

Transitional Housing Futures: Urban Design Proposals for Delta Park Center

VOLUME 2

Appendix: Site Analysis

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SPRING 2024

ARCH 584: URBAN DESIGN STUDIO | COLLEGE OF DESIGN



Acknowledgments

This urban design studio would not have been possible with the guidance, expertise, time, and feedback of a group of professionals, community members, and project stakeholders. The entire studio would like to thank the following parties for their immense contributions to both student learning outcomes and the final project deliverables.

Studio funded by Greg Goodman, Mark Goodman, Susan Schnitzer, and Christi Goodman

Central City Concern:

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Metro:

Andrea Pastor
Melissa Arnold

Oregon Harbor of Hope:

Homer Williams
Ankrom Moisan Architects:
Mariah Kiersey
Michael Great

ZGF:

Nolan Lienhart

Home Forward, Portland Design

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Transition Projects:

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Appendix A: Culture & Place

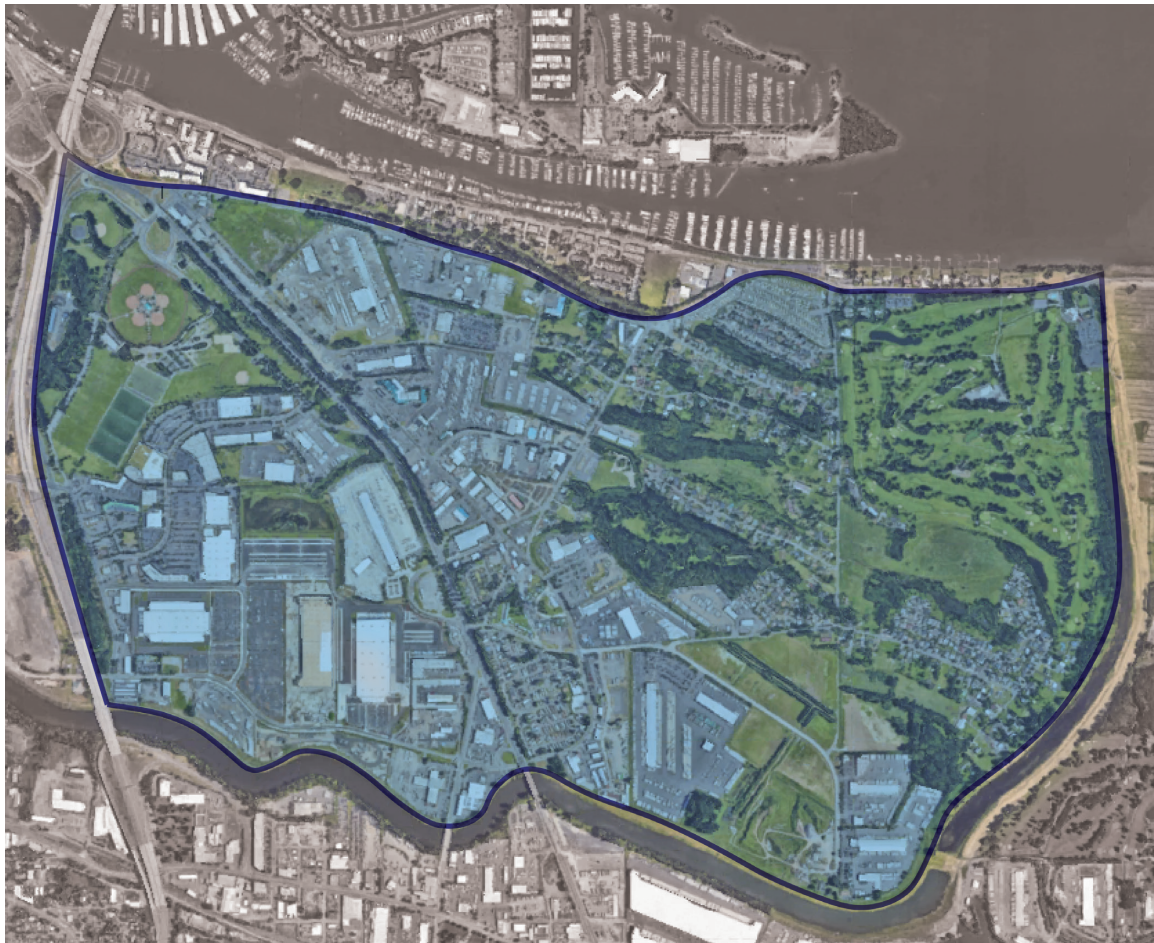
EAST COLUMBIA NEIGHBORHOOD AT A GLANCE

Current Cultural Overview:

Shaped through a rich history of triumphs and tragedies, the culture surrounding the location of the site is as expansive as it is deep. While currently having a limited “full time” residential population, it still boasts an eclectic and crowded social space, dis-proportionally large for the physical ground it covers.

Through a combination of private, as well as public spaces and events the area is able to draw a diverse population from a great geographic area, stretching well beyond Portland, as far as Seattle in some cases on a regular basis.

This broad base of familiarity and regional connections offer the opportunity to build local connections and spaces as robust as the regional and historical connections which now exist.



CULTURE/IDENTITY //
DEMOGRAPHICS

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EAST COLUMBIA (HIDDEN) NEIGHBORHOOD AT A GLANCE

DEMOGRAPHIC INFORMATION

Adjacent to the site there are several “hidden” neighborhoods, with populations possessing distinct characteristics not confined to the physical boundaries with which they interact.



CULTURE/IDENTITY //
DEMOGRAPHICS



Delta Parks West/East:
Sports Center - Soccer
Fields
Portland International Race-
way
Expo Center



Houseless Camps
R.V. and tent camps



Vancouver Commuter// High
Volume Retail Shoppers
(Lowe’s Example)

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ADJACENT NEIGHBORHOODS

DEMOGRAPHIC INFORMATION

Surrounding Neighborhoods clock-wise from upper left:
Hayden Island; Kenton; Piedmont; Bridgeton



CULTURE/IDENTITY //
DEMOGRAPHICS

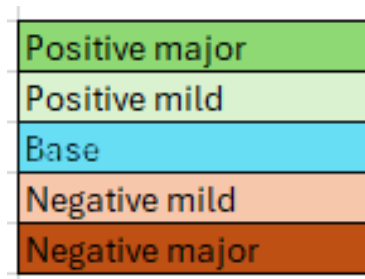
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ADJACENT NEIGHBORHOODS DEMOGRAPHIC INFORMATION

When comparing the site Location to surrounding neighborhoods on metrics on Education, Livability and housing it comes out in the middle. In general the area ranks (undesirably) high in rent burdens and relatively high in disability, but surprisingly low for food insecurity.

CULTURE/IDENTITY // DEMOGRAPHICS

Food Insecurity	Percentage	Difference from Base
East Columbia	8%	NA
Bridgeton	8%	0
Hayden Island	9%	1
Piedmont	11%	3
Kenton	8%	0



Disability	Percentage	Difference from Base
East Columbia	13%	NA
Bridgeton	13%	0
Hayden Island	17%	4
Piedmont	16%	3
Kenton	10%	-3

Education	No High School/GED	Difference from Base	Bach. Or Higher	Difference from Base
East Columbia	11	NA	41	NA
Bridgeton	11	0	41	0
Hayden Island	8	-3	33	-8
Piedmont	8	-3	55	14
Kenton	5	-6	50	9

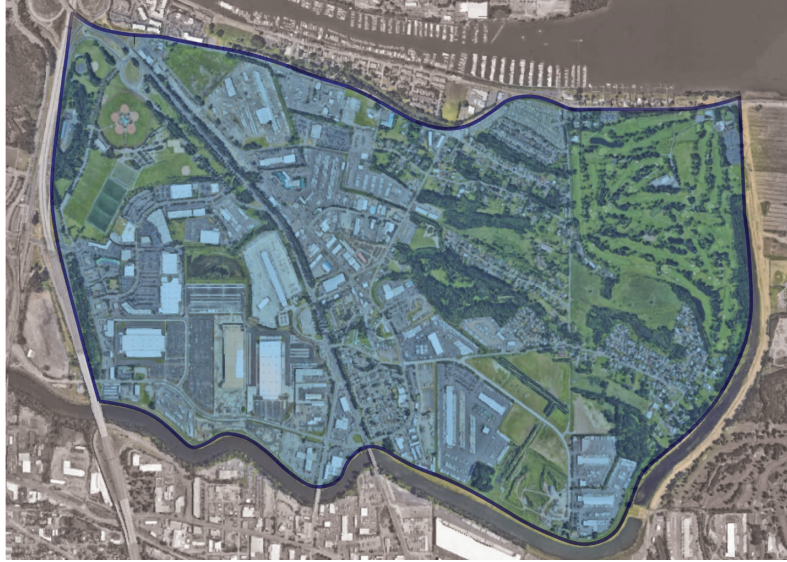
Housing	Home Ownership	Rent Burdened	Severly Rent Burd.	Med. House Value	Med. Rent
East Columbia	66	60	19	\$ 390,000	\$ 1,620
Bridgeton	66	60	19	\$ 390,000	\$ 1,620
Hayden Island	77	33	18	\$ 261,755	\$ 1,743
Piedmont	56	63	33	\$ 472,098	\$ 1,291
Kenton	69	51	15	\$ 427,831	\$ 1,699

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EAST COLUMBIA NEIGHBORHOOD

DEMOGRAPHIC INFORMATION

Total Population:
2,205



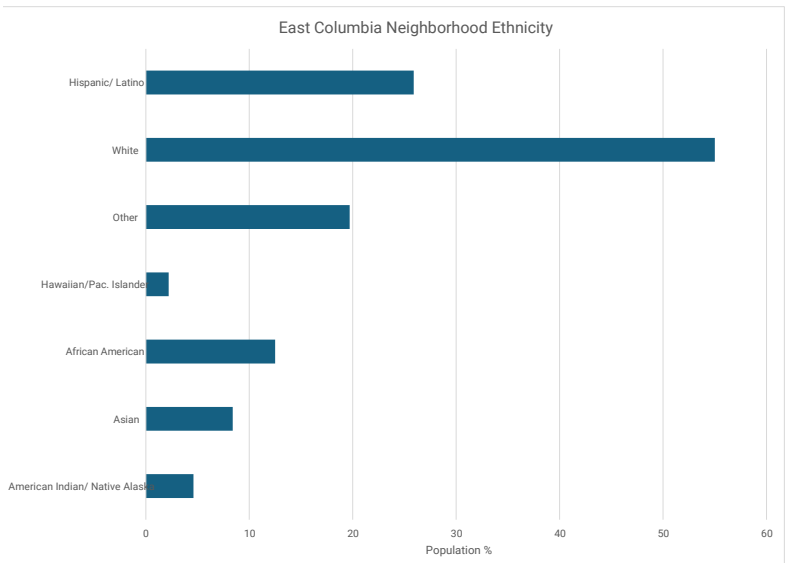
CULTURE/IDENTITY //
DEMOGRAPHICS

Ethnic breakdown of Hayden Island Neighborhood as of 2020 census

Highest Ethnicity:
White/European

Lowest Ethnicity:
Hawaiian/Pacific Islander

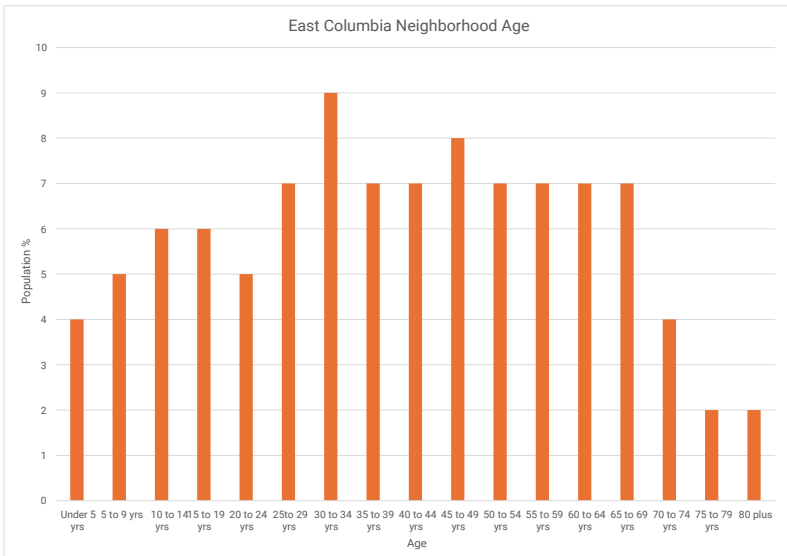
The ethnic breakdown of the neighborhood is in line with surrounding communities.



Age breakdown of neighborhood population as of 2020 census

Median age
30-34 years

The while the age distribution in the neighborhood is slightly younger than some of the surrounding neighborhoods, it has a much "flatter" curve.



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HAYDEN ISLAND NEIGHBORHOOD

DEMOGRAPHIC INFORMATION

Total Population:
3,000

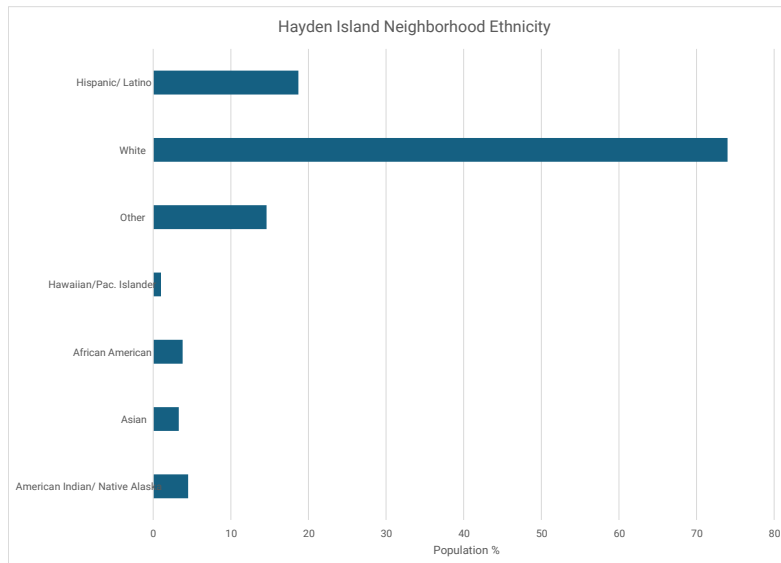


CULTURE/IDENTITY // DEMOGRAPHICS

Ethnic breakdown of Hayden Island Neighborhood as of 2020 census

Highest Ethnicity: White/European

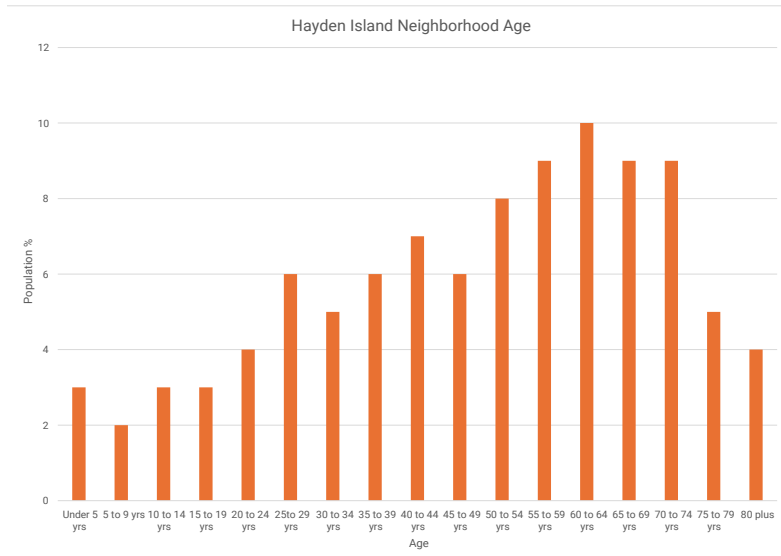
Lowest Ethnicity: Hawaiian/Pacific Islander



Age breakdown of neighborhood population as of 2020 census

Median Age 60 to 64 years

The older population representing a high deviation from East Columbia median age.



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BRIDGETON NEIGHBORHOOD

DEMOGRAPHIC INFORMATION

Total Population:
996



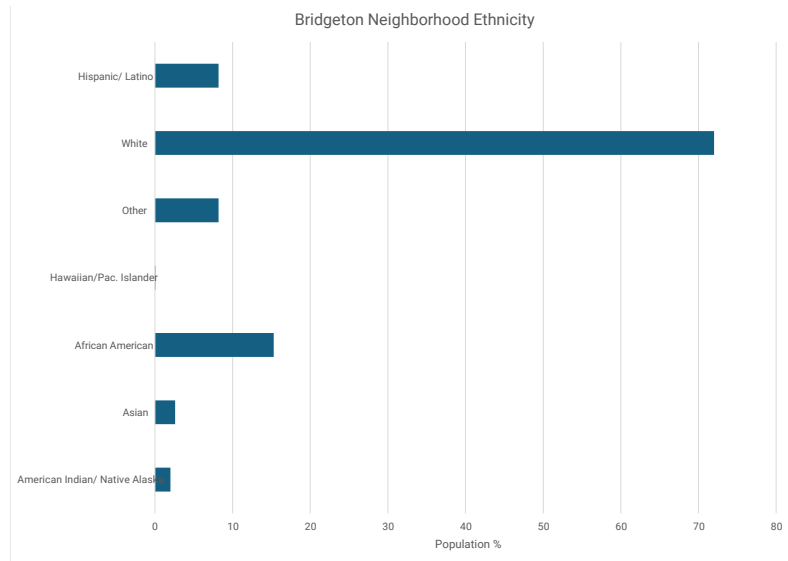
CULTURE/IDENTITY //
DEMOGRAPHICS

Ethnic breakdown of
Bridgeton Neighborhood
as of 2020 census

Highest Ethnicity:
White/European

Lowest Ethnicity:
Hawaiian/Pacific Islander
(not represented)

Native American/Alaskan

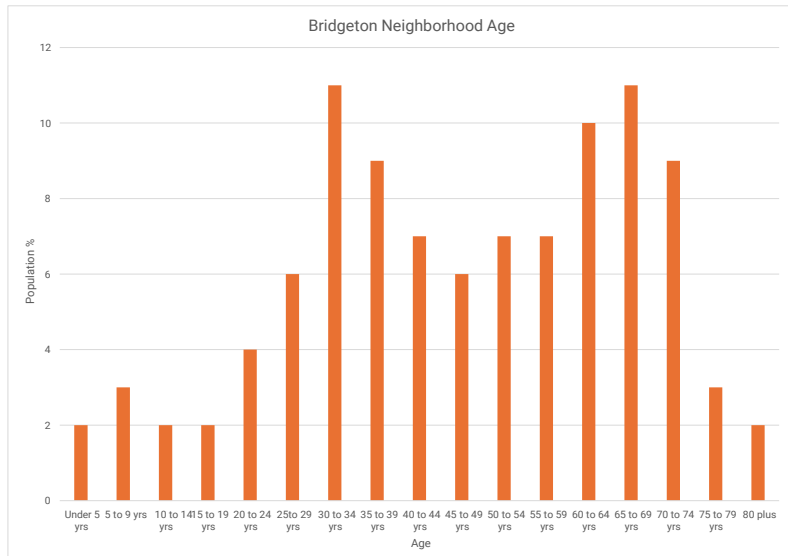


Age breakdown of
neighborhood population
as of 2020 census

Age breakdown is unique
in neighborhood with 2
spikes.

30-34 years
65-69 years

The older population
representing a high deviation
from East Columbia
median age.



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KENTON NEIGHBORHOOD

DEMOGRAPHIC INFORMATION

Total Population:
8,088

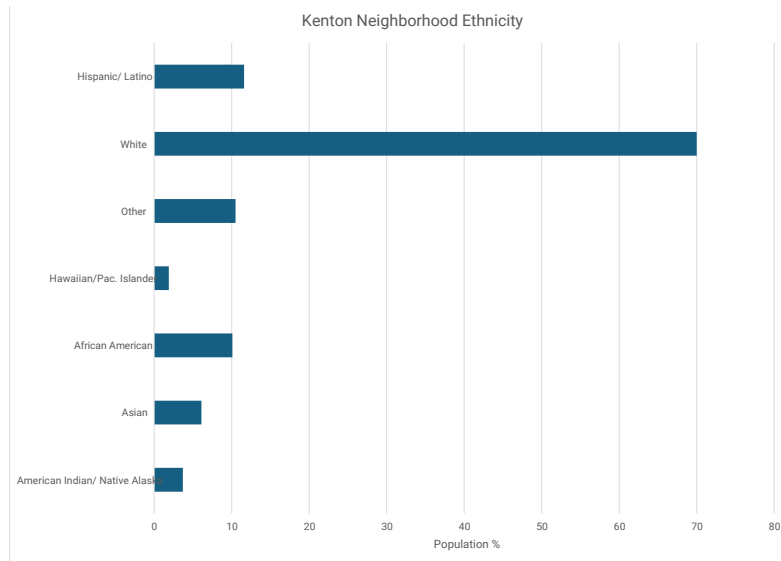


**CULTURE/IDENTITY //
DEMOGRAPHICS**

Ethnic breakdown of Kenton Neighborhood as of 2020 census

Highest Ethnicity:
White/European

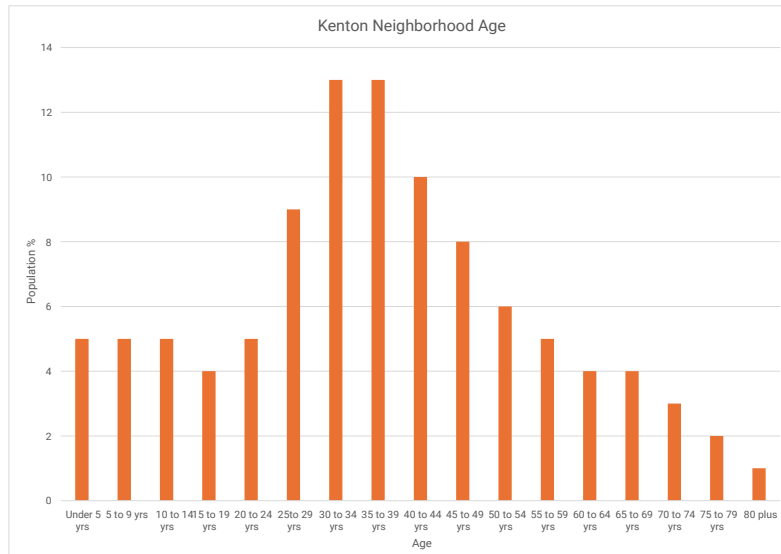
Lowest Ethnicity:
Hawaiian/Pacific Islander



Age breakdown of neighborhood population as of 2020 census

Medium age:
30-39 years

Same as East Columbia



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PIEDMONT NEIGHBORHOOD

DEMOGRAPHIC INFORMATION

Total Population:
7,033

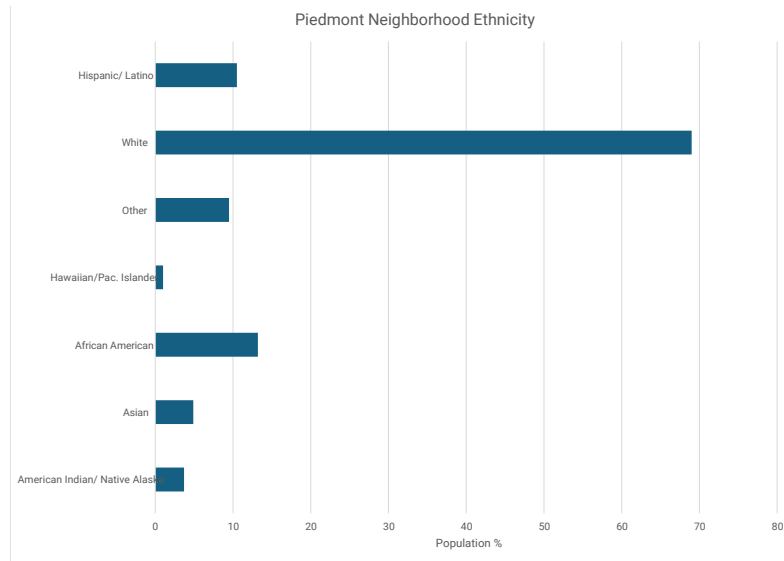


CULTURE/IDENTITY // DEMOGRAPHICS

Ethnic breakdown of Piedmont Neighborhood as of 2020 census

Highest Ethnicity:
White/European

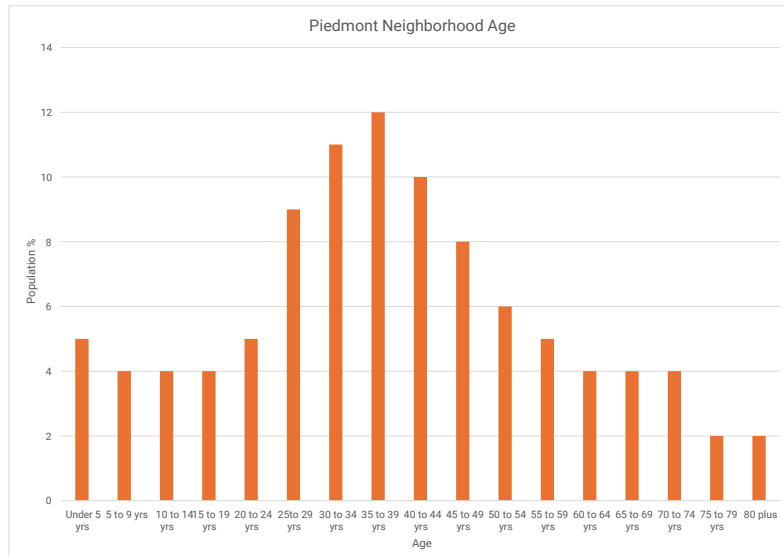
Lowest Ethnicity:
Hawaiian/Pacific Islander



Age breakdown of neighborhood population as of 2020 census

Medium age:
35-39 years

+5 years to East Columbia



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HOMELESS

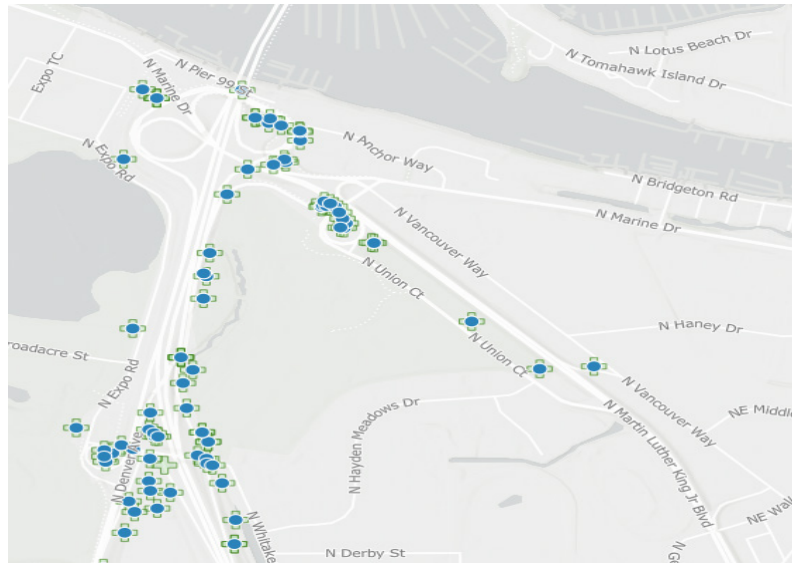
DEMOGRAPHIC INFORMATION

Like the rest of greater Portland Metro area chronic homeless camps, RV parking is present along the main transportation lines in the area.



CULTURE/IDENTITY // DEMOGRAPHICS

Real time map of reported camps as of 4.21.2024



Breakdown of disabilities in the homeless population in Portland as of 2023

HUD Homeless Population by Number of Disabling Conditions and Living Situation, Among Those Who Provided This Information

Number of Disabling Conditions	Unsheltered	Emergency Shelter	Transitional Housing	Total
One or more disabilities	1,860 (83.0%)	951 (71.9%)	570 (88.0%)	3,381 (80.3%)
Any one disability	878 (39.2%)	571 (43.2%)	253 (39.0%)	1,702 (40.4%)
Any two disabilities	279 (12.5%)	155 (11.7%)	77 (11.9%)	511 (12.1%)
Any three disabilities	287 (12.8%)	121 (9.1%)	124 (19.1%)	532 (12.6%)
More than three disabilities	416 (18.6%)	104 (7.9%)	116 (17.9%)	636 (15.1%)
Total Respondents	2,240	1,323	648	4,211

Note: Question - "Are you experiencing any of the following?" [Ask Each - Check all that apply]. Table includes all individuals who responded "Yes" or "None, N/A" to the question "Are you experiencing any of the following", and excludes individuals who indicated "Decline" or have data missing for this question.

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CROSS RIVER COMMERCE

DEMOGRAPHIC INFORMATION

Population:

Crossings(Daily): 131,747
10-20% for shopping

Vancouver: 199,600
(median age) 36.8 years

Commerce:

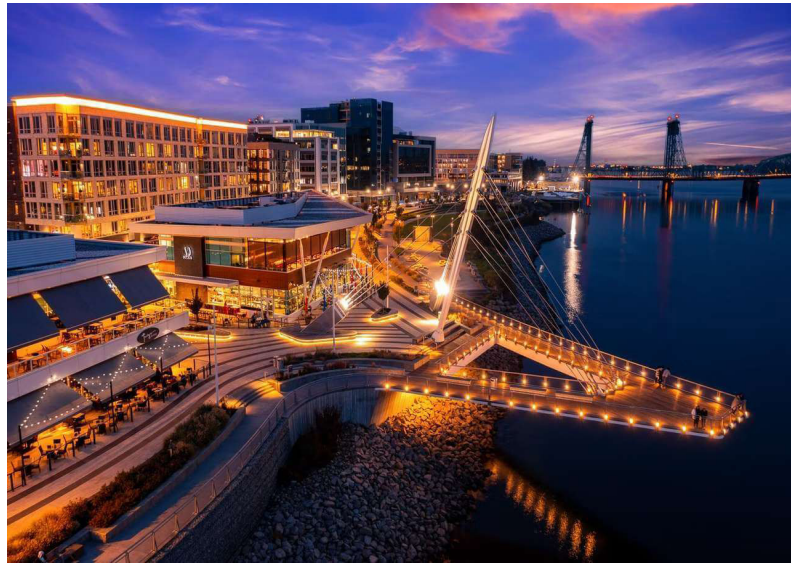
Vancouver Resident
Med. Income: 76,799

Typ. Lowe's Shopper
Med. Income: 40-80k

Home Ownership

Vancouver Resident
51%

Typ. Lowe's Shopper
Owner



CULTURE/IDENTITY //
DEMOGRAPHICS

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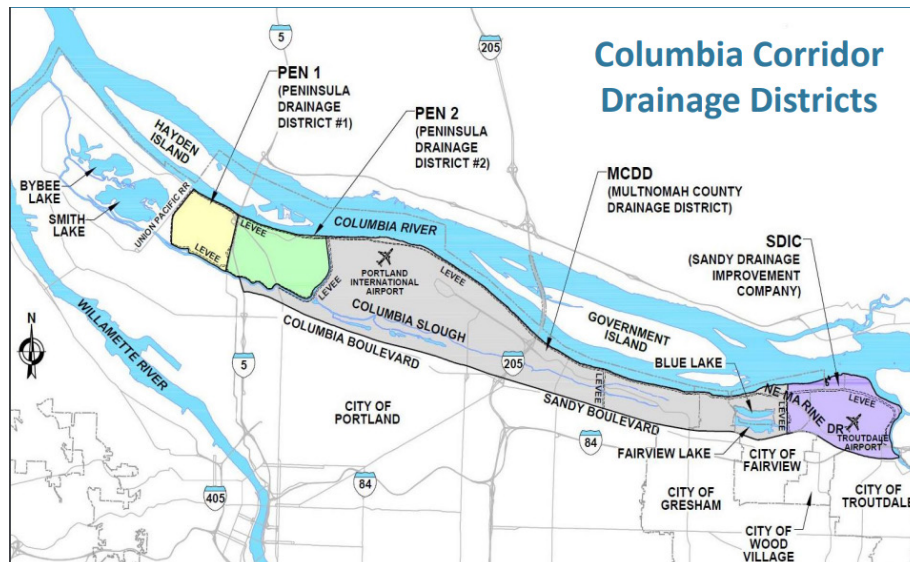
GREATER REGION IDENTIFICATION

DEMOGRAPHIC INFORMATION

In addition to being located in the East Columbia neighborhood, the site sits within the Columbia Slough Watershed, and the Columbia Levee system.



CULTURE/ IDENTITY//
IDENTITY



Above:
Columbia Slough
Water-Shed

Left:
Columbia Slough
Level Districts

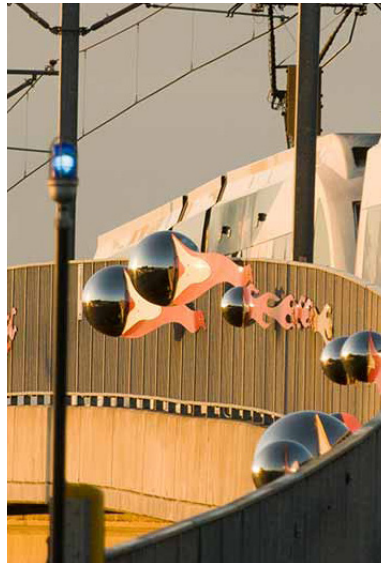
From:
MCDD
Flood Protection
The Columbia
Corridor
Levee System;
History and
Challenges

Kayla Mullis, Dec.
2023

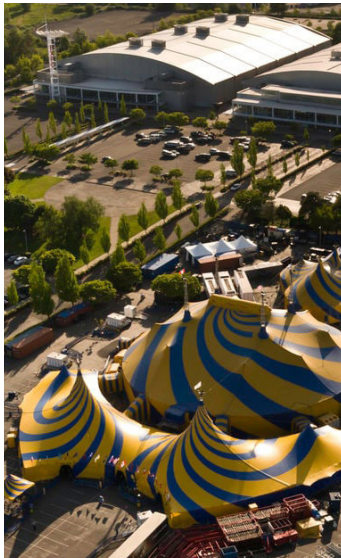
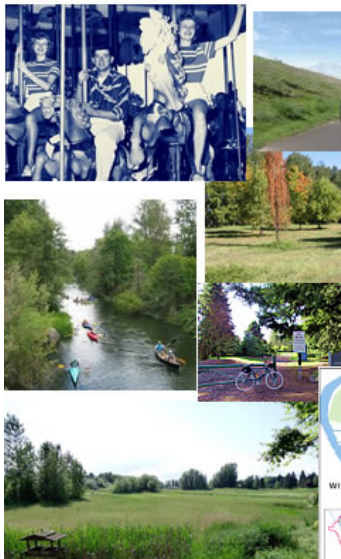
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GREATER REGION IDENTIFICATION

Photographic Record



CULTURE/IDENTITY //
IDENTITY



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PORTLAND INTERNATIONAL RACEWAY

DEMOGRAPHIC INFORMATION

At a glance:

Total net visits: 221,926
 Total visits: 352, 775
 Outside area (69%)

Capacity:
 86,000 total

Total spending: 30.5 million

Days of Operation: Yearly
 Peak season: April-September

Events:

- Drag Races
- Motocross
- Auto Racing
- Cruse-In/ Swaps

Community Events:

- Pancan Purple Stride
- Stride for Seniors
- Hood to Coast
- “Turkey Trot” relay
- Winter Wonderland
- Holiday Lights

Attendance by type:

Auto Racing:	40,050	11%
Motorcycle:	30,000	9%
Car Show:	33,500	9%
Non-Motorized:	14,950	4%
Holiday lights:	150,000	43%
Other:	84,275	24%

Participation:

Participant + Spectator	55%
Participant only	25%
Spectator only	17%



CULTURE/IDENTITY//
 IDENTITY

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DELTA PARK EAST OWEN'S SPORTS COMPLEX

DEMOGRAPHIC INFO

At a glance:

Total net visits: 59,351
Total visits: 364,769
Ave. repeat visits: 20

Capacity:
7 Softball fields
9 Soccer fields

Days of Operation: Yearly
Peak season: March-October

Events:

Pow Wow
Ultimate Frisbee
NW Athletic Con. Champ.
Portland Metro Summer Leg.

Attendance by type:

Baseball: 15,244	6%
Soccer: 146,486	61%
Softball: 38,016	16%
Volleyball: 6,554	3%
Other: 33,074	14%

Participation:

Participant + Spectator	55%
Participant only	25%
Spectator only	17%



CULTURE/IDENTITY//
IDENTITY

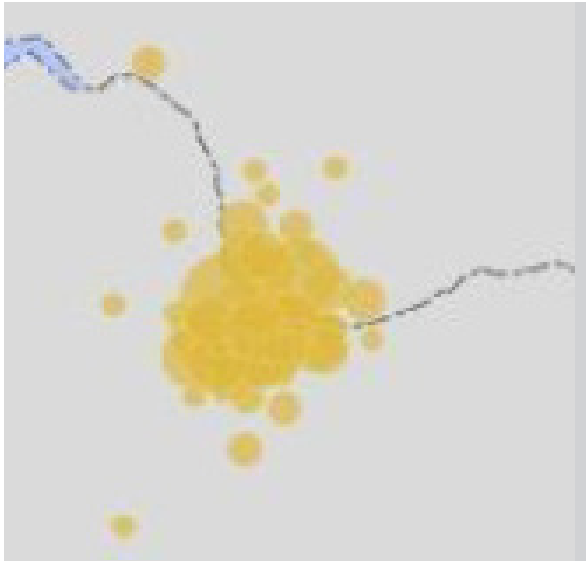
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GREATER DEMOGRAPHIC REGIONS

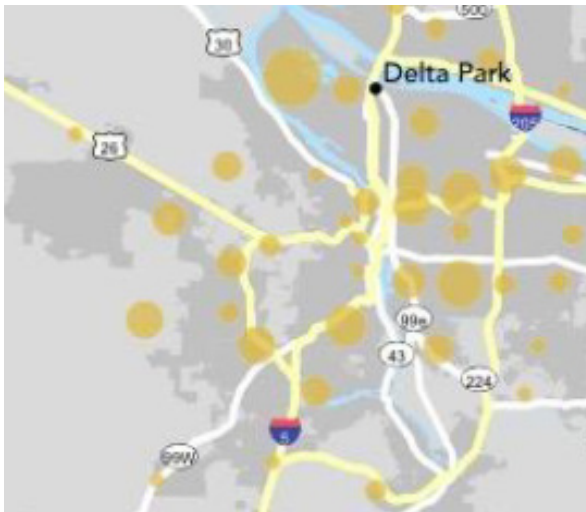
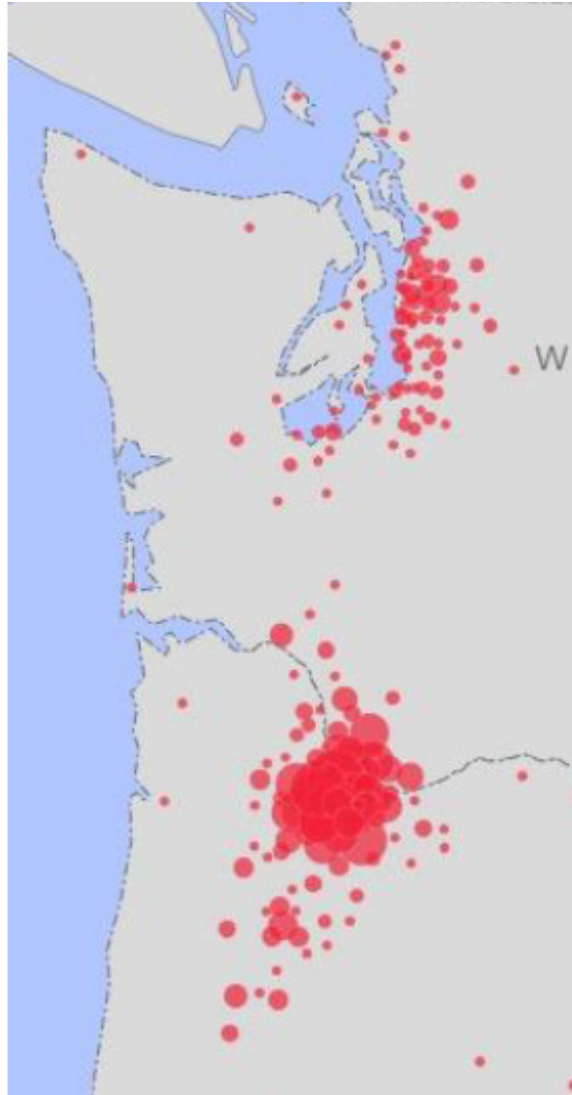
Portland Internation Raceway Owens Sports Complex

While the demographic using the Owens Sports complex immediately adjacent to the site is pre-dominantly from the greater Portland Metro Area, the demographic found at PIR comes from a much larger geographic range. In the case of PIR, the geographic foot-print of the demographic stretches from Eugene up to the greater Seattle metro.

Place of residence for Owen's center Visitors



Place of residence for PIR Visitors



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DEMOGRAPHIC

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Fig. From The Impact of Portland's Delta Park; An Economic Analysis Before and After Proposed Facility Improvements ECONorthwest May 2017 pgs. 13, 23

SINCE TIME IMMEMORIAL

The area we now call Portland has been occupied by Native Americans for thousands of years. When Lewis & Clark came through the area, they documented around 20 villages along the Columbia & Willamette Rivers. These villages shared a common culture and are believed to have been part of the Upper Chinook Nation.



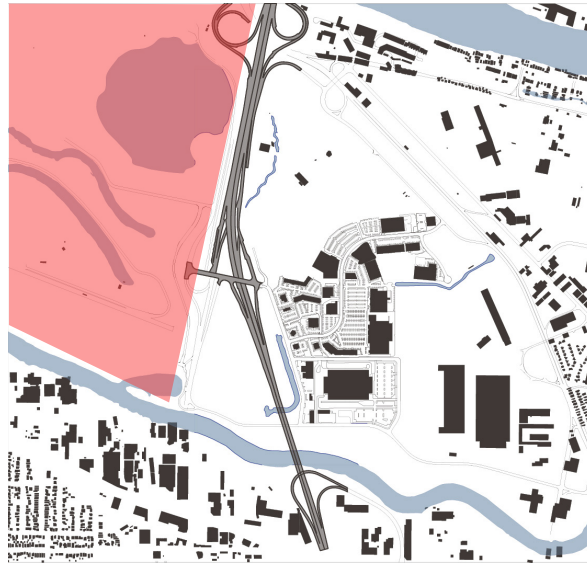
CULTURE & PLACE //
INDIGENOUS PRESENCE



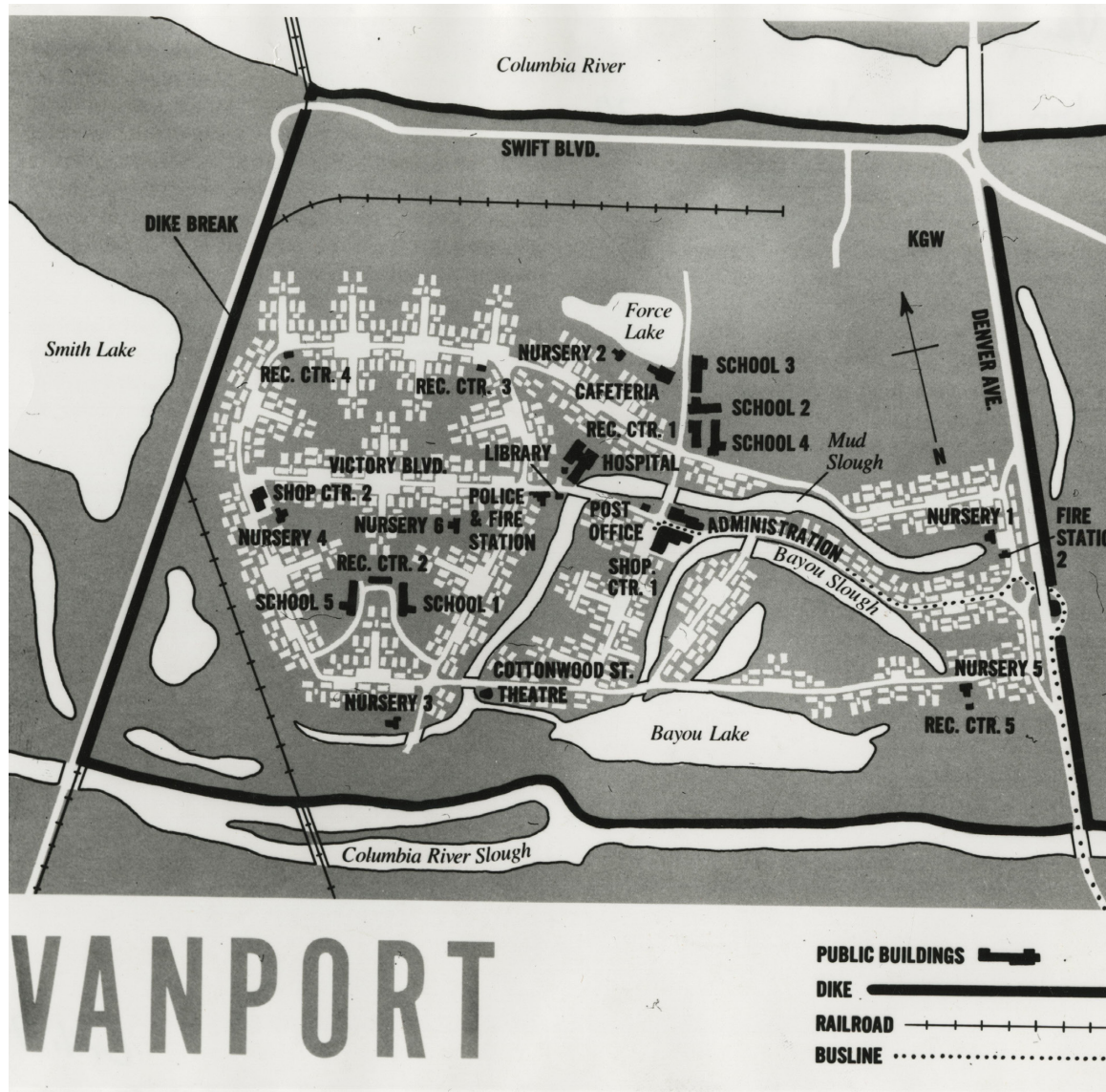
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VANPORT'S HISTORY

Even though Vanport only existed from 1942 to 1948, it was the largest wartime housing development in the country. At the time, it was the second largest city in Oregon and included shopping centers, a 750-seat movie theater, a 150-bed hospital, recreation centers, schools, and nurseries. At its peak, the population was around 42,000 people.



CULTURE & PLACE //
VANPORT



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VANPORT'S HISTORY

Vanport was home to the largest black population in the Portland metro area. At its peak, 40% of the total Vanport population was black. Although explicit segregation policies were not present in town policy, black residents still faced social discrimination. After the city's destruction, black residents were displaced all across Portland, mostly in the northern and eastern neighborhoods.



CULTURE & PLACE //
VANPORT



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CONSTRUCTION

Construction of apartments



CULTURE & PLACE //
VANPORT

Construction of a school



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Construction of a school

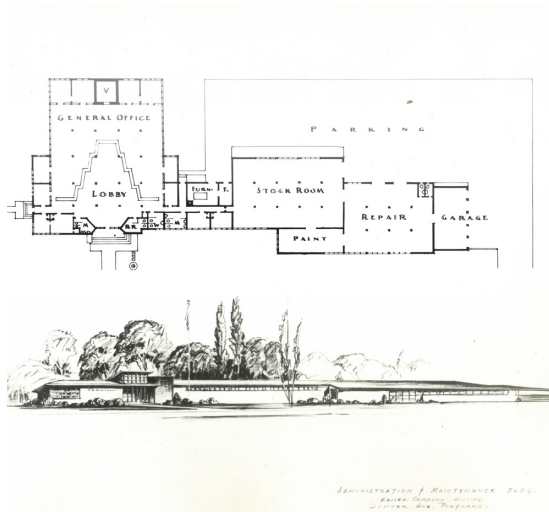


BUILDING TYPES

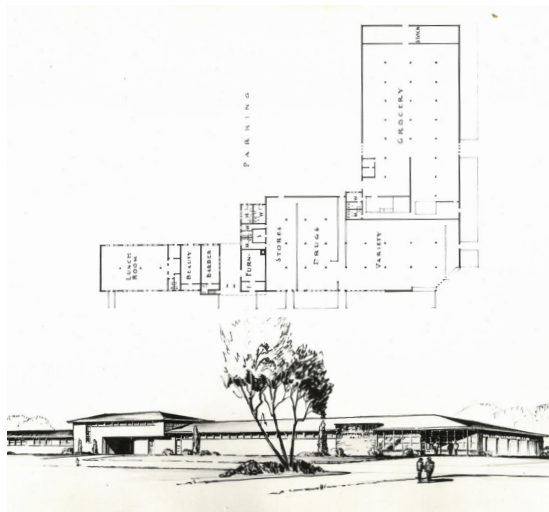
Newly finished apartments



CULTURE & PLACE //
VANPORT



The Administration Building



One of the shopping centers

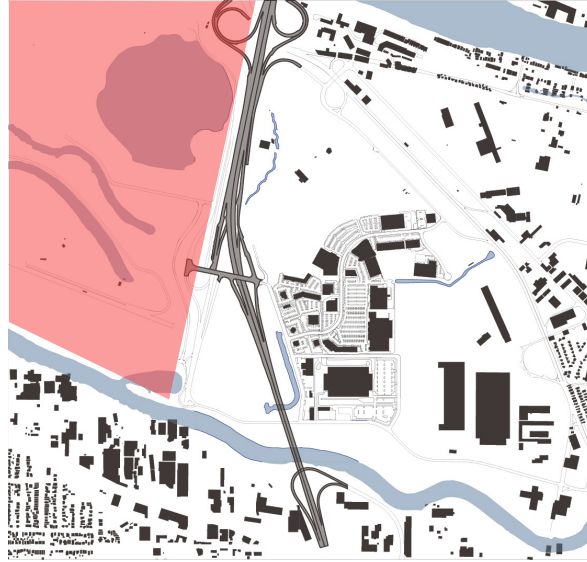


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OVERVIEW

In the weeks leading up to Memorial Day 1948, heavy rain led to high water levels in the regions rivers. On May 30, 1948, at 4:18 pm, water breached one of the dikes on the west side of the side near the railroad tracks. The city was completely flooded within thirty five minutes, which killed fifteen residents. The 18,500 residents living in Vanport at the time of the flood were displaced.



CULTURE & PLACE //
VANPORT FLOOD



STUDENT NAME // STUDENT NAME

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DESTRUCTION

The high waters that flooded Vanport didn't recede for weeks.



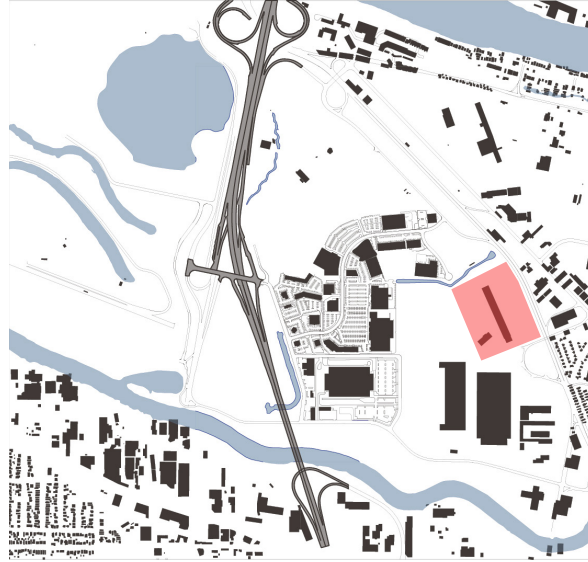
CULTURE & PLACE //
VANPORT FLOOD



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PORTLAND SPEEDWAY

The Portland Speedway was a half-mile auto racing track to east of the defined project site along NE Martin Luther King Jr Blvd. Races began on the site in 1924 and continued until the final race, which took place in 2001. Today, it is the site of trucking warehouse.



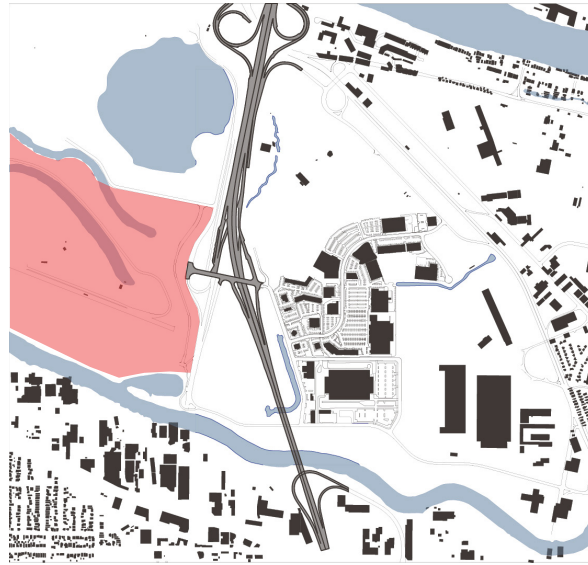
CULTURE & PLACE //
PORTLAND SPEEDWAY



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PORTLAND INTERNATIONAL RACEWAY

The Portland International Raceway was originally known as West Delta Park, where street racing took place on the old streets from the city of Vanport in 1961. The track was paved in the 1970s and is still in operation today.



CULTURE & PLACE //
PIR



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EXPO CENTER

The Expo Center site has seen the following events over the course of its history: The Pacific International Livestock Association (1920s - 1950s, Japanese incarceration center (May 1942 - September 1942), Oregon Centennial Exposition and International Trade Fair (1959), Multnomah County Fair (1960s - 1990s), the current Expo Center (1990s - Present).



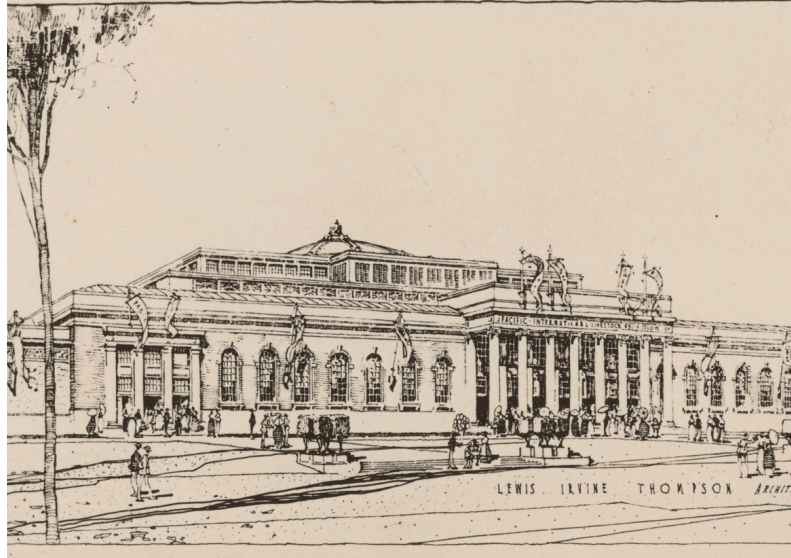
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EXPO CENTER



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EXPO CENTER

Pacific International
Livestock Exposition



CULTURE & PLACE //
EXPO CENTER

Japanese Internment



Oregon Centennial
Exposition and
International Trade Fair

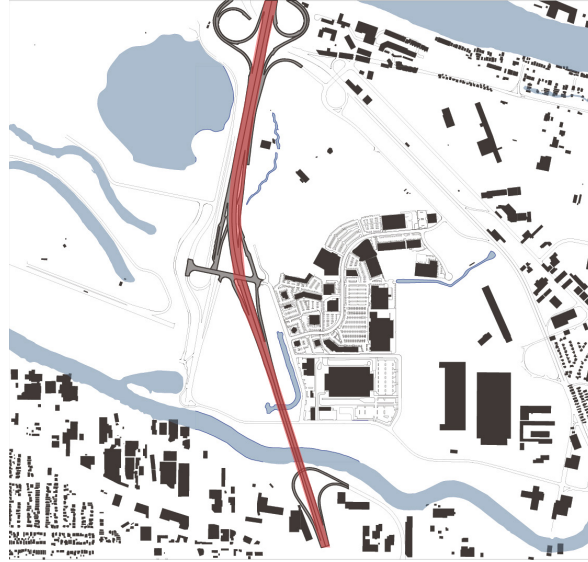


NICK HODGE // MISHA POPENIUK

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

I-5

The Pacific Highway Association formed in 1910 to connect Tijuana to Vancouver, BC. The highway adopted by the Oregon State Highway Commission in 1914. A gas tax was finally approved 1940. The I-5 route was studied and approved in the 1950s. I-5 construction came through the Portland area in the 1960s.



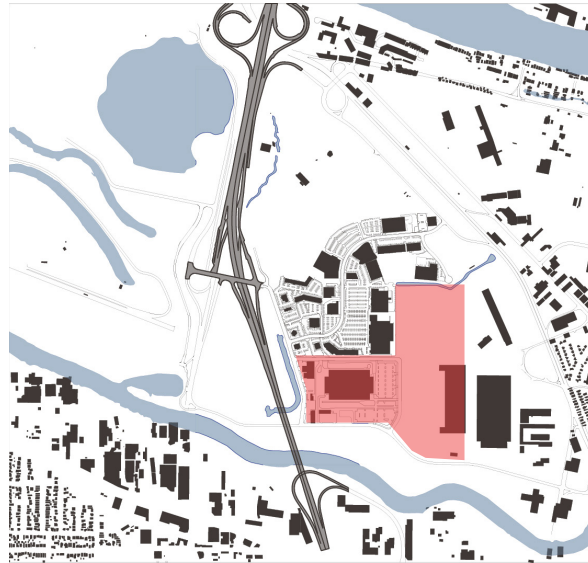
CULTURE & PLACE //
I-5



NICK HODGE // MISHA POPENIUK
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

PORTLAND MEADOWS

The Portland Meadows was a horse racing track that opened in 1946. The Vanport Flood closed the track in 1948. Races continued at the site until 2019. A casino-style poker club opened near the grand stand in 2016 and also ceased operations in 2019. The main building was demolished in 2020. Amazon began using the site for warehouse facilities in the former track parking lot starting in 2021.



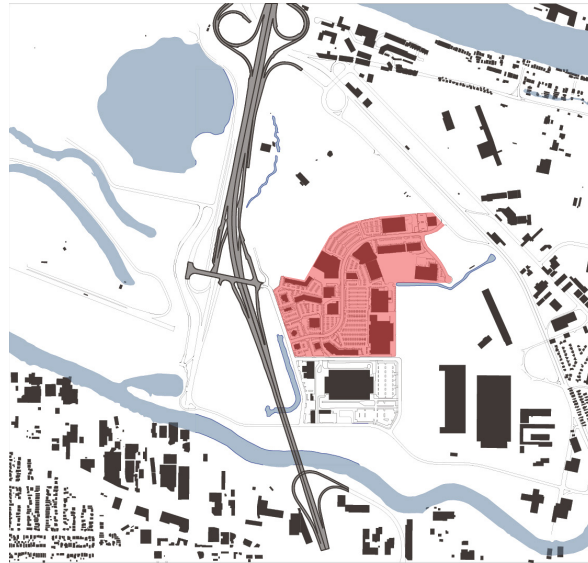
CULTURE & PLACE //
PORTLAND MEADOWS



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ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

DELTA PARK CENTER

Delta Park Center was originally developed in the 1980s as a retail center. It is currently home to large retailers like Lowe's and Dick's Sporting Goods as well as community services like a DMV office and a Bottle Drop location. It sees customers from the North Portland & Vancouver regions.



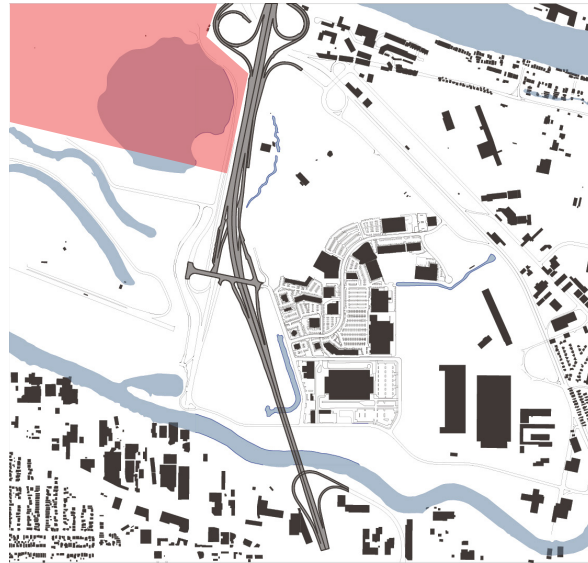
CULTURE // PLACE //
DELTA PARK CENTER



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DELTA DOME

The Delta Dome was a proposed sports venue originally posed to voters as a ballot measure seeking a bond to fund construction in 1964. Plans included seats for at least 46,000 people and parking for 17,000 cars. The structure was partially intended to increase the city's odds of hosting the Olympics. The proposal failed multiple ballot measures and ultimately was never built.



CULTURE & PLACE //
DELTA DOME



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Appendix B: Environmental

ECOLOGICAL LOCATIONS TO CONNECT WITH

- 1 Kelley Point Park**
(N Marine Drive & Lombard St.)
This multi-use park features cottonwood forest with grassy, open areas. It offers inviting beaches, as well as fabulous views of the Columbia Slough, Willamette and Columbia Rivers, Sauvie Island, and marine traffic.
- 2 Kelley Point Park Canoe Launch**
Just inside the park entrance, a parking area provides access to a canoe launch.
- 3 Kelley Point Park to Smith/Bybee Wetlands Trail**
The trail starts across the street from the entrance to the park. It passes through grassland and along the wetlands.

- 4 Ramsey Lake Wetlands**
This city constructed wetlands/stormwater treatment facility is planted with native vegetation. It borders Port of Portland mitigation wetlands to the north and restored historic wetlands and forests.
- 5 St. Johns Landfill Grasslands**
(No public access, but can be seen from adjacent viewpoints)
This closed landfill is part of the Smith and Bybee Wetlands Natural Area. Its 264 acres of grasslands complement the adjacent natural areas. Future trail access to the North Portland Greenway and Smith and Bybee Wetlands is planned.
- 6 St. Johns Landfill Canoe Access**
The entrance road provides parking for an informal canoe launch. Upstream sights are lovely. Slough lows here are tidal.
- 7 Smith and Bybee Wetlands Natural Area**
At nearly 2,000 acres, this is one of the nation's largest urban freshwater wetlands. Its varied habitats include ash and cottonwoods, open meadows, wetlands, and Smith and Bybee Lakes. The Interlakes Trail includes two wildlife viewing platforms. A canoe launch provides water access.

- 8 Bicycle-Pedestrian Trail**
This vacated road (formerly North Marine Drive) is part of the regional trail system located along the northeast edge of Smith Lake.
- 9 Wapato Wetlands**
(Accessible only by boat from the slough during high water)
These privately owned wetlands contain the largest stand of native Wapato ("Indian potato") within Portland.
- 10 Columbia Boulevard Wastewater Treatment Plant**
The plant started treating Portland's sewage in 1952. Treated sewage is discharged to the Columbia River. A footbridge connects the Peninsula Crossing and Columbia Slough trails. The site includes a 6-acre restored forest and a boat launch accessible during high water. Low water brings mud flats.
- 11 Peninsula Crossing Trail**
This trail connects the Willamette and Columbia Rivers and numerous greenspaces.
- 12 Heron Lakes Golf Courses**
These two Portland Parks & Recreation golf courses are located on the site of Vanport, a World War II housing project destroyed by flooding in 1948. At Force Lake, near the entrance, interpretive signs describe Vanport and local wildlife.

- 13 Vanport Wetlands**
Numerous waterfowl and shorebird species frequent this 90-acre Port of Portland mitigation wetland.
- 14 Delta Park**
This multi-use park offers sports fields, paths, a playground, and picnic tables.
- 15 Bridgeton Slough Walking Path**
A short trail parallels the slough. A planned extension along the levee will connect to the Expo Center.
- 16 Columbia Children's Arboretum**
The 27-acre arboretum and park is a mosaic of wetland, riparian, and grassland habitat. Beginning in 1968, students planted trees from each state here.
- 17 Flyway Wetlands**
This 25-acre wetland natural area has no amenities or access, but can be seen from adjacent viewpoints.
- 18 Multnomah County Drainage District Headquarters**
The Drainage District maintains 35 miles of waterways, 15 miles of levees, and pumps that control water levels in 6,200 acres of the Columbia Slough watershed. Canoe launches are provided into both the Lower (west) and Middle (east) Slough areas.

- 19 Catkin Marsh**
This 54-acre wetland, located within Broadmoor Golf Course, will be a future trail link in the regional trail system.
- 20 Whitaker Ponds Nature Park**
A walking path leads through a cottonwood forest, past two spring-fed ponds. This public park also includes a floating dock, canoe launch, environmental education areas, and stormwater treatment wetlands.

ME // STUDENT NAME
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

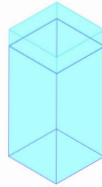
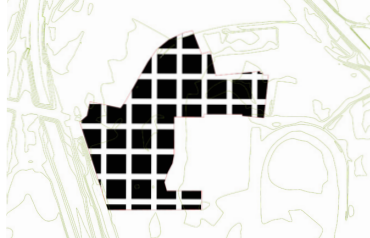


ENVIRONMENTAL // OPPORTUNITIES

NATURES BUDGET

If we filled the site area with Portland blocks and collected water and solar energy on the roofs, here are the amounts you can collect versus an estimate of programmatic need:

100% ground coverage:

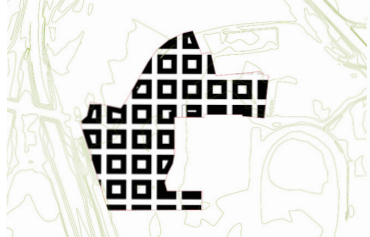


COLLECTED:
23 MILLION GALLONS



COLLECTED:
24 MILLION KWH

70% ground coverage:

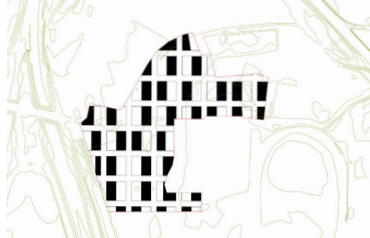


COLLECTED:
16 MILLION GALLONS



COLLECTED:
16.5 MILLION KWH

50% ground coverage:



COLLECTED:
11.5 MILLION



COLLECTED:
12 MILLION KWH

30% ground coverage:



COLLECTED:
7 MILLION GALLONS



COLLECTED:
7 MILLION KWH

Proposed Program: 1800 units of residential + 350k sq ft commercial/services

Water needs for proposed program - 20 million gallons/year.

Energy needs for proposed program - 29 million kWh.

*assumes solar covers entire roof area, with solar panels of 17.5 sq ft producing 320 watts/panel in Portland which has 3.5 peak sun hours/day on average

ENVIRONMENTAL // OPPORTUNITIES

KIM NICHOLS// NICOLE STOUT
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ENVIRONMENTAL // CLIMATE // WIND

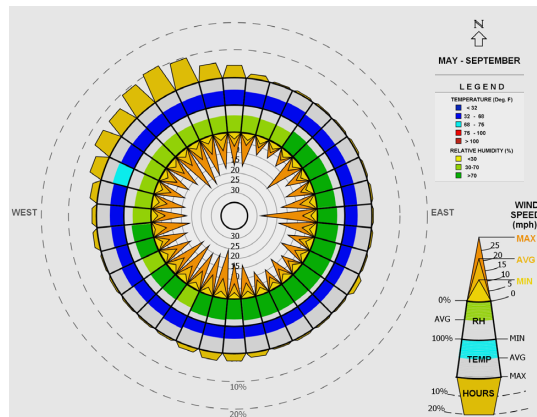
SUMMER

EMBRACE THE WIND

PREDOMINANTLY FROM THE **NW**

BENEFITS:

- VENTILATION
- EVAPORATIVE COOLING

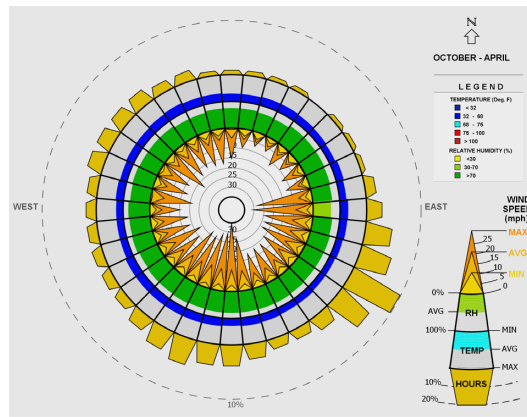


WINTER

PROTECT FROM THE WIND

PREDOMINANTLY FROM THE **SE**

WINTER WIND CAN MAKE OUTDOOR SPACES MORE UNCOMFORTABLE



FROM CLIMATE CONSULTANT 6.0 (PDX AIRPORT)

STRATEGIES:

- Open courtyards and outdoor areas more to the NW.
- For ventilation, 45 degree angle of openings towards wind is optimal.

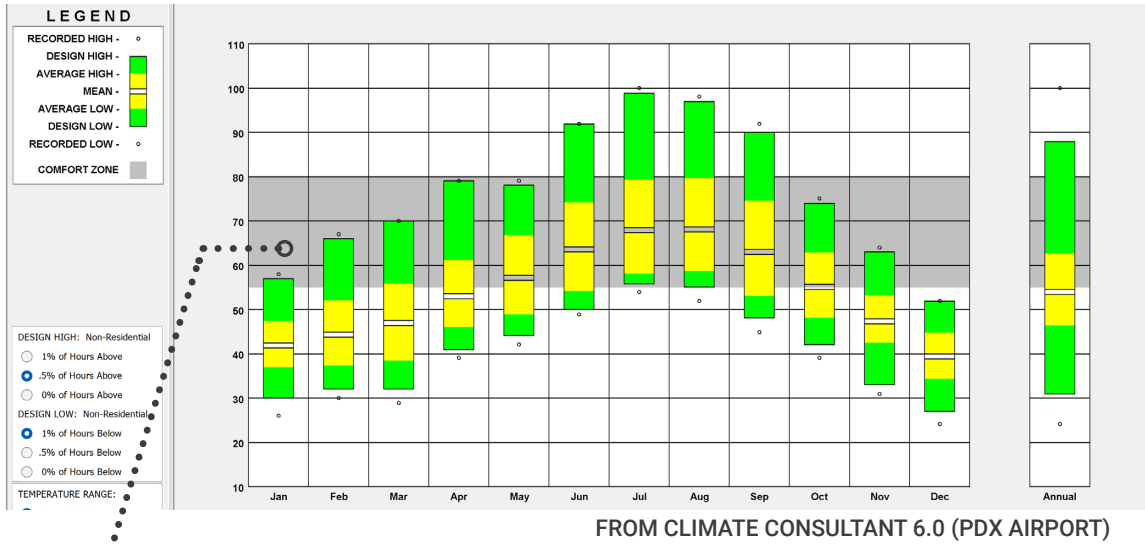
STRATEGIES:

- Sunny wind-protected outdoor space can extend occupied areas in cool weather.
- Exterior wind shields or dense planting can protect entries and outdoor spaces from cold winter winds (wing walls, wind breaks, fences, buildings, or land forms).

ENVIRONMENTAL // CLIMATE

KIM NICHOLS// NICOLE STOUT
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ENVIRONMENTAL // CLIMATE // TEMPERATURE and SUN



GREY BAND REPRESENTS THE COMFORT ZONE OF 55 DEGREES TO 80 DEGREES

ENVIRONMENTAL // CLIMATE

SUMMER

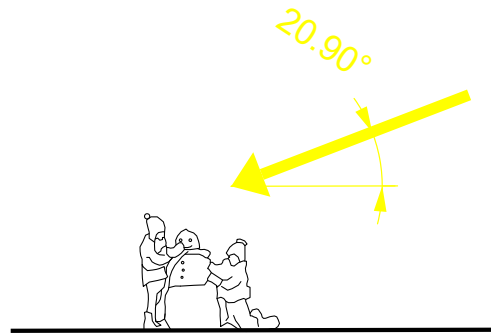
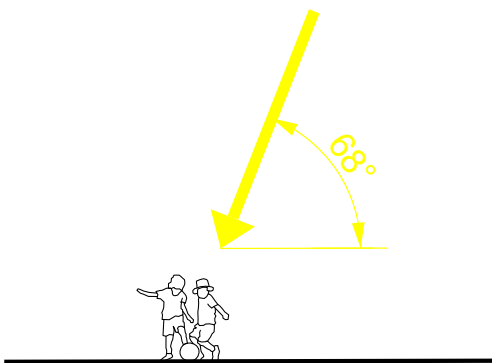
STRATEGIES:

- Increase tree cover
- Use shaded structures
- Water features
- Consider massing for shade
- Overhangs block HIGH summer sun but allow low winter light in.

WINTER

STRATEGIES:

- Protect from wind
- Protect from rain.
- Consider massing and orientation for winter light - LOW on the horizon.



KIM NICHOLS// NICOLE STOUT

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ENVIRONMENTAL // CLIMATE // RAIN

Portland has HOT, DRY summers and DRIZZLY, CHILLY winters.



Coquine Market Cafe from pdxmonthly.com Karen Brooks



Laugavegur 28b Boston - heated, sheltered, smoking area.



Peninsula Park PDX Portland.gov



Covered Basketball Courts - Alberta Park PDX



Westmoreland Park PDX Portland.gov



Luwit View Park Picnic Shelter - PDX portlandoregon.gov/

SUMMER

STRATEGIES:

- Drought tolerant plantings
- Use stored rainwater for irrigation during dry months
- Urban water features very popular here in summer
- Provide covered structures for outdoor use

WINTER

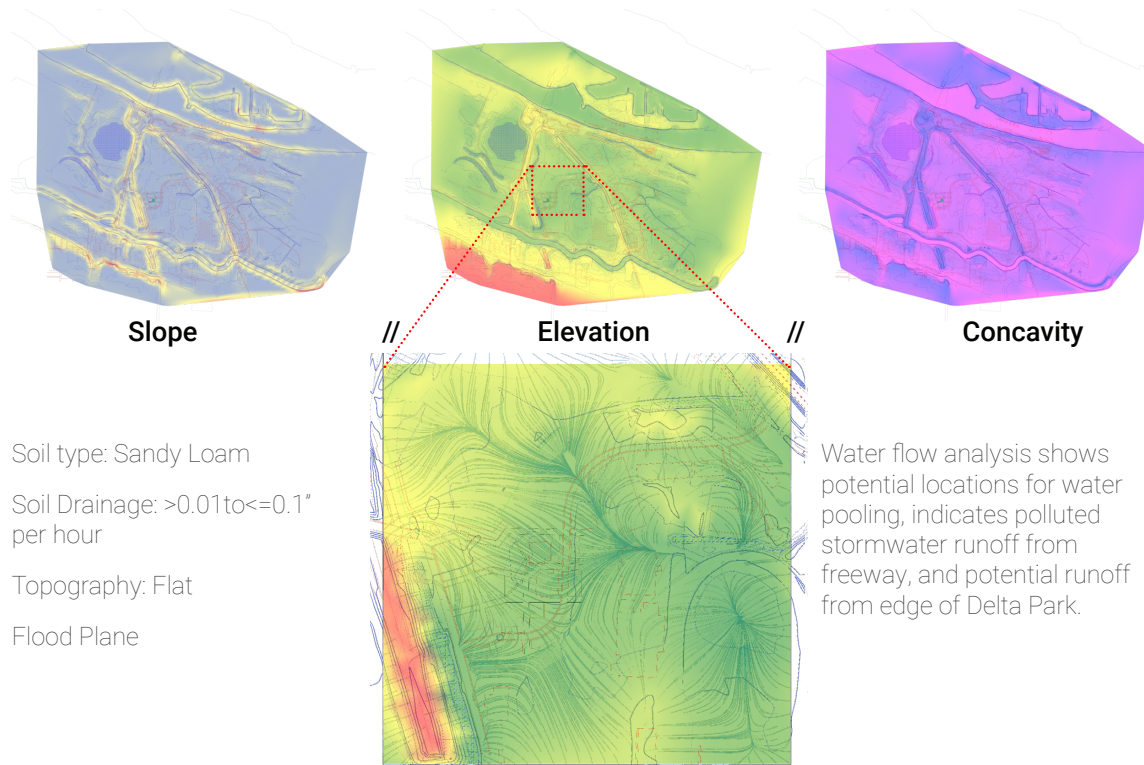
STRATEGIES:

- Capture rainwater for reuse
- Green roofs reduce the rain that reaches the streets
- Trees absorb more rain
- Ensure good drainage for pedestrian paths
- Provide covered structures for outdoor use

ENVIRONMENTAL // CLIMATE

KIM NICHOLS// NICOLE STOUT
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ENVIRONMENTAL // SUD // STORMWATER



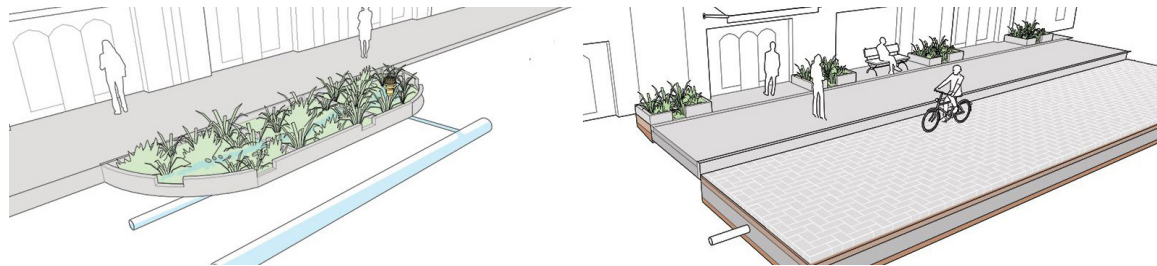
Soil type: Sandy Loam

Soil Drainage: >0.01 to ≤ 0.1 " per hour

Topography: Flat

Flood Plane

Water flow analysis shows potential locations for water pooling, indicates polluted stormwater runoff from freeway, and potential runoff from edge of Delta Park.



Illustrations of bioswale (left) and permeable paving (right) strategies see NACTO Stormwater Management: <https://nacto.org/publication/urban-street-design-guide/street-design-elements/stormwater-management/>

STRATEGIES:

- Bioswales adjacent to streets and parking structures (downhill and uphill are both effective)
- Robust urban plantings reduce runoff
- Permeable paving where appropriate (soil drainage poor)
- Filter and treat pollutants out of stormwater
- Consider visible water treatment for the neighborhood

ENVIRONMENTAL //
STORMWATER

KIM NICHOLS// NICOLE STOUT
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ENVIRONMENTAL // SUD // RAINWATER CAPTURE

Due to efforts to conserve water in Oregon, the Building Codes Division has approved the use of rainwater harvesting systems as an alternate method to the state plumbing codes. www.bcd.oregon.gov

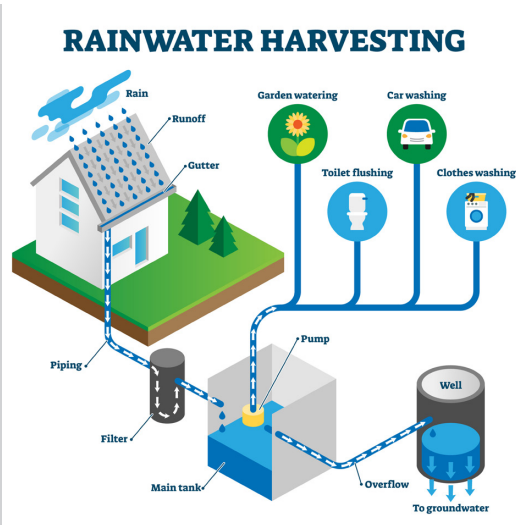
Virtually all water needs can be provided for via 4 (SEE: OPPORTUNITIES)

STRATEGIES:

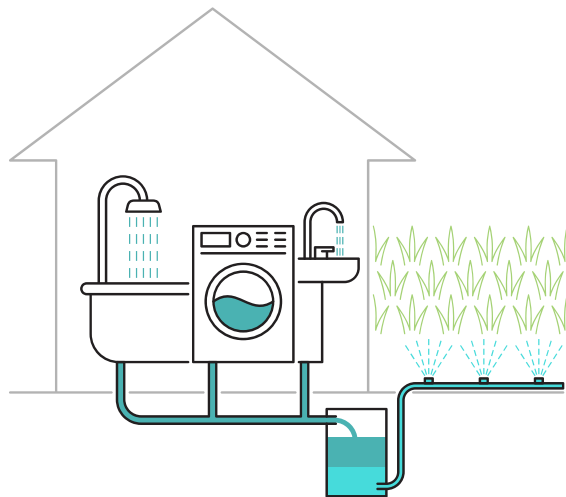
- Water Conservation
- Rainwater Harvesting
- Greywater Irrigation
- Blackwater Treatment



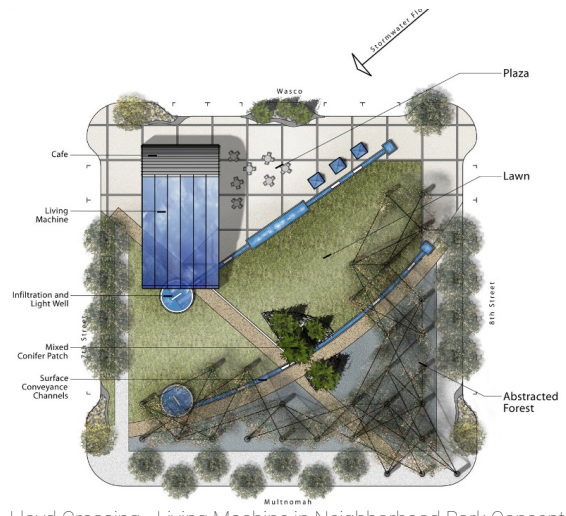
1.) WATER CONSERVATION



1.) RAINWATER HARVESTING



1.) GREYWATER IRRIGATION



Lloyd Crossing - Living Machine in Neighborhood Park Concept
1.) BLACKWATER TREATMENT

ENVIRONMENTAL // RAINWATER CAPTURE

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

KIM NICHOLS// NICOLE STOUT

ENVIRONMENTAL // SUD // HEALTH AND EQUITY

STRATEGIES:

- Equitable Neighborhood Amenities
- Access to Transit
- Pedestrian and Bike Paths
- Compact Development
- Mix of Housing Types
- Design WITH your population
- Design for Pets
- Accessible Public Spaces
- Attractive Open Space
- Access to Nature
- Design for safety
- Limited Pollution
- Consider cultural needs
- ART



Cultural Art - Chinatown PDX



Keep pollution away from vulnerable populations!



Attractive, shaded, pedestrian paths.



Include design for pets.

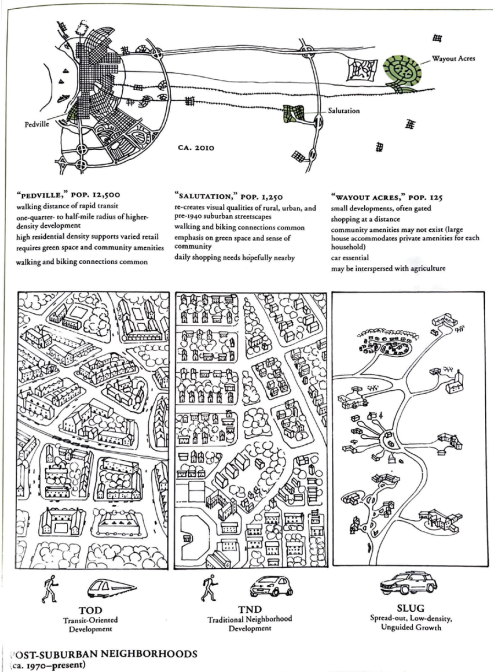
ENVIRONMENTAL //
HEALTH AND EQUITY

KIM NICHOLS// NICOLE STOUT

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ENVIRONMENTAL // TRANSIT

“With rare exceptions, every transit trip begins and ends with a walk. As a result, while walkability benefits from good transit, good transit relies absolutely on walkability.” (Jeff Speck)



FROM: A Field Guide to American Houses - Virginia Savage McAlester



FROM: Portland Vintage Trolley (Steve Morgon) Wikipedia

ENVIRONMENTAL // TRANSIT

GOOD TRANSIT REQUIRES:

- **LOCAL DENSITY**

This is the density within 1/2 mile radius of the transit stops.

- **NEIGHBORHOOD STRUCTURE**

Nodal and pedestrian friendly neighborhoods are required to support the walk on either side of transit.

- **QUALITY:**

Ridership varies more with the quality of the transit offered than the density of the neighborhoods it serves.

Transit is “a mobile form of public space” (Darrin Nordahl). Pleasant seating arrangements, big windows, wifi, charming typologies (trolley, double decker bus)

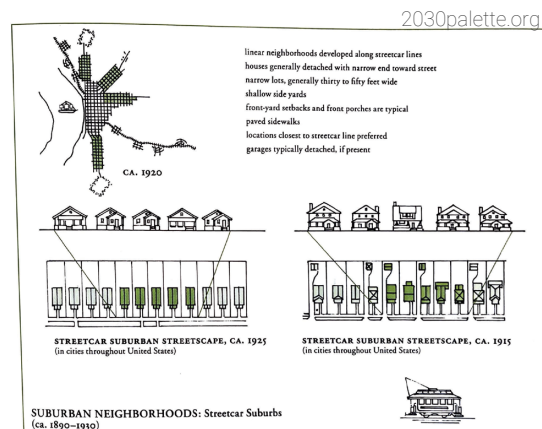
MINIMUM AVERAGE RES. DENSITIES: (DWELLINGS PER UNIT)

BUS:

- CORE: 50
- CENTER: 25
- VILLAGE: 15

RAIL SERVICE:

- CORE: 75
- CENTER: 40
- VILLAGE: 15



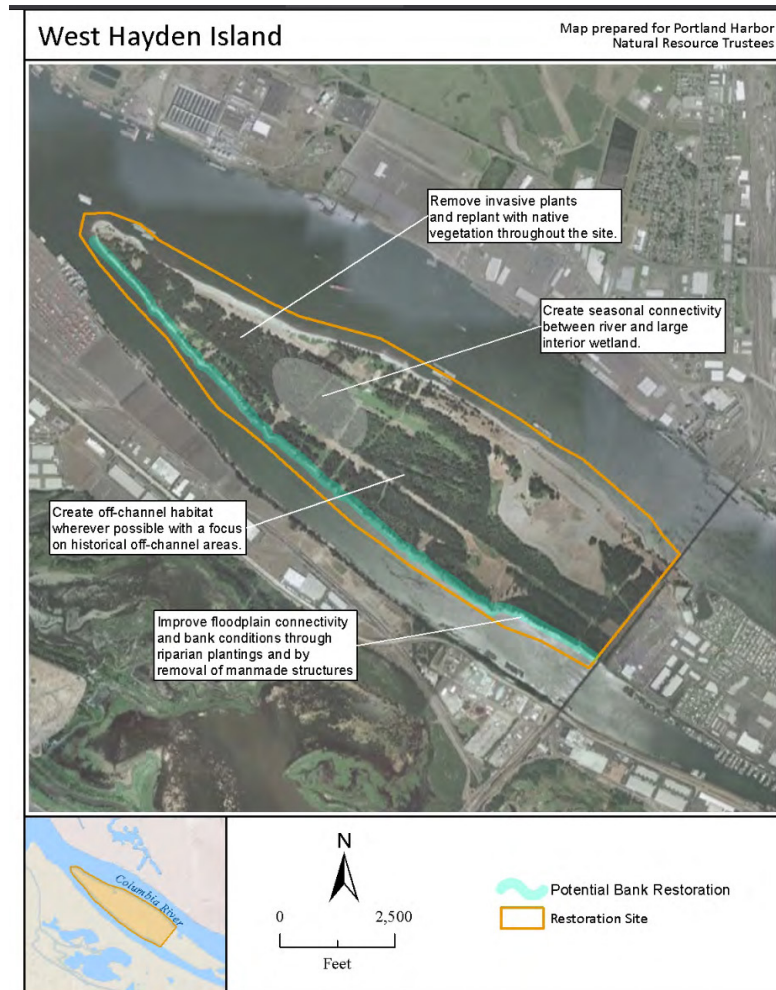
2030palette.org

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ENVIRONMENTAL // ECOLOGY

Nearest Restoration Area: Hayden Island West



This map represents conceptual fish and wildlife habitat restoration opportunities which have been screened against criteria developed by the Portland Harbor Natural Resource Trustees. Further analysis of this site will occur to determine the feasibility, cost, and habitat value of the restoration concepts on a finer scale.

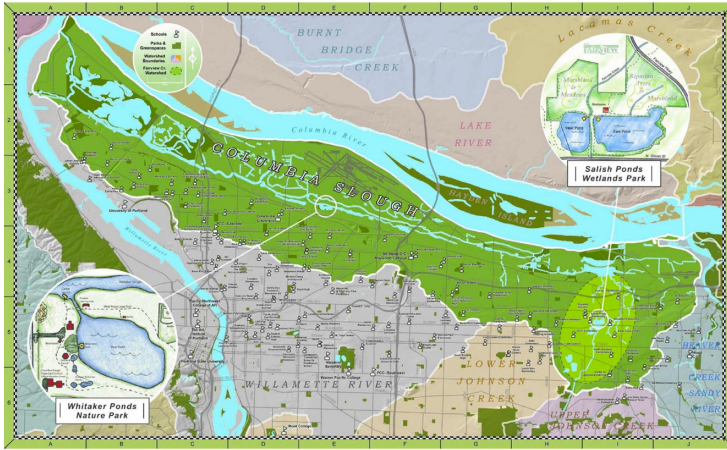
Hayden Island is located in the Lower Columbia River just east of the confluence with the Willamette River. The island is part of a significant regional network of natural areas that provide habitat for migrating birds and many other species. The western half of the island is 800+ acres of relatively undeveloped land located within the 100-year floodplain. Much of West Hayden Island is vegetated; it supports one of the largest stands of cottonwood-ash bottomland forest on the Lower Columbia with an understory of native and non-native plants. There are also meadows, wetlands, open sandy fill areas, beach and shallow water areas. West Hayden Island supports a variety of mammal, bird, reptile, amphibian, and insect species. Forest habitat provides nesting, roosting, and perching locations for a number of bird species. Salmon and lamprey migrate past Hayden Island to upstream spawning grounds. Lamprey larvae may use nearshore areas around the island as they have been found in similar habitats nearby.

ENVIRONMENTAL // ECOLOGY

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ENVIRONMENTAL // ECOLOGY

Ecosystems: Waterways, Wetlands, Uplands



Topographical Map of Portland and Oregon City, Oregon 1914



ENVIRONMENTAL //
ECOLOGY

Key Takeaways:

- River otters, Painted Turtles, Bald Eagles
- Key area along migratory routes for birds and fish
- Inadequate riparian buffers
- Endangered steelhead, coho, and Chinook salmon take refuge from strong currents and predators in the Willamette and Columbia rivers on their migratory routes.
- Nearby Smith and Bybee Wetlands attract the most bird species in the area.
- Portland's only endangered bird, the streaked horned lark, lives in wide open fields at and around Portland International Airport.

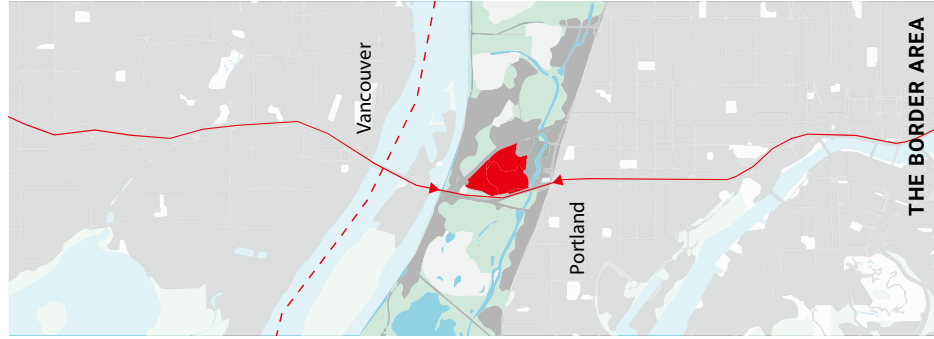
KIM NICHOLS// NICOLE STOUT

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

Appendix C: Physical Site

PHYSICAL SITE

THE SITE IN CONTEXT OF THE GREATER PORTLAND METRO AREA
This site is considered a node of the strip area between Portland and Vancouver



PHYSICAL SITE
CONTEXT

YENCHIEH PU

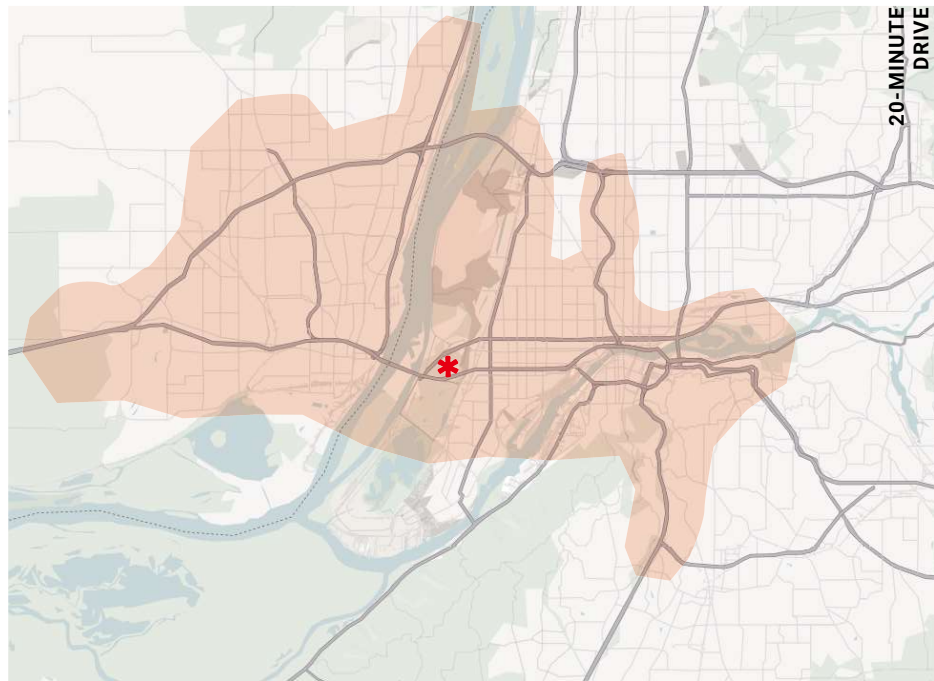
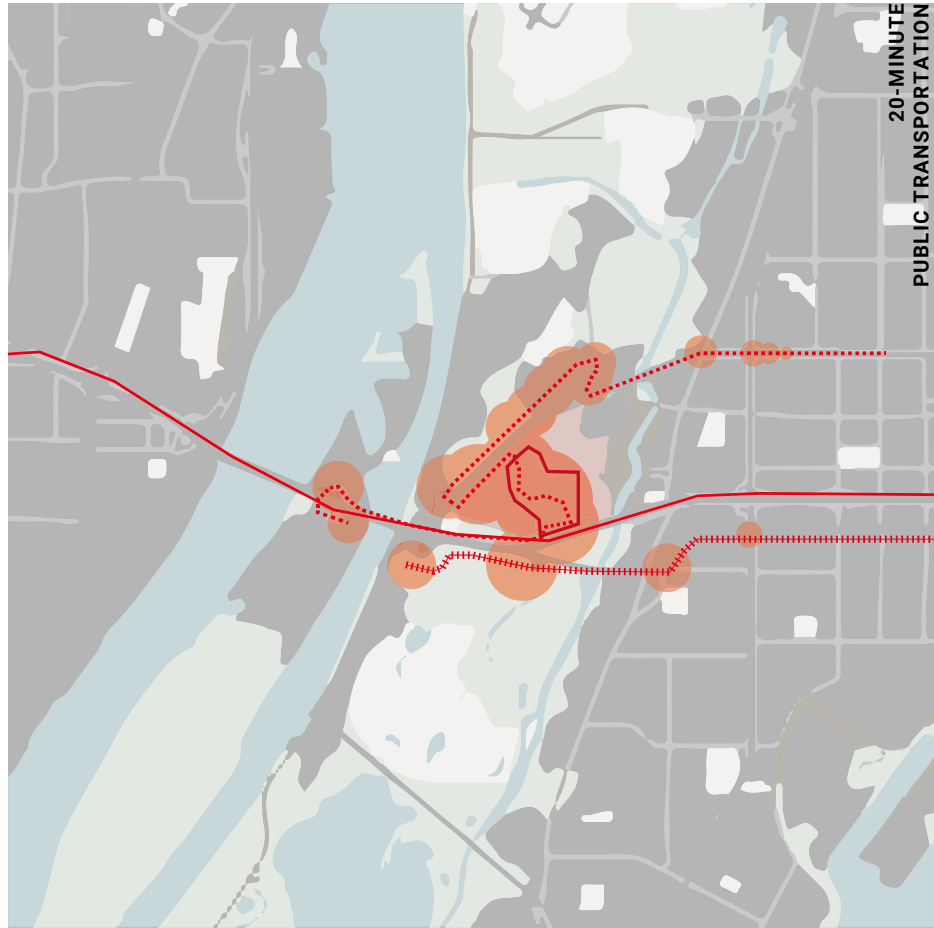
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARP/RAGETT

PHYSICAL SITE AMENITIES

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGETT

YENCHIH PU

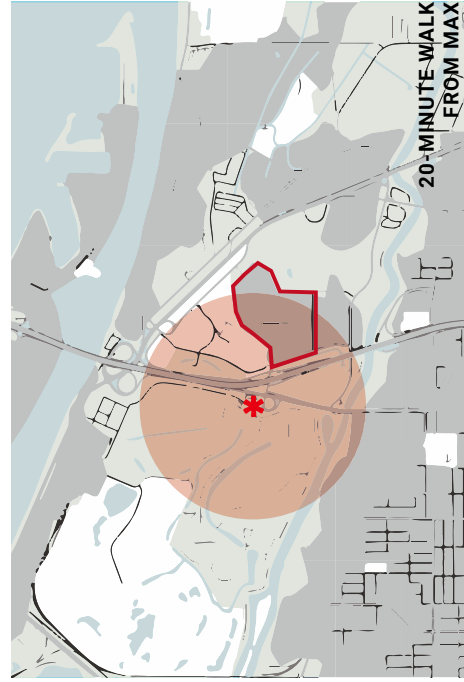
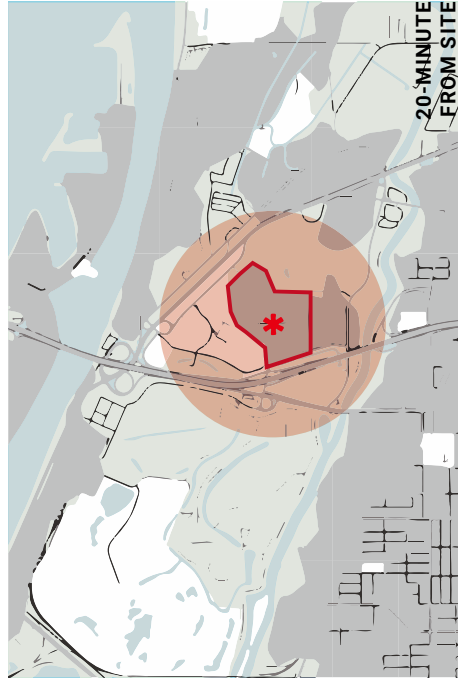
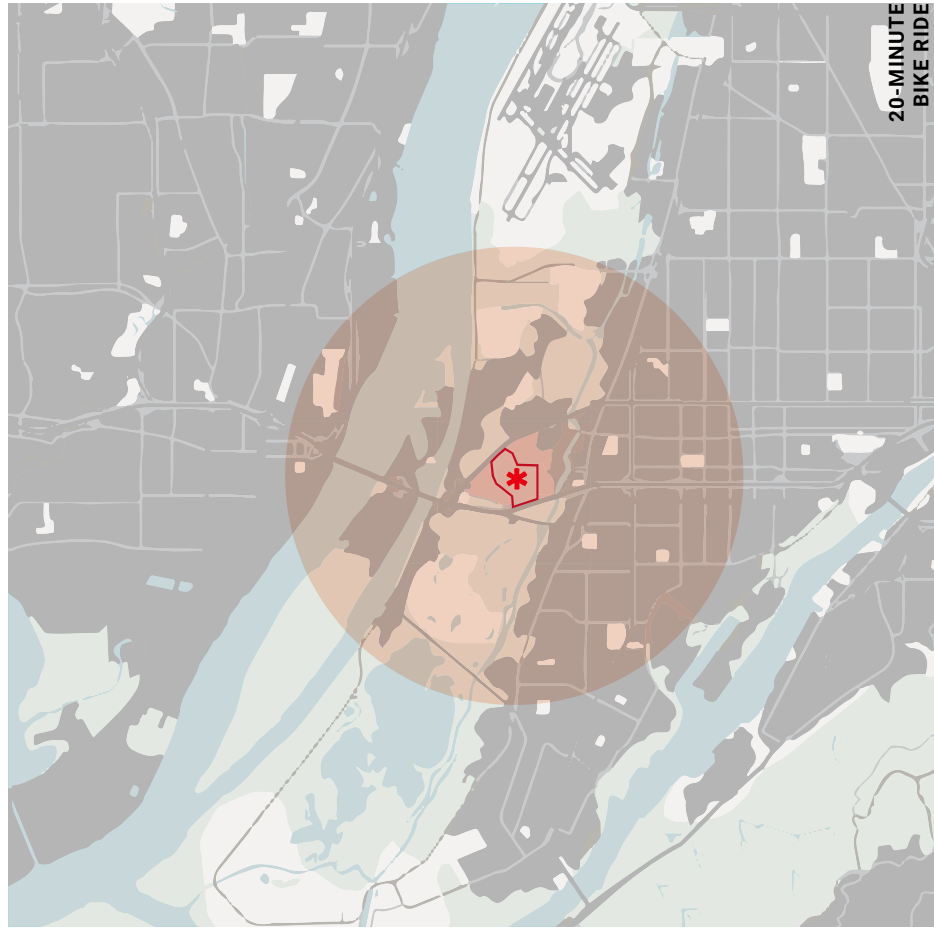
PHYSICAL SITE
TRAVEL TIME ANALYSIS
Analysis of 20-minute travel time with public transportation and driving.



PHYSICAL SITE

TRAVEL TIME ANALYSIS

Analysis of 20-minute travel time with bike and on foot.



PHYSICAL SITE
TRAVEL TIME

YENCHIEH PU

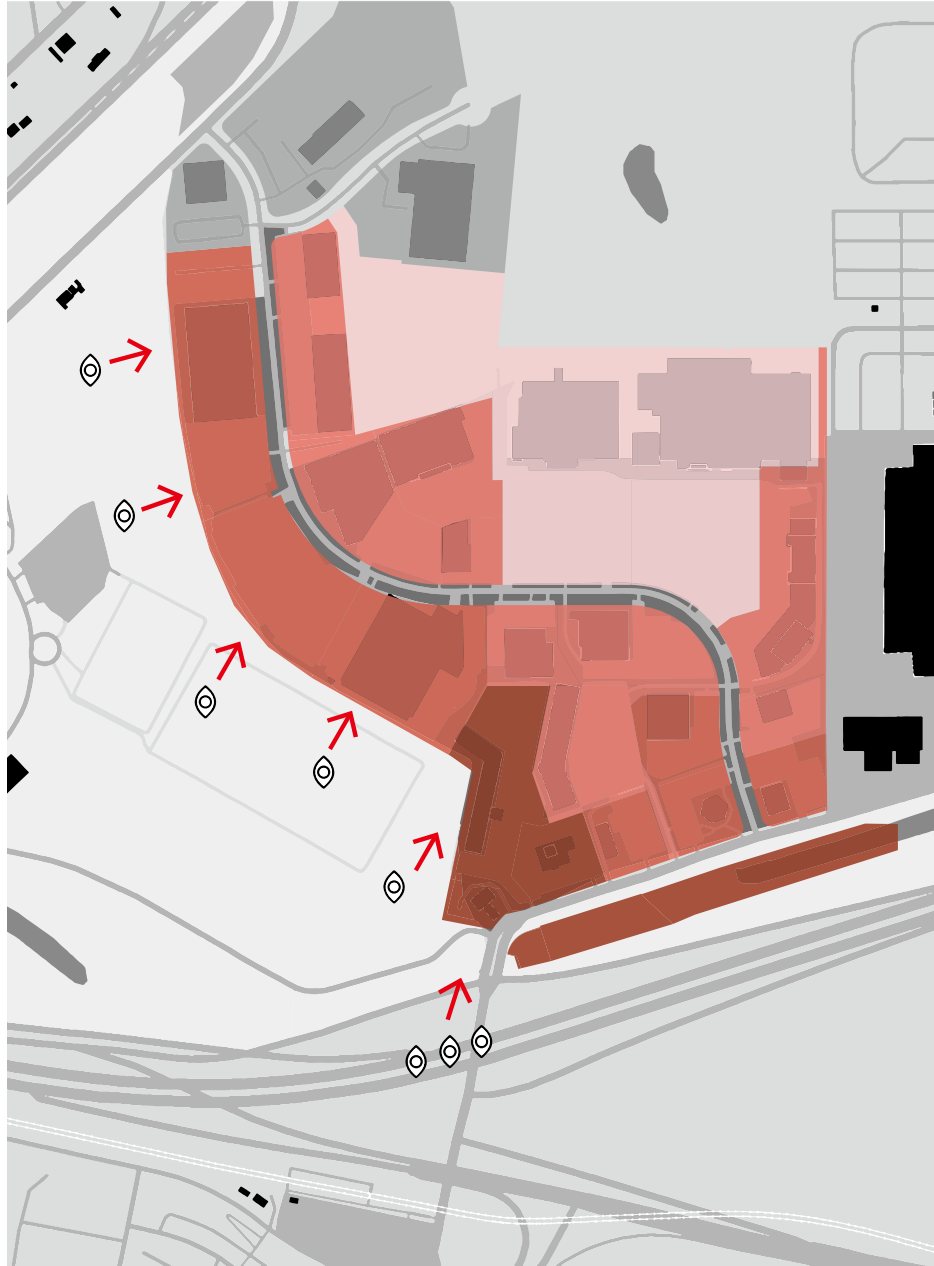
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLARP/RAGETT

PHYSICAL SITE
CRITICAL SITES

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ULLAR/D/RAGETT

YENCHIEH PU

PHYSICAL SITE
CRITICAL SITES
Sites that have high visual access.



PHYSICAL SITE

LANDMARKS

Most of the landmarks support outdoor activities.



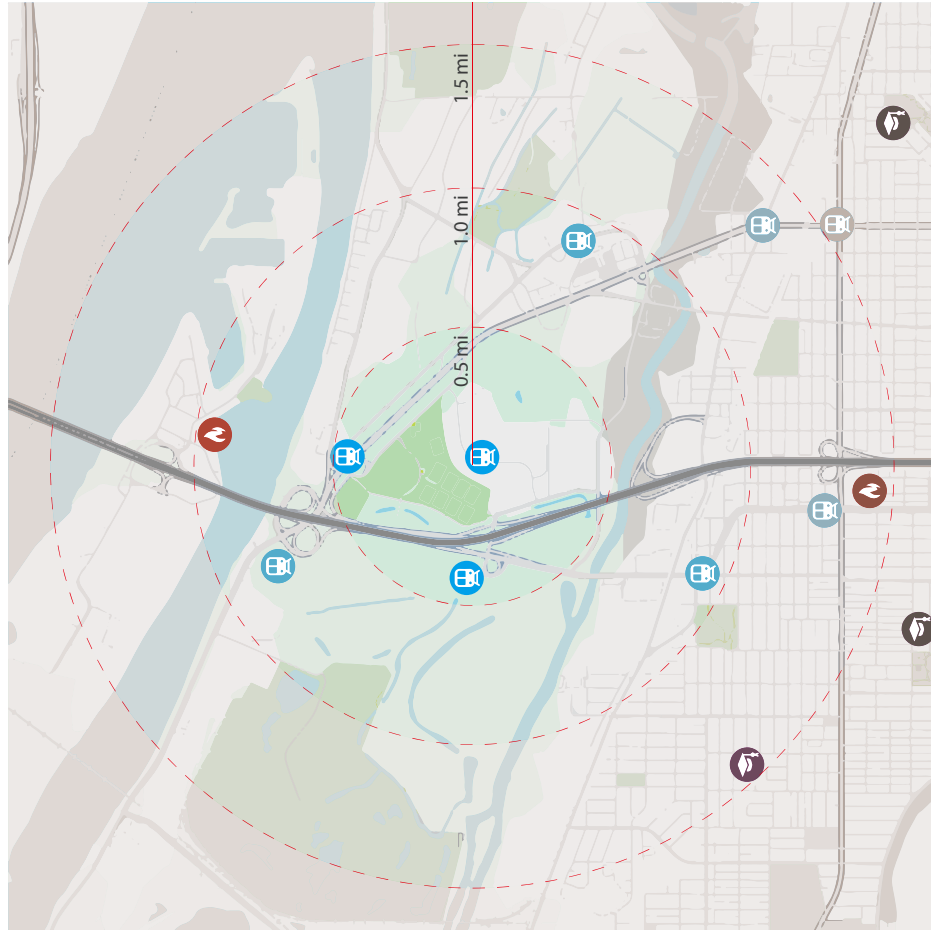
PHYSICAL SITE
LANDMARKS

YENCHIEH PU

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ULLARP/RAGETT

PHYSICAL SITE AMENITIES

PHYSICAL SITE
NEARBY AMENITIES
This location is currently always from service such as hospital, schools, and fire stations.

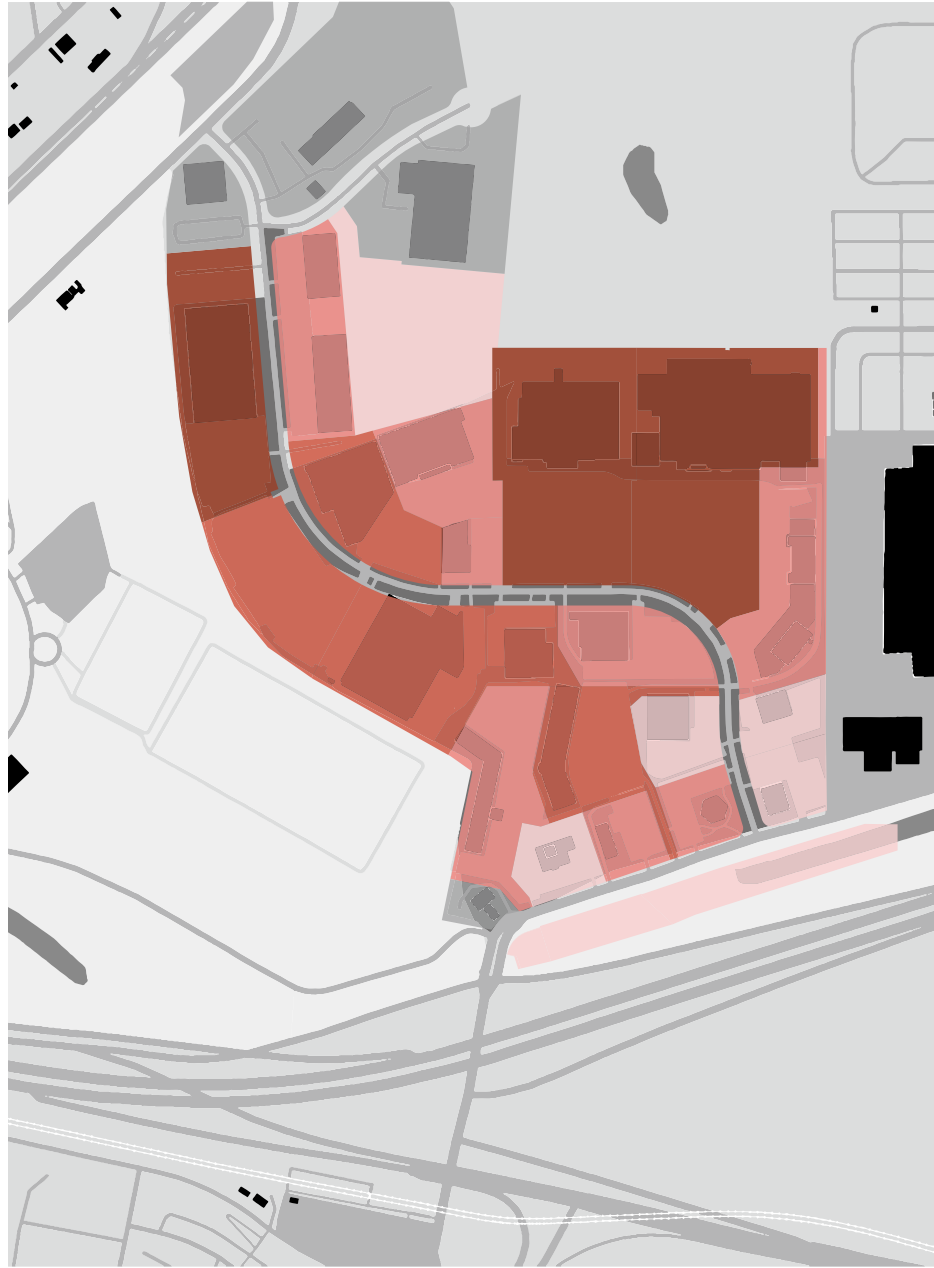


**PHYSICAL SITE
OPPORTUNITY SITES**

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLARP/RAGETT

YENCHIH PU

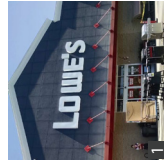
**PHYSICAL SITE
OPPORTUNITY SITES**
Opportunity is based on the level of activeness of the current slot.



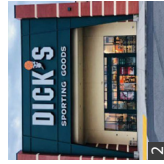
PHYSICAL SITE

DESTINATIONS

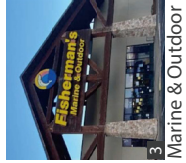
Most of the destination are outdoor related or wholesale business that needs more space.



1 Hardware



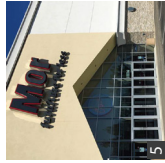
2 Sporting goods



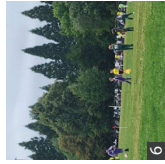
3 Marine & Outdoor



4 Restaurant Depot



5 Furniture



6 Delta Park

- 7 La-Z-Boy Furniture
- 8 Guitar Center
- 9 DMV
- 10 Amazon
- 11 Carquest Auto Parts
- 12 Shari's
- 13 Burger King
- 14 Inn At The Meadows
- 15 Country Inn
- 16 Chevron
- 17 Amazon
- 18 Dollar Tree
- 19 US Foods CHEFSTORE
- 20 The Place To Shoot
- 21 Platinum Motors PDX

PHYSICAL SITE DESTINATIONS

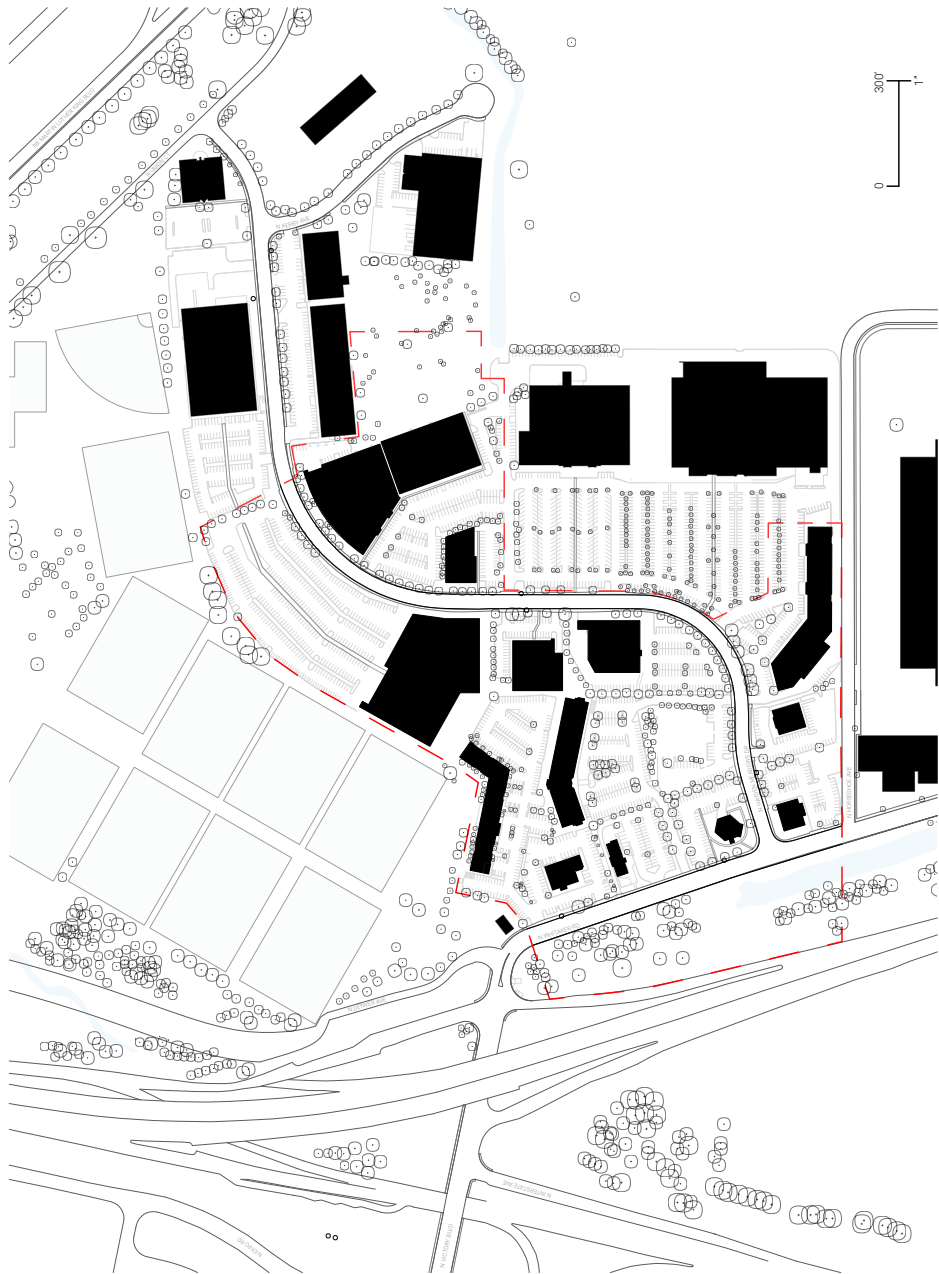
YENCHIEH PU

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLARP/RAGETT

PHYSICAL SITE //
FIGURE GROUND

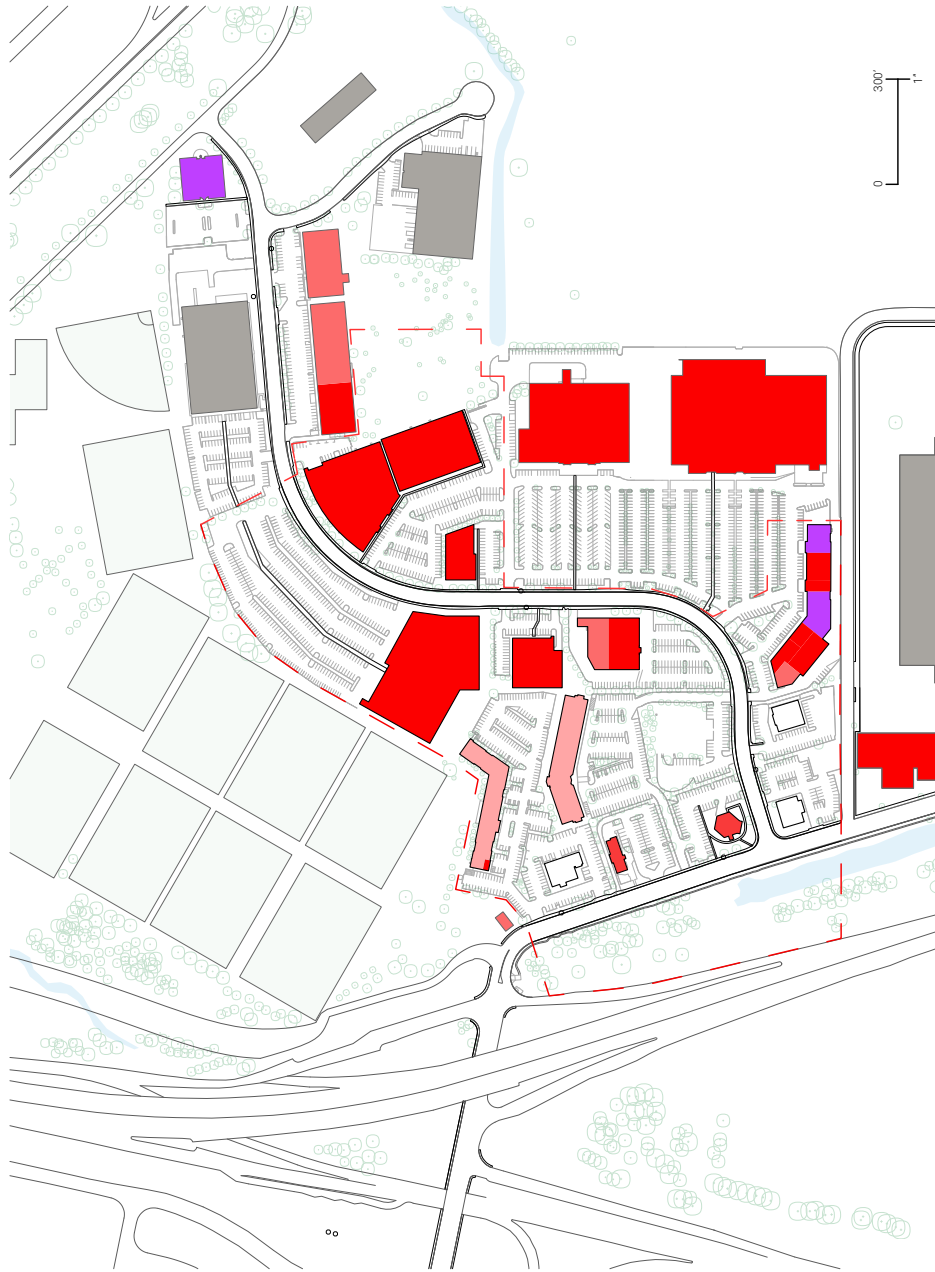
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGETT

RAEGAN MCKENNA // YEN-CHIEH PU



PHYSICAL SITE //
FIGURE GROUND

PHYSICAL SITE //
EXISTING USES



PHYSICAL SITE //
EXISTING USES

SHOPPING

- LOWES*
- DICK'S SPORTING GOODS*
- GUITAR CENTER
- LA-Z-BOY
- DOLLAR TREE
- FISHERMAN'S MARINE
- WORLD FURNITURE FOR LESS
- WALMART
- EXERCISE EQUIPMENT
- BEAUTY 24/7
- BED MART
- ZC CABINET AND QUARTZ
- US FOODS CHEF STORE*
- CARQUEST AUTO PARTS*

COMMERCIAL

- BURGER KING
- SHARI'S

FOOD

- HAYDEN MEADOWS PET CLINIC
- SPA LOGIC
- HOMEPLACE FURNITURE & DESIGN
- PLACE TO SHOOT*
- CASH & CARRY

SERVICES

- COUNTRY INN AND SUITES
- INN AT THE MEADOWS

LODGING

INDUSTRIAL

- MONDELEZ*
- RESTAURANT DEPOT*
- AMAZON*

CIVIC

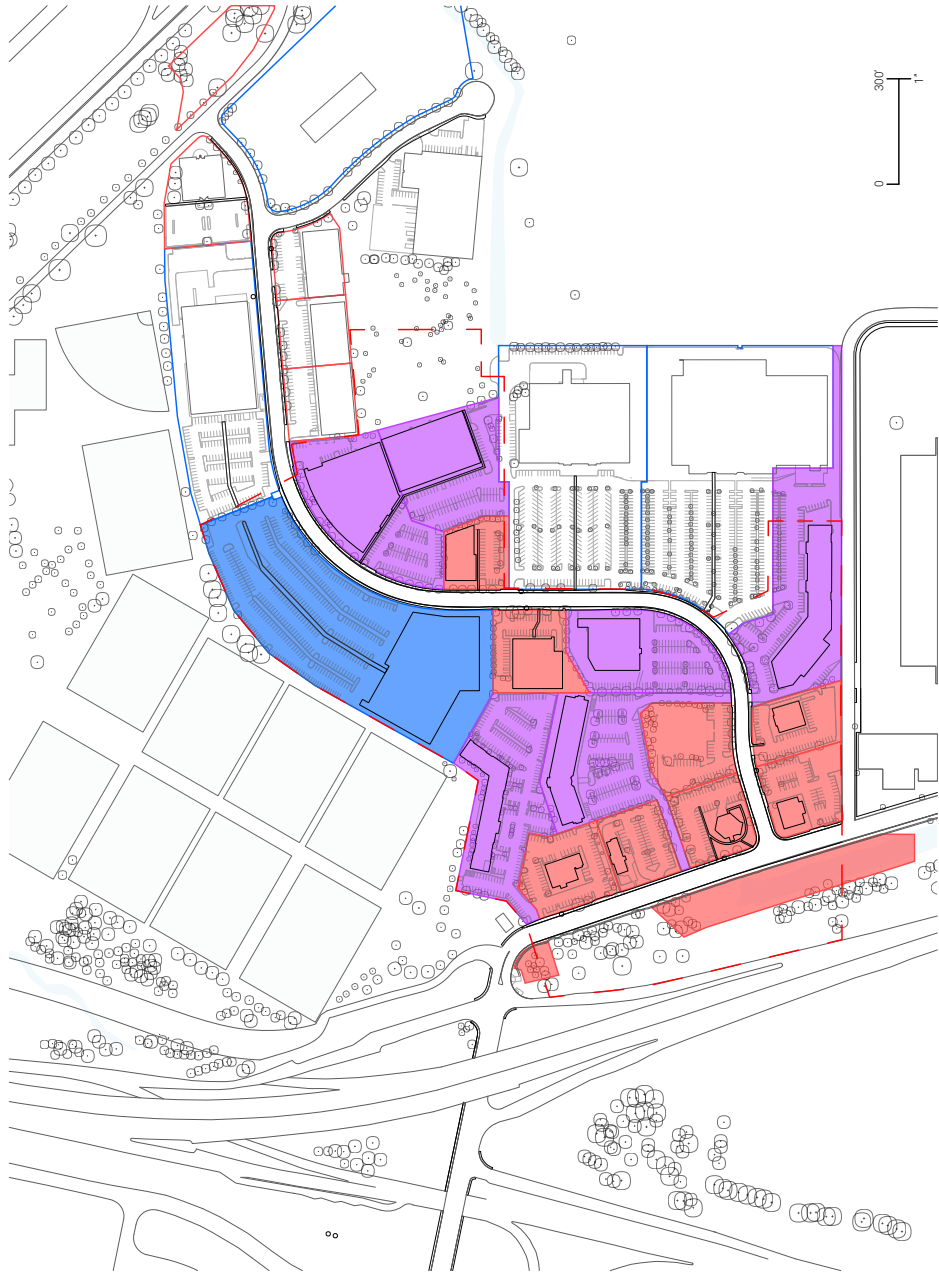
- OREGON ASSOCIATION OF BUSINESS OWNERS
- OREGON RECYCLING COOPERATION
- RECYCLING COOPERATION

* = not in site boundary but located closely

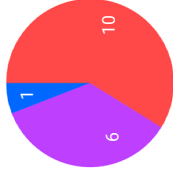
RAEGAN MCKENNA // YEN-CHIEH PU

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

PHYSICAL SITE //
PARCEL SIZES

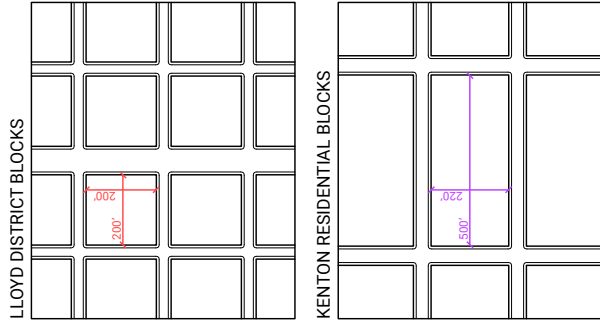


NUMBER OF PARCELS ON SITE



- SMALL 29,000 SF - 60,000 SF
- MEDIUM 61,000 SF - 160,000 SF
- LARGE 161,000 SF - 300,000 SF

PHYSICAL SITE //
PARCEL SIZES

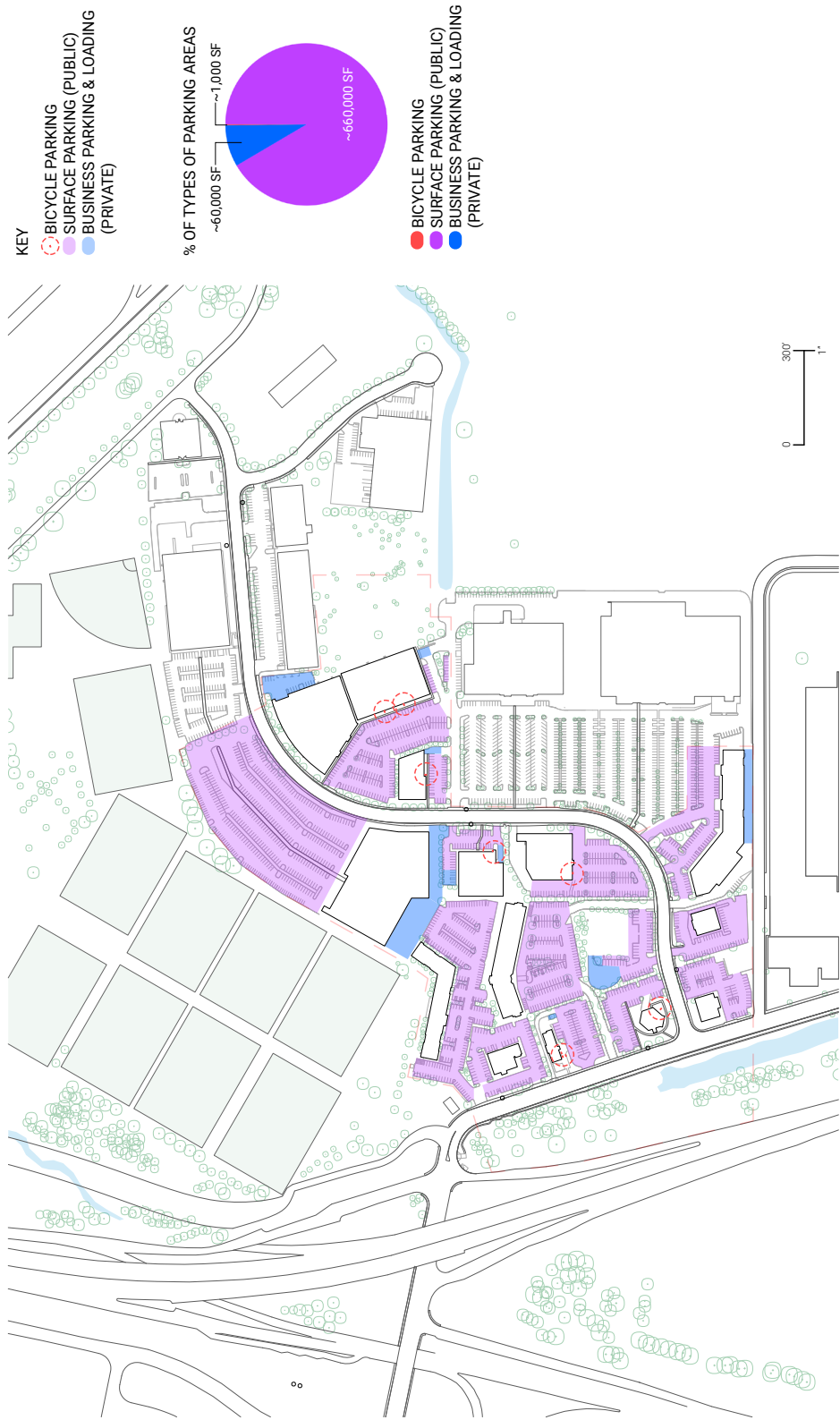


RAEGAN MCKENNA // YEN-CHIEH PU

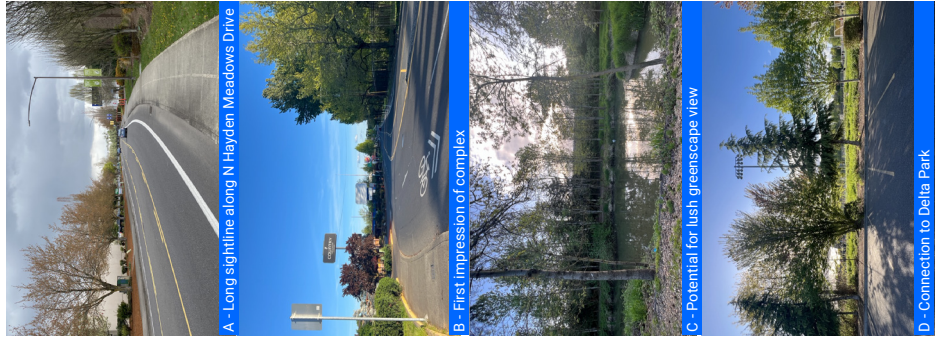
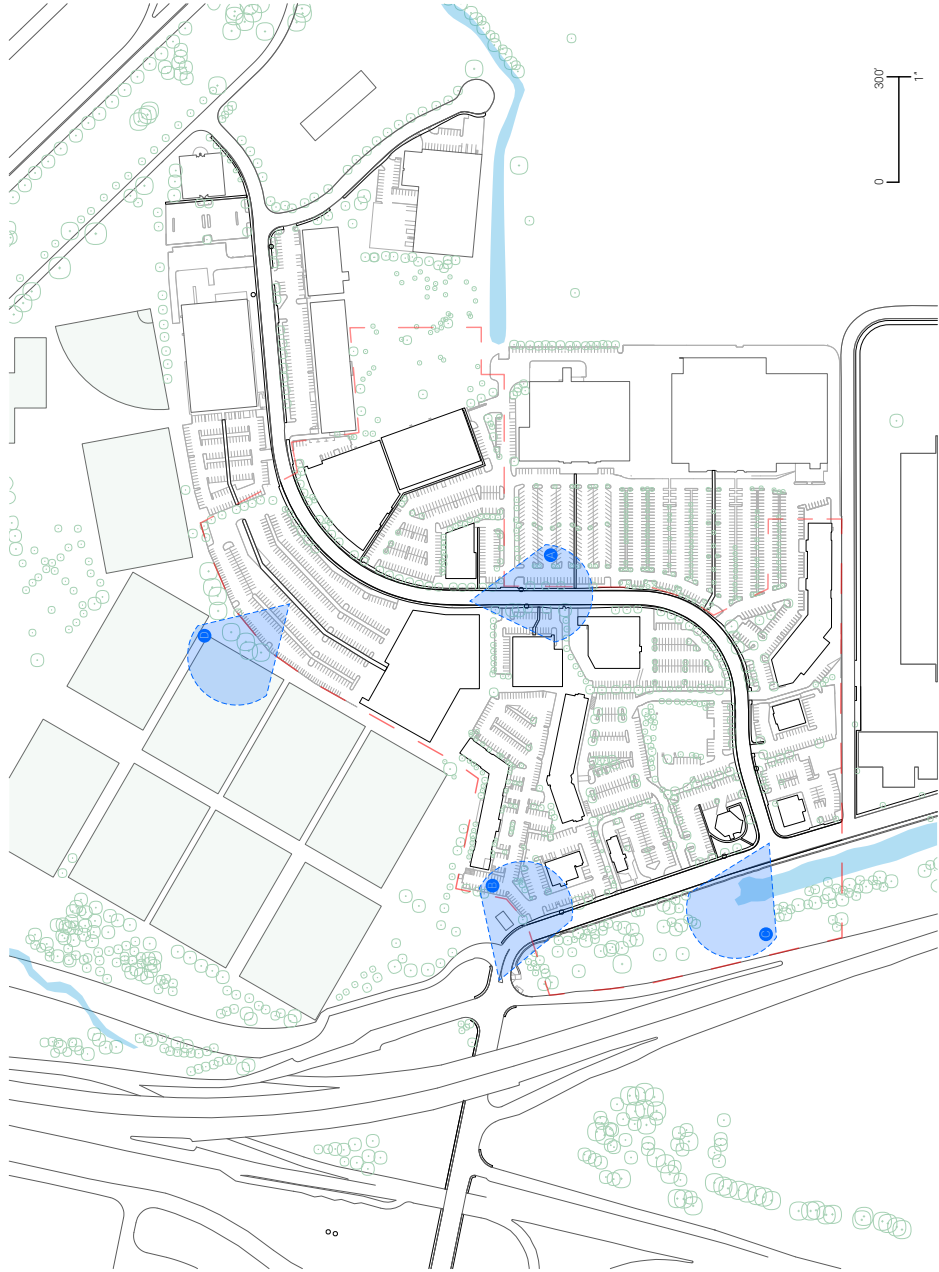
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PHYSICAL SITE //
PARKING AREAS AND TYPES

PHYSICAL SITE //
PARKING AREAS AND TYPES



PHYSICAL SITE //
VIEW POTENTIALS



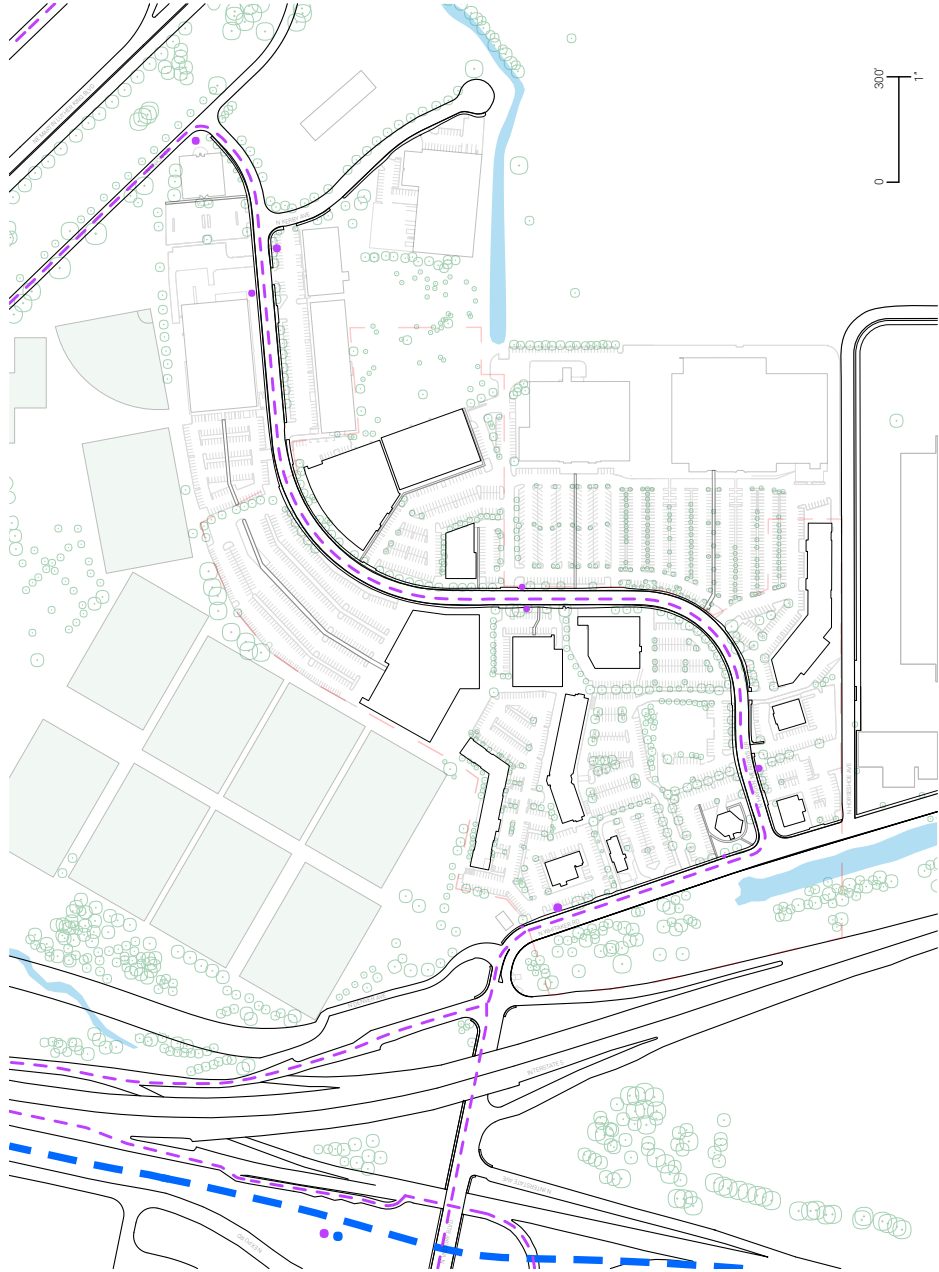
PHYSICAL SITE //
VIEW POTENTIALS

RAEGAN MCKENNA // YEN-CHIEH PU

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGETT

PHYSICAL SITE //
PUBLIC TRANSIT

PHYSICAL SITE //
PUBLIC TRANSIT



- KEY**
- BUS STOP
 - - - BUS ROUTE
 - MAX STOP
 - - - MAX ROUTE

MAX/LIGHT RAIL

The MAX yellow line travels adjacent to the site with a stop named "Delta Park/Vanport Transit Center MAX Station". This stop is NW of the site between N Expo Rd and N Denver Ave. The yellow line passes through critical neighborhoods like Killingsworth, Albina/Mississippi, Rose Quarter, Union Station, and Pioneer Square.

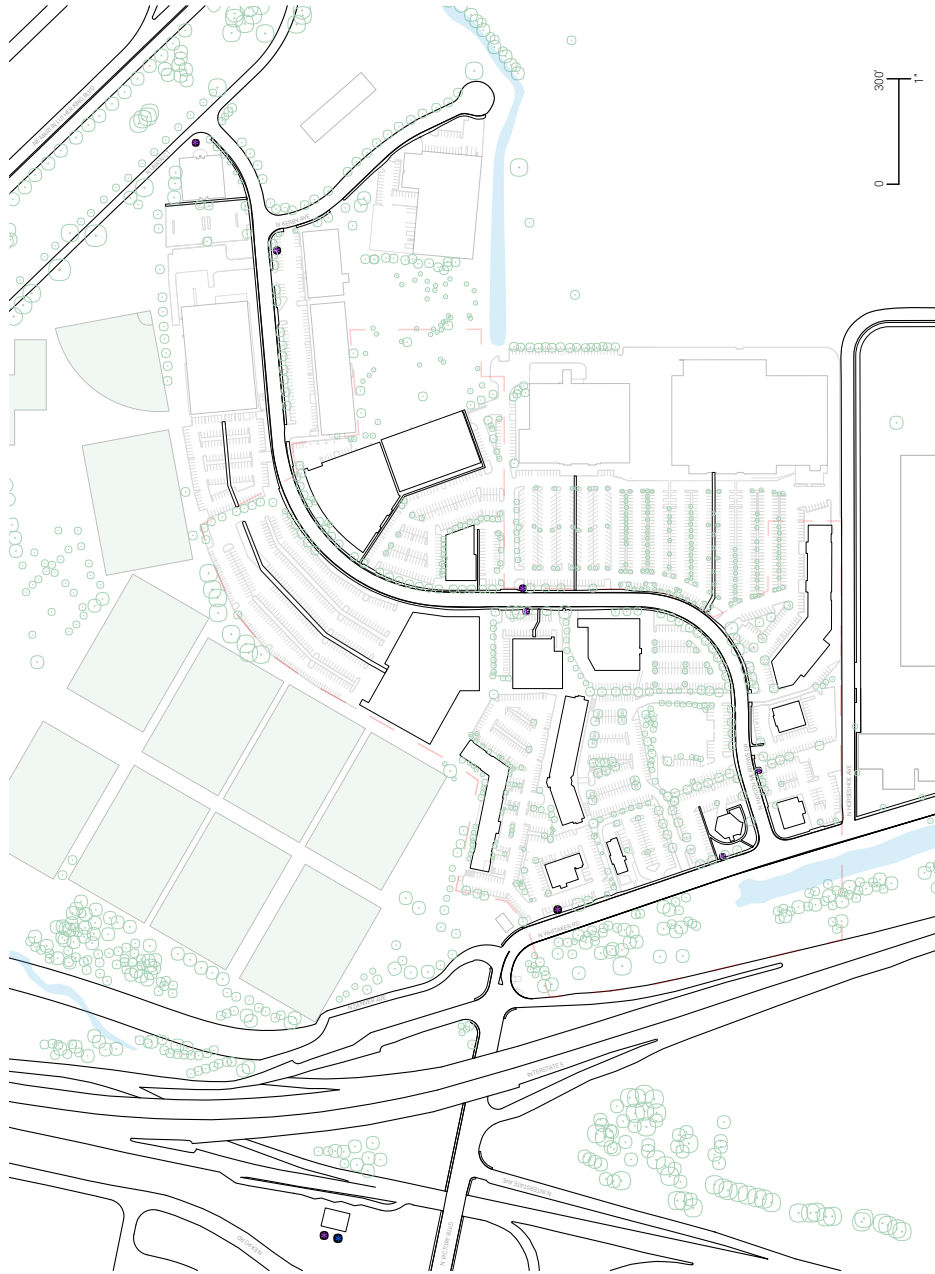
BUS

The bus line 6 travels adjacent to the site with a stop to the NW between N Expo Rd and N Denver Ave. The bus line 6 serves as a route from Providence Park to Jantzen Beach, Washington residents traveling from Portland would have to connect to Washington's public transportation system to complete their routes.

Bus line 6 has multiple stops (both directions) along N Hayden Meadows Drive.

PHYSICAL SITE //
STREETS, SIDEWALKS, AND INFRASTRUCTURE

PHYSICAL SITE //
STREETS, SIDEWALKS, INFRASTR.



KEY
 BUS STOP
 MAX STOP

SIDEWALK CLASSIFICATION

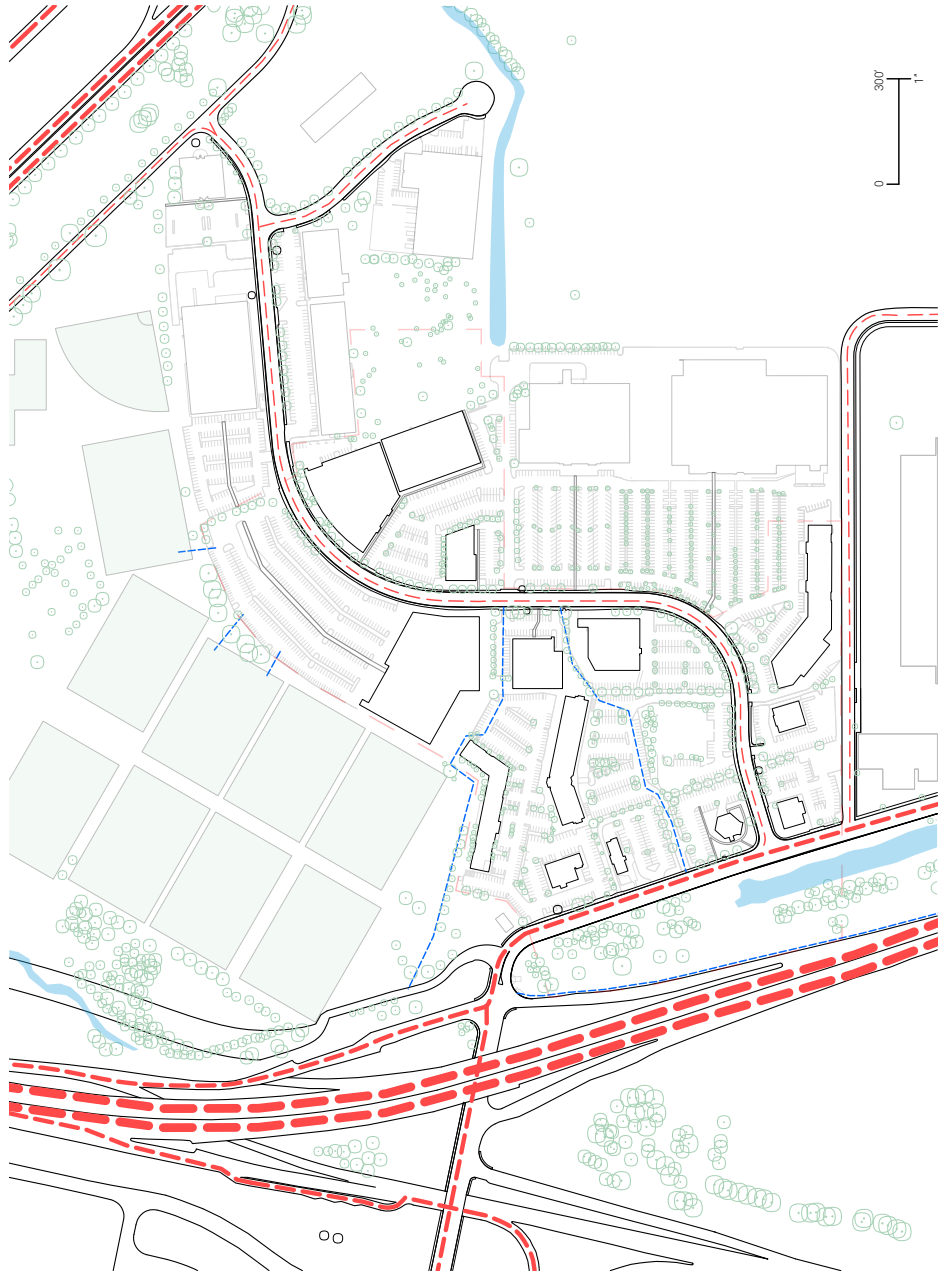
- N HAYDEN MEADOWS DR
SIDEWALK: 2
NOTES: TREE LINED IN MOST PARTS
- N VICTORY BLVD
SIDEWALK: 2
NOTES: NEXT TO FAST TRAFFIC
- N WHITAKER RD
SIDEWALK: 1
NOTES: NEXT TO FAST TRAFFIC
- N HORSHESHOE AVE
SIDEWALK: 1
NOTES: SIDEWALK OFFERS PLANTED BUFFERS IN SOME AREAS
- N UNION COURT
SIDEWALK: 0
NOTES: NO PED. ACCESS
- N DENVER AVE
SIDEWALK: 0
NOTES: GRAVEL PATH ALONG FENCE

*0 = NO SIDEWALK
 *1 = SIDEWALK ALONG ONE SIDE
 *2 = SIDEWALKS ON BOTH SIDES

RAEGAN MCKENNA // YEN-CHIEH PU

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGETT

PHYSICAL SITE //
PRIMARY PATHS



- KEY**
- UNOFFICIAL PATH (PEDS. ONLY)
 - LOW-MEDIUM TRAFFIC PATH
 - MEDIUM TRAFFIC PATH
 - HIGH TRAFFIC PATH

The primary paths at the site typically exist along roadways that provide sidewalks. However, the site heavily consists of surface parking which allows users to cut across and make unofficial paths of their own. The blue dashed lines indicate unofficial paths observed on a Sunday at 6 pm.

PHYSICAL SITE //
PRIMARY PATHS

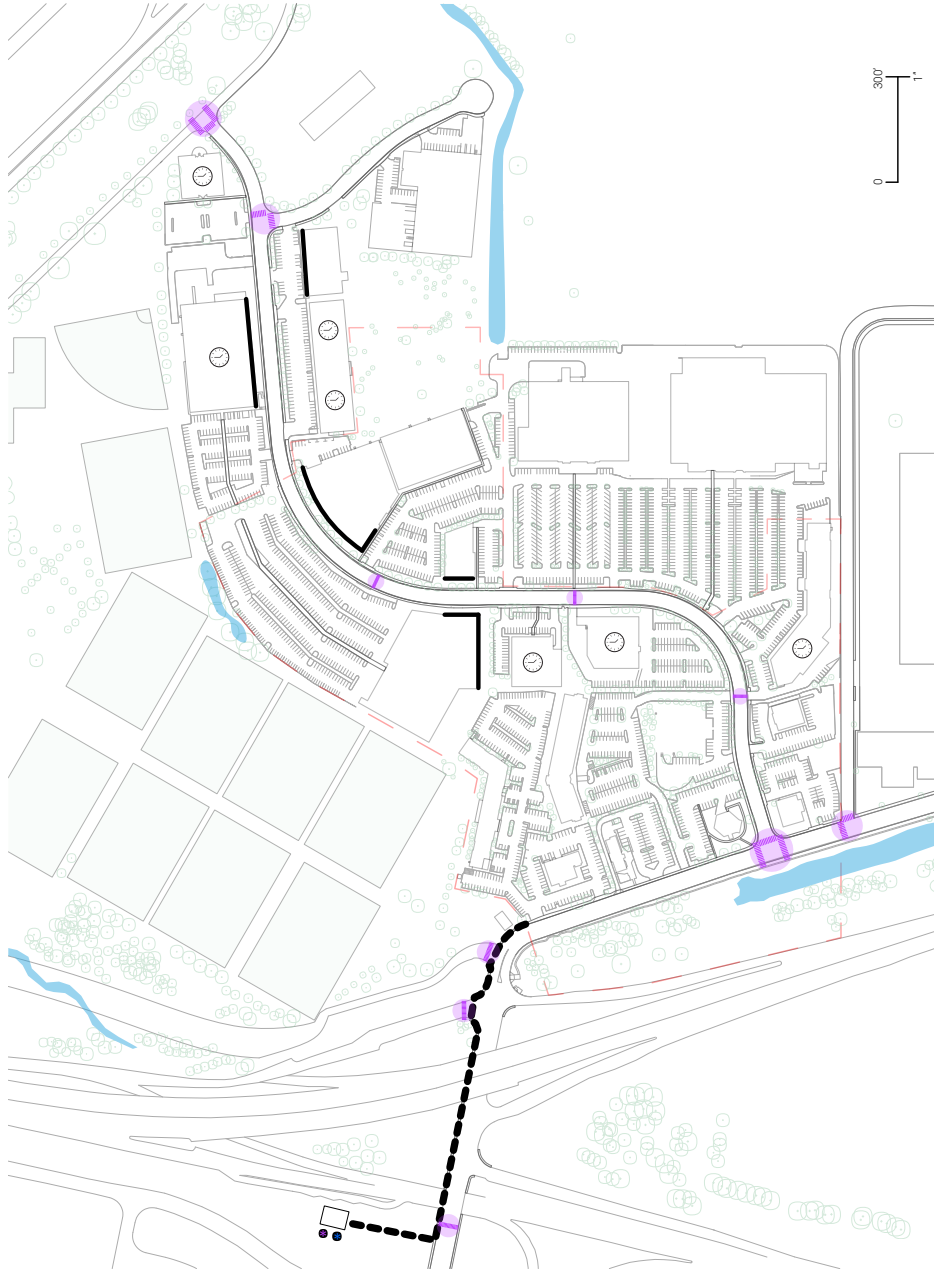
RAEGAN MCKENNA // YEN-CHIEH PU

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PHYSICAL SITE //
BARRIERS AND CHALLENGES

PHYSICAL SITE //
BARRIERS AND CHALLENGES

- KEY**
- NOT ACTIVE AFTER 7 PM
 - WATER ZONES
 - BUS STOP
 - MAX STOP
 - MISSING CROSSWALKS
 - BLIND FACADE
 - ROUTE FROM PUBLIC TRANSIT TO SITE



While these categories are identified as challenges or barriers, most contain potential for improvement. For example, the water zones may be physical challenges, but they could also offer serene landscape opportunities.

Some of these businesses close before 7 pm which makes after-hours engagement difficult and desolate.

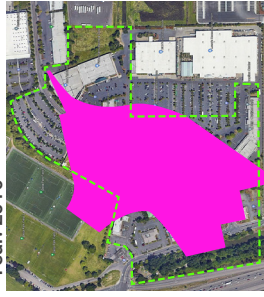
The route users take from the public transit station to the site lacks crosswalks, offers no buffer between pedestrian and vehicle lanes, and promotes dark and dangerous alcoves.

The blind facades along N Hayden Meadows offer little to engage pedestrians and isolates them from the environment.

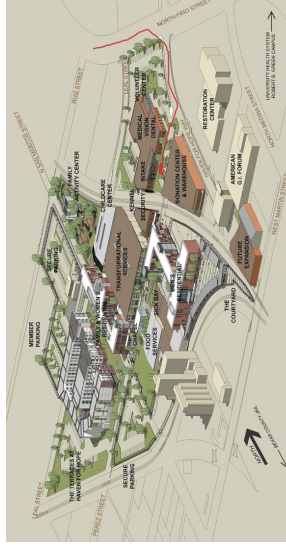
Appendix D: Precedents

PRECEDENTS //
TRANSITIONAL HOUSING

HAVEN FOR HOPE
 - Location: San Antonio Texas
 - Size: 17 Buildings, 1,700 Users
 - Area: 22 Acres
 - Year: 2016



SITE
COMPARISON



ZOE LUKE // FATIMA ABENOVA // ANDRES LEON

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLIARD/RAGGETT



PATIO



STREET



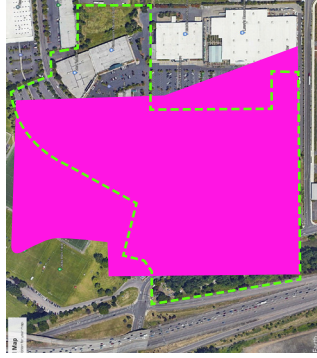
STREET



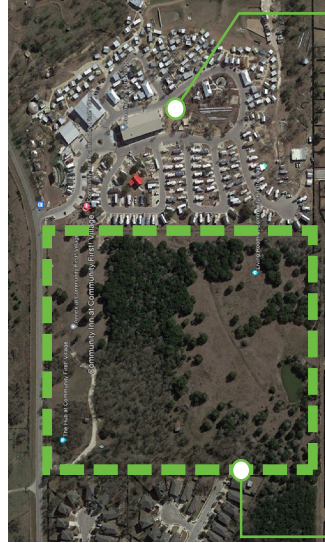
STREET

COMMUNITY FIRST VILLAGE

- Location: Austin, Texas
- Size: 370 Units
- Area: 51 Acres
- Year: 2016
- 7 Units per Acre



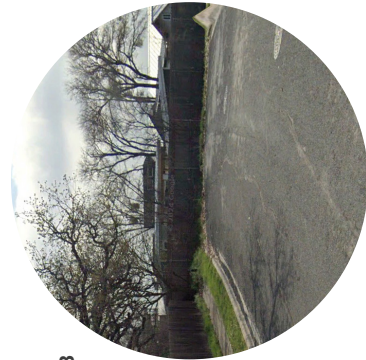
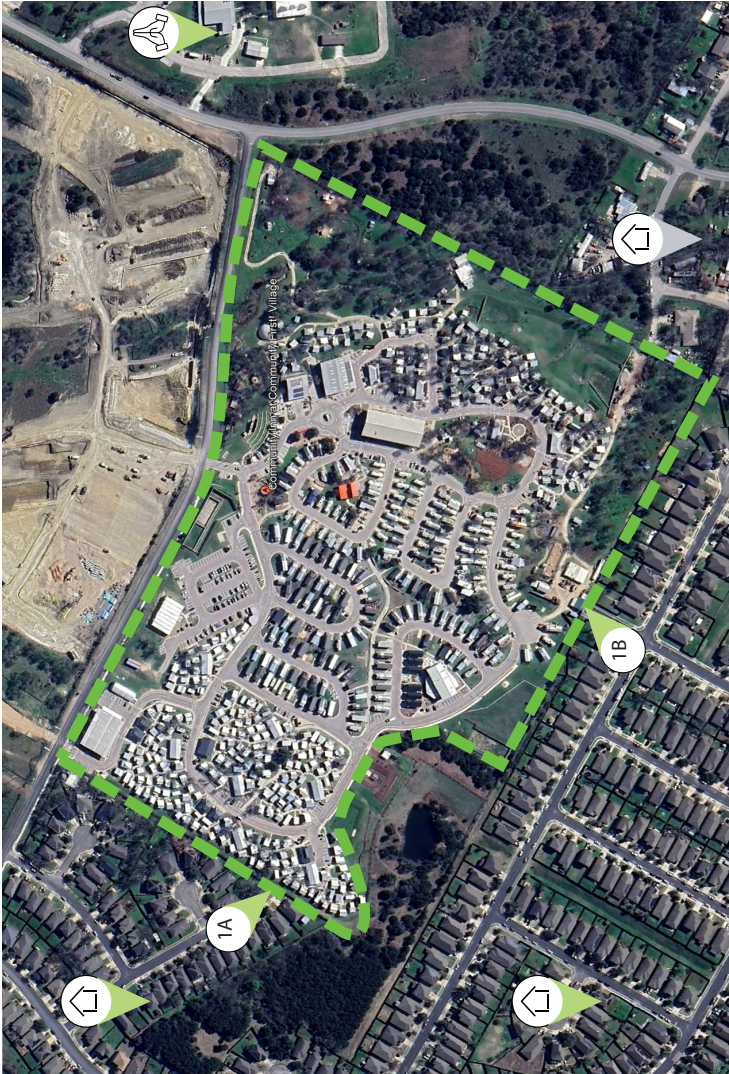
SITE COMPARISON



Expansion 2020
20 Acres

Frist phase project
31 Acres

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1B



1A

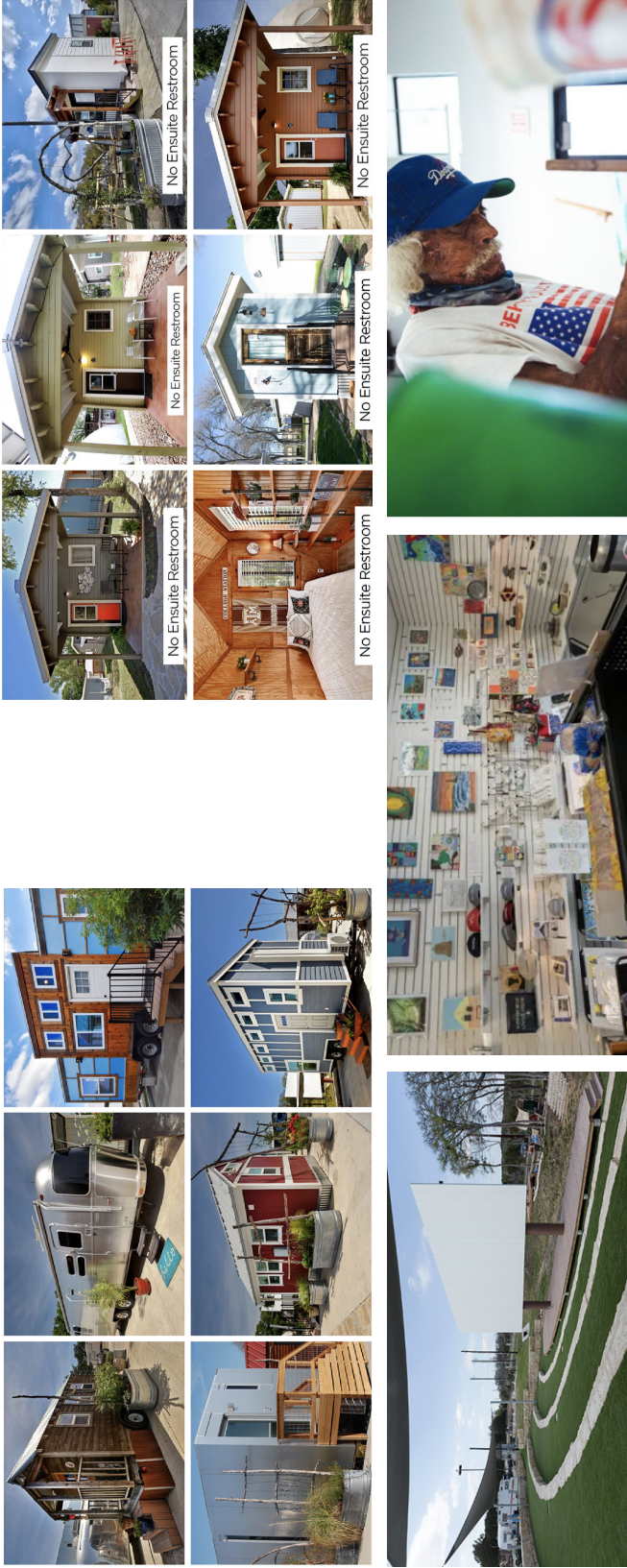
PRECEDENTS // TRANSITIONAL HOUSING

COMMUNITY FIRST VILLAGE

- Houses and RVs Dimensions: 43 x 11' Aprox.
- Tiny Houses Dimensions: 20 x 15' Aprox.
- Common spaces: Cinema, Genesis Gardens, Art House



PRECEDENTS // TRANSITIONAL HOUSING



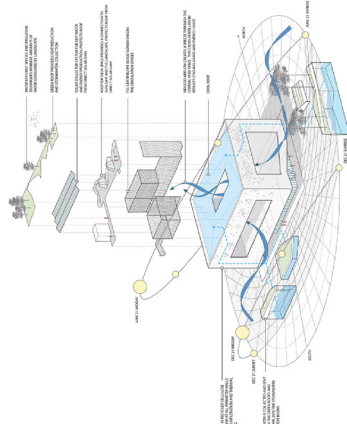
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PRECEDENTS //
TRANSITIONAL HOUSING



SITE COMPARISON



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ENTRANCE



STREET



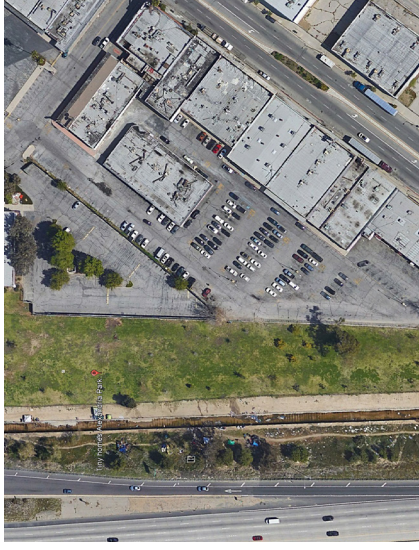
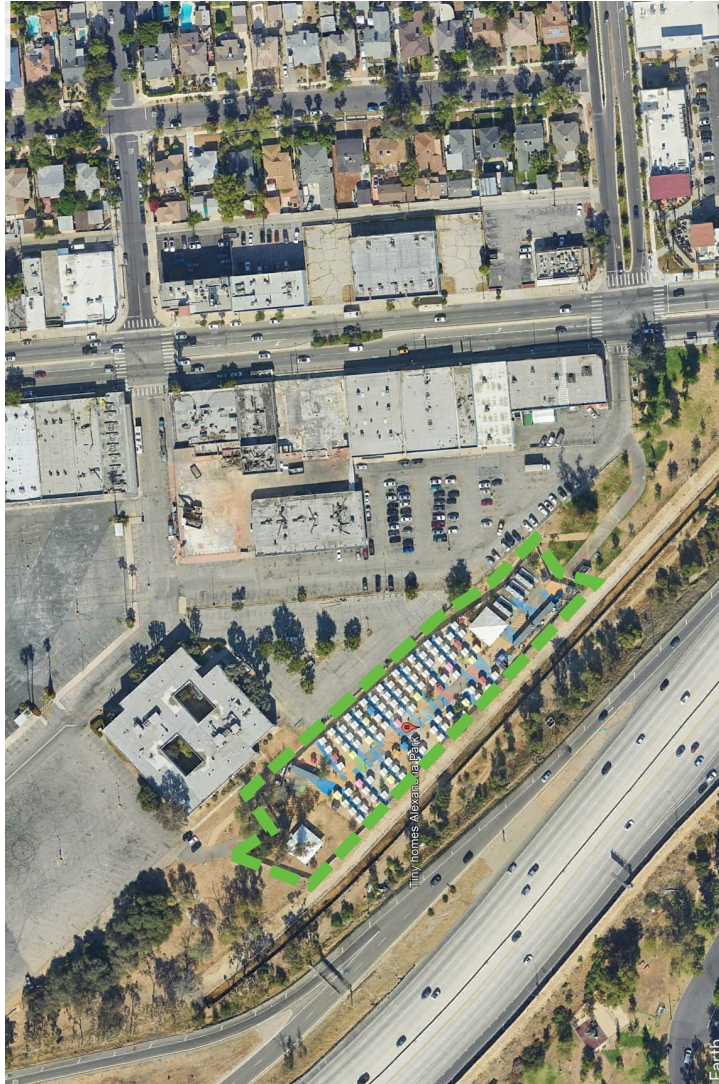
FRONTAL FACADE



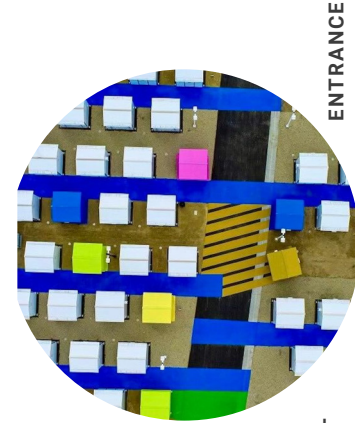
STREET

PRECEDENTS //
TRANSITIONAL HOUSING

- TINY HOME VILLAGE**
- Location: North Hollywood, Los Angeles California
 - Size: 103 Units
 - Area: 236,738 ft²
 - Year: 2021
 - 1 Unit per 2,298 ft²
 - Architects: Lehrer Architects LA
 - Similar projects: Chandler, Saticoy and Alvarado.



ZOE LUKE // FATIMA ABENOVA // ANDRES LEON
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLARD/RAGETT



ENTRANCE



STREET



FRONTAL
FACADE



STREET

TINY HOME VILLAGE
 - Pots dimensions: 8x8'
 - Acomodates 2 people



**SITE
COMPARISON**

**PRECEDENTS //
TRANSITIONAL HOUSING**



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 ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRD/RAGGETT

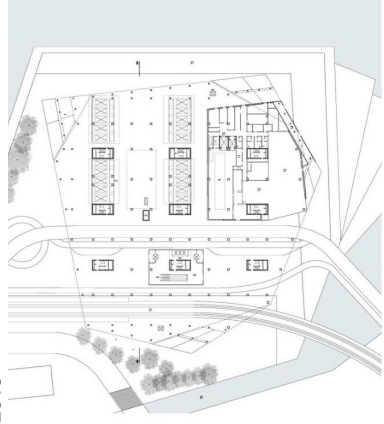
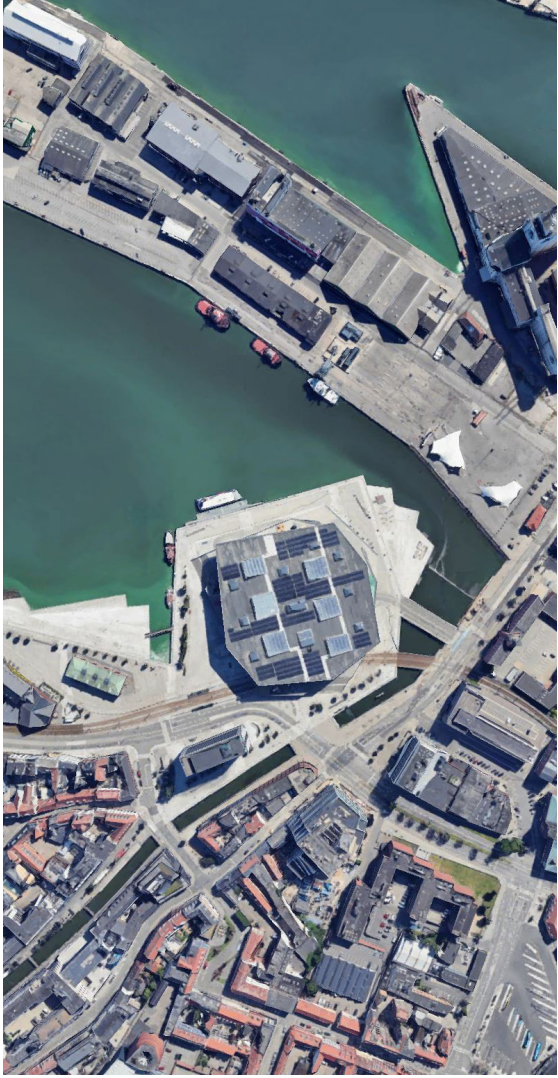
DOKK 1 LIBRARY

Location: Aarhus, Denmark

Area: 35600 m²

Architect: Schmidt Hammer Lassen Architects

Year: 2015



PRECEDENTS // CIVIC SPACE

Dokk1 as a transparent covered urban space is a site for "exchanging knowledge and opportunities and a multicultural meeting point that will change people's perception of the entire city". The architecture creates an "exceptional visual connection to the city – both from inside the building and out".



"transparent", covered ground floor



public plaza and large monumental stair for gathering



children's play areas in various outdoor levels and pockets of the site

ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRAD/RAGETT

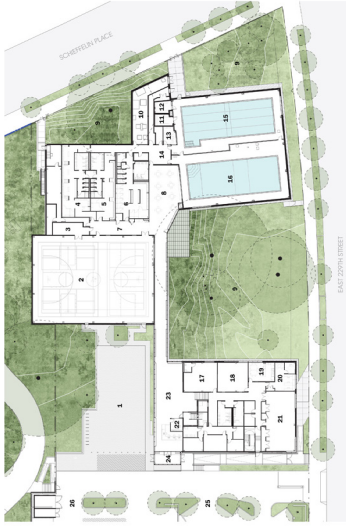
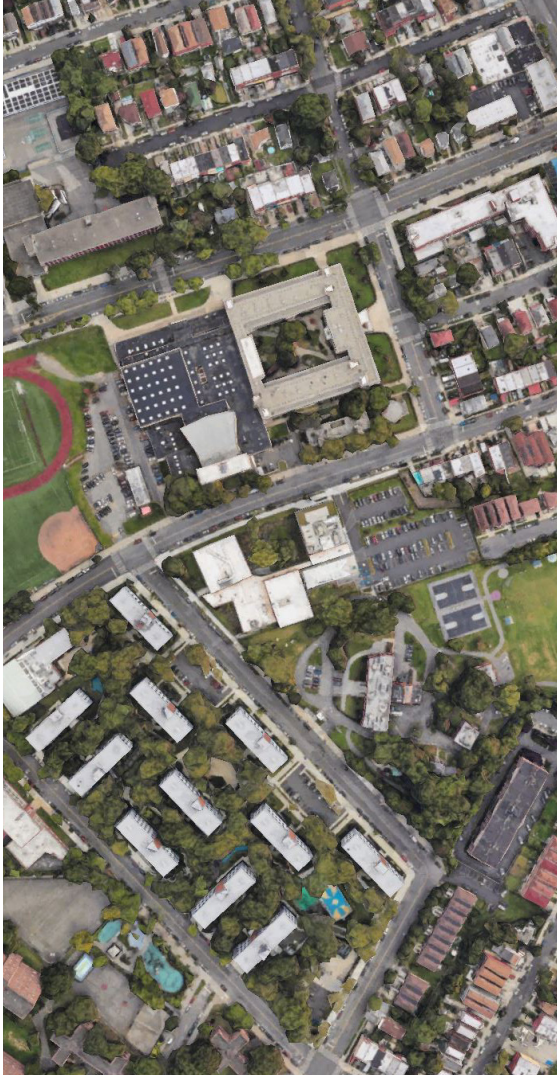
NORTHEAST BRONX YMCA

Location: Bronx, NY, USA

Area: 53,361 SF

Architect: Marvel Designs

Year: 2021



PRECEDENTS //
CIVIC SPACE

"The YMCA's vision was to build a facility that meets the wide-ranging needs of the economically diverse youth and families that live in the Northeast Bronx and provide access for neighborhood families to a state-of-the-art community hub, a space for everyone from children to seniors to engage in safe and fun recreational activities"



each building opens up into a protected, interior courtyard



public plaza draws visitors into a visually connected interior component of the YMCA



a variety of outdoor green spaces provide a quieter, yet connected space for the community to spend time in

ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRD/RAGGETT

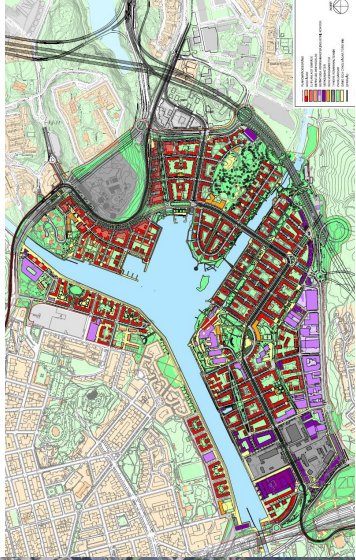
HAMMARBY SJÖSTAD

Location: Stockholm, Sweden

Area: 120 ha

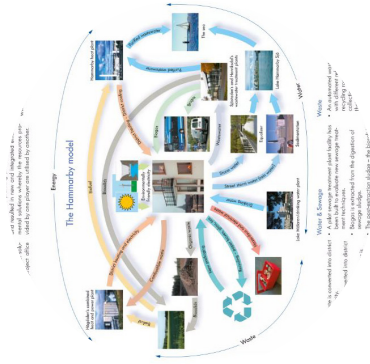
Planner: Jan Inghe-Hagström / Stockholm City Planning Bureau

Year: 1996-2018



PRECEDENTS // NEW RESIDENTIAL NEIGHBOURHOODS

8 Core Strategies: the future, limitations on climate change, population and public health, social cohesion, welfare and security, employment, economic growth and competitiveness, community development



environmental infrastructure integrated into residential neighbourhood



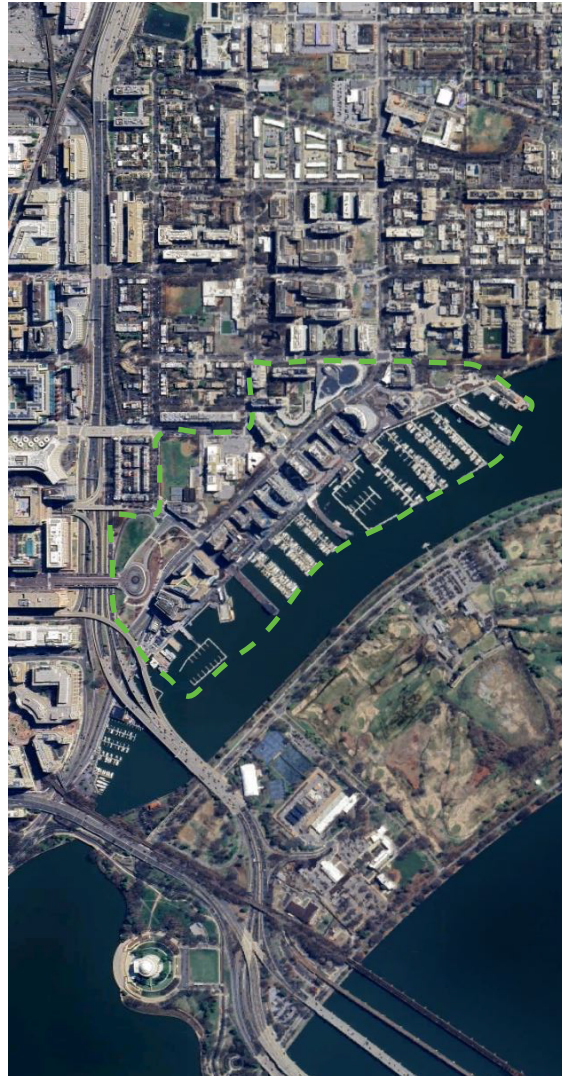
human-scaled pathways and green space / circulation for pedestrians



Abundant, protected public space and circulation within each block of residential buildings

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ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE



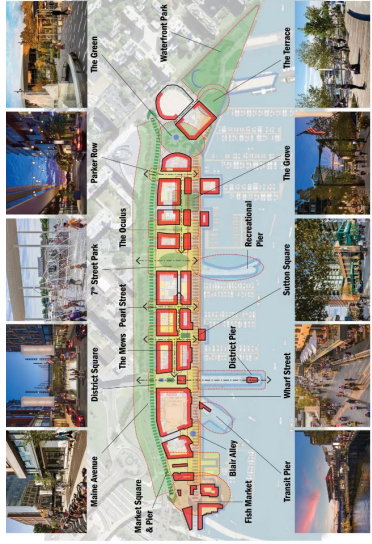
THE WHARF DISTRICT

Location: Washington, DC

Area: 24 acres

Planner: Perkins Eastman

Year: 2017 (Phase 1), 2022 (Phase 2)



PRECEDENTS //
NEW RESIDENTIAL NEIGHBOURHOODS

"The Wharf is a vibrant neighborhood encompassing a wide range of commercial, residential, and public uses. With expansive new piers, buildings, and promenades shaping dynamic spaces for people to gather, The Wharf is a place for all to enjoy life at the water's edge"



floating docks extend out and provide after-hour activities and pedestrian traffic



residential buildings with ground-level commercial stores engage pedestrians and provide a walkable environment



residential buildings overlook waterfront and and evening activities

ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE

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THE CLINTON TRIANGLE

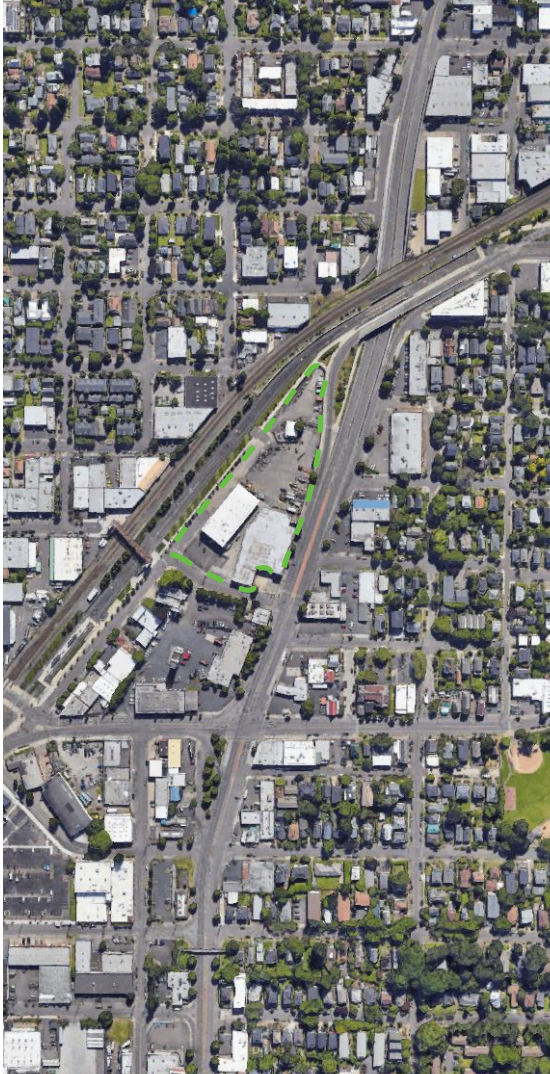
Location: Portland, OR

Area: 3.13 acres; 51 units per acre

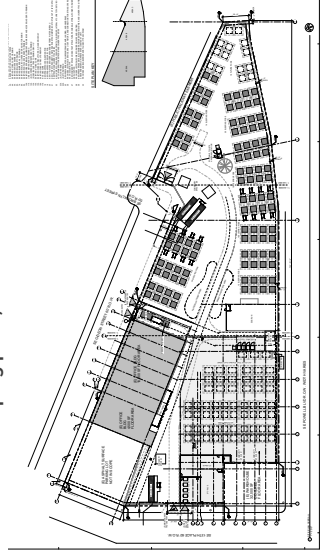
Planner: Sosyal Architecture and Community Dev. LLC

Year: 2023

Units: 100 sleeping pods, +60 future



PRECEDENTS //
TEMP. ALTERNATIVE SHELTER
SITE



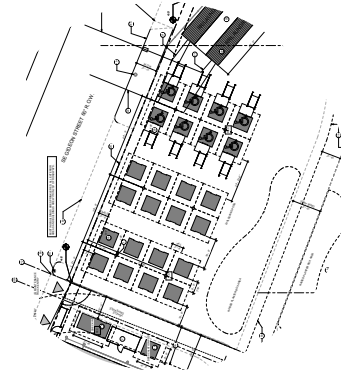
Clinton Triangle is a low-barrier shelter for adults (age 18+). Pets are allowed. Couples can share a tiny home. Guests can stay for an indefinite period, though the intention is for individuals to use the site temporarily before transitioning to other housing or care.



Prefabricated sleeping pods, 64 SF each



16 of the sleeping pods designated as accessible (ramp)



6 ft between structures equipped with electrical connections

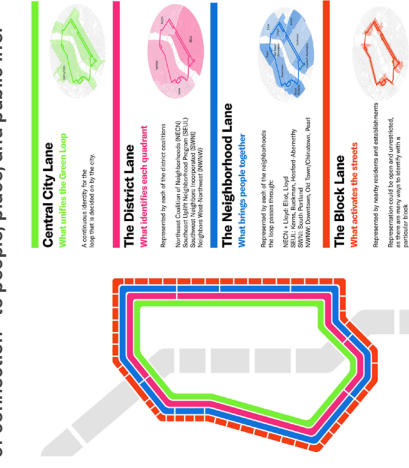
10 ft required between buildings and sleeping pods

ANDRES LEON // FATIMA ABELOYA // ZOE LUKE

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRD/RAGETT

University of Oregon Students Proposal, W. Smith website
GREEN LOOP: THE PORTLAND MOSAIC,
PORTLAND

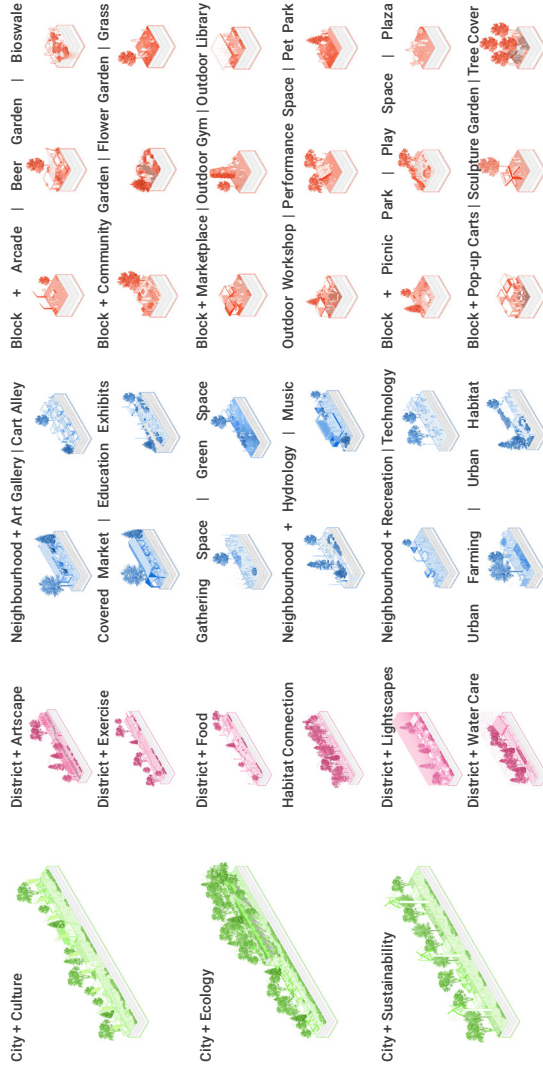
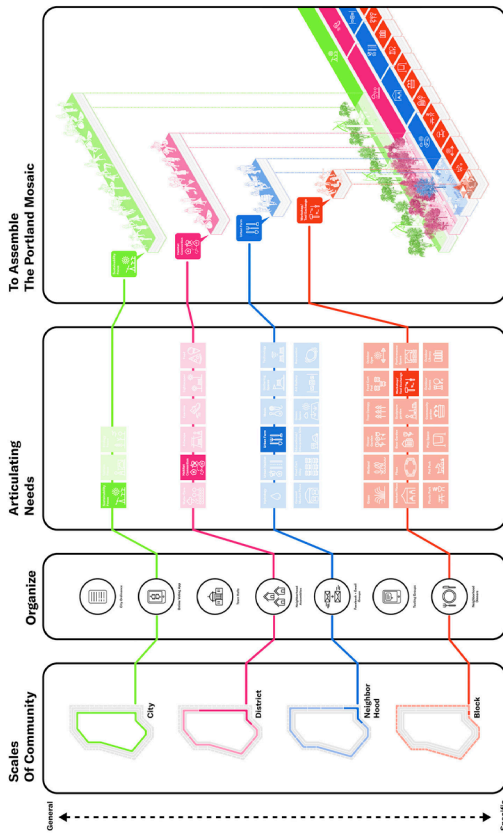
Proposed by Portland's Bureau of Planning and Sustainability, The Green Loop is a six-mile linear park, linking Portland's east and west sides with a robust bicycle and pedestrian network. More than just a path, it's a means of connection—to people, place, and public life.



Concept for the Green Loop: The Portland Mosaic, is an urban process whereby Portlanders define the character and identity of the project in a way that reflects their individual needs and aspirations for the future. It is a framework to be filled through collaborative efforts—a massive mosaic for which every Portland resident has a tile.

The Portland Mosaic represents four scales of community through which people experience Portland: the Block, the Neighborhood, the District, and the City as a whole. Each section, or lane, has its own unique identity, as decided by the corresponding community. The key feature of the Portland Mosaic is that the content of each lane is chosen by the very people that lane represents.

The effect we imagine is one in which the Green Loop has a markedly different purpose and feel wherever you live, visit, or travel—evolving and adapting with each new block.



PRECEDENTS // OPEN SPACE DESIGNS

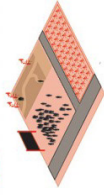
Stoss

DETROIT FUTURE CITY, DETROIT

The Detroit Strategic Framework Plan is a comprehensive, action-oriented roadmap for decision-making to improve the quality of life and business in Detroit.

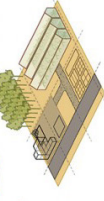
Work seeks to redefine and diversify the traditional notion of landscapes as only recreation by showing the multiple ways landscapes can improve the overall health of the city and its residents. Single-use, passive landscapes are resource-consumptive; but contemporary productive landscapes can generate resources. Through natural processes, they can reduce environmental health problems faced by city residents.

Landscapes and green infrastructures can clean air, water, and soil and improve the health of urban ecosystems.



TRANSITIONAL LANDSCAPES

TEMPORARY LANDSCAPES THAT CLEAN SOIL AND AIR, PROVIDE PLACES OF SOCIAL LIFE AND CREATIVE DISPLAYS



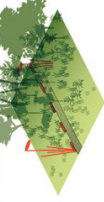
WORKING+PRODUCTIVE LANDSCAPES

LANDSCAPES THAT GENERATE NEW WORK, ENERGY AND FOOD, AND CREATE NEW URBAN EXPERIENCES



BLUE+GREEN INFRASTRUCTURES

LANDSCAPES THAT CAPTURE STORMWATER AND CLEAN AIR



ECOLOGICAL LANDSCAPES

MEADOWS AND FORESTS THAT PROVIDE ECOSYSTEM SERVICES AND OTHER ENVIRONMENTAL BENEFITS



COMMUNITY OPEN SPACES

LANDSCAPES FOR RECREATION, SOCIAL INTERACTION, LOCAL FOOD CULTIVATION

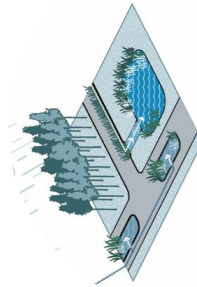
- PLAYGROUNDS
- NEIGHBORHOOD PARKS
- SPORTS FIELDS
- REGIONAL PARKS
- PLAZAS
- RECREATION CENTERS
- TRAILS / GREENWAYS
- URBAN GARDENS
- FARMERS MARKETS
- CEMETERIES (EXISTING)

- RESEARCH LANDSCAPE
- URBAN FARM
- AQUACULTURE AND HYDROPONICS
- ALGAE-CULTURE
- ENERGY FIELD OR FOREST
- HOMESTEADS
- CAMPGROUNDS

- LARGE LAKE
- SMALLER RETENTION POND
- INFILTRATION PARK
- SWALES + INFILTRATION MEDIANS
- WAD-SIDE POND (ALONG ROAD)
- GREEN INDUSTRY BUFFER
- CARBON FOREST

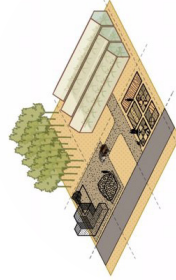
- EVENT LANDSCAPES
- REMEDIATION FIELDS OR FORESTS
- ART-SCAPES
- URBAN MEADOWS

Blue+Green Infrastructures



- LANDS
- RETENTION PONDS
- STORMWATER BIWAYS
- CARBON FOREST
- INDUSTRY BUFFER

Working+Productive Landscapes



- RESEARCH PLOTS
- URBAN FARMS
- ENERGY FIELDS AND FORESTS
- AGRICULTURE
- AGRICULTURE, ETC.
- HOMESTEADS

Carbon Forest



Innovative landscapes focus on multiple types of blue / green infrastructure, cleaning water and air and combine with productive types, including food and energy production, community engagement, and research.

In this way, the plan encourages landscape infrastructure as a civic instigator for new city structures.

The carbon forest proposal calls for a 500' separation between highways and neighborhoods. Planting area includes embankments and vacant parcels.

ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE

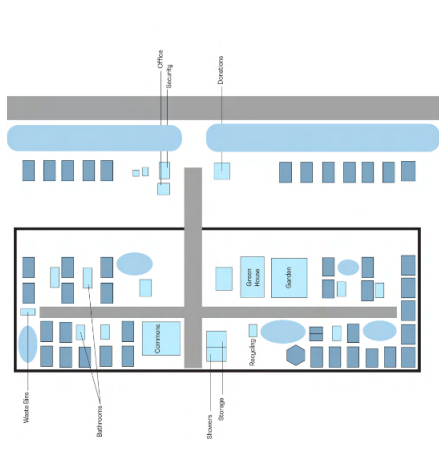
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRD/RAGETT

PRECEDENTS // HOUSING EXAMPLES

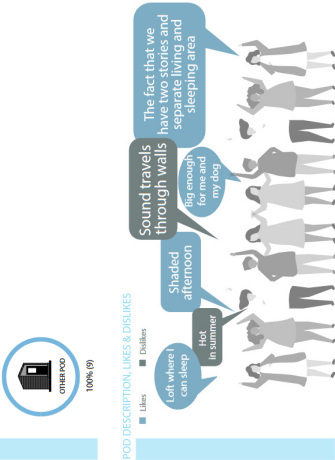
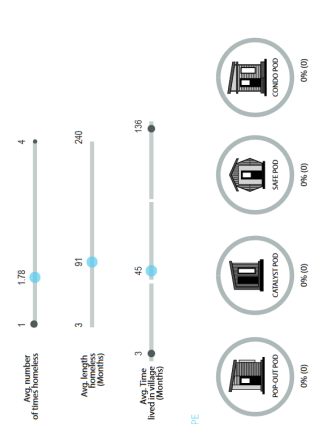
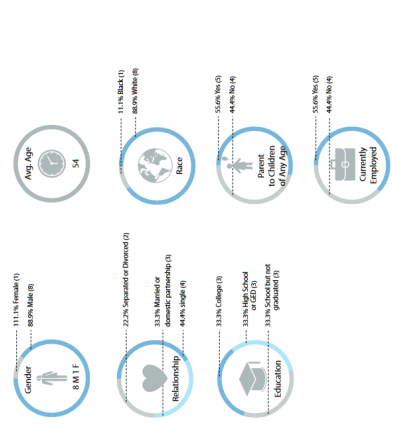
Architect Mark Lakeman, developer Eli Spevak, and others
DIGNITY VILLAGE, PORTLAND
 self-governed
 1.2 acre site
 1 full-time village program specialist
 45 pods, each 96-240 sq ft
 60-70 villagers

Dignity Village provided an example of a new form of alternative shelter that informs activism, advocacy, and shelter responses. It was created by people experiencing homelessness, with support from allies ranging from designers and developers to preachers and artists. In 2004 the Portland City Council granted campground status to the village, making it the country's first city-sanctioned type of community to legally exist in the city.

The nature of the village's location makes it unlikely for one to stumble across the site, with neighbors including a yard waste recycling facility, a prison, a country club, and the outer runways of the Portland airport. This remoteness has surely contributed to the village's longevity, with political pressures from neighbors of other burgeoning villages nearly always resulting in displacement. The isolated site does come with challenges, and cars are required by many villagers since nearly half of villagers have jobs outside the village.



RESIDENTS DEMOGRAPHICS



ANDRES LEON // FATIMA ABENOVA // ZOE LUKE



ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ULLAR/RAGETT



MICROBUSINESS



CONSTRUCTION PROCESS

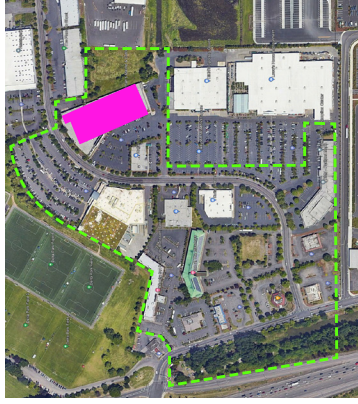


ZOE LUKE // FATIMA ABENOVA // ANDRES LEON

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/ILLIARD/RAGETT

DIGNITY VILLAGE, POTLAND

- 37 pods per Acre
- Tiny Houses Dimensions: 10 x 10 to 15 x 20 Approx.



SITE COMPARISON

PRECEDENTS // HOUSING EXAMPLES

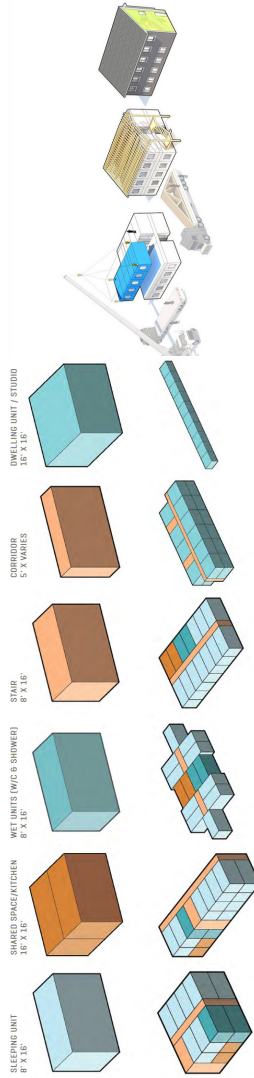
Holst Architecture

ARGYLE GARDENS, PORTLAND

24,000 sf, 72 units

Designed as a kit of parts, Argyle Gardens is the first buildout of LISAH (Low Income Single Adult Housing), a dignified co-living model designed to accommodate an optimum number of people to share community space and support. The modular system can be configured as formerly homeless, workforce, or student housing, or to house intergenerational families together.

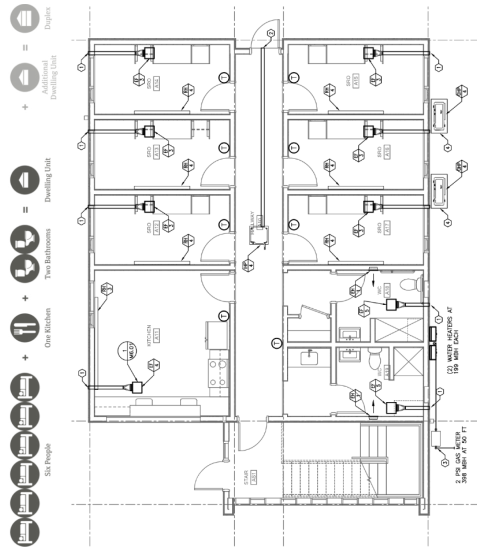
Argyle Gardens opened to residents in April 2020. Located in the Kenton neighborhood of Portland, the four buildings sit on a transitional site between a neighborhood and an industrial zone close to the MAX light rail line, bus lines, a park, and commercial shopping areas. The largest building contains 35 studio units, each 220 square feet. A large community room, laundry facilities, and support service offices, serve as a central hub and communal gathering space for all residents. Each of three cohousing buildings feature two six-bedroom units with two shared bathrooms and a large kitchen.



PRECEDENTS // HOUSING EXAMPLES

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ANDRES LEON // FATIMA ABEHOVA // ZOE LUKE



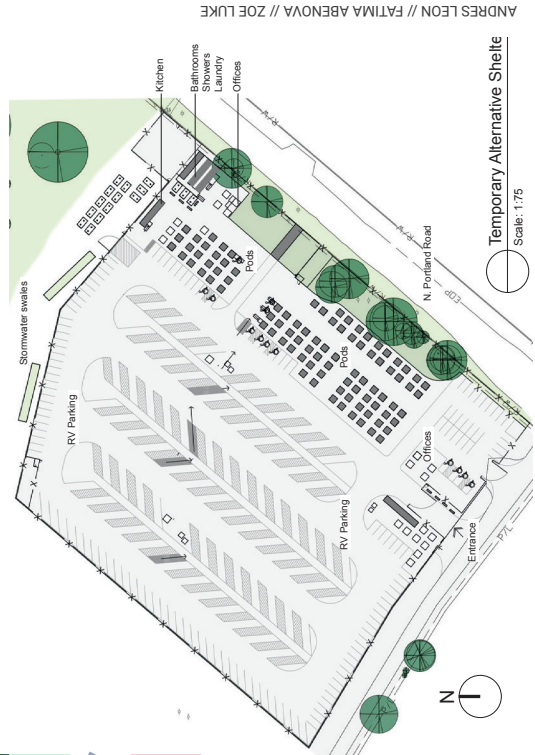
City Shelter Services Team
 10505 N. PORTLAND ROAD TASS
 Temporary Alternative Shelter Site
 6.45 acre site
 272.25 sq ft/pod
 up to 200 people

This site presented as a strong option for an RV shelter due to its size, availability for development, and ownership by the city. Temporary Alternative Shelter Sites provide secure shelter with 24/7 staffing where residents can access mental health support, substance use disorder treatment, and other critical resources as steps towards permanent housing.

PRECEDENTS // HOUSING EXAMPLES

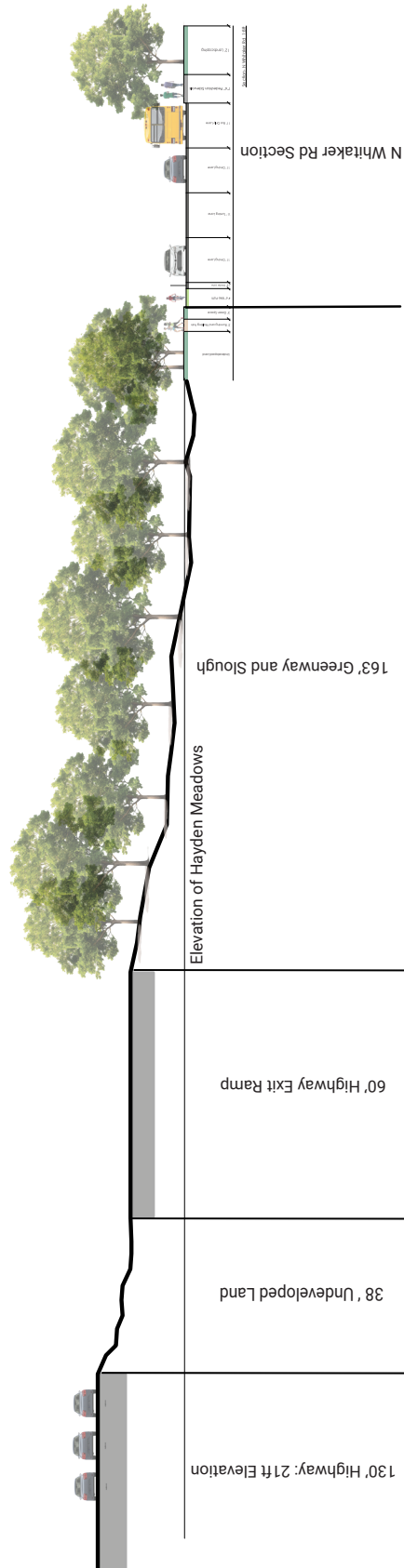


- large supply stores/manufacturers
- community centers/gardens/church
- grocery stores
- shelter site boundary



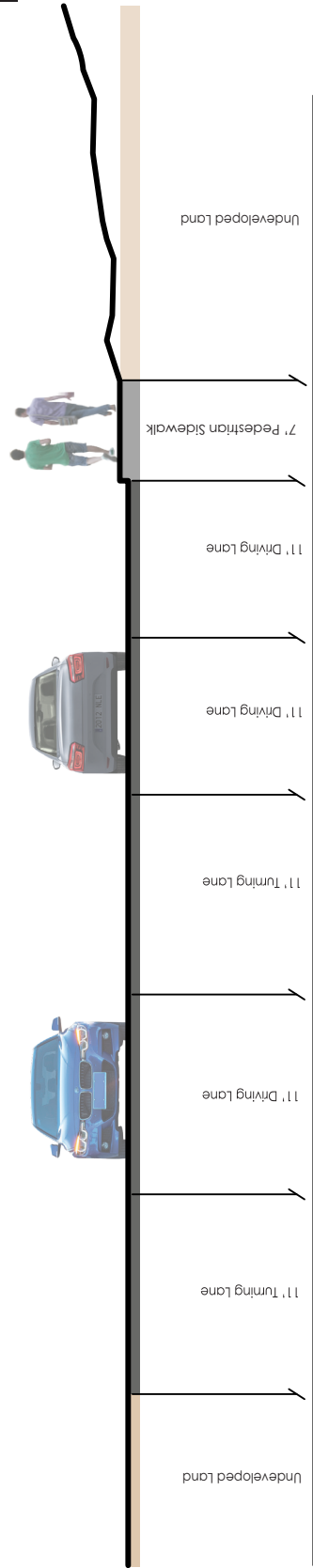
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LLLRD/RAGETT
 ANDRES LEON // FATIMA ABELOYA // ZOE LUKE

Appendix E: Street Sections



Section- Freeway Section at N Whitaker Rd 1:24ft

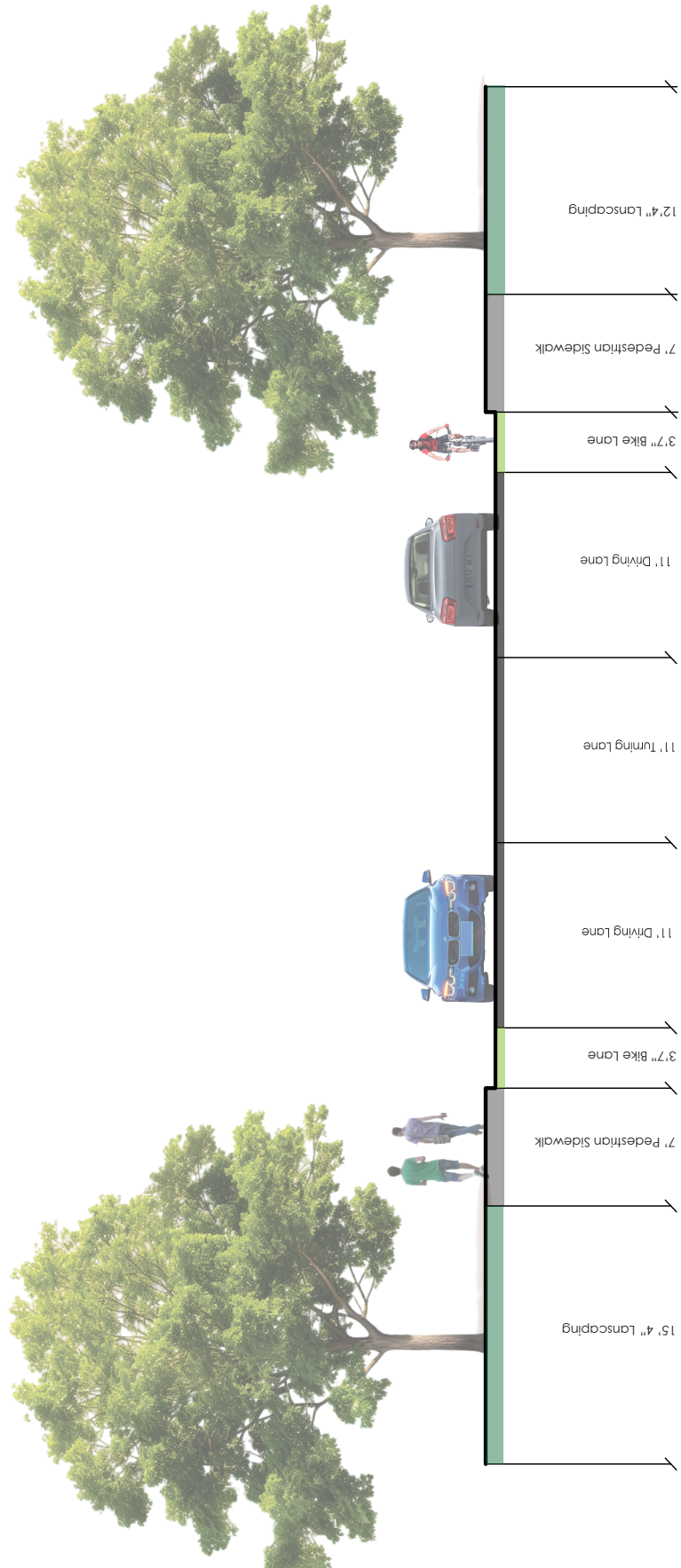
SECTION //
N VICTORY BLVD, 1:7FT



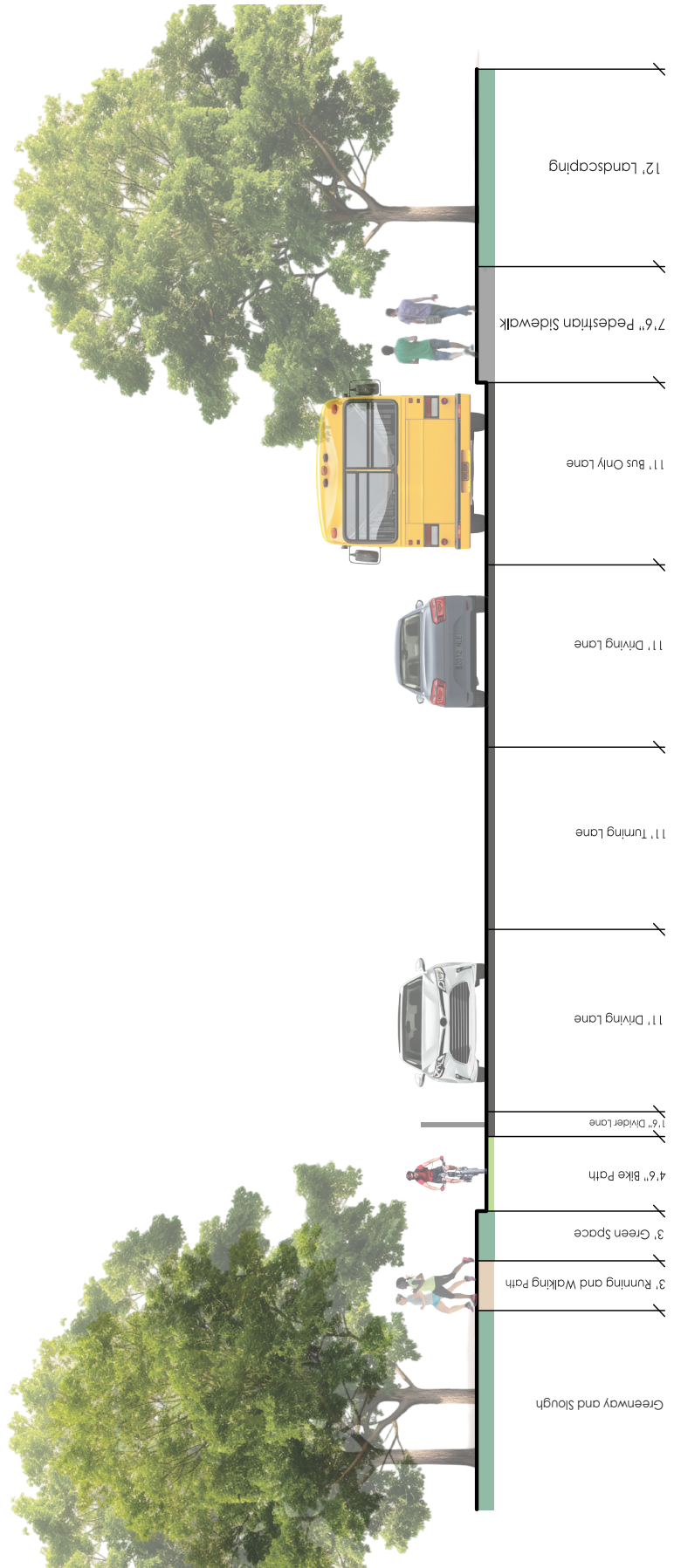
Section- N Victory Blvd 1:7ft

EMMA GABRIEL // DORIAN MCCALL

ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT



Section- N Hayden Meadows Rd. 1:8ff



Section- N Whitaker Rd 1:8ft

Appendix F: Transportation

TRANSIT SERVICES

Bus/Train



Stops.



Electric

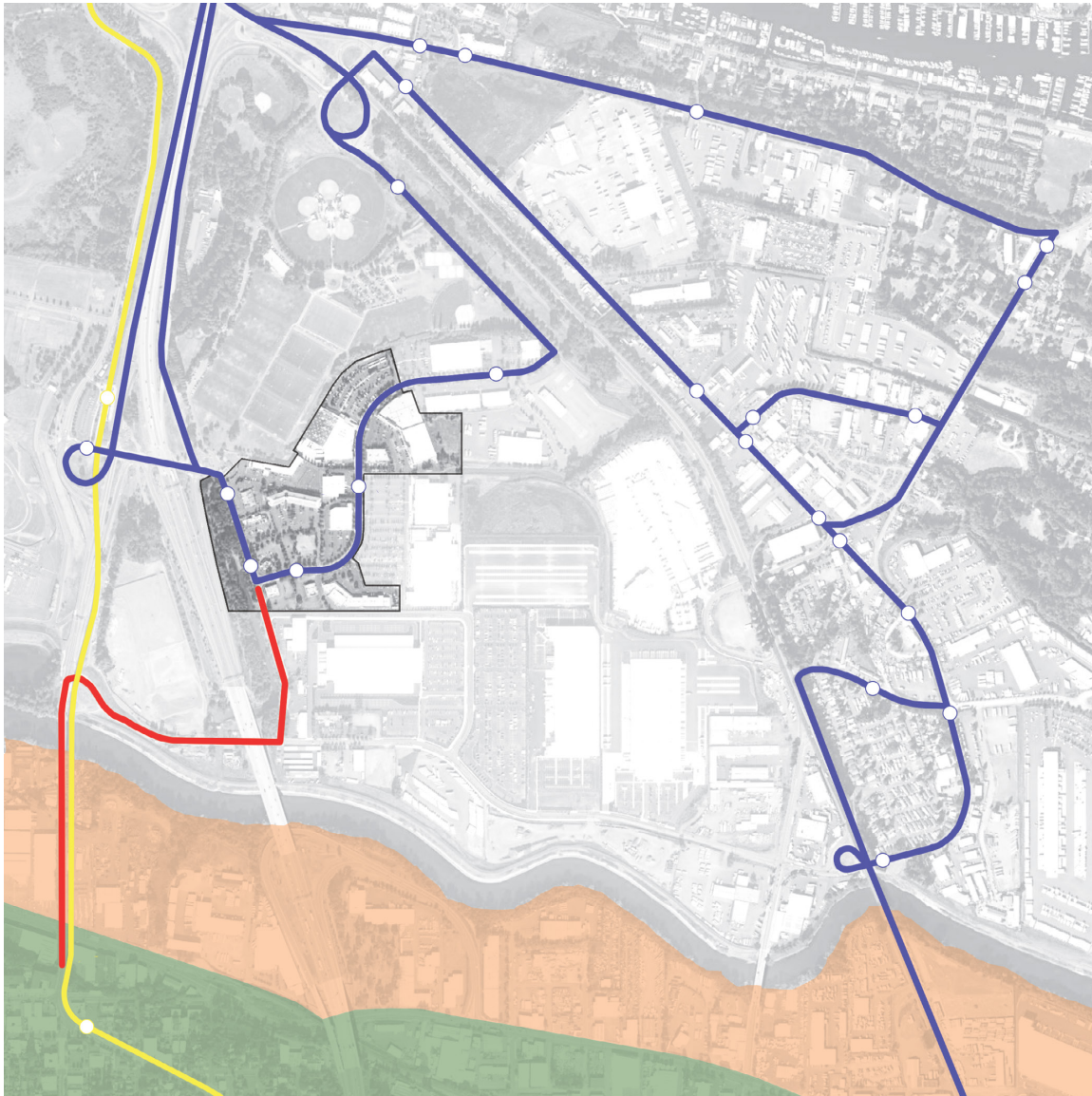


Ride Share



Entire map is serviced.

Walking

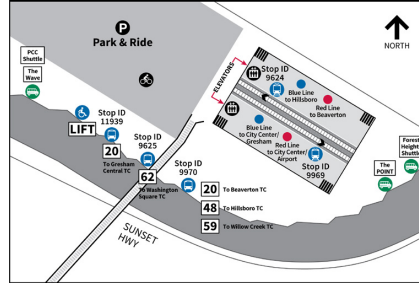


TRANSPORTATION //
TRANSIT SERVICES

JUSTIN SMITH // DANE COBB
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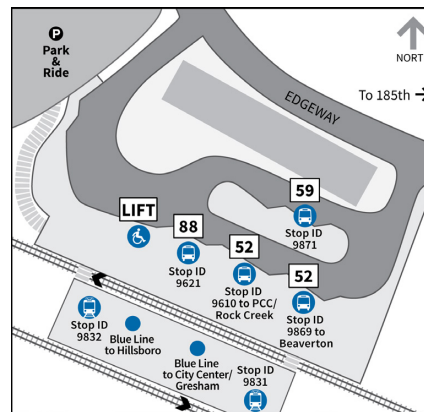
SUNSET TRANSIT CENTER

- Park & Ride
- Limited carpool parking available by permit from TriMet: Call 503-238-RIDE (7433)
- Bike & Ride
- Accessible to people with mobility devices
- Bike racks and lockers available
- Ticket vending machine (credit/debit cards accepted)
- 15-minute "Quick Drop" parking spaces for easy loading and unloading of passengers
- TransitTracker™ sign with MAX arrival countdown
- Coffee Shop: hot and cold beverages during weekday commute hours
- Overflow parking
- Nearby alternative parking is available. There are two shared-use Park & Rides:
 - Cedar Hills United Church of Christ, 11695 SW Park Way. Take 20-Burnside/Stark or 59-Walker/Park Way to Sunset TC.
 - Cedar Mill Bible Church, 12208 NW Cornell Rd. Take 48-Cornell to Sunset TC.



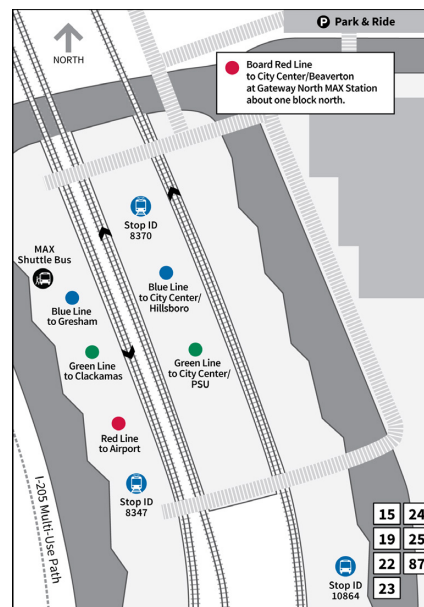
WILLOW CREEK TRANSIT CENTER

- Amenities
- Park & Ride
- Accessible to people with mobility devices
- Bike racks and lockers available
- Ticket vending machine (credit/debit cards accepted)
- Coffee Shop: hot and cold beverages, pastries and sandwiches-commute hours



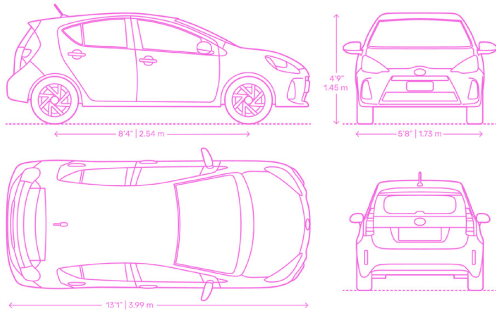
GATEWAY/NE 99TH AVE TRANSIT CENTER

- Park & Ride
- Car sharing
- Accessible to people with mobility devices
- Ticket vending machine (credit/debit cards accepted)
- Bike racks and lockers available
- 10-minute "Quick Drop" parking spaces for easy loading and unloading of passengers
- Transit Tracker™ sign with MAX arrival countdown
- Coffee Max: coffee, hot dogs and beverages during weekday commute hours

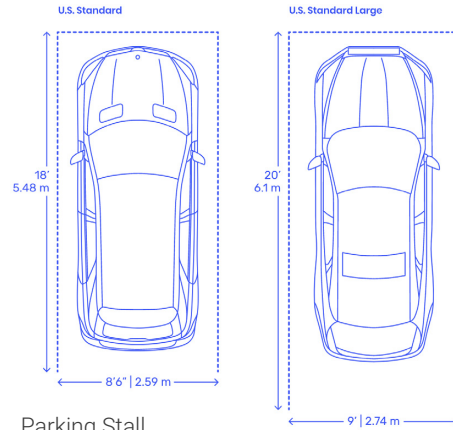


TRANSPORTATION // MOBILITY HUBS

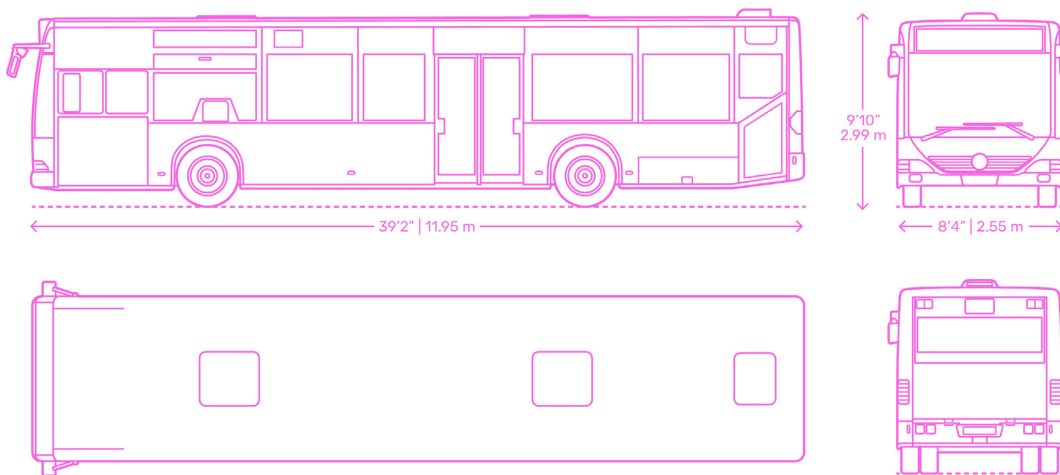
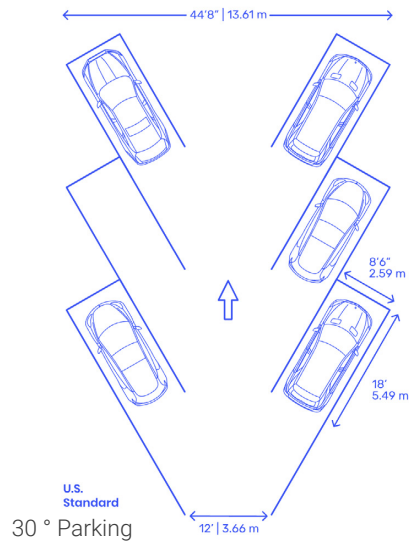
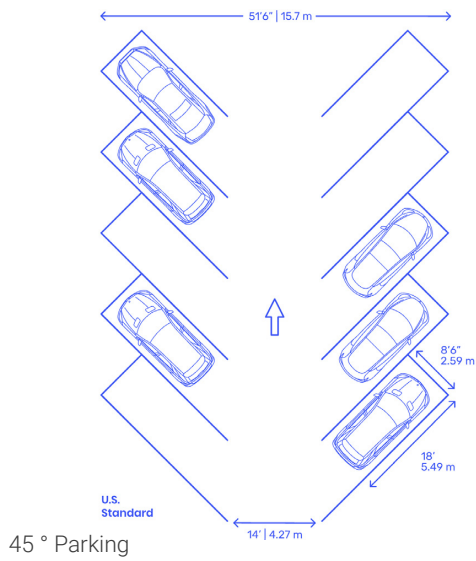
JUSTIN SMITH // DANE COBB
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Car (Toyota Prius C)



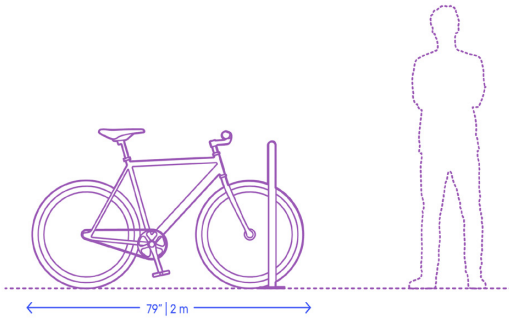
Parking Stall



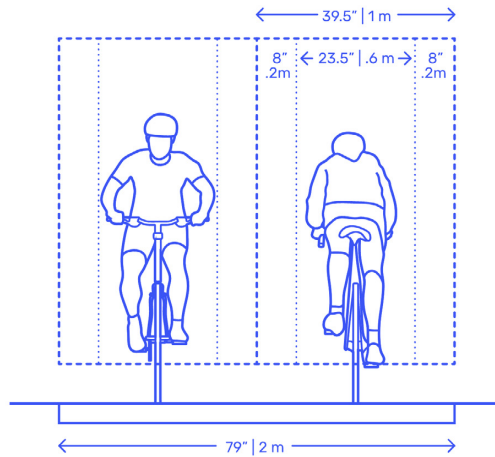
Bus

TRANSPORTATION //
CAR & BUS DIMS.

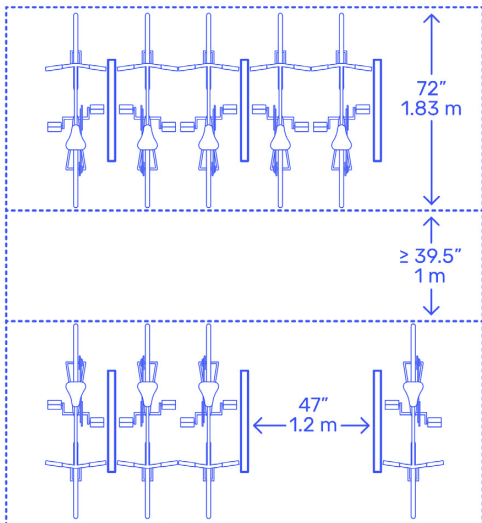
JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT



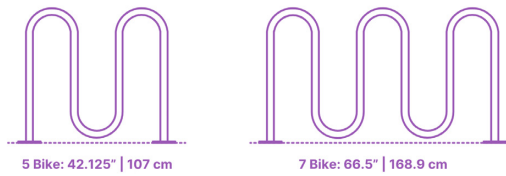
Bike



Biking Path

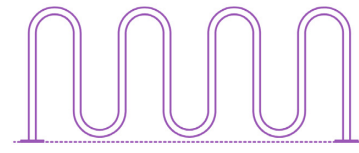


Bike Parking Arrangement



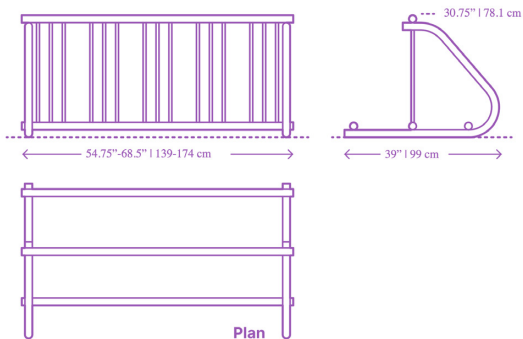
5 Bike: 42.125" | 107 cm

7 Bike: 66.5" | 168.9 cm

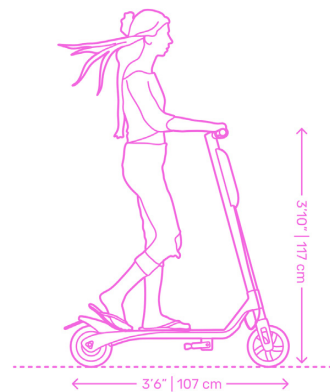


9 Bike: 91" | 231.1 cm

Bike Racks



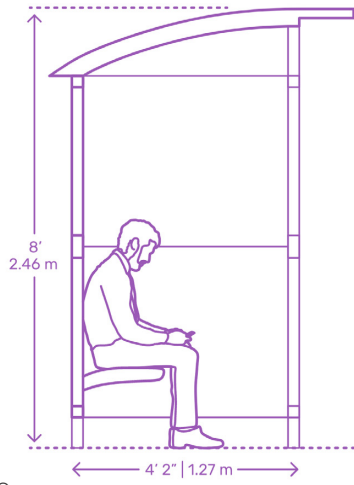
Alt. Bike Rack



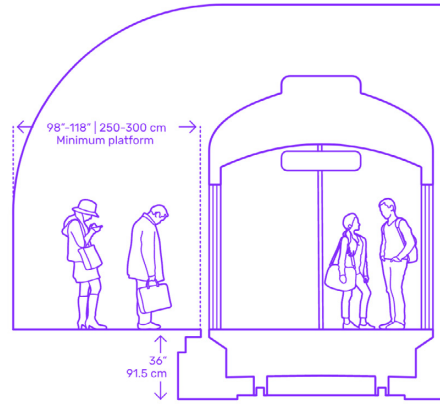
E Scooter

**TRANSPORTATION //
BIKE & SCOOTER DIMS.**

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ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

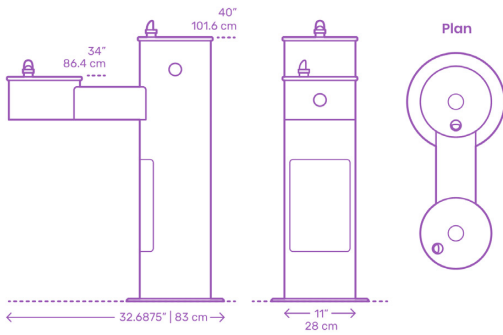


Bus Stop Cover

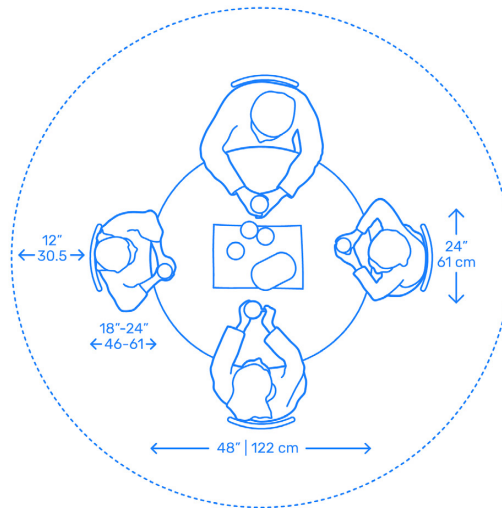


Train Edge Condition

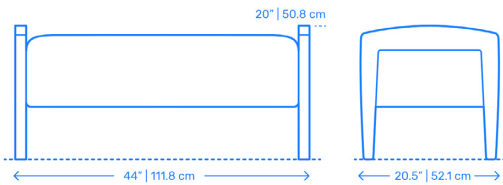
TRANSPORTATION //
MISC. DIMS.



Water Fountain



Patio Dining



Bench



Curb

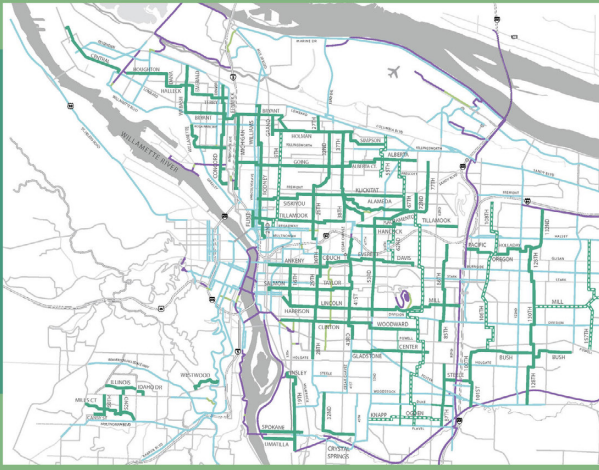
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BIKE ROUTES

NEIGHBORHOOD GREENWAYS:

- Reduce illegal speeding
- Help people cross busy streets
- Connect people to places
- Keep neighborhood streets quiet

- EXISTING
- FUNDED
- MULTIUSE PATH
- BIKE LANE
- OTHER LOW-TRAFFIC STREET



There are no Greenways in the site's vicinity.

TRANSPORTATION //
BIKE ROUTES



Bike Path Analysis

- • • • No Path
- — — — Bike Path
- — — — Protected Path
- • • • Bike Crossing
- — — — Shared Street

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AUTOMOBILE TRAFFIC ANALYSIS

Automobile Traffic Analysis

- 50 mph Roadway
- 40 mph Roadway
- 35 mph Roadway
- 25 mph Roadway.
- ADT (average daily traffic)



TRANSPORTATION //
AUTOMOBILE TRAFFIC

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LANE WIDTH MINIMUM - CHART

**TRANSPORTATION //
LANE WIDTH MINIMUMS**

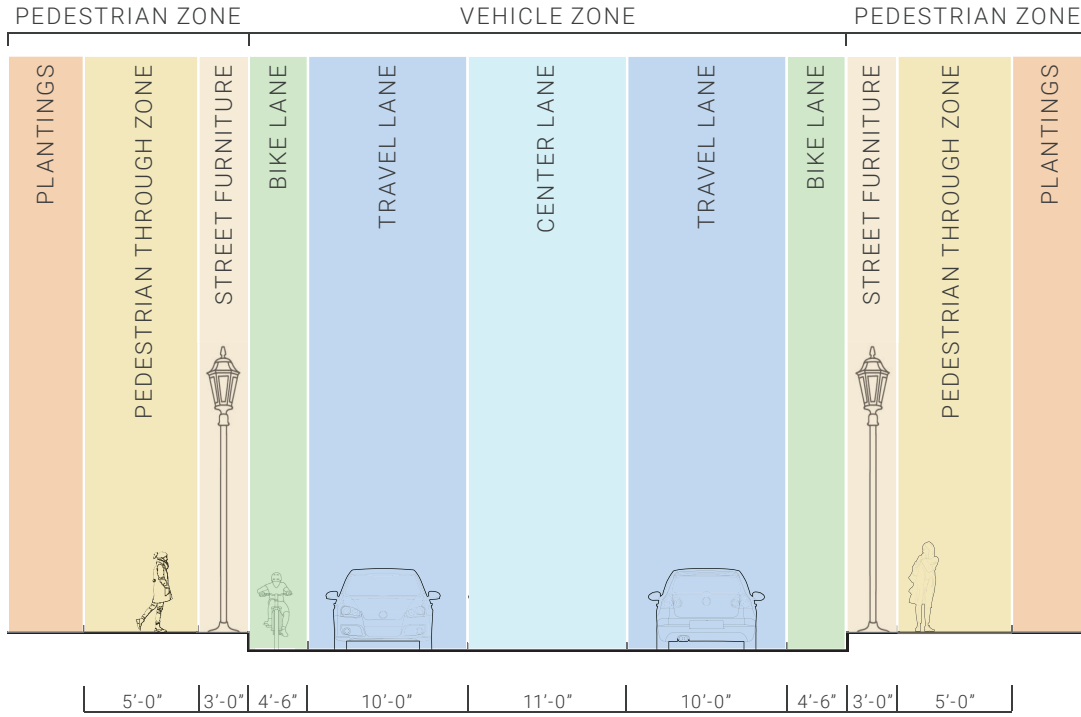
		Zone Width Min.							
Classification		Vehicle Lane	Bike Lane	Parking Lanes	Pedestrian Walkway	Sidewalk Width	Furnishing Zone	Crub	Frontage
	Civic Mainstreet	12' 0"	6' 0"	7' 8"	8' 0"	15' 0"	3' 0"	6"	2' 6"
	Neighborhood Mainstreet	10' 0"	4' 6"	7' 8"	8' 0"	15' 0"	3' 0"	6"	2' 6"
	Civic Corridor	10' 0"	4' 6"	7' 8"	5' 0"	12' 0"	3' 0"	6"	1' 6"
	Local Street	10' 0"	4' 6"	7' 8"	5' 0"	11' 0"	3' 0"	6"	6"

Refer to Oregon Neighborhood Street Design Guide. & NACTO Urban Street Design Guide.

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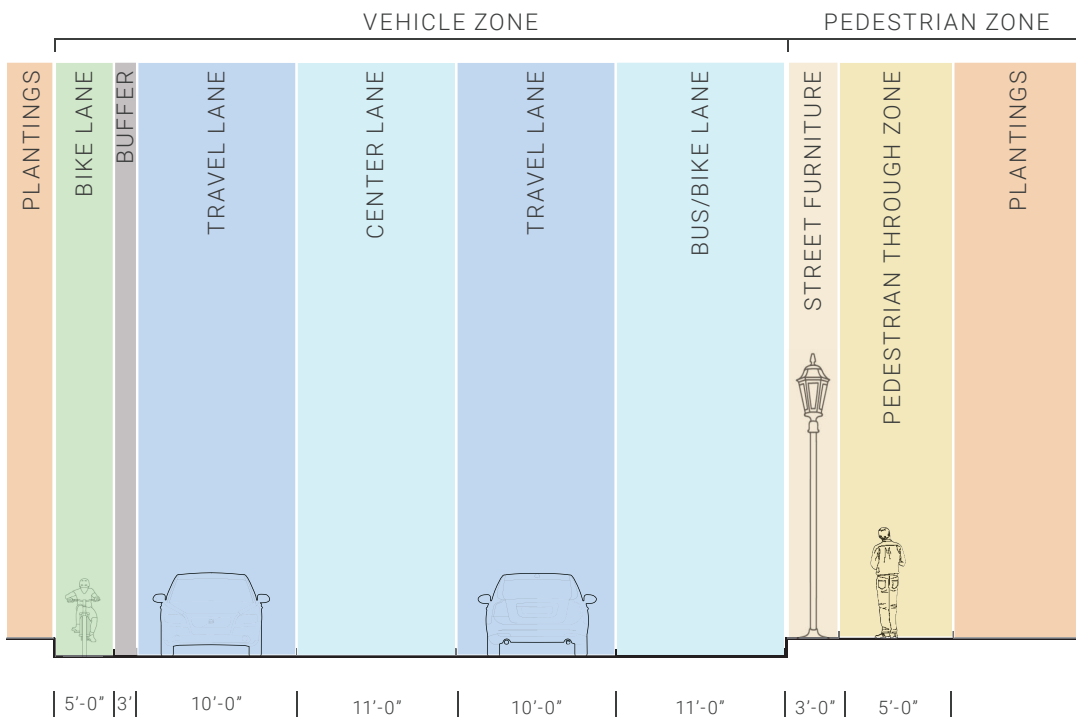
EXISTING STREET DESIGN

HAYDEN MEADOWS DR.



**TRANSPORTATION //
EXISTING STREET DESIGN**

WHITAKER RD.



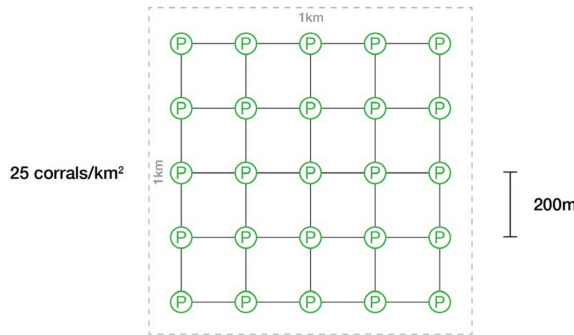
JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

MICROMOBILITY INFRASTRUCTURE

“Parking compliance improves at a steep rate when moving from very low parking corral densities to between 20 to 30 parking corrals per square kilometer, after which improvements to compliance rates taper off with each additional parking corral. This threshold is evident from the partial dependence plot, which shows a significant improvement in parking noncompliance when parking corrals exceed these threshold densities (Figure 4-3). To illustrate the impact of parking corral distribution, Figure 4-4 depicts the even distribution of 25 corrals within a 1km-by-1km square (25 corrals/km²). In this arrangement, the access/ egress distance to any parking corral is between 100m and 141m, and the walking time is around 1 to 1.5 minutes. Appendix 5 shows the conversion of the density to walking distance under the assumption of even distribution.”

“In addition, there is on-street parking to the south of Sunset TC, across the pedestrian bridge on Butner Rd.”

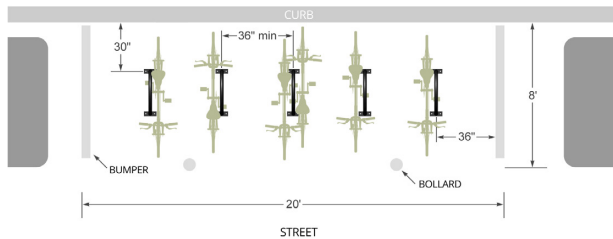
“For direct MAX access, use the Beaverton Creek Park & Ride located at SW 153rd Ave and Millikan Way. There are usually spaces available in this lot at all times.”



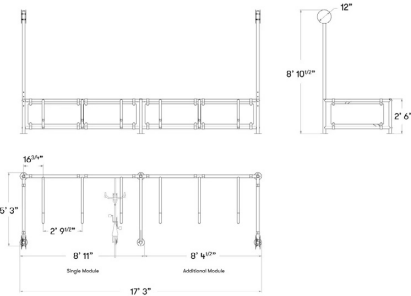
Meng, Sian. Shared Scooter Parking: The Role of Parking Density and Land Use in Compliance and Demand, Apr. 2024, www.urbanismnext.org/resources/shared-scooter-parking. Accessed 22 Apr. 2024.

TRANSPORTATION // MICROMOBILITY

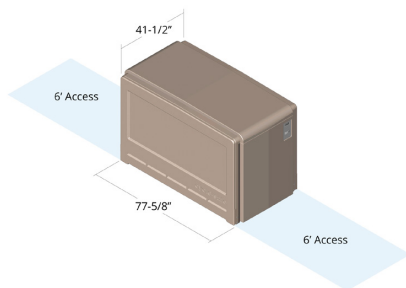
Street Corrals for Nike Biketown



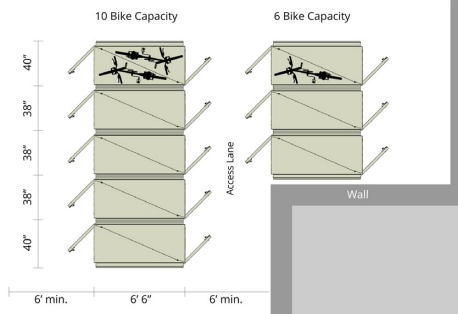
Bike/E - Scooter Corral



Bike Locker



Bike Locker Corral



JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

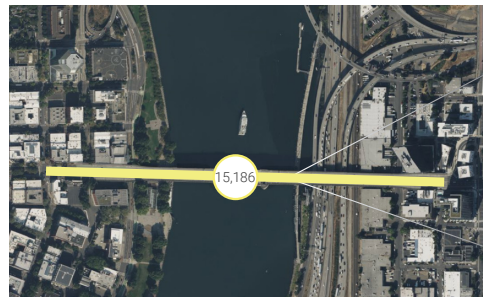
ADT COMPARISON & ANALYSIS

N Denver Ave. (Walking Path in Red)



- Civic Corridor
- 45 mph
- 0 Bike Lanes
- 1 Buffered Pedestrian Walk
- 0 Bus Lane
- 2 Car Lanes

Burnside Bridge



- Civic Main street
- 35 mph
- 2 Buffered Bike Lanes
- 2 Pedestrian Side Walks
- 1 Bus Lane
- 4 Car Lanes

N Mississippi Ave.



- Neighborhood Main street
- Mixed Use Development
- 35 mph
- 0 Bike Lanes
- 2 Pedestrian Side Walks
- 0 Bus Lanes
- 2 Car Lanes

SE Cesar E Chavez Blvd.



- Neighborhood Main street
- Park and Neighborhood
- 35 mph
- 0 Bike Lanes
- 2 Pedestrian Side Walks
- 0 Bus Lanes
- 4 Car Lanes

TRANSPORTATION //
ADT COMPARISON & ANALYSIS

JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

ELECTRIC VEHICLE CHARGING

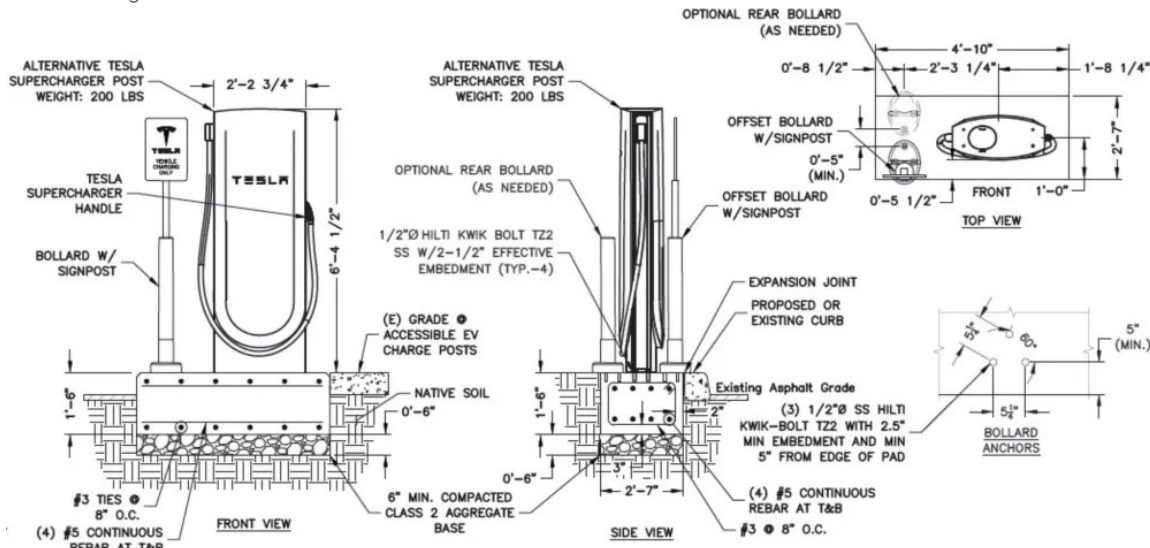
Tesla Parking Infrastructure Map

- Future Charging Network
- Existing Charging Network



**TRANSPORTATION //
ELECTRIC VEHICLE CHARGING**

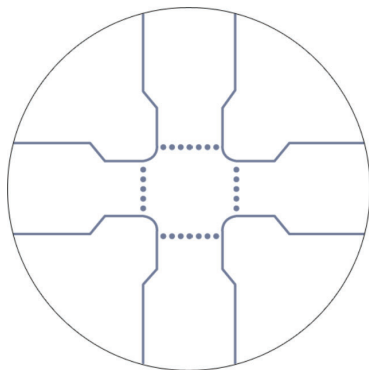
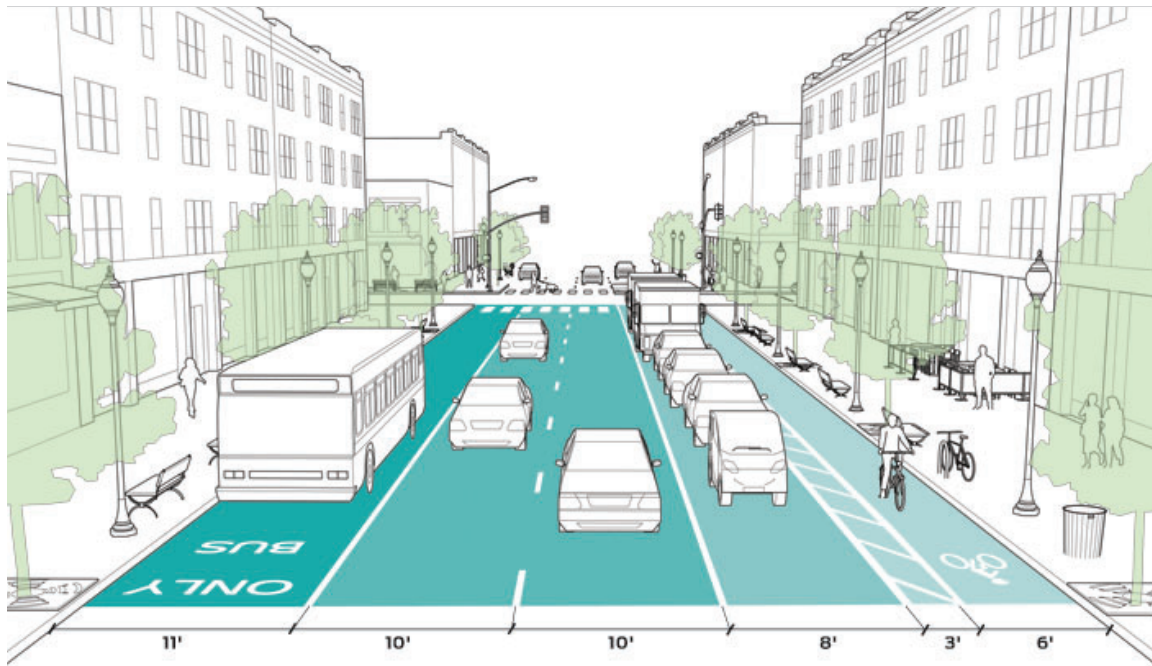
Tesla Parking Infrastructure Details



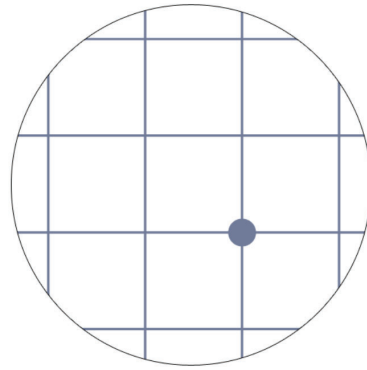
JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

WIDTH OF STREET/INTERSECTIONS

Typical dimensions of bus lanes, travel lanes, parking lanes, and bike lanes. Design guidelines and considerations for intersections.



DESIGN INTERSECTIONS TO BE AS COMPACT AS POSSIBLE



ANALYZE INTERSECTIONS AS PART OF A NETWORK, NOT AN ISOLATION



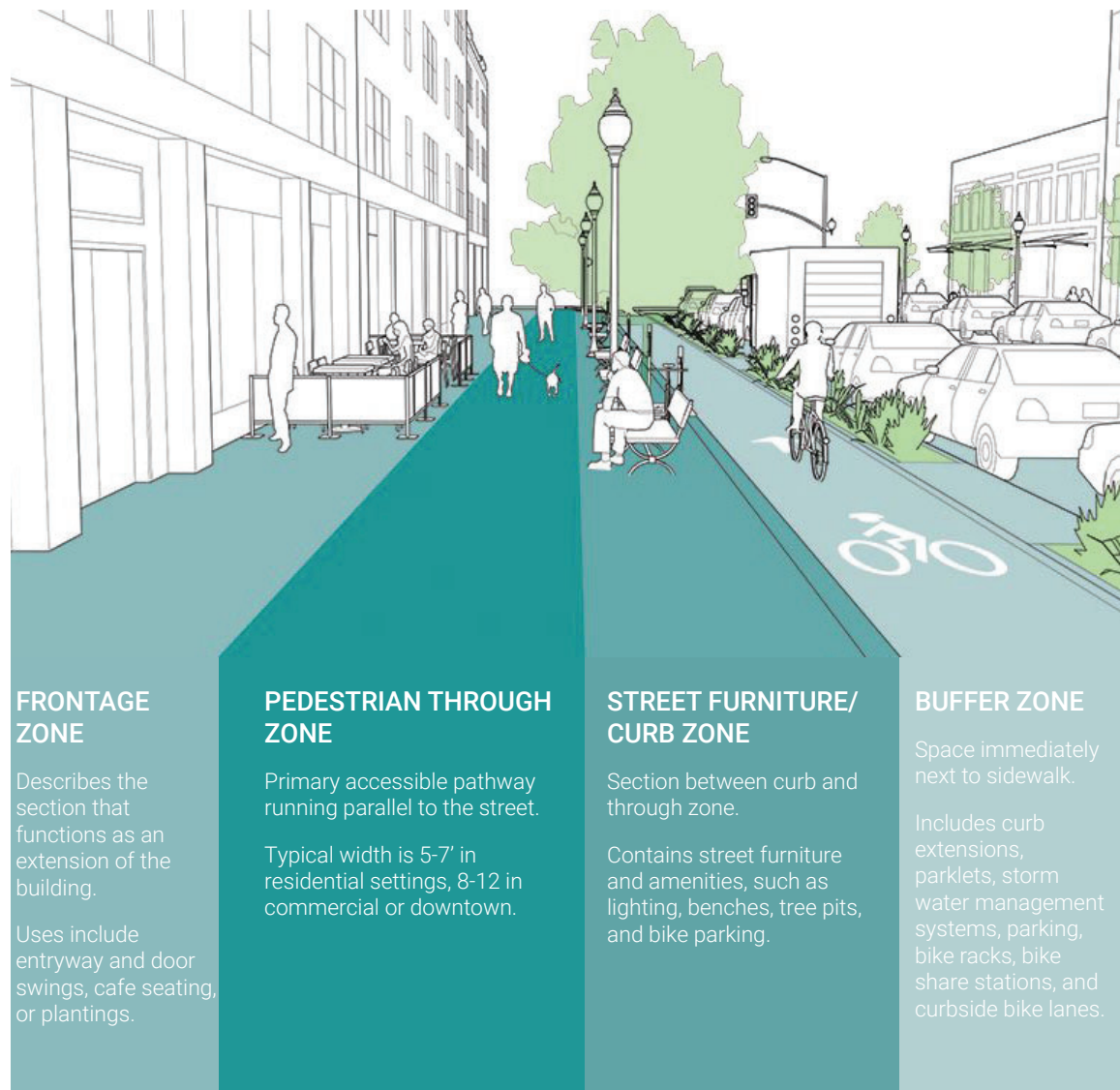
INTERSECTIONS ARE SHARED SPACES

TRANSPORTATION //
STREET DESIGN (NACTO)

JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

SIDEWALKS

Typical zones of sidewalk and dimensions of pedestrian through zone.



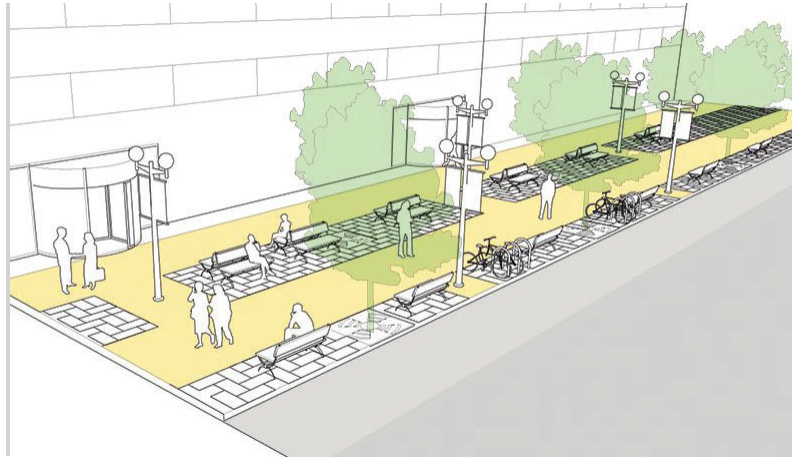
TRANSPORTATION //
SIDEWALKS (NACTO)

JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

SIDEWALKS

Examples of sidewalk design.

DOWNTOWN WIDE SIDEWALK



DOWNTOWN CONVENTIONAL SIDEWALK



URBAN NEIGHBORHOOD SIDEWALK



**TRANSPORTATION //
SIDEWALKS (NACTO)**

JUSTIN SMITH // DANE COBB
ARCH 585 // URBAN DESIGN STUDIO // S24 // LARCO/LILLARD/RAGGETT

BIKE FACILITIES

Examples of bike station typologies with typical dimensions and clearances.

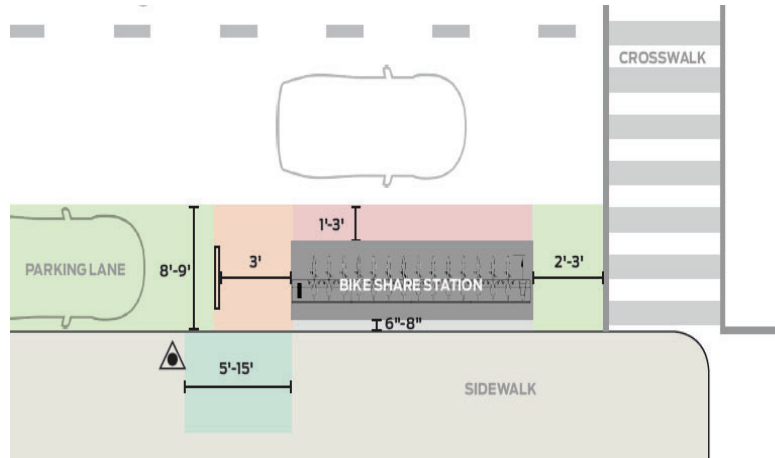
STREET SHARE STATION

Can be placed in parking lanes 8' or greater. Angled stations in parking lane is less than 8'

Typically 2'-3' between station and curb cuts

People typically need 1'-3' to pull bikes out of station

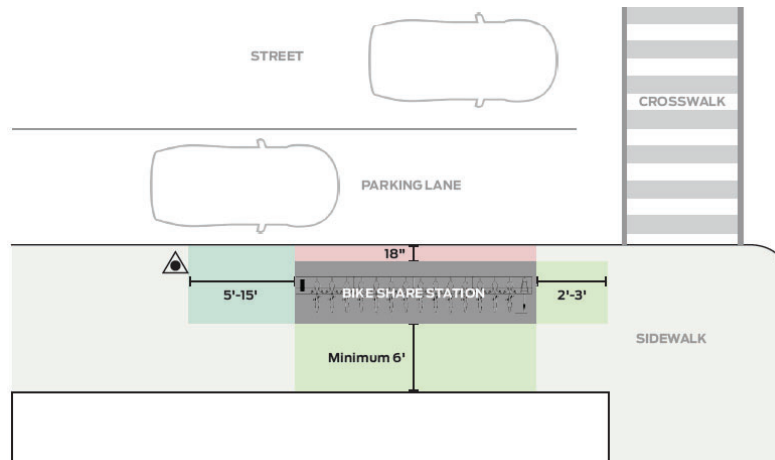
6"-8" of clearance typically from station to curbside for drainage



SIDEWALK STATION

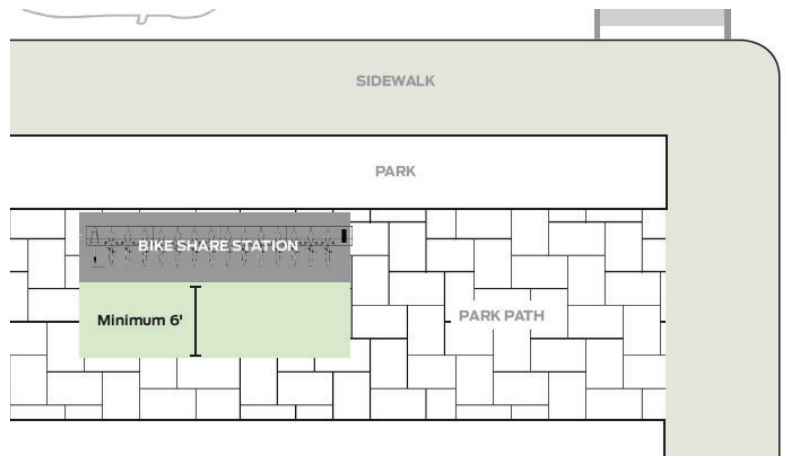
Minimum of 6' clear from back of docked bike to provide room for ADA pedestrians

Vehicle parking can be adjacent if placed at least 18' off curb



OPEN SPACE STATION

Minimum of 6' clear from back of docked bike to provide room for ADA pedestrians

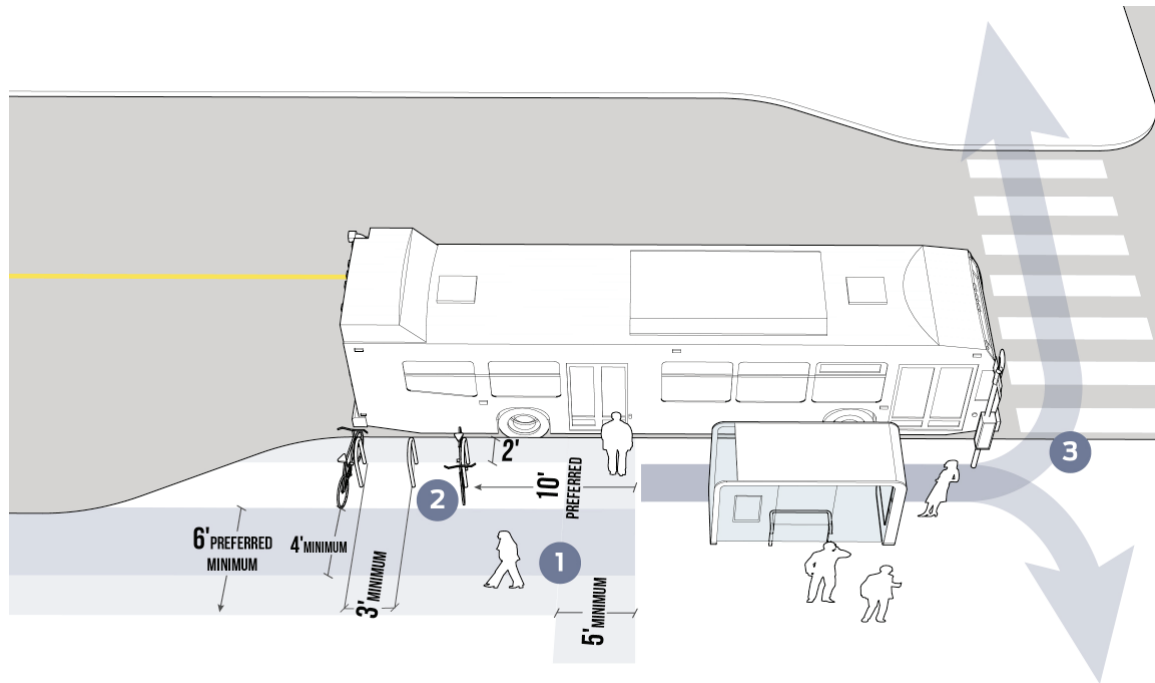


TRANSPORTATION //
BIKE FACILITIES (NACTO)

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BIKE PARKING

Guideline, clearance, and typical dimensions for bike parking.



ONE

Provide a clear zone around bike parking to avoid impeding traffic.

TWO

Minimum of 3' between bike racks.

THREE (RECOMMENDED)

Short-term bike parking should be located within 50 feet of stop or station entrance, as well as major destinations.

FOUR (OPTIONAL)

Enclosed bike storage (such as lockers, cages, or facility) enable first and last-mile trips.

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BIKE FACILITIES (NACTO)

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BULB-OUTS

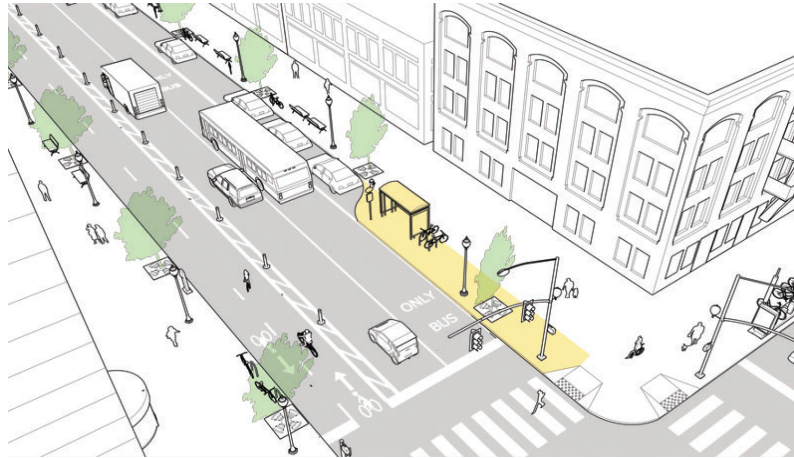
Examples of bulb-outs and recommended strategies.

BUS BULBS

RECOMMENDED: Equip with transit shelter whenever possible.

Align with parking lane

Bus bulbs help buses move faster and more reliably by decreasing time lost due to merging in and out of travel lane



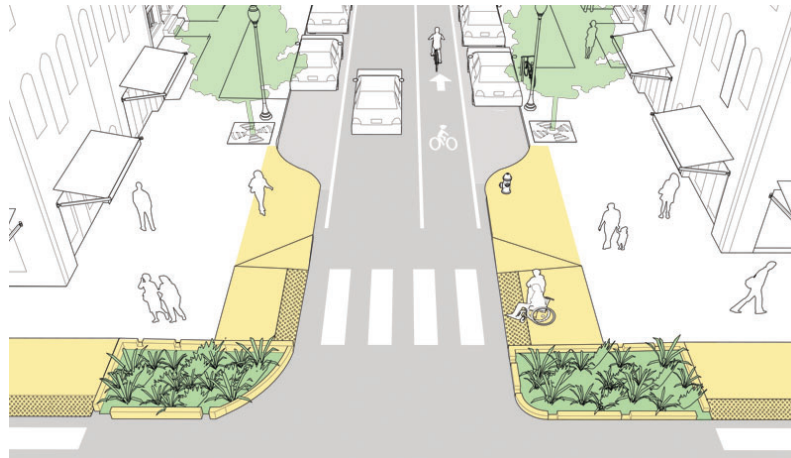
TRANSPORTATION //
BULB-OUTS (NACTO)

GATEWAYS

RECOMMENDED: Curb extension typically 1'-2' narrower than travel lane

RECOMMENDED: Combine storm water management features with curb extensions to reduce impervious surface area of street

Curb extensions often applied at the transition to a slower speed street



PINCHPOINTS

RECOMMENDED: Plant trees on extension to narrow overall profile of roadway

OPTIONAL: Pinchpoints can facilitate midblock pedestrian crossings on low-volume streets

OPTIONAL: Bike racks can be combine with curb cuts where needed



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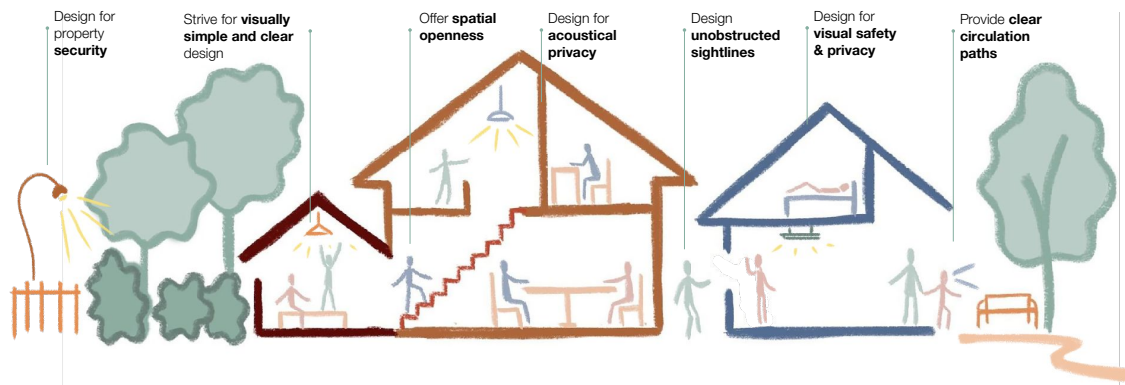
Appendix G: Trauma Informed Design

Trauma Informed Design

SAFETY & TRUST

As a Fundamental need, understanding safety as defined by those served is a high priority

Therefore, spaces in the built environment, informed by the local context, should prioritize individuals' sense of physical, psychological, and community safety and should offer a variety of space sizes, use quality materials, respect privacy and acoustics, and promote equitable and inclusive access for all.



TRAUMA INFORMED DESIGN//
SAFETY & TRUST

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Light-filled stairwells help residents feel safe traveling to and from their apartments. (Argyle Gardens - Holst)

Trauma Informed Design

CHOICE & EMPOWERMENT

A sense of agency, representation and choice is important for all people, especially in affordable housing communities where many residents, historically, have been impacted by decisions made without their voice or consent.

Therefore, the built environment should offer a variety of design features that allow individuals to make choices aligned with their needs, to feel heard and represented, and to practice self-care.



**TRAUMA INFORMED DESIGN//
CHOICE & EMPOWERMENT**



Provide lightweight furniture and spatial openness.

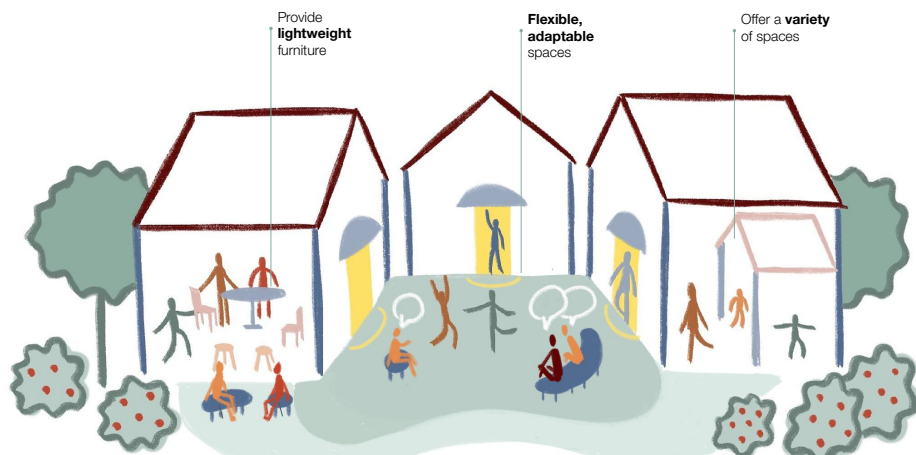
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Trauma Informed Design

COMMUNITY & COLLABORATION

Healing Happens within the context of relationships and in the meaningful sharing of power and decision-making

Therefore, physical spaces support rest and connection, and celebrate the history and strengths of the community.



Provide access to nature and a variety of spaces.

**TRAUMA INFORMED DESIGN//
COMMUNITY & COLLABORATION**

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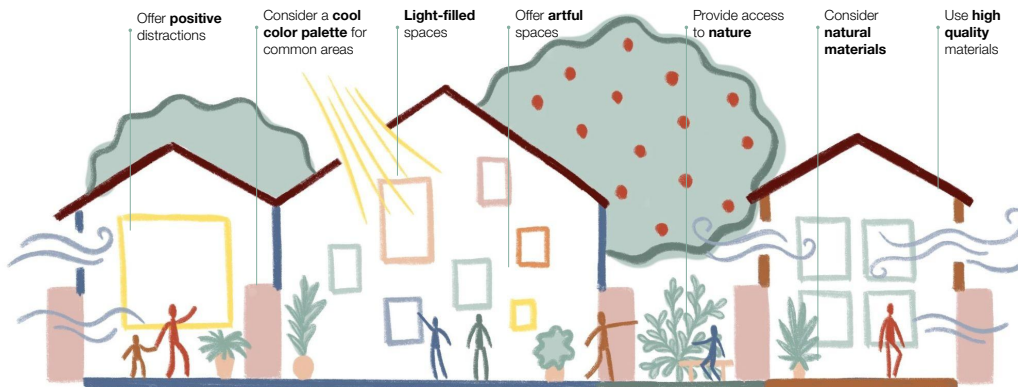
Trauma Informed Design

BEAUTY & JOY

Promoting recovery and healing happens with the appropriate social and spatial supports.

Therefore, spaces in the built environment should evoke hope, resiliency, and imagination.

TRAUMA INFORMED DESIGN//
BEAUTY & JOY

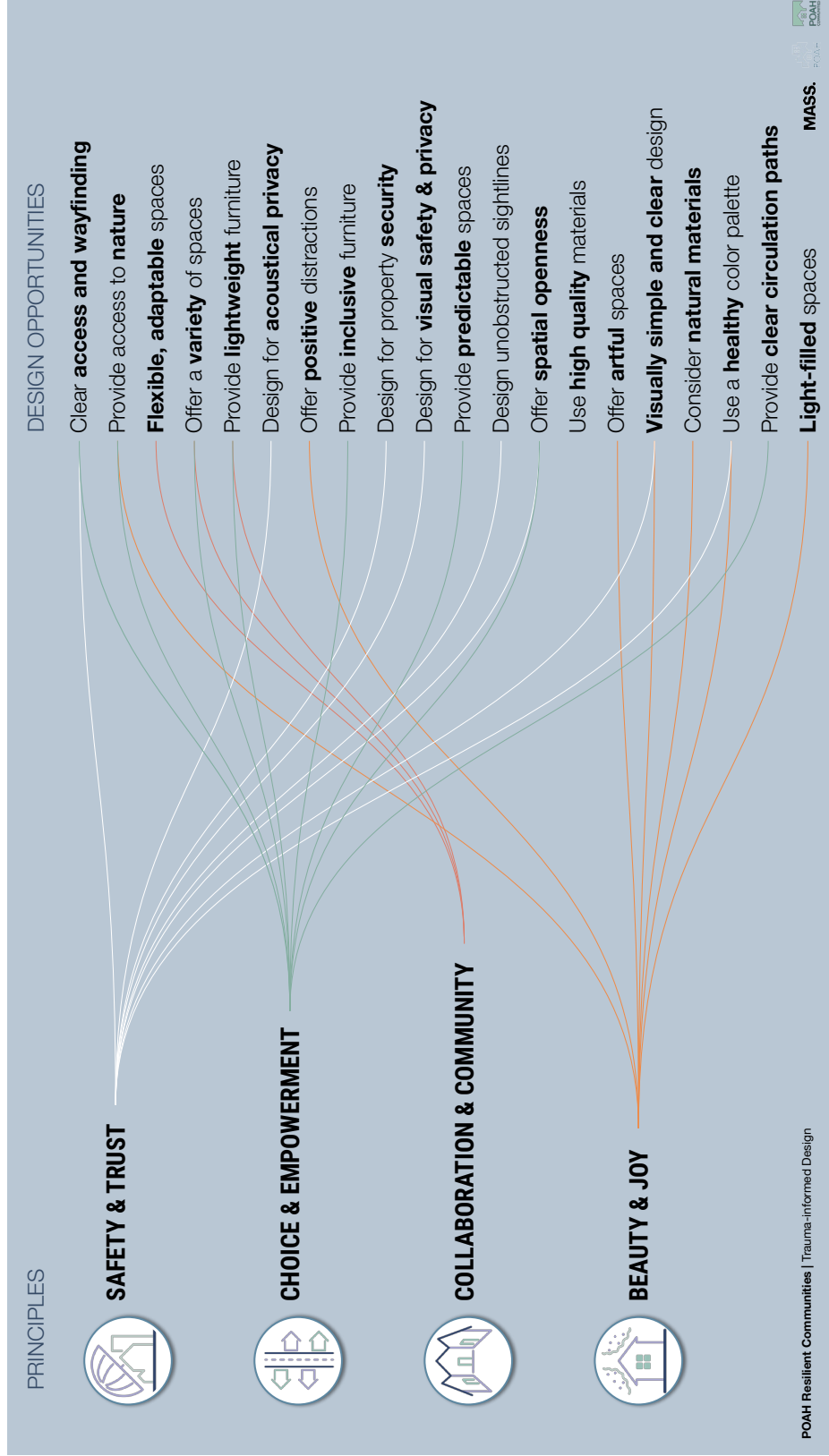


Consider a cool color palette and natural materials.

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TRAUMA INFORMED DESIGN
PRINCIPLES & DESIGN OPPORTUNITIES

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TRAUMA INFORMED DESIGN//
PRINCIPLES & DESIGN

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