



Downtown Houston

15

Physical Connections to Surroundings

700+

New Trees

3

Green Energy Opportunities

Willow Waterhole

10

Structures Reused

3+

Performing Arts Locations

23.6

Million Gallons of Stormwater Detained

7

Event Locations

5

Habitat Types

20+

User Groups Served

7

Buildings Reused





Surrounded on three sides by the Willow Waterhole Greenway detention and natural recreation area, this 28.8-acre former Shell Oil testing site is situated in the vibrant residential context of the Brays Oaks neighborhood. This crucial site was not used for exploration, leaving clean land to be transformed into a natural, educational, cultural and recreational destination for all of Houston. Relics of the site's history will be retained and adapted to tell the story of the rise of Houston as the nation's Energy Capital and its transformation into a sustainable city of renewable energy, with equitable access to nature and culture and cutting - edge, resilient solutions to flooding in adjacent neighborhoods.

## Existing Site and Context



**Elevated Offshore Platform:**  
This elevated structure was installed and houses electrical and offshore style buildings with control equipment that operated down hole heater testing. This is a strong platform and provides elevated views of the site.



**Horizontal Pipe Test Structures:**  
The long narrow covered structures were used to test electrical heaters and pipes. This covered structure connects the site on a north-south axis.



**Shop Building:**  
Large shop building was built in early 2000s and used as a workshop and lab. It is the newest building on site and has a large indoor space and high ceiling making it flexible for new uses.



**Old Main Garage and Office:**  
The old main shop/garage building with connected wash bay was built in the late 60s. It opens onto a large paved outdoor space and is adjacent to the Gantry, creating a nice outdoor room feeling.



**Gantry Crane:**  
The gantry crane is a 120' tall structure that had a 30 ton and 5 ton bridge crane located over a test pool that is about 40x 40x 20 feet deep, there was 30' cased test well below it that has been cemented in. This is an iconic structure that can be seen from across the Willow Waterhole.



**Tank Farm and Retention Levee:**  
This tank farm was part of the Process Upgrading Facility. It has a lot of interesting industrial elements and the metal tags making musical chiming sounds in the wind.



**Process Upgrading Facility:**  
This test process upgrading facility has two newer metallic buildings. It includes a foam suppression system and ventilated building that was used as a shop area. The chimney stack is iconic structures that can be seen from across the Willow Waterhole.



**Caisson Pump Test Facility:**  
This is the Caisson Pump Test Facility that was used to test offshore Deep-water pumps. The tank farm on the right was used to pump oil into the Test Facility.



**Tank Farm:**  
The tank farm was used to pump oil into the Test Facility to the left. The tank farm was built and the old tanks removed around 2016. There is piping underground that feeds the oil to the unit from the tank farm and then it is pumped back after the test is complete.



**Sandblasting Facility:**  
This was the sandblasting area that supported the maintenance of Shell America seismic ship towables. It was converted into a warehouse for large freezers that stored core samples for lab testing. This is a large shaded outdoor space that would be great for many activities.



**Administration Building:**  
The new administration building and warehouse designed by Cowell & Neuhaus with David Haid and built in 1961. The steel framed building was designed in the minimalist modern style of Mies van der Rohe. It is listed in the Houston Architectural Guide book as a building of historic significance.



**Brown Brick Warehouse:**  
Also designed by Cowell & Neuhaus with David Haid. It was mainly used this as warehouse space and storage. This is a great s



**Electrical Platform:**  
The elevated electrical structure houses a control room with a lot of electrical switch-gears and controls. This is a strong platform and provides elevated views of the site.



**Molten Salt Test Loop:**  
This was a circulating molten salt test loop. This is an iconic structure that can be seen from across the Willow Waterhole. The upper platform provides great views of the site and downtown Houston.



**Oil Derrick:**  
This derrick was used for vertical testing. Two cranes were used to work pipe with derrick during testing. A 2000 ft. well under derrick was used for testing, drilling, and running cables. This is an iconic structure that can be seen from across the Willow Waterhole.



**Horizontal Pipe Test Structures:**  
The long narrow covered structures were used to test electrical heaters and pipes, and pipes. This covered structure connects the site on a north-south axis, along the eastern border of the site.



- **Buildings to keep:** These buildings appear to be in good condition, have historical significance, visual appeal and usable/ functional spaces.
- **Structures to keep:** These structures appear to be in good condition, have historical significance and visual appeal.
- **Buildings and Structures to remove:** These structures are either too small to be reused, in a deteriorated condition or may be in a location that needs to be cleared, i.e. they create physical or visual barriers within the site.

## Existing Buildings and Structures



### COMMUNITY

**MAXIMIZE PARK POPULARITY SO THAT THERE IS LONG-TERM VITALITY AND CARE FOR THE PARK.**



### ECOLOGY

**ENSURE LONG-TERM PROJECT SUSTAINABILITY SO THAT IT IS A BELOVED TREASURE FOR GENERATIONS TO COME.**



### INDUSTRY

**INTEGRATE OLD AND NEW SO THIS COMMUNITY ASSET IS UNIQUELY OF THIS PLACE.**



### CULTURE

**PROVIDE EQUITABLE ACCESS SO THAT ALL CAN EXPERIENCE THE SPACE AND BE PART OF ITS VITALITY.**

Houston is the most diverse city in the USA. Are there traditions, activities, and events from your community that we can include in this site?

**AFFORDABLE RENTAL VENUES/SPACE**

**DOG PARK**

**SUMMER CAMPS**

**SKATE PARK**

**CULTURAL EVENTS (FOOD, HOLIDAYS, GATHERING)**

**BASKETBALL**

Building resilient, lasting places means creating habitat where creatures can thrive. Being in nature also makes people feel emotionally and physically. What parts of nature do you want to experience here?

**A VARIETY OF ECOSYSTEMS**

**OBSERVATION SPACES IN SHADE**

**VARIETY OF WATER SPACES FOR WILDLIFE**

**SAFE WILDLIFE MIGRATION**

**CONNECTIONS TO SURROUNDING TRAILS**

**TREES**

The industrial artifacts and buildings are one a kind! How could you imagine transforming these into places for playing, exploring or relaxing?

**OIL & GAS MUSEUM**

**USE OF PIPES IN WATER PLAY SPACES**

**MAKER SPACES**

**INVOLVE STUDENTS**

**RE-USE STRUCTURES**

Music, Arts, and Culture open your minds to new ideas and bring people together. What kinds of arts would you like to see here?

**PERFORMANCE SPACE OF DIFFERENT SIZES**

**FESTIVALS**

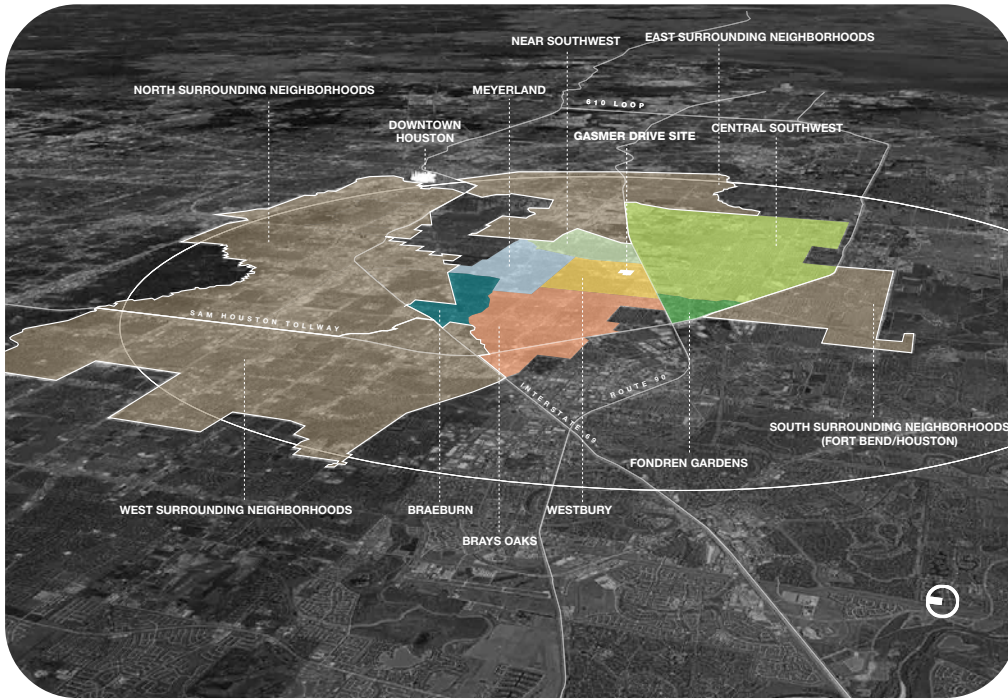
**MUSEUM & SCULPTURE GARDEN**

**VISITOR CENTER**

**MARKETS & FOOD**

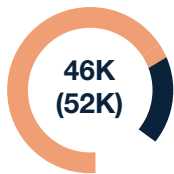
## Masterplan Goals and Programming



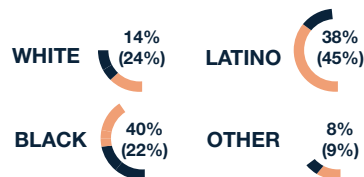


## BRAYS OAKS

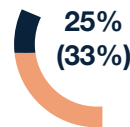
**MEDIAN INCOME  
(VS. HOUSTON OVERALL)**



**DIVERSITY  
(VS. HOUSTON OVERALL)**



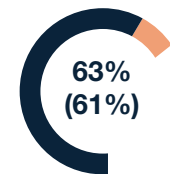
**BACHELOR'S DEGREE  
(VS. HOUSTON OVERALL)**



**2000-2019 POPULATION GROWTH  
(VS. HOUSTON OVERALL)**



**% FAMILY HOUSEHOLDS  
(VS. HOUSTON OVERALL)**



## COMMUNITY

The site is located in an area of high socioeconomic, racial, and ethnic diversity, creating a space in which people of all backgrounds come together in a variety of ways within existing educational, recreational, religious and cultural entities. Extensive community engagement during the planning process identified many needs and opportunities to provide crucial programming within the new park, including play, education, music, theater, maker space, community gathering, and nature.





**POND/WETLAND/RAIN GARDEN**  
3.2 Acres, 11% of site



**OAK SAVANNAH**  
4.7 Acres, 16% of site



**PINEY WOODS**  
2.4 Acres, 8% of site

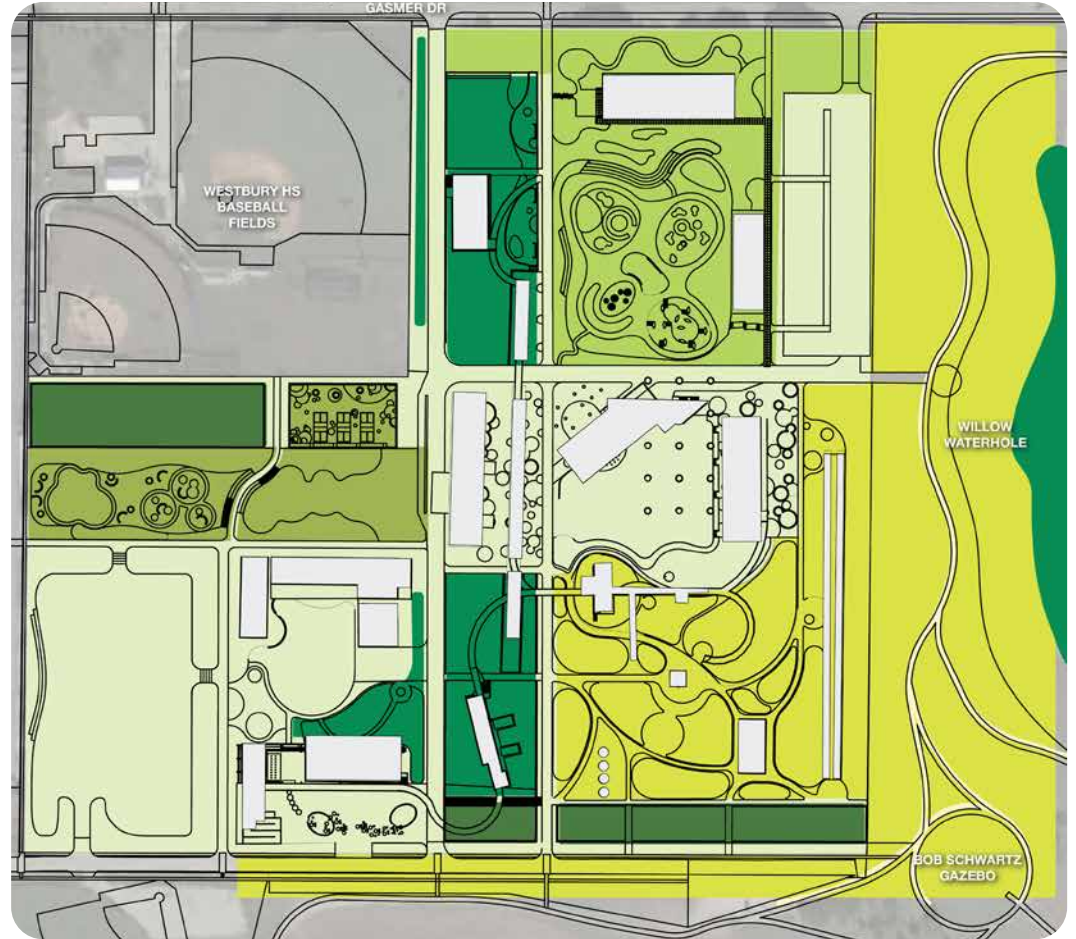


**BIG THICKET**  
1.6 Acres, 5% of site



**PRAIRIE**  
4.4 Acres, 15% of site

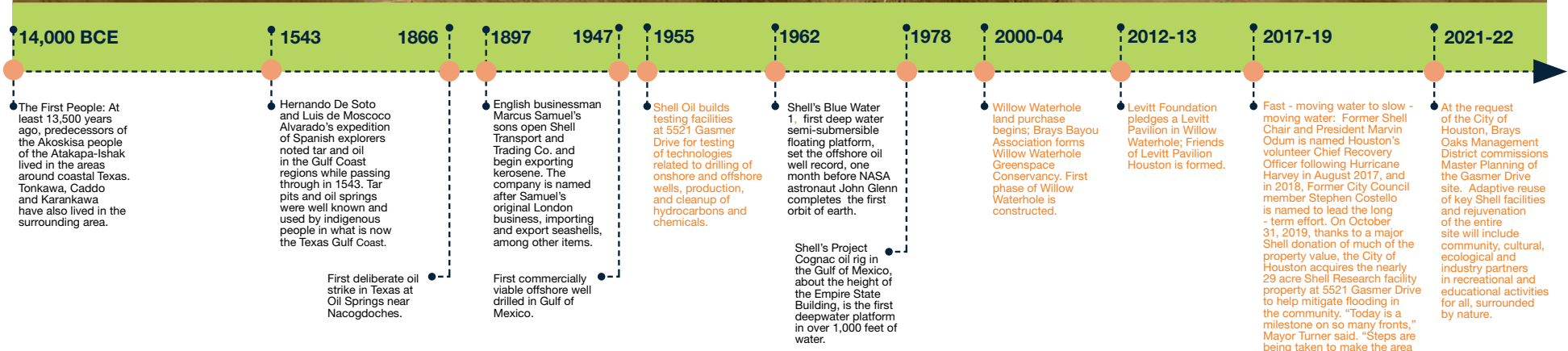
**700+**  
New Trees  
Planted



# ECOLOGY

Through the introduction of native plantings belonging to regional ecosystems, the project will provide much needed biological diversity to the neighborhood while reducing required park maintenance as plantings adapt to their environment. This approach also provides wildlife habitat and neighborhood resiliency, storing and cleaning water during flood events.





# INDUSTRY

Today, the site holds important relics of its past use as a testing site for Shell. Tomorrow, these pipes, towers, derricks and test platforms will demonstrate Houston's transformation from the carbon Energy Capital of the World into a sustainable, resilient city of the future.



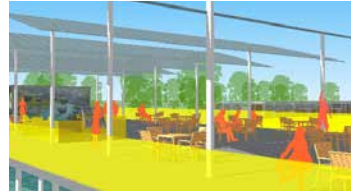
EVENT CENTER



THEATER PLAZA



PLATFORM CAFE



LEVITT PAVILION



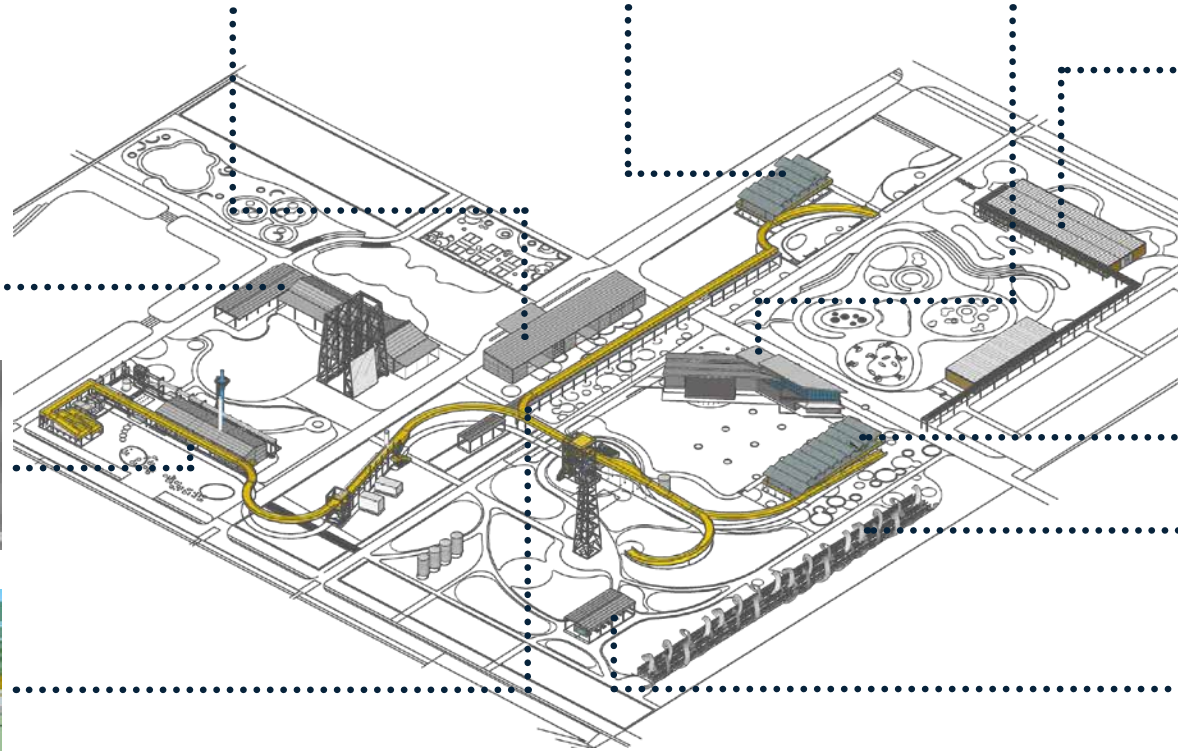
COMMUNITY CENTER



EDUCATION CENTER



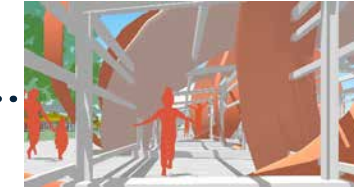
PROMENADE



HOSPITALITY PLATFORM



PUBLIC ART DISPLAY



FIELD STATION



17 Structures Reused



# CULTURE

New recreation, education, event, community, and performance centers will arise from adaptive reuse of existing buildings and structures on site. Interventions are designed to maintain the existing character of the structures while providing exceptional access to cultural opportunities.



## DETENTION

A whole site was purchased to increase detention for the surrounding neighborhood. The site must hold 60 acre-feet of storm water, equivalent to about 30 Olympic swimming pools. If one were to store this volume of water within a four-foot deep trench, 667,000 square feet (15.3 acres) would be required—or about 53% of the Gasmer Drive redevelopment site. An additional 15 acre-feet is needed for the site's planned development. Using the team's understanding of structures to be kept and the site's circulatory grid, ways were found to calculate and spread out the detention into different zones, allowing programmable spaces to fit within the site while meeting detention objectives.



An example of the 75 acre-feet of detention, at 4' deep.

## DUTCH DIKES

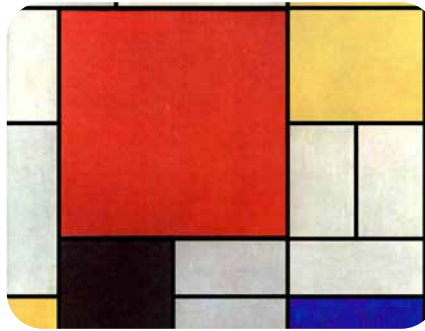
Given the amount of detention needed on site, the team drew inspiration from dikes in The Netherlands. In such dikes, formal alleys are shaded with evenly spaced trees, and the water is sloped away using long canals which keep the space functional even during flood events. The long canals are constructed largely in part to use the land for farming, while allowing the water to exist on site. The process dates back to the Renaissance era.



Beemster Polder, The Netherlands

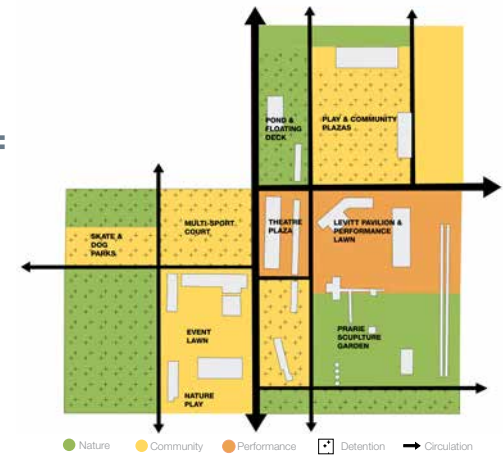
## MONDRIAN

Observing the smaller "rooms" these paths created, the team recalled the work of famed Dutch Modernist artist Piet Mondrian. The existing circulations routes, once lined by trees could create separate "rooms" - each with its unique program and approach to dealing with stormwater. This layout could be easy to construct, and simple to plot on a surface while still maximizing efficiency.



Composition with Large Red Plane, Yellow, Black, Grey and Blue (1921) by Piet Mondrian

## FRAMEWORK



## OIL AND WATER

### EMULSION

The site was built on experimentation of oil extraction fittings and processes. The patterns of circles and bubbles created when oil and water meet, and refuse to mix, offered inspiration for textures in contrast to the formality of Mondrian's inspirations. The process of emulsion offered a connection back to the story of our site while providing interesting textures for the plan and programmable spaces within it.



When oil and water meet, and refuse to mix, interesting patterns of circles and bubbles emerge.

## PIPES

### TOOLS

The construction of these buildings/structures included intricate pipework for carrying out experiments. Pipes, much like streets, transport things from one place to another, and thus the team felt it appropriate to integrate the site's pipework on a larger scale, perhaps by incorporating an interpretative experience that would allow users to make their way around the site in a very intentional way.



Several test structures on site were used to conduct tests related to pipe fittings.

## WILLOW WATERHOLE BAYOU

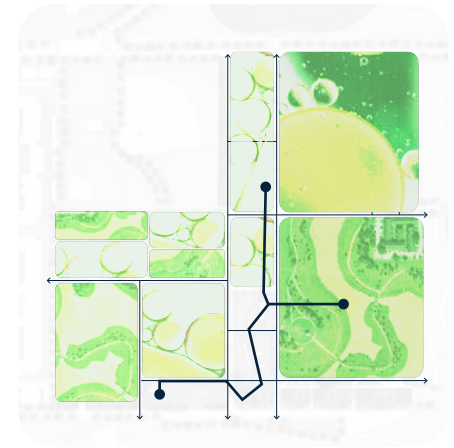
### CURVES

It was important to not only draw inspiration from forms found within the site, but from those outside of it. The Willow Waterhole Bayou features informal geometries that replicate the form of a natural lake. This form also allows ways to introduce visual interest, and views. Our site, although bounded by very rudimentary property lines, should have dialogue with the Willow Waterhole Bayou landscape.



Our site with the 60 ac/ft and 15 ac/ft of detention at 4' deep.

## TEXTURE



# Framework and Texture

Project organizational framework was inspired by Dutch art and dikes - a beautiful infrastructure for living well with a super - abundance of water, while textures inspiring park interventions reflect the existing landscape and industrial relics found on site.



- ① THE BIG THICKET
- ② FLEX-SPORT COURT
- ③ SKATE PARK
- ④ DOG PARK
- ⑤ FLEX LAWN
- ⑥ EVENT LAWN
- ⑦ PERFORMANCE LAWN
- ⑧ RAIN GARDEN
- ⑨ FOOD TRUCK PLAZA
- ⑩ SPLASH PAD
- ⑪ NATURE PLAY
- ⑫ OVERLOOK
- ⑬ PRAIRIE SCULPTURE GARDEN
- ⑭ PUBLIC ART DISPLAY
- ⑮ PLAY AREA
- ⑯ COMMUNITY PLAZA
- ⑰ FLOATING DECK
- ⑱ LIVE OAK COURT
- ⑲ THEATER PLAZA
- ⑳ BACKSTAGE + BIRD FRIENDLY WINDMILLS
- ㉑ GASMER + DRYAD STREETSCAPES
- ㉒ CONNECTIONS TO WWH
- ㉓ POTENTIAL EVENT PARKING
- ㉔ BIRD BLIND



The Gasmer Drive Redevelopment Property is poised to be a new kind of destination for the community and the greater Houston region. The plan embraces all facets of the site, weaving together the location's history, contemporary arts, programming, culturally rich and diverse community, ecology, and stormwater detention to tell a new story about urban transformation. Rather than wipe away the past, the master plan illustrates how we can repair our landscapes while embracing the history of the site and its ties to the oil and gas industry.

## Masterplan





● 100 year flood ● 500 year flood

DRY CONDITIONS



- Accessible space (23.83 AC | 85%)
- Strictly Planting (2.37 AC | 8.4%)
- Ponds/Wetland (1.8 AC | 6.4%)

WET CONDITIONS



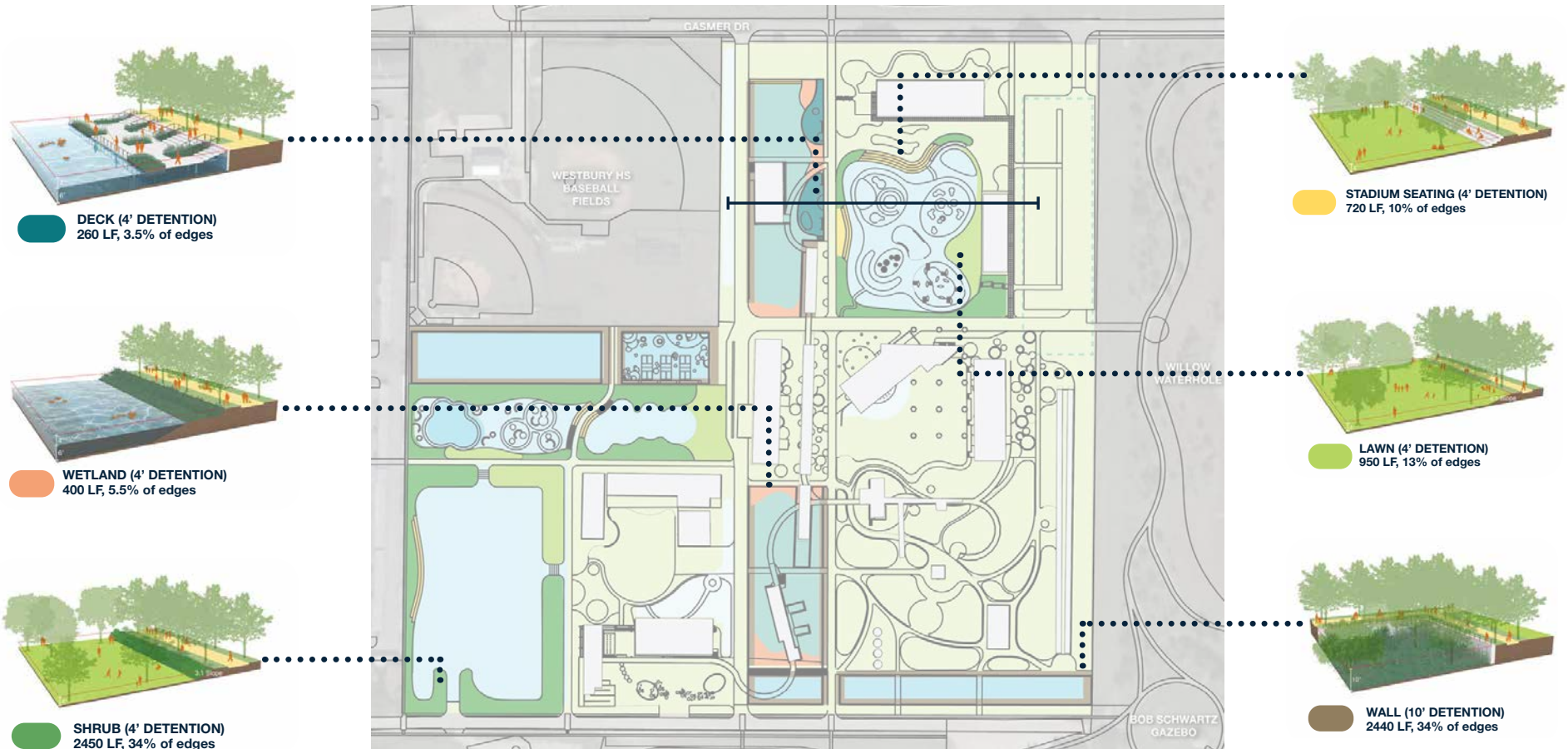
- Accessible space (16.2 AC | 56%)
- Underground Cistern (1.7 acres | 6%)
- 10' Detention (1.8 AC | 6%)
- 4' Detention (6.7 AC | 23%)
- 2' Raingarden (0.5 AC | 2%)
- Wet pond with 4' Detention (1.9 AC | 7%)

**23.6**  
Million  
Gallons  
Detained

## Stormwater Detention

The Gasmer Drive site was first acquired by the City of Houston to increase detention for the surrounding neighborhood. To achieve the City's objectives, the site must hold 60 acre-feet of stormwater, and an additional 15 acre-feet are needed for the site's planned development. If one were to store this volume of water within a four-foot-deep trench, 667,000 square feet (15.3 acres) would be required, consuming a majority of the site. Using the team's understanding of the structures to be kept and the site's circulatory grid, detention was distributed into different zones and strategies, allowing programmable spaces to fit within the site while meeting detention objectives.





## Detention Character and Edge Conditions

The plan proposes six ways to engage detention programs within the plan, with multiple edge conditions to create diverse spaces. The edge conditions create a variety of experiences, organize circulation, and provide different opportunities for habitat and recreation.





Elevated Viewing



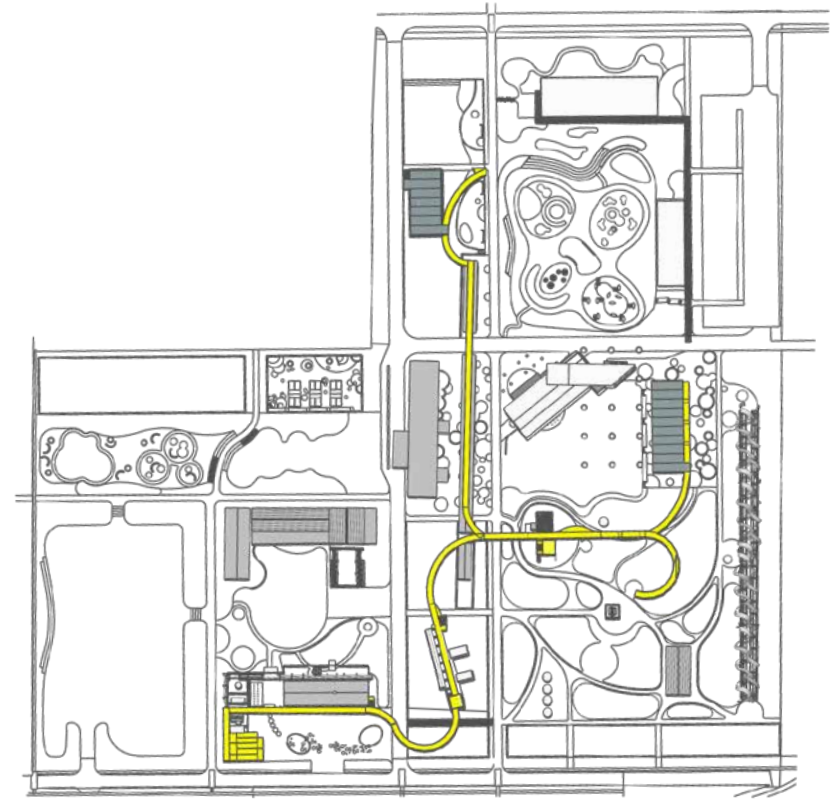
Interpretive Signage



Industrial Exhibit



Accessible Circulation



## Elevated Viewing and Circulation

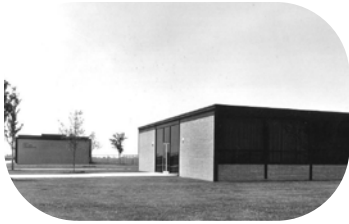




Community Space



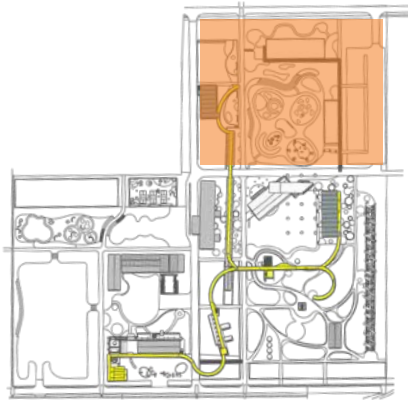
Offices



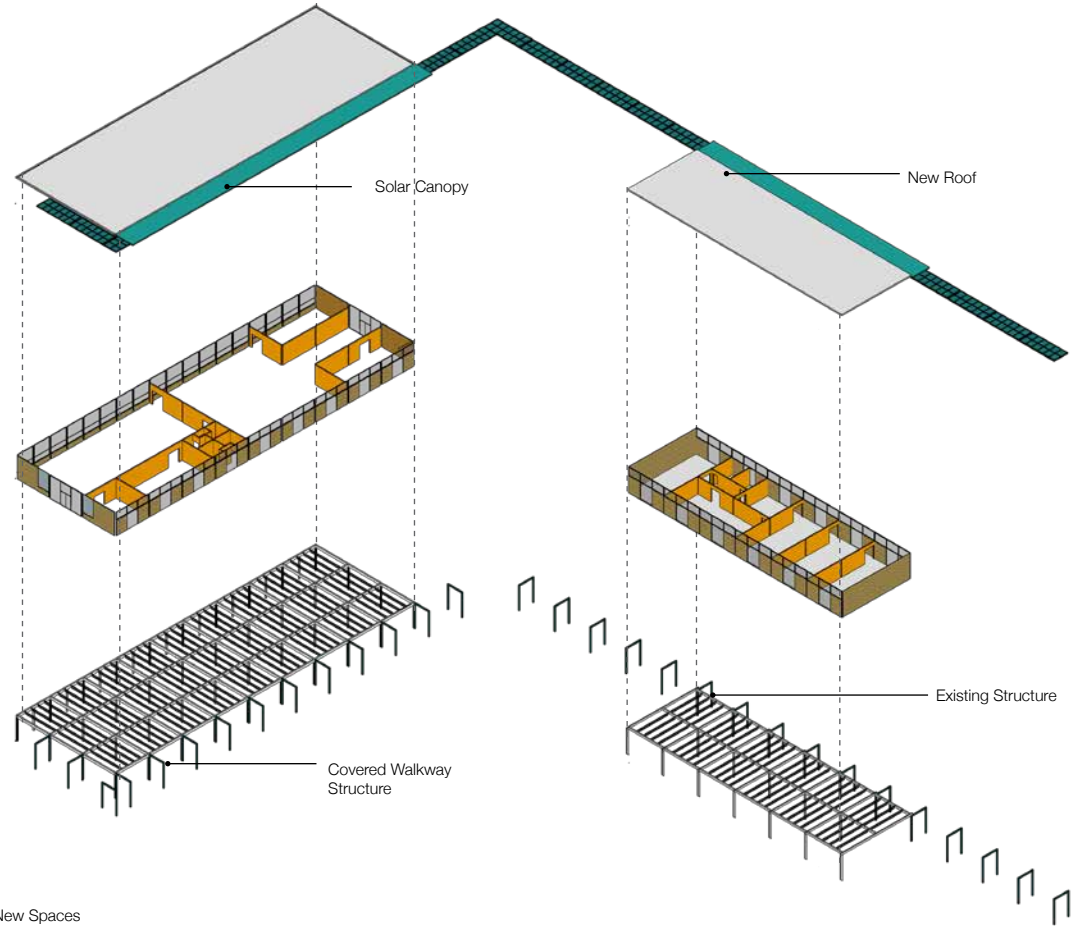
Gallery



Workshops



# Community Center



- New Spaces
- New Canopies







Community Theater Company



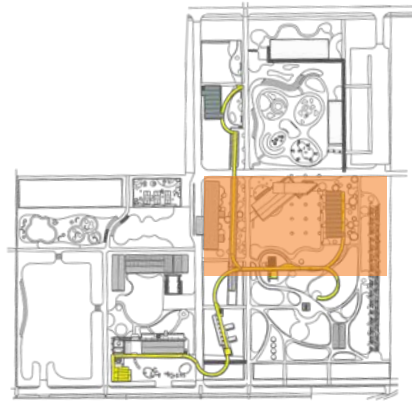
Children's Theater Camp



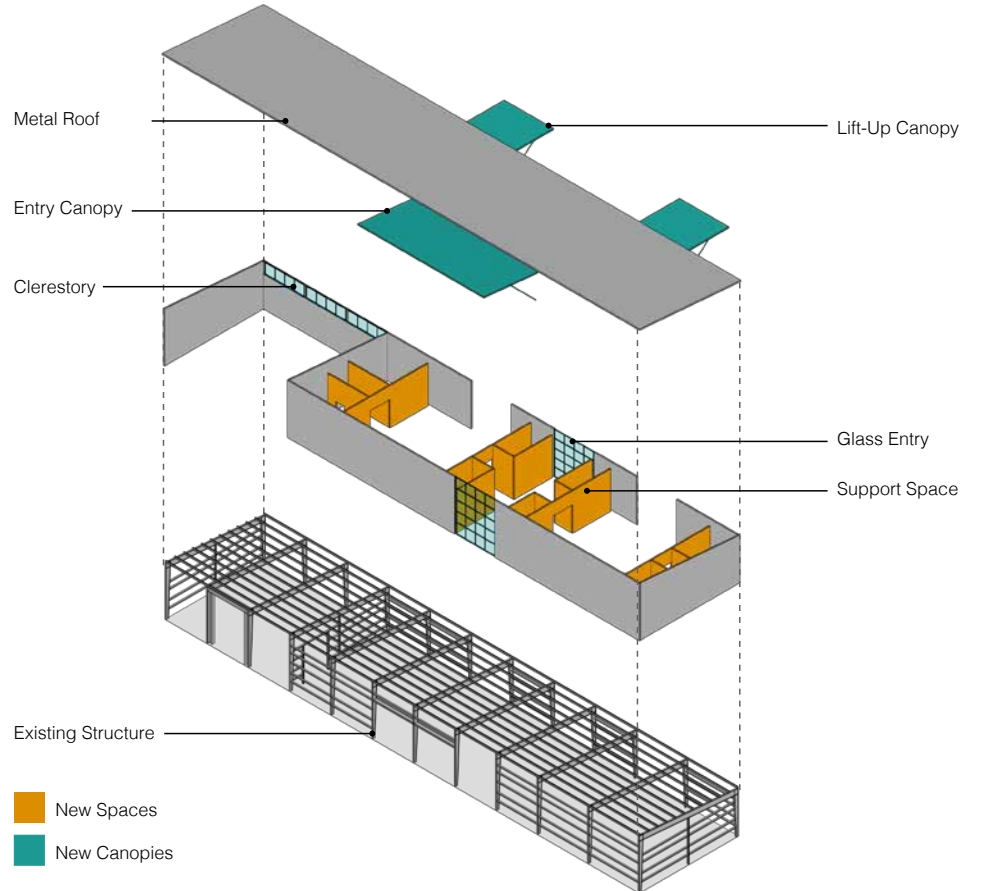
High School Theater



Flexible Performance Space



# Performance Center







Farmers' Market



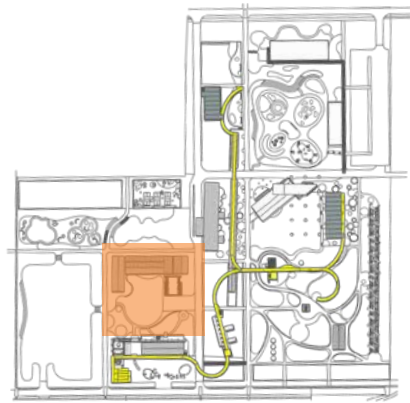
Outdoor Movies



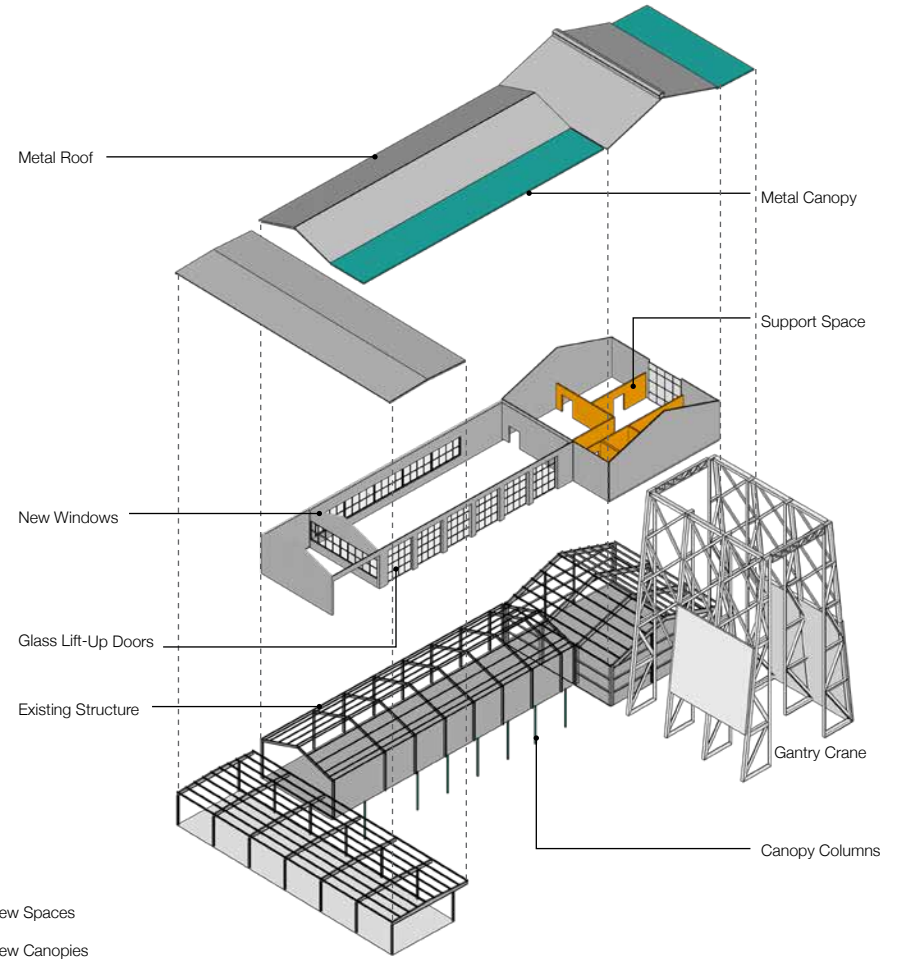
Outdoor Performances



Event Venue



# Event Center





Educational Play



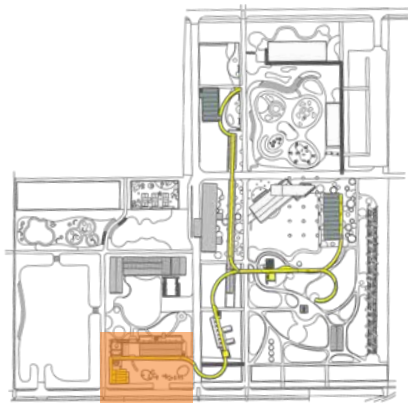
Interpretive Signage



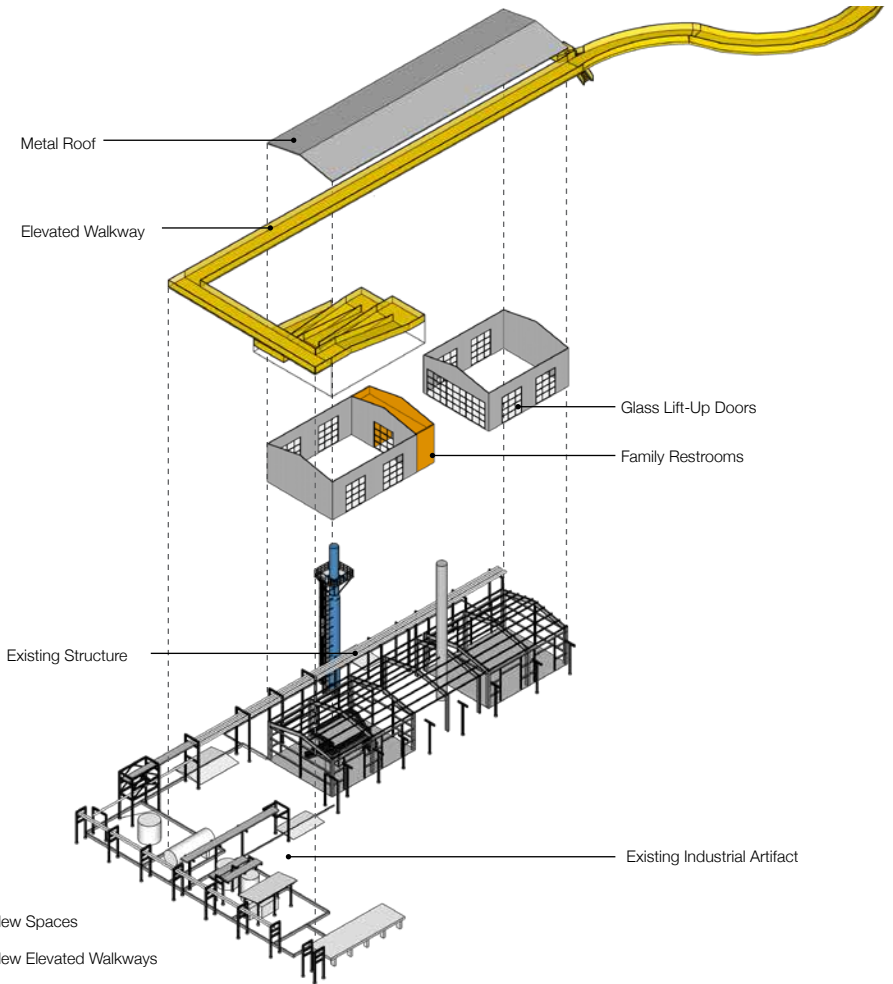
Industrial Exhibit



Education Center



# Education Center







Rainwater Collection Existing Tanks



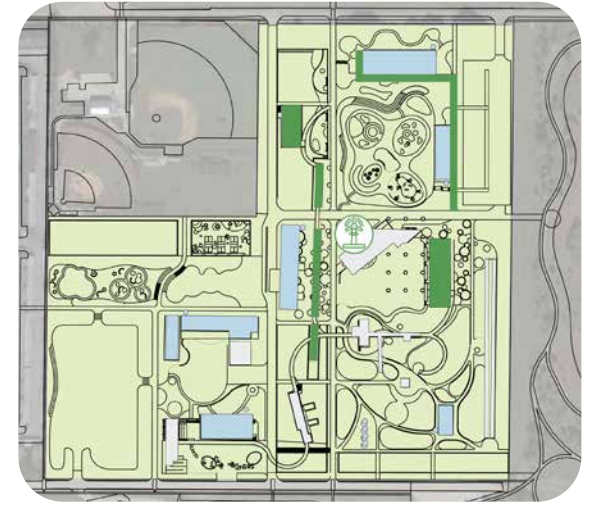
Bird-friendly Wind Turbines



Solar Canopies + Covered Walkways



Dark Sky Park and Event Lighting



## Sustainability

Most buildings will be able to collect rainwater for storage in existing tanks. Solar panels on canopy structures and bird - friendly wind turbines provide energy throughout the site, and Dark Sky lighting maintains crucial wildlife habitat and safe migration pathways. Juxtaposed with existing petrochemical industry structures, these technologies signal the future of energy in Houston and beyond. Adaptive reuse of buildings are designed to function passively, incorporating natural ventilation and daylight strategies and allowing the buildings to function as indoor/outdoor public spaces.





Reuse of Derrick as viewing platform, accessible through the elevated walkway

Repurpose of structures as valuable shaded and flexible space

Native prairie habitat restored with plantings and remediated soils

Pipeline structure provides framework for rotating art installations at a gateway to the site

## Native Prairie Restoration





Elevated walkway serves as alternative vantage point of performances

5,000 person open lawn, traffic controlled with slopes and planting

Proposed home of the Levitt Pavilion which will host dozens of free events for the community

1,000 foot tester wells can be sold as "VIP seating" and act as opportunities for microclimates, wayfinding, art, and lighting

## Levitt Pavilion