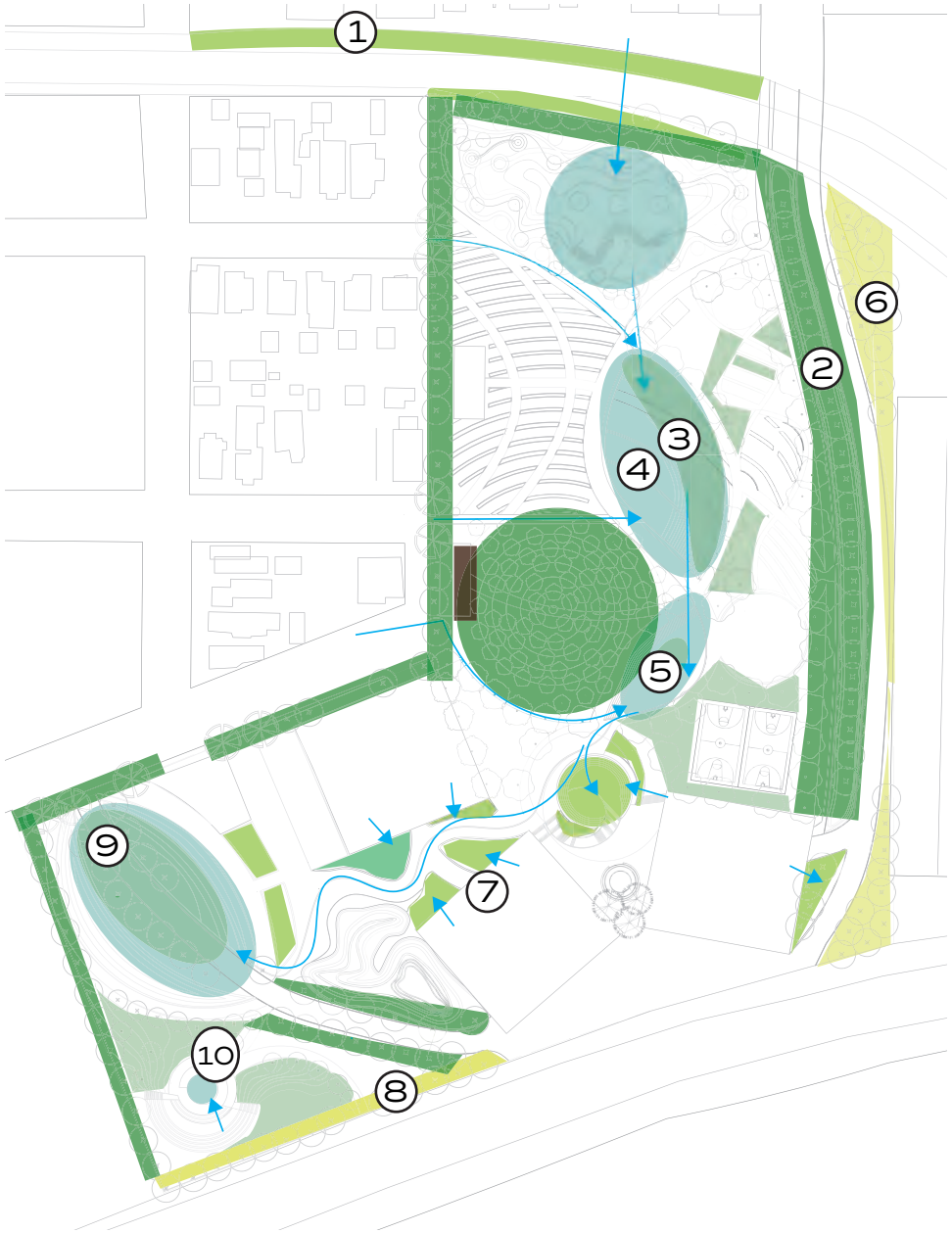
DESIGN ANALYSIS: Phytoremediation



LEGEND

Direction of runoff

Subsurface gravel wetland

Air Flow buffer

Phytoirrigation

Water storage & retention

Degradation cover Chaparral buffer

Stormwater planters

Runnels

0’ 200’ 400’

DESIGN ANALYSIS: Phytoremediation Elements

① **Subsurface gravel wetland:** Gravel filled trench underground captures and filters runoff from auto businesses. Grasses like carexes and other plants that tolerate inundation and petroleum can be planted at surface.

② **Air Flow Buffer:** Trees capture and hold airborne pollutants and particulate matter.

③ **Degradation Cover:** Captures and breaks down runoff contaminants.

④ **Vernal Pond:** A detention pond engineered as a biomimicry of an endangered California ecosystem that is intermittently a wet riparian or a dry grassland. Plants go in and out of hibernation. The various plants filter and degrade contaminants.

⑤ **Wetland:** Anaerobic system that breaks down organic contaminants and traps inorganics in planted media. Particularly efficient with metals.

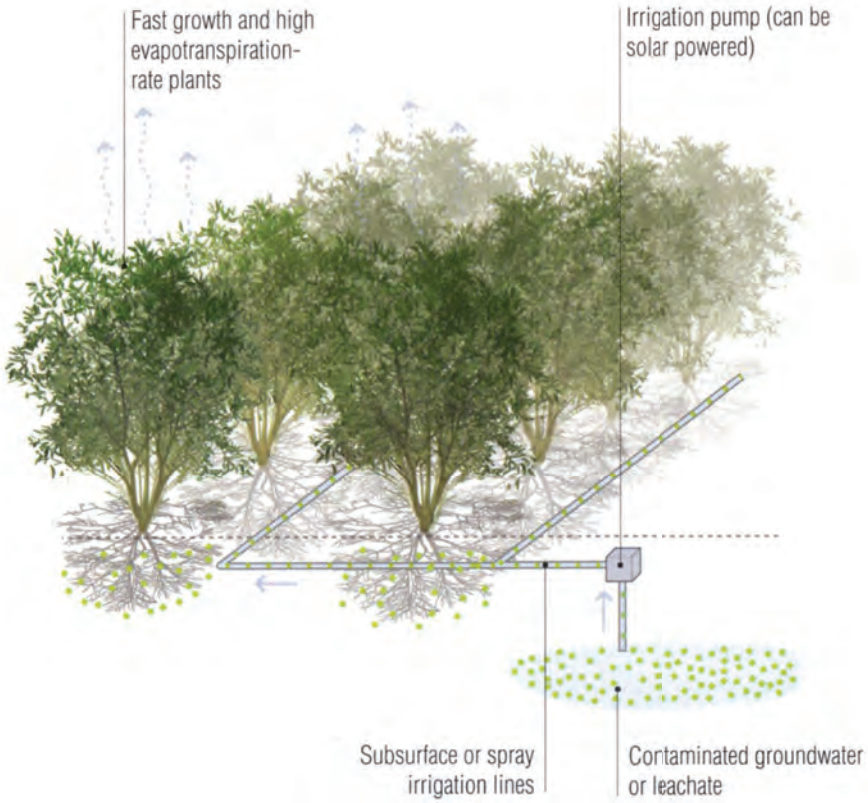
⑥ **Phytoirrigation** Contaminated groundwater is pumped and used to irrigate trees outside of public access. Contaminants volatilized or metabolized by trees.

⑦ **Stormwater planters:** Greywater, runoff, water, stormwater can be captured and utilized,preventing infiltration of stormwater prevents plume from migrating in aquifers.

⑧ **Multi Mechanism Buffer:** Multiple layers of planting prevent migration of pollutants, capture inorganics (like arsenic along railroads). Trees capture particulates.

⑨ **Stormwater Fountain:** Uses treated stormwater which is stored in cistern below fountain and chaparral buffer.

⑩ **Detention Pond:** A depression filled with grasses surrounds the stage and also holds stormwater during inundation.



Phytotechnology information from Keenan, Kate &Kirkwood, Neal. *Phyto* [41]

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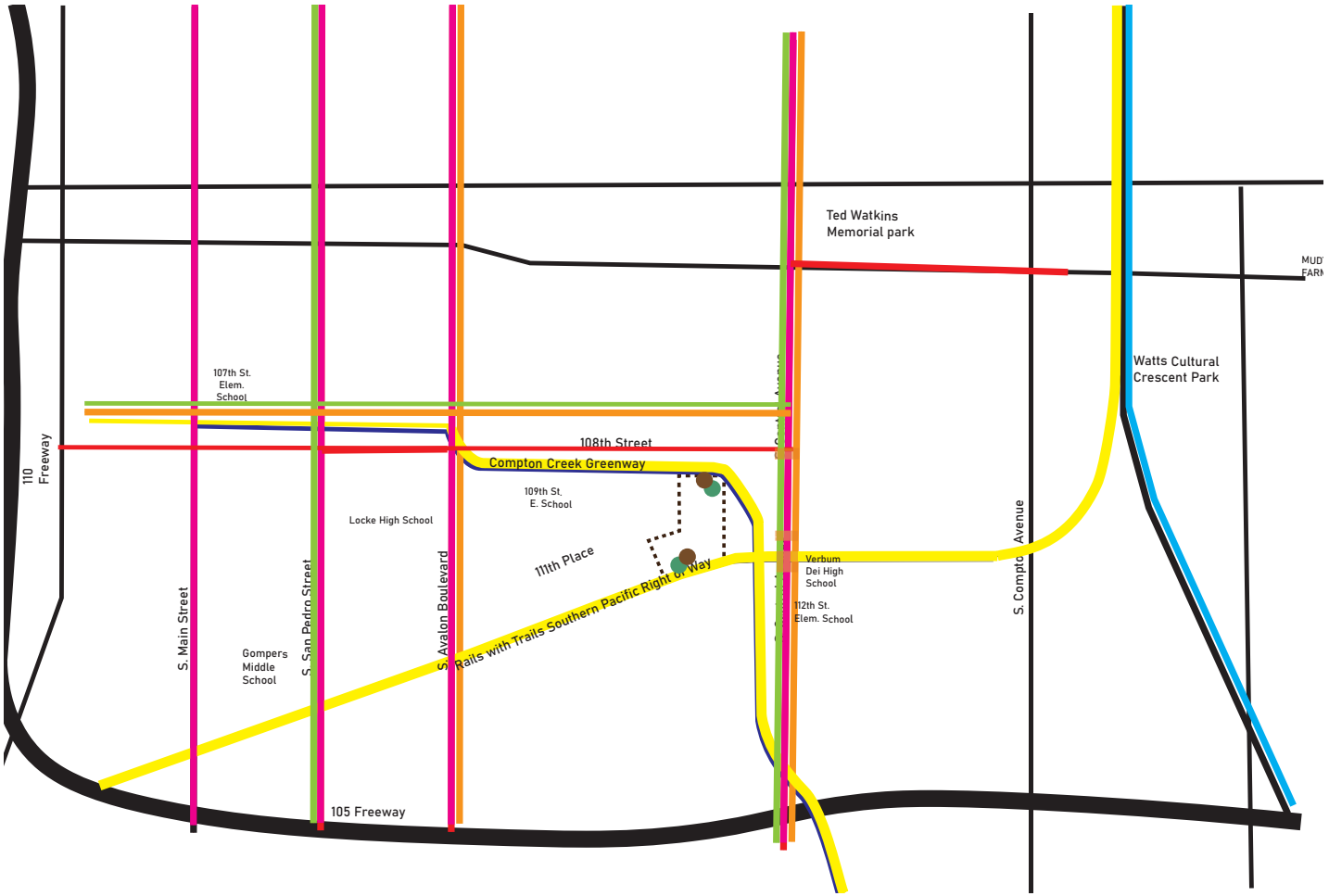
DESIGN ANALYSIS: Circulation

LEGEND

- Vehicular entrance/exit
- Underground parking
- Biike parking
- Vehicular parking entrance/ exit
- Pedestrian entrance
- Primary one way Vehicular Path 24'
- Secondary vehicular loop
- Loading dock
- Dedicated (primary bike path
- Secondary bike path
- Central Promenade
- Primary Pedestrian entry
- Primary Pedestrian pathway
- Secondary Pedestrian pathway
- Tertiary Pedestrian pathway

0' 200' 400'

DESIGN ANALYSIS: Connections



LEGEND

- DASH Bus route-only N-S
- METRO Bus route
- A Line Metro
- Bike Lanes
- Rails with trails and Compton Creek Green-way
- Bike entrance
- Pedestrian entrance

With a rails with trails pathway, Compton Creek greenway and street interventions, the site is part of the alternative transportation public transportation between the two neighborhoods and to the greater city.

0′ 750′ 1500′

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DESIGN ANALYSIS: Landscape Communities & Habitat

LEGEND

- California Oak Woodland
- Mixed Pine Forest
- California Chaparral
- Meadow
- Vernal pond
- Intermittent riparian/wetland
- Native/climate appropriate urban canyon
- Mediterranean plantings
- Mixed woodland (ferns in fog garden)

0’ 200’ 400’

PLANT PALETTE: Landscape types & habitat

OAK WOODLAND

Salvia spathacea
hummingbird sage

Symphoricarpos mollis
snowberry

PINE FOREST

Rhamnus californica
coffee berry

Calochortus splendens
Mariposa Lily

CHAPARRAL

Artemisia californica
California sagebrush

Salvia appiana
white sage

MEADOW

Castilleja exerta
owl clover

Asclepias fascicularis
narrow milkweed

VERNAL POND

Lupinus albifrons
silver bush lupine

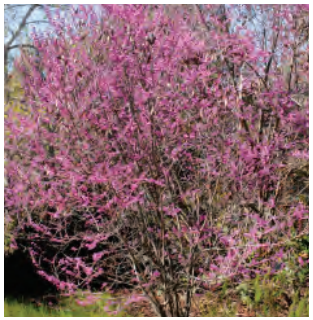
Mimulus guttata
seep monkeyflower

RIPARIAN

Populus trichocarpa
cottonwood

Juncus patens
“Elk Blue
California grey rush

URBAN CANYON



Cercis occidentalis
Western redbud

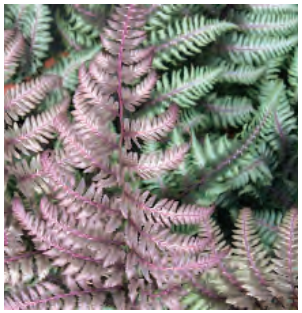
Polystichum
muniftum
giant chain fern

MEDITERRANEAN

Xeronema callistemon
poor knight’s lily

Bulbine fructescens
orange bulbine

MIXED WOODLAND



Athyrium niponicum
Japanese Painted
Fern

Woodwardia fimbriata
giant chain fern

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CONCLUSION: Tomorrow's Potential

VIBRANT LOCAL URBAN ECOLOGY

- 60% green space. (8 acres).
- Continuous tree canopy connecting the site to a Watts-Green Meadows greenway system.
- 1 acre of trees (over 300 trees).
- 2 acres Food Commons.
- 8 Landscape typologies and habitats created.
- 600 lbs of carbon sequestered per year.
-

HEALTHY WATERSHED

- 5 million gallons of stormwater storage.
- 11 Phytotechnology typologies.
- Capture, treatment and reuse of all greywater, stormwater and dry run off from site and from sub basin.
- Protection of creek from industrial edge run off and untreated stormwater during 50 year storm.
- Potentially all irrigation needs of site served by reuse of pre-treatment and treated water.

GREEN INNOVATION HUB

ANCHOR GREEN INDUSTRY:

200-300 employees.

SMALL URBAN MANUFACTURING CENTER:

- Support 400+ small urban manufacturer entrepreneurs.
- Employ 10 full time employees

Industrial Arts Center:

- 20 teachers/staff
- Classes for 80 students per day.

Incubator:

- 30-35 entrepreneurs supported over next five years.
- Potential Incubation of 120 businesses in 15 years.

COMMUNITY WELL BEING

All programming mentioned in community engagement research for both Green Meadows and Watts accommodated.

- Areas to play, exercise, gather, grow food, celebrate.
- Fragrant healing plants at Food Commons edges.
- A neutral meeting ground with activation and programming during week, weekends and evenings.
- After school STEAM programming and leadership programs for youth.
- Art and cultural recognition in the landscape.


Green innovation Hub


Gathering Plaza- farmers market


Community events

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APPENDIX: Methodology

CROSS REFERENCED HEALING DESIGN GUIDELINES

Healing design principles and objectives came from community engagement meetings but they are cross referenced with Here are the shared principles:

Healing Gardens by Clare Marcus

- Rich in species, multi-sensory, Minimal jarring noises.
- Connection to community, ancestor and spirits: Culture recognition in the landscape
- Clear signage, easy to navigate, multiple entrances & exits,
- Opportunity for solitude and introspection.
- Transformability of space, flexibilty- empowerment and innovation.

CROSS REFERENCED RESTORATIVE PRINCIPLES

Restorative Commons

- Heraclitean Movement: Soft tranquil movement in nature like cloud movement patterns, swaying grass, dappled light.
- Change & Resilience- Use of recycled elements and natural aging of materials reveals natures resilience.
- Multi sensory: Engaging sensory with detail. Fragrance, soft plants,& texture, rich in species, edibles, soundscapes.
- Transformability: Multiple uses, natural outdoor play for children to transform play space with sand, leaves, rocks, water, flowers.
- Horticultural therapy opportunity
- https://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs-p-39r.pdf

Design for Ecological Democracy by Randolf Hester

- Jens Jensen Council Ring as Sociopetal Place - 25' diameter Encourages people to listen to each other, have eye contact, work as a whole and then smaller groups.
- Nourishing centeredness every day- Informal gathering spaces.
- Make connections to unseen systems and important landmarks..
- Connection to Community, Ancestors & Spirits. Connections to other community, landscape, family and community traditions, God, and the past are sacred.

A Pattern Language by Christopher Alexander

- Tree Places- umbrella, groves, avenue (allees).
- Accessible green space-Entire community within 3 minutes of accessible green space.
- Life Cycle- the ideal of a balanced life cycle. That each community includes a balance of people from every stage in the lifecycle from infants to very old. (also Old People Everywhere and Teenage Society).
- Workplace Community: a mix of manual jobs, desk jobs, craft and sales. Dignity associated with all work. Work community interlaced with larger community to which it is connected. Shops and cafes at the seam between.
- Self governing workshops: 'No one enjoys his work if he is a cog in the machine."
- Parking: Vast parking lots wreck the land for the people.
- Communal eating.
- Industrial Ribbon- small enough that it does not need to be sharply segregated. Genuine so that it seems like it is a workshop.*
- Buildings must always be built on those parts which are in the worst condition, not the best.
- Consider the site and its building as a single living organism.

*Urban Land Institute states that size of 71% of most industries 0-5 acres.

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APPENDIX: Photo Credits

Page 4: Project Statement
From left to right: Eco-Industrial Park, LOGIS, Victoria, Australia, by GBLA Architects; urban ecology https://www.carolina.com/teacher-resources/Interactive/urban-ecology/tr37607.tr; Burj Khalifa gardens by SWA Landscape Architecture. Photo by Tom Fox. From landezine.com http://landezine.com/index.php/2012/02/burj-khalifa-landscape-architecture/; Restorative Commons, Definition from https://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs-p-39r.pdf. Photo: "Reciprocity" by Steffi Graham, 1995 from Restorative Commons , edited by Lindsay Campbell and Anne Weisen published by NRS

Page 5: Project Premise
From top to bottom: aerial of the 1965 "Watts Riots" above courtesy of the LA Times. 3D Google Earth image of Central Avenue and Lanzit site in background.

Page 6-7: Personal Statement
Credits on page

Page 12-15: Site Photos
All photos by Alyssa L. Moffitt, except for Maxine Waters Employment Center from website https://mwepc.org/ Photos of Central Avenue, aerials and recycling center from Google Earth.

Page 18-21 Watts & Green Meadows History
From top left to bottom right: Map, Rancho Tajuata, from Online Archives of California, https://oac.cdlib.org/ark:/13030/hb2n39n7f-p/?brand=oac4, Elementary School, https://bizarrela.com/2018/05/los-angeles-snapshots-1940s/; Train Station, https://wattsnc.org/history-of-watts/; subdivision, https://bizarrela.com/2016/02/los-angeles-southern-california-pre-1900s/; 'Lilacs.." https://bizarrela.com/2018/05/los-angeles-snapshots-1940s/Los Angeles Public Library photo collection; Sam Rodia, https://justin-maurer.com/2013/10/01/sam-rodias-watts-towers/: Santa Monica Highway, Courtesy of the Los Angeles Examiner Collection, USC Libraries.; Smitty's barber shop, https://www.vintag.es/2015/08/50-years-ago-today-28-historical.html; Purifoy, Courtesy of the Hammer Museum; Watt's Towers, Francine Orr, LA Times https://www.latimes.com/local/wattsriots/la-me-watts-riots-latinos-; Unity Mural, Mural in Pilsen. Photo by Oscar Sanchez; Tim Watkins, https://news.csudh.edu/tim-watkins/

Page 18-21 Watts & Green Meadows History
From top left to bottom right: Ted Wakins, courtesy of the Rockefeller Foundation; Watts, 1960's tracks, Film still from "A Practical Man" Documentary on Ted Watkins funded by Ford Foundation.; Saugus and paramedical program, Courtesy of Rockefeller Center;

Page 24: Users
From top left to bottom right: A Due Headquarters by Iotti & Pavaranni Architetti, https://www.iotti-pavarani.com/work/a-due-headquarters/; Ted Watkins, courtesy of Rockefeller Center; Johnathan from Chrysalis website https://www.changelives.org/newsroom/jonathan/; Latina Worker, https://www.laprogressive.com/workers-won/; https://www.familyhouston.org/visionary-circle/; Student in The Crucible program, Oakland, CA, https://www.thecrucible.org/; Innovator, https://nextcity.org/webinars/view/centering-equity-in-our-federal-strategy-for-urban-manufacturing

Page 33: Design Metaphor
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Reggio Emelia, renderings by Luce Emanueli, architect, https://urban-promo.it/2015-en/progetti/reggio-emilia-park-of-innovation-a-new-european-research-development-centre/ Torrent Estadella, rendering Eduard Balcells & Honorata Grzeikowska, http://www.beta-architecture.com/the-new-urban-fabrik-torrent-estadella-eco-industrial-park-eduard-balcells-honorata-grzesikowska/; The Crucible, from website, thecrucible.org

Page 40: Healthy Watershed
From left to right: Georgetown University's Pedro Arupe Hall system. 2016 Worldlandscapearchitect.com; LA River Verdugo Pass Final Report for Trust for Public Lands; Mission Creek at State Street, Santa Barbara, Photo by Alyssa Moffitt; From PHYTO by Kate Kennan, ASLA and Nialle Kirkwood, FASLA.

Page 42: Case Studies
South LA Wetlands, "Case Study Briefs." n.d. Landscape Performance Series. Accessed May 3, 2021. https://www.landscapeperformance.org/case-study-briefs?keys=&features%5B%5D=641&features%5B%5D=170 photo, Dave Vornberger, 2016, map by Psomas; NY Botanical Gardens, top photo byJim J Pinto, https://www.aslany.org/portfolio-item/nybg-native-plant-garden/, drawing by Alyssa Leal Moffitt; Waller Creek, renderings by "Michael van Valkenburgh Associates, Inc." n.d. Www.mvvainc.com. Accessed May 3, 2021. https://www.mvvainc.com/project.php?id=99.

Page 48: Community Well Being
From left to right: Ramsden Park Revitalization. City of Toronto. By PMA Landscape Architects.' Restorative Circle Garden, Western Corrective Institute; Mural by Robin Strayhorn, " Building Community" at Ted Watkins Park.;Natural Playground Mukanthi Playground (Adelaide, Australia) Photographer Mike Moore

Page 49:Cultural Reflection in the Landscape
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Page 54: Vibrant Urban Ecology
From left to right: Rails with Trails, Santa Barbara, photo by Alyssa Moffitt; Urban forest planned for vacant lot in Montreal. From The Gazette; Mary Brown Garden of California Natives, UC Davis Arboretum and Public Garden; LA Biodiversity Report, 2018.

Page 59: Intertwining Neighborhoods
Images Agency, Community Redevelopment. CENTRAL AVENUE MASTER PLAN and CORRIDOR STUDY. 30 Aug. 2008.

Page 63: Master Plan Inspiration
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Page 65: Concept one
From left to right: Allegretto Vineyard Resort, Paso Robles. Photo by Alyssa Leal Moffitt;Edinburgh Gardens, Melbourne Australia by GHD Pty Ltd. http://landezine.com/index.php/2012/10/edinburgh-gardens-raingarden-by-ghd-pty-ltd/

Page 67: Concept two
From left to right: Crenshaw High School Performing Arts design by NAC Architecture Plantings by Salt LA https://www.salt-la.com/Crenshaw-High-School; Manasssas Park by Siteworks-studio http://www.siteworks-studio.com/manassas-park/focao3lx-v5ksq7lp46dzvtn5r7ytr3

Page 69: Final Concept
From left to right: Penghu Central Commons, Hangzhou China, by PLAT Studioshttps://platstudio.net/Pengbu-Central-Commons; Hsi Lai Temple, by NAC Architecture, Frederick Rollands Architects and SALT LA, https://www.salt-la.com/Hsi-Lai-Monastery-Retreat-Center.

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From left to right: water pump, https://www.natureplaygrounds.com.au/playground-hand-pumps/, Walking Stick Woods Natural Play place, Chicago, https://www.chicagoparkdistrict.com/parks-facilities/walking-stick-woods-nature-play-space, Temazcal sweat lodge photo from Pinterest or dogpile; Central Avenue Promenade in SPringtime, Flikr iphil photo.

Page 81: Vignette C
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From left to right: Fog Garden Ian Potter Wild Play by Aspect Studios, Brisbane, https://www.aspect-studios.com/au/brisbane/Cleveland Cultural Gardens, photo by Cleveland Traveller. Bruma Winery, by TAC Taller Architectura Contextual https://inhabitat.com/mexican-winery-built-from-recycled-wood-and-rammed-earth-blends-into-the-valley-landscape/bruma-winery-by-tac-taller-de-arquitectura-contextual-6/; Ecology of Place for Phil Biaggi by Suzanne Biaggi, Cornerstone Gardens, Sonoma CA. Photo by Scott Hess. https://www.gardendesign.com/destinations/conceptual-gardens.html ;

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Page 83: Art Garden Plant Palette
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Platanus racemosa, Photo by Bri Weldon, https://www.flickr.com/photos/briweldon/5229357074/; Danthonia, Las Pillitas Nursery, https://www.laspilitas.com/nature-of-california/plants/459–danthonia-californica; Leymus, photo by Pete Veilleux, East Bay Wilds, https://www.flickr.com/photos/eastbaywilds/; Phragmites, photo by Joseph di Tomasso, https://www.cal-ipc.org/plants/profile/phragmites-australis-profile/; Iris, photo by Stephen Lea, 2004; Sambucus photo, https://plantsam.com/sambucus-nigra/ Acacia, https://lifestyleseeds.co.za/product/acacia-abyssinica/; Eriodictyon, https://www.laspilitas.com/nature-of-california/plants/274–eriodictyon-crassifolium; Salix, photo by Allan King, https://www.flickr.com/photos/aking1/9960250385/; Typha, https://vanvleck.org/bloom-list/typha-latifolia/

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From left to right: Burj Khalifa Gardens, Abu Dhabi, by SWA Landscape Architecture. Center Right: New York Times atrium garden by Renzo Piano, photo from HW White Architects. Center, Forestiere Underground Gardens, Fresno< CA. photo undergroundgardens.com. Bottom right, LACMA elevator garden, photo by Joey Zanotti, Flickr

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Page 105: Materials Gateways
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Capstone Studio, Summer 2021
Meg Coffee, Jim Pickel, Pamela Brief