

Navajo Townsite Community Development Corporation

Pre-Design Report

Multifamily Housing Development

Issued October 28, 2022

Contact us

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Navajo Townsite CDC - Redclay Multifamily Housing Development

MASS.



*Drone image of Lot 1 looking northeast
(Source: Reuben Hubbell / N8 Productions).*

01

Introduction

Why This? Why Now?
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*Drone image of surroundings looking west
(Source: Reuben Hubbell / N8 Productions).*

01

Introduction

Why This? Why Now?
Designing for Impact

Why This Why Now?

MASS has partnered with Navajo
Townsite CDC to consider the potential
of 3.17 acres of land within the
community of Navajo, New Mexico.



*Drone image of Lot 1 & 2 looking northeast
(Source: Reuben Hubbell / N8 Productions)*

Why This Why Now?

The closing of Navajo Forest Product Industries (NFPI) in the 1990s marked the departure of a primary economic driver and the infrastructural investment that came with it.



Source: Navajo Historical Department

Why This Why Now?

The 2020 census recorded the town population to be 1,818, about 200 less than recorded in the 2000 census. The town's services include an elementary, middle and high school, fire station, post office, general store and gas station.



Source: Google Earth

Why This Why Now?

It has proven challenging for those who do not qualify as 'low income' to find housing.



*Drone image of Lot 1 & 2 looking northeast
(Source: Reuben Hubbell / N8 Productions).*

Why This Why Now?

Similar to other rural towns, Navajo faces a ‘brain-drain’ of its younger population moving to larger towns and cities to live and work.



Why This Why Now?

To develop a healthy & vibrant community, NTCDC is looking to secure additional funding to build a multi-family, mixed-income housing development, including pocket parks and community spaces, on the remaining undeveloped areas of its existing Master Lease.



Why This Why Now?

Our work has focused on imagining what it might look like to build community and housing for Native professionals and range of generations and incomes.



Navajo (Diné) Epistemology

“THINKING”

The foundation of thought process
towards a vision/mission

Nitsáhákees

Siih Hasin

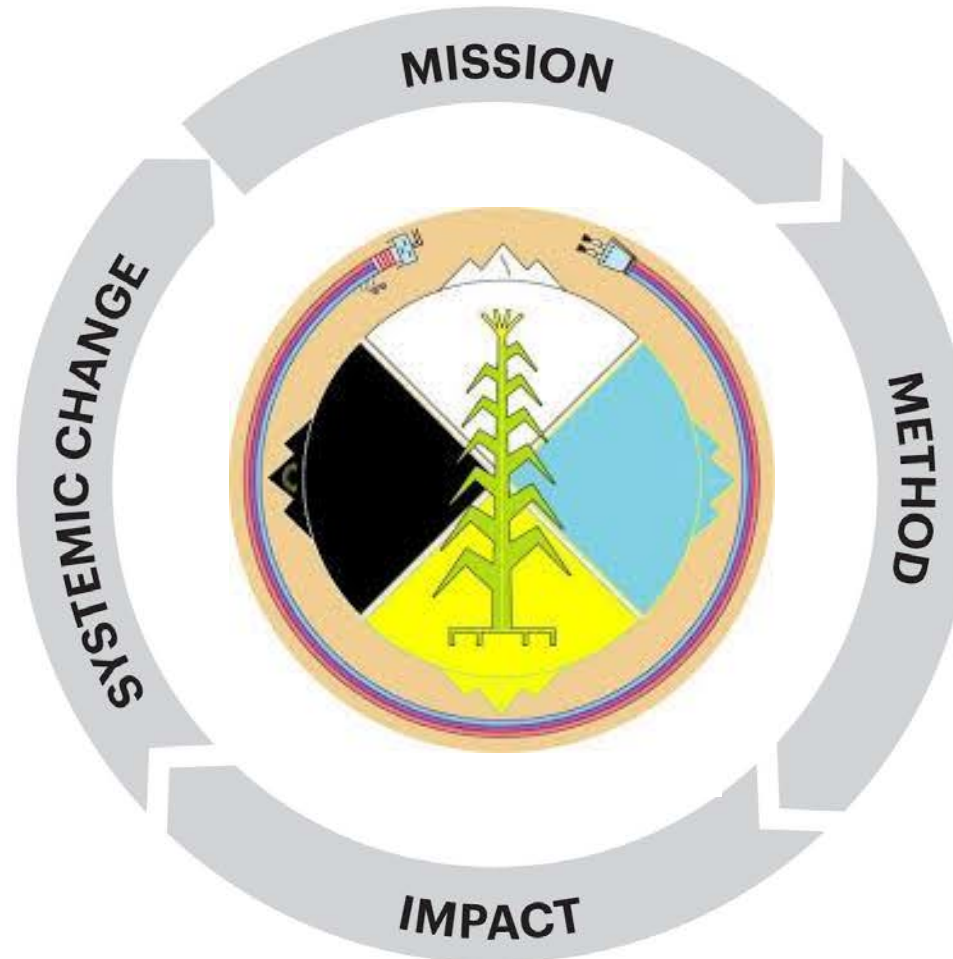
“ASSURING”

A reflection and critical evaluation
of accomplished
goals and objectives

Nahatá

“PLANNING”

The development of goals to
fulfill a purpose

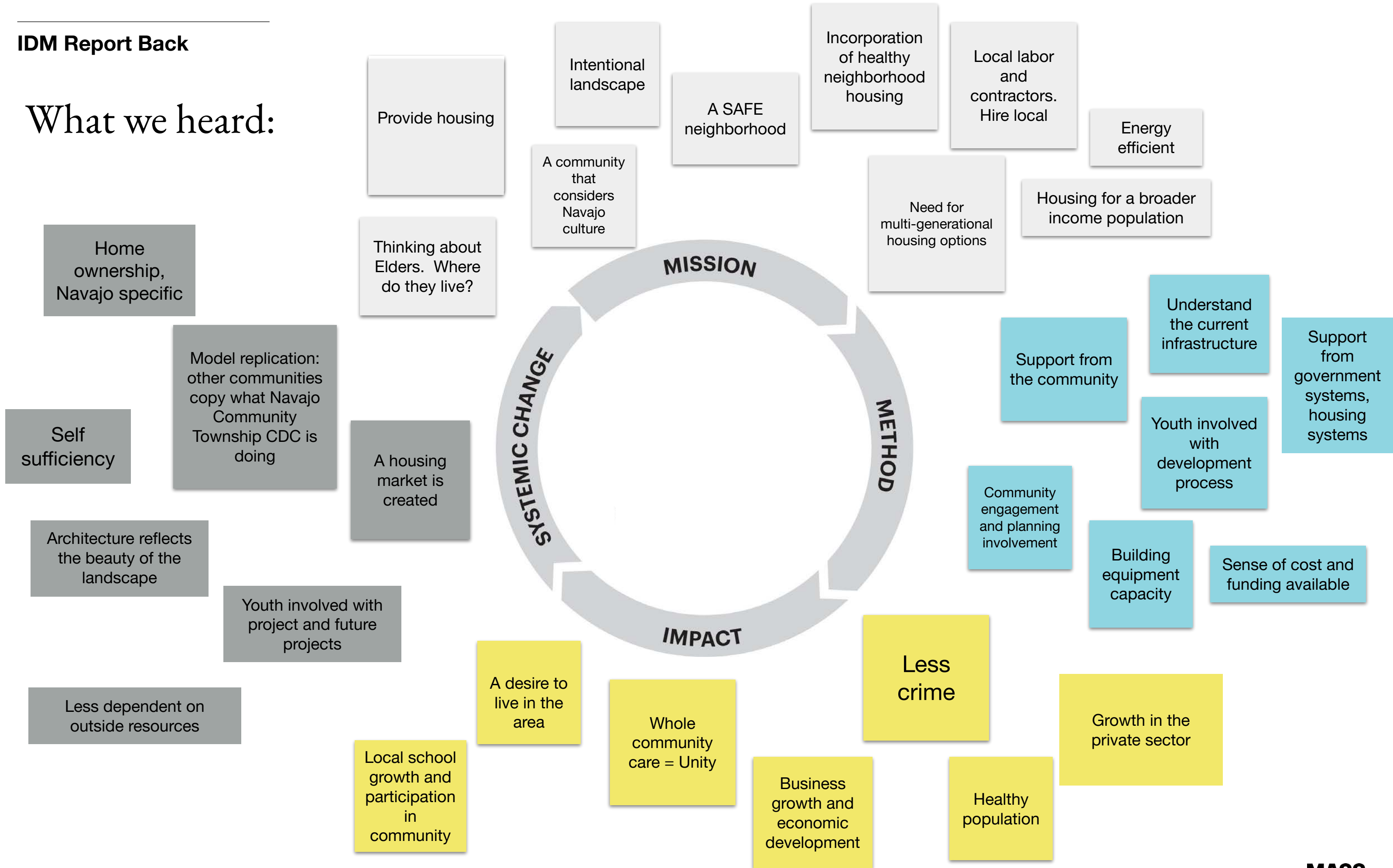


liná

“LIVING”

The implementation of models and
development of your mission

What we heard:



Model culturally-responsive, equitable housing development in Navajo Nation across a range of income levels

The Navajo Townsite development becomes a model for design engagement, multifamily housing, and community building in Indian country



- (1) Form mutually beneficial public-private partnerships between NGOs, cultural organizations, and local governments.
- (2) Identify priorities and need across types of housing
- (3) Understand and relate to cultural and geographic context
- (4) Design multi-family, attached homes and landscape that preserve the "Spirit of Home" and *K'e* with the environs.

of events and initiatives that happen in the space

units sold/rented

\$ small business(s) profits

↑ range of ages and incomes who live here



*Drone image of Lot 1 looking northeast
(source: Reuben Hubbell / N8 Productions).*

02

Site & Context

Navajo Town History
Mapping/Contextual Analysis
Community Feedback

Community Development History



Source: Navajo Historical Department

1963

Navajo Forest Production Industry (NFPI) opens its door to produce and mill lumber providing jobs to over 600 Navajo families.



Source: Navajo Historical Department

1991

NFPI production stops and shuts down by July 25.



Source: Navajo Times

2002

Navajo Nation formally dissolves NFPI

1980

Griswald's Store established

1989

Navajo Townsite Community Development Corporation is incorporated under the Navajo Nation as its own Non-Profit Organization.

1999

NTCDC acquires the Master Lease

2012

NTCDC acquires funds for 25 public rental units and 15 lease-to-own homeownership units. Completed and occupied by 2012.



Source: Reuben Hubbell / N8 Productions

Site & Context

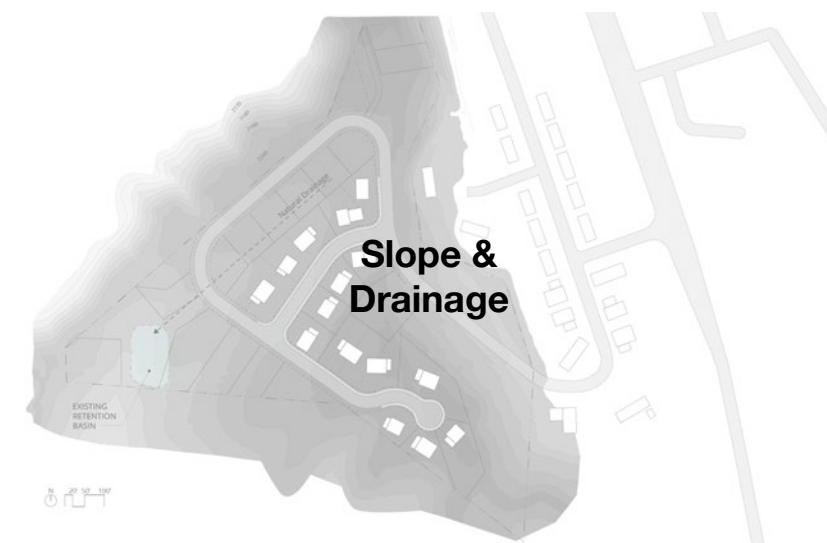
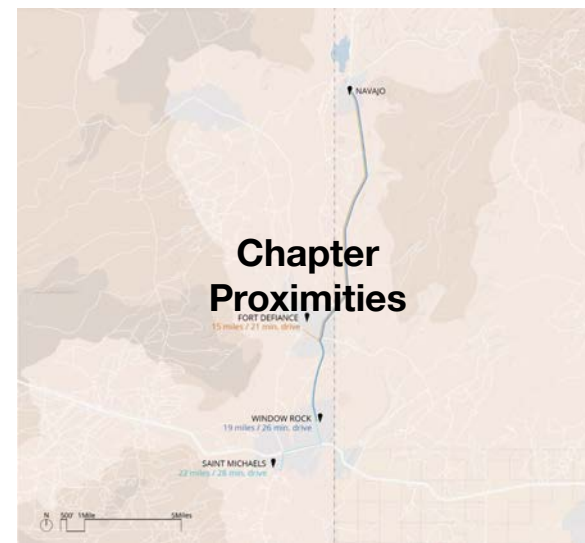
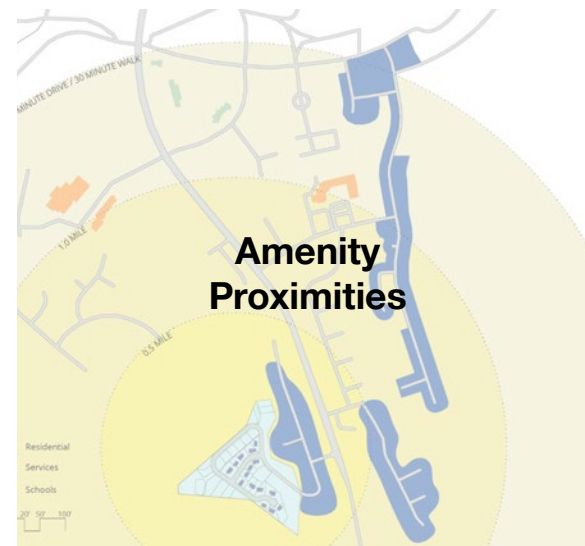
These questions have underpinned our studies of NTCDC's site.

Are there opportunities for homeownership? Where are homeowners currently living?

How might developments weave together with the landscape? Where are there opportunities for open / park space? Are there an opportunities to connect housing developments through a trail network?

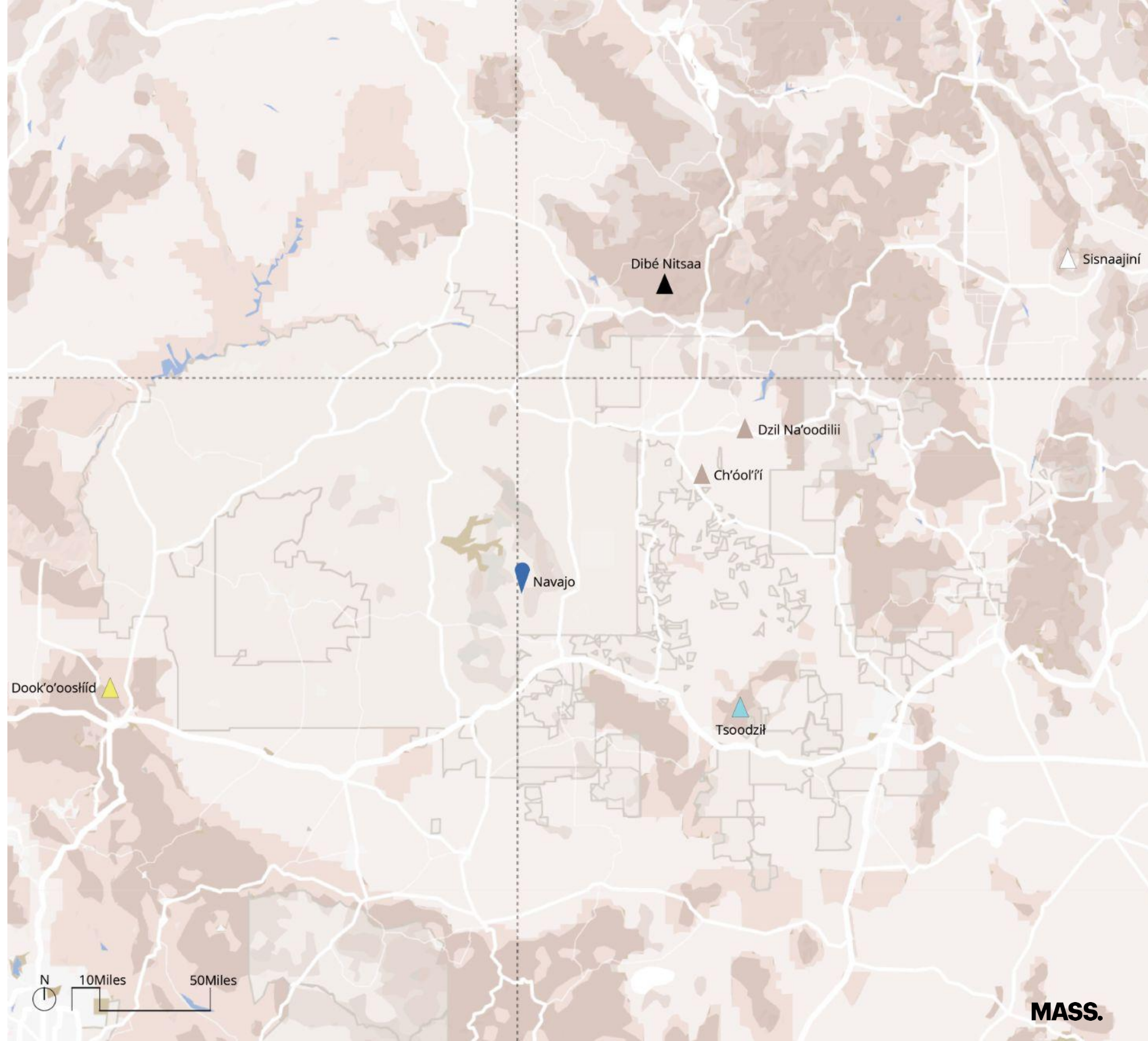
What are the existing cultural and recreational amenities and what can be activated through this project?

What are the amenities and elements of spatial design that are Navajo specific?



Within the Sacred Mountains

To live in Navajo, is to live between the Four Sacred Mountains.



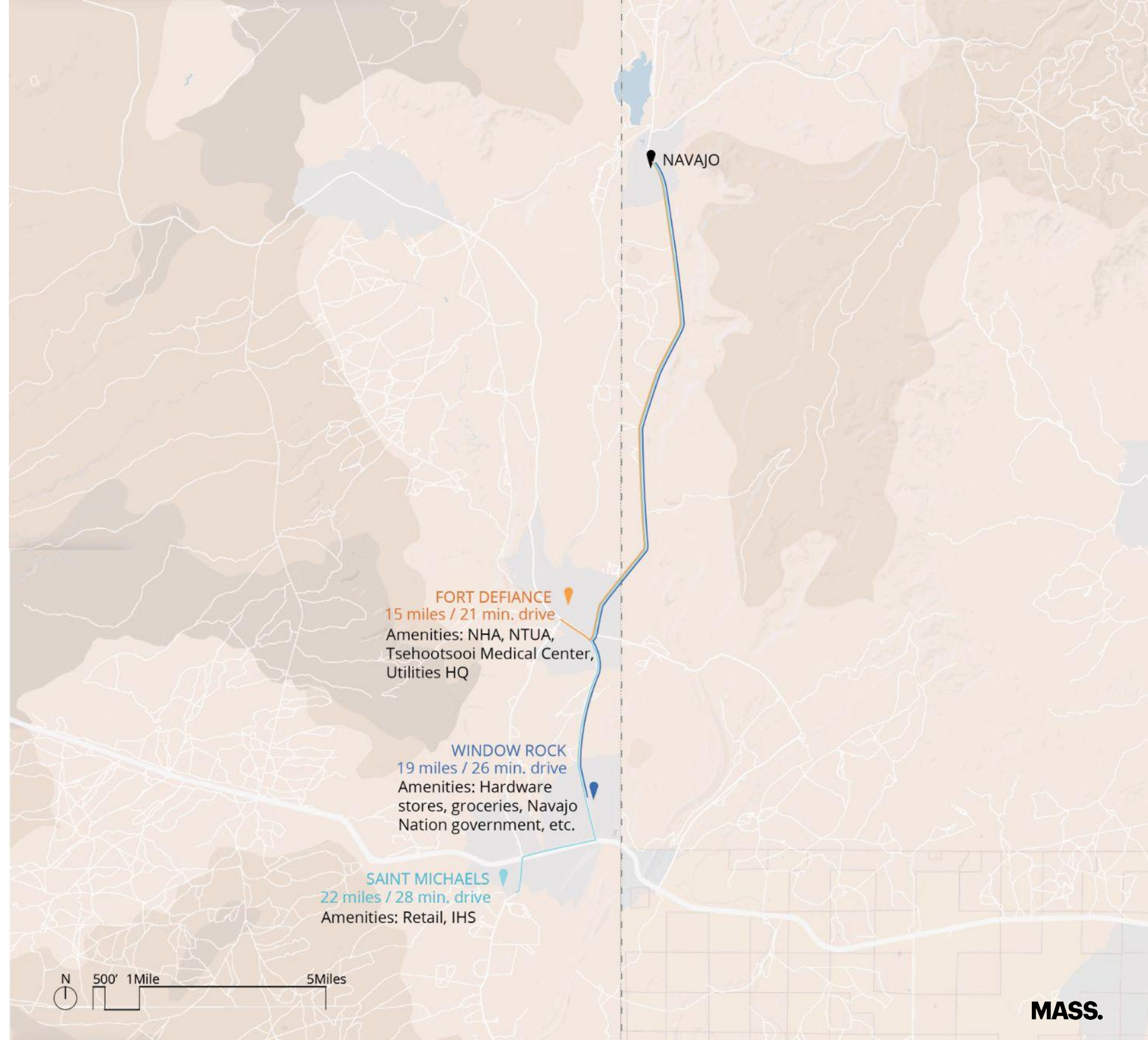
Surroundings

Nestled among the rocks, mountains, earth and open skies of Diné ancestral land.



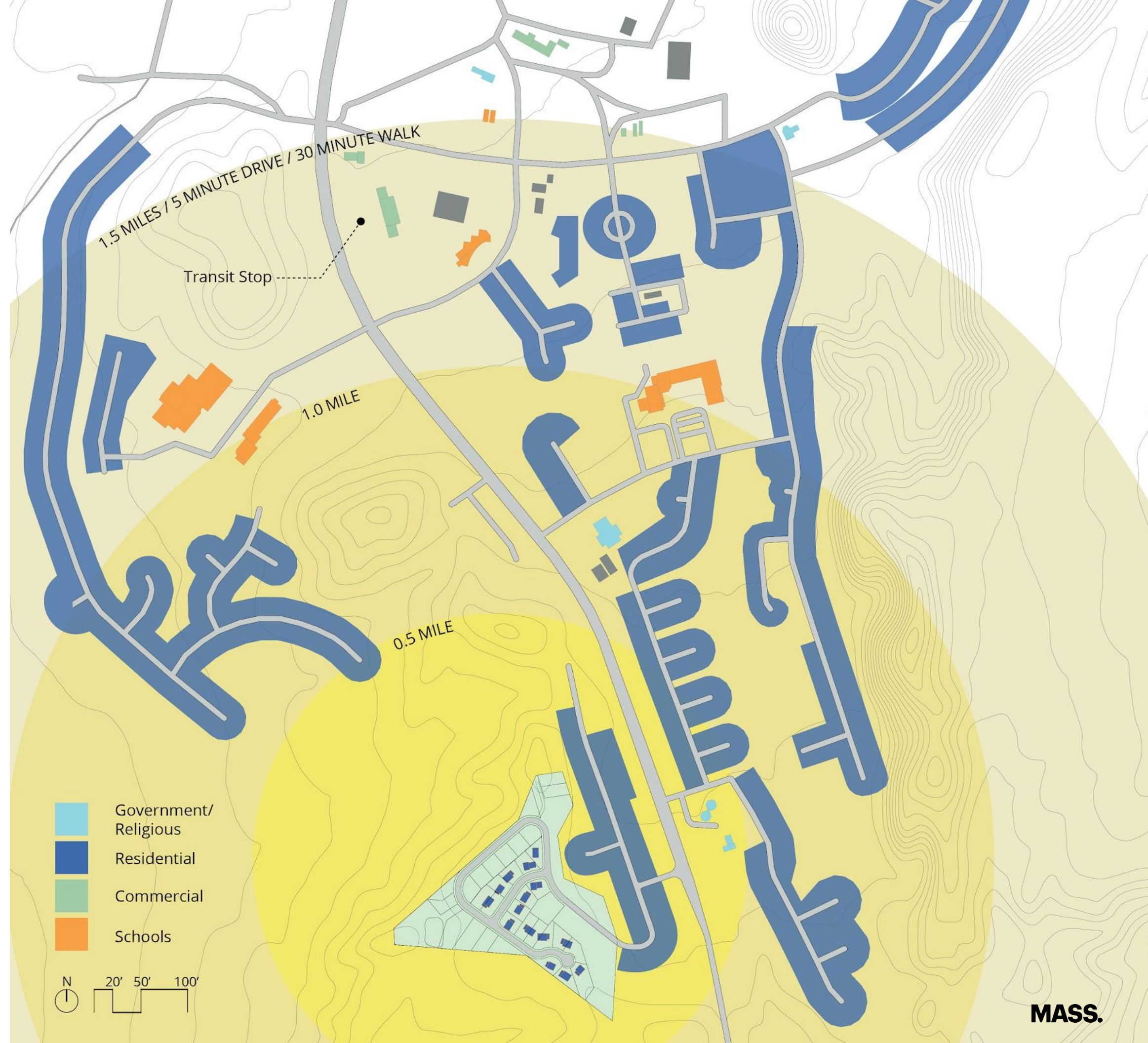
Chapter Proximities

The town is less than 30 minutes away from larger economic centers.



Proximities & Existing Uses

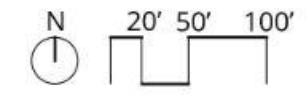
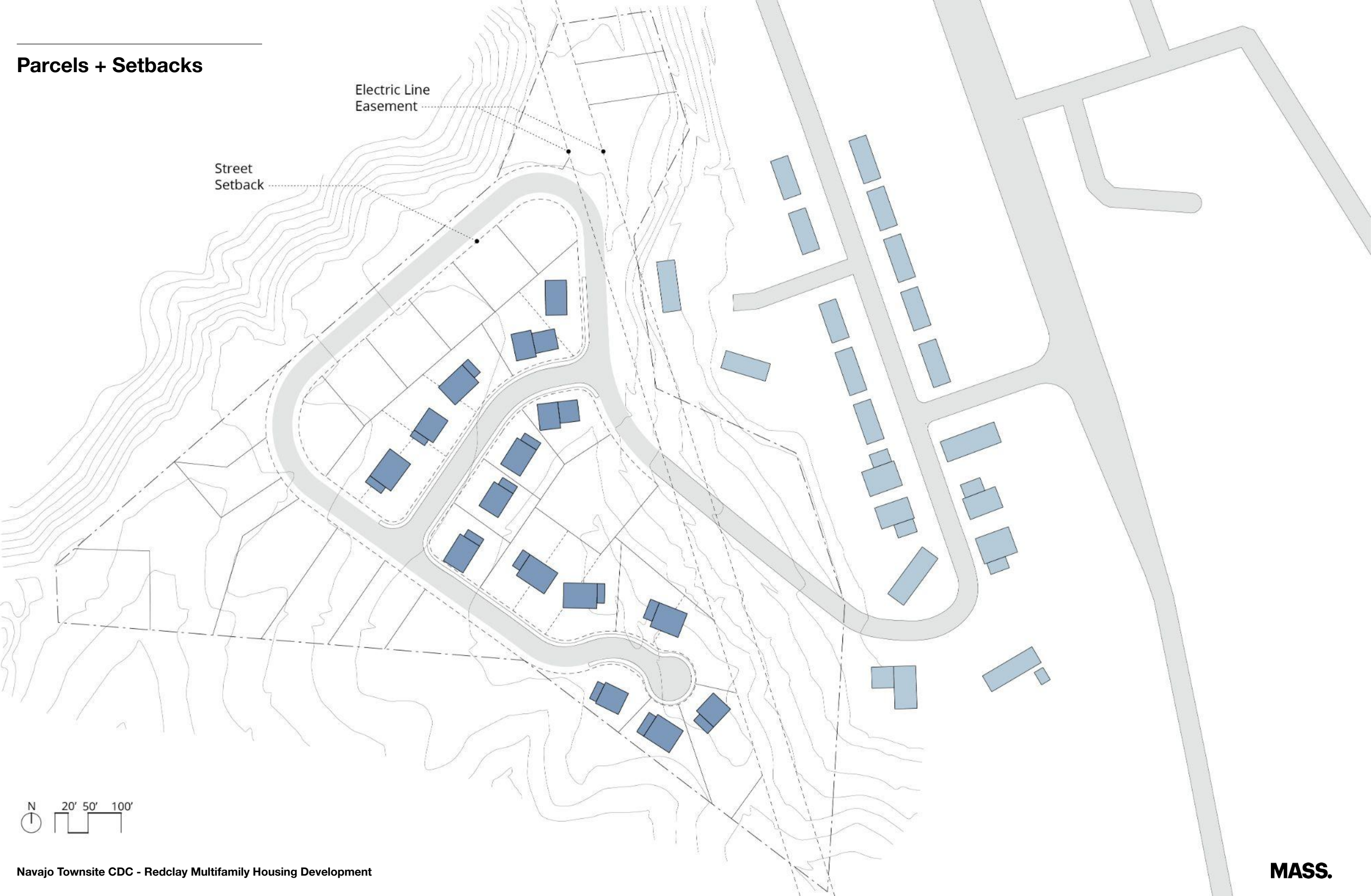
NTCDC's site benefits from both close proximity to the town's services while having immediate access to open space to the West and South.



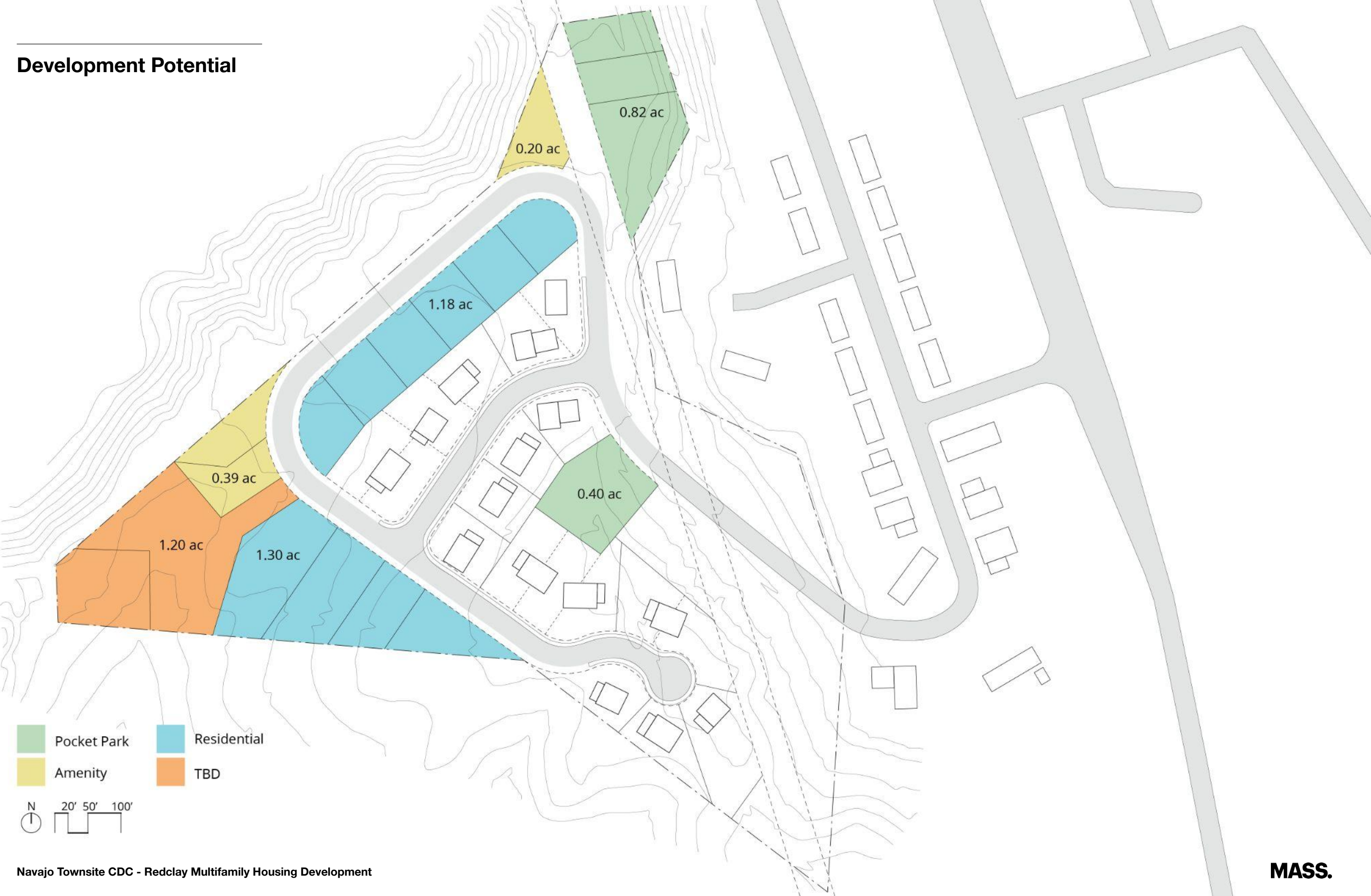
Parcels + Setbacks

Electric Line Easement

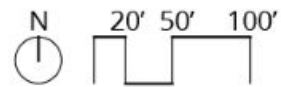
Street Setback



Development Potential



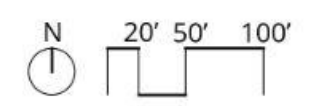
Slope + Drainage



Utilities



- Water Service
- Sewer Service



Access



Framing Feedback

Community feedback guiding
our work

Multi-generational

Most current residential families
consist of 4-6 people in one home`

Rural living is better than city living
for the space it affords you

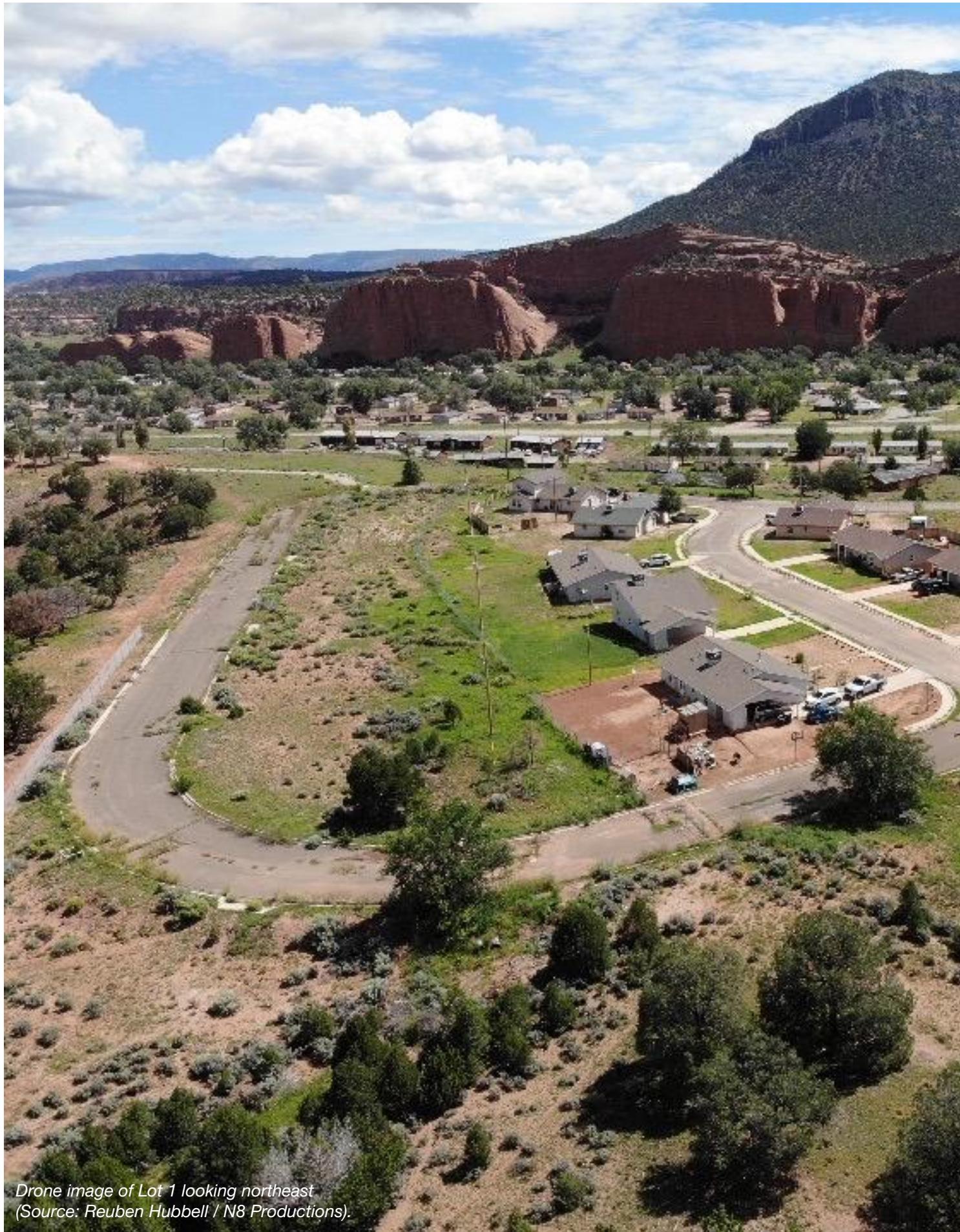
Increasing fair access for renters
of all incomes

Economic development, opportunities
to build financial literacy and agency

Incorporate traditional design and colors

Outdoor amenities, including a dog park,
play/sport areas, event spaces

Too much space is not good and
becomes junky and full of old cars and
area is not maintained.



*Drone image of Lot 1 looking northeast
(Source: Reuben Hubbell / N8 Productions).*

03

Design & Operational Strategies

Form, Function, Fabrication

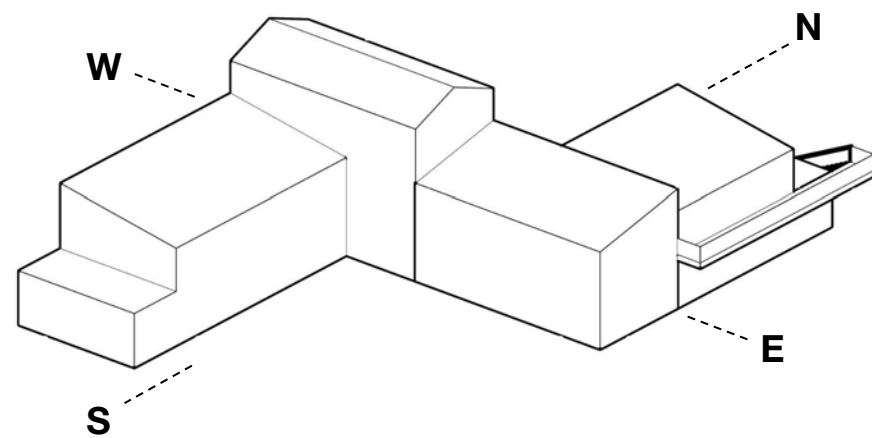
Site Plan

Massing Studies

Unit Count

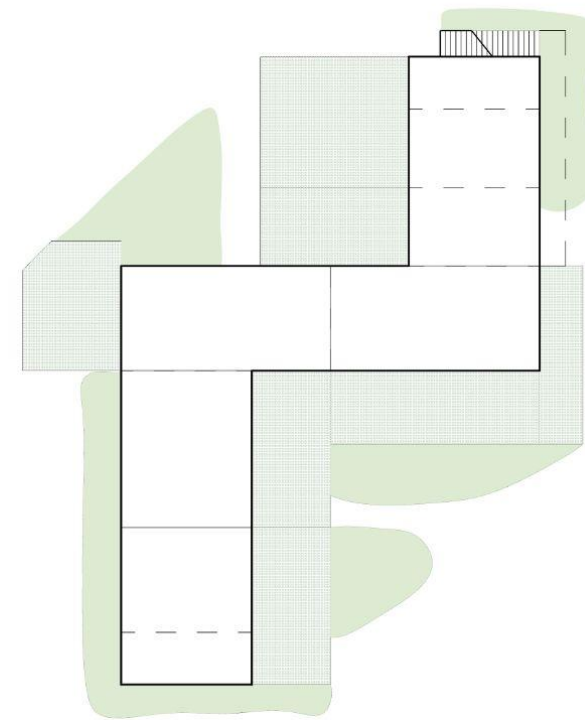
Renderings

Concept Design Narrative



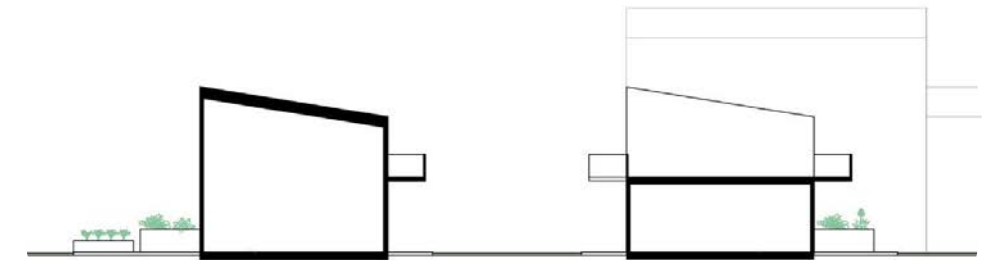
Form

Clusters of units with varying heights are distributed to allow porosity through the site. Taller heights are oriented towards the street.



Function

An L-shaped plan allows for East and West facing units with access to private patio and garden space as well as public green space



Fabrication

Healthy materials, adequate sound proofing and access to outdoor space allow for a comfortable living environment in denser housing development.

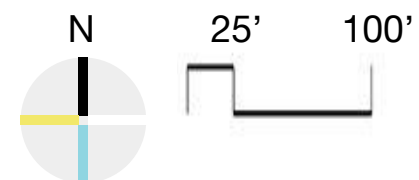
Site Plan

- Gathering Space
- Play / Sport
- Shared Landscape
- Private Yards
- New Sidewalks
- Parking

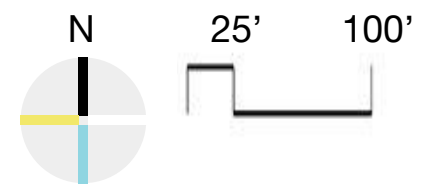
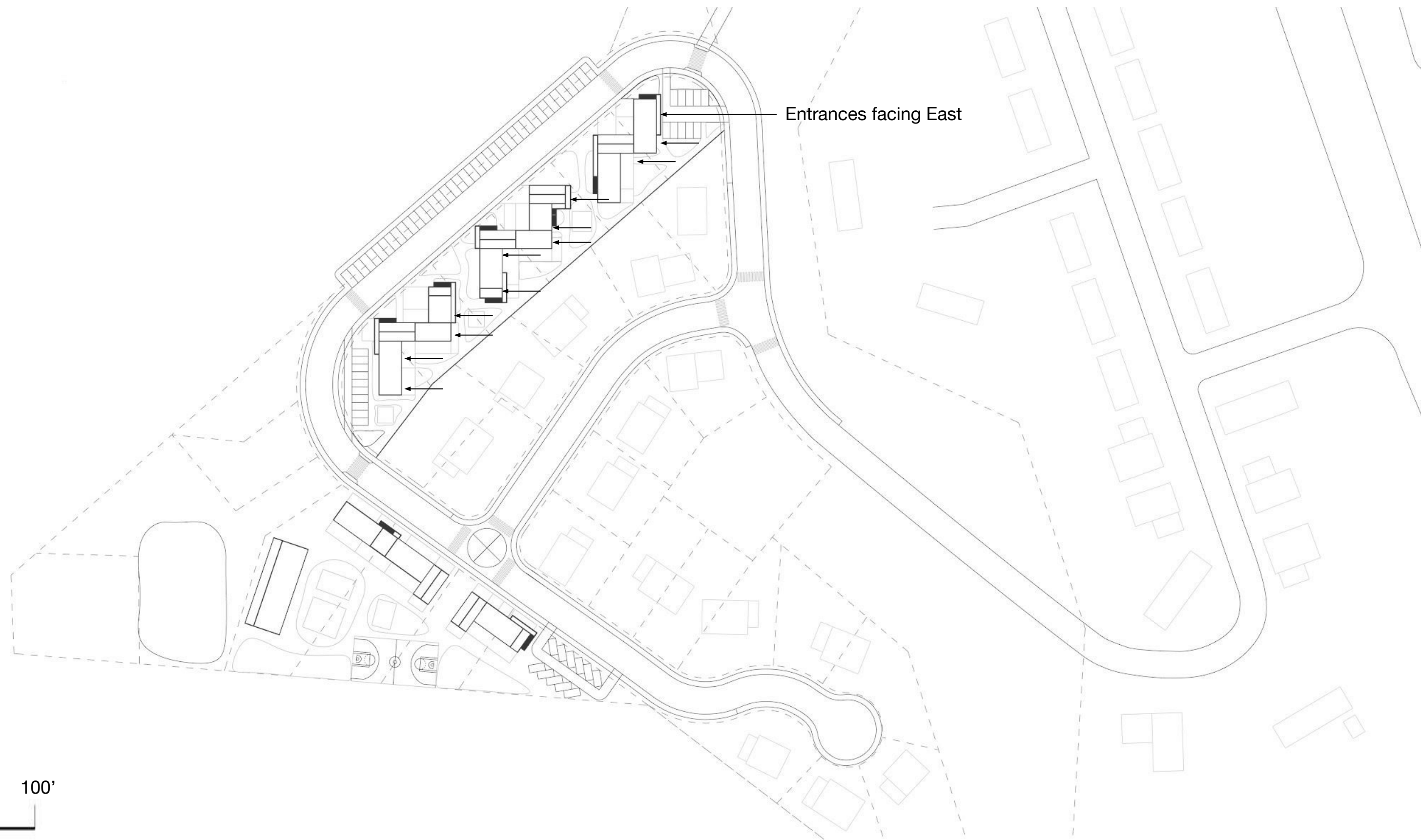


Site Plan - Pedestrian Circulation

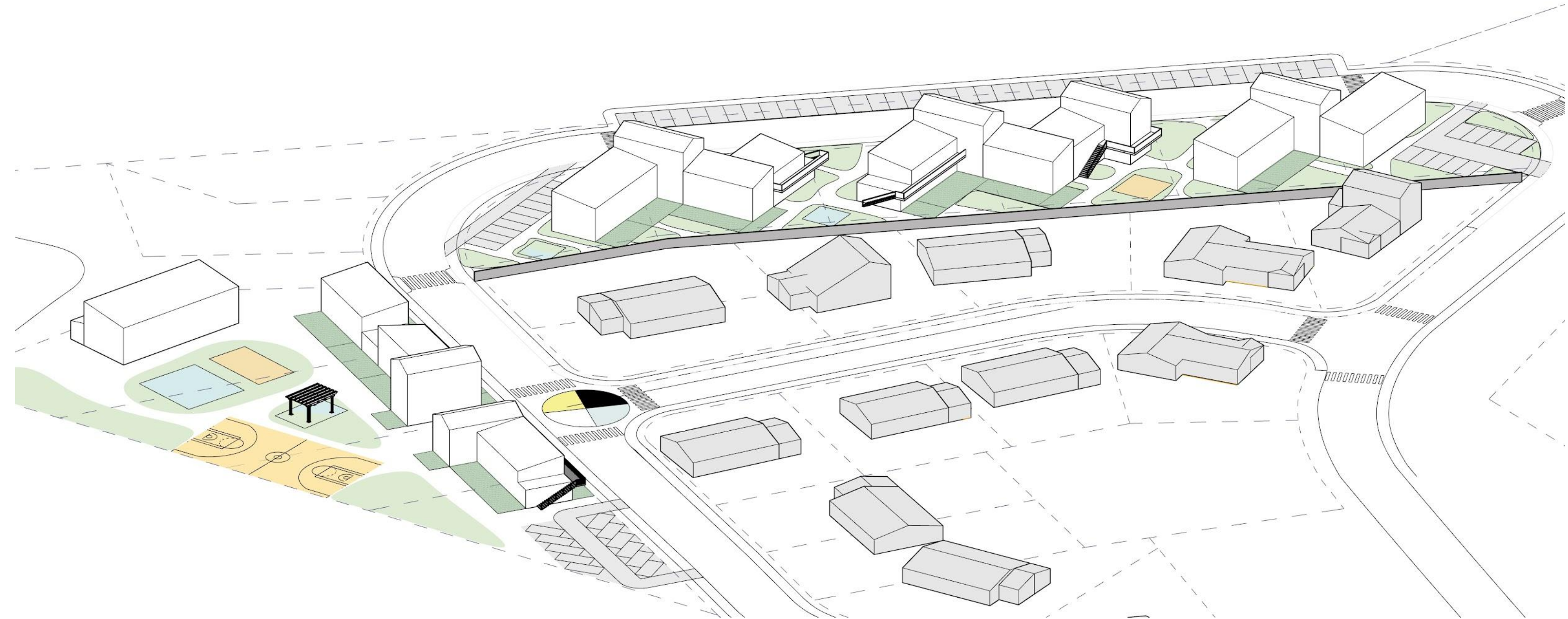
--- Pedestrian Circulation



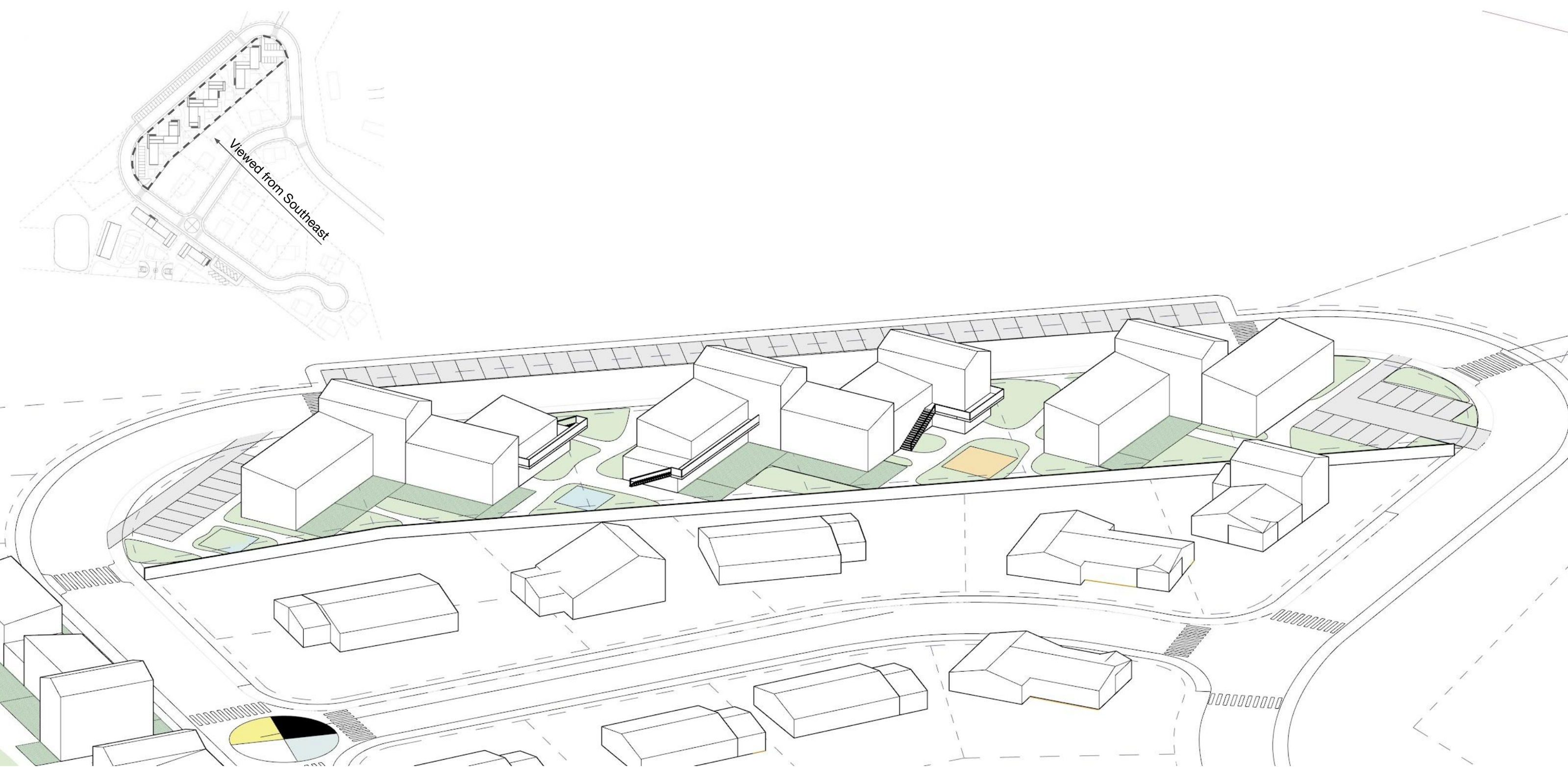
Site Plan



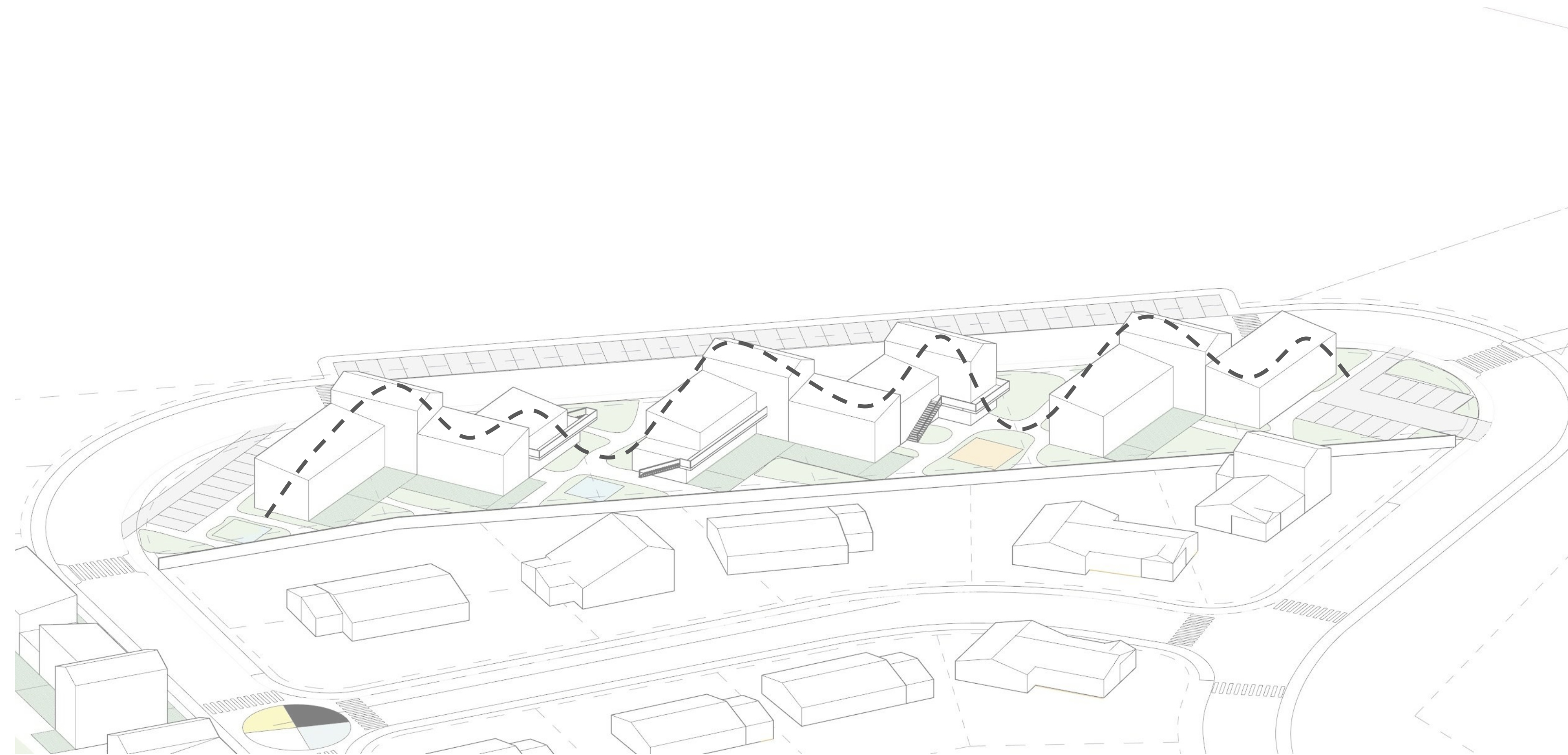
Whole Site - Massing



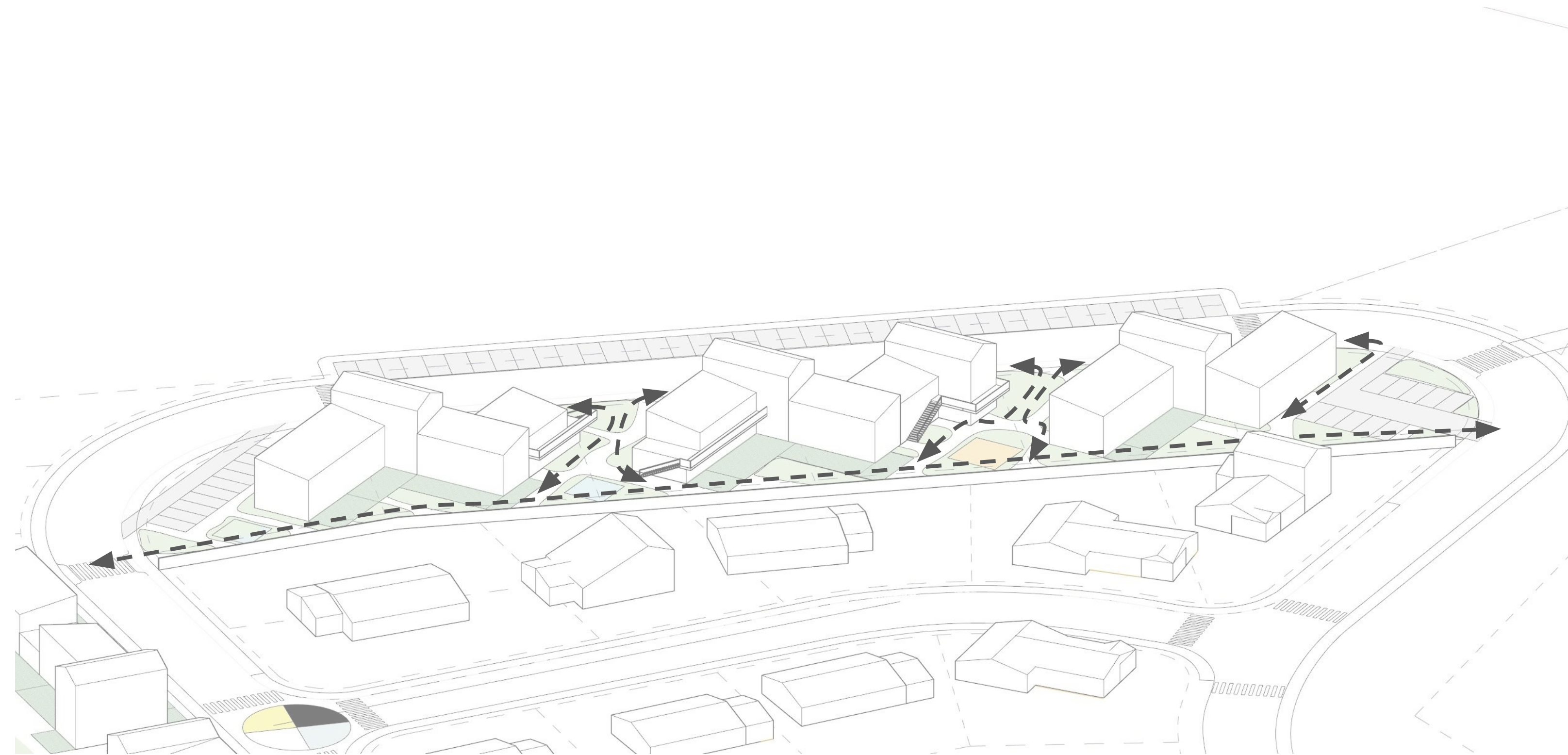
Lot 1 - Residential Site



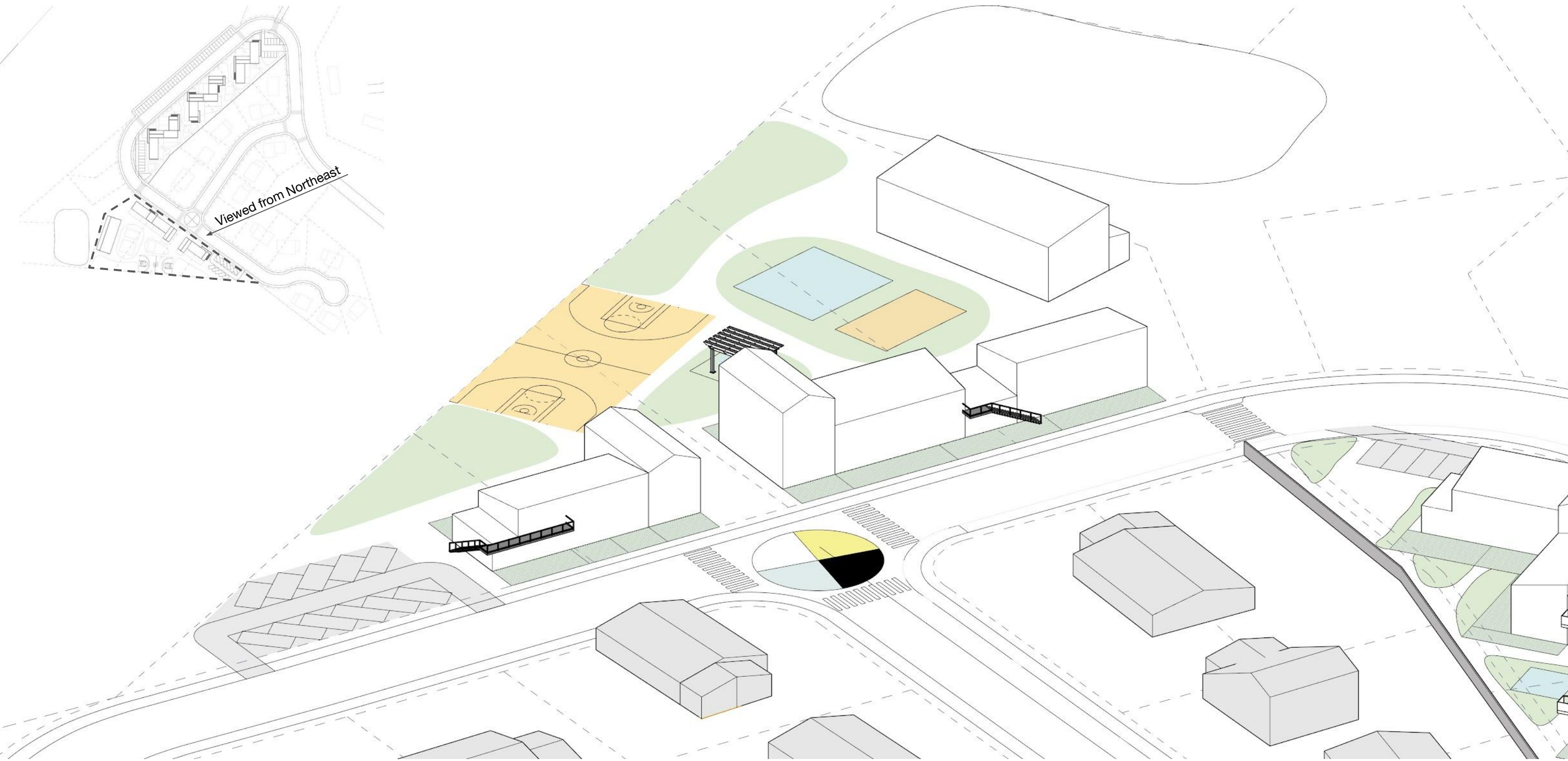
Lot 1 - Residential Site



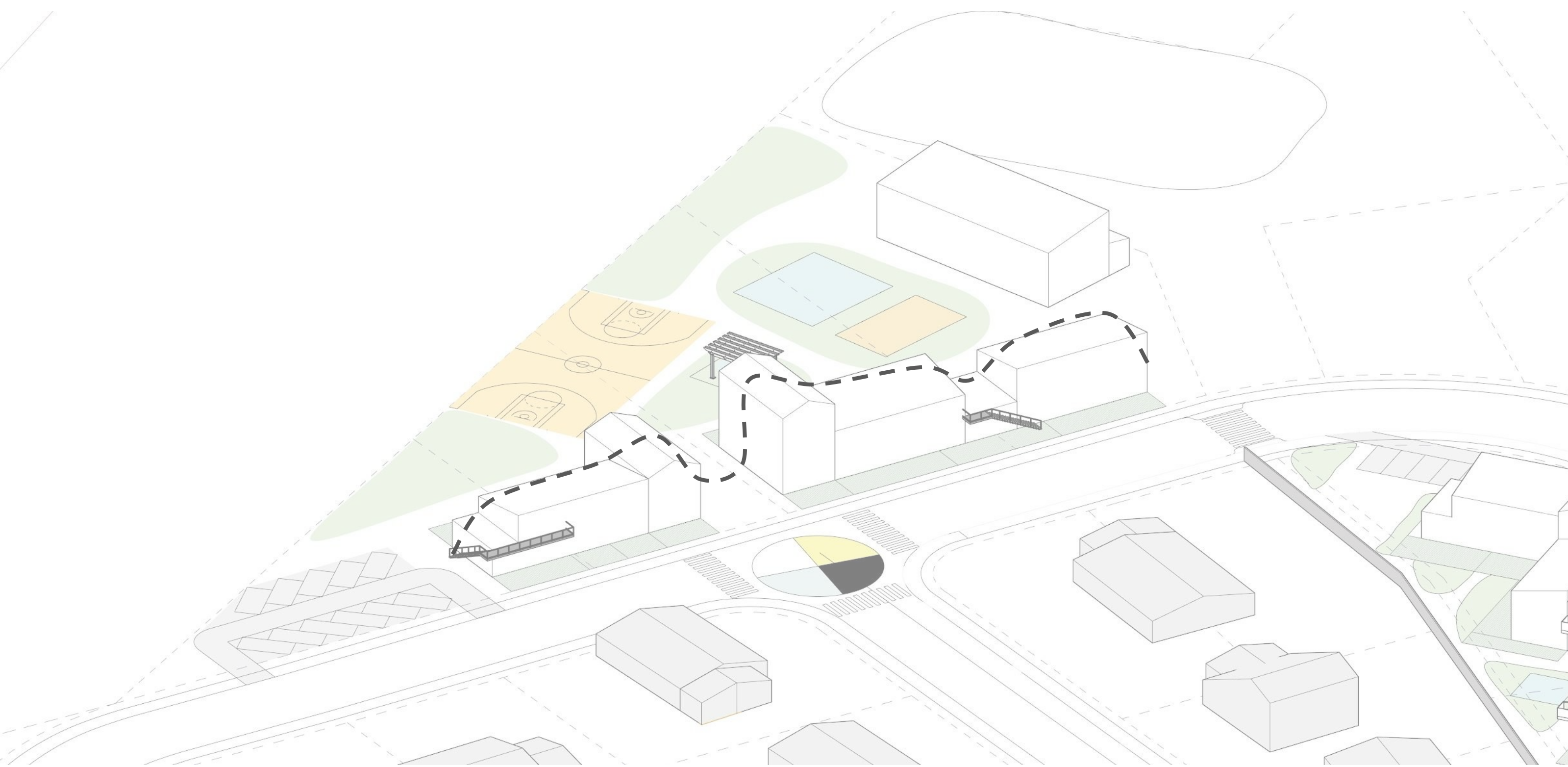
Lot 1 - Residential Site: Site Porosity



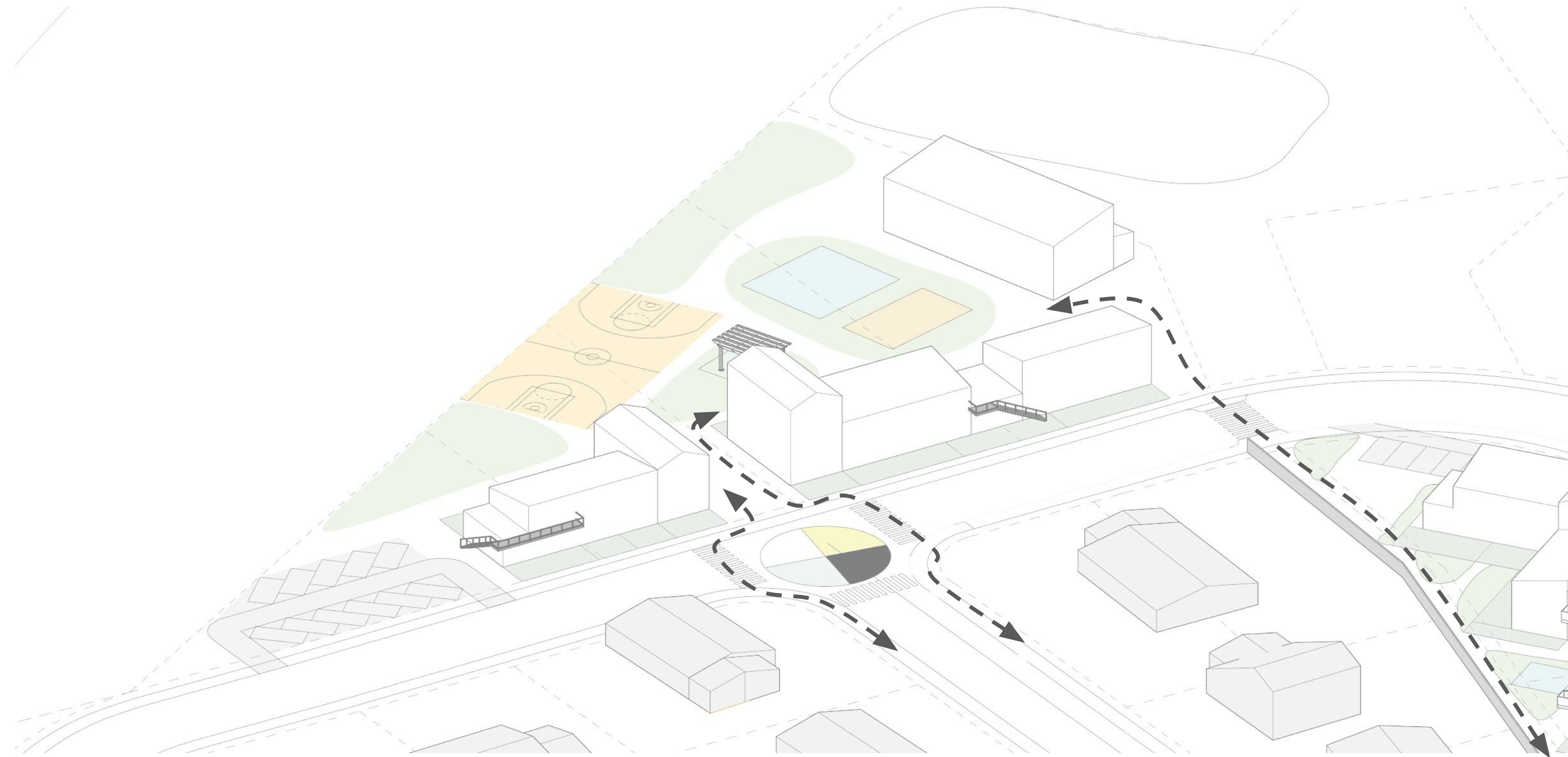
Lot 2 - Mixed-Use Site



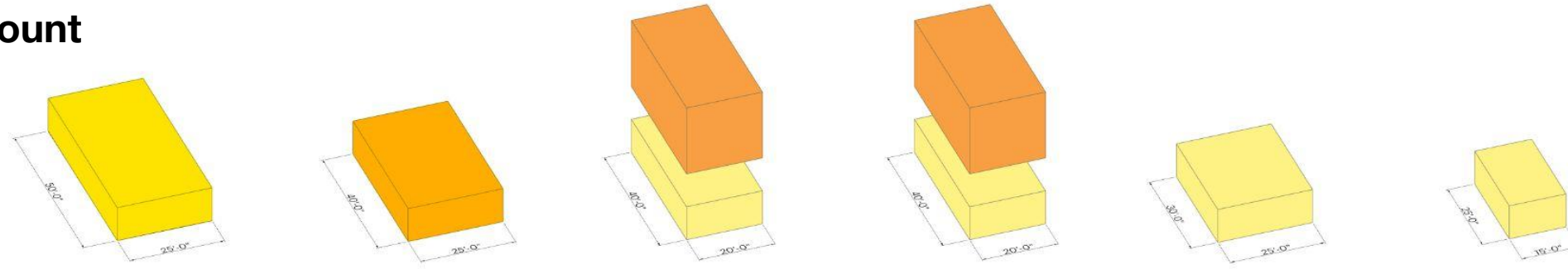
Lot 2 - Mixed-Use Site: Vertical Variation



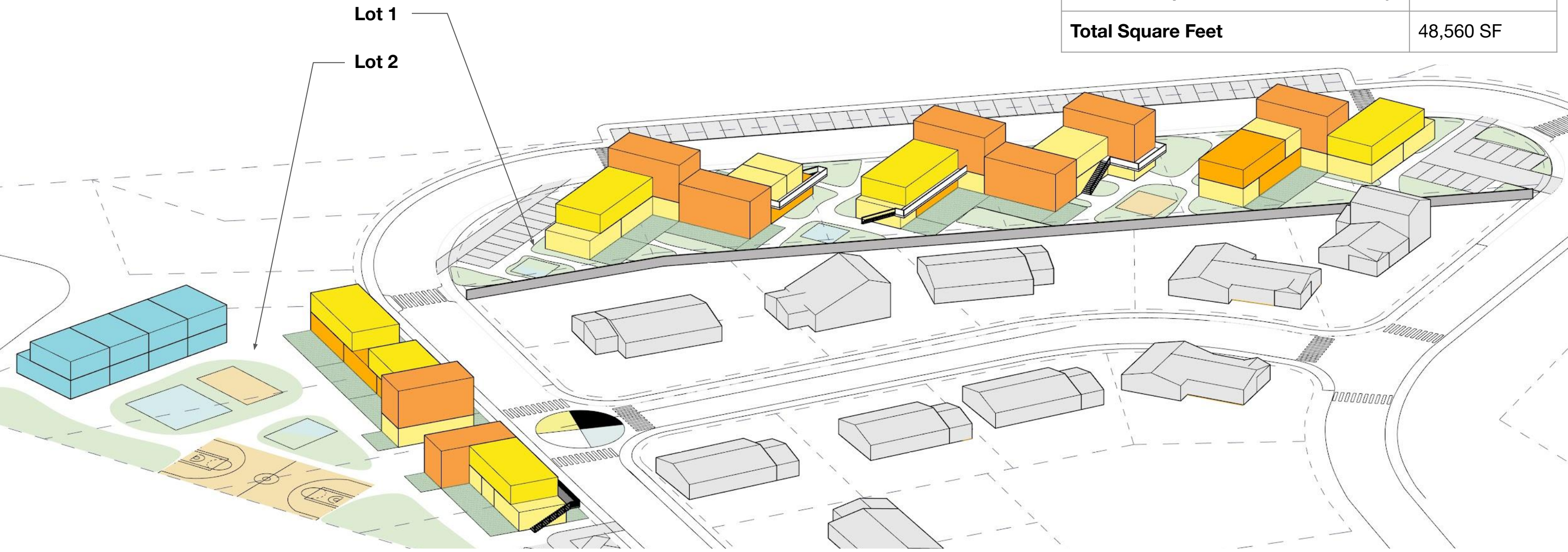
Lot 2 - Mixed-Use Site: Site Porosity



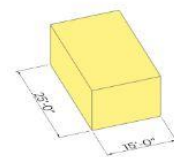
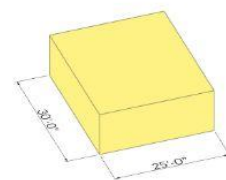
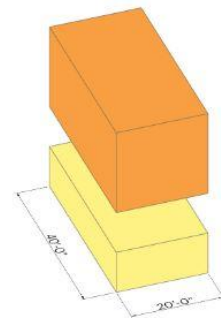
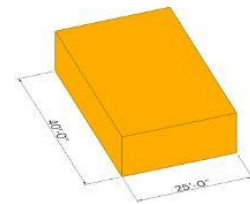
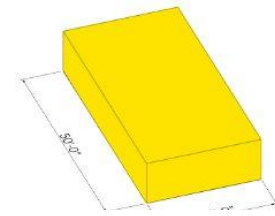
Whole Site - Unit Count



		3-Bedroom (1,250 SF)	2-Bedroom (1,000 SF)	1-Bedroom (800 SF)	Townhouse (1,600 SF)	1-Bedroom (750 SF)	Efficiency Unit (375 SF)	Total Unit Count	Total Net Square Feet
Unit Count	Lot 1	3	4	4	6	5	4	27	27,284 SF
	Lot 2	3	3	1	2	1	1	11	14,088 SF
Total Net Square Feet Residential									40,510 SF
Total Net Square Feet Public Amenity									8,050 SF
Total Square Feet									48,560 SF



Cost per Unit



	NSF	GSF	Low End Cost (\$350/sf)*	High End Cost (\$450/sf)*
3 Bedroom	1,250	1,438	\$503,125.00	\$646,875.00
2 Bedroom	1,000	1,150	\$402,500.00	\$517,500.00
Townhouse	1,600	1,840	\$644,000.00	\$828,000.00
1 Bedroom (under Townhouse)	800	920	\$322,000.00	\$414,000.00
1 Bedroom	750	863	\$301,875.00	\$388,125.00
Efficiency Unit	375	431	\$150,937.50	\$194,062.50

* Cost estimates are preliminary and based on current average construction costs in the southwest region. A more refined cost estimating exercise is highly advised during the full design phase of this development

Cost & Phasing

Note: Development team should add 10-15% contingency to all construction estimates below.

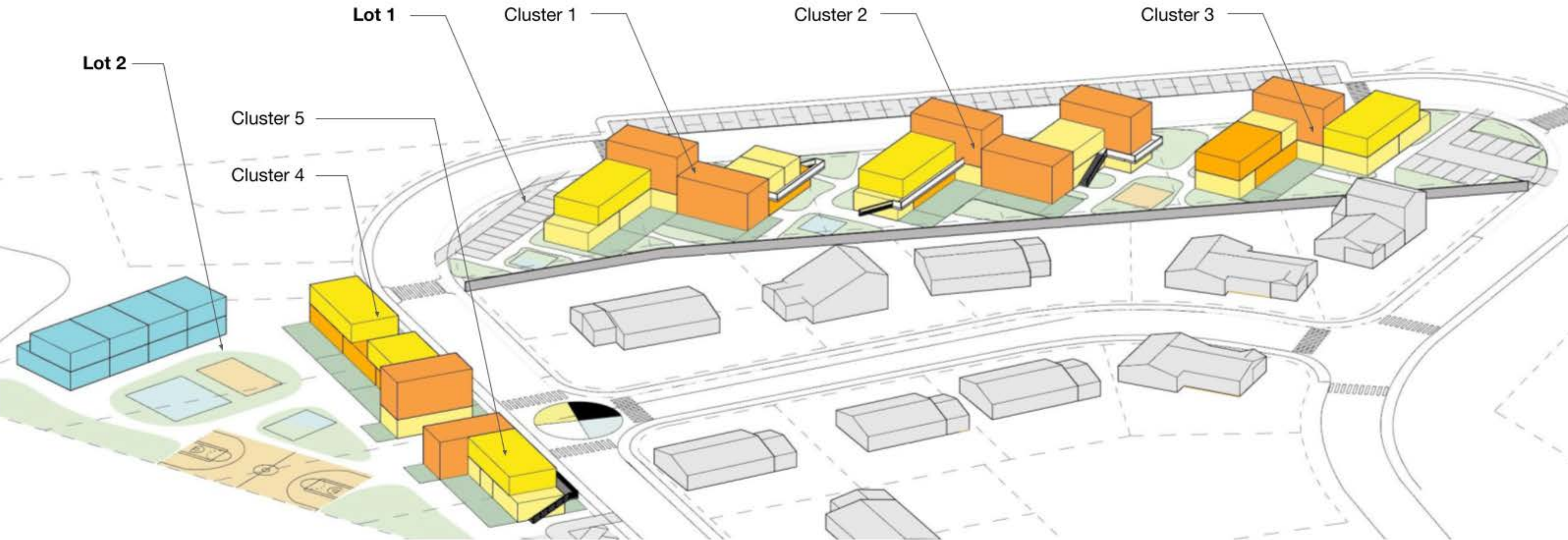
	Unit Type	Unit Count
Cluster 1 (Lot 1)	3 Bedroom	1
	2 Bedroom	1
	1 Bedroom (under Townhouse)	1
	Townhouse	2
	1 Bedroom	2
	Efficiency Unit	2
	Total Units	9

	Unit Type	Unit Count
Cluster 2 (Lot 1)	3 Bedroom	1
	2 Bedroom	1
	1 Bedroom (under Townhouse)	2
	Townhouse	3
	1 Bedroom	2
	Efficiency Unit	1
Total	10	

	Unit Type	Unit Count
Cluster 3 (Lot 1)	3 Bedroom	1
	2 Bedroom	2
	1 Bedroom (under Townhouse)	1
	Townhouse	1
	1 Bedroom	2
	Efficiency Unit	1
Total	8	

	Unit Type	Unit Count
Cluster 4 (Lot 2)	3 Bedroom	2
	2 Bedroom	3
	1 Bedroom (under Townhouse)	1
	Townhouse	1
	1 Bedroom	0
	Efficiency Unit	0
	Total	7

	Unit Type	Unit Count
Cluster 5 (Lot 2)	3 Bedroom	1
	2 Bedroom	0
	1 Bedroom (under Townhouse)	0
	Townhouse	1
	1 Bedroom	1
	Efficiency Unit	1
Total	4	



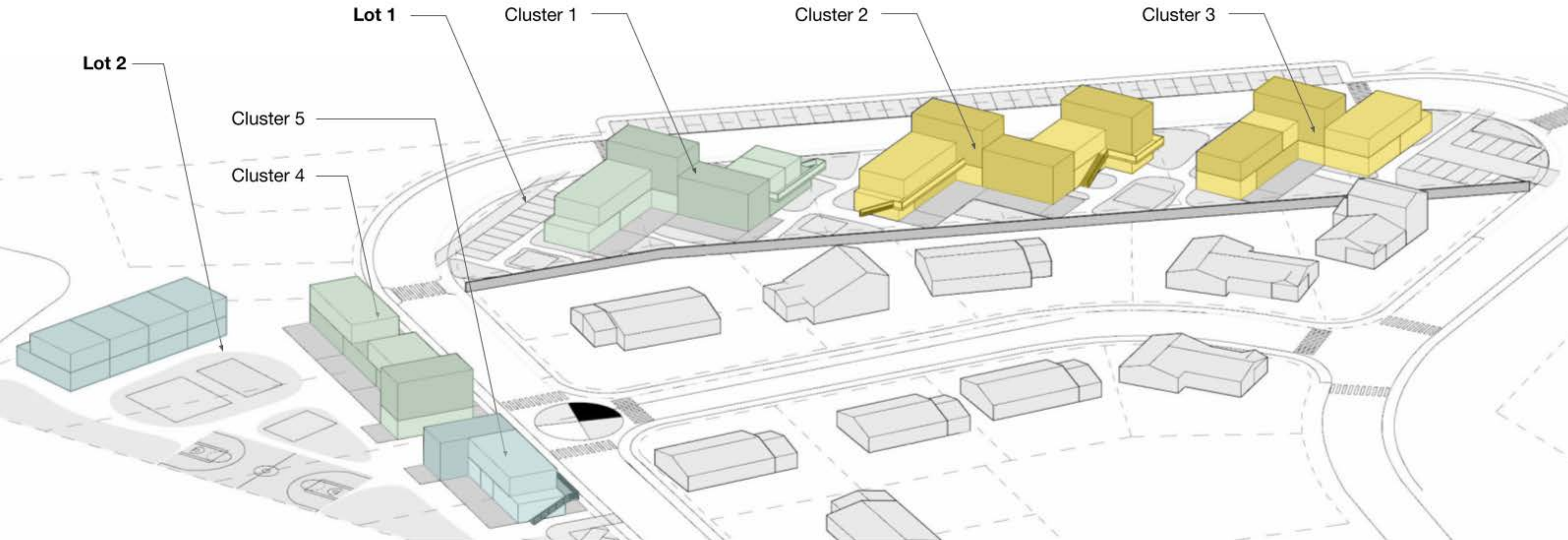
Cost & Phasing

Note: Development team should add 10-15% contingency to all construction estimates below.

		Total Units	Total GSF	Low End Cost (\$350/SF)	High End Cost (\$450/SF)
Lot 1	Cluster 1	9	9,775	\$3,421,250.00	\$4,398,750.00
	Cluster 2	10	12,104	\$4,236,312.50	\$5,446,687.50
	Cluster 3	8	8,654	\$3,028,812.50	\$3,894,187.50
Lot 2	Cluster 4	7	9,085	\$3,179,750.00	\$4,088,250.00
	Cluster 5	4	4,571	\$1,599,937.50	\$2,057,062.50
	Public Amenities	4-8	8,050	\$2,817,500.00	\$3,622,500.00

Phases	Scope	Low End Cost (\$350/SF)*	High End Cost (\$450/SF)*
1	Cluster 2 + 3	\$7,265,125.00	\$9,340,875.00
2	Cluster 1 + 4	\$6,601,000.00	\$8,487,000.00
3	Cluster 5 + Public Amenities	\$4,417,437.50	\$5,679,562.50

* Cost estimates are preliminary and based on current average construction costs in the southwest region. A more refined cost estimating exercise is highly advised during the full design phase of this development

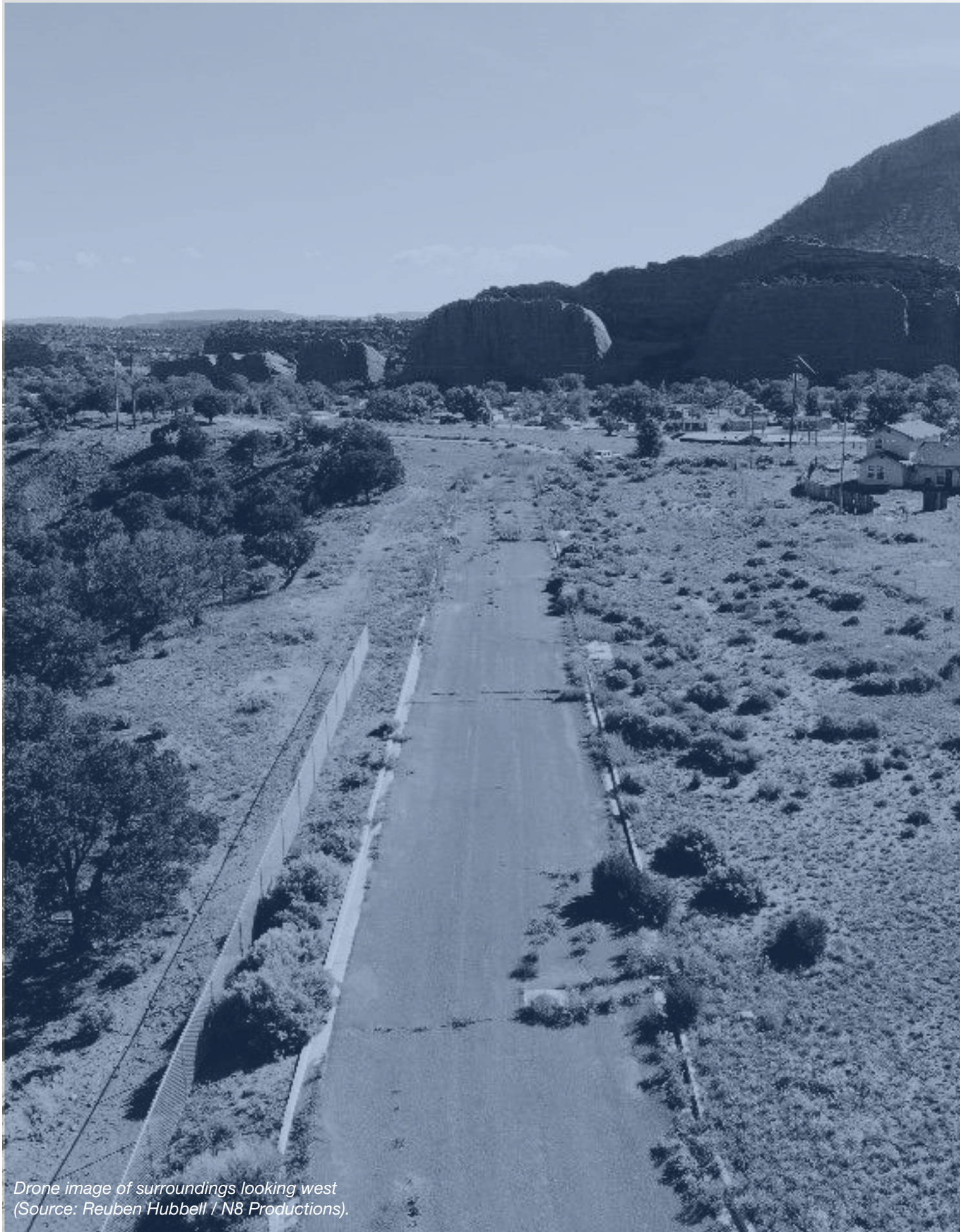


Perspective - Residential Site



Perspective - Residential Site



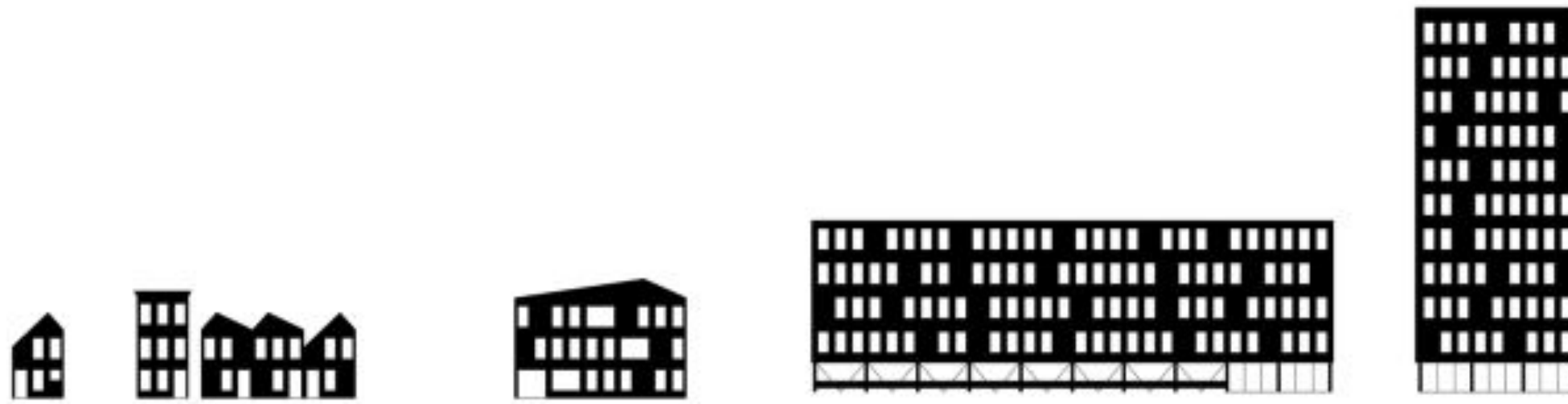


*Drone image of surroundings looking west
(Source: Reuben Hubbell / N8 Productions).*

Appendix

Multifamily Housing Typologies
Precedents

Multifamily Housing Typologies



	Infill	Low-rise	Mid-rise	High-rise
Names	Duplex, two, three or four-family, garden, walk-up	3-over-1	5-over-1, 5-over-2, 4-over-2	Tower
Construction type	Typically wood	Typically wood	Wood on concrete or steel podium	Concrete or steel
# of Floors	3 stories, up to 6 in older buildings	1-3 stories	4-7 stories	Unlimited by IBC, dictated by zoning, usually 12 + stories
# of Units	~1-4 units	~5-50 units	~50-200 units	~4-20+ units/floor

Source: Brookings

Housing Typologies: Rowhouse

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Siler Yards

Architect: AOS Architects

Client: Creative Santa Fe & NM Inter-Faith Housing

Location: Santa Fe, NM

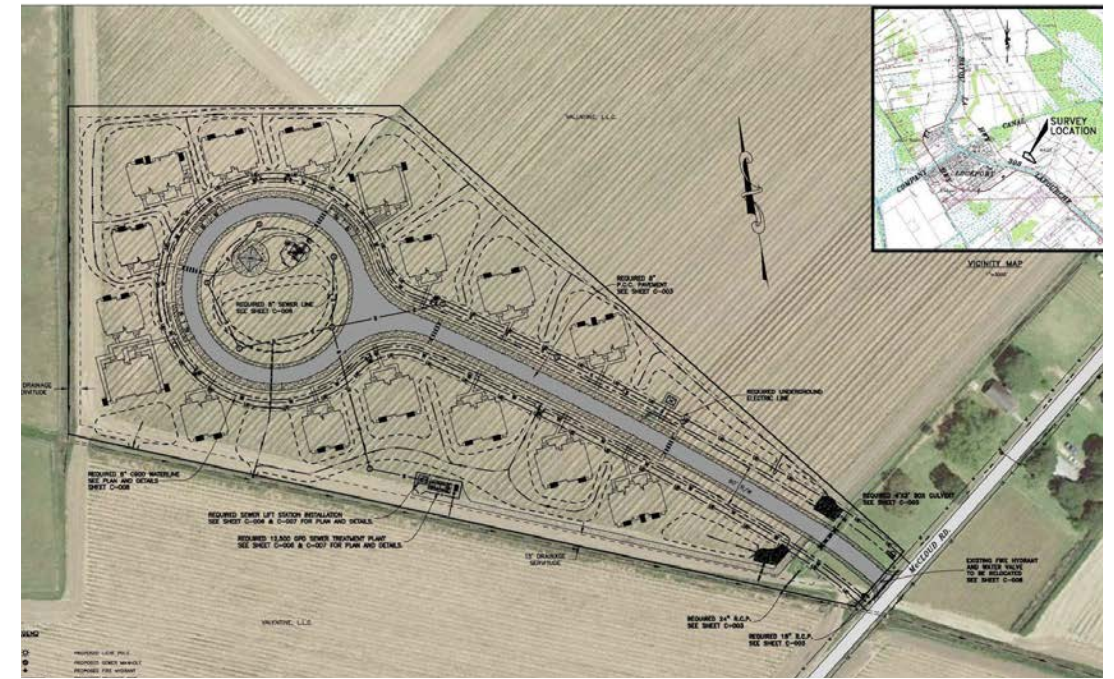
Project Cost: \$16.2 million

Description: Live/work housing and an affordable community studio space for the city's lower-income artistic workforce

Precedent Research

Housing Typologies: Triplex

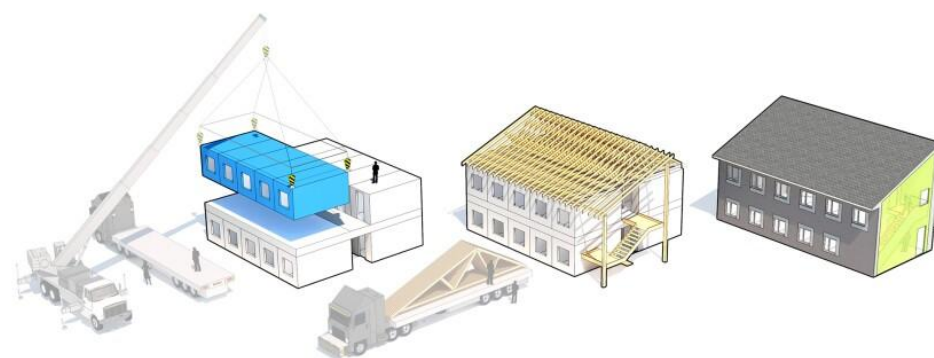
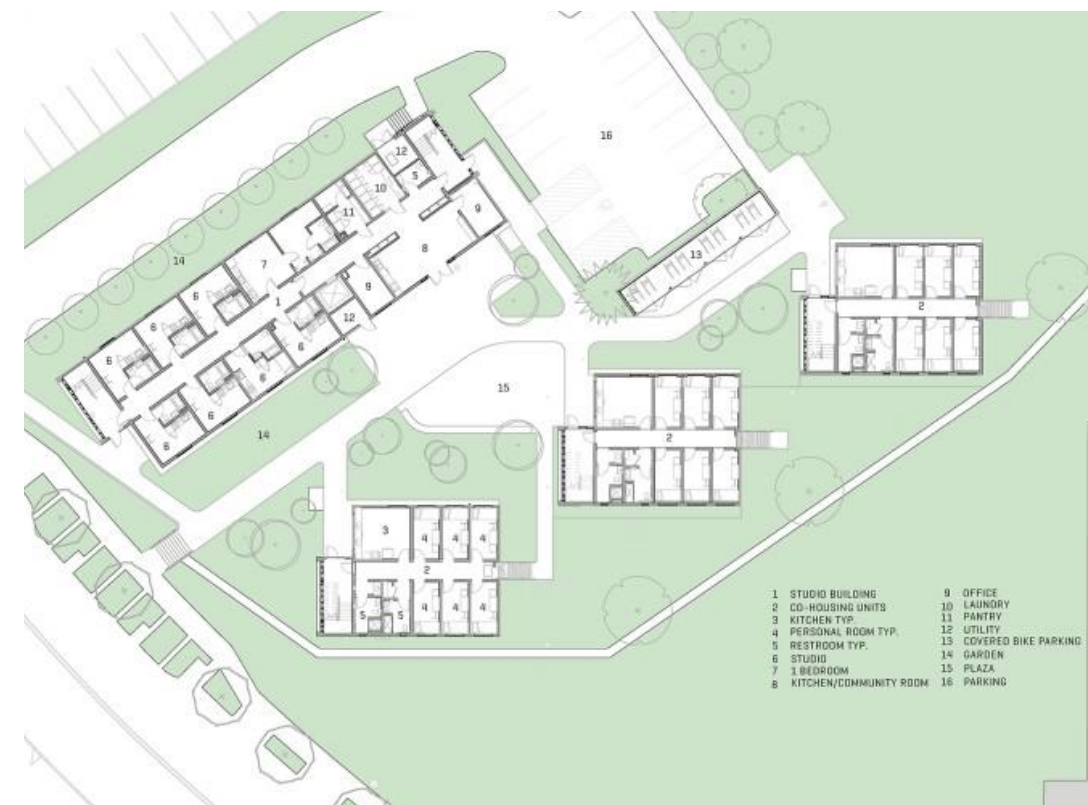
Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Les Maisons de Bayou Lafourche
Architect: VergesRome Architects
Client: Gulf Coast Housing Partnership,
Louisiana Office of Community Development,
Louisiana Housing Corporation
Location: Lockport, LA
Project Cost: \$11,000,000
Description: 35 weather-resilient,
mixed-income.

Housing Typologies: Co-Living + Dense Row Houses

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Argyle Gardens

Architect: Holst Architecture

Client: Transition Projects

Location: Portland, Oregon

Project Cost: \$8,500,000

Description: 72-unit housing designed for low income families and previously unhoused residents, with communal co-living suites and separate studio apartments.

Housing Typologies: Lowrise

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



JESD Workforce Housing

Architect: Lowney Architecture

Client: Jefferson Elementary School District

Location: Daly City, CA

Project Cost: Not available

Description: 56 affordable housing units (6 buildings, made up of 118 modules built in Idaho)

Housing Typologies: Infill - Townhomes

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Oak Park Housing

Architect: Johnsen Schmalig Architects

Client: Indie Capital

Location: Sacramento, CA

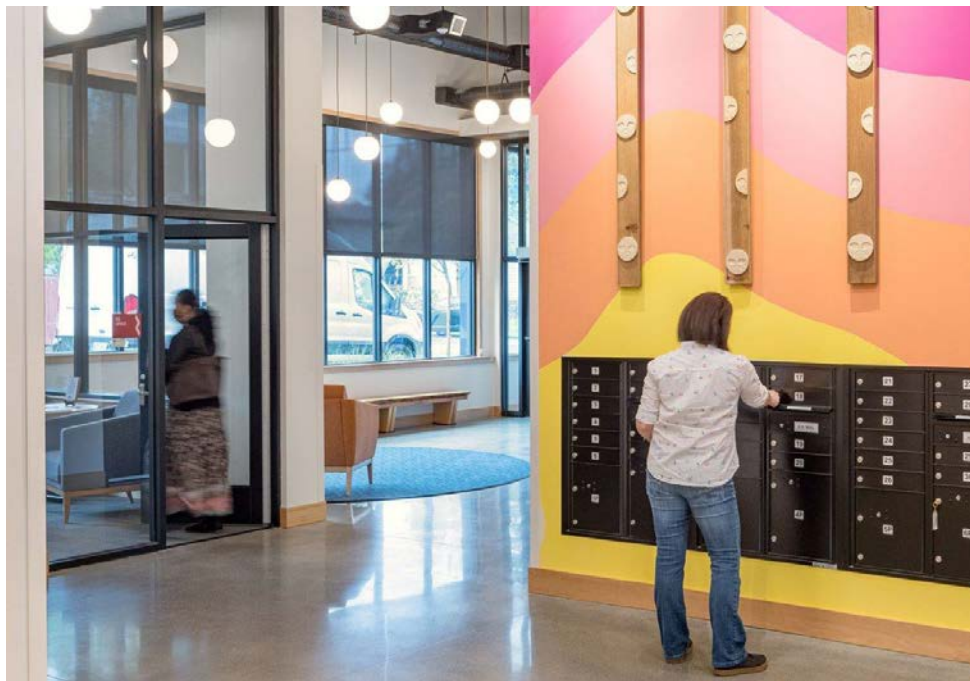
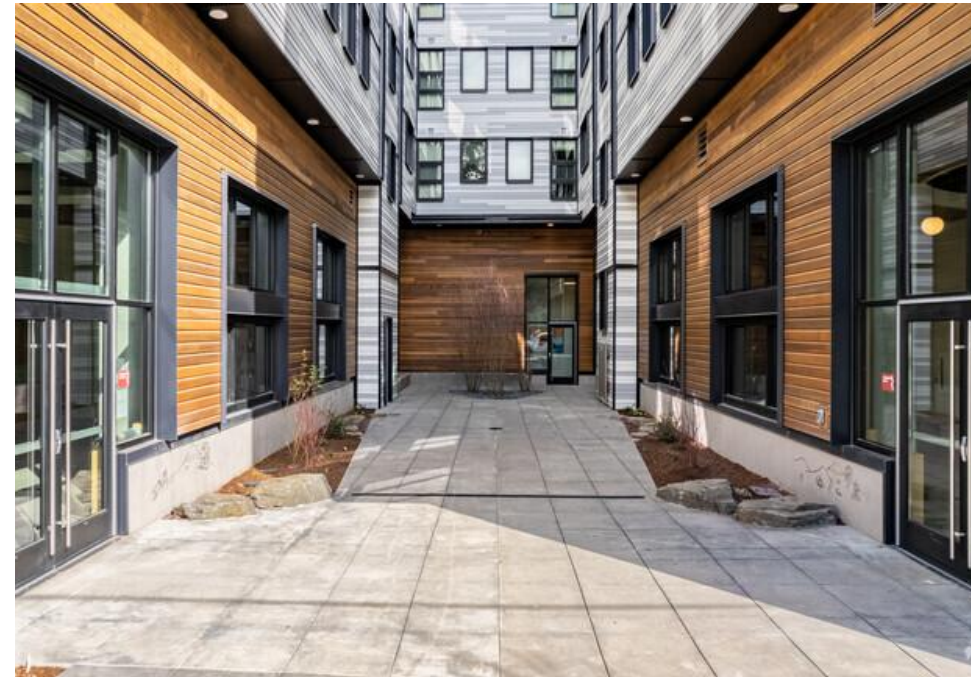
Project Cost: \$1.7 million

Description: 6 market-rate housing units
(~2000sf)

Precedent Research

Housing Typologies: Mid-rise + 3-Over-1

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Mamook Tokatee

Architect: Carleton Hart Architecture

Client: Native American Youth and Family Center (NAYA) + Community Development Partners

Location: Portland, OR

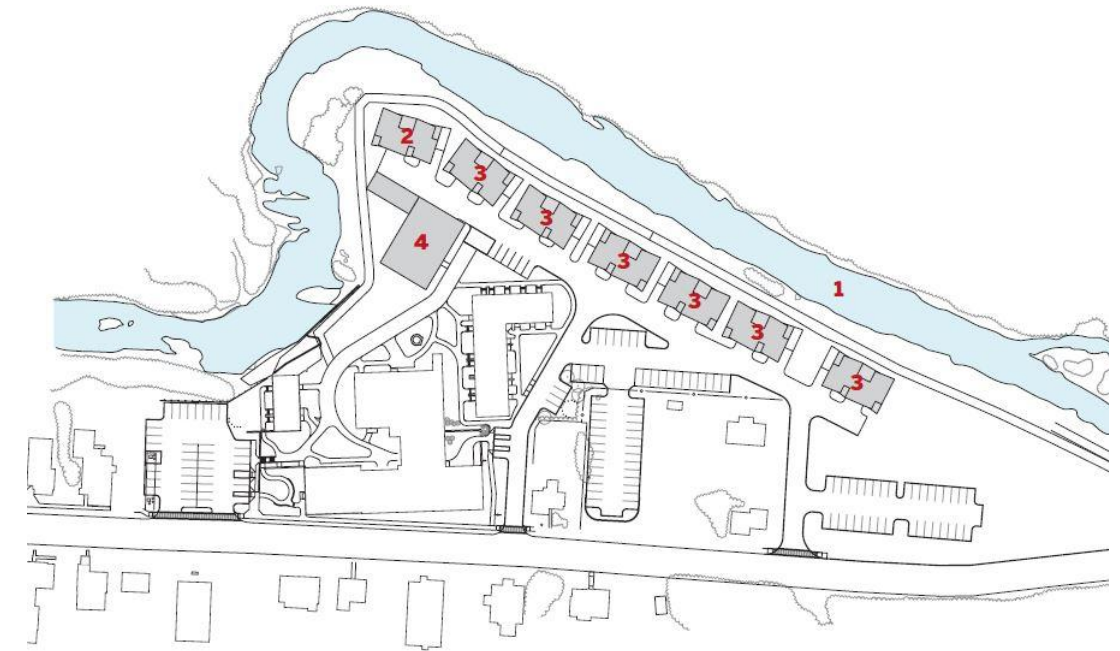
Project Cost: Not available

Description: 56 affordable mixed-income rental units (1100-2370sf), including artist lofts, studios and three-bedroom apartments. 20 units offer preference for Native American households

Precedent Research

Housing Typologies: Apartments + Duplexes

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Modern Mill and River House

Architect: Merge Architects

Client: Traggorth Companies + Mitchell Properties

Location: Williamstown, MA

Project Cost: \$4.9 million

Description: 6-unit apartment building (Modern Mill, 1450-1800sf) and duplex units (River Houses, 1950+2400sf)

https://www.multifamilyexecutive.com/design-development/design/5-innovative-multifamily-projects-showcase-the-benefits-of-building-better_o

Precedent Research

Housing Typologies: Apartments + Townhouses + 3-Over-1

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Jefferson Park Apartments

Architect: Abacus Architects + Planners

Client: Jefferson Park Apartments

Location: Cambridge, MA

Project Cost: \$15-20 million

Description: A combination of townhouses over apartments and 3-Over-1 units that form landscaped courtyard spaces

Precedent Amenities



Current Amenities

1. Hybrid Work
2. Furry Friends
3. More Mail
4. Contemporary Finishes
5. Biophilic Design: Connection to the environs
6. Walkability
7. Outdoor Escapes: Roof terraces, courtyards, parks.
8. Extra Space
9. Smart Buildings
10. Health and Wellness: therapy, financial counselors, meditation rooms, virtual meeting spaces.

Precedents: Tribal Amenities



Tribal Amenities

1. Spiritual Spaces
2. Gathering Space
3. Ramada
4. Sauna
5. Spa
6. Childcare

Housing Typologies: Native-Centered Multi-Family

Organizational strategies and structures that achieve a range of housing densities and meet diverse needs.



Cedar Crossing

Architect: Perlman Architects

Client: Native American Connections

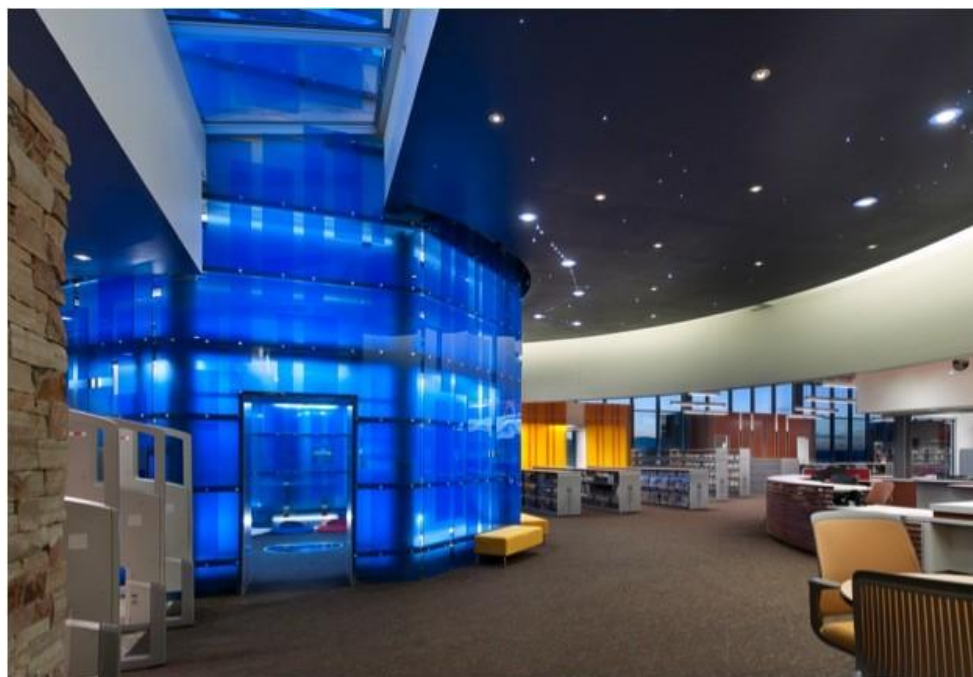
Location: Phoenix, AZ

Project Cost: \$17.6 million (residential portion)

Description: 74 affordable units with 2-4 bedroom layouts, a fitness center & community spaces. Roughly half of the residents are of Native American descent. The building also houses a treatment and recovery center with private courtyards and a Talking Circle room.

Native Cultural and Community Centers

Creating welcoming and familiar spaces grounded in Native concepts, for Native communities,



Diné College Library

Architect: DLR Group

Client: Diné College

Location: Shiprock, AZ

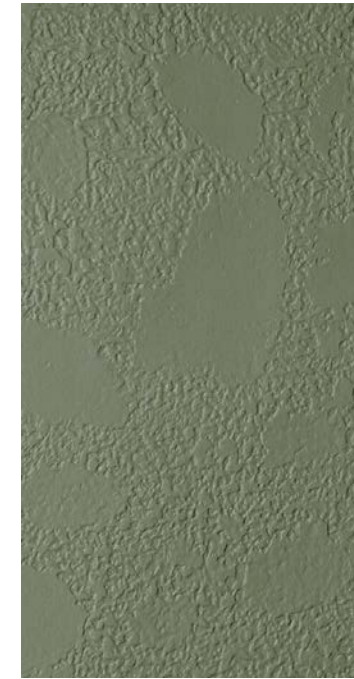
Project Cost: Not available

Description: The building's form aligns with Navajo-specific special landforms, sacred directions, and celestial relationships. At the building's center is the Storytelling Room, acting as the family hogan of the library.

Precedent Research

Material Palette

Materials complimentary to the surrounding landscapes including natural stone red, black, and sage veneers, brick, rammed earth, hardie stucco panels, and stacked gabion.



Outdoor Spaces: Shared



Programmed Outdoor Spaces

Create specific, programmed outdoor spaces for a range of activities including:

- Outdoor cooking / Events
- Play areas
- Gardening
- Sports
- Classes

A'he'hee!

MASS.