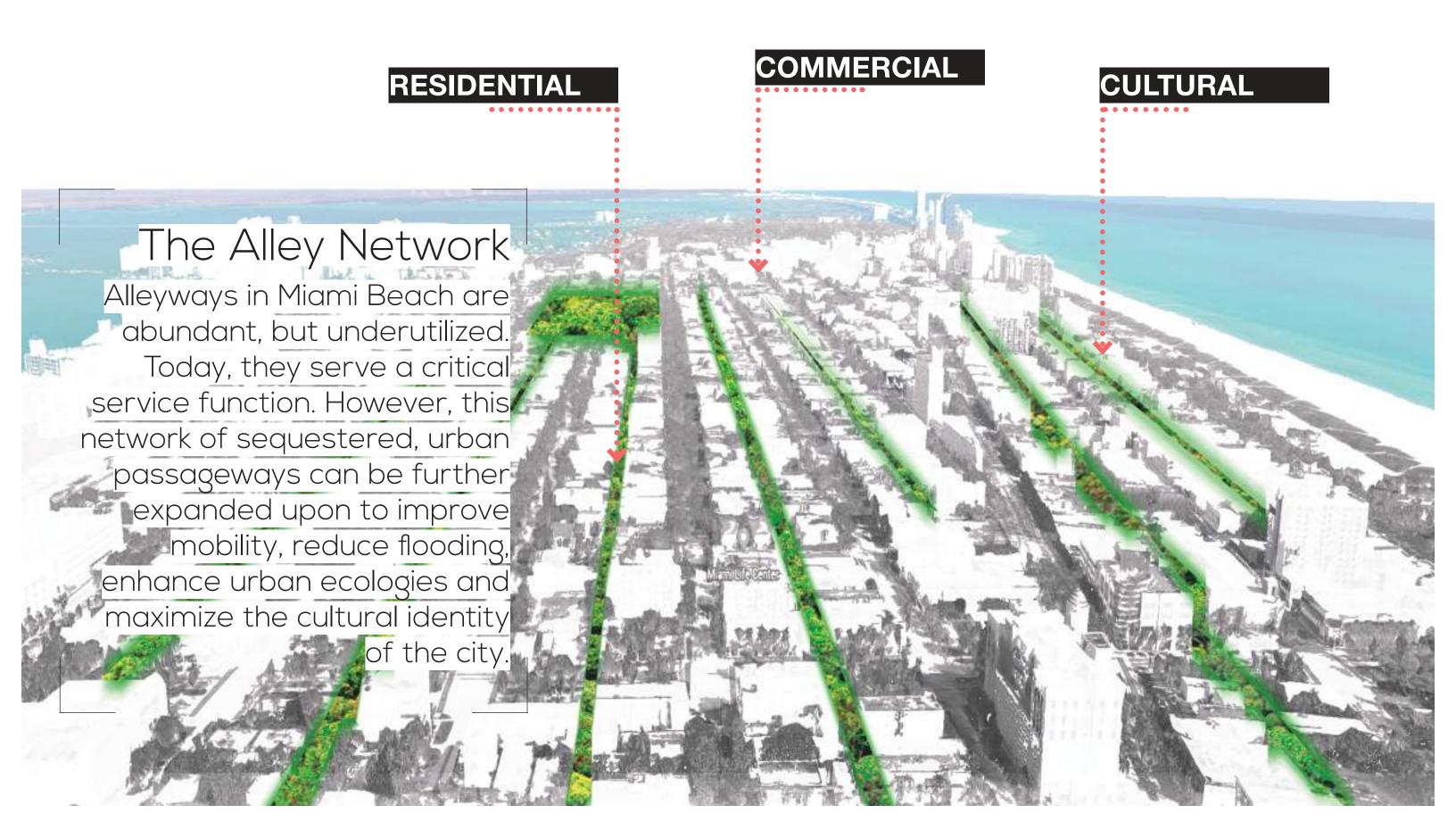


ADAPTATIONS OF ALLEYS IN MIAMI BEACH

"TIGHT URBANISM"

KoDA



Jacobs Blue Green Infrastructure

Bio-retention/Bioswales/Rain Gardens

Blue and Green Roofs

Constructed Wetlands/Floating Wetland Islands

Detention Basins/Surface Storage

Enhanced Tree Pits/Trenches Injection Wells (Pumped)

Permeable Pavement

Rainwater Harvesting (Cisterns, Rain Barrels)

Storm water Planters

Subsurface Infiltration and Storage

Tree Canopy

Wet Ponds

James Corner Field Operations

Transform from mall to district Showcase historic Lapidus work

Enhance the shopping and dinning experience Reorganize to prioritize public space and program

Integrate access streets

Create a connected bike network & loop

Urbanize Lincoln Lane North / South

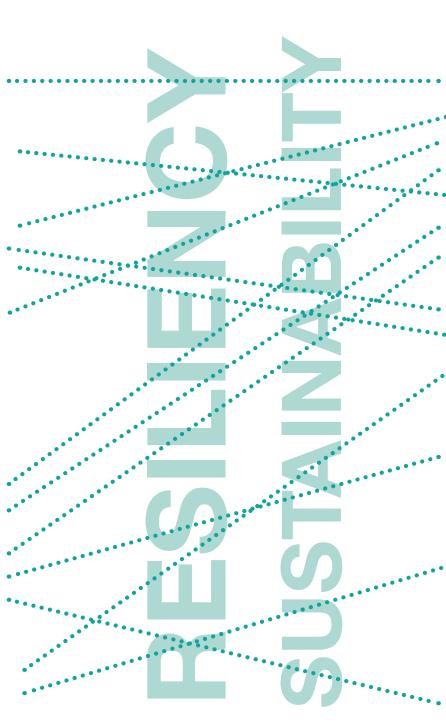
Leverage under-utilized lots

Emphasize gateways

Organize the line

Create civic anchors

Develop a cohesive design vocabulary



KoDA

Bioretention/Bioswales/Rain Gardens

Permeable Pavement

Tree Canopy

Enhance the shopping and dinning experience

Detention Basins/Surface Storage

Reorganize to prioritize public space + program

Create a connected bike network & loop

Urban Agriculture

Rainwater Harvesting (Cisterns, Rain Barrels)

Stormwater Planters

Create civic anchors

Solar Activation

New Retail Opportunity

Urbanize Lincoln Lane North / South

Community Garden

Benches

Aromatic Planting

Develop a cohesive design vocabulary

Native Planting

Elevated Walkways

Art Activation

Lighting

Leverage under-utilized lots

Placemaking

Seattle, WA

Activating alleys could offer **50%** more public space across the city.

Seattle decided to clear its alleys of dumpsters, moving instead to a trash-bag collection model of waste management.

Seattle's downtown has approximately 217,500 square ft of public-space alleys, of which 85% were underutilized.

Austin, TX

The City of Austin Cultural Arts Division provided a grant of \$5,000 for the visual art installed overhead.

Baltimore, MD

Seeking "small, cheap improvements that reset people's expectations of what an alleyway can be"

Through a \$30,000 grant from the Rauch Foundation, 20 alleyways in six neighborhoods are now covered in murals and artwork; they're filled with block parties and cleared of trash.

Kyoto, Japan

"The alleys and canal edges of Gion, the old entertainment district of Kyoto, where retail has compacted the storefront into a four-foot deep experience that would typically require twelve in the west. Shades, screening, gardens, drainage, and displays are integrated in a tight unison" - Daniel Toole

Los Angeles, CA

Green alleyways will help the city meet its goal of increasing stormwater capture to 50 billion gallons by 2035; currently, the city saves 8.8 billion gallons annually.

Of the roughly 300,000 acres in the city of Los Angeles, more than 2,000 are alleyways that cut through city blocks.

An alley, between East 51st and 52nd Streets of South Avalon Boulevard, is expected to capture more than **700,000** gallons of water a year.

EaCa Alley, Hollywood: a crime-ridden area, transformed into a pedestrian thoroughfare + dining space in 2012. The transformation was made possible through a collaboration of the City Council, the local redevelopment association, and the support of the surrounding business owners, who formed an alley association after seeing the value in attracting pedestrians into the alley and using the alley for dining space.

The transformation cost \$800,000 and included repaving with red bricks, storm water and drainage improvements, lighting, and elimination of trash bins.

Chicago, IL

Chicago Green Alley Program, among the first in the United States adapted over 100 of the city's alleys with permeable surfaces that redirect stormwater into the ground and away from Chicago's "overtaxed" sewer system, reducing flooding and recharging the surrounding soil.

13,000 alleys = 3,500 acres were paved with impermeable material, leading to flooding. If all of the alleys became permeable - Up to 80% of the rainwater falling on these surfaces per year could filtered into the soil or harvested - reducing flooding, filtering groundwater and saving taxpayer money that would otherwise be spent treating stormwater.

Green Alley Pilot Approach #2: Full Alley Infiltration Using Permeable

Pavement" - Permeable paving allows rainwater to penetrate through the surface filter into the soil below. Typical cost:

\$3-\$15 per sq ft.

San Francisco, CA

Annie Alley - temporarily closing the alley to cars. The alley hosts on-going weekly programming, such as picnics, film screenings and dance/music performances. The alley was designed to include trellises with hanging plants, benches, and cafe tables. The cost of capital and construction for the temporary improvements was roughly \$128,000.

Jack Kerouac Alley: a short, 18' wide, oneway alley in Chinatown was a common place for illegal dumping and as a short cut for vehicles. Completed in 2007, hard costs were approximately \$350,000.

Creating a pedestrian only right-ofway with unit pavers, pedestrian scale lighting, and bronze cast plaques inscribed with poetry. The City also negotiated a "Quit Claim" with property owners, which forfeit vehicular access to their property in exchange for making the right-of-way pedestrian only.

Alleys are open for services in the early morning hours - then close vehicular traffic during the day.

Pedestrian-scale lighting improves walkability and safety for pedestrians, and can provide exposure to businesses by lighting up signage. Typical lighting costs for SF

alleys range from **\$2,000 - \$20,000**.

Linden Alley: Became a pedestrian-friendly, "green" street that creates an intimate social space for people to walk and relax. The new, raised roadway slows traffic and puts people on the same footing as cars. The pedestrian and vehicle areas are defined by above-ground planters and changing pavers. A coffee shop and several stores brings people and life to the alley. The surrounding property owners pool together \$5,000 annually for maintenance costs.

Belden Place, one of the city's most famous alleys, has multiple restaurants w/ outdoor seating—the alley has become a magnet for residents and visitors.

Melbourne, AUS

Since the 1980s as a part of the **Melbourne**City Plan, alleyways have been transformed
/ activated as a way to improve livability
in downtown through engagement of
public spaces.

Since then, dozens of alleys in the city have been revitalized into an urban network of alleys with art installations, small cafes, residences, and retail.

Now, theses alleys, **covering** 3.5

(2.2 miles), are a vital part of the city's urban landscape and attract hundreds of thousands of visitors each year.

To support the alley transformation, the City operates a "Love your Laneway" project, which partners with local stakeholders to improve and revitalize alleys through waste management, amenities and access, public lighting and road surfacing, and artistic and cultural uses. The City has adopted a number of planning policies to support the transformation of the alleys.

Miami Beach, FL

The Betsy-Carlton Orb, Shulman + Associates - 2016:

This revitalization and reuse of the alley became an example of placemaking within the city. Conceived as a bridge connecting the historic Carlton and Betsy boutique hotels, the space has taken on new cultural life within the alley, including expanding the Betsy's poetry program from inside their Writer's Room to the public thoroughfare of the alley.

Miami Beach has about

22.3 Acres of alleyways. To compare...Flamingo Park: 36.53 acres & Lummus Park: 26.34 acres.

Miami Beach alleyways make up about 10% of roadways, spanning 9.17 miles.



A VISION FOR THE FUTURE





Shading



Planting



Solar



Gardens



Pervious



Art



Lighting



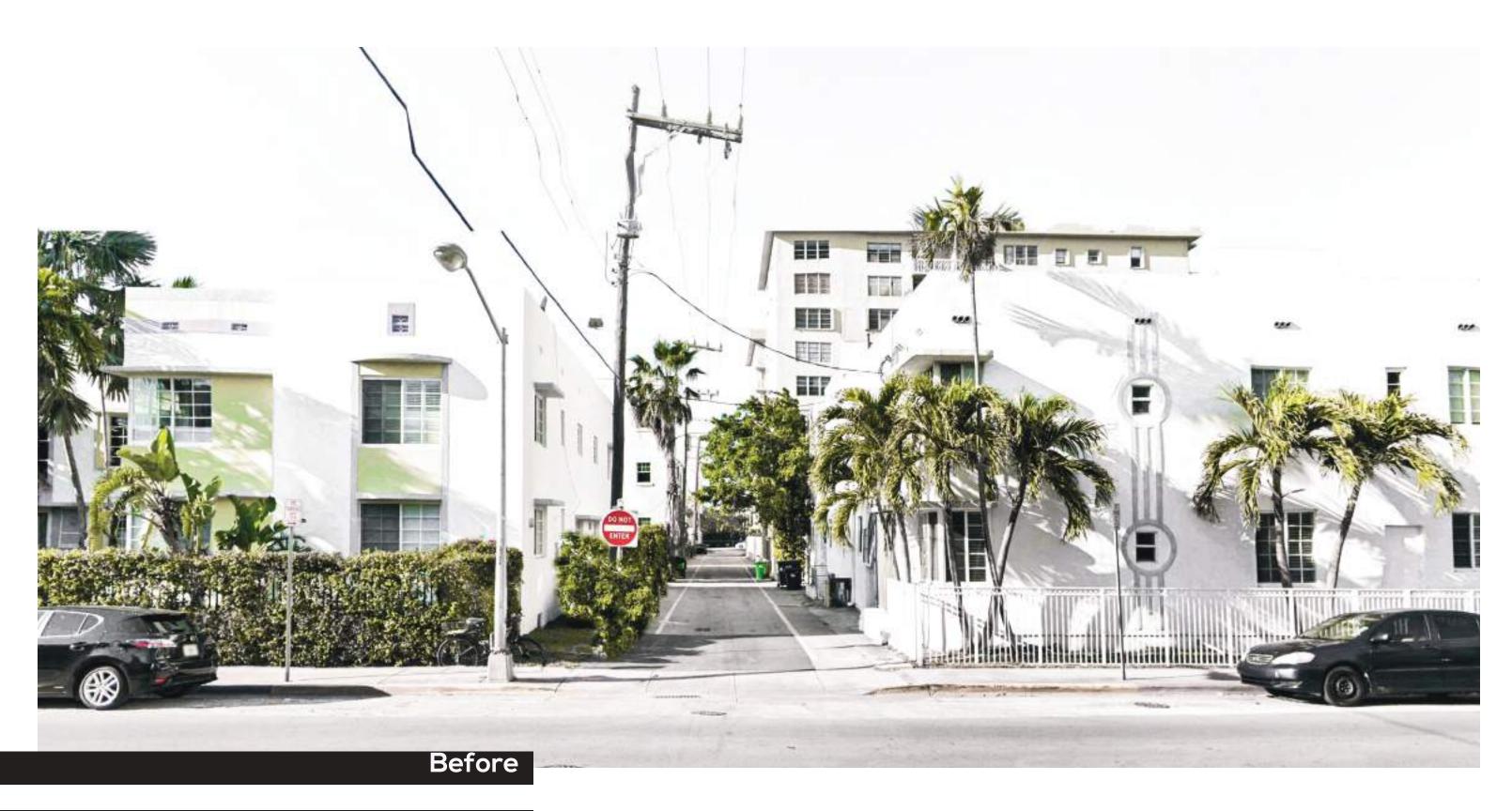
Dinning



Retail



Public



A VISION FOR THE FUTURE





Planting



Gardens



Pervious

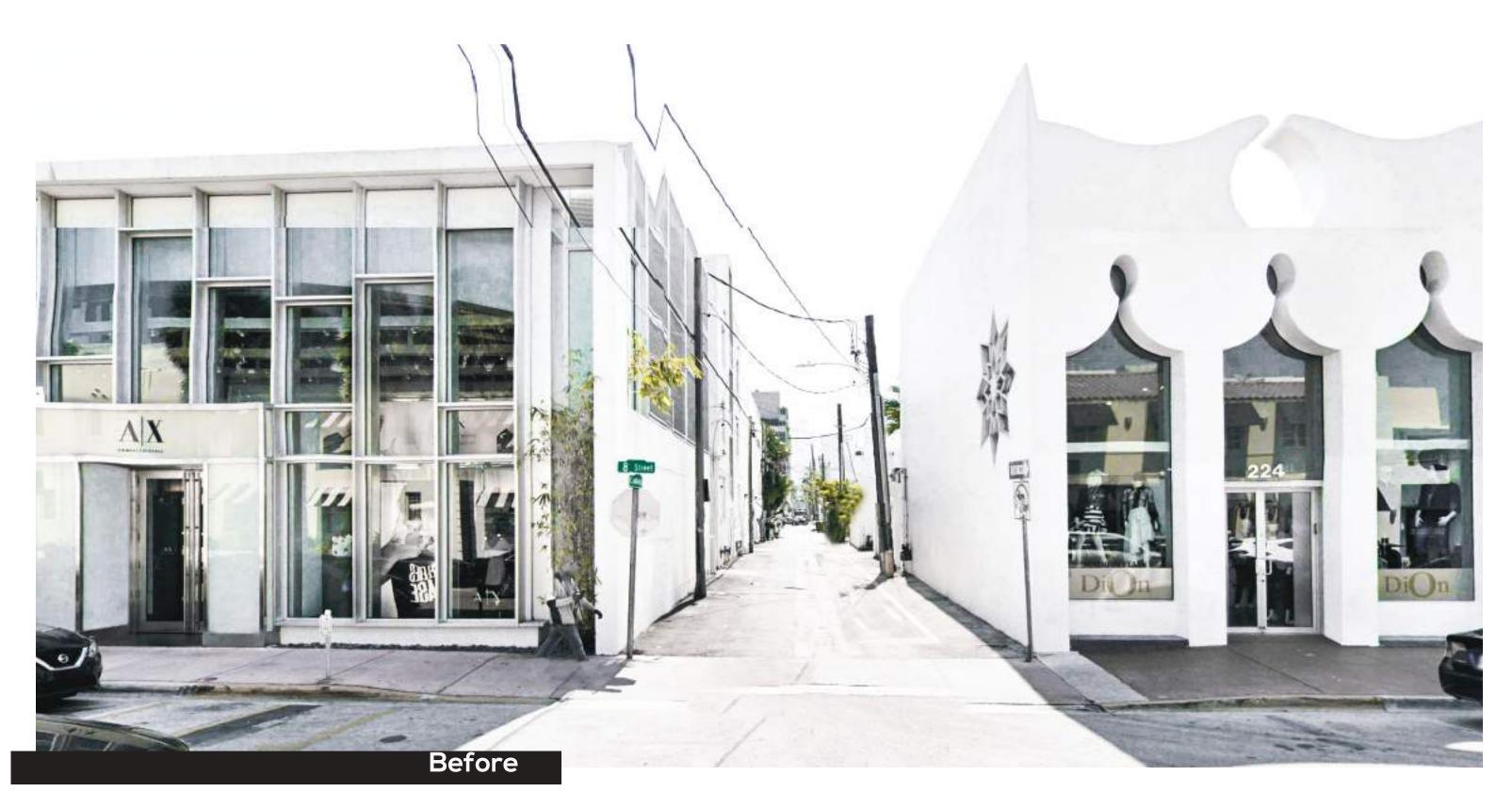


Lighting



Public





A VISION FOR THE FUTURE





Shading



Planting



Palms



Gardens



Pervious



Art



Placemaking









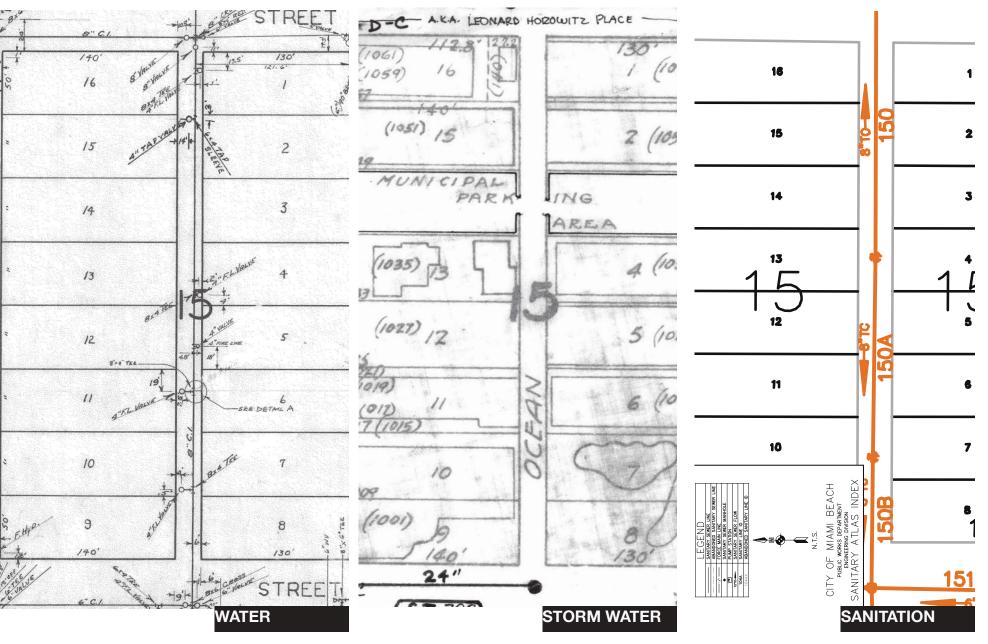






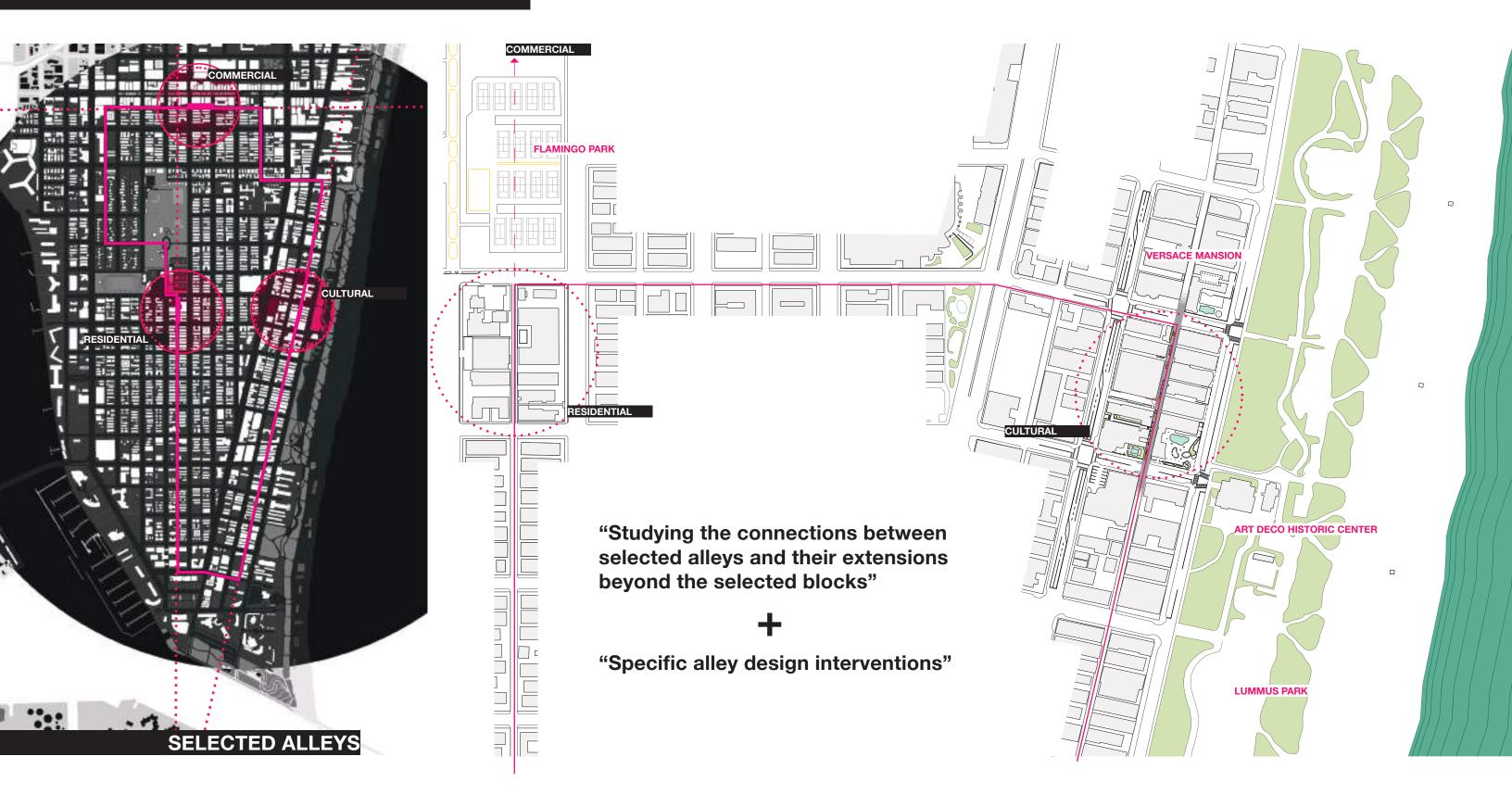
AREA ANALYSIS:	Width:	Length:	Area:
Cultural Alley		201194111	711 001
Alley	20 ft	400 ft	8,000 sf
10th Street Crossing	50 ft	50 ft	2,500 sf
11th Street Crossing	50 ft	50 ft	2,500 sf
Cultural Alley Total Area:			13,000 sf



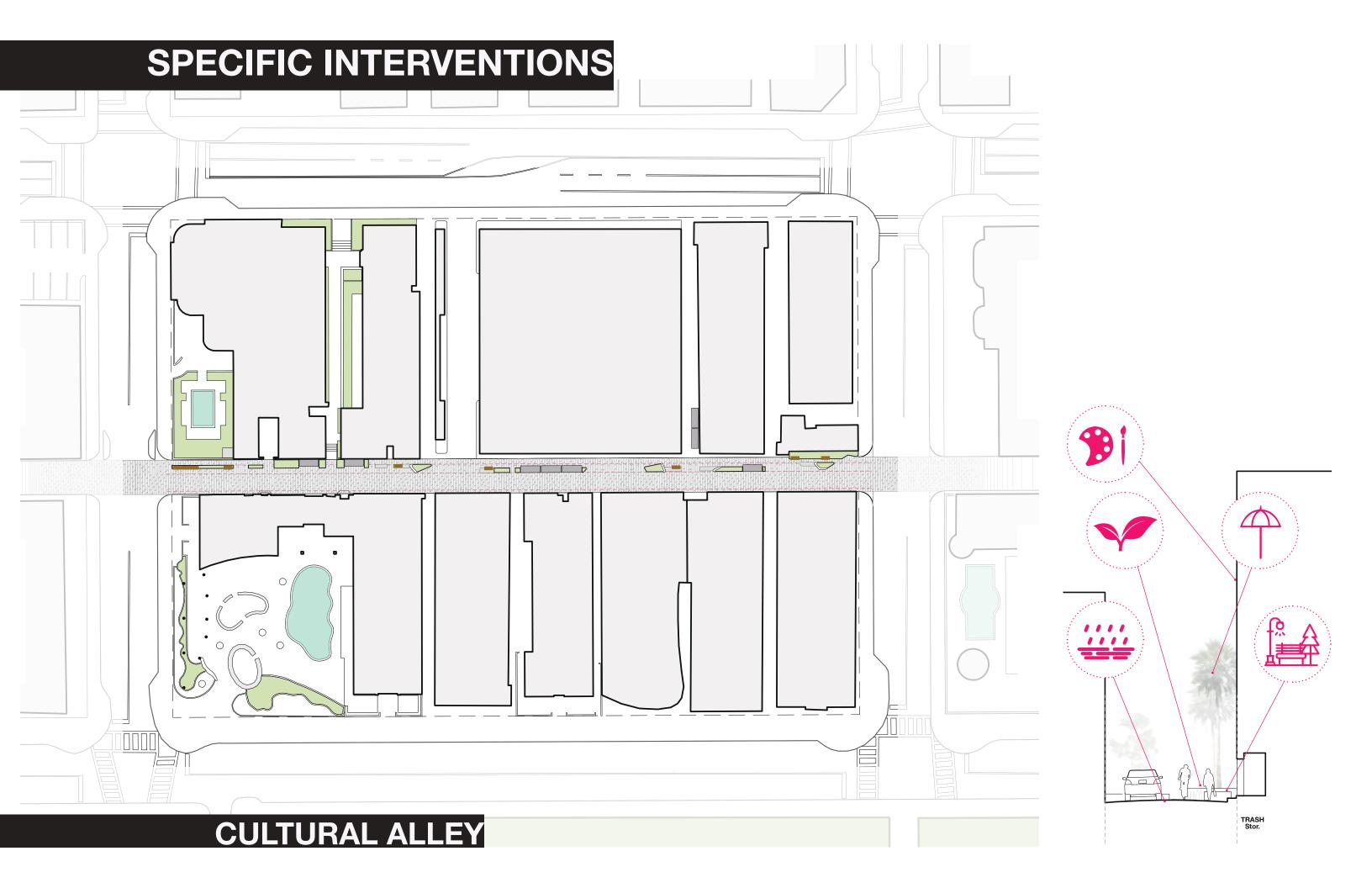


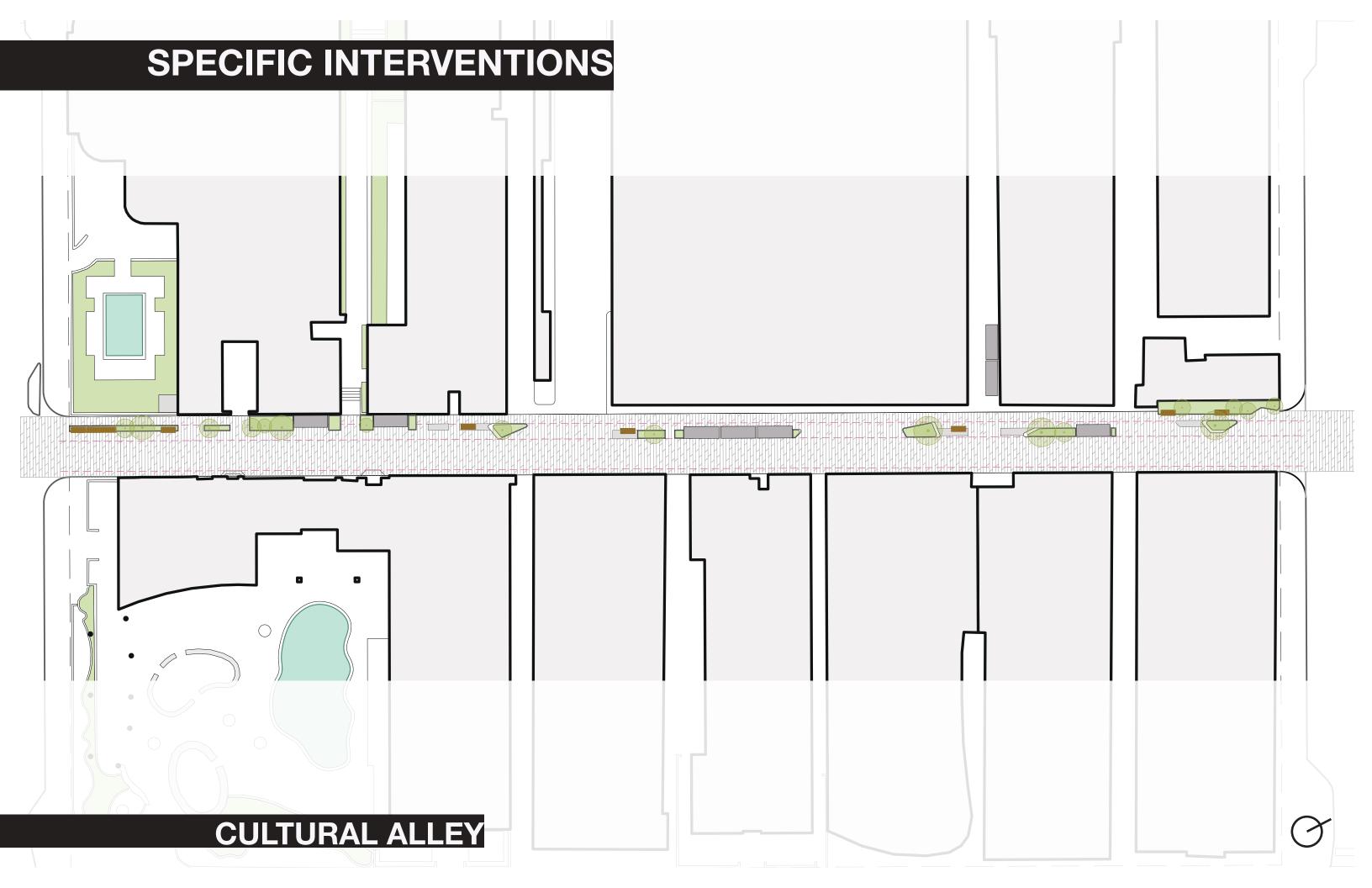
EXISTING CONDITIONS

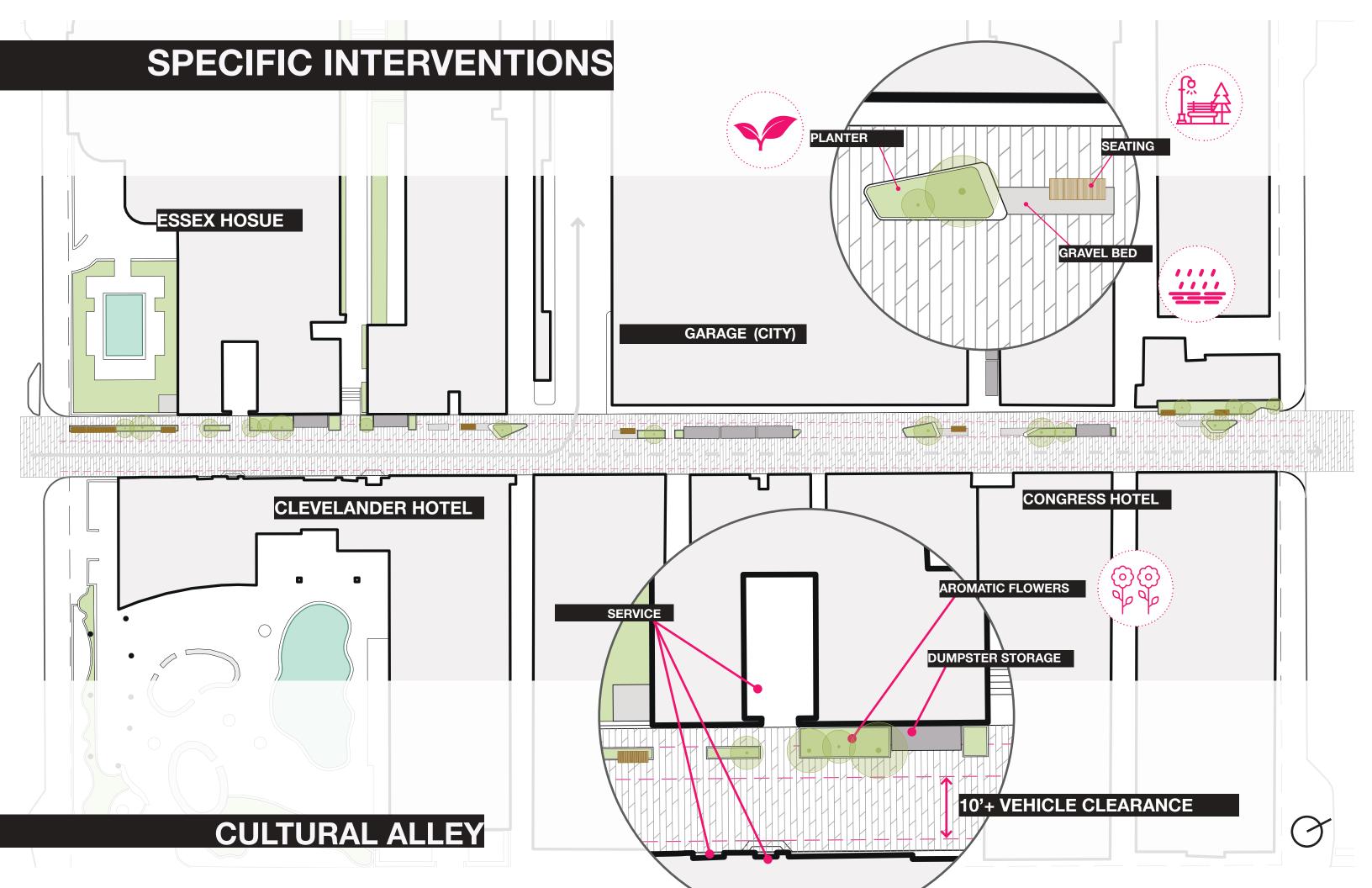
SPECIFIC INTERVENTIONS



CULTURAL ALLEY







Approx. 40% of Miami Beach is Impervious.

Alleyways make up approx. 972,720 sqft.

By making all alleyways PERVIOUS (LID)

- The Impervious % could be brought to...

RESEARCH

Flora + Fauna

Low Impact Development (LID)

Native Species Non-Native Species Species for LID+

LID Implimentations:

Bioswales Sun Exposure Urban Agriculture Shading Planting Gardens Rain Garden Grass Shrubs

Flowers Palms Trees **Rain Water Collection Low Maintenance Planting** Xeriscape Lawn / Landscape Water Run-Off Filtration **Alternative Pavers** Pervious Pavers

Alleyways make up approx. 10% of all

Miami Beach roadways.

How can the trash pick-up process be streamlined to reduce the impact on alley ways?

- Dumpsters per block? Dumpsters per alley?
- Pick up locations per block?

ALLEY USAGE

Service Trash Pick-Up Recycling

Deliveries Meters

county has the lowest **DPW** recycling rate in the

> A case by case reviewis needed for each alley on conditions involving sanitation, drainage & traffic (one-way or 2 - way).

At 18%, Miami-Dade

Contracts

Schedules

Timing

Volumes

Routes

When are deliveries allowed in the alleys? Commercial Loading Zones.

7am - 8pm ONLY "AL" Permit Required.

Types of Meters in Álleyways.

"Wish-cycling"

What are the trash pick-up

How long does each stop take?

How can stops be streamlined?

How much (volume) trash is

collected on Miami Beach?

What are the truck routes?

Where do they stop?

schedules?

Place a public emphasis on "Reuse" rather than "Resycte"

Implementing public recycling education + sorting bins at specific locations in alleys.

"Having designated trash pick up points at the ends of blocks. All trash (in sorted bags) would end up in dumpsters at access points for each blocks making it more efficient for garbage truck to access and take away" ---Leaving space in the alley for designed intervention.

Meet with DPW to answer questions + get data.

D. Toole

Set up meeting with Public Works + (Private) trash removal service - for direct information regarding waste data. Received: City Atlas GIS

Water Sanitation

Storm Water

36% Impervious with Alleways

- Weekly trash pick ups?
- Gallons of trash can a typical dumpster hold?

Solutions?

Composting What can be composted...

- Leaves
- Grass clippingsBrush trimmings
- Manure (preferably organic) - Any non-animal food scraps: Fruits, vegetables, peelings, bread, cereal, coffee grounds and filters, tea
- leaves and tea bags. (Minus the staples) - Old wine.
- Pet bedding from herbivores ONLY
- Dry cat or dog food
- Dust from sweeping and vacuuming
- Dryer lint
- Old herbs and spices

With prep / extra time..

- Shredded newspaper, receipts, paper bags, etc (any non-glossy paper)
- Tissues, paper toweling, and cotton balls - unless soaked with bacon fat, kerosene, makeup, or other stuff that doesn't belong in
- Cardboard, egg cartons, toilet rolls
- Used clothes, towels, and sheets made from natural fabrics — cotton, linen, silk, wool, bamboo
- Old string & twine made of natural fabrics
- Pine needles - Pine cones
- Hair Old, dry pasta
- Saw dust
- Wood chips
- Nut shell
- Twigs
- Corn cobs - Pits from fruit

- Nut shells

- Toothpicks, wine corks

PLANTING PALETTE













seagrape









saw palmetto





















wild coffee



Received:

DPW meeting occurred on:

PUBLIC WORKS DEPARTMENT

MIAMI BEACH, FL 33139

February 5, 2020

1700 CONVENTION CENTER DRIVE,

City of Miami Beach **DPW GIS Atlas to** map utilities.

> Waste Contracts

"A palette one can simply select species from for design implementation + optimization"

Landscape Organization LID+ Landscape Pallet

Native Species

Defining Traits

- **Provides Shade**
- Attracts Butterflies
- Flowering
- Berries/Fruits that Attract Wildlife
- Attracts Birds
- Water Absorption
- Attracts Hummingbirds
- Holistic Qualities
- Native Species
- S Salt Tolerance
- W Water Mitigation
- D Drought Tolerant
- AF Aromatic Flower

Info

Gumbo Limbo - Bursera simaruba 2 3 D, N, S Tall (25-40 ft), provides shade and is very hardy, roots may lift sidewalk. Consider Strangler Fig (Ficus Aurea), caution Dahoon Holly - llex cassine ... W A X D, N, W, S Can grow tall (25-40 ft), thrives in swampy, wet soils, berries attract wildlife, good for naturalizing urban areas. Marlberry - Ardisia escallonioides 🍪 🔑 💥 D. AF. N. W. S Can grow tall (10-21 ft), has fragrant white flowers all year, fruits widely used by wildlife. Silver Palm - Coccothrinax argentata 🍀 🔏 D, N, W, S White flowers in summer, food source for Key Deer. High wind resistance, visually appealing. Height: 3-15ft, spread: 6-7ft. Wax Myrtle - Myrica cerifera \mathscr{A} 🕶 🍰 D. AF. N. W. S Good hedge plant for wild life, high moisture tolerance, best to space from buildings, 10-40ft height, 20-25ft spread. Wild Coffee - Psychotria nervosa & ** ** D. N. S Medium drought/salt tolerance, partial shade optimal, white flowers in spring-summer, many wildlife eats the fruit, shiny leaves, Saw Palmetto - Serenoa repens R w 🕹 🔀 D, N, S Yellow/white flowers in spring, common in dunes, round black fruits used by many mammals and large birds. 3-10ft height and spread Firebush - Hamelia patens 🛪 🕹 🧡 🙊 ₩ 🏯 Seagrape - Coccoloba uvifera patens 2 x 3 w AF. D. N. S Fragrant white flowers in spring, fruit attractive to wildlife, grows as tree inland, good wind resistance. Sweet Acacia - Acacia farnesiana 🐯 🕶 🖳 🔏 🔀 AF, D, N, S Very fragrant, yr-round, small yellow flowers - grows 15-25 ft w/ a 15-25-ft spread. Sharp thoms on the branches. Fiddlewood - Citharezylum fruiticosum 🛞 😿 🖫 AF, D, N, S Very fragrant, yr-round, white flowers (spring-fall). Grows 8-10 ft tall w/ 6-8 ft spread. Will also attract birds Spicebush - Lindera benzoin 🏵 🔑 🗤 🕹 🚣 AF. D. W. N. Showy, fragrant flower, Grows to 6-12ft tall, tolerant to most soils, commonly used in moist rain gardens. Coontie - Zamia floridana W D, S, W, N, Great for ground cover with tropical aesthetic, attracts butterflies, moderate salt & drought tolerance. Gallberry - llex glabra 🔑 🛣 🎎 🛞 D, S, W, N, White flowers in spring, berries in Fall - good for wildlife. Good for wetlands, high wind resistance. Elderberry - Sambucus 🚣 🔑 🛪 🕶 📥 **D, S, W, N,** Variable flowers, berries attract birds, some species' flowers attract butterflies, 12-20 ft hight. Black Mangrove - Avicennia germinans 🎎 🔏 🐯 S. W. N. White flowers all year long - attract bees. 10-20 ft spread w/ 20-30ft height. Breathing roots produced in full sun. Pond Cypress - Taxodium ascendens 🚵 🖉 🏋 D, S, W, N, Wetland plant, but adapts well to dry sites. Has yellowish Fall color, high wind resistance. Yaupon Holly - Llex vomitoria 🚣 🔑 💢 😿 D. S. W. N. White flowers, red fruit attracts wildlife, variable heights and spreads, high wind resistance. Leather Fern - Acrostichum danaeifolium 🎎 S, W, N, Good for wet sites with low sunlight, large fem, 4-8 ft height, 3-5 ft spread. Silver Buttonwood - Conocarpus erectus 🔔 🖰 🔑 S. N. D. W Typically in the northern part of South Florida 30-50ft height and spread, food plant for butterflies Red Bay - Persea borbonia 🚣 📮 🔏 😿 Groundsel Tree - Baccharis halimifolia 🚣 👯 S. N. D. W White flowers in fall, poisonous seeds, useful for reclaiming wet sites by retention ponds etc. Med. Growth rate with 6-12ft height/spread. Simpson's Stopper - Myrcianthes fragrans 🚵 🔏 😭 😽 🕏 S, AF, N, D, W White flowers all year, edible fruit, birds use the berries, tolerates occasionally wet soil, high soil moisture tolerance Red Maple - Acer rubrum 2 88 & N, D, W Low - no salt tolerance, flowers and foliage throughout the year. Shallow rooted, good for wet sites. Fast grow rate w/ 35-80ft helpht and 23-35ft spread. Red Mulberry - Morus rubra 🚣 R 🔩 🤭 😿 🕶 ... Bay Cedar - Suriana maritima 📤 👚 🛣 🐯 N, S, D, Yellow flowers all year, good beach plant, grows in sand or bare rock. Medium growth rate - 5-20ft tall, 5-8ft spread. Beach Bean- Canavalia rosea 🐯 N. S. D. Pink flowers, mainly used in dune stabilization and for ground cover, very fast growing. Seeds and beans poisonous. Gulfcoast Spikerush - Eleocharis cellulosa 🚣 W, N, S, D, Tallest of all Spikerush in FL. Grows in wetlands and brackish areas, major component in the everglades. Moderate salt tolerance, likes wet soils. Mangrove Spiderlilly - Hymenocallis latifolia W. N. S. D. AF Show, fragrant, white flowers, Tolerant of drought and salt spray, Fast growth rate, Some species have a low soil salt tolerance, Used as water plant. W, N, S, D, Smaller sized, low maintenance palm, 12-25ft height, 6-10ft spread. Prefers moist soil. High wind resistance. Saltmeadow Cordgrass - Spartina bakeri 🚣 W, S, D, N native to northern Florida, fast growing, wetland grass. Sea Lavender - Heliotropium gnaphalodes 🐯 AF, S, D, N Flowers have a mild sweet fragrance. Commonly used in coastal plantings and dunes. Does not thrive in an inland setting or with over watering.

Non-Native Species

Sea Oxeye Daisy - Borrichia frutescens 88 4 W

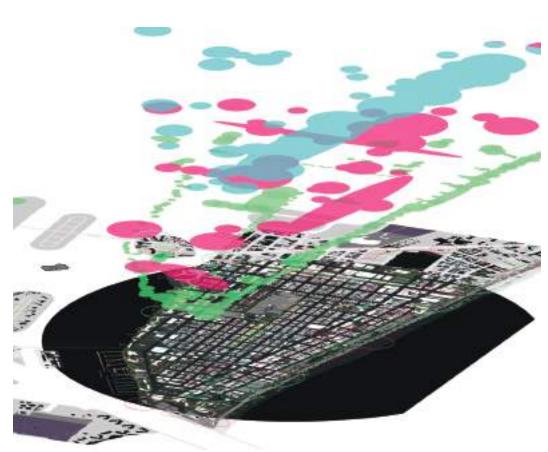
Slender Lady Palm - Phapis humilis - &	S, D, W Thin trunk palm, partial to full shade, moist soil, good seaside tolerance. Low root damage potential.
	D, W Thin trunk palm, white flowers in summer, resistant to lethal yellowing, high wind resistance. Tolerance to moist soils. Low salt tolerance.
Coconut Palm - Cocos nuciferd 🚣 🔩 🛞	W, S, D, Fruit tree, used as a reclamation plant, grows in areas w/poor air quality / drainage. Prefers well drained soils, very salt resistant. Malayan seeds are the most hardy.
Date Palm - Phoenix spp. Except P. reclinata 🎎	W, S, D, Smaller cluster palm, yellow flowers in summer, high wind resistance. Soil moisture: medium.
Gardenia - Gardenia jasminoides 🛞	AF, Very fragrant, pure white flowers, can reach heights of 4-6 ft w/a 6-10 ft spread. High maintenance, thrives with moist composted in soil.
	AF, Very fragrant, used in making perfumes and as a flavoring in tea. Can grow up to 10 ft tall, thrives is moist well drained soil.
Sweet Olive - Osmanthus fragrans 🐯 📩	AF, D, S Very fragrant flowers/fruits, used in making perfumes and as a flavoring in tea, can reach 20 ft tall with age. Thrives is moist, drained soil.
Mango - Mangifera indica 🛞 🕹 😿	D, S Medium drought and salt tolerance, edible fruit, variants for smaller areas, mildew resistance, etc. Fast growing, 30-40ft height and spread.
Francipani - Plumeria rubra 88	AF D S Franciant, shown red/injuly flowers in spring to fall. Low moisture tolerance, Height/spread; 20,25ft

AF, S, W, D, N A common beach plant, with yellow flowers. Native to salt water wetlands. Does not tolerate over watering/fertilizing.

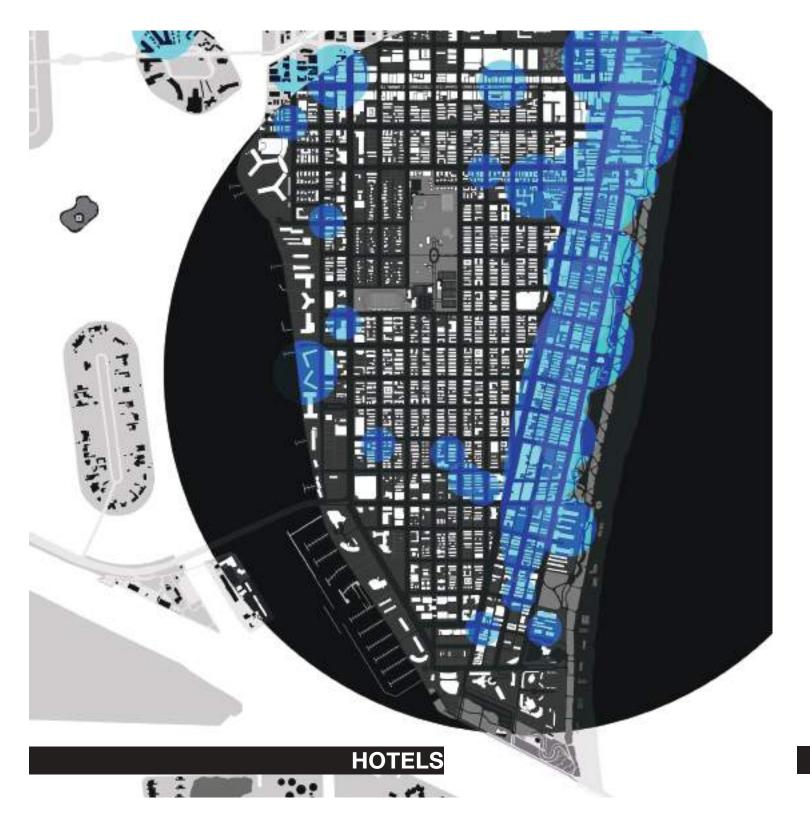
MAPPING

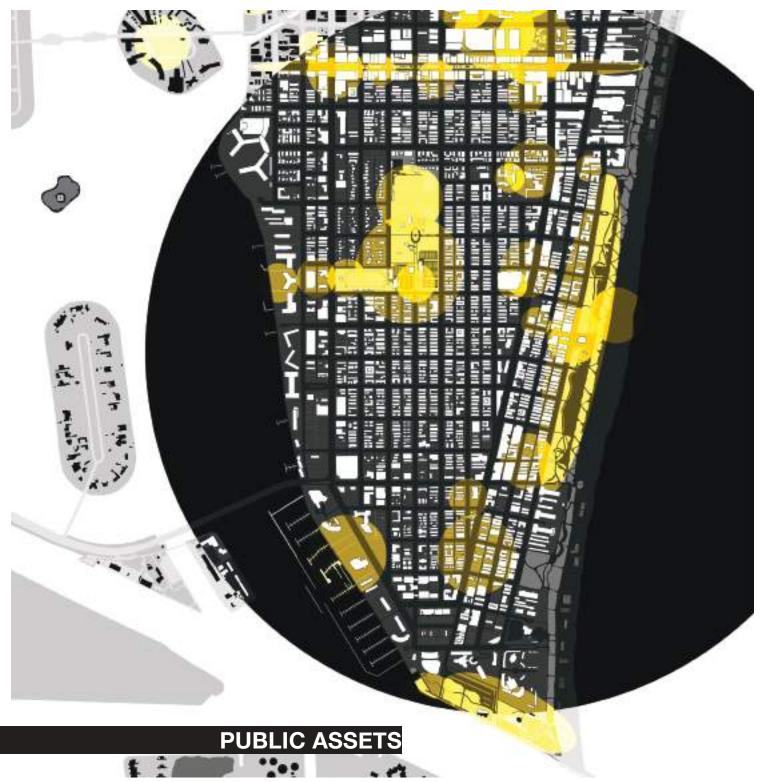
The Opportunities...

"They alley ways can stitch together all the city's most important places - becoming a pedestrian connector throughout the entire island" We began to map out the city's public assets, hotels, green spaces, transit lines, and heat island effect. This allows us to see how the alleys serve to connect and provide solutions to all of these.









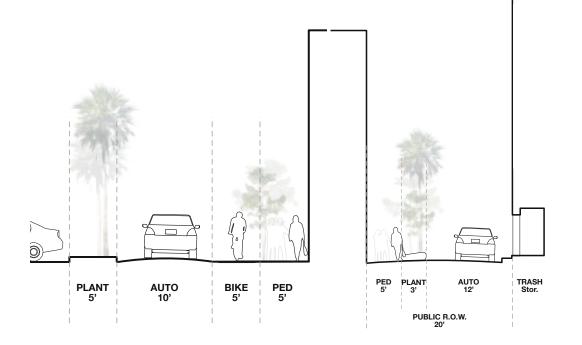


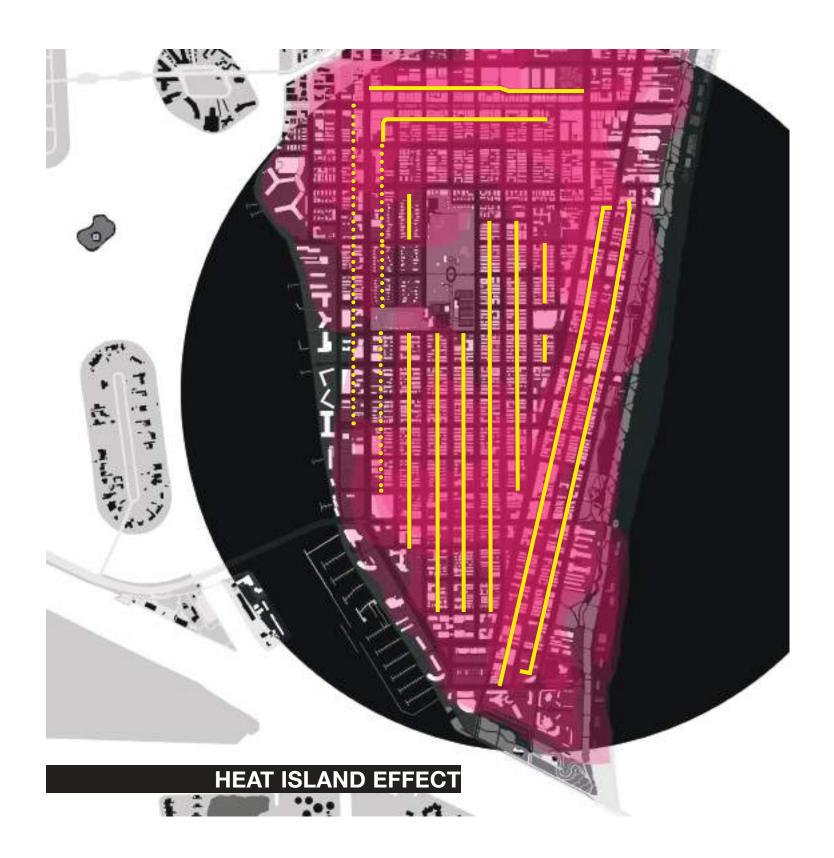


The Opportunities...

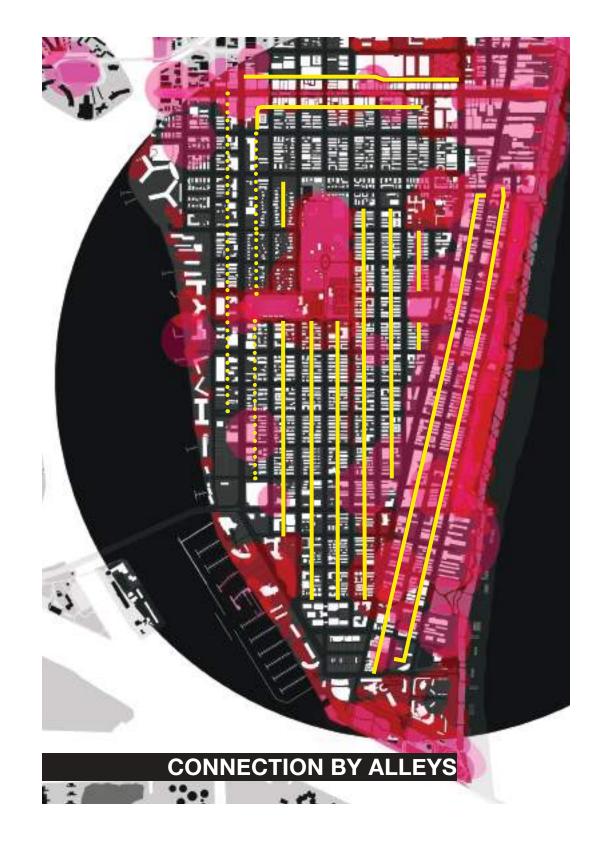
With most alleys running through areas with higher level of the "heat island effect" there is the opportunity to implement (LID) strategies to help reduce ground heat. These include, planting, trees, lighter pavers, alternate paving, shading devices, etc.

- RAIN GARDEN
- AROMATIC FLOWERS
- PLANTERS
- BENCH SEATING
- ART INSTALLATION
- RAISED PEDESTRIAN CROSSING
- SMALLER DUMPSTERS
- CANOPY
- LIGHTING
- DUMPSTER STORAGE
- IN-GROUND LED LIGHTING
- CONCRETE PAVEMENT
- PERMEABLE PAVERS

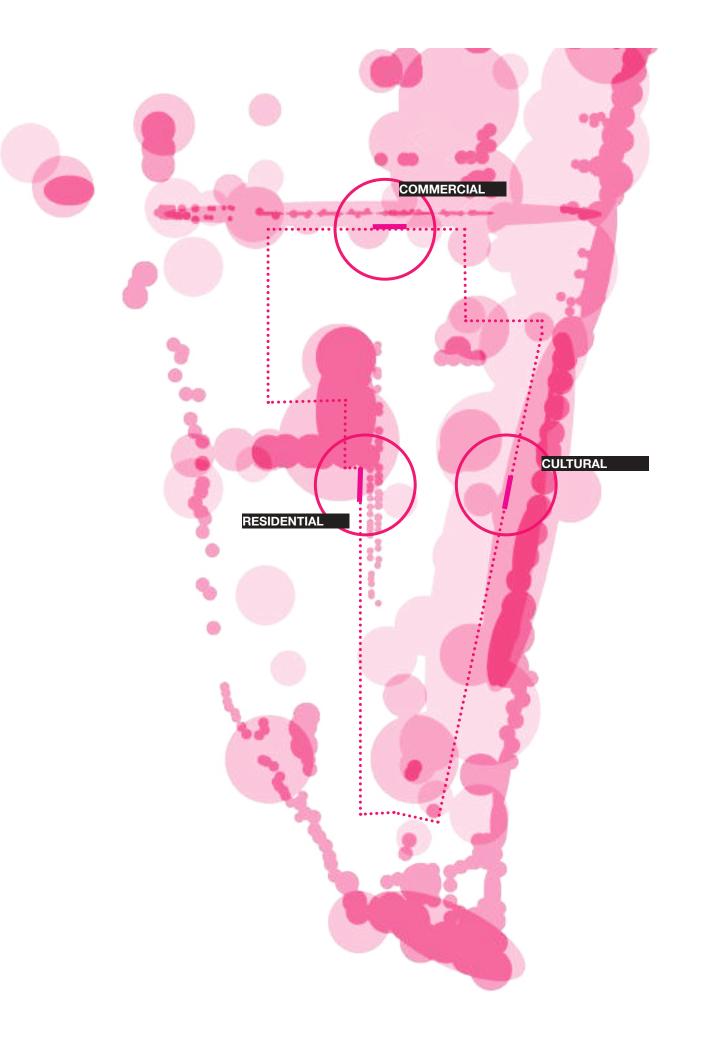




OVERLAYED MAPPING



A LOOK AT HOW
OUR SELECTED
ALLEYS FORM AN
"ALLEY LOOP" CONNECTING SOME
OF THE CITY'S HOT
SPOTS.



ALLEY IMPLEMENTATION STRATEGIES

Low Impact Development (LID)

Sun Exposure

Urban Agriculture



Bioswales



Rain Water Collection



Low Maintenance Planting



Xeriscape Lawn / Landscape



Water Run-Off Filtration



Alternative Pavers



Pervious Pavers



Gardens

Planting

Shading



Rain Garden



Grass



Shrubs



Flowers



Palms



Trees

Alley Opportunities



Shading



Evaportransportation



Public Enhancement



Placemaking



Dinning



Retail



Lighting



Planting



Pedestian Access



Urban Agriculture



Elevated Walkways



Art Activation



Refresh Spaces



Scooters



Solar Energy

Works cited

Burgos, Lila, and Tamar Sarkisian. "East Cahuenga Alley Revitalization Project." The Los Angeles Sustainability Collaborative, 2013.

"Living Alleys." Market Octavia.

James Corner Field Operations. "Lincoln Road District Master Plan." 2015.

Byrne, Thomas. "The Chicago Green Alley Handbook." 2010.

UCLA Luskin Center for Innovation. "The Avalon Green Alley Network Demonstration Project." 2015.

Anzilotti, Eillie. "A New Life For Urban Alleys." City Lab. 2016.

Produced By:

KoDA Miami

Wesley Kean

Jake Crociati Chance Paul Stillman Danny Fragata Fadia Jawhari

KoDA

THANK YOU!

