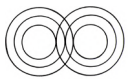


ARENA PARK:

RENEWED ENERGY IN SOUTH BAY L.A.



STATEMENT



The Arena Park project will **transform a decommissioned section of the El Segundo Energy Center**, formerly the site of two massive fuel tanks, into a thriving natural space for conservation and recreation.

Throughout the **20th century**, the Southern California coast was transformed **from an abundant ecological hotbed to extractive industrial and military uses**.

The **21st century** is seeing an attempt to **restore lost ecology** with the knowledge that **recreation, conservation & ecosystem health** are all vital resources for a healthy social-economic order.

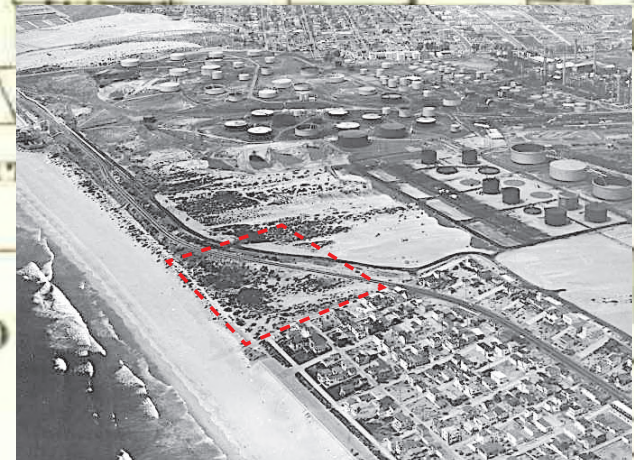
The project will deliver:

- Endangered native habitat restoration.
- Expanded access & opportunities for recreation.
- Re-imagining of the site's industrial past.

Arena Park will let **new generations experience the coast as it existed** before the rapid development of the Los Angeles region, **balancing access with habitat restoration** while minimizing visitors' impact on the delicate ecosystem.



View of the site in 2026.

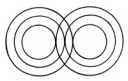


Aerial view of the site in 1952. (Photo: <https://usclibstore.usc.edu/Whittington>)

The area was labeled "Arena" ("sand" in Spanish) in the 1901 US Geological Survey.

(Image: <https://ngmdb.usgs.gov/topoview/viewer>)

LOCATION



CONTEXT



DRIVING DISTANCES

The site is centrally positioned within the South Bay coastal corridor: immediately adjacent to Dockweiler Beach and the Hyperion facility, about 5 minutes driving from LAX, 10–15 minutes from the Manhattan Beach Pier and Marina del Rey, 20–30 minutes from UCLA and Santa Monica, and 45–60 minutes from Hollywood, and Downtown Los Angeles depending on traffic.

Dockweiler State Beach	0.5 mi	Marina del Rey	7 mi
Hyperion Sewage Plant	0.5 mi	Culver City Downtown	9 mi
El Segundo Downtown	2 mi	SoFi Stadium	9 mi
LAX International Airport	3 mi	Baldwin Hills	11 mi
Playa del Rey	3 mi	UCLA	13 mi
Bruce's Beach	4 mi	Santa Monica Pier	13 mi
Manhattan Beach Pier	4.5 mi	Hollywood	18 mi
Sand Dune Park	5 mi	Downtown Los Angeles	19 mi



Images: <https://earth.google.com/>

METROPOLITAN CONTEXT



1. GUASHNA VILLAGE

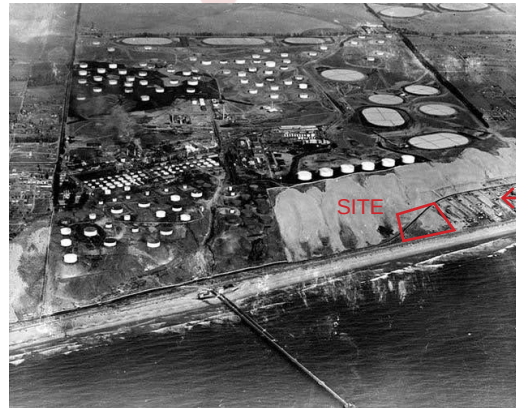
One of the main villages of the **Tongva nation** was located at the mouth of **Ballona Creek**, sheltered by the northern end of the South Bay dune complex. The village was an important **coastal trading post**, with archaeological evidence show human habitation **dating back 10,000 years**.



"Wiyot's Children" by Mary Leighton Thomson depicts the Tongva village of Guashna (Image: <https://patch.com/california/marinadelrey/ballona-wetlands-ceremony-tongva-gabrielino-ancestors>)

2. STANDARD OIL REFINERY

Completed in 1911, the second Standard Oil refinery built on the West Coast was the **namesake of the town of El Segundo**. The refining complex **still operates today**, supplying petroleum products under the **Chevron** brand.



Standard Oil Refinery in the 1920s, now Chevron. (Photo: www.flickr.com/huffstutterrobert/5223454523)

3. EL PORTO RESIDENTIAL DEVELOPMENT

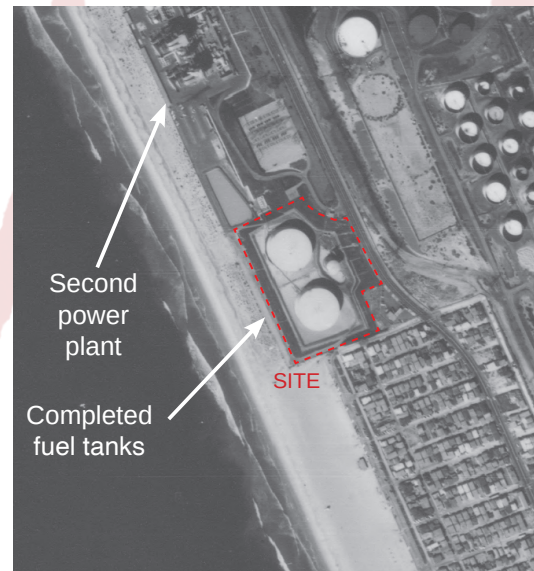
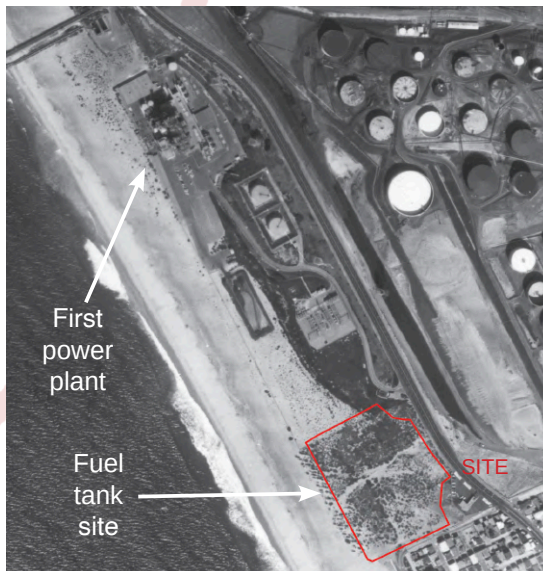
The neighborhood was also **founded in 1911**. Initially a seaside retreat, by the 1940's it had become a **bohemian enclave** outside of city boundaries. **Annexed into Manhattan Beach** in 1980, the area has become **more affluent** in recent times.



1950s view from Vista del Mar Blvd. looking north towards the El Segundo Power Plant and Chevron gas station adjacent to the site (Photo: www.osoport.com)

4. POWER PLANT

Originally an **oil burning power plant**, it was **completed in 1958**. The **fuel tanks** that occupied the site were **finished in 1965**. The original generating units were decommissioned in 2002, demolished and **replaced by natural gas fueled units in 2011**.



Left: first power plant in 1962. Right: second power plant and fuel tanks in 1968 (Image: framefinder.com)

5. FUEL TANKS DISMANTLED

By **2013** the 220 foot diameter fuel tanks were removed. Extensive soil remediation was done at this time, including the excavation of over 25,000 tons of PCB-contaminated soil. The **site has remained vacant** since except for occasional overflow parking use.



Tanks in process of demolition, 2011. North tank removed, south tank still standing. (Image: <https://earth.google.com/>)

ACTIVE

Age: 15-75
Income: all
Ethnicity: all
Activities: cycling, skateboarding, rollerskating, rollerblading, scooting, longboarding, skate-surf, running, surfing, swimming, hiking, calisthenics, volleyball...

PASSIVE

Age: all ages
Income: all
Ethnicity: all
Activities: walking, people-watching, fishing, birding, reading, gathering, picnic, meditation, drawing, playing musical instruments...

ROLLER SPORTS: A SOUTHERN CALIFORNIA LEGACY

All forms of wheeled play are extremely popular at the site due to the bike path and strand.

Groups including Girlswirl, Concrete Queenz, and Softiez promote inclusive participation.

DEMOGRAPHICS

El Porto residents

- 1,787 residents and 1,095 households
- Median age of 33.2
- Median household income of \$157,866
- Average rent \$3,079/month
- 35% annual turnover rate
- Mix of affluent renters, young professionals, and some long-term homeowners.

Regional Beach Users

- Weekdays are dominated by locals, surfers, and fitness users.
- Weekends and summer bring the highest crowds, parking demand, and family groups.

Overall, El Porto functions as both a neighborhood community and a heavily used public recreational destination, creating planning challenges around traffic, parking, crowding, and balancing local quality of life with public beach access.



DIY adaptive re-use for skateboarding.



Wheeled play related clubs, meet-ups, non-profits and brands drive outdoor space use and community gatherings.

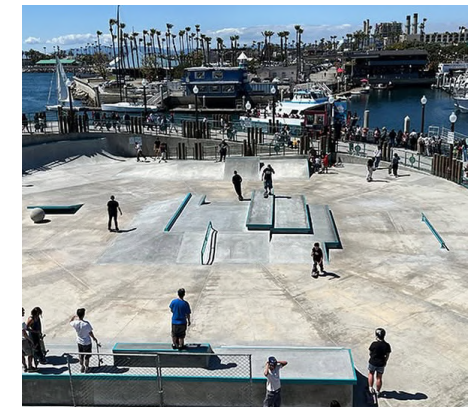
Study by GOSKATE finds 40% of new skateboarding participants are women.



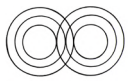
Oceanfront skating spaces at other greater LA communities such as Venice Beach (above) and Redondo Pier (below) have brought significant users and life into their respective areas. (Images: greatvisualtruths.blogspot.com)



Active & passive users sharing the space.



JUSTIFICATION



ECOLOGICAL LEGACY

Intense development has almost completely erased the LA coast's original landscape of **dunes up to 300 feet tall** stretching from Ballona Creek to Palos Verdes. Only tiny pockets remain outside of the LAX Dunes Preserve, which is not open to the public. This project will bring back some of the ecological legacy that once defined the region.

EQUAL ACCESS

Beach access is limited for those who do not live in the area, particularly those who do not drive due to **limited parking and public transit options**.

LOSS OF DUNE HABITAT

Coastal **habitat is under immense pressure** from energy production, housing, transportation and other development. Beach erosion due to the damming and channelization of rivers that once nurtured the coastline with sand have left us with rapidly disappearing beaches that require active replenishment and protection.

CULTURAL LEGACY: FROM INDUSTRY TO RECREATION

The area is a **magnet for recreation**, a resource that can be further developed as we embrace the cultural and ecological legacy of the site.



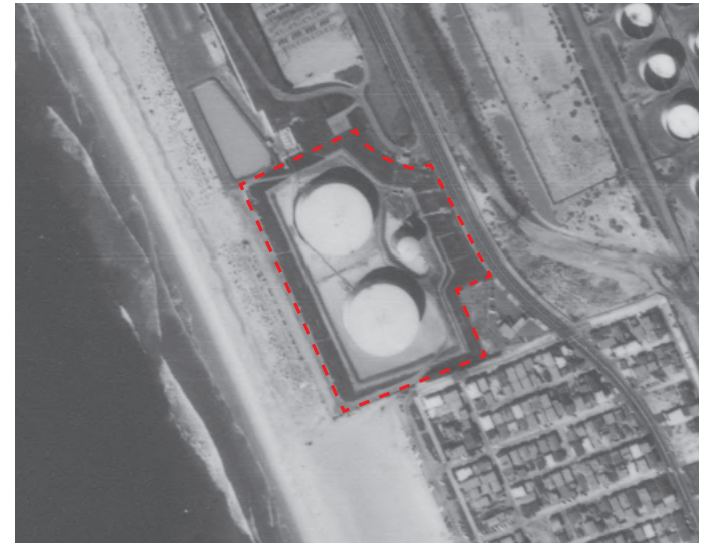
The LAX Dunes are most of what remains from a dune system once comprising 23,000 acres from Palos Verdes to Santa Monica.



Heavily used bike path along western edge of site



Undeveloped sand dune area in 1952. (Image: framefinder.com)



Completed fuel tanks in 1968. (Image: framefinder.com)

STATISTICS

ANNUAL VISITORS

Manhattan Beach: 3.8 million
The Strand: 2–3 million (est.)
El Porto Beach: 0.5–0.9 (est.)
Dockweiler State Beach: 2–3 million (est.)

ACTIVE PARTICIPANTS (U.S.)

Birdwatching: ~96 million
Cycling: ~57.9 million
Roller skating: ~11.2 million
Skateboarding: ~9.3 million

NEAREST PARKS

Dockweiler State Beach: 0.2 mi
Bruce's Beach Park: 1.8 mi
Sand Dune Park: 2.1 mi
Polliwog Park: 2.9 mi

PLAY+JOY=CARE+IDENTITY
IDENTITY+SPACE=PLACE

RESTORE NATIVE HABITAT

- Restore pre-development native dune habitat
- Allow visitors to engage in the environment through low-impact trail system
- Connect users to wildlife through guide-signs and bird blinds



Southern California native dune habitat. (Photo: mintatravels.com)



LAX Dunes landscape with elevated boardwalk rendering. (Render: ChatGPT)

EXPAND RECREATIONAL OPPORTUNITIES

- Allow users to re-imagine existing paved terrain for wheeled play, embracing the region's surf & skate culture as the asset that it is
- Create new walking & running paths immersed in nature
- Provide an accessible rest & recreation space for beach-goers, cyclists and other users



The Strand is one of LA's most popular destinations (Photo: <https://www.latimes.com/travel/list/manhattan-beach-neighborhood-guide-things-to-do>)



DIY skateboard activity on bike path. (Photo: www.findskatespots.com)

CONNECT COMMUNITY TO THE SITE

- Connect pedestrian access from the popular Strand beachfront walk
- Provide bicycle access from the South Bay bike path
- Expand limited vehicular access for private vehicles and transit



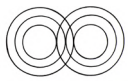
The Strand promenade ends at site.

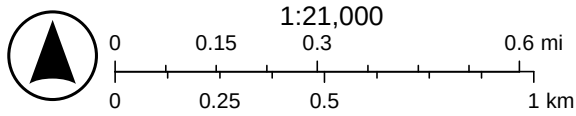
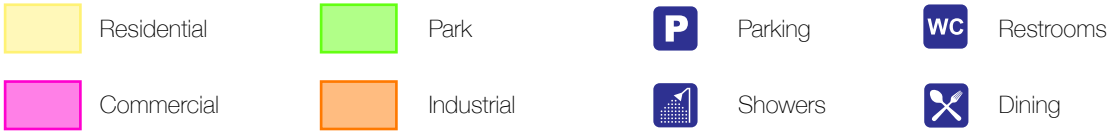


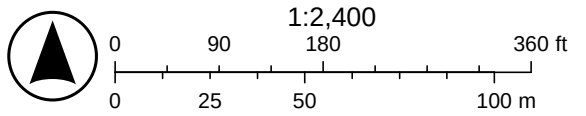
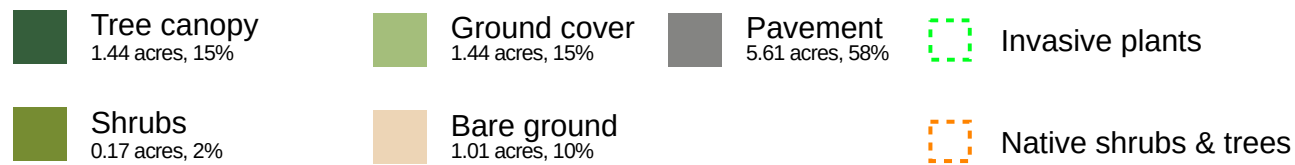
Traffic backed up at limited El Porto parking lot.

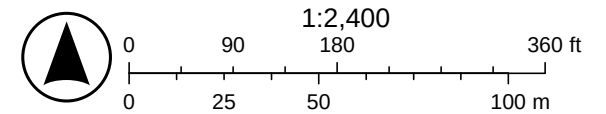














PHYSICAL CONDITIONS

2' contours



Views



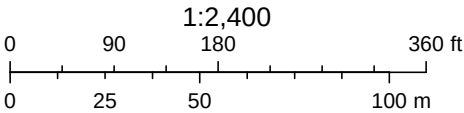
Prevailing NW wind



Noise

Average Daily Temperature

Winter: 58°F	Summer: 68°F
Spring: 62°F	Fall: 66°F



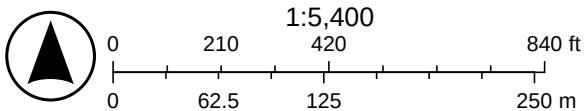
2090 SEA LEVEL

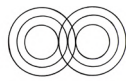
Data shows sea level rise is not a major concern for the site.



U.S. Sea Level Rise - Intermediate-High (2090)

Below Sea Level





DUNE RESTORATION

FORMATION

Dunes are formed by **sediment (sand) deposits** from a combination of the **wind, streams** discharging into the ocean, **runoff** from local storms, coastal **currents** and **waves** bringing sediment from deeper water. These **same forces erode or remove sediment** from dunes, putting them in a **constant state of flux**.

ESTABLISHMENT

Dunes form and remain in areas where **topography**, prevailing **winds** and **currents** cause it to accumulate at a greater rate than it erodes. After an initial period of accumulation, successive layers of **plants** become established and further **anchor the sediment** that forms the dunes.

CONSTRUCTION

Low impact techniques that encourage natural dune formation should be prioritized. They include:

Sand fences: simple wooden fences stop wind-born sand, encouraging the accumulation of wind drifts that can grow into dunes.

Native plants: these similar effects to fences, anchoring sand in place once dunes begin to appear.

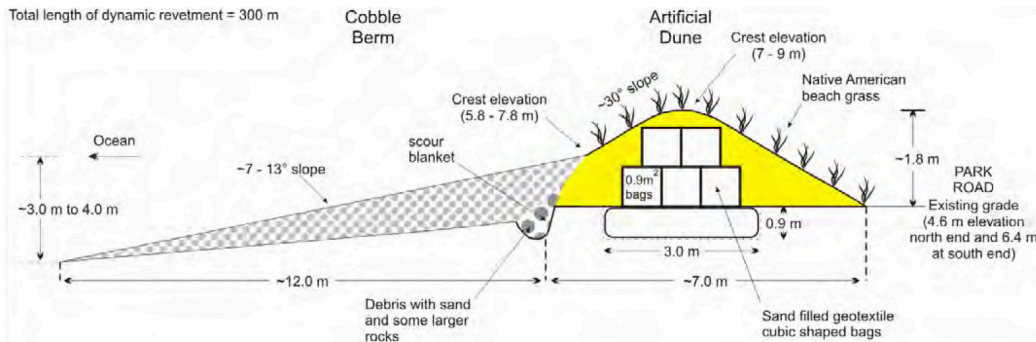
Larger scale interventions can further enable dune growth:

Removing barriers: removing structure such as revetments and rock jetties that block sand flow; opening up streams by depaving them or removing dams so they can carry more sediment.

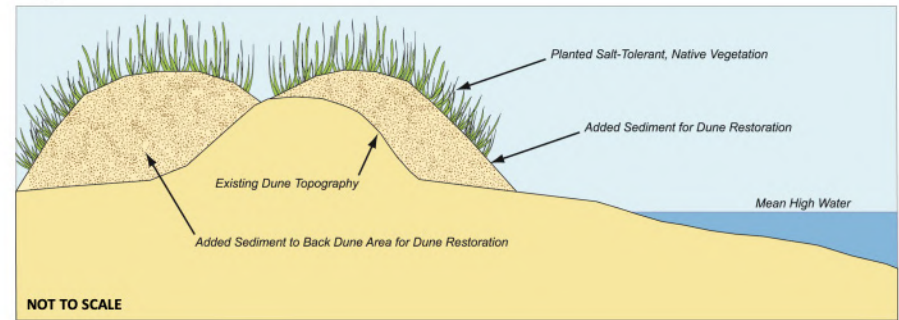
When this approach is insufficient, dunes can be constructed using artificial means:

Importing sediment: sediment can be brought in by land or dredged up from the sea bed. It is best to use sediment from similar sites or of similar qualities to existing native sand.

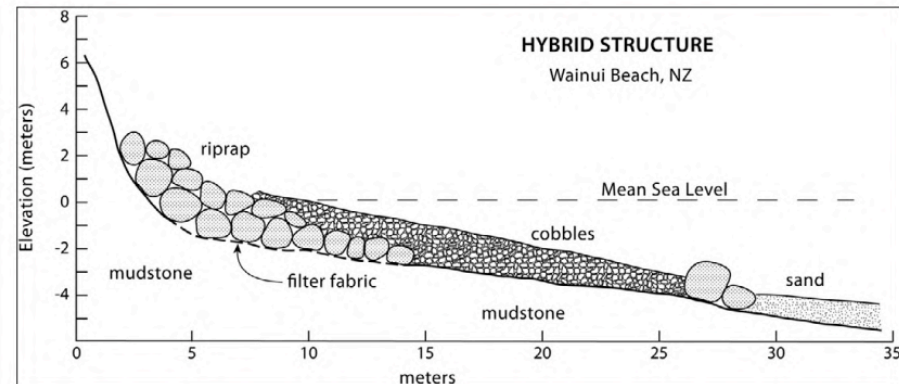
Support structures: a variety of techniques have been used to bolster dune construction and anchor sand, with mixed results. These include constructed bases from geotextile bags filled with sand, boulders, gravel or rip rap berms and revetments, and logs. The placement and, more often, the overall size of these interventions determine whether they stay in place or are washed away by wind and tide.



Sand fences help anchor sediment and foster natural dune formation. (Photo: <https://www.rios.com/projects/manhattan-beach-dune-restoration/>)



Imported sediment on top of existing dune formations. (Image: https://www.northeastoceancouncil.org/wp-content/uploads/2019/01/Living-Shoreline-Profile_Beach-Nourishment.pdf)



Above: Artificial structures can reinforce dunes and while protecting shorelines from erosion.

Left: Structures such as geotextile bags or boulders can serve as a foundation to help anchor dunes constructed on top of them. Vegetation on the surface provides additional sand anchoring.

(Images: <https://scispace.com/pdf/design-with-nature-strategies-for-shore-protection-the-4bv3wcpfz.pdf>)

CASE STUDY 01: CRISSY FIELD

COASTAL ECOLOGICAL RESTORATION + PUBLIC RECREATION | SF, CA

PROJECT OVERVIEW

Crissy Field is a former military airfield within the Presidio of San Francisco that was transformed into a hybrid ecological park integrating tidal marsh restoration, coastal dune habitat, recreation, and public waterfront access. Prior to restoration, the site consisted largely of fill, pavement, degraded shoreline conditions, and obsolete infrastructure. The project reconstructed native coastal ecologies while accommodating heavy public use within a dense urban context. The design, led by George Hargreaves and Hargreaves Associates, is widely recognized as a precedent for combining habitat restoration with active civic programming.

DESIGN STRATEGIES

ECOLOGICAL RECONSTRUCTION

The project restored tidal marshes, dune vegetation, and coastal habitat systems that had been erased through military development and grading.

CONTROLLED PUBLIC ACCESS

Boardwalks, trails, overlooks, and circulation corridors were carefully designed to minimize habitat disturbance while maintaining immersive public access.

LAYERED RECREATION

The project accommodates walking, biking, gathering, education, and passive recreation without overwhelming the ecological systems.



COASTAL MATERIAL PALETTE

Durable materials resistant to salt spray, wind, and coastal erosion were used throughout the site.

SIMILARITIES TO THE EL SEGUNDO ENERGY CENTER SITE

- Former industrial/infrastructural coastal site
- Degraded asphalt and engineered surfaces
- Native dune and coastal habitat restoration
- Strong public recreational component
- Coastal wind and salt exposure
- Need to balance ecology with human activity
- Integration of circulation systems within restored habitat

KEY TAKE-AWAYS FOR EL SEGUNDO

1. RECREATION + HABITAT CAN COEXIST

Crissy Field demonstrates that active public use does not need to conflict with ecological restoration if circulation and programming are carefully organized.

2. RESTORE ECOLOGICAL PROCESSES, NOT JUST PLANTING

The project focused on restoring functioning coastal systems rather than decorative landscaping. At El Segundo, dune restoration should operate as living infrastructure tied to sand movement, habitat, and resilience.

3. CREATE IMMERSIVE ECOLOGICAL EXPERIENCES

Visitors directly experience restored landscapes through pathways and overlooks. The El Segundo project could use elevated skate overlooks, dune-edge seating, and circulation paths that engage the restored terrain.



Images: <https://www.cngsite.com/places/crissy-field-next/>



CASE STUDY 02: BATTERY BLUFF PARK

COASTAL BLUFF RESTORATION + ADAPTIVE PUBLIC LANDSCAPE | SF, CA

PROJECT OVERVIEW

Battery Bluff Park is a coastal landscape restoration and public access project located within the Presidio of San Francisco overlooking the Pacific Ocean near the Golden Gate Bridge. Designed by Field Operations in collaboration with the Presidio Trust, the project transformed a previously inaccessible and infrastructure-dominated bluff edge into a resilient public coastal landscape integrating habitat restoration, circulation systems, and recreation.

The site was heavily altered by former military occupation and roadway infrastructure, including paved surfaces, retaining conditions, steep grading, disturbed soils, and fragmented coastal

DESIGN STRATEGIES

SCULPTED TOPOGRAPHY AS EXPERIENCE

The design uses grading and landform manipulation to shape circulation, views, gathering areas, and ecological transitions across the site.

NATIVE COASTAL HABITAT RESTORATION

Native bluff and coastal vegetation stabilize slopes, improve biodiversity, and reconstruct ecological continuity along the coastline.

EMBEDDED CIRCULATION SYSTEMS

Pathways, overlooks, and access routes are woven into the terrain to minimize ecological disruption while maximizing experiential engagement.

INTEGRATION OF INFRASTRUCTURE + LANDSCAPE

Existing infrastructural conditions and retaining geometries are absorbed into the landscape framework rather than completely erased.



FLEXIBLE OPEN RECREATION

Open lawns, terraces, and circulation corridors accommodate informal recreation and social occupation without overwhelming ecological systems.

SIMILARITIES TO THE EL SEGUNDO ENERGY CENTER SITE

- Former infrastructural/military-industrial landscape
- Coastal Southern California-like bluff and dune conditions
- Steep grades and sculpted topography
- Existing hardscape and disturbed soils
- Public recreation integrated with ecological restoration
- Need to balance access with habitat protection
- Coastal wind and erosion exposure
- Adaptive transformation of engineered landscape systems

KEY TAKE-AWAYS FOR EL SEGUNDO

1. DRAMATIC GRADING CAN DEFINE SPATIAL IDENTITY

The steep grades at the El Segundo site could become one of the project's strongest experiential features through sculpted skate terrain, overlooks, circulation paths, and dune transitions.



2. CIRCULATION CAN PROTECT ECOLOGY

Embedding pathways into topography helps direct movement and minimize disturbance to restored habitat systems.

3. HARDSCAPE + ECOLOGY CAN FEEL COHESIVE

Concrete surfaces, retaining edges, and native planting can coexist within a unified landscape language rather than appearing as separate systems.

4. COASTAL RESTORATION BENEFITS FROM LAYERED TERRAIN

Changes in elevation can support transitions between skate zones, gathering spaces, planted dunes, and protected habitat areas.

5. RECREATION CAN REMAIN INFORMAL + FLEXIBLE

The project demonstrates the value of open-ended public terrain that supports exploration, gathering, and multiple forms of occupation.



Images: <https://www.mantlela.com/battery-east-vista>

CASE STUDY 03: MANHATTAN BEACH DUNE RESTORATION

COASTAL HABITAT RECONSTRUCTION + EXPERIENTIAL PUBLIC LANDSCAPE | MANHATTAN BEACH, CA

PROJECT OVERVIEW

The Manhattan Beach Dune Restoration Project by RIOS explores the restoration of native Southern California coastal dune ecology within a highly urbanized South Bay context. The project focuses on reconstructing fragmented dune habitat while creating immersive public experiences that reconnect visitors to the ecological history of the Los Angeles coastline.

The design approach emphasizes the integration of ecological restoration, recreation, public education, and sculpted topography. Rather than separating habitat from public life, the project creates layered relationships between pathways, dune landforms, native vegetation, overlooks, and informal gathering spaces.

Located within the historic El Segundo dune system, the project addresses broader regional issues including habitat fragmentation, biodiversity loss, coastal urbanization, and disconnection between communities and native ecologies.

DESIGN STRATEGIES

DUNE MORPHOLOGY AS SPATIAL FRAMEWORK

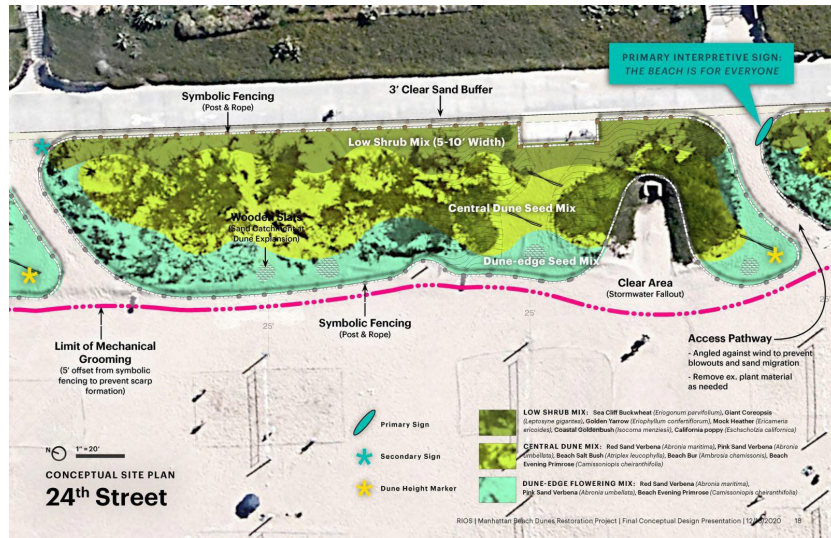
The project uses sculpted dune landforms to organize circulation, views, habitat zones, and public gathering areas. Topography becomes both ecological infrastructure and experiential landscape.

NATIVE HABITAT RECONSTRUCTION

Native coastal strand and dune species are reintroduced to restore biodiversity, stabilize soils, and reconstruct regional ecological identity.

EDUCATIONAL LANDSCAPE

Interpretive opportunities help communicate the ecological history of the South Bay dune system and the environmental significance of coastal restoration.



SIMILARITIES TO THE EL SEGUNDO ENERGY CENTER SITE

- Shared historic El Segundo dune ecology
- Urban South Bay coastal context
- Formerly disturbed and engineered landscape conditions
- Need to balance ecology with active recreation
- Public engagement within sensitive habitat systems
- Integration of sculpted terrain and circulation systems
- Strong emphasis on experiential landscape design
- Potential overlap between recreation and habitat restoration

KEY TAKE-AWAYS FOR EL SEGUNDO

1. TOPOGRAPHY CAN ORGANIZE BOTH ECOLOGY AND RECREATION

The steep grades at the El Segundo Energy Center site could become a defining design feature that supports dune reconstruction, skate terrain, overlooks, and circulation simultaneously.

2. DUNES CAN FUNCTION AS EXPERIENTIAL INFRASTRUCTURE

Rather than acting only as protected habitat zones, restored dune systems can become immersive public landscapes that shape movement, views, and spatial experience.

3. HABITAT RESTORATION THAT FEELS INTEGRATED WITH PUBLIC LIFE

The project demonstrates that ecological restoration can become an active and visible part of public recreation rather than existing as isolated conservation space.

4. NATIVE ECOLOGY CREATES REGIONAL IDENTITY

Using plant communities specific to the historic El Segundo dunes reinforces a strong sense of place unique to the South Bay coastline.

5. LAYERED CIRCULATION MINIMIZES CONFLICT

Separating pedestrian movement, wheeled recreation, and sensitive habitat zones through changes in grade and material transitions can help balance ecological protection with active public use.



Images: <https://www.rios.com/projects/manhattan-beach-dune-restoration/>

SOUTHERN CALIFORNIA COASTAL DUNE HABITAT

Conditions prior to major development and beach grading



Sanderling
Calidris alba

Photo: <https://www.audubon.org/field-guide/bird/sanderling>



California Least Tern
Sternula antillarum browni

Photo: https://www.allaboutbirds.org/guide/Least_Tern/id



Western Snowy Plover
Charadrius nivosus nivosus

Photo: https://www.instagram.com/pjDV1vsd_kfA/



Beach Evening Primrose
Camissoniopsis cheiranthifolia

Photo: https://en.wikipedia.org/wiki/Camissoniopsis_cheiranthifolia



Mock Heather
Ericameria ericoides

Photo: <https://www.calfloranursery.com/plants/ericameria-ericoides/>



Beach Bur
Ambrosia chamissonis

Photo: <https://nathistoc.bio.uci.edu/plants/Asteraceae/Ambrosia%20chamissonis.htm>



Sand Verbena
Abronia maritima

Photo: <https://www.lasplittas.com/nature-of-california/plants/5-abronia-maritima>



Dune Lupine
Lupinus chamissonis

Photo: [https://caliscape.org/plant/2325/Lupinus-chamissonis-\(Dune-Bush-Lupine\)](https://caliscape.org/plant/2325/Lupinus-chamissonis-(Dune-Bush-Lupine))



Dune Wild Rye
Elymus mollis ssp. mollis

Photo: https://en.wikipedia.org/wiki/Elymus_mollis



El Segundo Blue Butterfly
Euphyllotes battoides allyni

<https://www.xerces.org/endangered-species/species-profiles/at-risk-butterflies-moths/el-segundo-blue>



Silvery Legless Lizard
Anniella pulchra pulchra

https://en.wikipedia.org/wiki/Anniella_pulchra



Loggerhead Shrike
Lanius ludovicianus

https://www.allaboutbirds.org/guide/Loggerhead_Shrike/overview



Coast Buckwheat
Eriogonum parvifolium

[https://caliscape.org/plant/1517/Eriogonum-parvifolium-\(Coast-Buckwheat\)](https://caliscape.org/plant/1517/Eriogonum-parvifolium-(Coast-Buckwheat))



California Sagebrush
Artemisia californica

[https://caliscape.org/plant/396/Artemisia-californica-\(California-Sagebrush\)](https://caliscape.org/plant/396/Artemisia-californica-(California-Sagebrush))



California Deermouse
Peromyscus californicus

https://en.wikipedia.org/wiki/California_deermouse



Lemonade Berry
Rhus integrifolia

[https://caliscape.org/plant/3201/Rhus-integrifolia-\(Lemonade-Berry\)](https://caliscape.org/plant/3201/Rhus-integrifolia-(Lemonade-Berry))



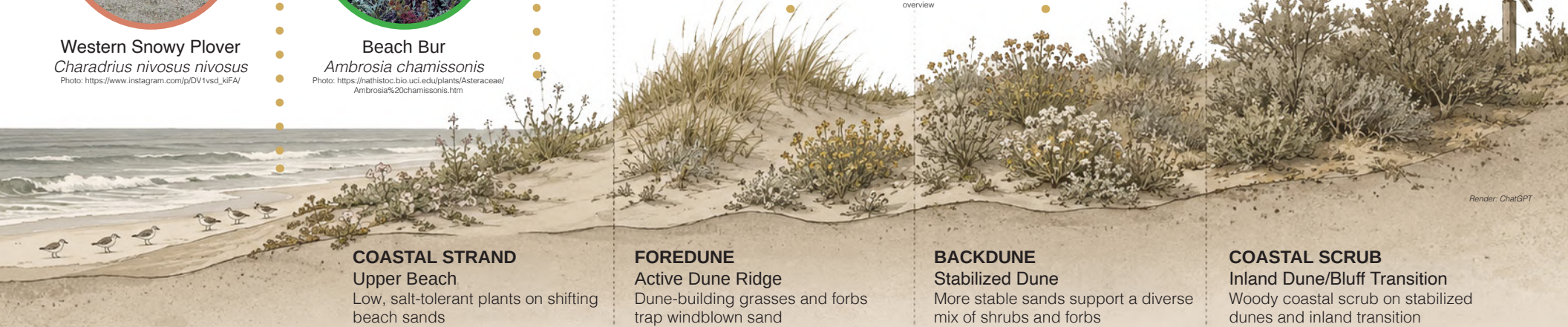
California Ground Squirrel
Otospermophilus beecheyi

https://en.wikipedia.org/wiki/California_ground_squirrel



CA Brittlebush
Encelia californica

[https://caliscape.org/plant/1404/Encelia-farinosa-\(Brittlebush\)](https://caliscape.org/plant/1404/Encelia-farinosa-(Brittlebush))



COASTAL STRAND
Upper Beach

Low, salt-tolerant plants on shifting beach sands

FOREDUNE

Active Dune Ridge
Dune-building grasses and forbs trap windblown sand

BACKDUNE

Stabilized Dune
More stable sands support a diverse mix of shrubs and forbs

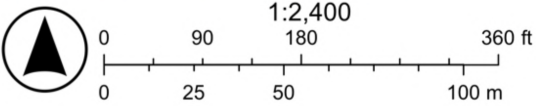
COASTAL SCRUB

Inland Dune/Bluff Transition
Woody coastal scrub on stabilized dunes and inland transition

INCREASING SALT SPRAY

DECREASING WIND EXPOSURE | INCREASING SOIL STABILITY | INCREASING PLANT DIVERSITY

INLAND/UPLAND



LOS ANGELES DUNE RESTORATION PROJECTS



A growing network of native dune restoration projects along the Los Angeles coast aims to restore a fraction of the region's original native habitat, creating the unique opportunity to build an interconnected network of sites to support biodiversity, recreation and restoration.

1. SANTA MONICA

First large-scale dune restoration pilot in Los Angeles County (2016). Restored native coastal strand habitat using sand fencing, native plantings, and public education. Expanded into Phase 3 to restore approximately 46 acres. Supports Western Snowy Plover, El Segundo blue butterfly, California legless lizard, and native dune beetles.



Photo: <https://www.santamonicabay.org/what-we-do/projects/santa-monica-beach-dunes/>

2. DOCKWEILER

Restoration adjacent to the El Segundo Dunes with native dune vegetation to reconnect fragmented habitat and benefit the endangered El Segundo blue butterfly.



Beach and Dune Restoration - Proposed View at 5 yrs.



Photo: <https://www.santamonicabay.org/what-we-do/projects/los-angeles-living-shoreline-project/>

3. LAX

One of California's largest coastal dune restoration efforts. Removal of invasive species, restoration of native buckwheat communities, and habitat enhancement for the endangered El Segundo blue butterfly. Only listed project that is not open to the public.



Photo: <https://www.santamonicabay.org/news/restoring-the-el-segundo-sand-hills/>

4. MANHATTAN BEACH

First large-scale dune restoration pilot in Los Angeles County (2016). Restored native coastal strand habitat using sand fencing, native plantings, and public education. Expanded into Phase 3 to restore approximately 46 acres. Supports Western Snowy Plover, El Segundo blue butterfly, California legless lizard, and native dune beetles.



Photo: <https://www.rios.com/projects/manhattan-beach-dune-restoration/>

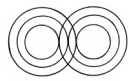
5. MALIBU

The dune restoration includes a series of pathways, educational signage, symbolic fencing, as well as both sand fencing and native dune plant seeding to catalyze dune growth.



Photo: <https://www.rios.com/projects/malibu-living-shoreline/>





April 18, 2026 at 11:00 AM

FAUNA

Native



Red-Tailed Hawk
Buteo jamaicensis



American Crow
Corvus brachyrhynchos



Western Gull
Larus occidentalis



Brown Pelican
Pelecanus occidentalis



Sanderling
Calidris alba



Western Fence Lizard
Sceloporus occidentalis

FLORA

Native



Hollyleaf Cherry
Prunus ilicifolia



Coffeeberry
Larus occidentalis



Coyote Brush
Baccharis pilularis

Invasive



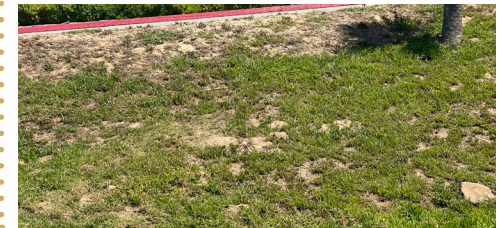
Ice Plant
Carpobrotus edulis



European Searocket
Cakile maritima



Mexican Fan Palm
Washingtonia robusta



Turf Grass
Var. species

STAKEHOLDERS & AGENCIES

PRIVATE



Clearway Energy



Chevron

LOCAL



L.A. County Beaches & Harbors

NON PROFIT



The Bay Foundation

STATE



California Coastal Commission



City of El Segundo



Heal the Bay



California Coastal Conservancy

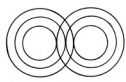


City of Manhattan Beach



Surfrider Foundation

OPPORTUNITIES



1. AMPHITHEATER BOWL

Existing grading provides base for **amphitheater performance and gathering space**. Area denoted by wavy line on plan.



2. CONCRETE STRUCTURES FOR PLAY

Existing cement slopes & basin offer opportunity for **skateboarding, BMX, scootering, etc...** Users re-imagine existing terrain, inviting creativity, visual interest and ownership of the space.



3. ABANDONED TANK

Monumental visual anchor with potential for **rooftop viewing platform** to become regional attraction.



3B. FORMER TANK FOOTPRINTS

Denoted by dashed line on plan.



4. BIKE PATH + SERVICE ROAD

Popular cycling route from Marina del Rey to Redondo Beach. Can be relocated using existing service road (5a) to open up space for dune restoration.

5. EXISTING PATHWAYS

Existing **vehicular and pedestrian pathways on site** allow connection to the space and circulation within.



6. STRAND PEDESTRIAN WALK

Northern terminus of **popular walking path**.

7. BUS STOP

Public transportation currently **not well connected to beach area** due to steep grades and lack of sidewalks.



8. STREET ACCESS

Vehicular access along southern edge. A break in the berm allows for **building a road into the site** from here.





CONSTRAINTS

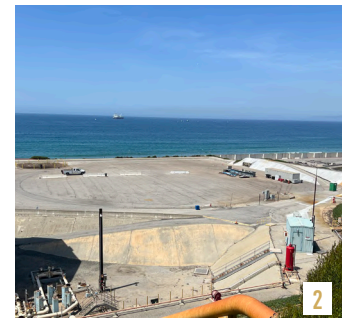
1. STEEP SLOPES

Extremely steep grades along site perimeter, especially on Eastern edge.



2. PAVEMENT

At least 58% of site is paved.



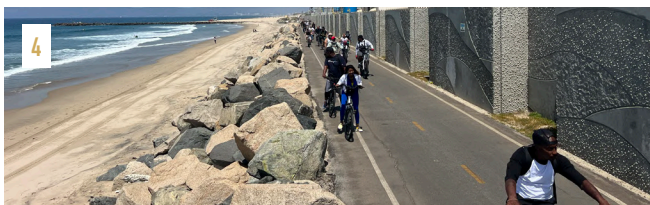
3. BERM

Mound along southern edge blocks pedestrian and vehicular access.



4. BOULDER REVETMENT

Rock revetment disconnects site from beach, preventing a true dune habitat. The revetment is necessary because the beach has been depleted of sand due to sediment flow disruption.





OPPORTUNITIES

UNDERLYING SANDY SOIL



NEARBY DUNES



NATIVE PLANT COMMUNITIES



RECYCLED WATER AVAILABILITY



CONSTRAINTS

BEACH EROSION

Note drastic reduction of beach width from 1962 to 2023 (right)

STREAM CHANNELIZATION

The Ballona watershed used to supply sediment to the Santa Monica Bay coastal dunes. Before 1825 this was also the mouth of the L.A. River. Sediment deposits from the L.A. watershed likely formed the South Bay dunes.

Below: Ballona Creek outlet 1937 vs. 2025.

Image: <https://www.facebook.com/groups/lostmarket/>



Above: Beach erosion from 1962 to 2023 due to lack of sediment flow from rivers. (Photo: www.framefinder.com)



SOIL CONTAMINATION



COASTAL STRUCTURES DISRUPTING SAND FLOW



A rock jetty to the north of the site constructed in the 1980's to protect Chevron infrastructure cuts off sand flow to the site. Note severe reduction of sand down current (south) of the jetty. Jetty removal or sand pumping could restore some sediment flow. Similar structures up the coast also block sand flow but this is the largest one with the most pronounced

INVASIVE PLANTS



OPPORTUNITIES & CONSTRAINTS: RESTORE NATIVE HABITAT

EXISTING SOIL CONDITIONS

OPPORTUNITIES

- **Sandy soil from remnant dunes** is still present underneath the pavement, as evidenced on this site and others nearby.

CONSTRAINTS

- **Soil contamination** from fuel tank operations needs to be addressed by removing or remediating native sandy soils.
- **Compacted, imported and removed soils** from construction and operations.
- **Lack of natural sand flow** due to channelization and damming of the region's creeks and rivers prevents natural replenishment of sand dunes following coastal erosion due to ocean currents, waves and precipitation.



Invasive Bermuda grass and Mexican fan palm growing in sandy soils.



Native coastal scrub on the site.



Native Holly leaf Cherry trees.

EXISTING FLORA & FAUNA

OPPORTUNITIES

- Existing **coastal scrub native plant communities** on site.
- **Native and migratory animal species** found on and around the site.

CONSTRAINTS

- Extensive **invasive plant communities**, including large swatch of Bermuda grass, ice plant, European sprocket and Mexican fan palm



Beach erosion from 1962 to 2023 due to lack of sediment flow from rivers.



SITE LAYOUT & BUILT ENVIRONMENT

OPPORTUNITIES

- **Oceanfront space** for recreating dunes
- Existing network of **pathways**
- **Basins** for constructed wetlands

CONSTRAINTS

- Extensive **pavement** and other industrial remnants
- Boulder **revetment** along bike path prevents true connection to the beach and ocean



View of seawall looking north.



Opportunity: existing basins can be used to create constructed wetlands.



OPPORTUNITIES & CONSTRAINTS: EXPAND RECREATION

CONCRETE SLOPES & BASINS FOR WHEELED PLAY

OPPORTUNITIES

- Paved slopes & basins on site offer opportunities for wheeled play such as skateboarding, BMX, scootering, etc... that **naturally flourishes** in these types of environments.
- Inviting people to use the structures as built introduces a **creative element** to play, making it **more engaging and visually interesting**.
- Allowing the public to customize these features introduces another level of **interest and ownership** that makes users into stewards of a place with which they come to develop a strong connection.

CONSTRAINTS

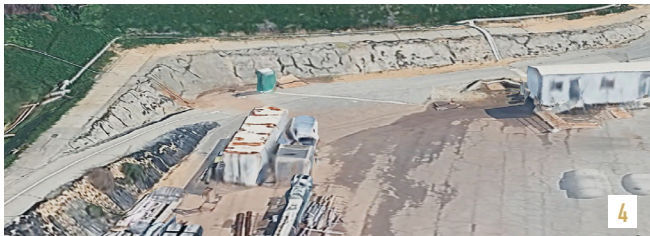
- **Rough condition of concrete** can make some of these surfaces inadequate or dangerous for roller sports.



(1) Steep concrete banks in fair condition for roller sports.



(2) Shallow, less steep basin for beginner friendly wheeled play such as "surf-skate" riding, longboarding, scootering.



(4) Degraded concrete areas may be better suited for removal.



Beginner friendly disciplines such as "surf-skate" are popular & inclusive. (Photo: *Vogue*)



Skate culture was forged on the concrete structures of the mid 20th century. (Photo: Jay Adams, 1975)

CONCRETE SLOPES AS AMPHITHEATER

OPPORTUNITIES

- Artificial landforms can provide the base for an amphitheater-style **performance and gathering space**.

CONSTRAINTS

- **Challenging installation** seating, steps and other amphitheater elements on existing surfaces.



(5) Potential amphitheater site with fuel tank backdrop.

STEEL TANK AS FOCAL POINT

OPPORTUNITIES

- Monumental scale creates **visual & emotional impact**.
- Potential **backdrop for performances**.
- Link to history of the site and region, reaffirming **sense of place & progress**.

CONSTRAINTS

- Potential **structural and safety issues** stemming from poor condition and rusting.



(6) Existing tank structure can serve as focal point.

OPPORTUNITIES & CONSTRAINTS: CONNECT COMMUNITY

BIKE PATH

OPPORTUNITIES

- Well used **bike path along western edge of site** brings many users to the space.

CONSTRAINTS

- Important cycling thoroughfare cannot be interrupted, **must remain in conjunction with habitat restoration** work.



Bike path from north west corner of site.



Rest area along bike path on south-west corner of site.



Southern edge berm terminates at gas station property line. Southern edge of the site lacks pedestrian connection to neighborhood and bus stop off of Vista del Mar.

VEHICULAR ACCESS

OPPORTUNITIES

- Vehicular connection possible via **54th street on southern edge of site.**
- Bus stop** at Chevron gas station on Vista del Mar.

CONSTRAINTS

- Steep slope** from bus station with **no sidewalks.**
- Large earthen **berm separating street from site.**
- Constricted access with **one way in and out.**
- Steep roadway.
- Dense traffic into El Porto parking lot**, often backing up into roadway.



Traffic backing up onto 54th St.

STRAND BOARDWALK

OPPORTUNITIES

- Popular **walking route terminates at site.**

CONSTRAINTS

- Will bring **large crowds including dogs.**
- Lack of pedestrian conn



Strand terminus facing site.



PROGRAM ELEMENTS



NATIVE SOCAL DUNE HABITAT

Recreating a holistic ecosystem and incorporating natural processes to provide a sustainable, resilient habitat for animals and people to thrive. **~6.7 acres**

NATURE TRAIL NETWORK

Provide an immersive experience of the site that highlights the importance and value of the place while protecting it from excessive and improper use. **~1 mile**

ADAPTIVE REUSE ROLLER PLAY SPOTS

Design the opportunity for excitement and community around popular recreational uses such as cycling, skating, and skateboarding while embrace the industrial legacy of existing built elements on the site. **~9000 square feet (0.2 acres)**

AMPHITHEATER

Utilize grade changes and built elements to make space for showcasing culture and community. **~6000 square feet (0.14 acres)**

GATHERING SPACE

Facilities for gathering with shelter from wind & sun. **~22,000 square feet (0.5 acres)**

BICYCLE & VEHICLE PARKING

Open up the site and greater coastline to visitors. **~22,000 square feet (0.5 acres)**

BEACH ACCESS

Build inclusive new connections to the beach that overcome grade changes and the seawall at the base of the site. **n/a**

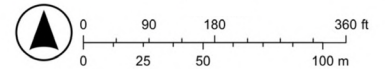
RESTROOMS

Allow for healthy, clean use of the site while utilizing recycled water. **~900 square feet**



Photo: <https://www.sdisf.com/>

SPATIAL RELATIONSHIPS



Restrooms. Photo: <https://architectureau.com/contributors/Bloom-Cameron/>



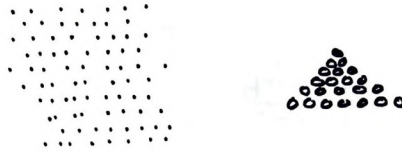
DIY adaptive re-use roller play fosters community ownership & engagement.

ARENAS PARK

ARENA = SAND



GRAINS OF SAND



"GRANITO DE ARENA"

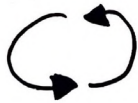
↳ EVERY CONTRIBUTION MATTERS

A MOUNTAIN OF SAND



DUNES
SEA
BIRDS
WIND
WAVES
CURRENT
FLOW
MIGRATION

↳ "A COAST LAND IN FLUX"



MARGINS → FOREFRONT

NATURAL + CULTURAL + ECONOMIC

SHIFTS
CHANGE



WINDS OF CHANGE
NOTHING IS STATIC HERE

GREAT HEIGHTS
VIEWS



PAST → FUTURE
FUTURE → PAST

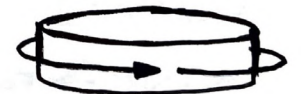
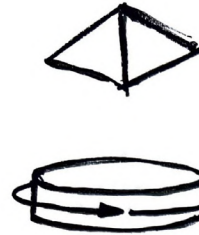
BEACH → INDUSTRY

INDUSTRY → DUNES

SAND: "EMPIRE" OF SAND

CURRENTS: A COAST IN FLUX

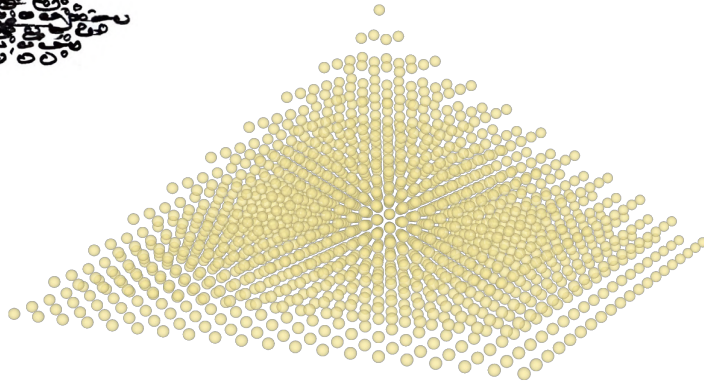
SUNRISE KINGDOM
SUNSET KINGDOM



DESIGN IDEATION

Arenas Park

KINGDOM OF SAND



GRAINS OF SAND

From the Spanish word “Arenas” for sand, also the colonial namesake of the area and of the new park. The depletion of our coastline is, in great part, due to the damming of our rivers, cutting off the source of sand that used to nourish the coast.

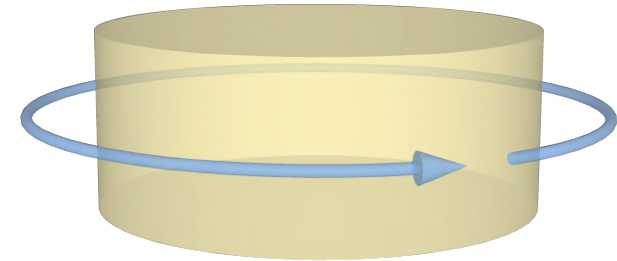
SAND AS BUILDING BLOCK

Sand forms the very ground of the site, aggregating to form massive hills. We take our design cues from an infinitesimal, uniform material that aggregates to form banks, dunes, beaches, habitats, and so on.

EVERY CONTRIBUTION MATTERS

“Cada cual su granito de arena”, we all pitch in our tiny part to form a greater whole. The spirit of unity, collaboration and togetherness embodied by sand will define the spirit of the new park.

COASTAL FLUX



NATURAL FLOW

The dunes, the birds, the current, the wind, the waves - all of the natural elements of the site are in a constant state of flow or migration that largely defines them.

WINDS OF CHANGE

The 20th century saw a profound cultural & economic shift, as the area went from a rich fishing and gathering ground, to an industrial complex, to a hotbed for culture & leisure. The land in its natural state, once perceived as a void (“there’s nothing there”), was exploited by Standard/Chevron, creating a true wasteland and the desire to preserve and cherish what was there before.

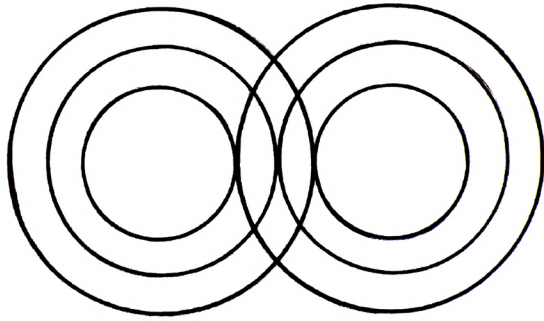
CIRCULAR PATH

Industrial facilities in dense urban areas are no longer desirable, and the advent of tourism and recreation as an industry, along with the growing importance of conservation of dwindling ecosystems, has changed how we see open space. These themes of circularity and interconnectedness will guide the design process.

PROPOSED DESIGN CONCEPTS

Arena Park

FUTURE ECHO

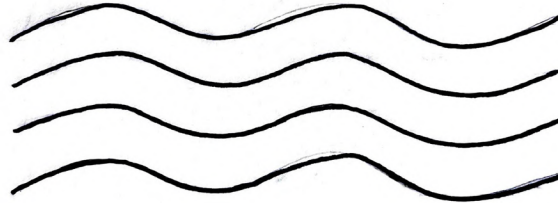


Future Echo radiates from the outline of two fuel storage tanks that occupied the site before 2014. Once futuristic extractive uses give way to a forward-looking renewal of the land for people, animals and plants. The footprint of the tanks, still visible from above, divides the space into two distinct zones: one giving free reign to the ever shifting dunes, the other full of opportunities for human connection with the outdoors. Echoing circular patterns guide the structure of trails and spaces, remembering the industrial past through form as well as the adaptive re-use of concrete banks, basins and the remaining tank.

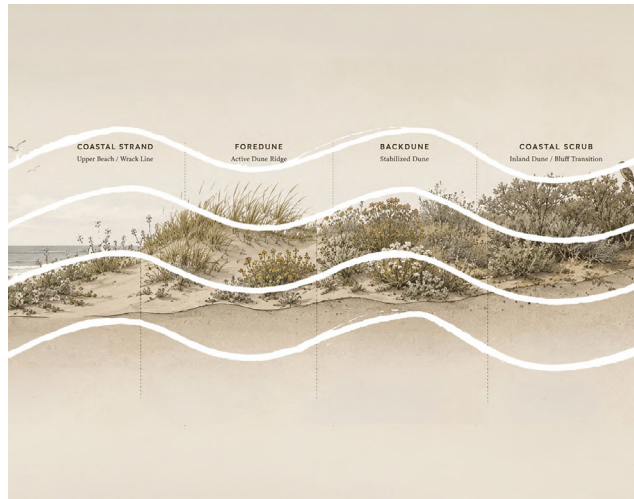


The pair of 220-foot diameter fuel tanks pre-demolition.

SAND WAVE

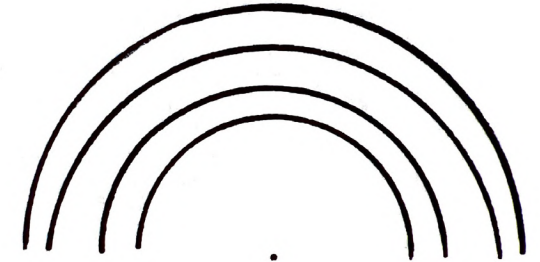


Sand Waves draws from the natural structure of the original Southern California dune habitat, with successive layers of unique plant and animal life defined by their distance from the ocean. Spaces are layered in sequence from the water to the hillside, with undulating forms guiding the layout and meshing with the structure of constructed dunes that will reclaim the site from it's industrial past. Trails follow this wave pattern, guiding visitors across the site while offering new views of land and sea with every curve.

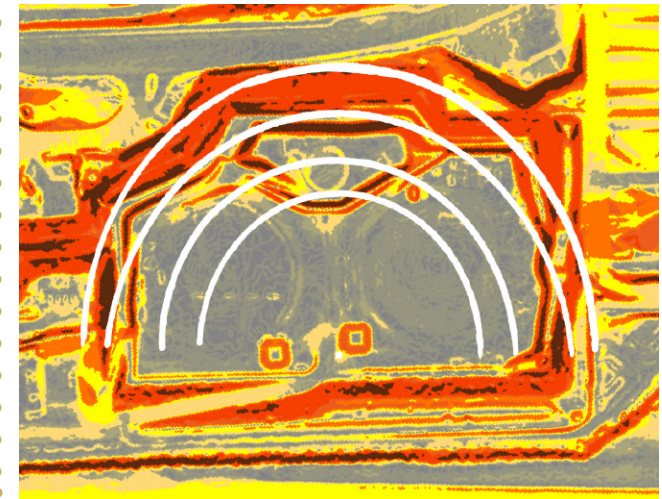


Undulating layers define the SoCal dune habitat.

ARTIFICIAL AMPHITHEATER



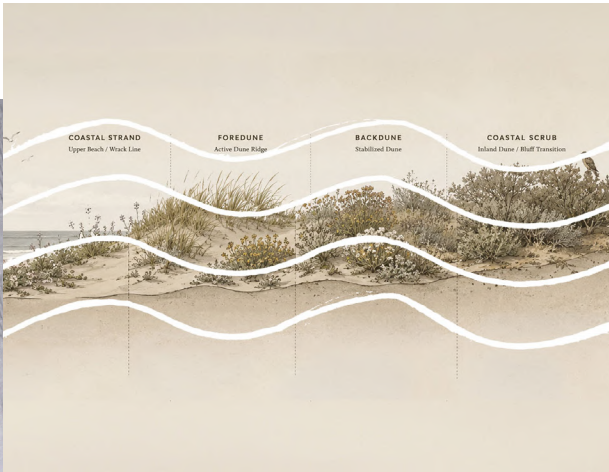
The extensive terraforming that was done to the site created a sort of massive Artificial Amphitheater, with a ridge of steeply sloped, elevated terrain forming a semi-circle looking out towards a large plain and the ocean beyond. This design uses the macro scale pattern of grading on the land to guide a design that arranges spaces in sequence around the main central space and the focal point of the Pacific Ocean. This design embraces flat expanse at the core of the site, flattening secondary embankments and basins to create an uninterrupted central stage for the park.



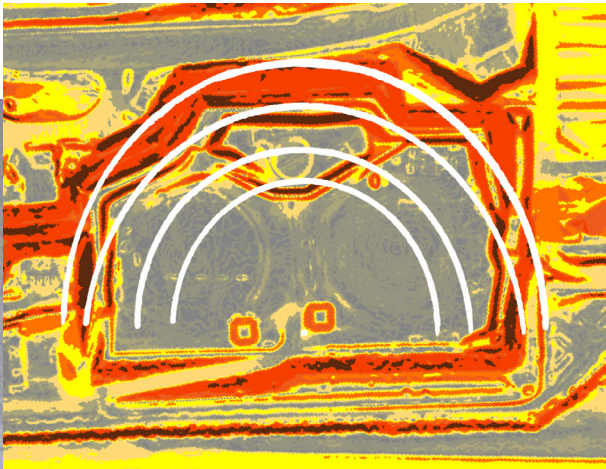
Steep slopes in dark red indicate the site's U-shaped outer ridge.

DESIGN CONCEPT: SAND WAVE

Site Diagram

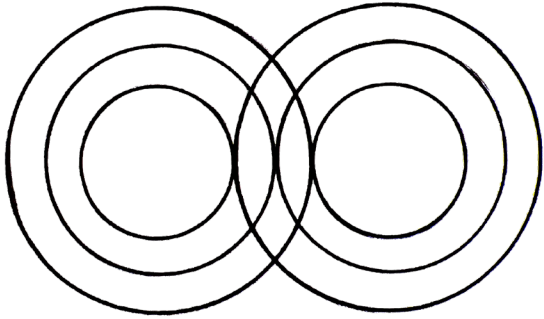


DESIGN CONCEPT: ARTIFICIAL AMPHITHEATER
Site Diagram



FINAL DESIGN CONCEPT: FUTURE ECHO

Arena Park



The pair of 220-foot diameter fuel tanks pre-demolition.

FUTURE ECHO RADIATES FROM THE OUTLINE OF TWO FUEL STORAGE TANKS THAT OCCUPIED THE SITE BEFORE 2014.

ONCE FUTURISTIC EXTRACTIVE USES GIVE WAY TO A FORWARD-LOOKING RENEWAL OF THE LAND FOR PEOPLE, ANIMALS AND PLANTS.

THE PLAN USES EXISTING GRADING, PATHS & LAYOUT ORIGINALLY DESIGNED AROUND THE TWO MASSIVE CIRCULAR VOIDS.

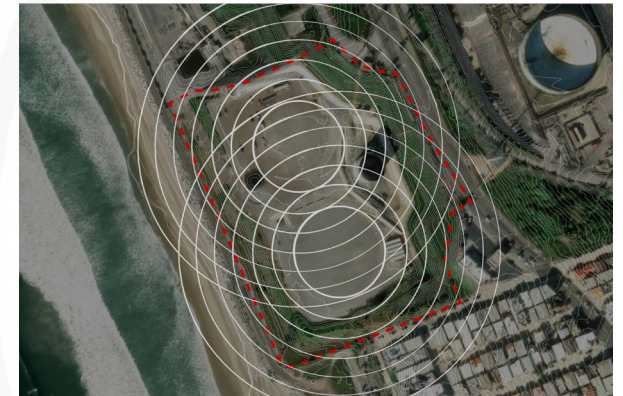
RENEWED ENERGY AND LIFE OCCUPY THE VOID ONCE FILLED WITH FOSSIL FUEL.

THE FOOTPRINT OF THE TANKS, STILL VISIBLE, DIVIDES THE SPACE INTO TWO DISTINCT ZONES: ONE GIVING FREE REIGN TO THE EVER SHIFTING DUNES, THE OTHER FULL OF OPPORTUNITIES FOR HUMAN CONNECTION WITH THE OUTDOORS.

ECHOING CIRCULAR PATTERNS GUIDE THE STRUCTURE OF SPACES AND CIRCULATION.

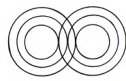
REMEMBERING THE INDUSTRIAL PAST THROUGH FORM

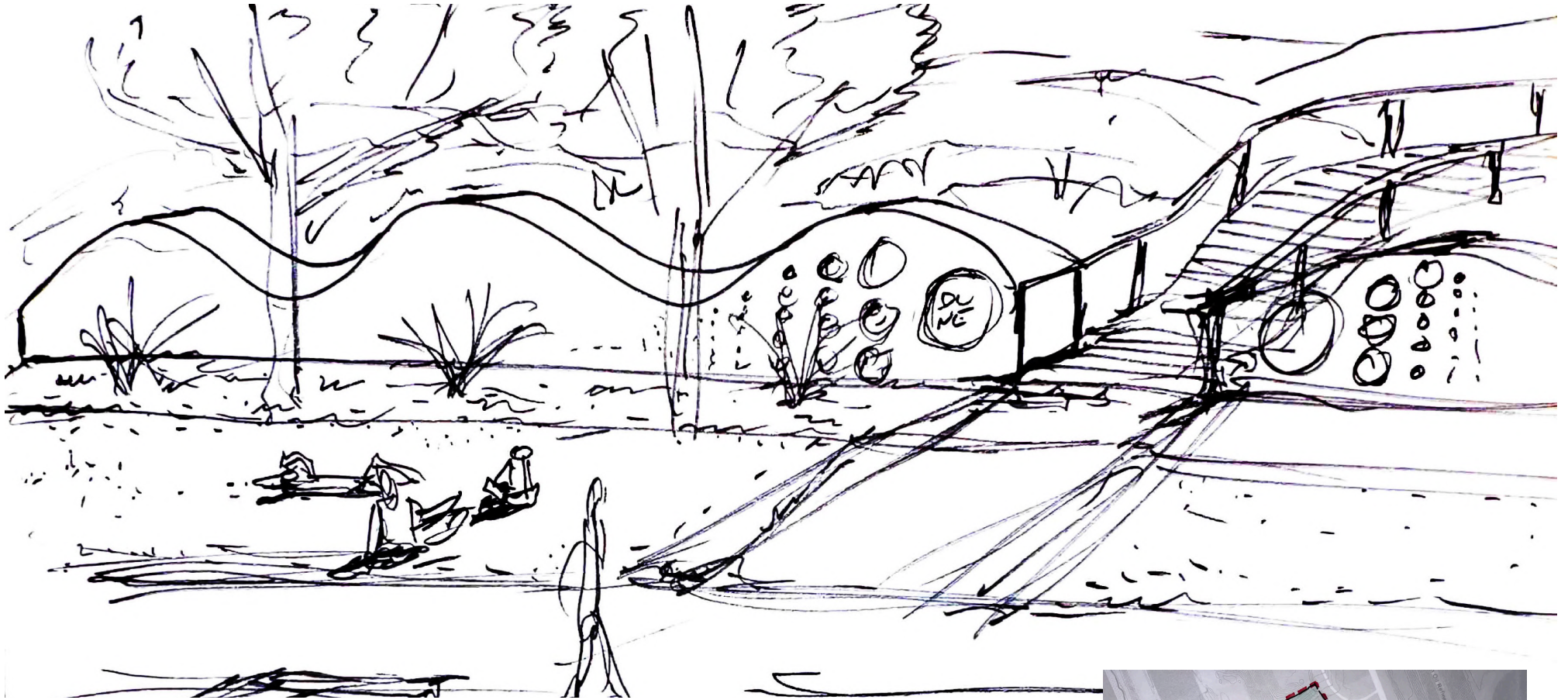
ADAPTIVE RE-USE OF CONCRETE BANKS, BASINS AND THE REMAINING TANK.



Images: earth.google.com

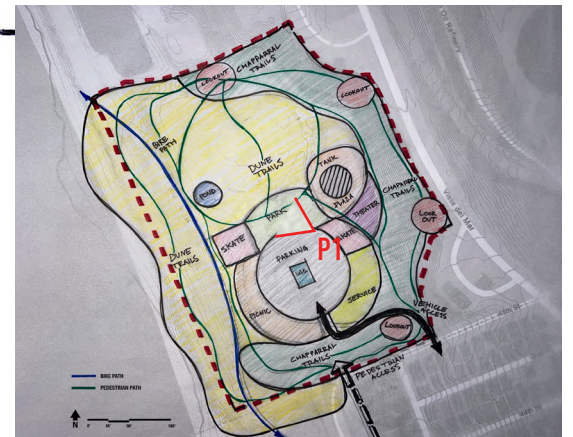




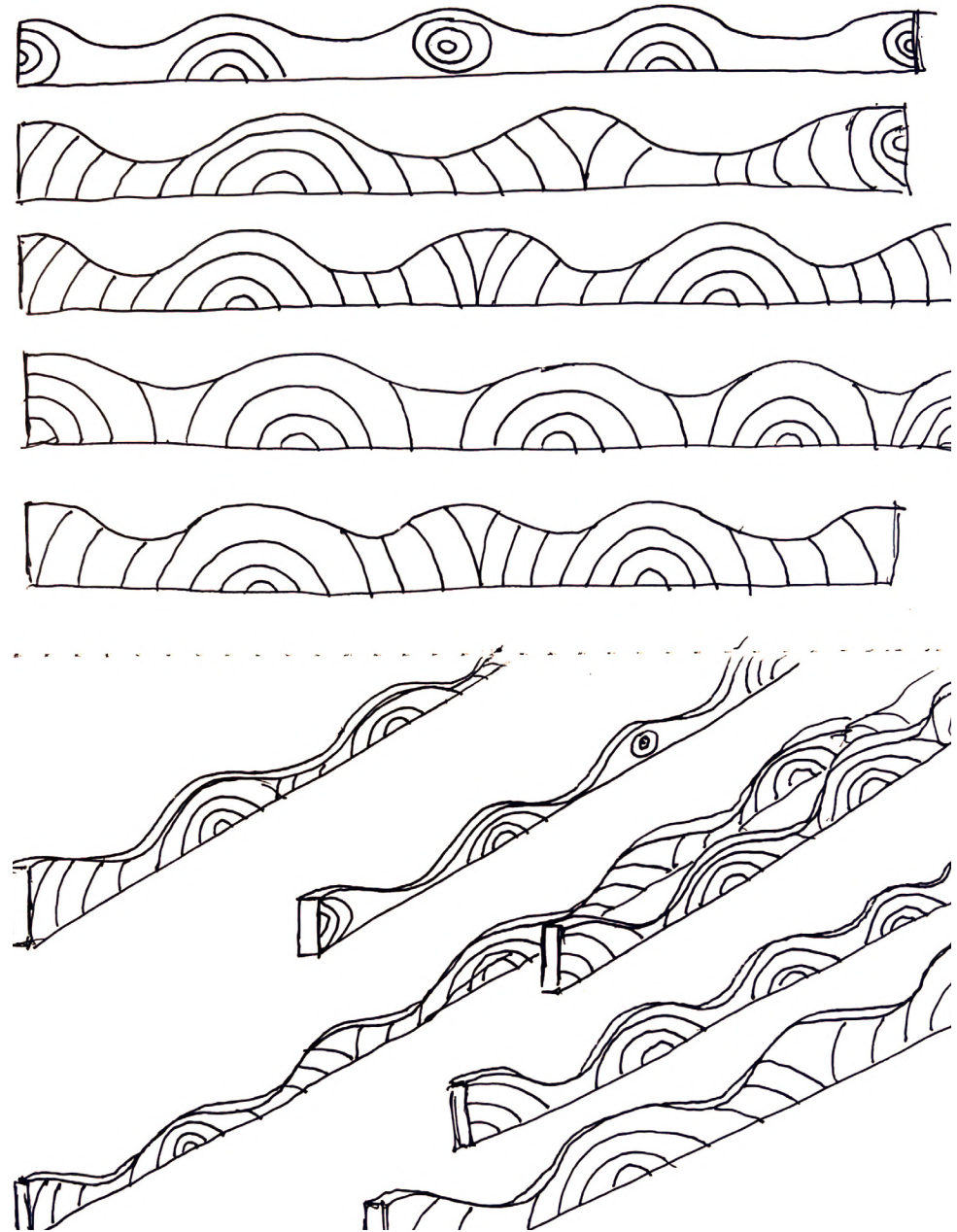
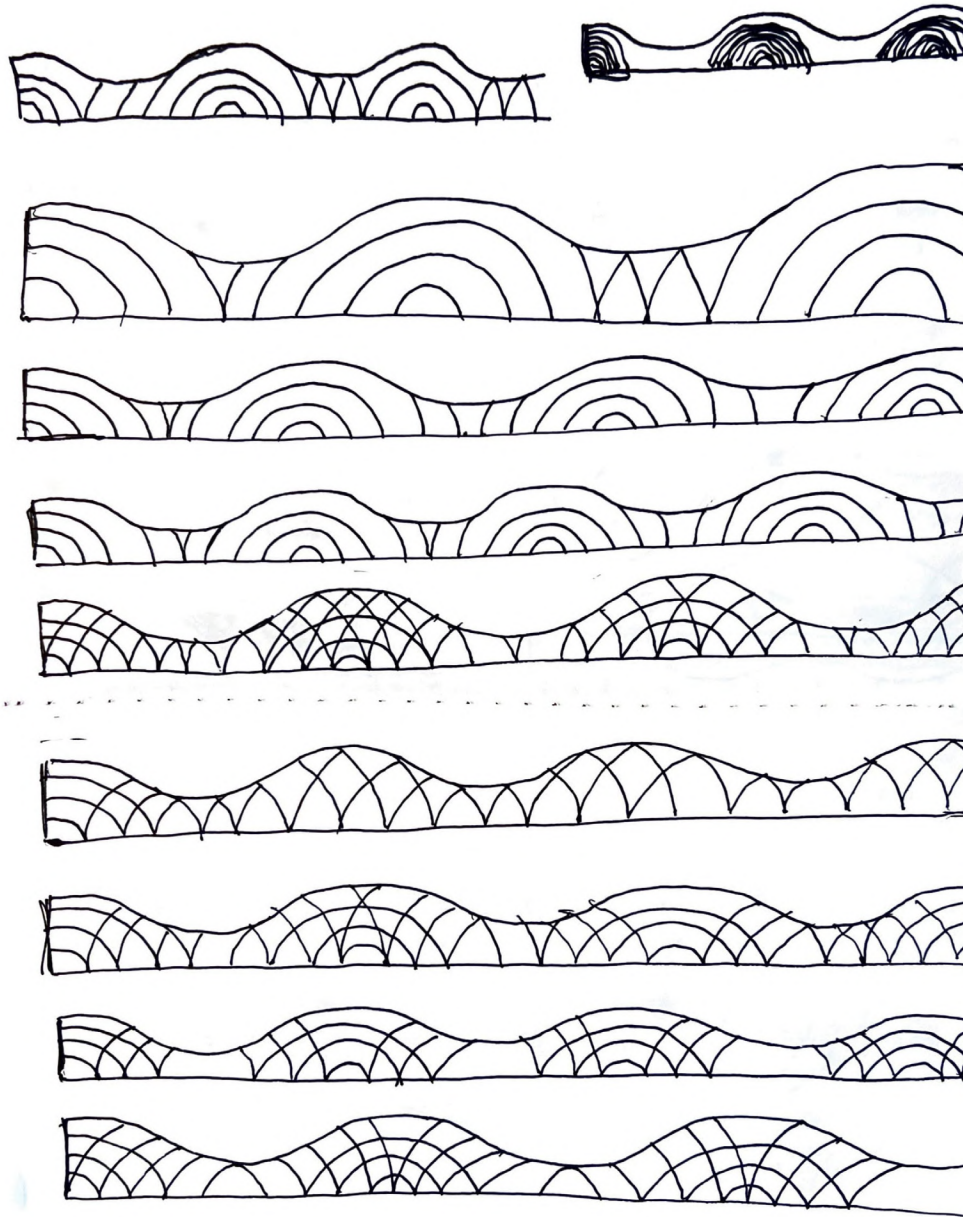


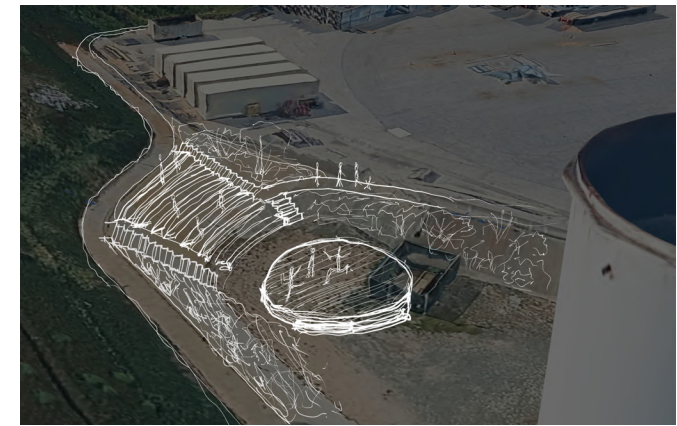
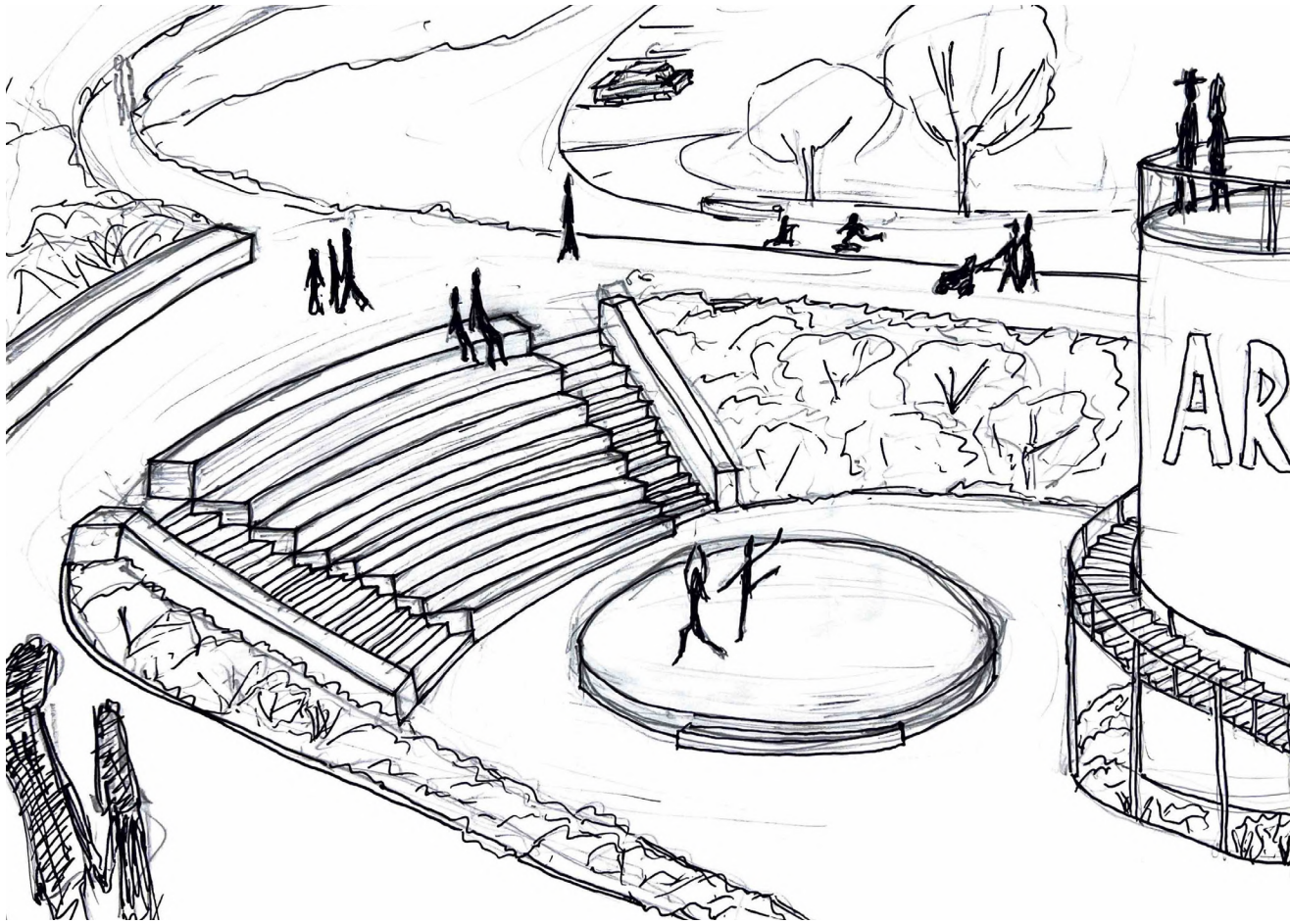
FEATURES

- Barrier between wild & developed sections of park.
- Helps contain sand dunes, which tend to spread
- Low, thick wall presents opportunities for play



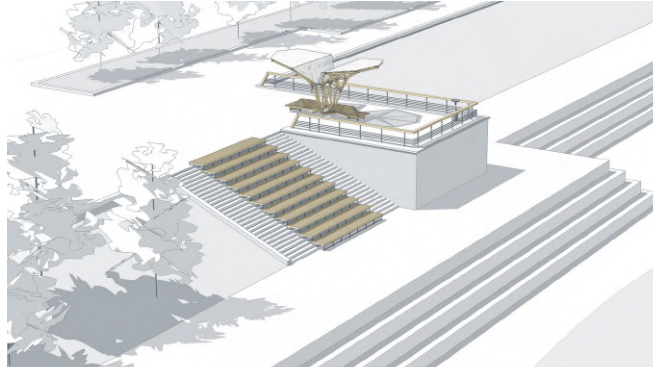
WAVE WALL STUDY SKETCHES



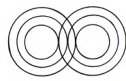


INSPIRATION

- **Adaptive re-use amphitheater** built with pre-fabricated components attached to existing concrete slope.
- Concrete construction also possible



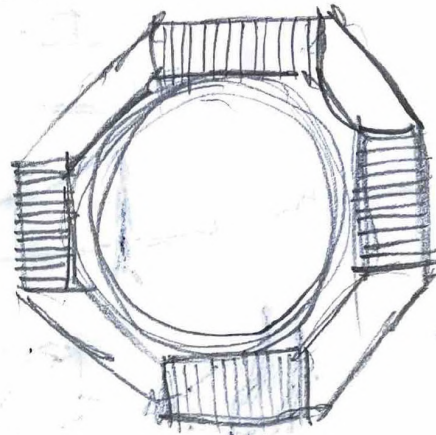
Adaptive re-use amphitheater. (Images: <https://www.archilovers.com/projects/230615/viewing-platform-with-canopy-and-amphitheater-renewal-of-the-yenisei-riverfront-in-divnogorsk.html>)



"Ribbon"

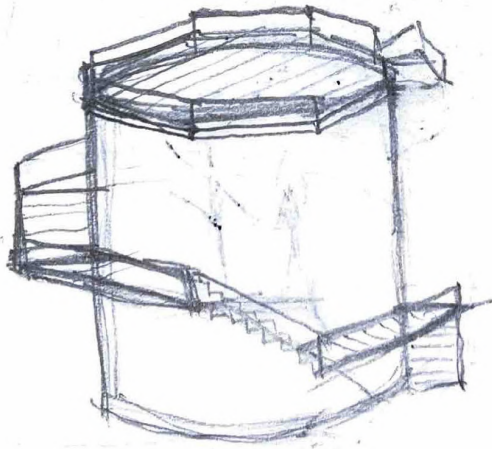


Ribbon Ramp



Octagon Stairs
plan view

"Octagon"



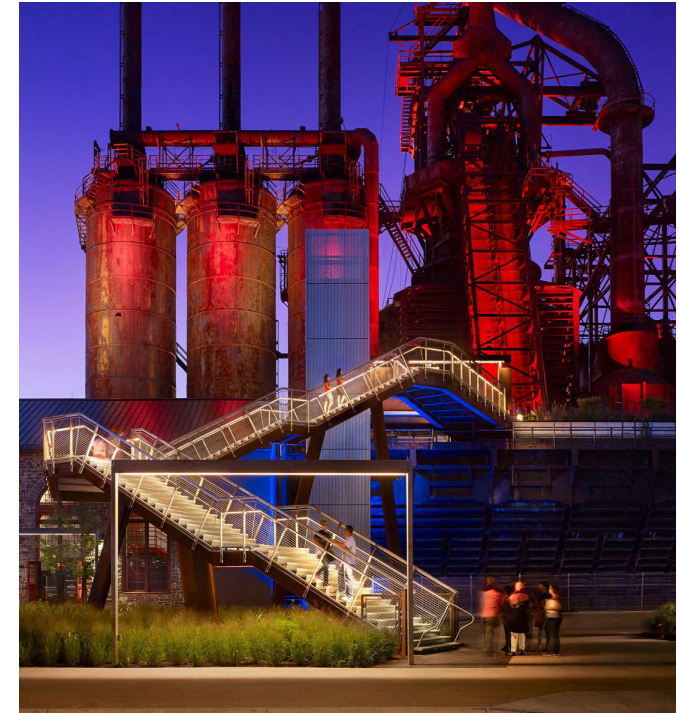
Octagon Stairs



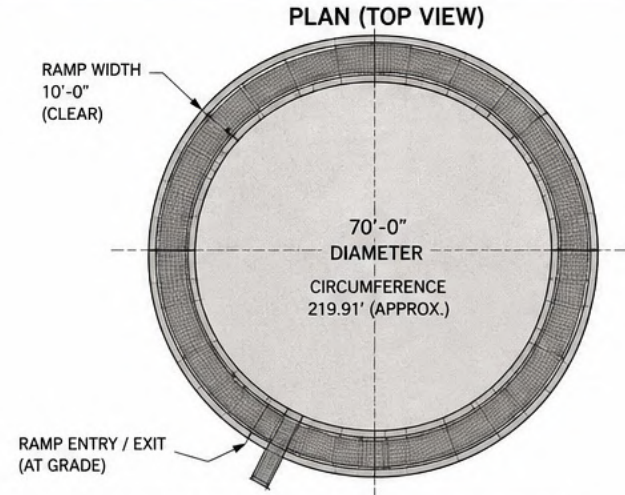
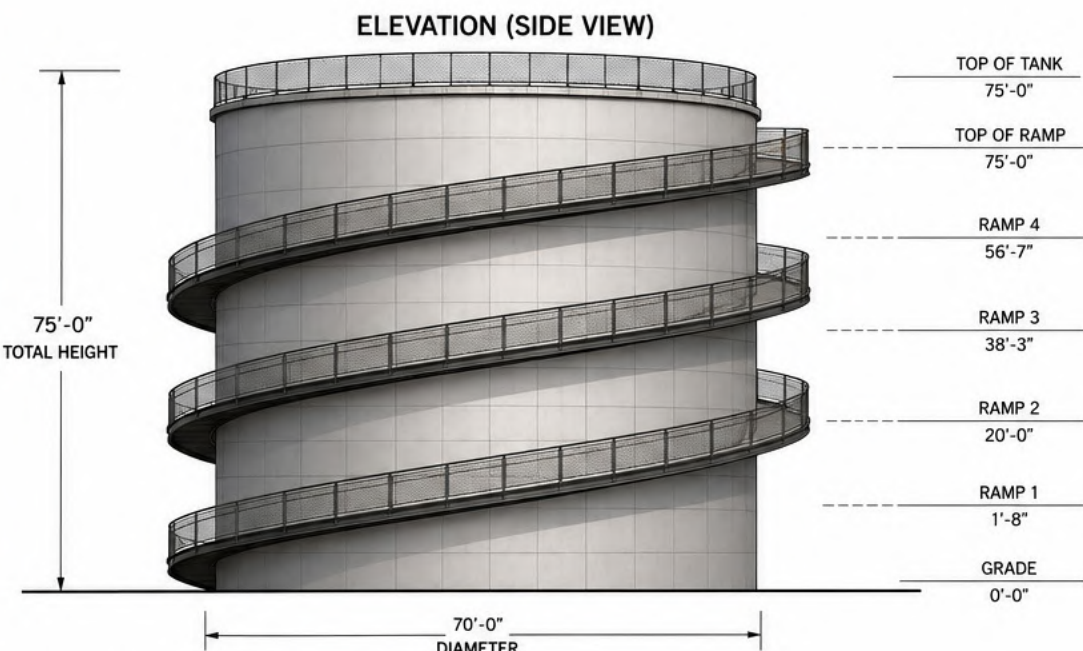
Tank current condition.

INSPIRATION

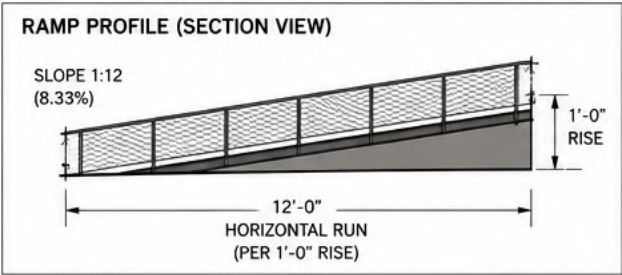
- **Pedestrian causeway** built onto former railway trestle at Bethlehem Steel in Bethlehem, PA



Hoover-Mason Trestle, former Bethlehem Steel Plant, PA (Photo: <https://www.wrtedesign.com/projects/hoover-mason-trestle>)

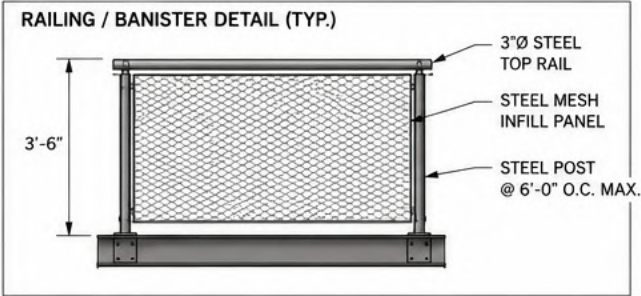


REVOLUTION HEIGHTS		
REVOLUTION	ELEVATION (TOP OF RAMP)	RISE FROM GRADE
RAMP 1	1'-8"	1'-8"
RAMP 2	20'-0"	18'-4"
RAMP 3	38'-3"	36'-7"
RAMP 4	56'-7"	55'-0"
TOP OF RAMP	75'-0"	75'-0"



- NOTES
- Ramp width is 10'-0" clear (adjustable).
 - Metal mesh rails with steel posts and handrail, similar to reference image.
 - Slope is 1:12 (8.33%) which complies with ADA maximum running slope.
 - Circumference of tank is 219.91 feet (approx.).
 - Rise per full revolution (1:12): 18.33 feet (approx.).
 - Total ramp length along walking surface is approximately 899 linear feet (approx.).
 - Number of revolutions required to reach top: approximately 4.09 turns.

RAMP SUMMARY	
Tank Diameter	70'-0"
Tank Circumference	219.91 linear feet (approx.)
Tank Height (Top of Tank)	75'-0"
Ramp Slope	1:12 (8.33%)
Ramp Width (clear)	10'-0"
Horizontal Distance per 1'-0" Rise	12'-0"
Rise per Full Revolution	18.33 feet (approx.)
Total Vertical Rise	75'-0"
Total Ramp Length (along slope)	Approx. 899 linear feet
Number of 360° Revolutions	Approx. 4.09 turns



Render: ChatGPT

INSPIRATION

NATIVE CALIFORNIA DUNE RESTORATION



LAX Dunes. Photo: <https://www.dailybreeze.com/>



Photo: <https://www.friendsofthedunes.org/>



Photo: <https://www.santamonica.gov/santa-monica-beach-dunes>

DUNE TRAILS & BEACH ACCESS



Photo: <https://www.resilientcoastlines.com/projects>



Photo: <https://www.dailybreeze.com/>

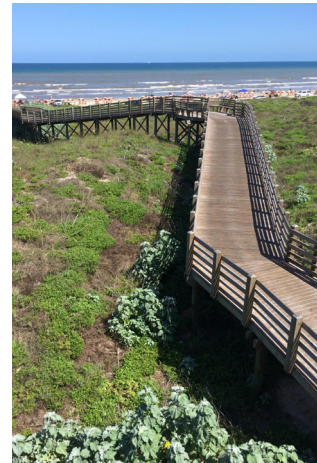


Photo: www.cinnamonshore.com

NATIVE CHAPARRAL + CONCRETE ELEMENTS



Photo: <https://www.pagethink.com/projects/battery-bluff-park>

ADVENTURE PLAY



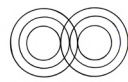
Photo: www.landezine.com/yannan-avenue-highway-adaptation-wallaceliu/



Photo: www.dezeen.com

WAVE WALL





DECOMPOSED GRANITE



Photo: <https://www.southwestboulder.com/products/desert-gold-decomposed-granite-fines>

EXPOSED AGGREGATE CONCRETE



Photo: <https://land8.com/permeable-paving-the-essential-guide/>

PERMEABLE CONCRETE



Photo: <https://seamlessoverlays.com/blog/permeable-paving-vs-permeable-concrete>

PERMEABLE PAVERS



Photo: <https://encorecoatings.com/resurfacing-exposed-aggregate-pool-deck>

BOARDWALK



Photo: <https://californiawanderland.com/boardwalks-in-california/>

PERGOLA



Photo: <https://www.baldwinpergolas.com/commercial/curved.php>

BIKE RACKS



Photo: <https://es.pinterest.com/pin/443675000764642459/>

PICNIC TABLES



Photo: <https://www.sandersonconcrete.ca/all-picnic-tables>

BENCHES



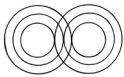
Photo: <https://www.externalworkindex.co.uk/entry/128661/Woodscape/Lancaster-hardwood-timber-seat/>

SITE PLAN: ARENA PARK

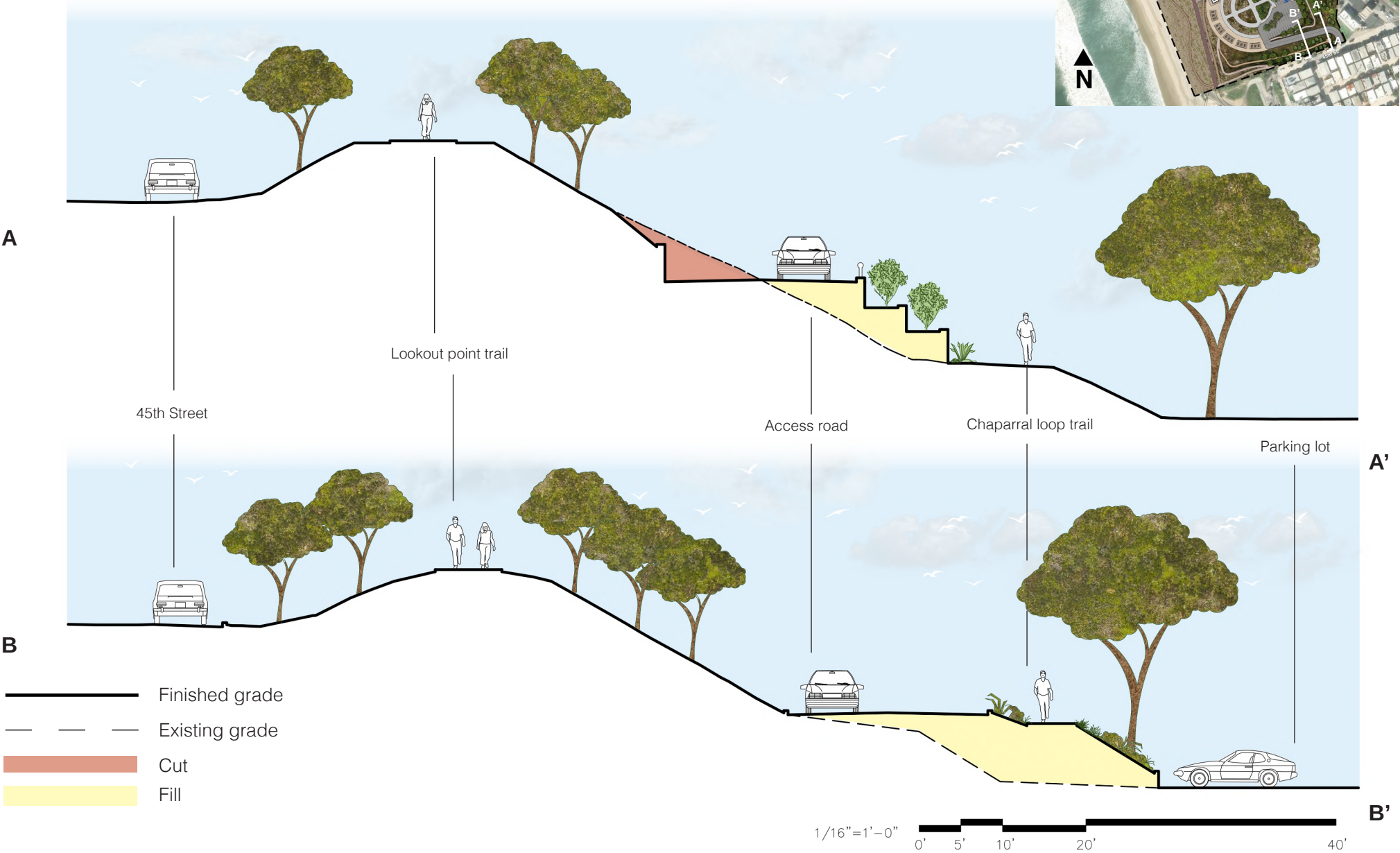



ARENA PARK: VEHICULAR ACCESS GRADING

Sections



- Stepped retaining walls allow for safe vehicular access at a maximum grade of 12%.
- Native shrubs blend walls into surrounding hillsides.



ARENA PARK: TANK TOWER & EL PORTO ARENA

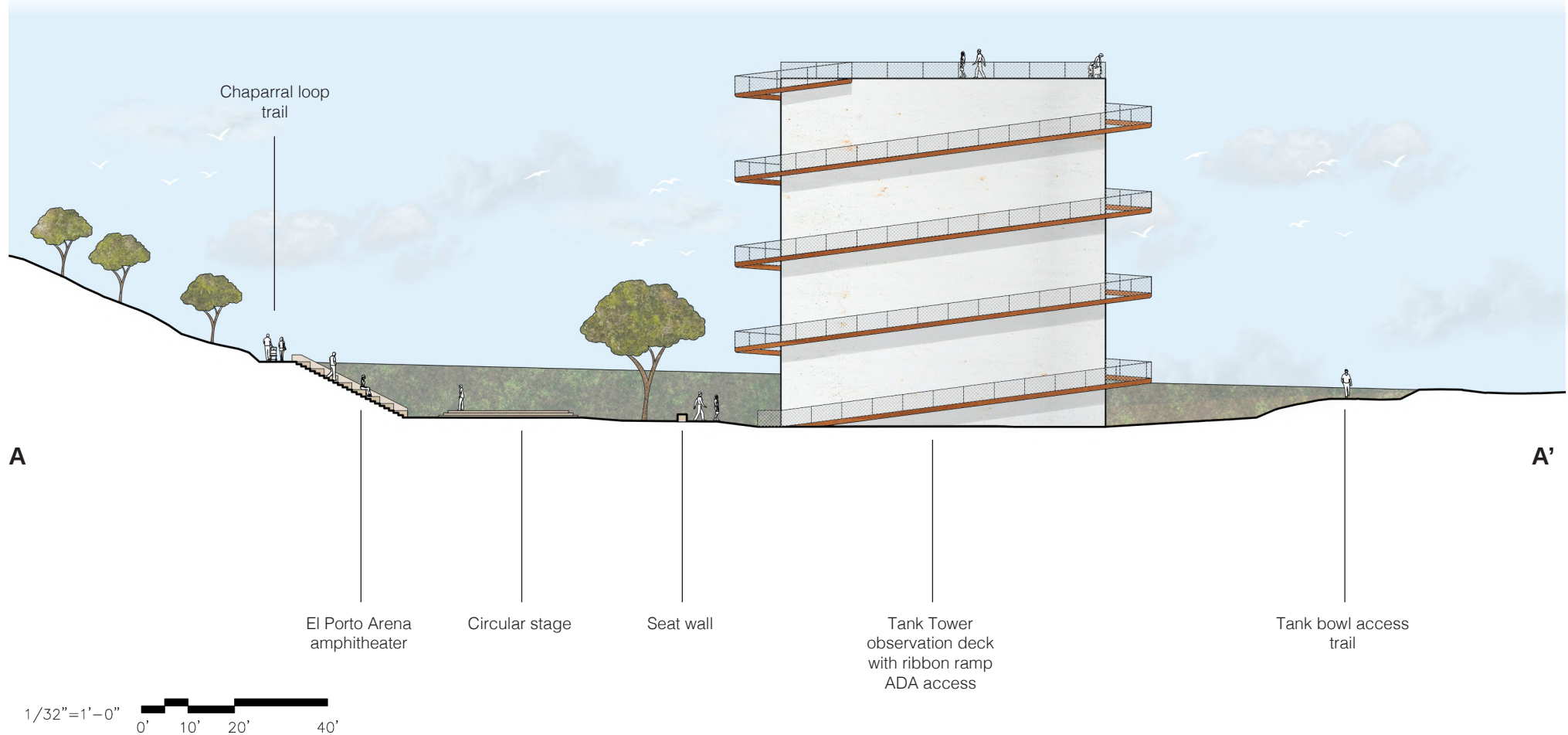
Section Elevation



- Tiered amphitheater utilizes existing fuel tank containment bowl topography.
- Existing circulation paths are used for tank bowl access and chaparral loop trail.
- Tank Tower ribbon ramp at continuous 8% grade.
- Native coastal sage scrub vegetation replaces paved banks.

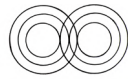


Tank current condition.



ARENA PARK: EL PORTO ARENA

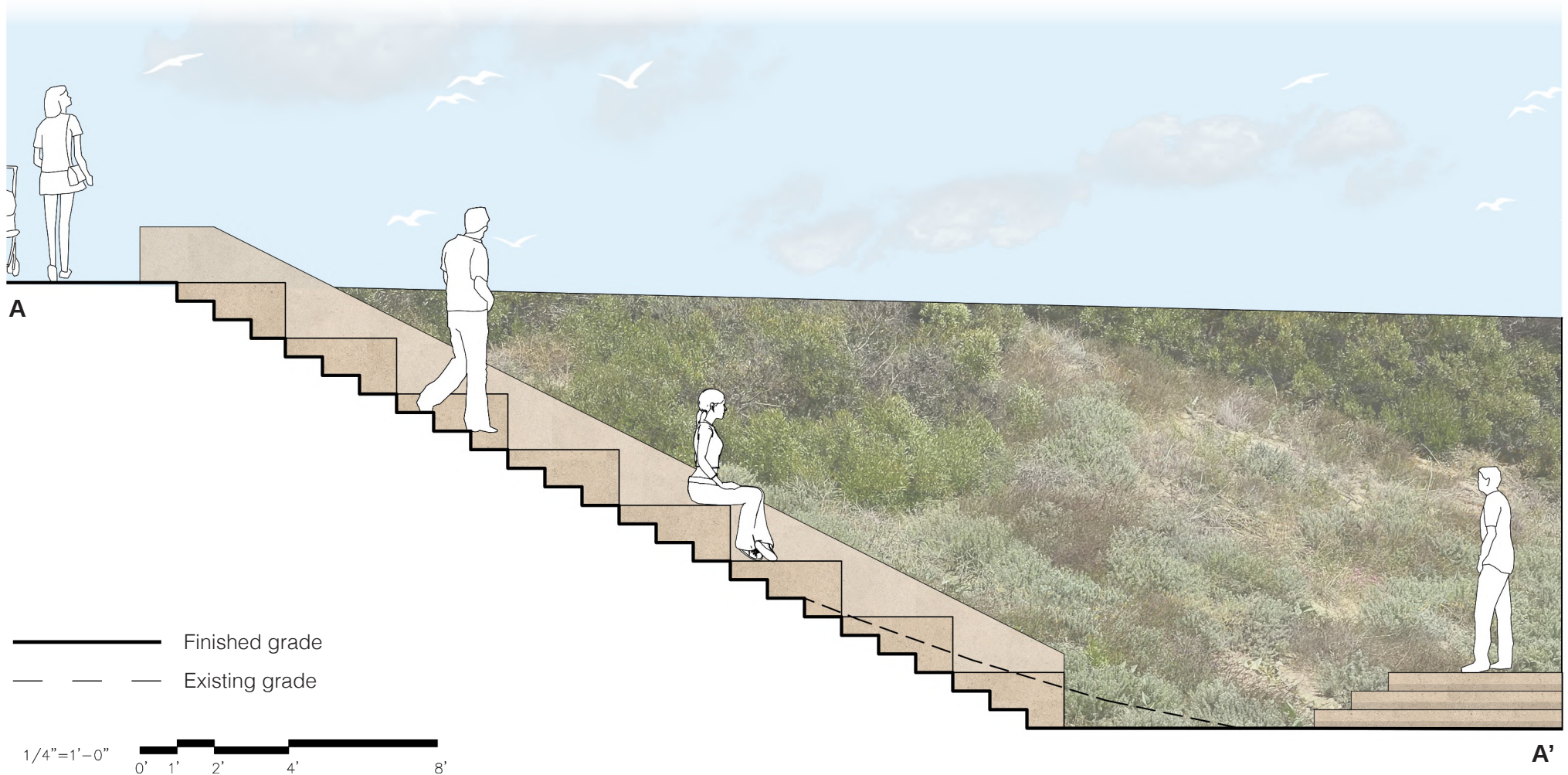
Section Elevation



- Existing slope closely matches finished amphitheater form.
- Fuel tank backdrop and tank bowl grading create remarkable visual and acoustic conditions for performance space.



Amphitheater site current condition.



ARENA PARK: ADVENTURE PLAYGROUND

- 1. Slides
- 2. Climbing wall
- 3. Chaparral loop
- 4. Transit access



ARENA PARK: WATERFRONT

1. Fore dune boardwalk trail
2. Back dune boardwalk trail
3. Bike path
4. Bike hub
5. Surf-skate bowl
6. Restrooms
7. Picnic area

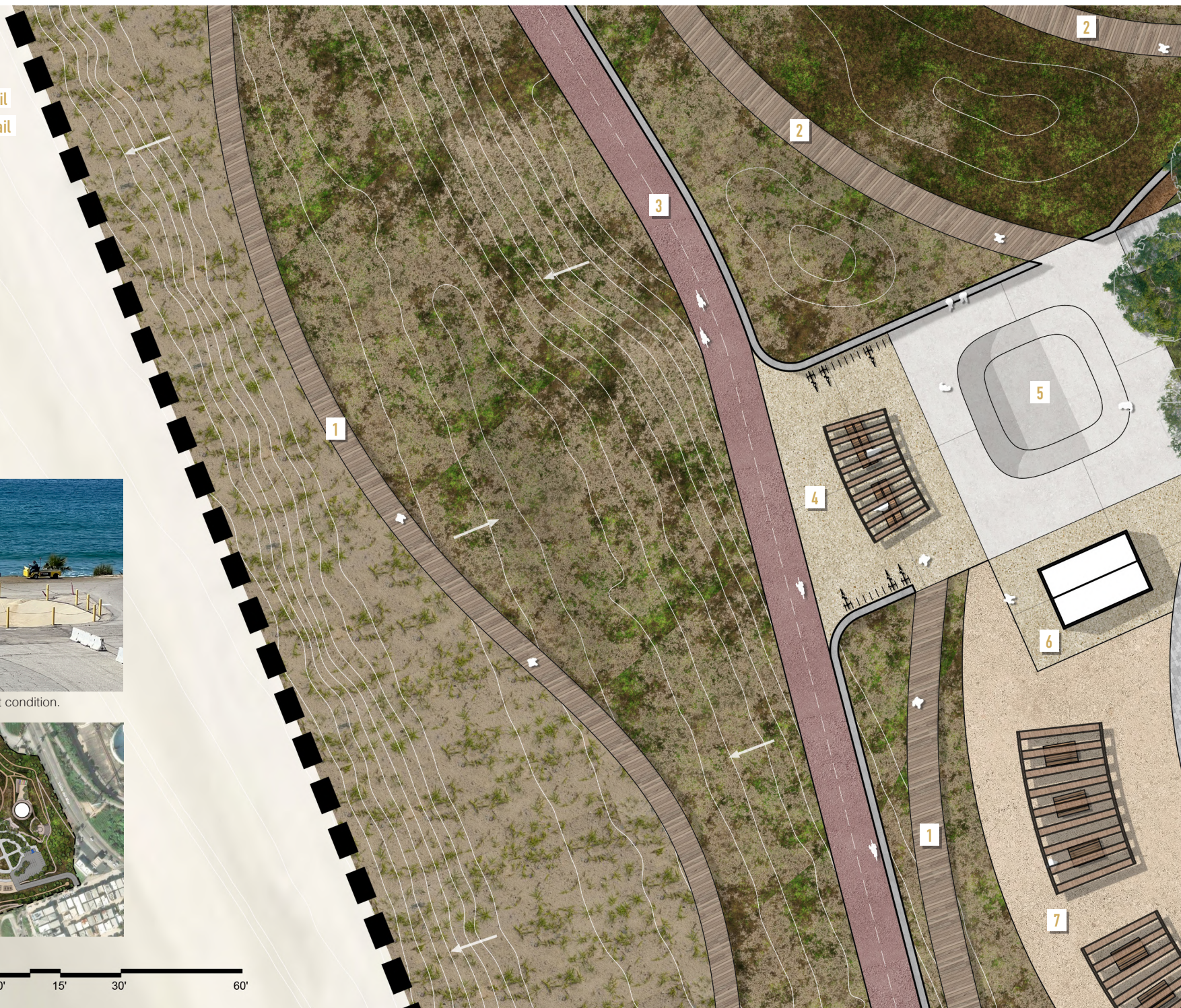


Surf-skate bowl site current condition.



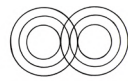
1/32" = 1' - 0"

0' 15' 30' 60'

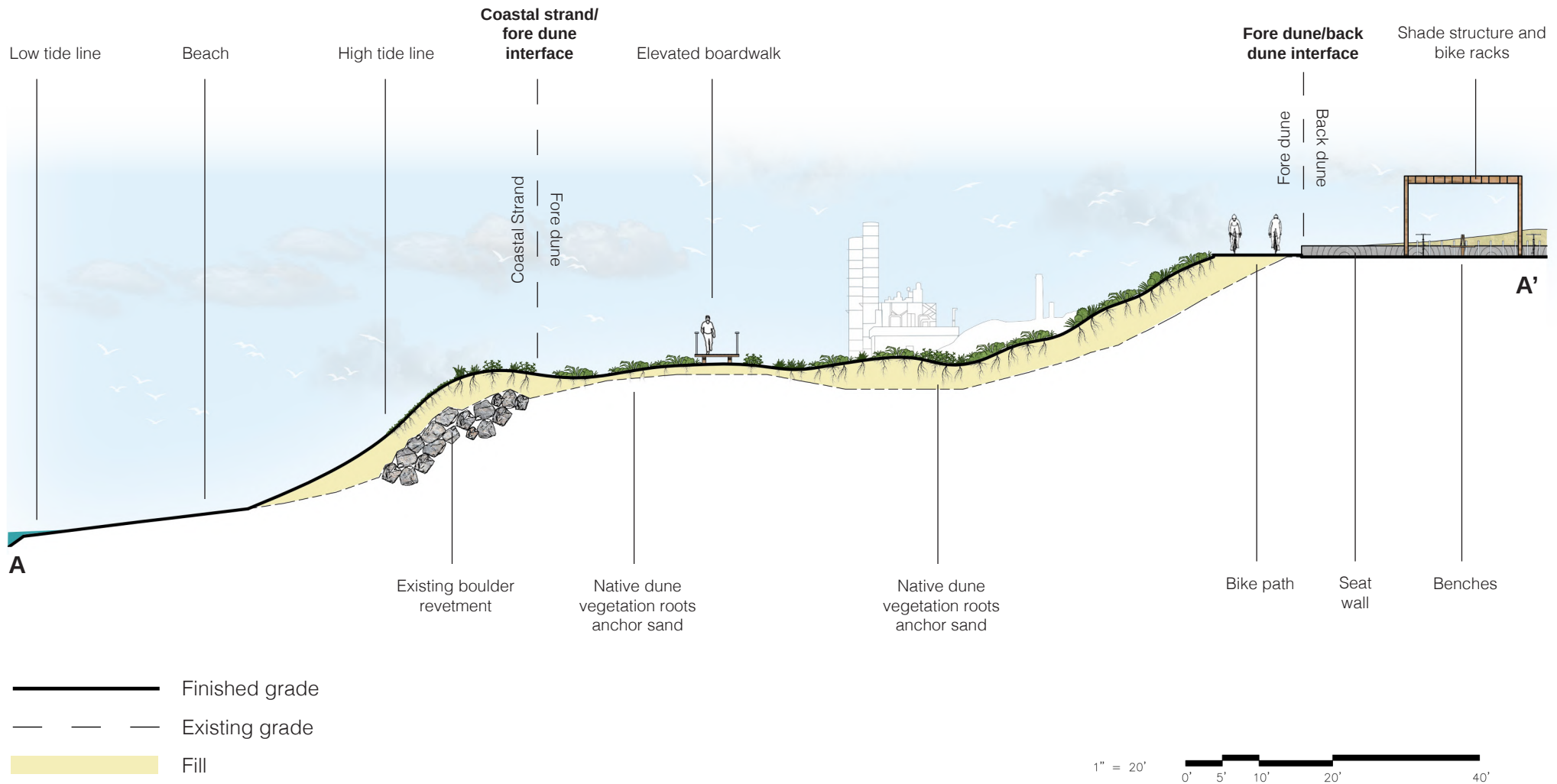


ARENA PARK: COASTAL STRAND & FORE DUNE

Section Elevation

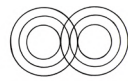


- Imported sand placed on top of existing sandy soils to create new fore dune and coastal strand features.
- Reduced grade helps mitigate erosion and mimics original dune conditions.
- Native dune vegetation helps anchor sand in place.
- Existing boulder revetment serves as base for newly constructed coastal strand terrain.
- If native vegetation, reduced grade and revetment foundation fail to prevent erosion, revetment will continue to protect site from high tides.

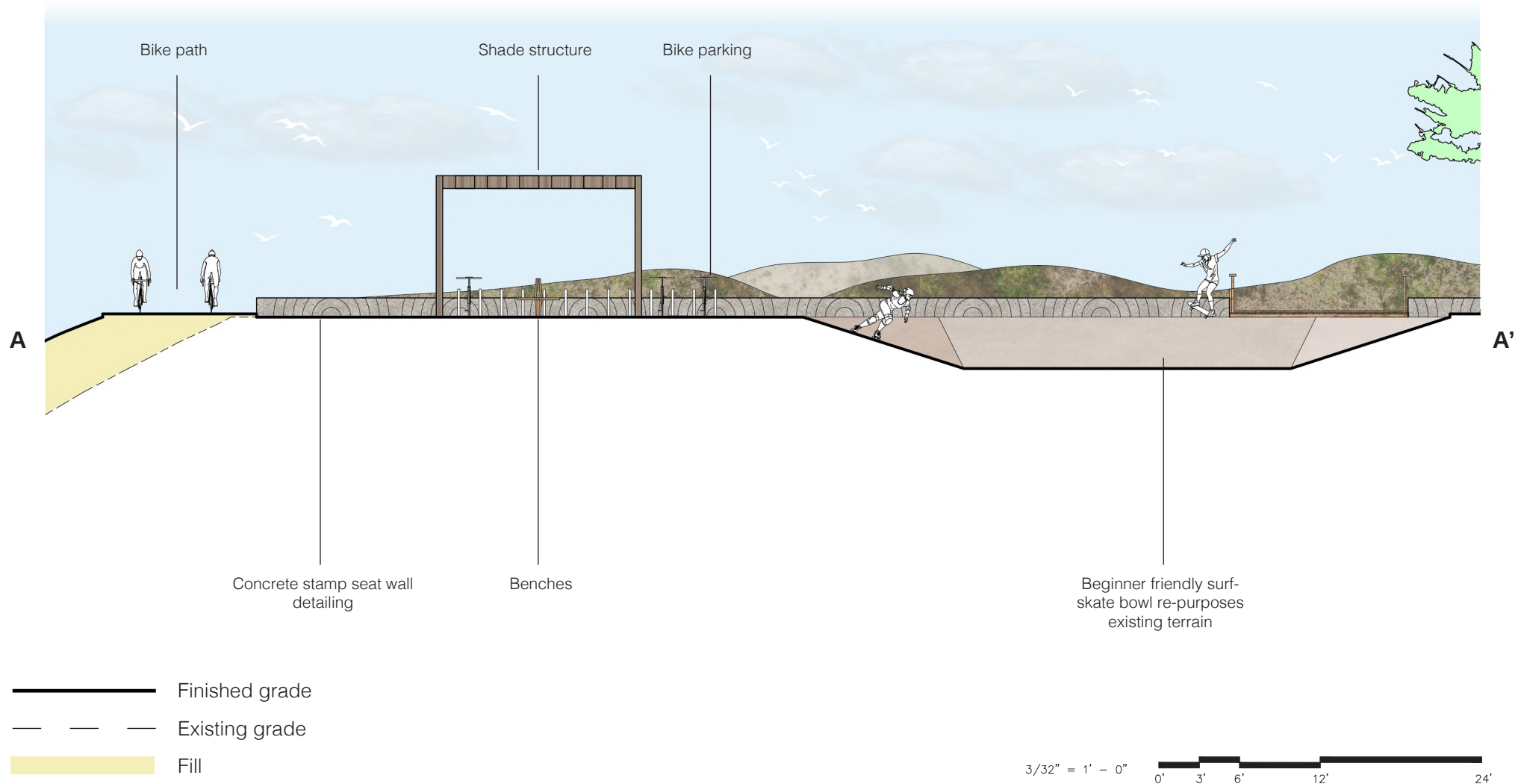


ARENA PARK: BIKE HUB & SURF-SKATE BOWL

Section Elevation



- Bike hub rest area includes shade, seating, parking, water and restrooms.
- Bike trail users can enjoy the views as they rest, or park their bikes and explore the park's trail network on foot.
- Surf-skate bowl re-adapts existing terrain for beginner friendly riding, providing a place for community gathering as well events put on by different stakeholders.



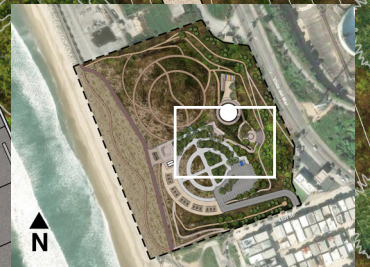
ARENA PARK: MAIN PLAZA



1. Back dune boardwalk
2. Dune gateway
3. Wave wall
4. Roller play feature
5. Tank tower deck
6. Amphitheater
7. Park with turf
8. Back dune area
9. Chaparral loop
10. Transit access

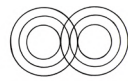


1/32" = 1' - 0"
0' 15' 30' 60'

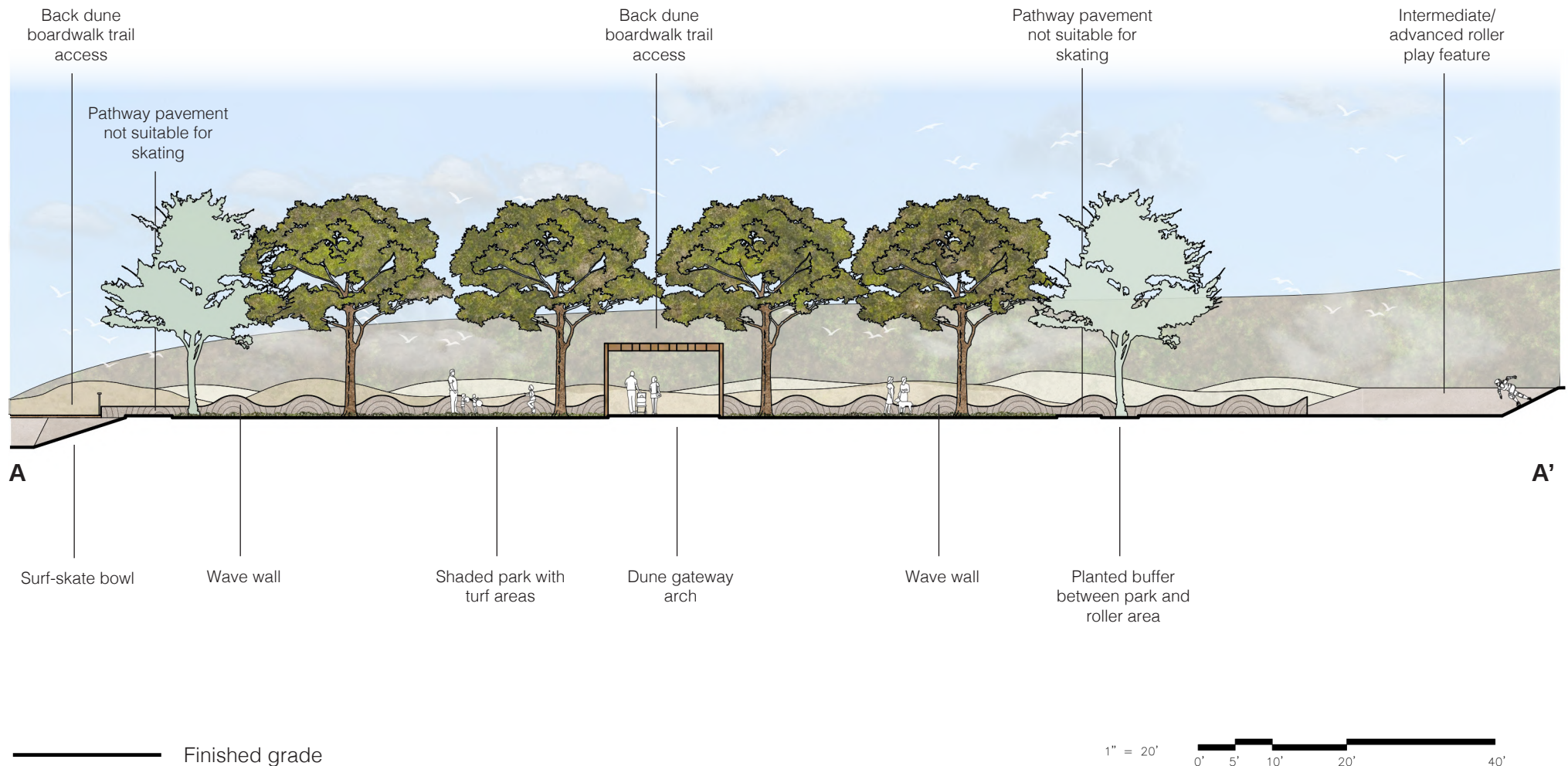


ARENA PARK: WAVE WALL

Section Elevation

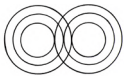


- Wave wall serves as buffer between main natural dune and landscaped park areas, also providing opportunities for open-ended play.
- Roller play features utilize existing pavement and topography.
- Thoughtful buffers using plant material, pavement and structures create separation between active and passive use areas.



ARENA PARK: WAVE WALL & DUNE GATEWAY

Perspective



Dune gateway arch

Shaded park with turf areas

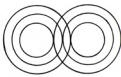
Pathway pavement not suitable for skating

Wave wall

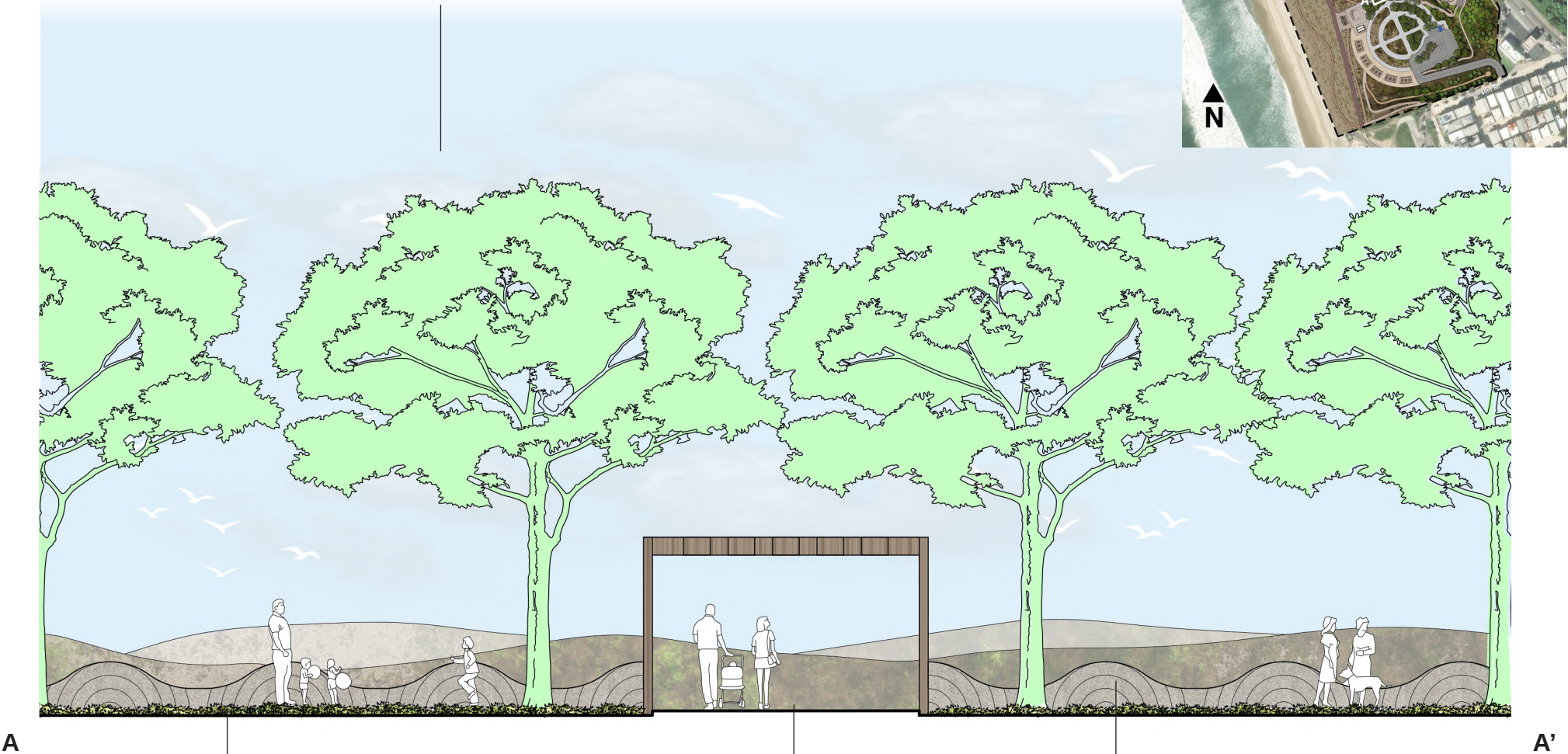


ARENA PARK: WAVE WALL & DUNE GATEWAY

Section Elevation



Native Western Sycamore
and Catalina Ironwood
trees



Shaded turf areas for
relaxation and play

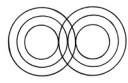
Dune gateway arch

Concrete stamp wave
wall detailing

Finished grade

1/8" = 1' - 0"





Dune gateway arch



Pathway pavement
not suitable for
skating

Wave wall





Dune gateway arch

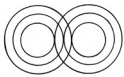


Wave wall

Pathway pavement
not suitable for
skating

Boardwalk dune
trails





Back dune
vegetation



Fore dune
vegetation

Wave wall



Back dune
vegetation

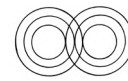
Coastal sage
scrub

Fore dune
vegetation

Wave wall



CONCLUSIONS: FROM OUTDATED INDUSTRIAL FACILITY TO VIBRANT NATURAL & SOCIAL SPACE



RESTORE NATIVE HABITAT

- Extensive native dune habitat re-constructed, including coastal strand, fore dune, back dune & chaparral segments
- De-paved over 4 acres of land (half of the site)
- Replaced invasive plants with native plant communities, including natural spaces & parkland



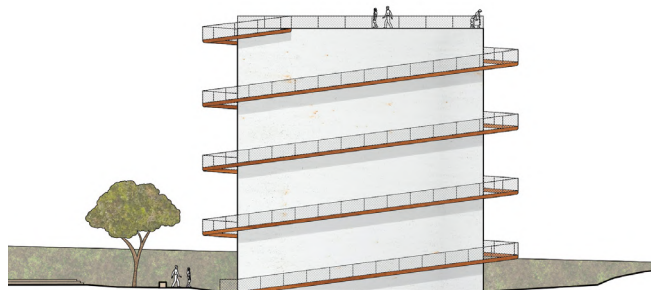
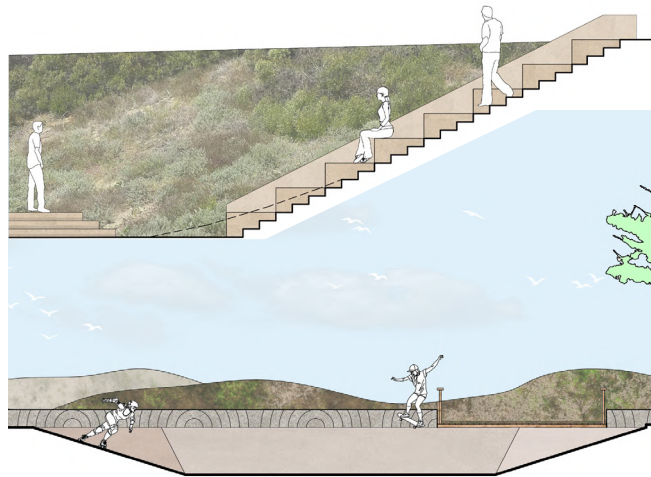
Layers of dune habitat implemented over former bike path and revetment.



Extensive new dune areas for all to enjoy.

EXPAND RECREATIONAL OPPORTUNITIES

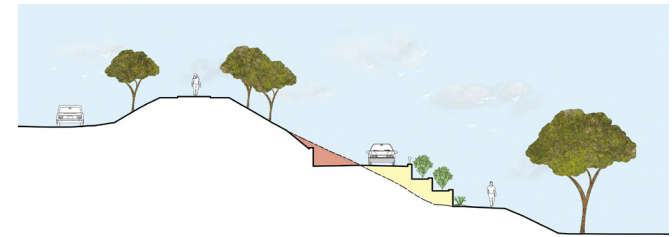
- Created spaces for active & passive recreation for all ages & abilities, including adaptive re-use & nature play
- New cultural & social event facilities
- Regional attractions include unique nature trails & re-imagined industrial structures



Adaptive re-use passive, active and cultural recreation facilities.

CONNECT COMMUNITY TO THE SITE

- New vehicular entry & parking for expanded access from SoCal community
- Direct connection to Strand boardwalk
- New connection to bus stop on Vista del Mar
- Improvements greatly expand access for all



New vehicular, pedestrian and transit access points.



THANK YOU!



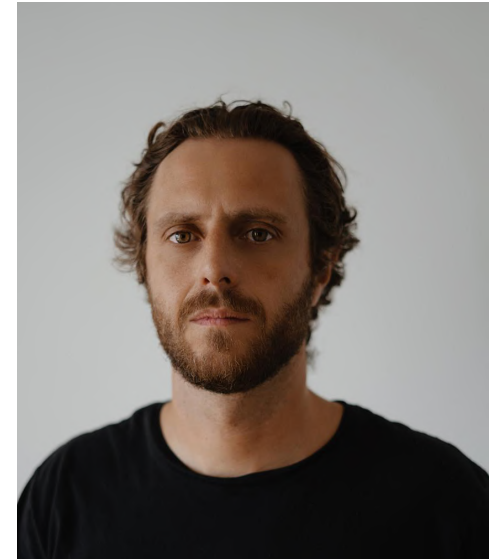
ABOUT THE AUTHOR: JOSEP FERRER MIRANDA

A life-long passion for **writing, music and visual media** led Josep to a career in **marketing and communications**. He got his start in the wine industry, where over the course of 8 years some of the best in the business showed him the power of **storytelling and human connection**.

His desire to make a positive impact and explore new challenges eventually led him to Greywater Corps, a Los Angeles-based design/build firm dedicated to **reclaimed greywater and rainwater irrigation systems**.

As **Communications Manager and Marketing Director at Greywater Corps**, he was able to raise the profile of the company, developing a large, dedicated following by telling the story of its unique mission. Through this work he found a vast community of people that connected deeply with the idea of **making the world a better place through direct action**.

He also had the privilege of working with many forward-thinking designers, environmental advocates, and clients – all of whom inspired him to pursue **landscape architecture as a means of amplifying the impact of environmental work**. While one intervention can make a difference, the effects are multiplied when we design systems that work together for the common goals of **sustainability, beauty, and joy**.



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UCLA EXTENSION: LANDSCAPE ARCHITECTURE CERTIFICATE PROGRAM

Course Sequence — Fall 2023 through Summer 2026

Fall 2023

ARCH X 472 — Introduction to the Landscape Design Professions (4 units)
ARCH X 472.4D — Design Graphics 1: Drafting and Drawing of the Built Environment (4 units)

Winter 2024

ARCH X 471.1A — Landscape Design 1: Site Design Basics (4 units)
ARCH X 472.4E — Design Graphics 2: Communication for Site Analysis, Conceptual and Site Design (4 units)

Spring 2024

ARCH X 471.1B — Landscape Design 2: Site Design (4 units)
ARCH X 472.4F — Design Graphics 3: Digital Rendering and Presentation Drawings (4 units)

Summer 2024

ARCH X 471.2 — Landscape Design 3: Advanced Site Design (5 units)
ARCH X 493.992 — AutoCAD 1 (4 units)
ARCH X 472.6A — History of the Designed Landscape (4 units)
Portfolio Review (0 units)

Fall 2024

ARCH X 472.12A — Grading and Drainage (4 units)
ARCH X 472.8A — Plant Studies I: Trees (4 units)

Winter 2025

ARCH X 472.9 — Landscape Design 4: Environmental Analysis and Planning (4 units)
ARCH X 472.8B — Plant Studies II: Shrubs (4 units)

Spring 2025

ARCH X 472.5 — Landscape Design 5: Planting Design (4 units)
ARCH X 493.6 — AutoCAD 2 (4 units)

Summer 2025

ARCH X 472.19 — Landscape Design 6: Concept Development (4 units)
ARCH X 472.12B — Irrigation/Water Conservation (4 units)

Fall 2025

ARCH X 472.14A — Landscape Construction Methods and Materials (4 units)
ARCH X 472.14B — Landscape Construction Drawing 1 (4 units)
ARCH X 493.9 — Professional Practices in Landscape Architecture (2 units)

Winter 2026

ARCH X 472.14C — Landscape Construction Drawing 2 (4 units)
ARCH X 472.23 — Human Factors in Landscape Architecture (4 units)
Portfolio Review (0 units)

Spring 2026

ARCH X 472.8 — Landscape Design 7: Advanced Design Studio (5 units)
ARCH X 472.15C — Capstone Project Seminar (3 units)

Summer 2026

ARCH X 472.15D — Capstone Project Studio (10 units)

Electives

ARCH X 493.773 — Introduction to SketchUp for Landscape Architects (3 units)
ARCH X 496.21 — Beginning Stormwater Management (4 units)

*112/111 required units completed