Rooted in Context: Middle Housing Design Explorations in Oakridge

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FALL 2025
OAKRIDGE

ARCH 484/584: ARCHITECTURAL DESIGN STUDIO ECOLOGICAL HOUSING DESIGN

UNIVERSITY OF OREGON

Oakridge
MOUNTAIN BIKING CAPITAL OF THE NORTHWEST

SCI
Sustainable Cities Institute

SCYP
Sustainable City Year Program

Acknowledgments

This architectural design studio would not have been possible without the dedicated time, support, and feedback from Oakridge city staff and community members. The entire studio would like to thank the following parties and individuals for their assistance and contributions to the final project proposals and subsequent completion of this Report.

Bryan Cutchen, City Mayor

James Cleavenger, City Administrator

Lynda Kammerer, Uptown Business and Revitalization Association Board Member

Site Property Owners and Agents:

Nancy Evanson, Property Owner

Steve Ness, Property Owner

Jennifer Lloyd, Realtor

Oakridge Museum Volunteers:

Dirk “Poncho” Tarman, Dianna Wellman-Hadley, Bud Rice, & Lori Shafer

Special thanks to the Oakridge Public Library for hosting the final community showcase during the December 2025 First Friday Art Walk.

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About SCI

The Sustainable Cities Institute (SCI) is an applied think tank focusing on sustainability and cities through applied research, teaching, and community partnerships. We work across disciplines that match the complexity of cities to address sustainability challenges, from regional planning to building design and from enhancing engagement of diverse communities to understanding the impacts on municipal budgets from disruptive technologies and many issues in between.

SCI focuses on sustainability-based research and teaching opportunities through two primary efforts:

1. Our Sustainable City Year Program (SCYP), a massively scaled university-community partnership program that matches the resources of the University with one Oregon community each year to help advance that community's sustainability goals; and

2. Our Urbanism Next Center, which focuses on how autonomous vehicles, e-commerce, and the sharing economy will impact the form and function of cities.

In all cases, we share our expertise and experiences with scholars, policymakers, community leaders, and project partners. We further extend our impact via an annual Expert-in-Residence Program, SCI China visiting scholars program, study abroad course on redesigning cities for people on bicycle, and through our co-leadership of the Educational Partnerships for Innovation in Communities Network (EPIC-N), which is transferring SCYP to universities and communities across the globe. Our work connects student passion, faculty experience, and community needs to produce innovative, tangible solutions for the creation of a sustainable society.

About SCYP

The Sustainable City Year Program (SCYP) is a yearlong partnership between SCI and a partner in Oregon, in which students and faculty in courses from across the university collaborate with a public entity on sustainability and livability projects. SCYP faculty and students work in collaboration with staff from the partner agency through a variety of studio projects and service- learning courses to provide students with real-world projects to investigate. Students bring energy, enthusiasm, and innovative approaches to difficult, persistent problems. SCYP's primary value derives from collaborations that result in on-the-ground impact and expanded conversations for a community ready to transition to a more sustainable and livable future.

Community partnerships are possible in part due to support from U.S. Senators Ron Wyden and Jeff Merkley, as well as former Congressman Peter DeFazio, who secured federal funding for SCYP through Congressionally Directed Spending.

About City of Oakridge

The City of Oakridge, Oregon, is a vibrant community nestled in the foothills of the Western Cascade Mountains, with a population of approximately 3,500 residents within city limits (nearly 5,000 when including nearby Westfir and surrounding areas). Surrounded by the extensive Willamette National Forest, the city provides ample opportunities for activities such as hiking and mountain biking, with nearly 500 miles of trails and five rivers in its vicinity. Oakridge's elevation (1,200-1,700 ft.) results in a favorable climate, characterized by over 300 sunny days annually, while avoiding the fog of the valley and the heavy snowfalls of higher elevations.

Governed by a council-manager system since 1972, Oakridge residents benefit from a robust and supportive municipal administration. The City offers a comprehensive range of services, including street maintenance, water, wastewater, and park utilities, as well as police, fire, and emergency medical services. Additional municipal services include library access, economic development, planning and zoning, and general administrative support. Funding for city operations is derived from property taxes, franchise fees, and other revenue sources, with special projects financed through grants and loans.

In the past decade, Oakridge has secured nearly $11 million in grants and loans for community projects and maintains an annual budget of approximately $10 million.

The citizens of Oakridge cherish their history and cultural heritage, celebrating it through a variety of events and activities throughout the year. The long-standing Tree Planting Festival pays homage to Oakridge's timber town roots, while the Concerts in the Park series offers free performances at the Banner Bank Amphitheater in Greenwaters Park. Additionally, Oakridge features four art galleries, three nearby hot springs, and is conveniently located just 25 miles from Willamette Pass Ski Resort. The Eugene-Springfield metropolitan area, approximately 35 miles away, further enriches the community's cultural offerings with its vibrant arts scene, including music, theater, and access to the University of Oregon.

The City of Oakridge is committed to fostering a safe, livable, and sustainable environment for its residents while promoting economic development and community engagement. As part of its ongoing planning initiatives, Oakridge is exploring various strategies to enhance its sustainability and growth, ensuring that the community continues to thrive for generations to come. The partnership between the Sustainable City Year Program and the City of Oakridge is supported by local stakeholders, enabling University of Oregon students and faculty to collaborate on projects and provide recommendations to address city-identified challenges and opportunities.

Course Participants

THIRD-YEAR UNDERGRADUATE ARCHITECTURE STUDENTS

Anirban Bhaduri
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Gidi Batya
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Lily Maas
Lindsay Chen
Macy Moore
Spencer Barras

Course Description

ARCH 484/584: ARCHITECTURAL DESIGN STUDIO

This course guides students through design projects requiring comprehensive and integrative study over a wide range of project options. Course components include individual criticism, group discussions, lectures and seminars by visiting specialists, and public review of projects.

Executive Summary

The architectural design studio's design challenge stemmed from an affordable housing challenge in Oakridge, Oregon. Over the ten-week term, students investigated common medium-density housing types: duplexes, townhouses, and cottage clusters, townhouses over flats, walk-up apartments.

With feedback from presentations and reviews, students refined their designs to the final goal: a neighborhood of different housing types. Students worked in pairs to blend ideas and designs focused on broad concepts such as the familial living experience, creating community, and maintaining a consistent sense of place. The final proposals aimed to house a diverse demographic of people in an efficient, safe, and beautiful manner.

Introduction

FIG. 1

Snapshot of Uptown Oakridge from Oak Street.

Photo Credit: Ava Tai

Since the early 2010s, Oregon has fallen victim to an affordable housing crisis (Shrader, 2024). Oakridge is no different. A 2023 report predicted that the City would need 368 new dwelling units to accommodate housing needs over the next twenty years (Zylstra, 2023). Oakridge has a higher proportion of low-income households, as well as households below the poverty line and the current housing, built mostly in the early 1900s, does not provide support for an aging senior population nor are there many options for a broader range of household types. While many homes are located north of Uptown, many are short-term rentals (Airbnb, Vrbo, etc.) that sit empty much of the year. The need for new, more dense, more affordable, and easily accessible housing that fits the unique demographic desires of the City was is clear.

The architectural design studio "Ecological Housing Design" explored just that. A similar studio occurred in fall 2024 (Manning, 2024) while this term students had the opportunity to provide a deeper and slightly different exploration with more ideas, perspectives, and possible solutions.

Students completed three "mini" projects followed by a final, cumulative partner-project. Students learned to generate ideas quickly through short iterations and common housing layouts. All designs were driven by "Essence Statements," short 200-word blurbs sharing the overall concept, goals, and spirit of their proposed housing.

FIG. 2

Views from Salmon Creek site at Little Texas.

Photo Credit: Ava Tai

Throughout the term students traveled to the City to visit the museum and local monuments, analyze current housing, and talk to residents. The site visits helped students better understand the tight-knit community and how to translate this into design. The broader, overarching goal of the studio was to generate affordable middle housing designs and present these ideas to the community of Oakridge. At the end of the term, students presented their final projects in the Oakridge Public Library during the December First Friday Art Walk and Tree Lighting celebration, connecting with dedicated community members about a shared image for the future of the City.

While students designed for changing housing types and possibly changing goals/household types, the overall sentiment was consistent: How can we investigate the roots of and address the housing crisis in Oakridge by designing towards the unique needs of the region and City, while still maintaining the area's rich heritage and close community?

FIG. 3

Students and Professor Bollo at the Oakridge Tree Lighting Celebration, after presenting final projects.

Photo Credit: Lindsey Hayward

Initial Research - Middle Housing Taxonomy Studies

FIG. 4

Second Street and Teller Road site panorama.
Photo Credit: Ava Tai

Throughout the course of the 10-week term, students in the Ecological Housing Design Studio completed three two-week projects individually. Students designed through increasing measures of density, from a duplex to three townhomes to a small neighborhood.

These three mini projects functioned as preliminary research of housing types, design patterns, and overall strategies that could be successful for a larger-scale project. For the final three-week design (See section Middle Mixed-Type Neighborhoods), students worked in pairs to analyze, redesign, and combine from the past three mini projects to create a larger, more expansive neighborhood in Uptown, Teller Road, or Salmon Creek.

SITE

For the first two projects, the site was divided into 16 equal lots of 50'x100', reflecting the 16 students in the design studio. Additionally, Teller Road was extended west to create the main road of the development, with several alleys to supplement each lot cluster. On individual lots, students worked to design duplexes and townhomes, with some acknowledgment of their neighboring designers (students with the plots directly adjacent to them). For the third and final mini project, students either chose the totality of sites 1-3 or sites 4-6, both equating to a new lot of 150'x100'.

FIG. 5

Map of site off West 2nd Street and Teller Road, including individual student lot assignments.

Design Credit: Christina Bollo

FIG. 6

Student duplex models aligned based on plot assignments.

Photo Credit: Christina Bollo

PROJECT 1: DUPLEXES

For the purposes of the design studio, “duplex” refers to any form of two dwelling units built in conversation with another located within the same lot. “Built in conversation” means that the two units were constructed and designed with the other in mind, and that the presence of the other unit influenced multiple aspects such as orientation, outdoor space development, and interior layout. Duplexes, while being the “least dense” of middle housing, still double the density of the typical single-family detached house. A duplex can be socially advantageous at both small and large scales; a multigenerational family can live in proximity with varying levels of independence, and having duplex units of different sizes can increase housing type variety, likely also increasing racial/economic/social diversity as well. Thus, duplexes can take many forms, such as side by side (sharing one center wall), top and bottom (one unit stacked vertically on top of another), and detached (no connecting walls but sharing the same lot).

Essence statements drove students' design forward. In terms of the duplex, students were encouraged to design with two specific families or groups in mind, and shape their overall concept towards their wants, needs, and specifications. Many students designed to support Oakridge's aging population, with many developing features to support a multigenerational family. Other students chose to design for a younger population, perhaps reflecting Oakridge's outdoor culture, to attract new residents into the town.

Since the duplex would be situated in the students' assigned individual site lot (Fig. 6), designs needed to be regionally appropriate to Oakridge in terms of scale, accessibility, materials, and overall sentiment. Students considered the relationship between the two dwellings as reflecting the relationship of the residents, maximizing areas of visual and acoustic privacy, as well as the possibility of shared or private outdoor spaces and parking areas.

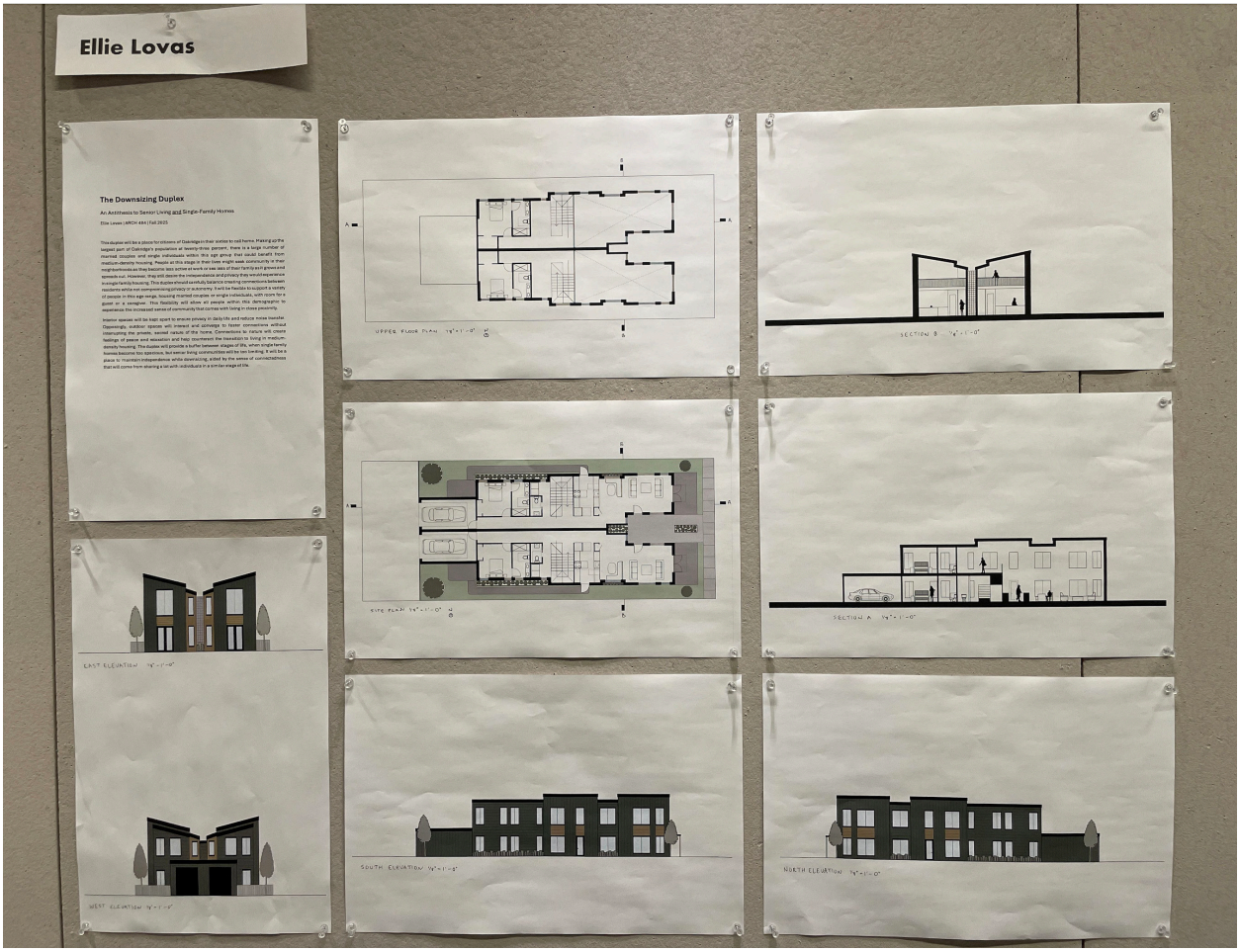


FIG. 7

Side-by-Side Duplex final presentation pin-up.

Design Credit: Ellie Lovas

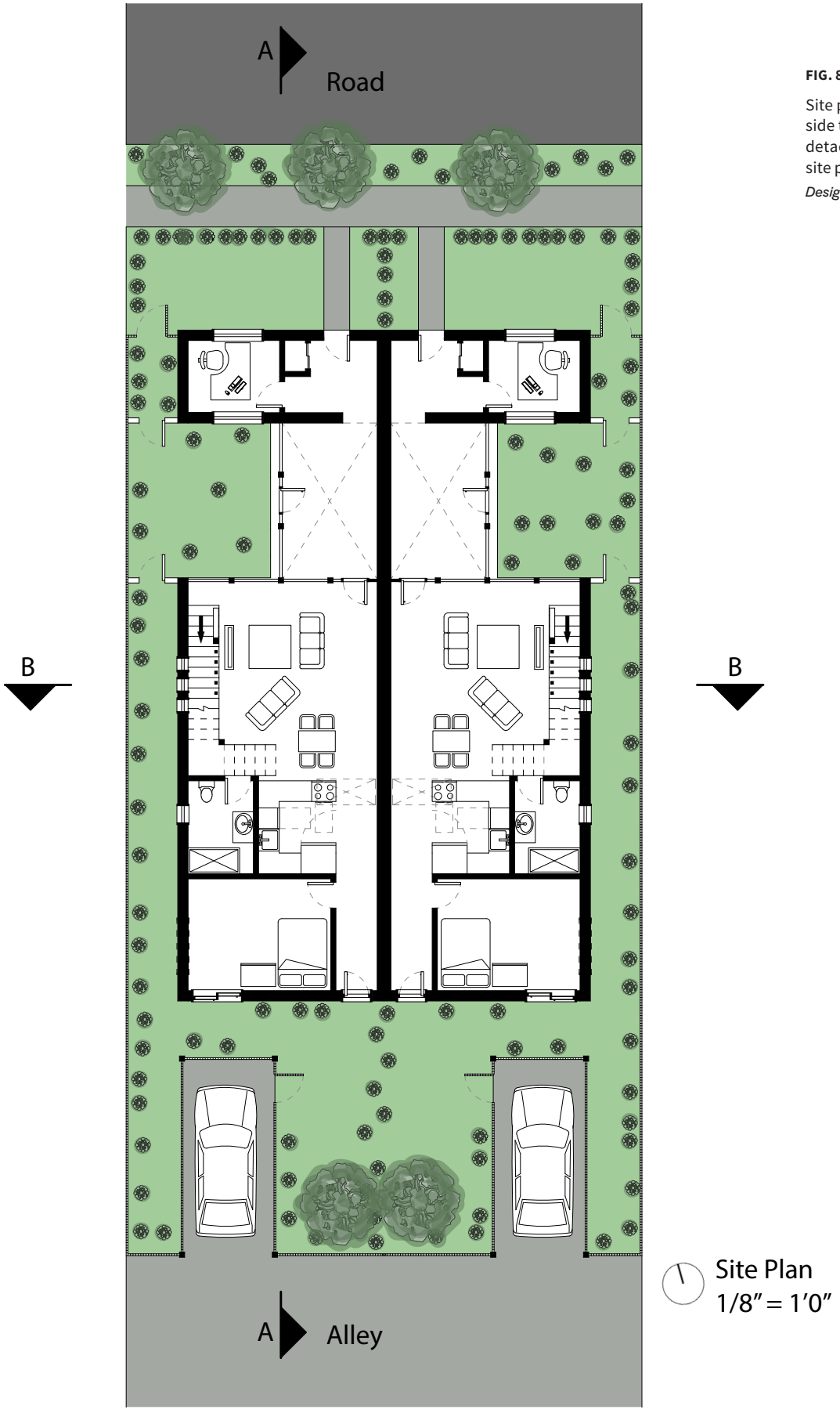


FIG. 8

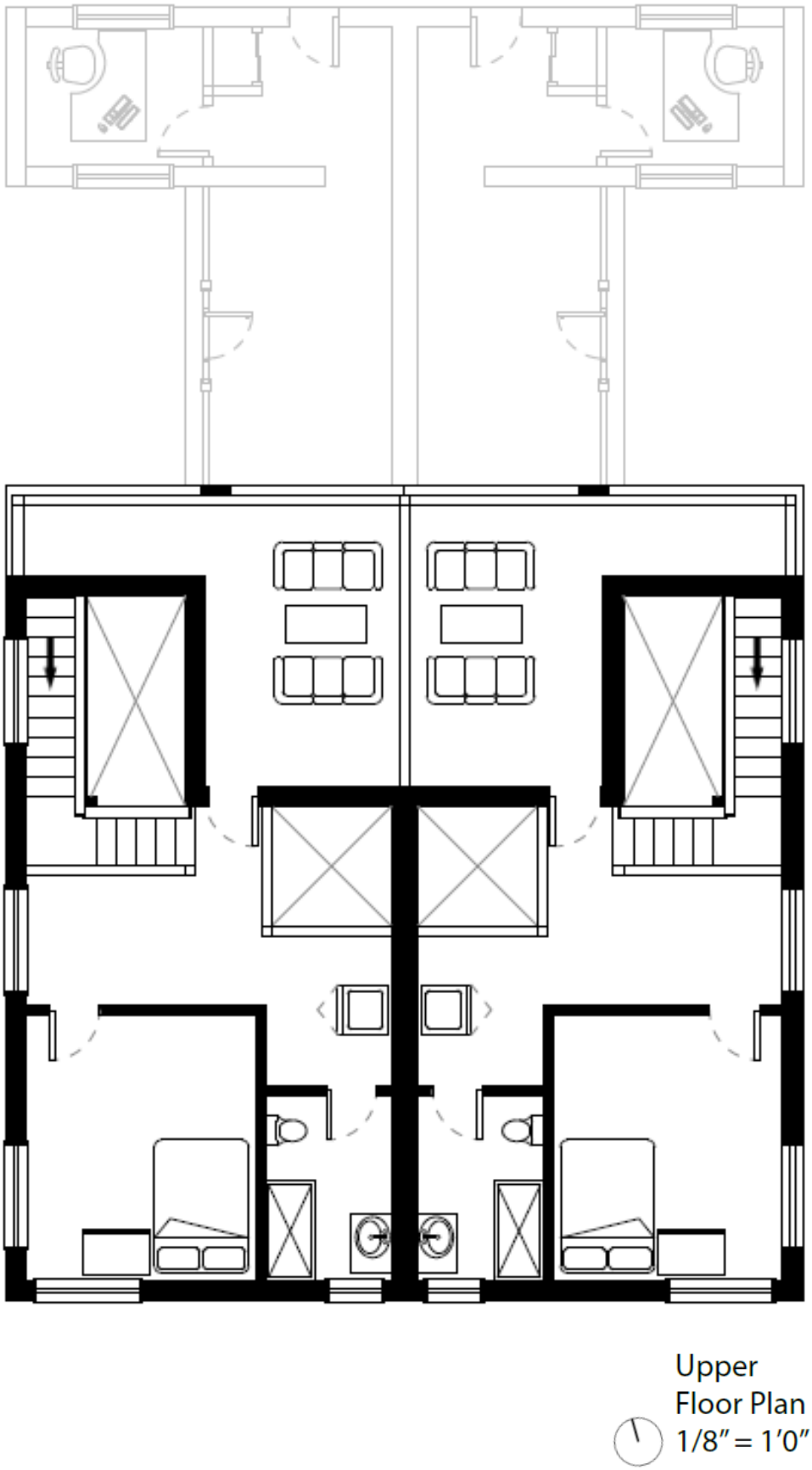
Site plan of side-by-side two-bedroom, detached garage duplex site plan.

Design Credit: Ani Bhaduri

FIG. 9

Second floor plan of side-by-side two-bedroom, detached garage duplex site plan.

Design Credit: Ani Bhaduri

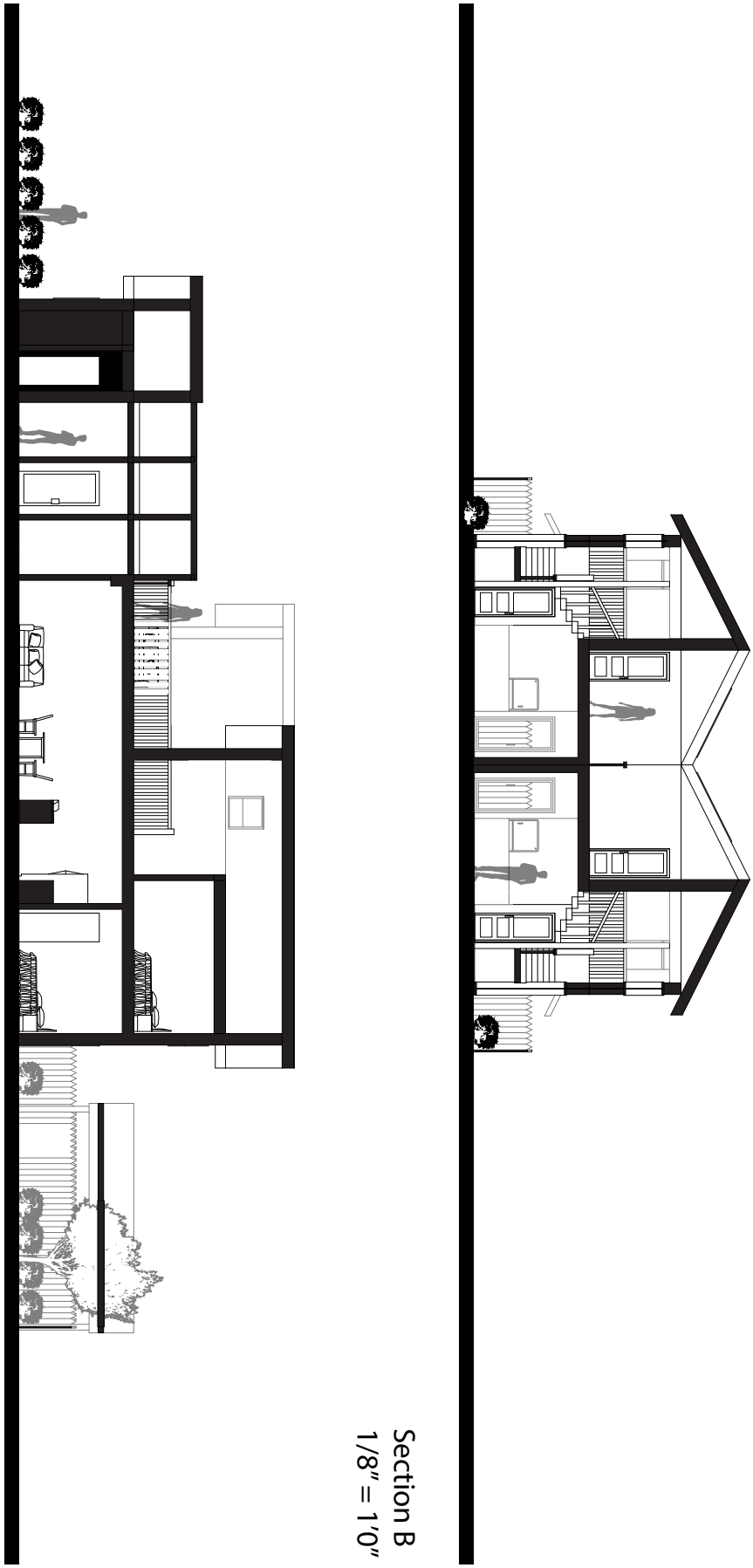


Most students chose to explore the side-by-side, attached duplex type. In this type, the two units share a wall that acts as the reflection point – the two units are identical, but one is flipped along that shared wall. The project above illustrates this idea. A benefit of this duplex type is that both units are equal in almost every way, perhaps promoting ideas of a shared common experience among neighbors to build community. In terms of physical features, students tended to put common areas such as the living room and kitchen towards the front of the home, closer to the entrance to create a privacy gradient from most public to most private areas, such as the bedrooms. Furthermore, a similar privacy gradient was utilized in many projects from the center of the shared wall outwards. Students would place similar common areas/stairs/hallways closer to the shared center wall to maximize visual and auditory privacy of their intimate rooms (bedrooms, bathrooms) from their duplex neighbors, as well as maximize window opportunity. Outside, there were common patterns of a shared outdoor space in the front or back of the home, meant to complement a small area of private outdoor space, whether that be in the form of a balcony, courtyard, or other fenced outdoor terrace area.

FIG. 10

Section of Side-by-Side two-bedroom duplex.

Design Credit: Ani Bhaduri



Section A
1/8″ = 1′0″

Section B
1/8″ = 1′0″

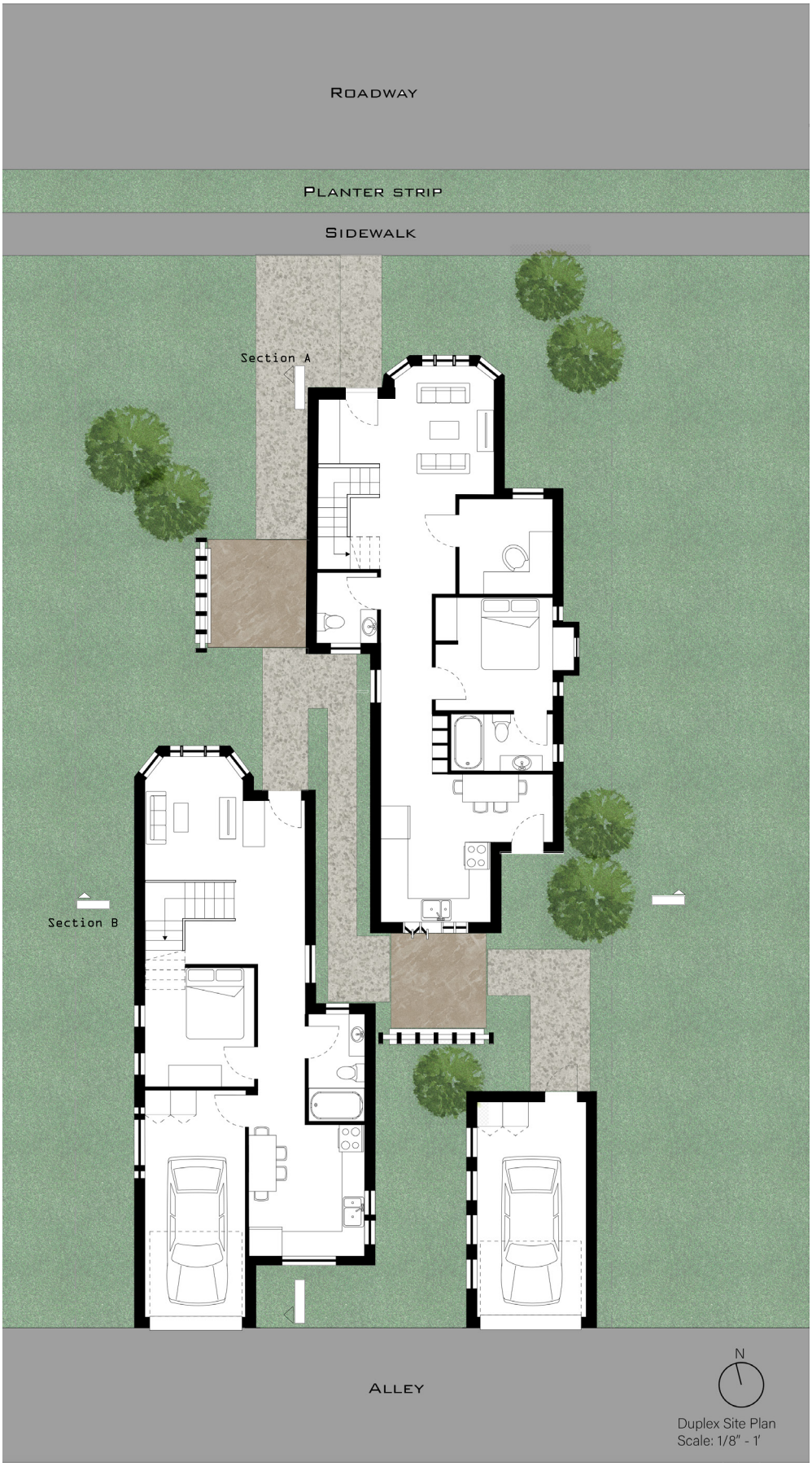


FIG. 11

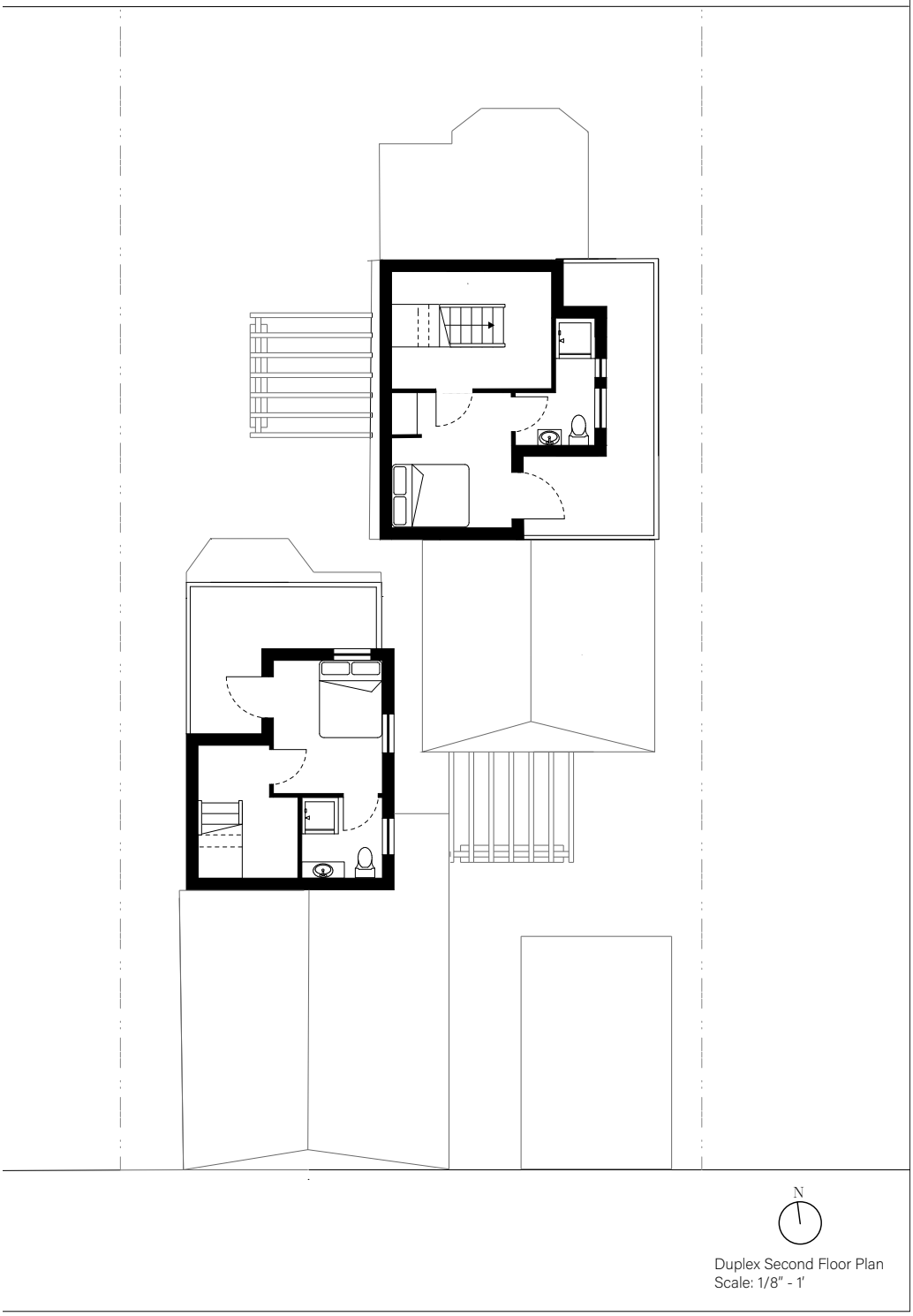
Site plan of detached duplex.

Design Credit: Ellie Cordle

FIG. 12

Second floor plan of detached duplex.

Design Credit: Ellie Cordle



Other students took the detached approach to the duplex project. The detached duplex allows for the greatest extremes of auditory and visual privacy, as all four walls are not shared. Each unit functions very similarly to a standard single-family home in this way. Similar organizational logic to the side-by-side type is also applied, however, with bedrooms and other private areas on the exterior, and common spaces like the kitchen and living room on the interior. The main difference, as illustrated in Fig. 11 is the shared common outdoor space, as well as the isolated parking strategy for the east unit.

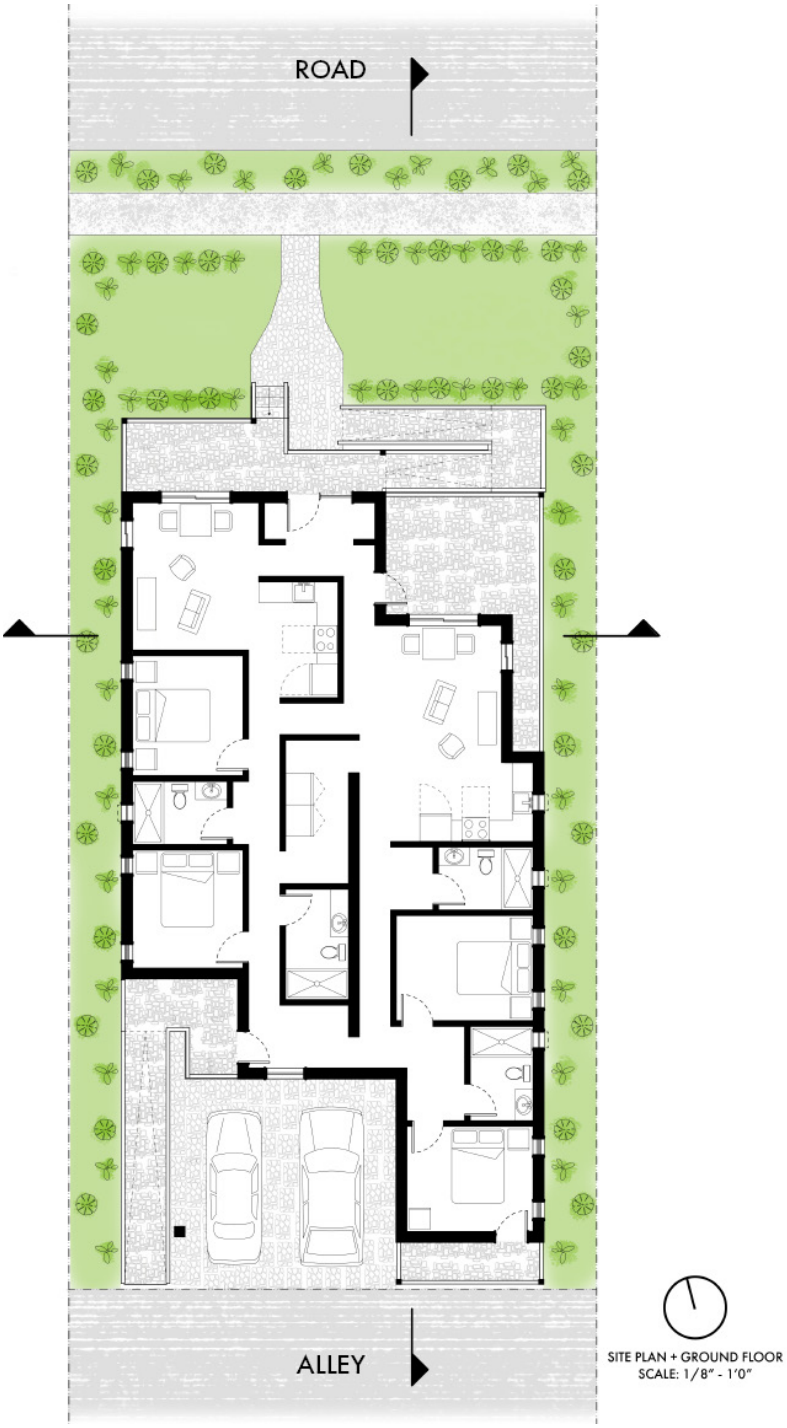


FIG. 13

Site plan of connected duplex for multigenerational family.

Design Credit: Lily Maas

However, some students took a more creative approach when designing their duplexes. Figure 13 illustrates a duplex built for a blended family, where there is no internal nor external separation between the two properties. Though the design follows similar principles to the other side by side duplexes explained above, private spaces like bedrooms lay on the exterior while more common, possible shared spaces like the laundry room, kitchen, and hallways are in the middle.

Students also focused on the entrance procession off the street and to each of the dwellings. While there was a required 10-foot setback from the sidewalk, students were encouraged to design more than just a straight concrete path from sidewalk to door.

Many students carefully placed vegetation and planters to indirectly control outdoor circulation, while others chose to develop features off the house, such as porches and overhangs. Transitional areas were a focus; a place where residents could chat with neighbors, grab their keys out of the rain, or take a brief breath of fresh air without putting on shoes. Facade development began with preliminary elevation studies here as well.

FIG. 14

Street-facing (north) elevation of connected duplex.

Design Credit: Lily Maas

FIG. 15

Side (east) elevation of connected duplex

Design Credit: Lily Maas

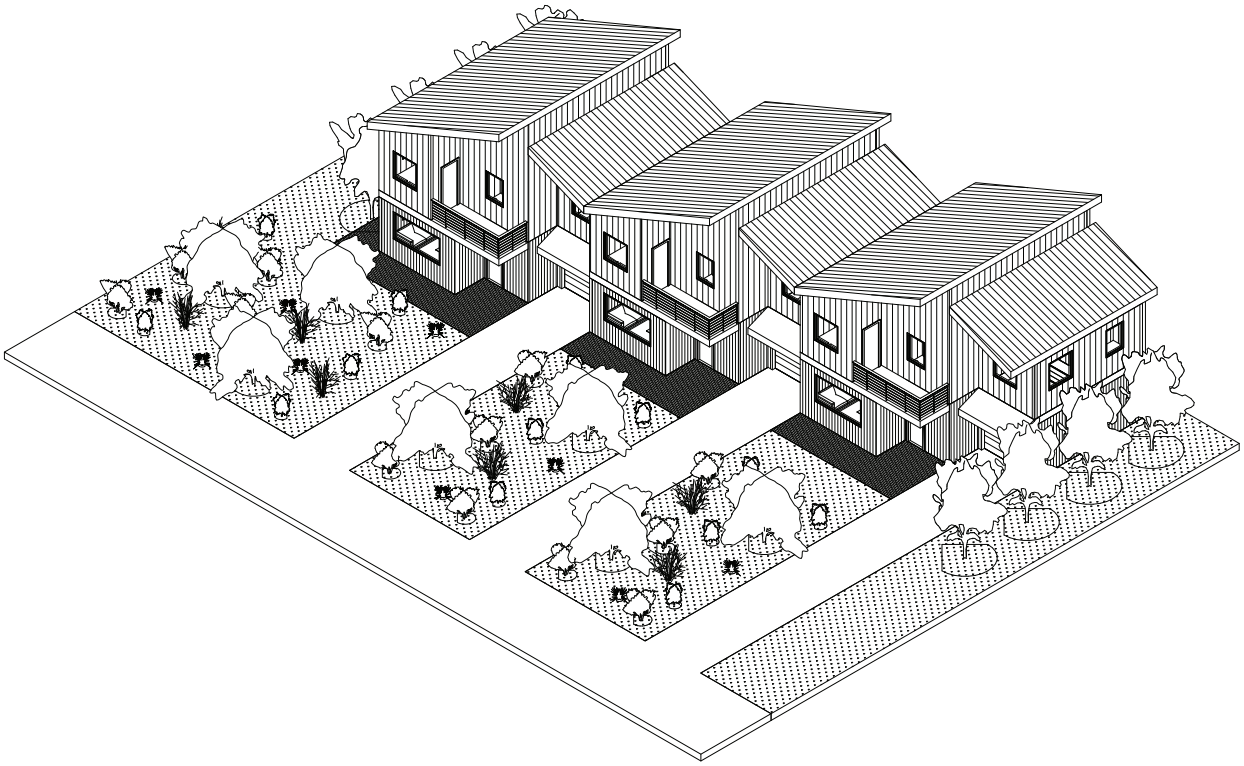


FIG. 16

Townhouse axonometric.

Design Credit: Spencer Barras

PROJECT 2: TOWNHOUSES

Townhouses, often called rowhouses on the East Coast, are attached dwellings (usually 3+ units), with each unit sharing at least one wall with a neighbor. This center wall, sometimes doubled, has no side setbacks, and thus, no windows, allowing fire protection. Townhouses are typically multiple stories and therefore have the benefit of not having neighbors above or below. Often townhouses are long and narrow with widths of 15 to 25 feet; studio townhouses hovered closer to 13 feet.

While utilizing the same lot from the duplex project (50'x100'), students designed a set of three townhomes. Many students again decided to design regarding an imagined family or group of people common to Oakridge. Through discussion with neighboring lot peers, students could move their buildings to the property line. Furthermore, students were encouraged to create an off-alley parking strategy that would not disrupt the dwellings' relationship with outdoor spaces since porches and private spaces were now required. All but one student had at least one "end condition" townhome – a unit that only shared one wall with a neighbor (the student's design or their peers) and thus could have windows on three walls instead of two.

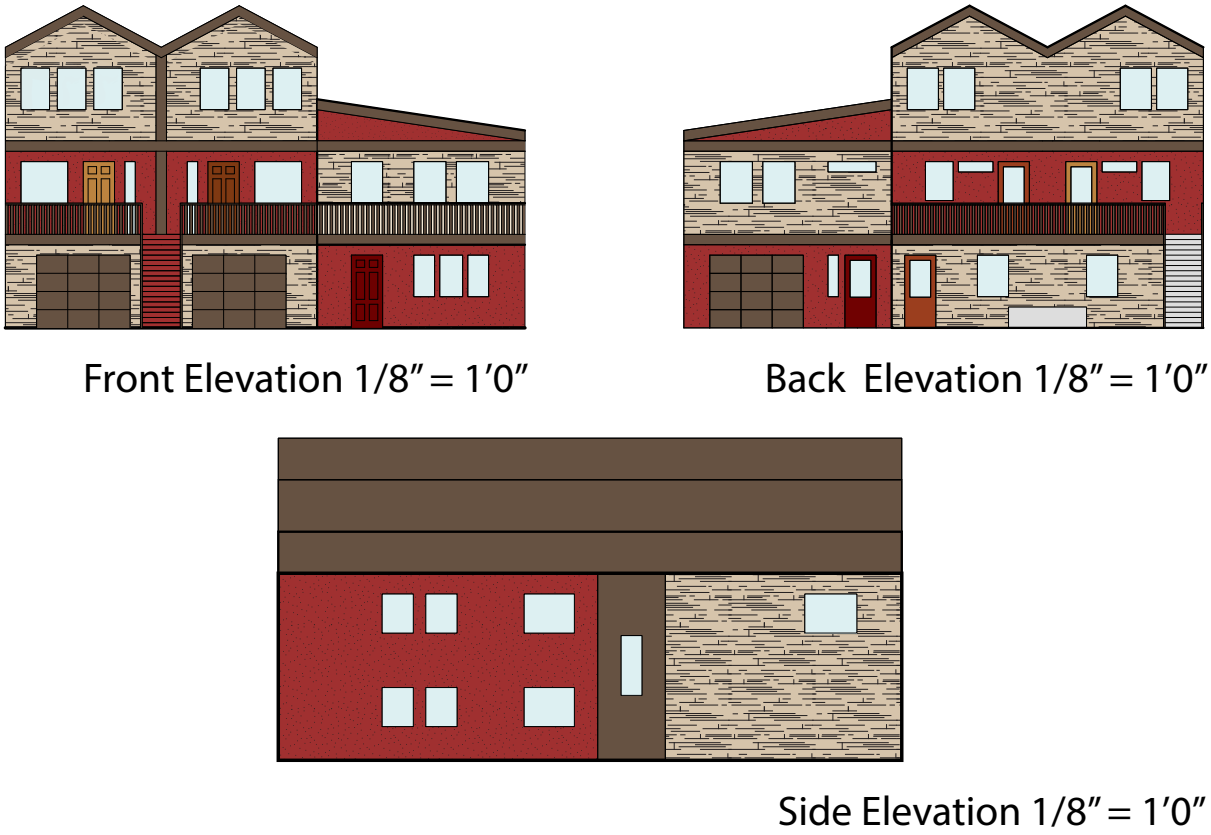


FIG. 17

Elevation of townhouse, clear example of end condition unit.

Design Credit: Ava Tai

Many students situated parking in the back directly off the alley. This was done in multiple ways: detached and attached garages, detached carports, and shared parking areas. As for the organization of interiors, students often chose to design in a modular method (all three townhouses with very similar layouts) as seen in Fig. 19; two townhomes with reflected layouts with a third “end condition” unit (Fig 17); or some combination of the two (Fig 18). Whatever the organization strategy, there were similarities in the designs.

Like the duplexes, since all bedrooms are required to have a window, many students situated them at the front or back of the dwellings, mostly on the second or third floors. Bathrooms, closets, stairs, and other utility areas that did not require a window typically resided in the middle of each unit. Kitchens, living, and dining rooms existed near each other, allowing for easy flow between spaces, and all usually being on the first floor. These public facing rooms acted as transitional areas, from public to private (upstairs), and from indoor to outdoor.

FIG. 18

Site plan of cascading townhomes of different sizes.

Design Credit: Macy Moore

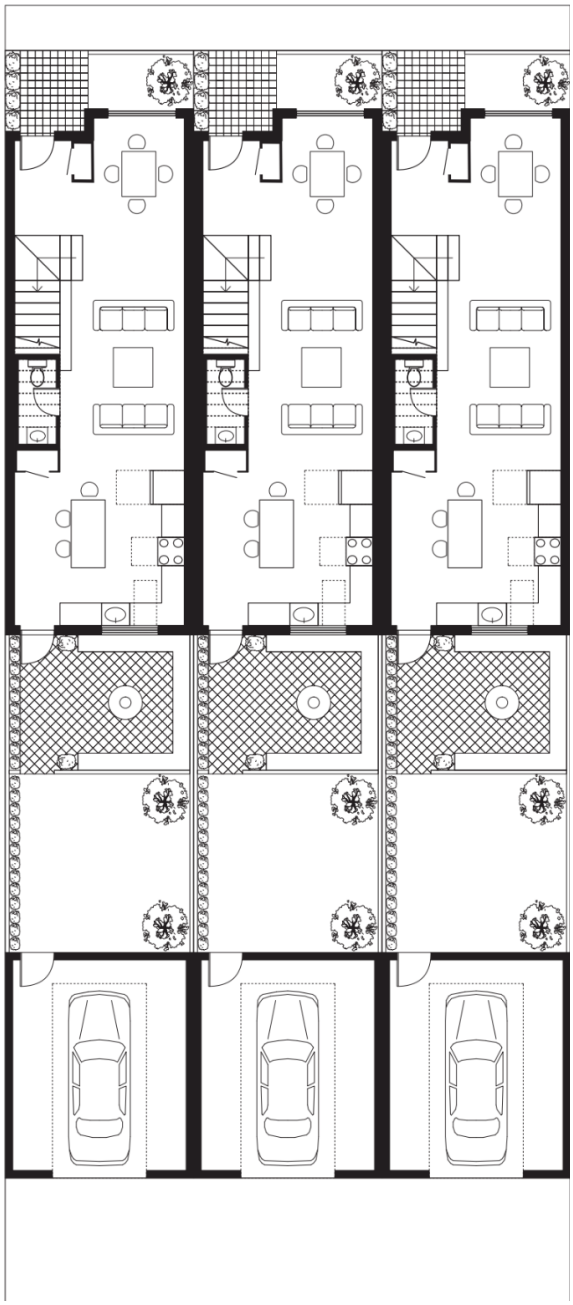


FIG. 19

Site plan of consistent townhomes.

Design Credit: Ellie Lovas

FIG. 20

Back elevation of cascading townhomes, showing parking strategy.

Design Credit: Macy Moore

FIG. 21

Sections of cascading townhomes.

Design Credit: Macy Moore

FIG. 22

Sections of cascading townhomes.
Design Credit: Macy Moore

Students also prioritized connections to outdoors and further development of outdoor rooms. As parking was encouraged to be towards the back of units to create a better street-front presence, students had the opportunity to design specific procession entrances from the sidewalk. For privacy concerns, some students chose to stagger each of the units in either the front or back, which allowed for each entrance to feel more separate from another. Backyards were sometimes shared or had symbolic barriers such as trees or low fences to encourage separation but not physically enforce it. In some scenarios, first, second, and third floor porches gave opportunities for greater outdoor privacy.

Students were encouraged to develop facades while developing floor plans. Rhythm, balance, and harmony were achieved by utilizing a standardized bay system, specific color and material choices, consistent architectural style, and intense detailing of elements such as window frames, mullions, and railings. Students created colored elevations and layered facade models (Fig. 24) to exemplify different layers of depth in their designs.

FIG. 23

Elevation rendering of townhouse.

Design Credit: Ellie Lovas

FIG. 24

Facade model of townhouse.

Design Credit: Ellie Lovas

PROJECT 3: MAXIMUM MEDIUM DENSITY

In the third and final mini project, students had the choice of designing 10-12 dwellings through three main types of housing: townhouses over flats, cottage clusters, and/or walk-up apartments. The overall goal was to create a community within the new 150'x100' lot that met a maximum medium density, defined as 29-35 dwelling units per acre (DUA).

Students were not required to have truly internal/enclosed hallways between units but were required to have a mix of dwelling sizes and types (1-3 bedroom, including Type A units), as well as a developed parking strategy that meets Oregon Building Code and maximized outdoor space. Students were encouraged to further explore their facade developments, material choices, private vs public space, shared and single outdoor space, and relationships between and among related dwellings.

Broadly speaking, site design was consistent over this third mini project, regardless of chosen housing type. Parking was often pushed into a cluster or string along one side of the lot, typically the west – off 2nd, which acted as a screen between the busy street and the dwellings. Green space was centered in the lot, which made the area more private and allowed all dwellings to have equal access to the walking paths, picnic benches, playgrounds, and other outdoor community spaces. Trees and other vegetation created additional screening and privacy between units and off the streets and alleys.

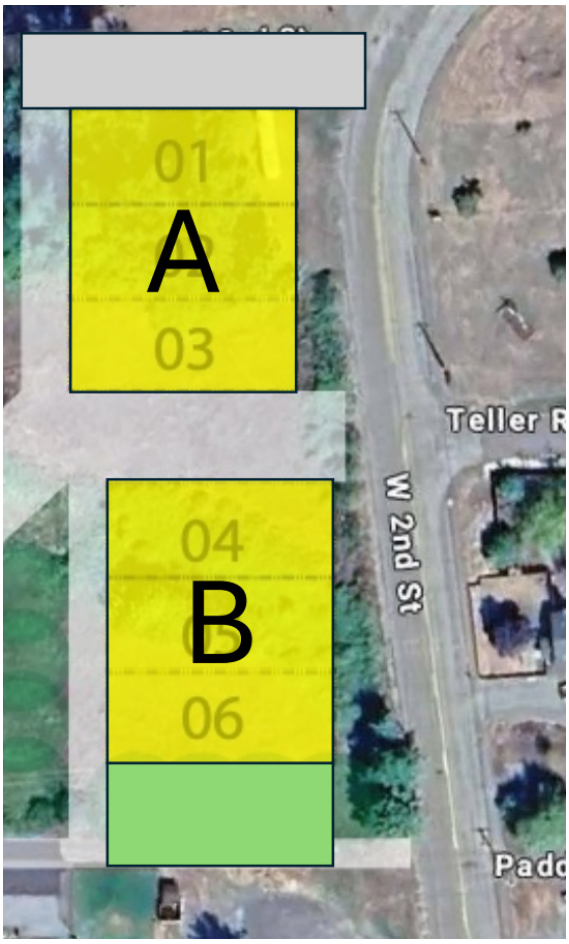


FIG. 25

New site division plots for Maximum Medium Project.

Design Credit: Christina Bollo

FIG. 26

Completed pin-up of walk-up apartments.

Design Credit: Emile Starkweather

TOWNHOUSES OVER FLATS

Townhouses over flats are a multistory townhouse, stacked above a one-story flat, typically clustered with other dwelling pairs of a similar nature. This allows for a greater housing density since a similar building footprint is still present. Additionally, all dwellings maintain a somewhat-strong relationship to the ground level. With only one-story, flats provide an opportunity for accessible units and extreme outdoor connection while townhomes can house a greater number of people as they expand upwards with multiple floors. Students who chose this housing type for the third mini project applied their knowledge from the second project with similar restrictions and site setbacks. The height limit for all dwelling types in Oakridge is 35', from midpoint of the roof to the ground.

Figure 27 represents a common student-designed unit organization. The bottom floor (green) is a single unit—a 1 bedroom, 1 bathroom flat with an incorporated garage. Moving upwards, by way of exterior stairs, the blue represents a larger 2-story 3-bedroom, 2.5-bathroom townhome, whereas the purple represents a slightly smaller 2-bedroom, 1.5-bathroom townhome. Parking for these townhomes is in designated off-street spots, as shown below (Fig. 28). Other students had a similar organization: two townhomes sharing a wall, stacked over one flat. Sometimes this three-dwelling cluster related to another identical one as well.

Many of the dwelling layout organization tactics were similar to the previous projects. However, the flat is a very different housing type and typically caters to a different familial archetype—couples, for example. Many of the students who explored this housing type designed their flat with Oakridge's senior population in mind, focusing on design elements and layouts that would prioritize accessibility and opportunities for aging-in-place. Figure 28 displays how movement from the connected garage, street-facing entrance, or/to courtyard entrance is smooth and flowing. The main living and kitchen areas face the courtyard/back entrance to maximize daylight and transition from indoor and outdoor public spaces and activities. The bedroom(s) across different designs in flats are located to the sides or the back of the dwelling, far away from any entrance.

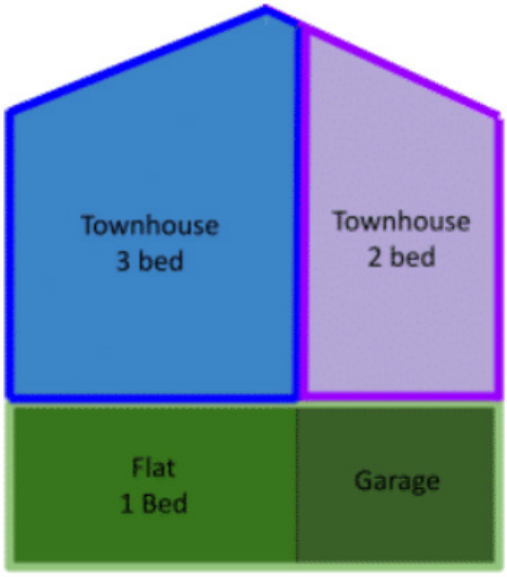


FIG. 27

Typical townhouses over flats diagram.

Design Credit: Ava Tai

FIG. 28

Townhouse over flats site plan, showing flats layout, greenspace, walkways, parking.

Design Credit: Ava Tai

FIG. 29

Townhouse #1 entrance floor plan in townhouse over flat cluster.

Design Credit: Ava Tai

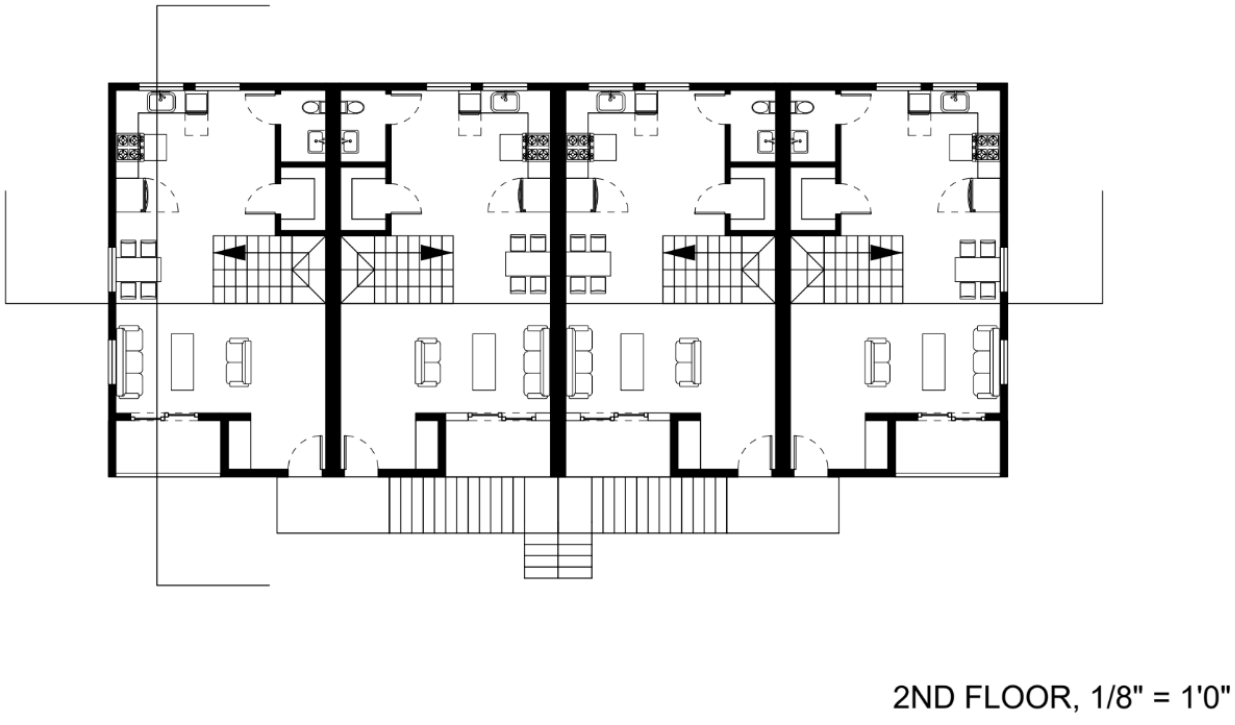


FIG. 30

Townhouse #2 entrance floor plan in townhouse over flat cluster.

Design Credit: Lindsay Chen

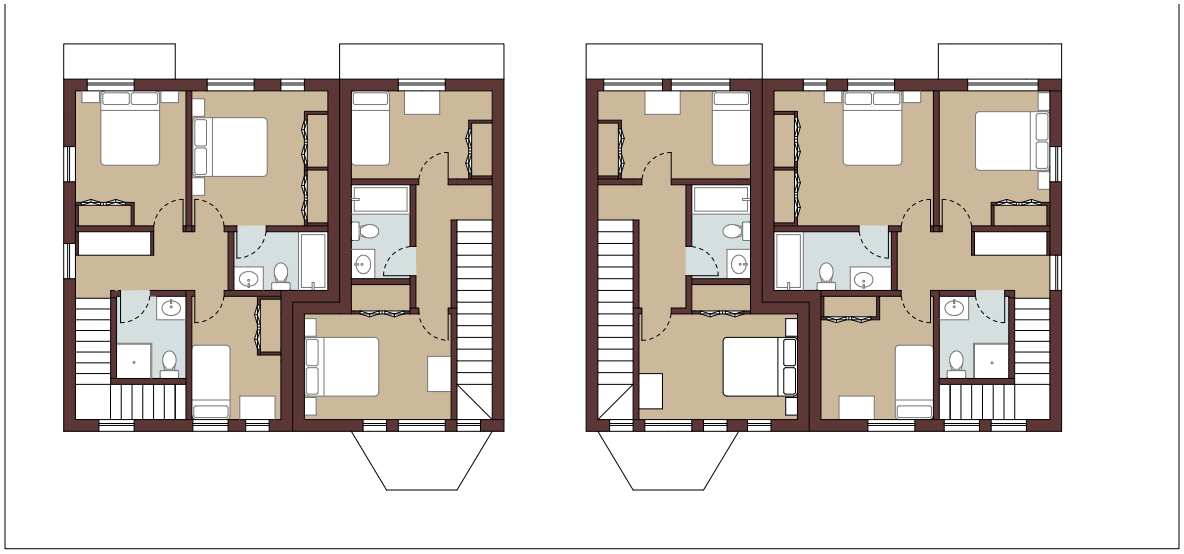


FIG. 31

Townhouse #1 upper floor plan in townhouse over flat cluster.

Design Credit: Ava Tai

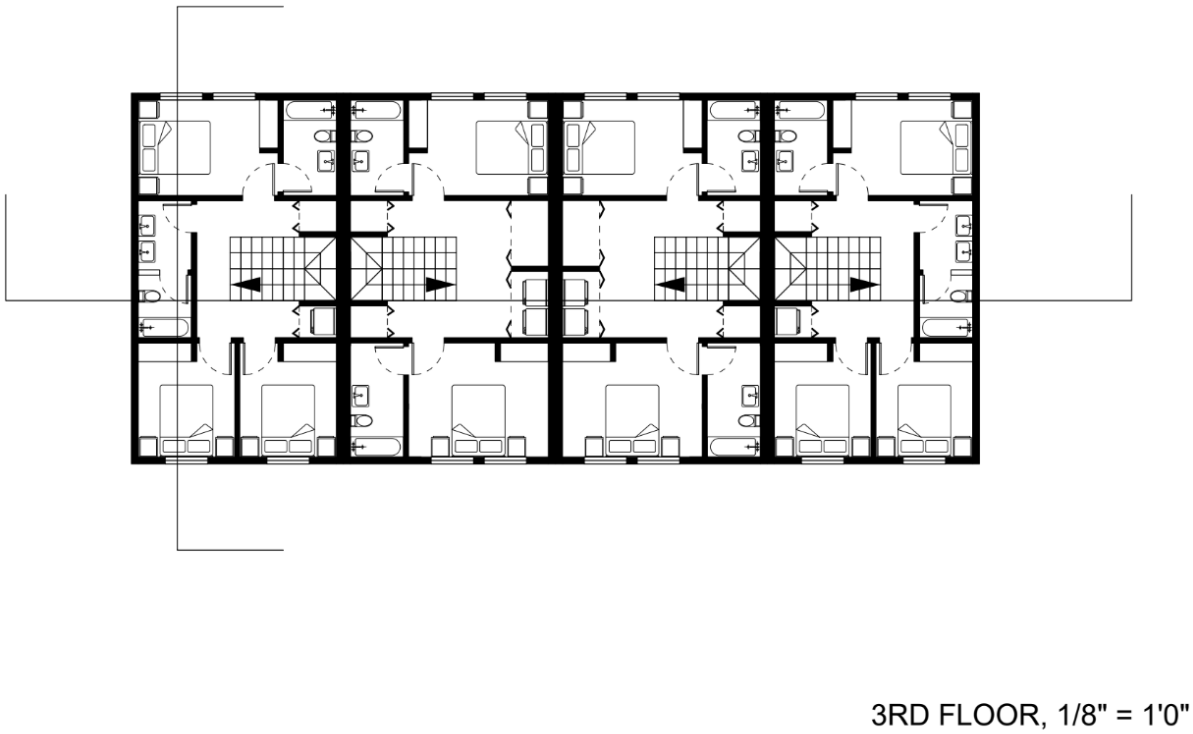


FIG. 32

Townhouse #2 upper floor plan in townhouse over flat cluster.

Design Credit: Lindsay Chen

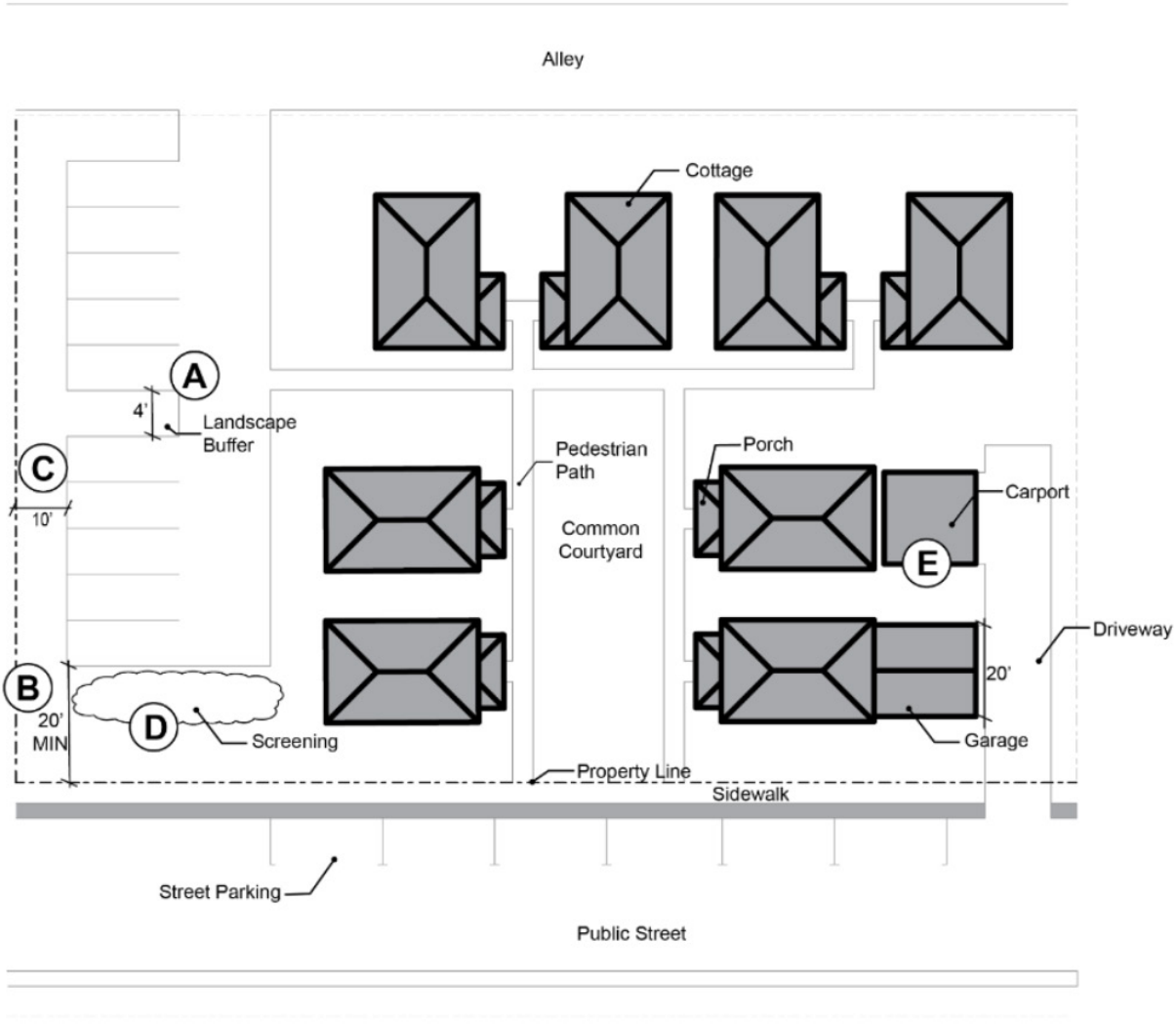
Movement to the townhomes is accessible with exterior stairs off the common courtyard / greenspace. Both townhome entrances can be accessed from the small landing at the top of the stairs, acting as a liminal break space. The two townhomes are built in a similar organizational manner to the townhomes in the second mini project. The two floor plans are generally mirrored across the shared middle wall. It is an important decision to separate the bedrooms between the two townhomes wherever possible - namely, avoiding two bed headboards sharing the same wall on opposite sides. Thus, visual and auditory privacy is prioritized within the same household and extends to the adjoining townhome as well. In some designs (Fig. 29), this privacy is increased by having additional stairs in the center of the room unit on the shared party wall, whereas in other situations (Fig. 30) this was not possible due to privacy concerns of the other townhouse-flat cluster nearby.

COTTAGE CLUSTERS

A cottage cluster is a group of small dwellings grouped around a common green space or courtyard in the center. If choosing this type of housing, students closely followed Oregon Middle Housing Model Code. Individual cottages within a cluster have small footprints (maximum 900 square feet) and are typically 1-2 stories tall. Clusters must allocate off-street parking, a mixed-use courtyard with pedestrian paths, and individual cottages main entrances must face the courtyard.

While many students explored the idea of utilizing this housing type, only two students chose cottage clusters as the third project.

Student designs were situated in the north area of the site, turning the northern edge into another alley to access the one parking space per unit, or 10 in total. The cottages were a mix of one- and two-bedroom units, approximately 900 or 1100 square feet, respectively. A relatively small footprint (approximately 450-550 square feet) was utilized to maximize space for the shared interior courtyard with each individual cottage, parking, and outdoor space connected via numerous pedestrian paths.



A Parking allowed in clusters of up to 5 spaces. Clusters separated by minimum 4 feet of landscaping.

B No parking or vehicle area within 20 feet from street property line (except alley).

C No parking within 10 feet from other property lines (except alley). Driveways and drive aisles permitted within 10 feet.

D Screening required between clustered parking areas or parking structures and public streets or common courtyards.

E Garages and carports must not abut common courtyards. Garage doors for individual garages must not exceed 20 feet in width.

FIG. 33

Cottage Cluster Community Elements.

Design Credit: Oregon Middle Housing Model Code

FIG. 34

Cottage Cluster site plan and first floor plans.

Design Credit: Lily Maas

FIG. 35

Cottage Cluster Site Elevation.

Design Credit: Lily Maas

FIG. 36

Cottages Unit Breakdown.

Design Credit: Lily Maas

FIG. 37

Cottage Cluster Site section.

Design Credit: Lily Maas

FIG. 38

Walk-Up apartments facade.
Design Credit: Spencer Barras

Though there were three types of units, all 10 cottages organized their spaces in similar ways. The main living area is at the absolute front of the cottage, on the first floor, likely acting as a transition from common/public space like the courtyard to more private spaces on the inside of the home, as well as to increase connection to outdoors and maximize sunlight. From the living area, residents could easily flow to the nearby dining and kitchen areas, and to the stairs, which were typically towards the back end of the dwelling. The bedrooms resided on the second floor, which gives a sense of greater privacy from neighbors or pedestrians in the common courtyard, as well as possible guests.

WALK-UP APARTMENTS

Finally, walk-up apartments are the densest, most cost-effective medium-density housing type, and therefore have the greatest potential for sustainable practices. The main underlying difference between walk-up apartments and standard low- or medium-rise apartments is the lack of internal hallways and passages between the unit. Walk-up means that each unit entrance is accessible from the outdoors, via a system of landings, exterior staircases, and catwalks. However, the success of walk-up apartments as a middle housing type is determined by the relationships formed with neighboring units and the community as a whole, in the shared public spaces such as parking, green spaces, pathways, etc. How can private spaces remain private in a much denser scenario?

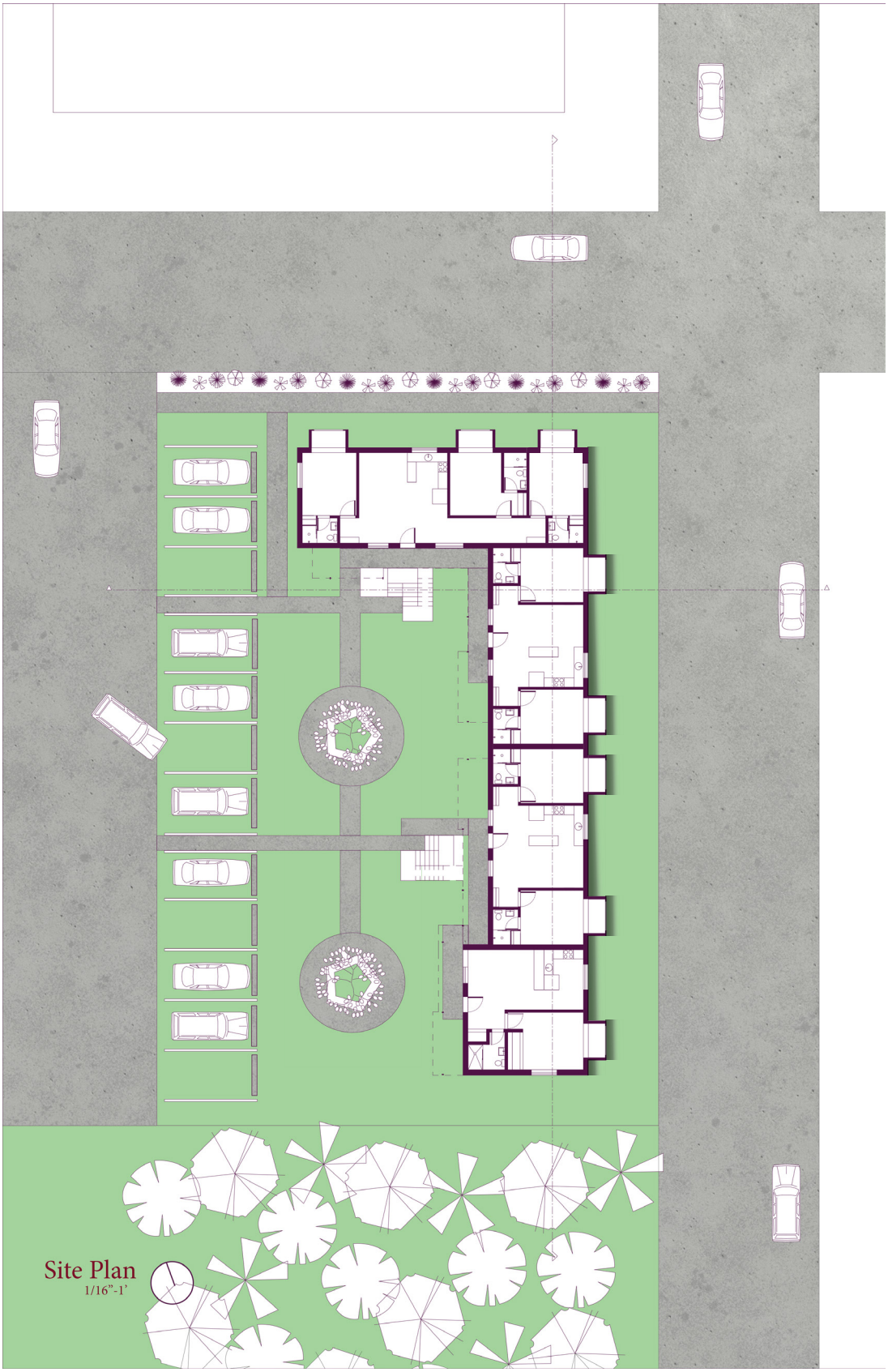


FIG. 39

Walk-up apartments #1 site plan.

Design Credit: Gidi Batya

FIG. 40

Walk-up apartments #2 site plan.

Design Credit: Gidi Batya

The majority of students in the design studio chose this option for the third project, possibly because of the opportunity for a large green space and more organized parking solution. Common massings for the apartment structure included “U” shapes and “L” shapes, as the building itself would then act as a wall to shield the inner courtyard and make it more private, though straight “I” shapes were somewhat common. Parking was developed in one of two general methods: distributed in a line off one of the alleys or integrated with the building structure somehow, often through semi-enclosed carports.

In such, the space between parking and the building created a transitional area, which many students developed as a semi-public green space. A fusion of recreation and utility, this green space often included walking paths from apartments to parking, vegetation, benches, blacktop for outdoor sports, and open space to allow for natural light to penetrate inwards. Vegetation, if present, acted to beautify the area and as additional screening area between public and private space off the street.

With the individual units, design strategies reflected similar ideological goals and results as the flats. Many essence statements prioritized neighborly relationships, privacy, safety and refuge, and access to nature and natural light. A focus on populations such as young couples, growing families, or older adults fostered a need for an equal distribution of bedrooms. Ground floor units were often one- or three- bedrooms and supported older adult accessibility needs or allowed for supervision of children playing outdoors. Living, kitchen, and dining spaces were near the entry and bedrooms were separated towards the exterior to create privacy gradients.

With the larger scale, facade development was simpler. Vertical bay divisions were more common, as similar or same units were often stacked on top of each other as stories progressed. Some students highlighted certain vertical bay elements for rhythm or visual interest. Students prioritized symmetry and balance for the entire building based on the building massing (“U”, “L” or “I” shapes). Common roof shapes were the same as previous projects: flat, slanted, or gabled, although this iteration included more “flat” tops. These strategies make the entire building feel unified and perhaps encouraged residents to become part of a larger community.

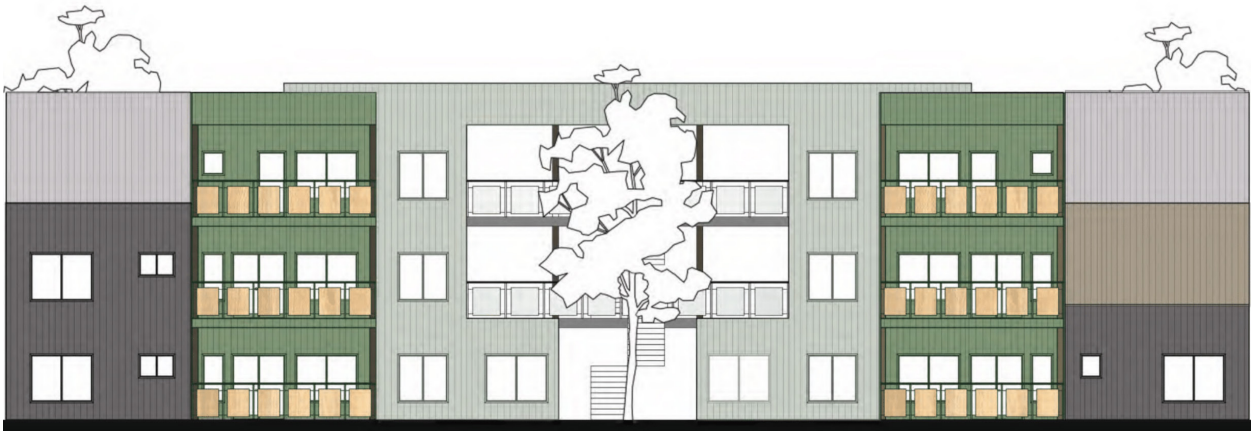


FIG. 41

Apartment site east elevation with center tree.

Design Credit: Ellie Lovas

Middle Mixed-Type Neighborhood

For the final three-week long project, student pairs created larger-scale medium-dense neighborhoods at one of three possible sites: 2nd and Teller, Uptown, or Salmon Creek.

Based on feedback after individual project reviews, students reflected, selected, altered, and combined their past middle housing types studied in the initial taxonomy middle projects within their groups to create a diverse neighborhood to accommodate various household sizes, types, demographics, and income levels. Students thought broadly about their site, including city and building codes regulations, commercial restraints and zoning, parking strategies, common spaces, and further site development such as leveling. At the end of the three weeks, students presented their projects to faculty and professionals, and later presented to Oakridge residents.

FIG. 42

Students Macy Moore and Gidi present their final pin-up presentation to reviewers.

Photo Credit: Christina Bollo

TELLER REDESIGN PROPOSAL

Second and Teller was the initial middle housing taxonomy project site, providing great mixed-type neighborhood opportunities. Students could develop the entire site as defined in Project 1, only limited by the roads to the east and south, and the screening of trees to the north. Only one group decided to pursue a complete redesign of the site.

Design Intentions & Site Development

With an older population (60+), this neighborhood focused on a younger artist generation, hoping to bring a new demographic into the City. The group's essence statement focused on balancing independence and community. Denser housing can lead to closer living and community, which is further encouraged by shared common spaces such as parks, pathways, and even parking.

The site is generally mirrored across a vertical center point. Each unit has one parking spot and there are various parking strategies, each directly relating to the unit type. For example, the one-bedroom townhome has parking directly under the unit as its position is centralized in the site, whereas the larger cluster of townhomes over flats has a combined parking lot nearby. These large parking blocks employ similar strategies seen in the Maximum Medium (Project 3) designs, screening and transitioning areas from the main road deeper into the site. At the center of the site is a common green space with playground, gazebo, and walkways, also often seen in the Maximum Medium projects.

The slight slope of the site posed some theoretical challenges that were solved by arranging the dwellings horizontally. As the site was mostly sloped north to south, downward, the horizontal bands of even ground necessitated less (theoretical) leveling. Units, if placed higher up on the site, stepped upwards.

The middle communal greenspace and playground area were unique. Somewhat hidden from the main roads and neighbors outside the development, trees and dwellings acted as a screen to create a safe, more private area specifically for residents. Its rounded and bark chip pathways were distinct from the walkways found in the rest of the community. Through its playful form, it signified a place to unwind and rest.

Diversity in Housing Choice

The most common middle housing type in this project proposal was the two-bedroom townhome, though there are two variations within this category. From a demographic standpoint, a two-bedroom townhome makes sense, as one bedroom could be utilized for living/sleeping, while the other an office, art studio, or other place for work. The three-bedroom townhomes (over the one-bedroom flat) likewise provide opportunities for familial expansion or other young household types. On the other hand, the flats in this cluster could serve an older population with greater accessibility and a grand connection to the outdoors with a large, privatized backyard.

There were 90 dwellings in total over four acres, which translates to a net density of 22.5 DUA.

FIG. 43

Second and Teller Neighborhood Redesign site plan.

Design Credit: Lindsay Chen and Annalitha Kumar

FIG. 44

Topography and dwelling massing models of redesign.

Design Credit: Lindsay Chen and Annalitha Kumar

Creating Unity

When creating a neighborhood, it is important that it feels unified and together. Site design and overall layout are vital to a coherent sense of place. As mentioned previously, the site is reflected down the middle, which allowed for easy navigation and wayfinding. If one knows half of the site, they can easily find their way through the other.

Furthermore, each half is subdivided into smaller communities, which breaks down the scale of the large four-acre lot. Townhouses over flats are clustered together into four distinct building masses in each half, allowing for closer relationships with neighbors. Similarly, the one-bedroom townhomes at the southern middle site may allow for people of similar demographics to find common ground and community.

Visually, common materials and styles made each housing type feel different from one another but still feel connected. Natural orange-yellow toned wood referenced Oakridge's history as a lumber town while geometric angular roof shapes matched and played off one another to create a neighborhood that is coherent and diverse.

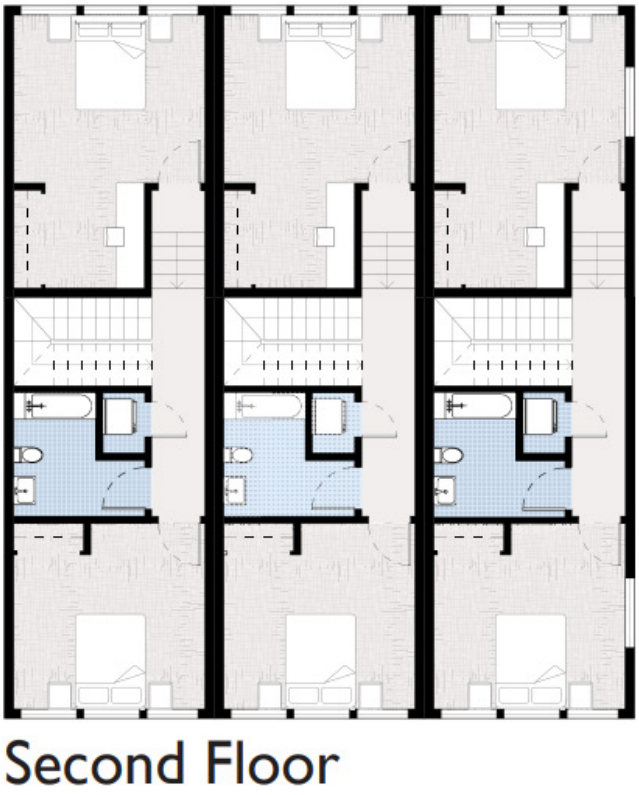


FIG. 45

Redesign Unit 1 Plans.

Design Credit: Lindsay Chen and Annalitha Kumar

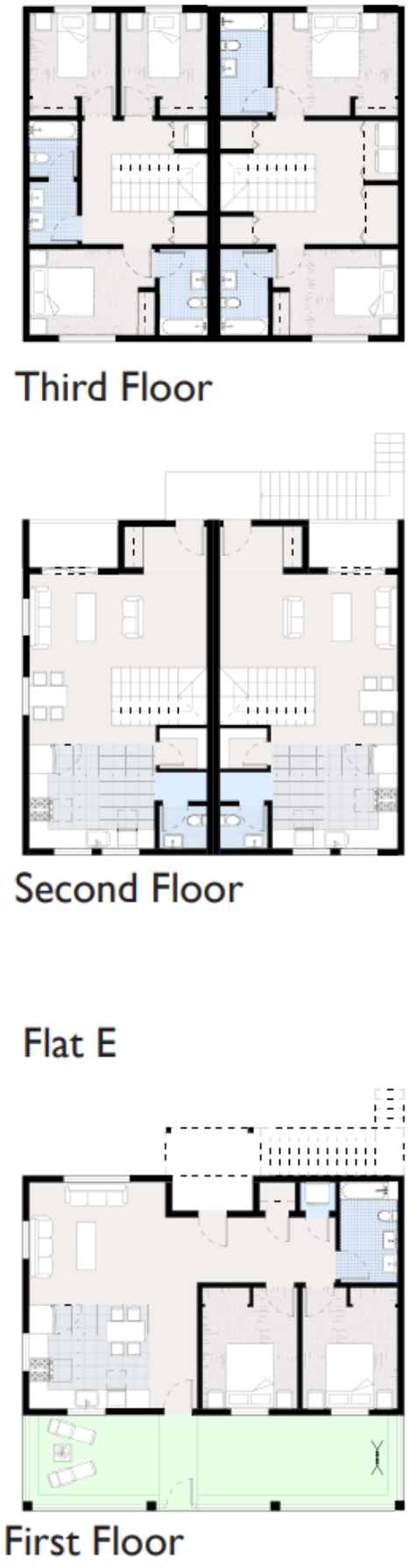
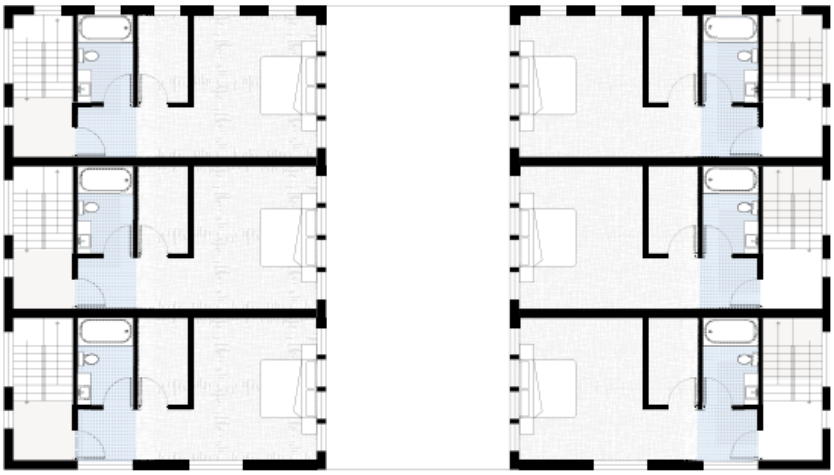


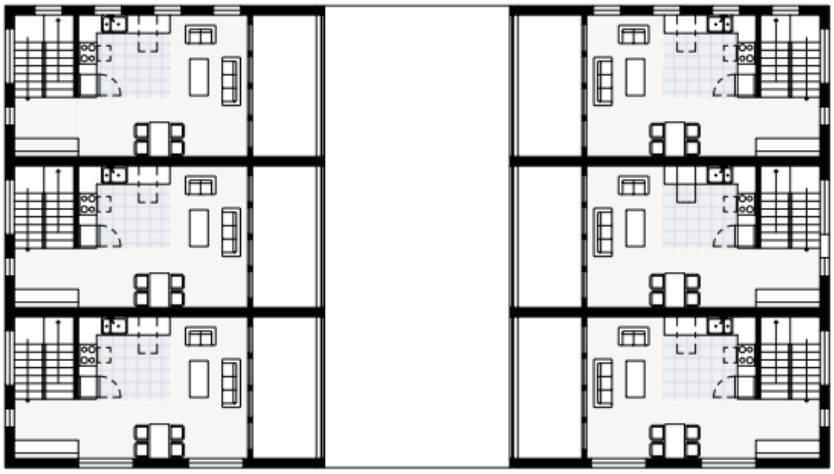
FIG. 46

Redesign Unit 2 Plans.

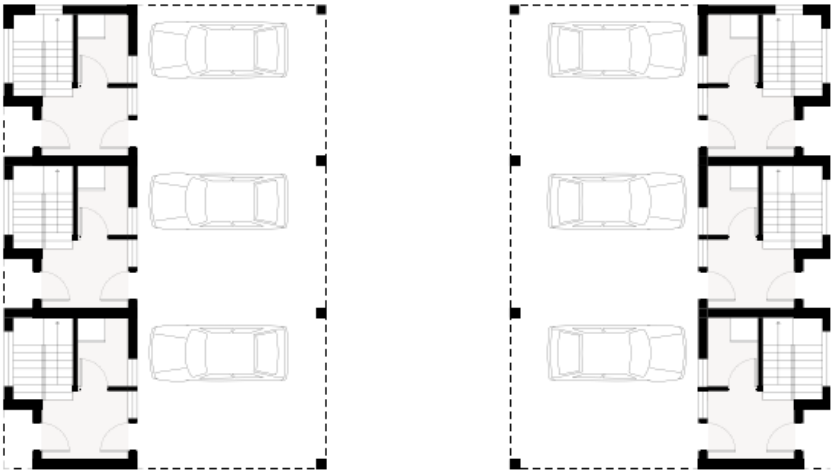
Design Credit: Lindsay Chen and Annalitha Kumar



Third Floor



Second Floor



First Floor

FIG. 47

Redesign Unit 3 Plans.

Design Credit: Lindsay Chen and Annalitha Kumar

FIG. 48

Site Elevation with slope and entourage.

Design Credit: Lindsay Chen and Annalitha Kumar

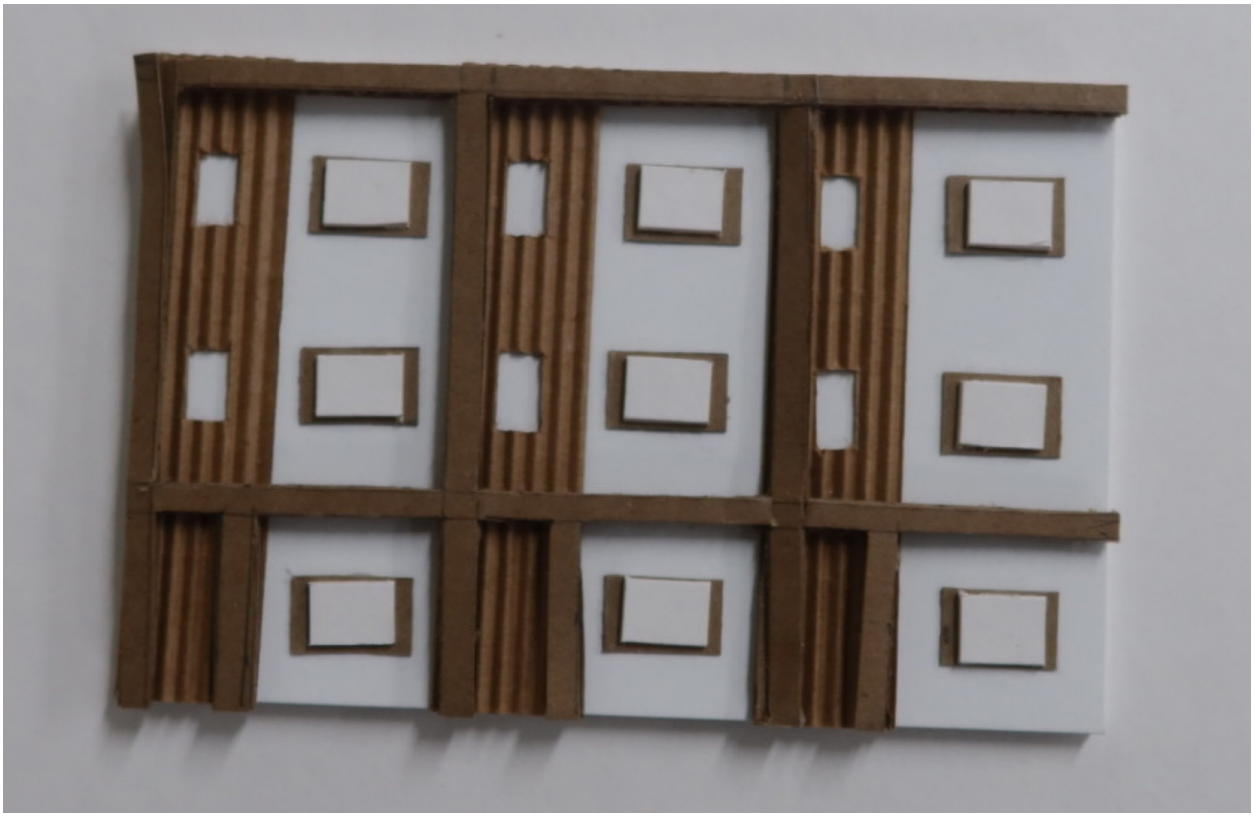


FIG. 49

Townhomes & Townhomes over flats facade models.

Design Credit: Lindsay Chen and Annalitha Kumar

FIG. 50

Townhomes over flats facade model.

Design Credit: Lindsay Chen

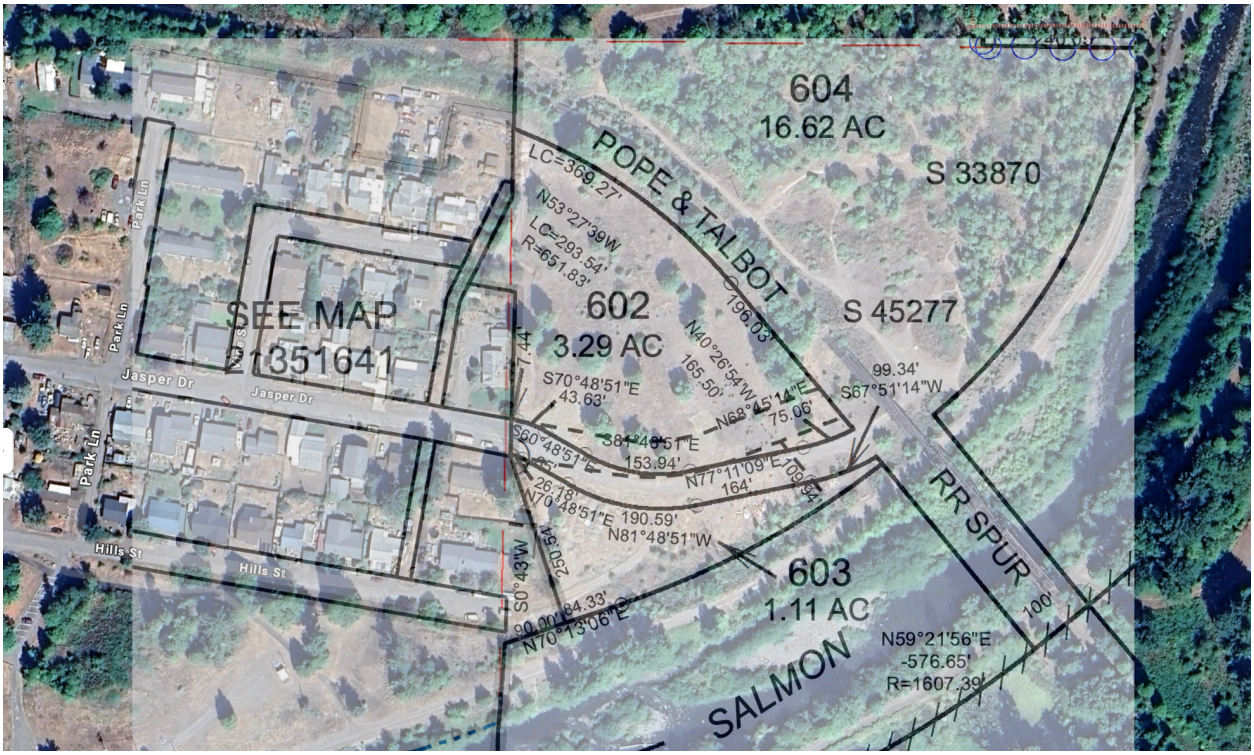


FIG. 51

Salmon Creek at Little Texas Site Map.

Design Credit: Christina Bollo

SALMON CREEK DEVELOPMENT PROPOSALS

The Salmon Creek site, located about a mile Southeast of Uptown, was a large empty lot with unlimited possibilities. However, in contrast, the site is more separated from the urban areas of Uptown or Highway 58. Part of the larger "Little Texas" area, the plot is flanked by smaller housing developments and large individually-owned lots. The undeveloped land includes trees, small hills, and other vegetation and terrain changes. Salmon Creek runs at about a 45-degree angle on the southern half of the site, creating the bottom border. The small creek is ever-present as running water can be heard across the area. Furthermore, the old railroad bridge, while no longer in service, still exists to cross the creek, with its tracks running through the rest of the site. The site is beautifully secluded, with the surrounding hills encompassing all viewpoints.

The City of Oakridge specifically recommended this site as an option. While there is little information available online about the Little Texas Salmon Creek area, it is possible that this site may be considered for future housing developments. Two student pairs of developed the Salmon Creek site.

Demographic Housing Goals

Both groups prioritized protecting nature while also designing for equity, accessibility, and affordability. Housing types prioritized young families to draw a younger, growing population into the City. The design process included brainstorming appropriate units for multigenerational families of all ages, types, and income levels while balancing concerns about community and privacy. The ideal outcome was a neighborhood where all would feel safe and comfortable growing, living, and aging in.

FIG. 52

Salmon Creek Site Views and Context.

Photo Credit: Ava Tai

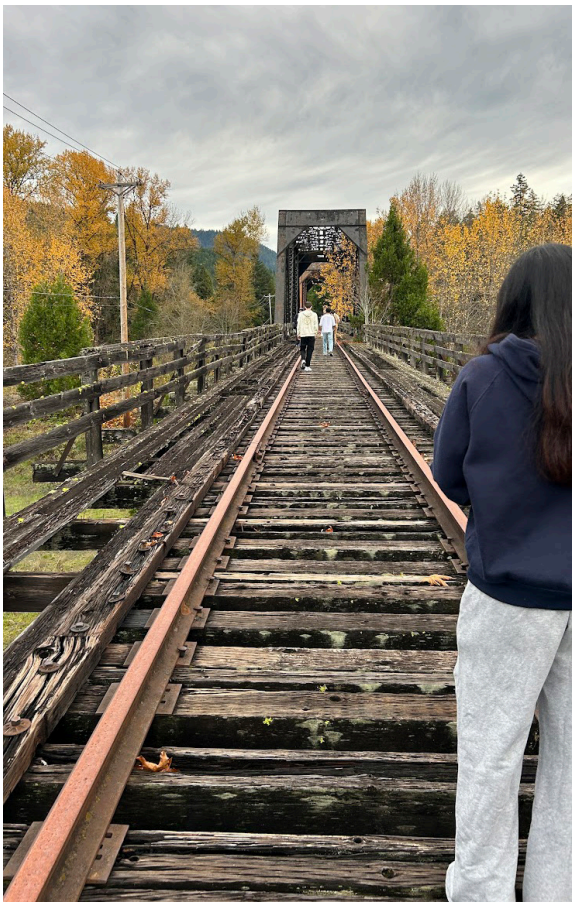


FIG. 53

Out of Service railroad bridge and tracks.

Photo Credit: Ava Tai

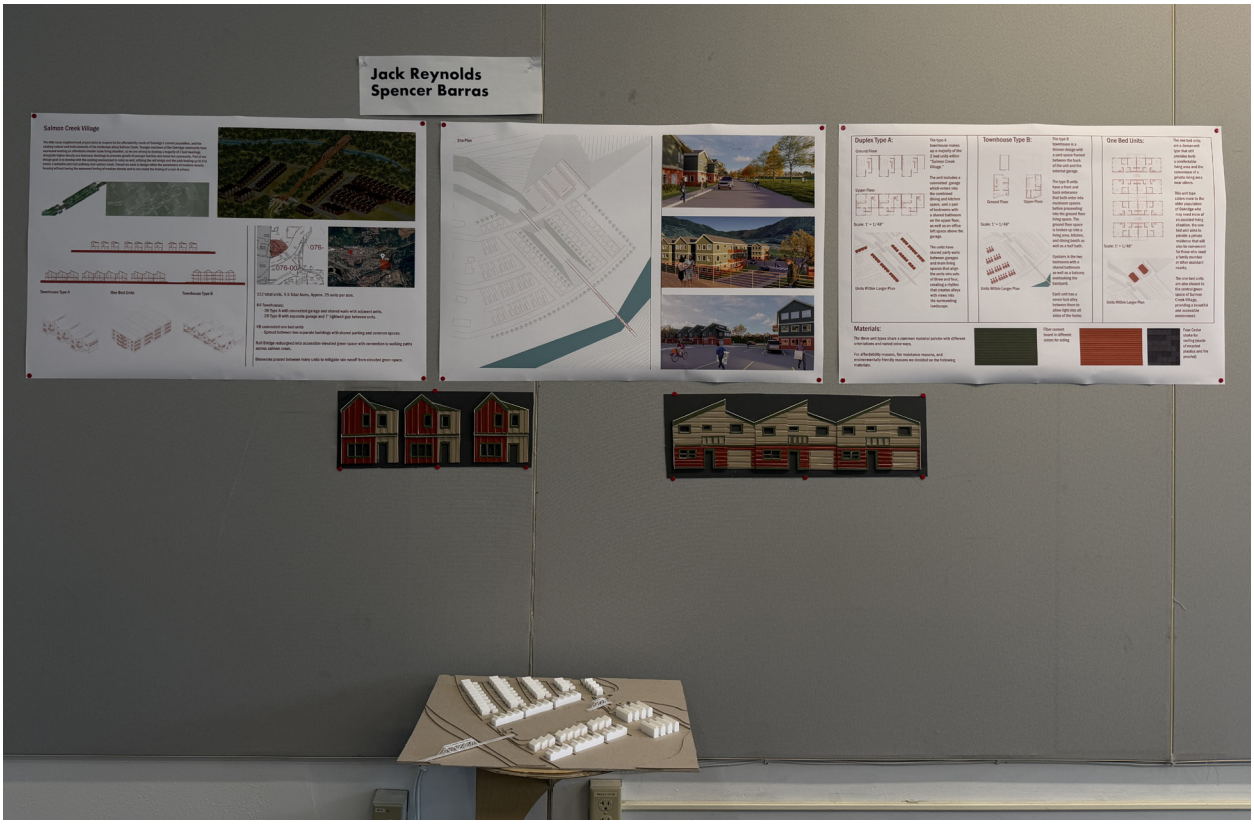


FIG. 54

Final Salmon Creek Redesign pin-up and models for review by faculty.

Design Credit: Spencer Barras and Jack Reynolds

FIG. 55

Neighborhood aerial perspective with context.

Design Credit: Emile Starkweather and Ellie Lovas

Shaping and Transforming the Site

The open site required a lot of development and planning, and both teams wanted to preserve and protect the natural environment and pre-existing elements as much as possible. Both teams extended and repaved the current gravel roads from the western neighborhood (Vine Street, Jasper Drive, and Hills Street) eastward towards the railroad bridge. Hills Street is used as a southeastern barrier between the housing development and the creek, while the railroad bridge is used as a semipermeable barrier to the northeast. Both groups kept the railroad bridge present in their designs, feeling it was symbolic to the area's sense of place and its history. Greenspace, vegetation, and high leveling allowed the bridge to feel separate yet accessible from the housing development. Groups also envisioned a possible renovation of the bridge, transforming it into a safe pedestrian crossing over the creek.

Students placed housing between the new extended roads in three to four slanted bands. This organization, similar to the 2nd and Teller redesign, allowed for homes to be level and match the current topography, meaning less leveling and cost. Furthermore, this created closer housing clusters of closer with more private greenspace in between.

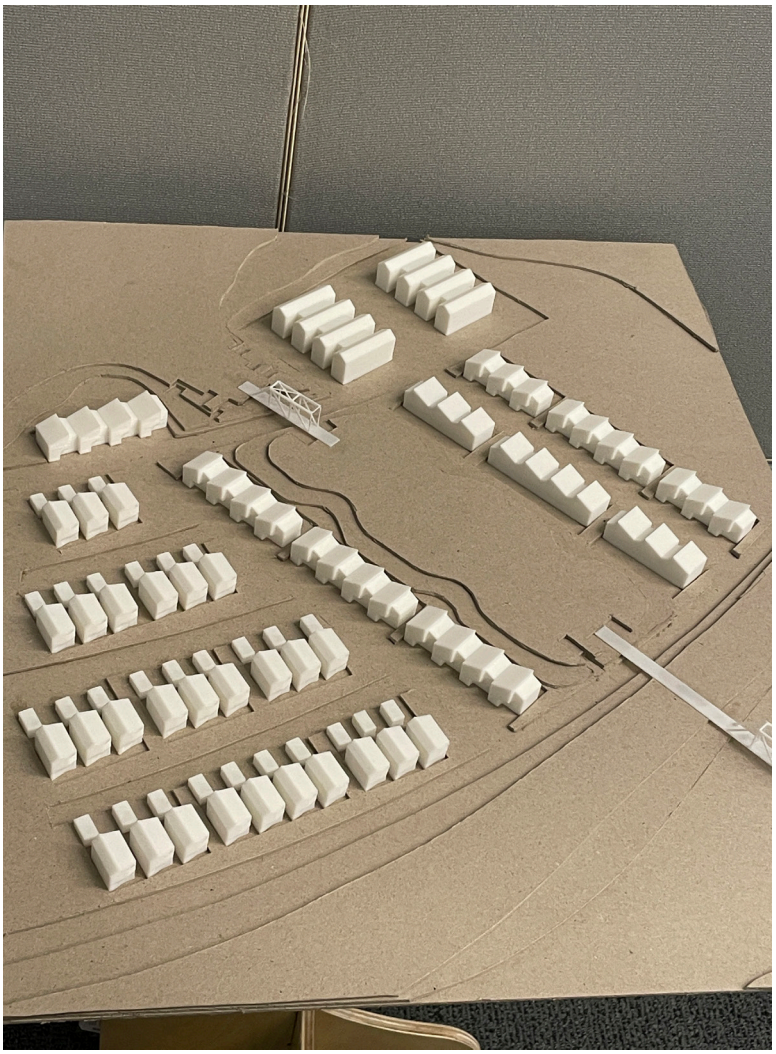


FIG. 56

Topography site model with building massings.

Design Credit: Spencer Barras and Jack Reynolds

FIG. 57

Site Plan of development #1, including first floor plans, #1.

Design Credit: Emile Starkweather and Ellie Lovas

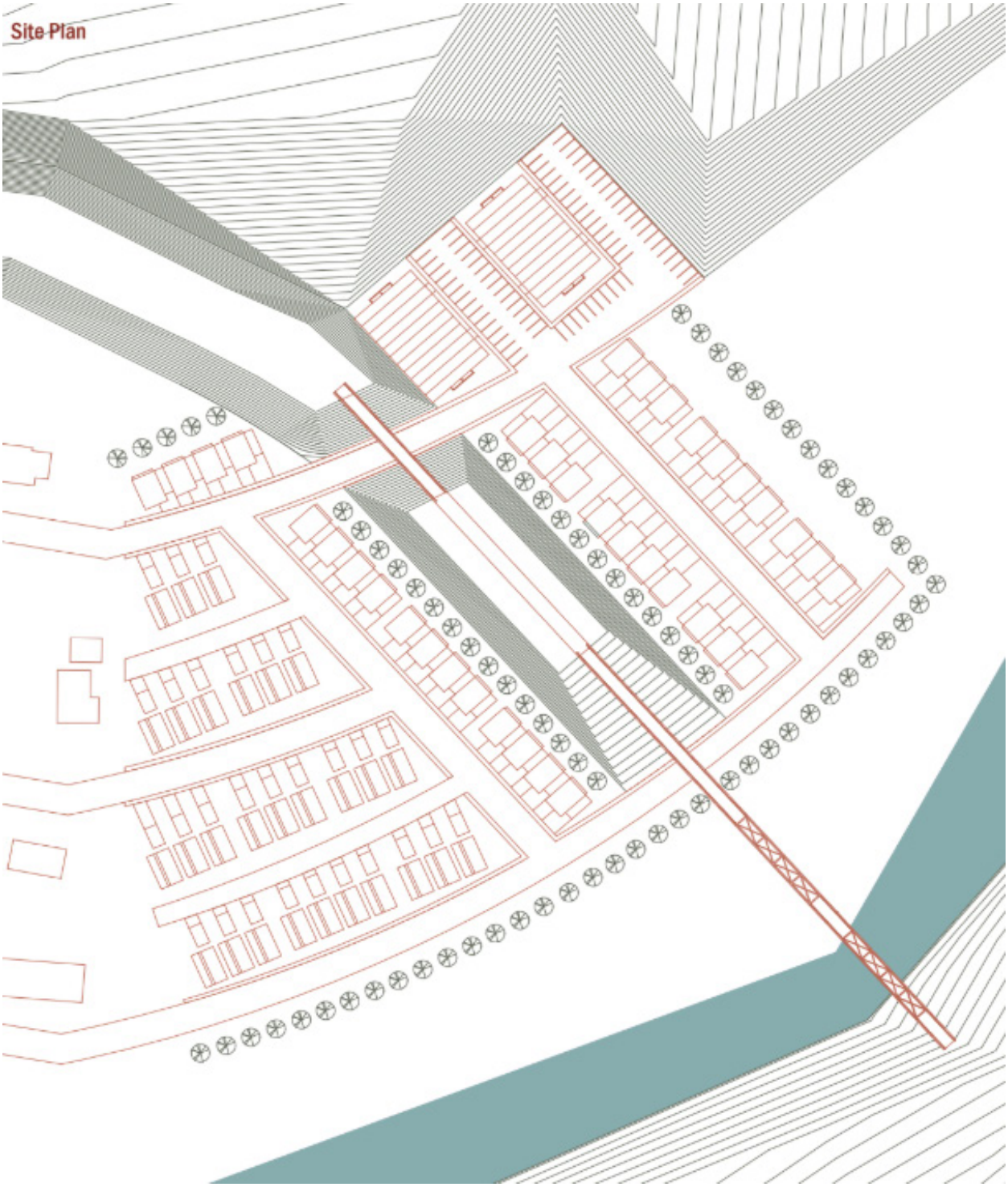


FIG. 58

Site plan of development #2, including building outlines.

Design Credit: Spencer Barras and Jack Reynolds

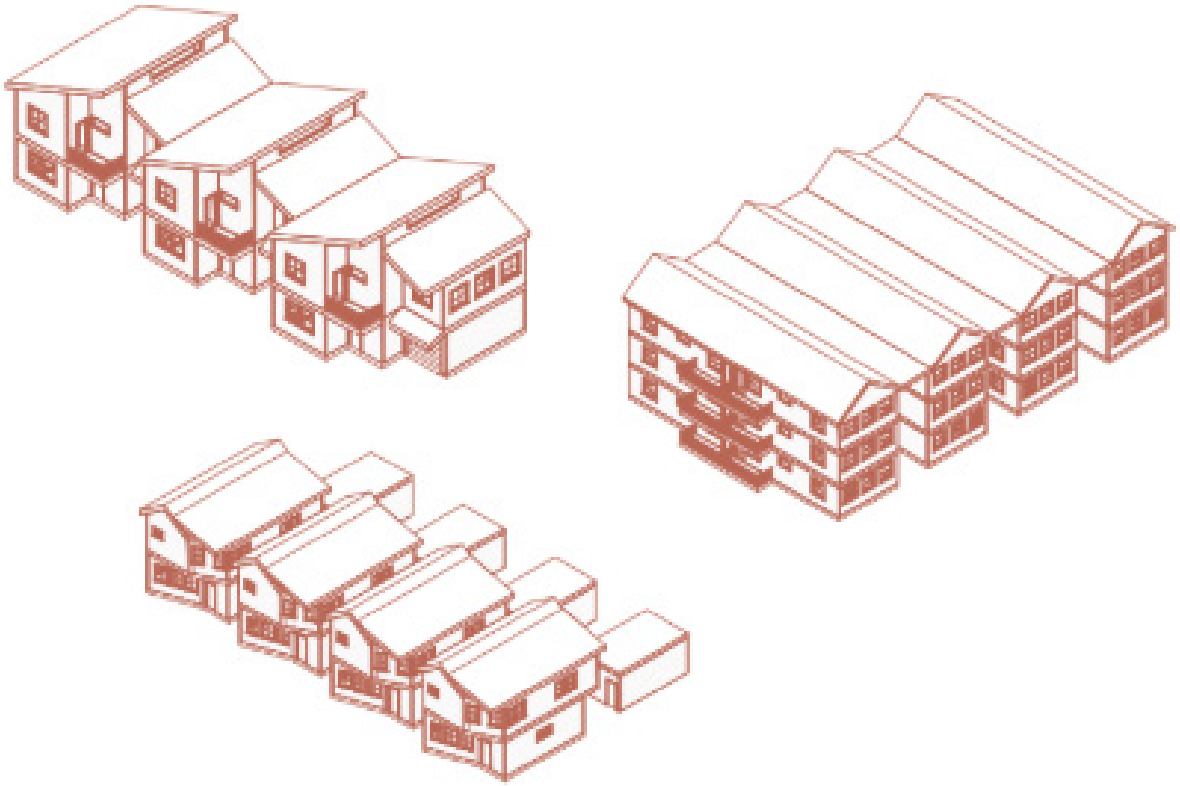


FIG. 59

Isometric projections of housing types used in group #2.

Design Credit: Spencer Barras and Jack Reynolds

Diversity in Housing Choice

Both groups used the townhouse typology, likely because of its modular properties, as units can be easily added or subtracted depending on the context. The public ground floor typically contains the kitchen, living, and/or dining room, which presents numerous opportunities for connections to outdoor space, such as the private deck or nearby greenspace. Having bedrooms on the upper floors allows this ground floor to act as a transitional area – a place for guests and visitors to come in and out. Most of the townhomes were two-, three-, or four-bedroom units, perfect for many family types. One group also chose to incorporate multistory side by side duplexes, which functioned similarly to the townhomes.

The other typology used by both groups was some form of walk-up apartments. These apartment buildings typically had 10-15 units in total, including a range of one-, two-, and three-bedroom selections. Apartments on the ground floor were often Type A, accessible, or catered towards an aging population, as they were typically one-bedroom. This denser selection of housing allows for a smaller building footprint and more greenspace. For natural lighting and other privacy concerns, these buildings were placed towards the exterior of the plot, on the northern or southern sides.

In terms of density, groups had a DUA of 25 or 36 across the 4.5-acre lot.

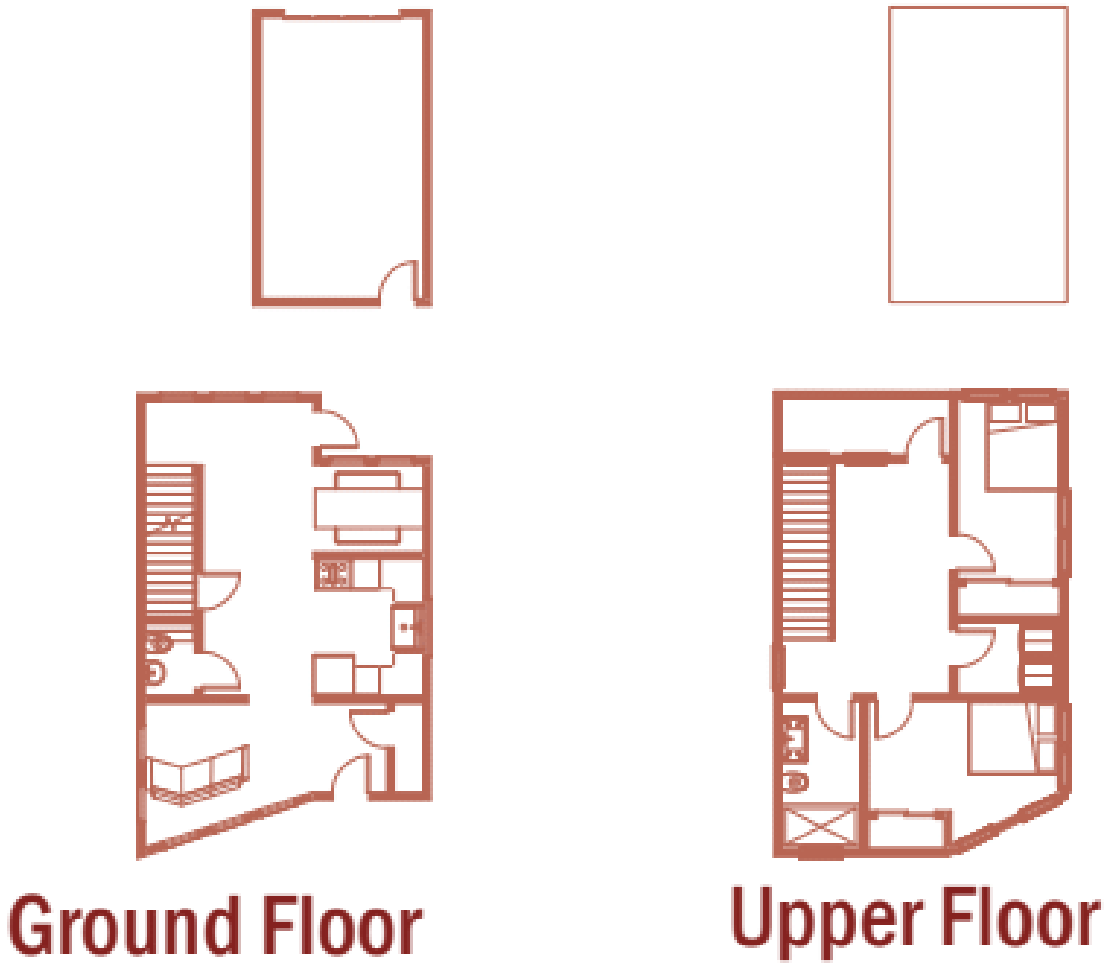


FIG. 60

Group #2 townhouse floor plans, with detached garages.

Design Credit: Spencer Barras and Jack Reynolds

FIG. 61

Group #1 townhouse floor plans.

Design Credit: Emile Starkweather and Ellie Lovas

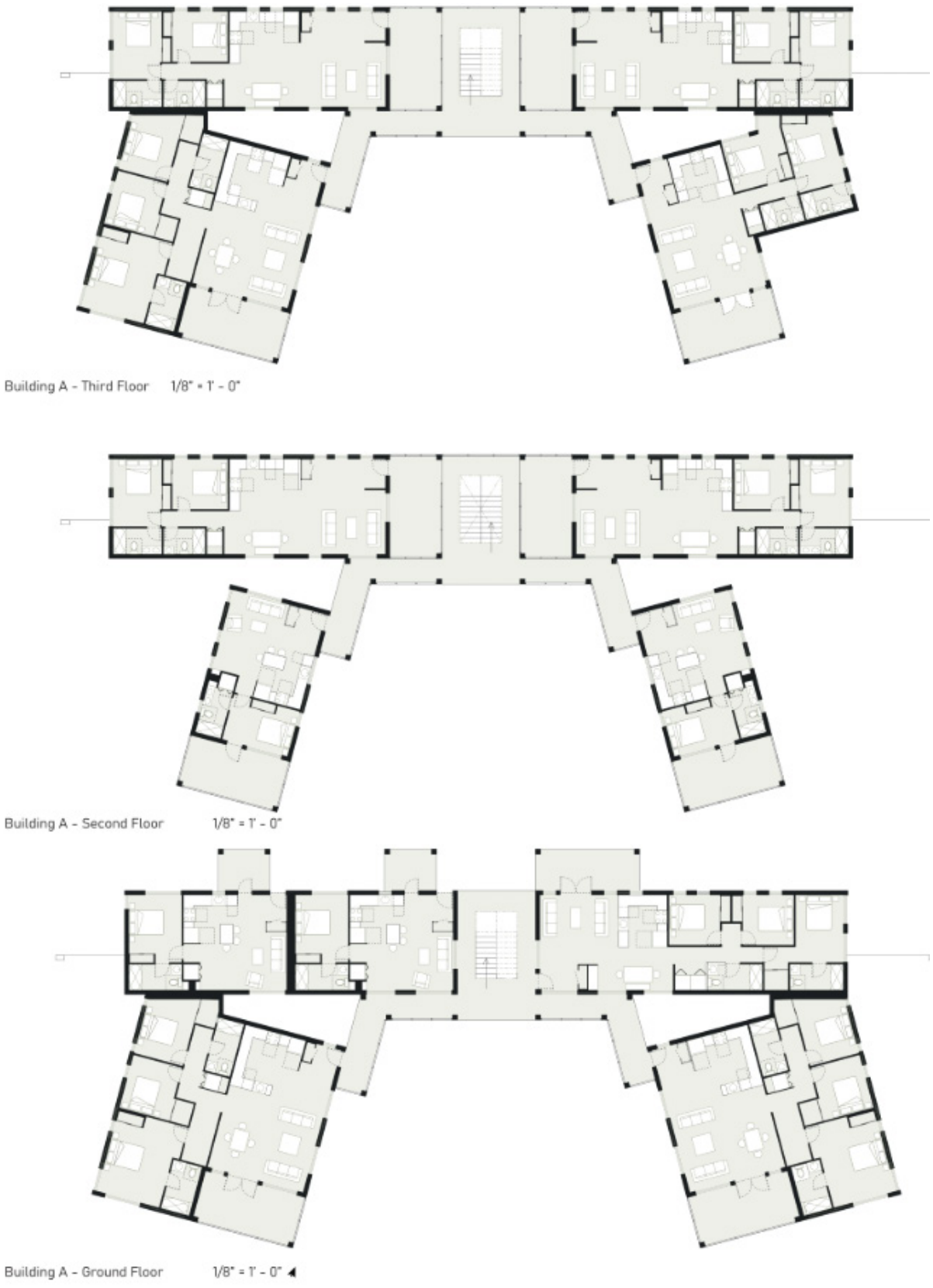


FIG. 62

Walk-up apartments floor plan.

Design Credit: Emile Starkweather and Ellie Lovas

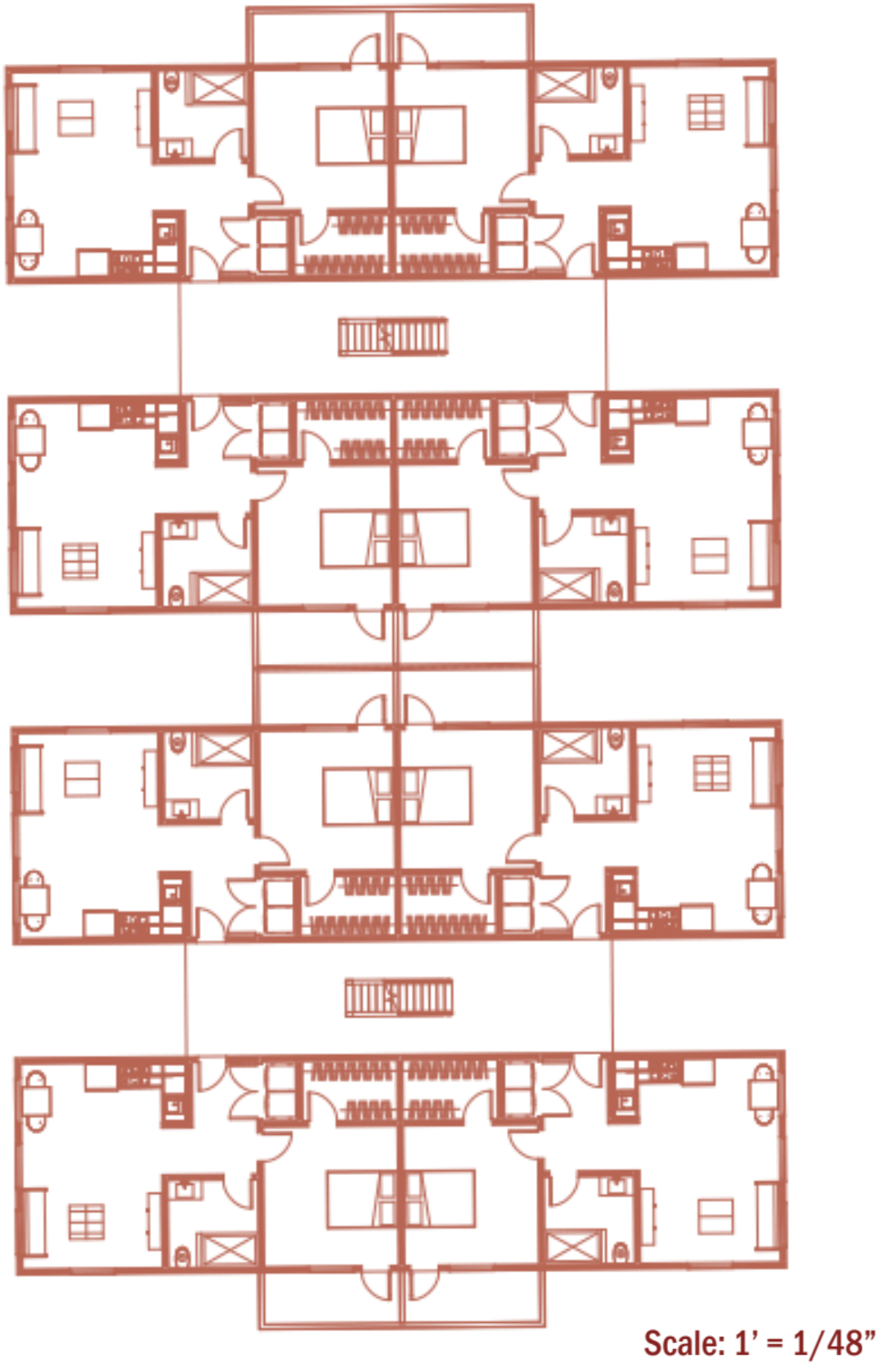


FIG. 63

One-bedroom apartment unit floor plan.

Design Credit: Spencer Barras and Jack Reynolds

FIG. 64

Developed Space between townhouse clusters.

Design Credit: Emile Starkweather and Ellie Lovas

Community Development

Creating community within the 4.5-acre area with many dwellings was challenging. Multiple strategies of separation helped to break down the scale of the neighborhood. First, the railroad acts as a natural separator between the developments. One group chose to reflect their design across the railroad bridge, while the other developed mostly two-bedroom townhomes with attached garages. However, within the two halves of the plot, the scale is broken down further with many units of the same type clustered together. Figure 65 exemplifies how one group created clusters of duplexes and townhomes, often in stacked rows. This allows for each cluster to have one utility (alley access for parking) and one recreational side (greenspace with pathways and vegetation). Clustering dwellings allows closer relations to specific residents as well as the opportunity to make individual clusters different and more suited towards specific resident needs.

In the southwestern corner of the site, illustrated in light green (Fig. 64), there is room for community-based development such as outdoor sports, a playground, picnic benches, and perhaps a garden. The numerous pathways provide accessible access to all parts of the site and inspire wander and play for children. Trees, vegetation, and the dwellings themselves provide screening and symbolic safety and property edges. The darker green in Figure 64 represents less developed, heavier vegetation. Groups also mentioned bioswales to collect stormwater as well to keep parts of the site relatively untouched.

FIG. 65

Community Perspective of Group #2 townhomes.
Design Credit: Spencer Barras and Jack Reynolds

Both groups considered parking strategies. In order to have a flowing and coherent outdoor space, large parking lots were often pushed to the outside of the development. Many dwellings also incorporated off-street parking that was accessible from the extended alleys. For example, Group B's two-bedroom townhomes have attached and detached garages. In all of these layouts, parking is in the back of the dwelling to create visually simulating and pleasing street-fronts where children can play without safety concerns of cars.

Creating Unity

Utilizing few housing types for the many dwelling units created unity across the site. Wayfinding and moving through the neighborhood is straightforward with easy to follow roads and pathways, utilizing the railroad bridge as a landmark. Dwellings were designed in dialogue with each other to avoid a monotonous dystopia. Figure 67 exemplifies duplex and townhome illustrations of one project. Both roofs are slanted and reach about the same height. There is a similar triple bay system on the facade, both vertically and horizontally. Materiality is similar but not identical, as both are envisioned to have large square paneling across the facade in a lighter toned wood. The apartment buildings in the same project are flat roofed, but incorporate a similar division across the facade, with a complementary darker toned wood. Across the other group (Fig. 64), fiber cement board as horizontal siding in various colors is incorporated in each dwelling unit across the entire site. The bright colors are reminiscent of other bright housing patterns seen throughout the rest of the city, perhaps with the orange drawing on "Salmon" in Salmon Creek, and the green complementing nearby nature.

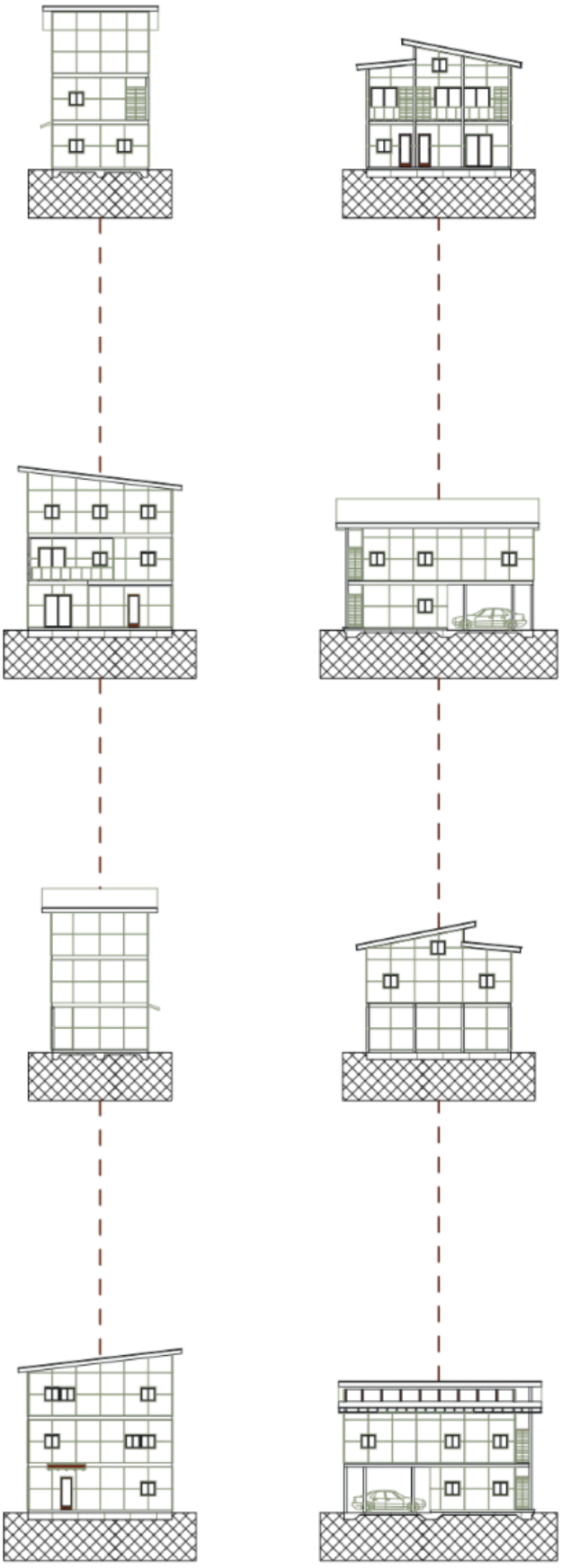


FIG. 66

Linework facades of townhomes and duplexes from Group #1

Design Credit: Emile Starkweather and Ellie Lovas

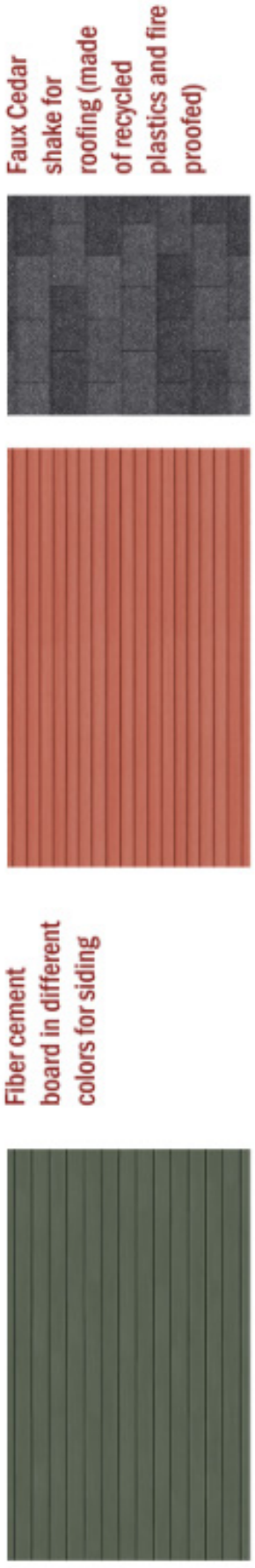


FIG. 67

Facade material selections of Group #2.

Design Credit: Spencer Barras and Jack Reynolds

FIG. 68

Oakridge Uptown collage.

Design Credit: Ava Tai

URBAN INFILL PROPOSALS

Uptown, or 1st Street, is the City's lifeline, including many public amenities such as the Post Office, bank, City Hall, and City Library. The street includes local businesses and restaurants, and serves as a base for many community-based events like the First Friday Artwalk each month and the December Tree Lighting. However, on a day-to-day basis, it does not see much traffic (car, foot, or otherwise) from visitors nor sometimes locals, at is visually and physically separate from Highway 58. Many buildings are empty and there are many vacant lots. People pass through the town without a second thought.

An urban infill project could potentially revitalize Main Street, bringing in permanent flows of people through housing. Groups worked together to find a natural balance of their pre-designed housing types (through the initial taxonomy studies) and the existing commercial and public spaces. Uptown was broken down into smaller pieces, so students could analyze each part of their designs. Students aimed to match Oakridge's longstanding vision of a visitor-filled town, which would further community and economic development.

FIG. 69

Uptown Urban infill perspective rendering

Design Credit: Gidi Batya and Macy Moore

Housing Goals

As with the preliminary taxonomy projects, many students focused on similar demographics with their urban infill project as well, including support for multigenerational families and senior residents (60+), as well as envisioning new resident types such as single-person households and a younger, outdoor-focused or artist population.

Many essence statements included design elements that focused on building community, providing affordable housing, connecting residents to nature, and providing adequate support for a range of different household types and ages.

Addressing Multiple Sites & Pre-Existing Buildings

To begin the design process, student pairs chose at least three to four parcels of land. While there were no direct limitations on what could be considered a prospective "site", students had to justify their choices to an imaginary Oakridge audience. For example, removing or relocating vital institutions such as the U.S. Post Office (SE Corner of Cedar and 1st Street), First Tech Credit Union (NW Corner of Oak and 1st Street), or other local businesses would be a detrimental to the local community. Nonetheless, some groups chose to alter these aforementioned parcels and institutions within them, which required strong justification.

FIG. 70

Possible Uptown Sites.

Design Credit: Christina Bollo

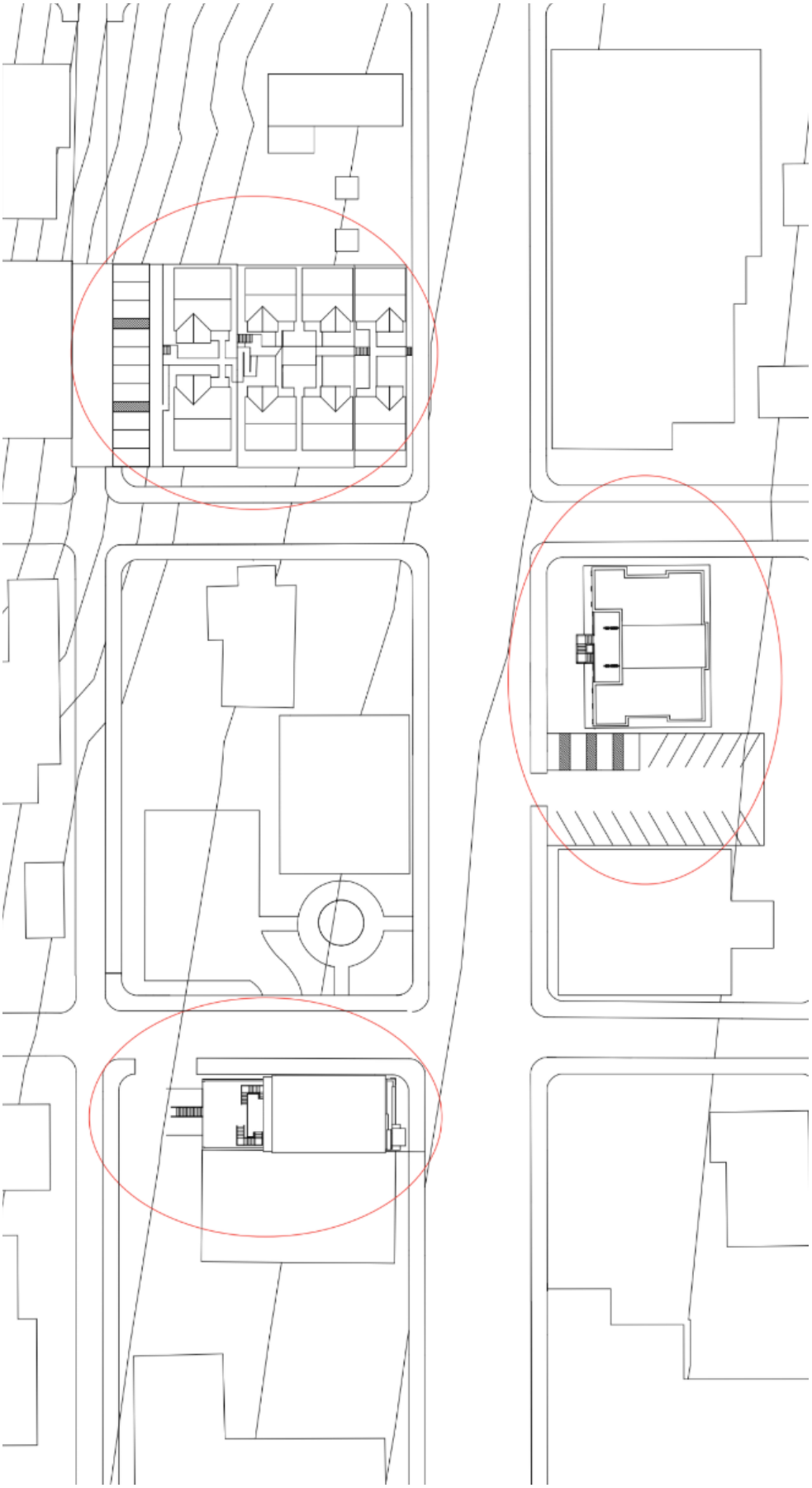


FIG. 71

Example of a Group's chosen sites.

Design Credit: Ellie Cordle and Jamaica Atad

FIG. 72

"First Tech Site" perspective picture, from the corner of 1st and Oak.
Photo Credit: Ava Tai

Many of the five groups chose sites around 1st Street and Oak Street. There was a unanimous decision to infill the northeast corner of 1st Street and Oak Street, which currently exists as a sloped, undeveloped grass lot. Often dubbed the "First Tech Site" site, it is bordered by an empty storage garage to the north, single-family homes to the northeast, and the Tree-Lighting Ceremony tree to the east. The site length and vastness made it a high quality choice. One disadvantage, however, was the northward slope. All groups also selected the parking lot east of the post office, at the SW corner of Oak Street and 1st Street. Many students argued that on-street parking eliminated the need for an expansive parking lot for patrons. This site was flat and has potential direct access off two main roads and the alley behind.

Other sites chosen included the SW, NE, and NW corners of Cedar Street/1st Street adaptive reuse of an Ash Street and 1st Street building, the empty lot between two buildings off 1st Street, and/or expanding the previous NE Oak Street and 1st Street corner northwards past the existing alley.

Despite a variety of sites, students aimed to create a unified, collaborative design scheme among all areas off 1st Street. As with any urban infill project, blending new housing developments with existing local businesses, parking lots, and other spaces is key. Many groups selected facade styles, materials, and colors to match the surrounding context, physically and spiritually.

FIG. 73

Site Plan of Uptown, including existing buildings and proposed infill.

Design Credit: Macy Moore and Gidi Batya

FIG. 74

Uptown Site Section Perspective, taken from SE.

Design Credit: Anirban Bhaduri and Chae Cannon

FIG. 75

Street Section with Building Elevations.

Design Credit: Lily Maas

FIG. 76

Facade depth models of apartment complex and townhomes.

Design Credit: Ashtin Neikes and Lily Maas

The elevation drawings (Fig. 75) and models (Figs. 76 and 77) demonstrate coherence among all housing developments in one project. Dwellings are not identical but still feel like they belong together. In general, groups often chose to use bright tones on the facade, like the range of colors on various pre-existing building elevations. Similar to taxonomy studies, many students envisioned facades made from majority fiber cement – a material that looks like wood but is more fire-resistant. Additionally, students attempted to keep a similar architectural language among the new housing units, older homes, and other local buildings. Some elements often used were gabled roofs, horizontal siding, organized bays, and natural wood-like elements to reflect Oakridge's history as a timber town.

Diversity in Housing Choice

Students aimed to design for a total of 18-36 dwelling units per acre. Such a large range accounted for the pre-existing buildings in Uptown that would account for the land area but could not be transformed into housing. Groups often utilized their same or adjusted housing designs from the preliminary taxonomy studies, but with several creating new schemes to fit specific chosen parcels.

All five groups chose to incorporate their previous townhome design in some form. Since townhouse groups are modular, many groups found it easy to splice different numbers (typically three to six) based on the available lot size. Modularity also helped in the case of the "First Tech Site" on the northeast corner of Oak and 1st Street, where individual townhomes could be stepped vertically up or down to reflect the slope of the land. Townhome designs were easily altered based on site or demographic context, resulting in some groups having more than three types in their proposal. Typically, these townhomes ranged from two- to three-bedrooms and aimed to support growing or multigenerational families.

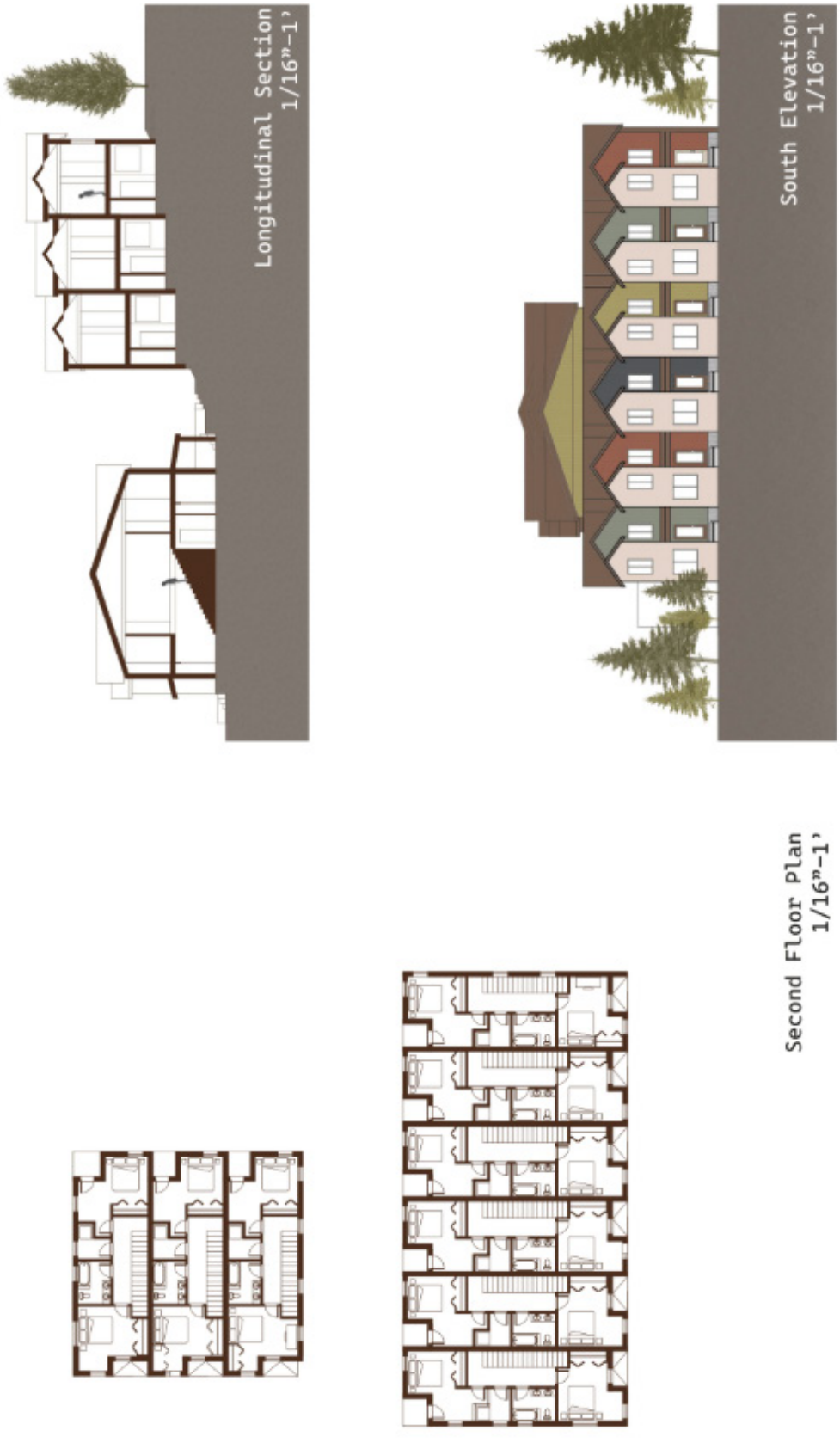
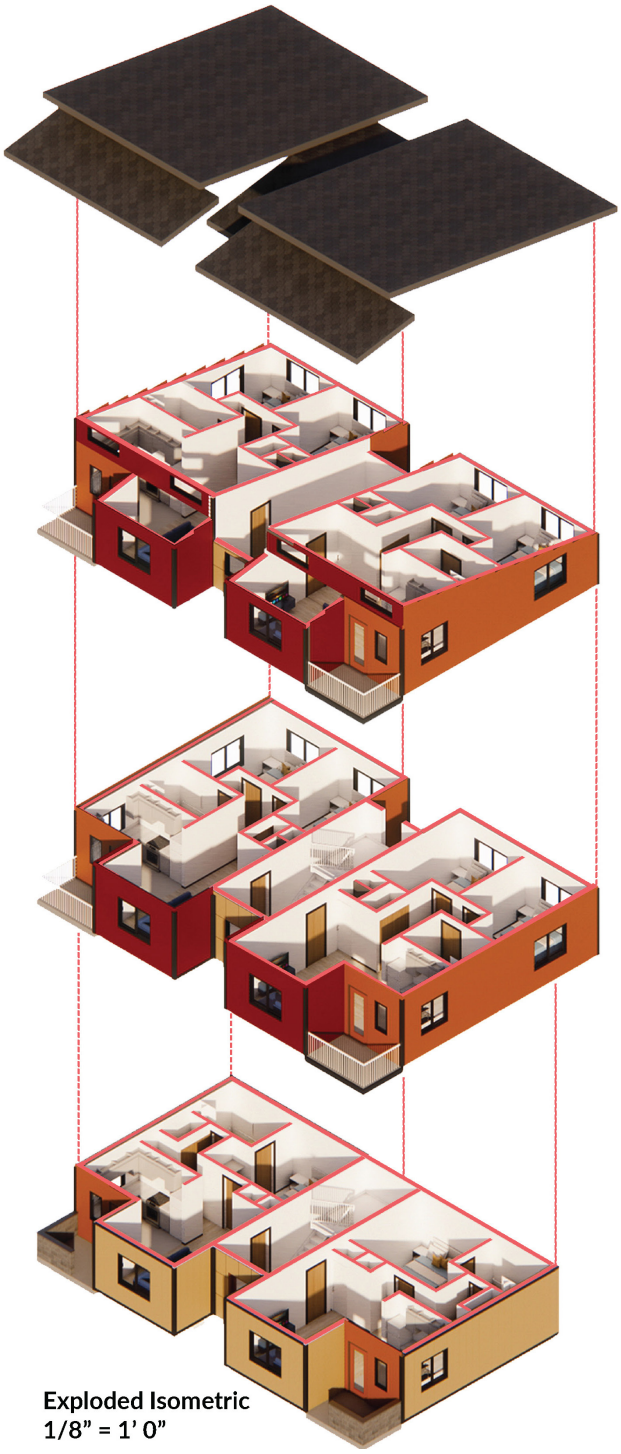


FIG. 77

Townhouse on First Tech Site. Plan, Elevations, and Site Section.

Design Credit: Macy Moore and Gidi Batya



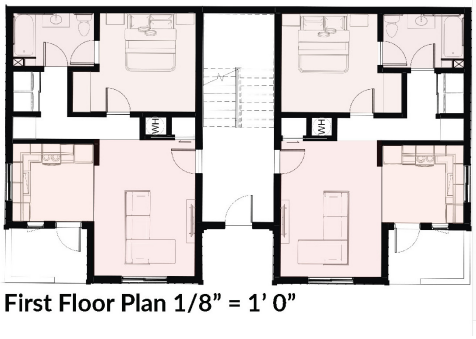


FIG. 78

Apartment on First Tech Site. Plans and Exploded Isometric.

Design Credit: Anirban Bhaduri and Chae Cannon

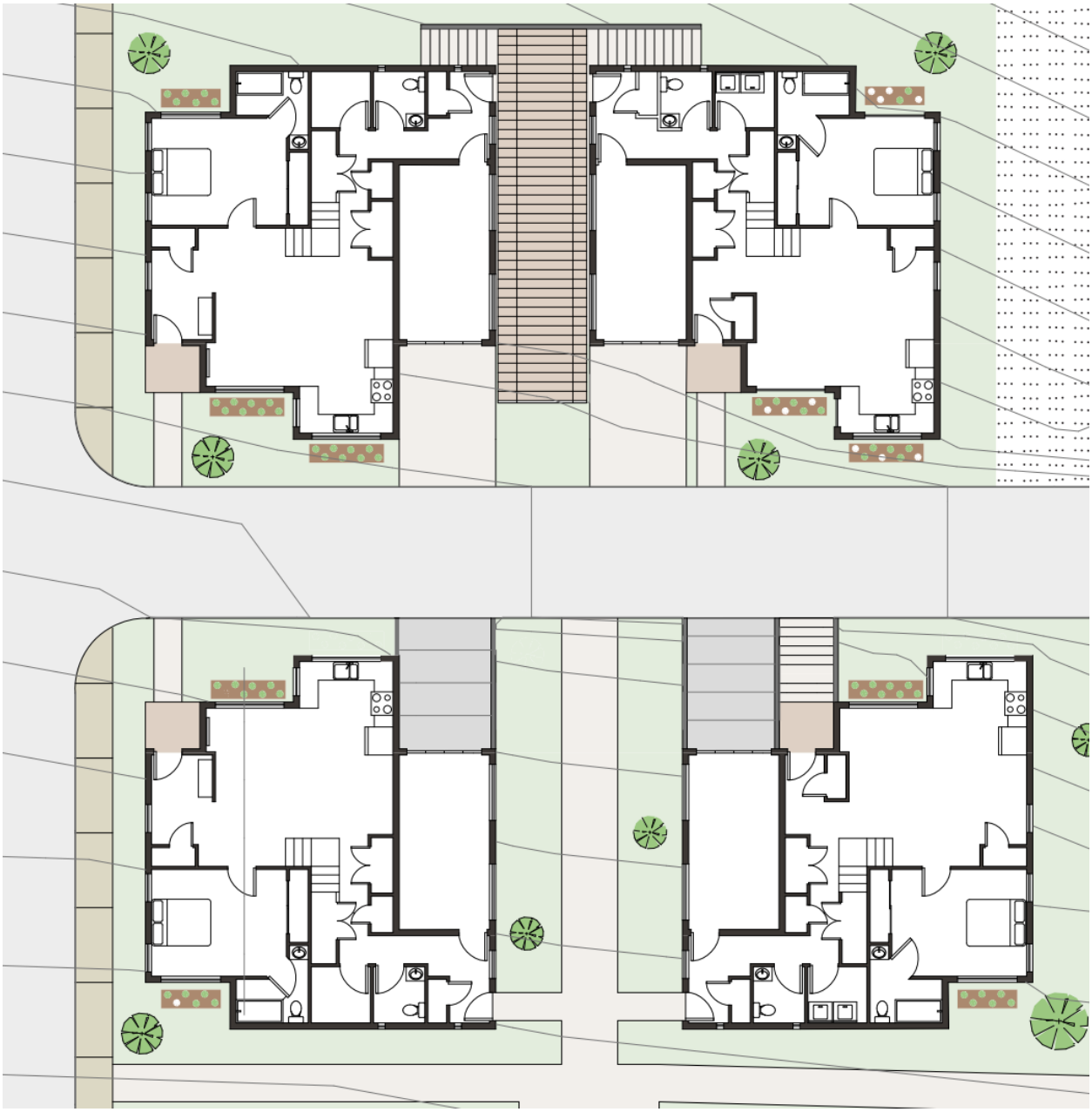


FIG. 79

Duplex Site and Floor plan on upper First Tech Site.

Design Credit: Ava Tai and Charlie Kirkendall

Walk-up apartment buildings were also utilized by four groups. Though they have a large building footprint, walk-up apartment buildings provide a high density of housing and often provide opportunities for communal greenspaces. The stacked floors of single-level units also create opportunities for accessibility at ground floor, as well as increased privacy at higher stories. Most individual units here were one- and two-bedrooms, suited towards younger families or older single adults.

Duplexes and cottage clusters were uncommon choices but were used by two separate groups to create a mini community within the urban area. Fig 79 shows how four duplexes were clustered together to create a unified outdoor space

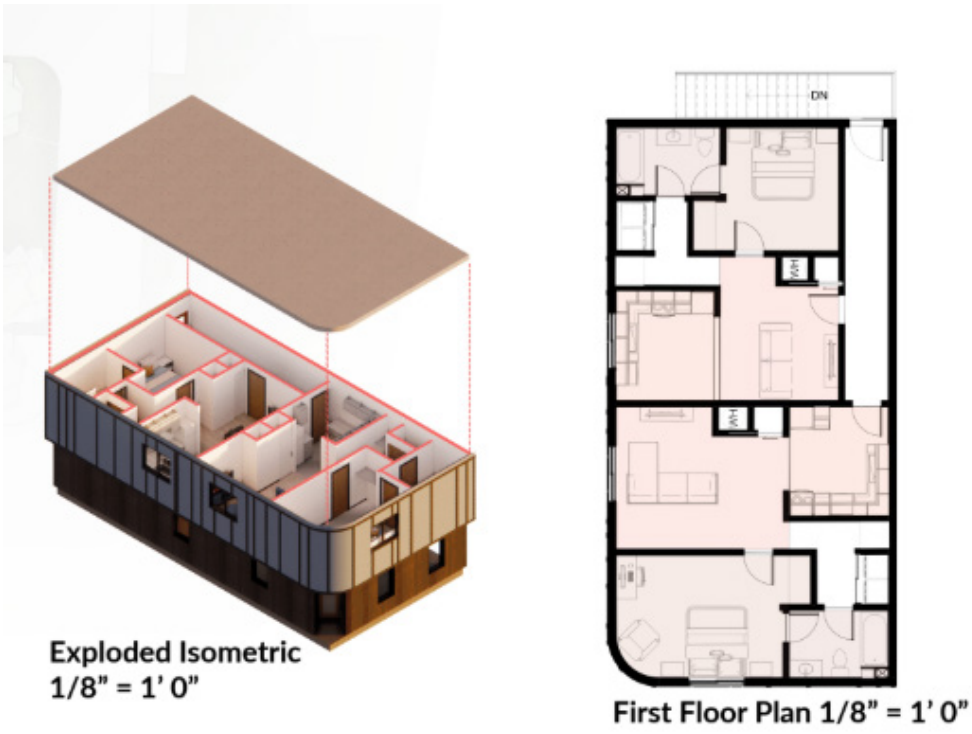


FIG. 80

Adaptive Reuse and Historic Rehabilitation Housing exploration.

Design Credit: Anirban Bhaduri and Chae Cannon

between all units. As both typologies are detached single-family homes, privacy is generally increased.

A unique strategy included adaptive reuse of a pre-existing building at the northeast corner of Ash Street and 1st Street. As part of this hybrid design, residents entered through a northern exterior back staircase, which led to three one-bedroom and one-bathroom single-family townhomes. Housing on top of commercial spaces not only allows for increased privacy, but also increases density. Overall density ranged from 20 DUA to about 33 DUA for entire developments. Individual infill lots reached as high as 38 DUA. Lower DUAs likely came from mixed infill of housing and commercial spaces.

Creating Commercial, Residential, and Third Spaces

Urban infill housing means that there will often be overlap between residential and commercial zones. There are local businesses and public amenities along 1st Street, but what will happen if dwellings are added? If Uptown is to become a bustling street with visitors, how will privacy and security be maintained for the residents in the new housing units? How will the differences between public and private, commercial and residential, spaces be inherently known?

Site selection was the first step to determine parcels of land for new housing. At the chosen sites, students began designing within specific setbacks (6 feet from all streets and alleys, 5 feet between buildings if windows are present). In most cases, dwellings were in separated areas from commercial or extremely public areas and were flanked by large greenspace areas (Fig. 82). In situations where buildings directly met one another, dwellings were characteristically different from commercial spaces while still sharing the same architectural language. Certain features, such as a gabled roof, porches, and repetition of bays often

FIG. 81

Semi-private outdoor space and screening.
Design Credit: Charlie Kirkendall and Ava Tai

subliminally signal to visitors that the building is someone's home. Using the adaptive reuse design as an example (Fig. 80), the material and color of the second (residential) floor is different yet complementary with the ground-floor building. Residential and commercial spaces, when not physically separated, are often distinguished from each other by small details such as this.

The project also required each dwelling to have some sort of semi-private outdoor space that was not designed for the public such as a shared courtyard (like those common with cottage clusters), private backyard, or personal porch. To create ground-level space away from the public, groups often strategically placed open outdoor spaces behind dwellings off any main roads. The housing itself could work to screening the public, while neighbors could converge in the shared area. Trees, vegetation, or slight level changes were also utilized to create gentle privacy warnings to visitors. Unlike a tall or unattractive fence, these soft boundaries would not physically restrict anyone from crossing but acted more as a symbolic barrier.

Similar symbolic strategies were also utilized for parking separation. Each dwelling was required to have at least one parking spot off 1st Street. Parking was often solved by creating smaller lots behind each home. This strategy allowed for short walking distances from car to home while still ensuring that the street-front presence on 1st Street was lively, beautiful, and without driveways and garage doors. Attached garages, while more uncommon, were still present, and allowed increased accessibility with smaller transition distances.

FIG. 82

Site plan of concentrated urban infill selection.

Design Credit: Lily Maas and Ashtin Neikes

FIG. 83

Site plan of apartment near post office, including re-designed parking lot.

Design Credit: Jamaica Atad and Ellie Cordle

FIG. 84

Street Elevation and Section, including parallel parking on-street.

Design Credit: Macy Moore and Gidi Baty

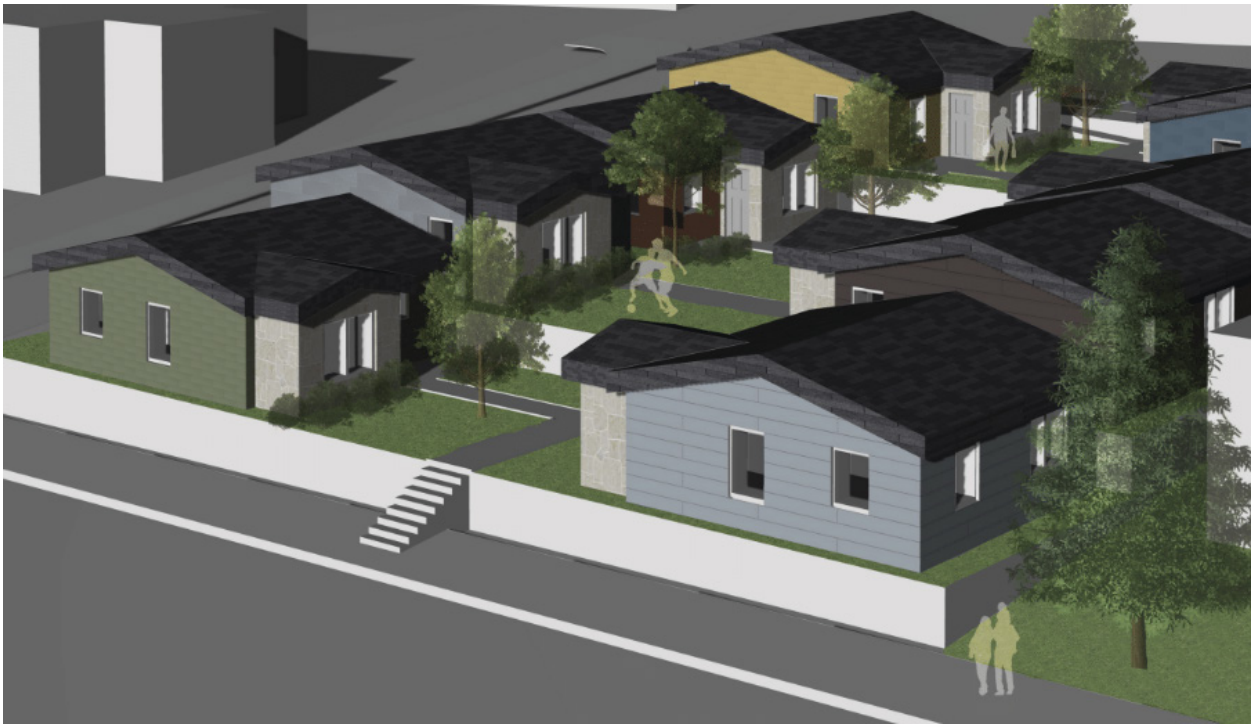


FIG. 85

Cottage Cluster housing with developed courtyard.

Design Credit: Jamaica Atad and Ellie Cordle

Many students found that current parking over-accounted for needed spaces. Thus, commercial parking, if altered (like with the Post Office lot), was reallocated to parallel or diagonal parking off 1st Street or redesigned on the same parcel to be more efficient.

Groups also worked to redesign each parcel towards full completion. This included mapping walkways from sidewalks to houses, necessary back alleys, pathways through courtyards, etc. Students made these public features transitional, efficient, beautiful, unified with the dwellings, and with a greater view of Uptown. Landscaping, leveling, vegetation planning, and specific material choices (example: concrete vs stone pavers) helped screen dwellings away from urban areas but also create enjoyable outdoor rooms for residents.

Street Redesign

First Street is approximately 54 feet, encompassing two lanes of traffic, with parking on either side. Many students observed that Uptown is car-centric with a lot of traffic. If the intersection of Oak Street and 1st Street is considered the "heart" of Oakridge, why is it loud, busy, and focused on commuters rather than pedestrians?

One student group completed an entire street redesign. From east of Cedar Street to just west of Ash Street, 1st Street was transformed into a two-block woonerf. Often defined as a "living street", a woonerf prioritizes pedestrians and cyclists first and cars last. The pair of students chose to control traffic by placing speed traps at either end of the woonerf and added a roundabout at the Oak Street intersection. Strips of vegetation and trees were placed between the sidewalk and road, which brought color and acts as an auditory and visual barrier to cars nearby. Bioswales were used to connect to nature. By centering and designing streets at the person level, Uptown regains its "heart" of Oakridge status. People will want to walk their dog, grab a meal, or look at artwork. Furthermore, the woonerf better supports Oakridge events such as the First Friday Art Walk since car traffic can be restricted.

Other groups applied less-intensive street design techniques such as sidewalks and bike lanes; widening sidewalks by decreasing excessive on-street parking; adding colored crosswalks at the Oak Street intersection for increased pedestrian attention; and generally adding more greenery to the spaces near the road.

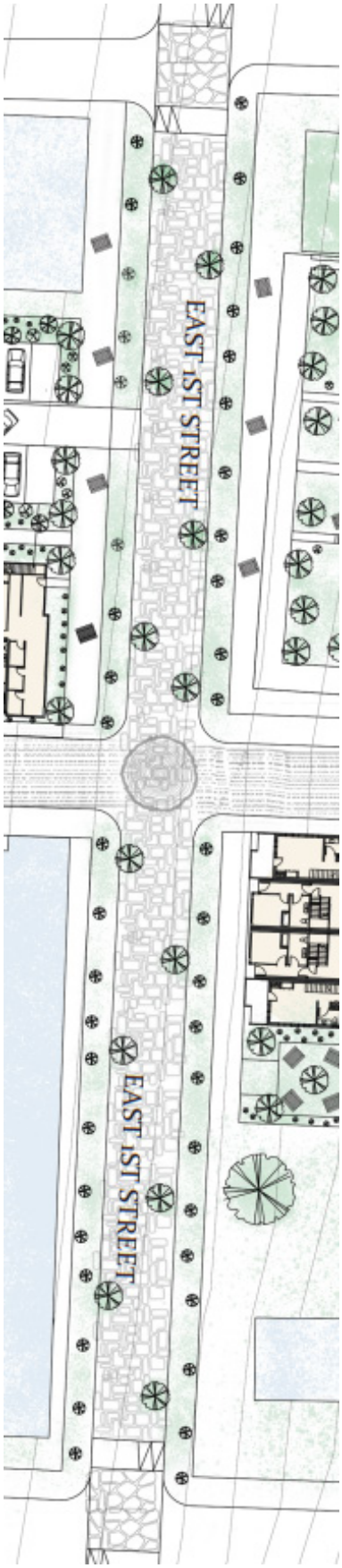


FIG. 86

Woonerf creation and
1st Street redesign.

Design Credit: Ashtin Neikes and Lily Maas

FIG. 87

Street Perspective including two story townhomes and woonerf construction.

Design Credit: Ashtin Neikes and Lily Maas

FIG. 88

Oak Street perspective, including added vegetation and widened sidewalks.

Design Credit: Anirban Bhaduri and Chae Cannon

Conclusion

The architectural studio aimed to envision a better future for Oakridge through design. First, students explored various middle housing types through short, two-week projects. The duplexes, townhouses, and final maximum medium designs helped students solidify skills in internal layout strategies, facade development, parking strategies, greenspace planning, and connection to nature and neighbors.

For the final project, the 2nd and Teller, Salmon Creek, and Uptown Urban Infill proposals responded to the initial design challenge of affordable and sustainable medium-density housing. While working in pairs, students revised their two-week project designs into similar housing typologies to create a complete neighborhood. Throughout the term, students applied their essence statements to guide their design choices. Designing for specific groups of people aided students in choices about building form, materials, color, and interior layout. Students also focused on site design, building orientation, connection to surrounding context, privacy gradients, and unity across the City. Field trips to Oakridge helped students feel connected to the site and context, and the greater community. Students designed with intention and care to create middle housing resources for the future of Oakridge.

FIG. 89

The 16 undergraduate architecture students from the ARCH 484: Ecological Housing Design Studio during their first trip to Oakridge.
Photo Credit: Christina Bollo

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Schrader, B. (2024). State of the State's Housing. Oregon Housing and Community Services. https://www.oregon.gov/ohcs/about-us/Documents/state-of-the-states-housing.pdf

Zylstra, R. & Cleavenger, J. (2023). Oakridge Housing Needs Analysis Summary Report. https://www.ci.oakridge.or.us/media/11141

Glossary

Note: Terms are defined in relation to the ARCH 484 Oakridge Ecological Housing Design studio, and may not align with standardized definitions, architecturally or otherwise.

Adaptive Reuse – remodeling, revitalizing, and/or reusing a pre-existing building for a new or different purpose than originally designed.

Axonometric – a drawing representing a building in three-dimensions, utilizing a parallel (45 degree) projection.

Bays – vertical or horizontal divisions of a building. On the facade, bays are typically defined by window or door placements.

Circulation – common movement and interaction within a building by people.

Context (Architectural) - the urban, natural, and spiritual surroundings of a building.

Cottage – residential buildings with a small footprint, typically one or two stories.

Cottage Cluster – a grouping of small detached units (cottages) that are oriented around a common courtyard or greenspace.

Diagram – a simplified drawing utilized to explain inner building relationships or relationships with context. Common diagrams including daylighting, circulation, public/private gradients, parti, and program/spatial hierarchy. DUA – Dwelling Units per Acre. A measure of housing density, the higher the DUA, the more compact and denser the housing.

Duplex - two dwelling units built in conversation with another located within the same lot. Common types include side-by-side, stacked, detached, or connected.

Elevation – a scaled two-dimensional drawing of a (typically exterior) building face. Exists as a mechanical rotation of the floor plan.

Essence Statement – a brief, about 200-word blurb sharing the uniqueness of the design's typology, concept, goals, and intended users, without revealing any physical attributes of the building.

Facade – a more developed elevation of an exterior wall of a building. More emphasis on compositional and decorative elements that contribute towards building spirit and character. Does not necessarily reflect the interior layout of the space.

Fenestration – openings, such as windows and doors, on the facade.

Floor Plan – a scaled two-dimensional drawing of a building layout, as seen from above. Includes relationships between rooms as characterized by walls, windows, doors, stairs, and sometimes furniture. Typically cut four feet above the floor.

Gable – a triangular-shaped or “A” shaped roof, formed by the intersection of two slopes. Also called a pitched roof.

Glazing – the glass in fenestrations, such as windows and doors.

Grade (Site Development) - the level of the earth, typically above or below ground level. Can also refer to percentage increase or decrease in slope over land.

Housing Density – the number of dwellings (homes, independent of number of bedrooms) located in a specific amount of land. Typically measured in DUA.

Isometric – similar to an axonometric. A drawing representing a building in three-dimensions, utilizing a 30-degree projection.

Massing – overall, simplified form, shape, and size of a building.

Massing Model – a simplified three-dimensional physical representation (model) only characterizing general building forms. Often utilized at the start of the design process to see how proposed forms interact with surrounding context.

Modular – a design that can be broken down into smaller, similar parts AND grouped together to create something larger.

Mullion – horizontal and vertical bars across glazing panes, creating divisions. Often utilized for structural support and can be stylized.

Nook – a small, somewhat separated space off a larger open space. Formed by the meeting of two or three walls.

Overhang – part of a building’s roof that extends beyond the exterior wall. Provides protection from rain and direct sunlight, for the building’s health and user experience.

Parti – a simplified diagram that characterizes leading concept, experience, and/or simplified two-dimensional shapes of layout.

Party Wall – a wall shared by two adjacent buildings, often found in multi-unit housing types. Ensures fire safety, privacy, and structural integrity. Fenestrations are not permitted.

Perspective Drawing – a drawing representing a three-dimensional experience of the building or place. Depths, distances, heights, locations, and some materiality and color are often shown.

Powder Room – a small restroom that includes only a toilet and sink. Often located on the main floor of the home for guests to use.

Procession – the designed path from one place to a set location.

Program – design requirements of a building, including types of spaces and allotted sizes.

Render – a visual representation of a building, typically with color, texture, and materiality. A variety of tools can be used to render, such as hand media (i.e. colored pencils, watercolors), digital tools (adobe photoshop and illustrator), and computer programs (Rhino3D, Lumion, D5, Fusion).

Scale – the relative size of a drawing or model to accurately and proportionally represent its real-life counterpart. Common scales utilized in this project were 1/16" = 1'0 and 1/8" = 1'0", where one sixteenth of an inch of the drawing translates to one foot in the real world.

Screen/Screening - a permeable barrier that somewhat physically or symbolically separates one area from another. Commonly utilized screens are vines, trees, and other vegetation.

Section – a drawing representing a building cut by a vertical plane. Illustrates vertical relationships along multiple floors, as well as interior imaging.

Setback – a minimum distance between any built element and named feature. Typically exist in relation to alleys, main roads, sidewalks, and other buildings or lots.

Site Plan – a graphic two-dimensional representation of the ground floor of the building and its surroundings. Includes any outdoor development such as walkways, vegetation, parking, etc.

Site Section – a vertical slice taken through the entire site. Emphasizes building massing in relation to nearby surroundings. Typically includes similar elements represented in a site plan.

Taxonomy – the grouping and categorizing of similar buildings through form and purpose.

Townhome - attached typically multi-story single-family dwellings. Typically in groups of three or more units, with each unit sharing at least one wall with a neighbor.

Townhome over Flat – a one-story flat on the ground floor, with one or two multistory townhomes stacked directly above.

Typology – a classification system of buildings, based on form, purpose, and other essential characteristics.

Urban Infill - new construction of buildings on available or unused land, typically between or in pre-existing buildings or neighborhoods, within a greater urban context.

Walk-Up Apartment – multistory apartment buildings that have all entrances to individual units accessible from the exterior. There are no internal hallways, elevators, or staircases.

Appendix A

Teller Re-Design

Site Plan: 1/20"=1'0"

Site Section: 1/20"=1'0"

Site Elevation: 1/20"=1'0"

A New Life

Oakridge Neighborhood Development

ARCH 484 Christina Bollo | Lindsay Chen, Annalitha Kumar

On the Teller Site, the neighborhood design brings together a smaller demographic of Oakridge, providing homes for the young population and artists. Housing in this neighborhood provides opportunities to explore relationships between neighbors as well as discover new avenues and joys in connection and creativity. This development balances independence with community. Many young people have fears regarding their future, including the uncertainty of homeownership. Offering dense housing bridges this gap and brings new life and opportunities, as well as job and economic growth. Having spaces for artists and encouraging young people to stay in Oakridge brings color and creativity to the city, reviving the sense of life. This neighborhood offers a flexible yet efficient lifestyle and community while being able to maintain independence within the community. This development aims to create comfort and spirit in a current world of instability, and nurture those who are finding their footing in life.

Parking: 1 spot/unit — 90 parking spots

Units: Townhouse
- A 16 Units 2 bed, 2.5 bath
- B 16 Units 3 bed, 2.5 bath
- C 18 Units 2 bed, 1.5 bath
- D 24 Units 1 bed, 1 bath

Flat
- E 16 Units 2 bed, 1 bath

Net Density: 90 Dwellings/4 acres — 22.5 dua

Townhouse B,A

Third Floor

Second Floor

Flat E

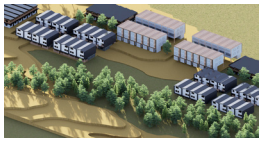
First Floor

Floor Plans: 1/8"= 1'0"

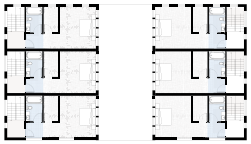
Townhouse C

Second Floor

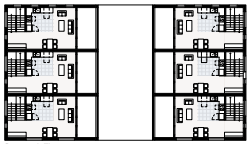
First Floor



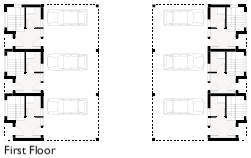
Townhouse D



Third Floor



Second Floor



First Floor

Appendix B

Urban Infill Groups

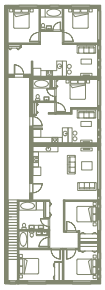
First Street Revival

Arch 484 Fall ‘25 | Gidi Batya & Macy Moore | Christina Bollo

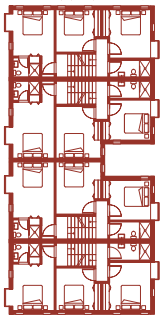
Essance Statment:

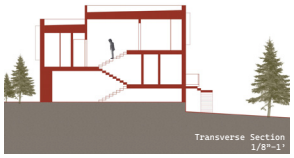
Infill housing on Oakridge’s first street will reflect a beacon of community as well as the nature that surrounds them. Taking inspiration from natural ecosystems in the surrounding and creating a lively hub of community within the ecosystem of Oakridge is the primary concern. The community created by these spaces should be diverse and community inducing. The spaces will cater to accidental meetings, creating a language of home, and fostering connection with nature that is so deeply embedded in the history of Oakridge. Spaces should be affordable and allow for the existing community of Oakridge to flourish. They should also allow for residents to feel as comfortable in their own spaces as possible. Private and public spaces should have thoughtful boundaries and develop levels of community that allow for ideal levels of both comfort and connection. In addition, commercial spaces should create a new identity of first street that reflects the booming culture and lively nature of the town. Spaces will be publicly and naturally oriented, allowing for a bustling creative town to thrive that connects residents to their home- and one another- on every possible level. This Oakridge infill project will prioritize spaces of connection, community, nature, and life.

SITE A- APARTMENTS



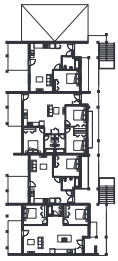
SITE B- TOWNHOMES



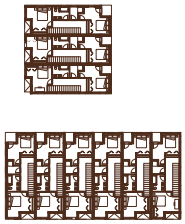


SITE C/D- APARTMENTS

SITE E- APARTMENTS



SITE F- TOWNHOMES



WOONERF TO THE WISE; ROOTS IN OAKRIDGE

UPTOWN OAKRIDGE INFILL DEVELOPMENT

ASHTIN NEIKES & LILY MAAS
ARCH 484 FALL 2025
PROF. CHRISTINA BOLLO

ESSENCE STATEMENT

This neighborhood development in Uptown Oakridge will be essential in revitalizing the heart of this closely-knit community. With Oakridge being a town with such a small population, providing mixed middle-housing will provide the best possibility of bringing a diversity of people while creating affordable housing. With Uptown being in the heart of Oakridge, a neighborhood in this site would bring ample opportunity for daily interactions facilitated through the everyday rhythm of a small-town lifestyle and shared outdoor space. This neighborhood will be essential in rekindling the spirit of Oakridge by fostering places of gathering and strengthening the culture and community of the place. Homes will allow for a flexibility of living styles in order to cater to the diverse demographic of Oakridge. Each home in these neighborhoods will provide moments of privacy and security while the outdoor spaces will provide opportunities for chosen interaction, which can lead to a nurturing and supportive shared environment. Connection to the outdoors and to community will be key in fostering a successful neighborhood in this site of Oakridge
The neighborhood should focus on the experience of the residents and their interactions between their neighbors, the existing urban context, and the outdoors in order to encourage a positive, nourishing community that will benefit Oakridge.

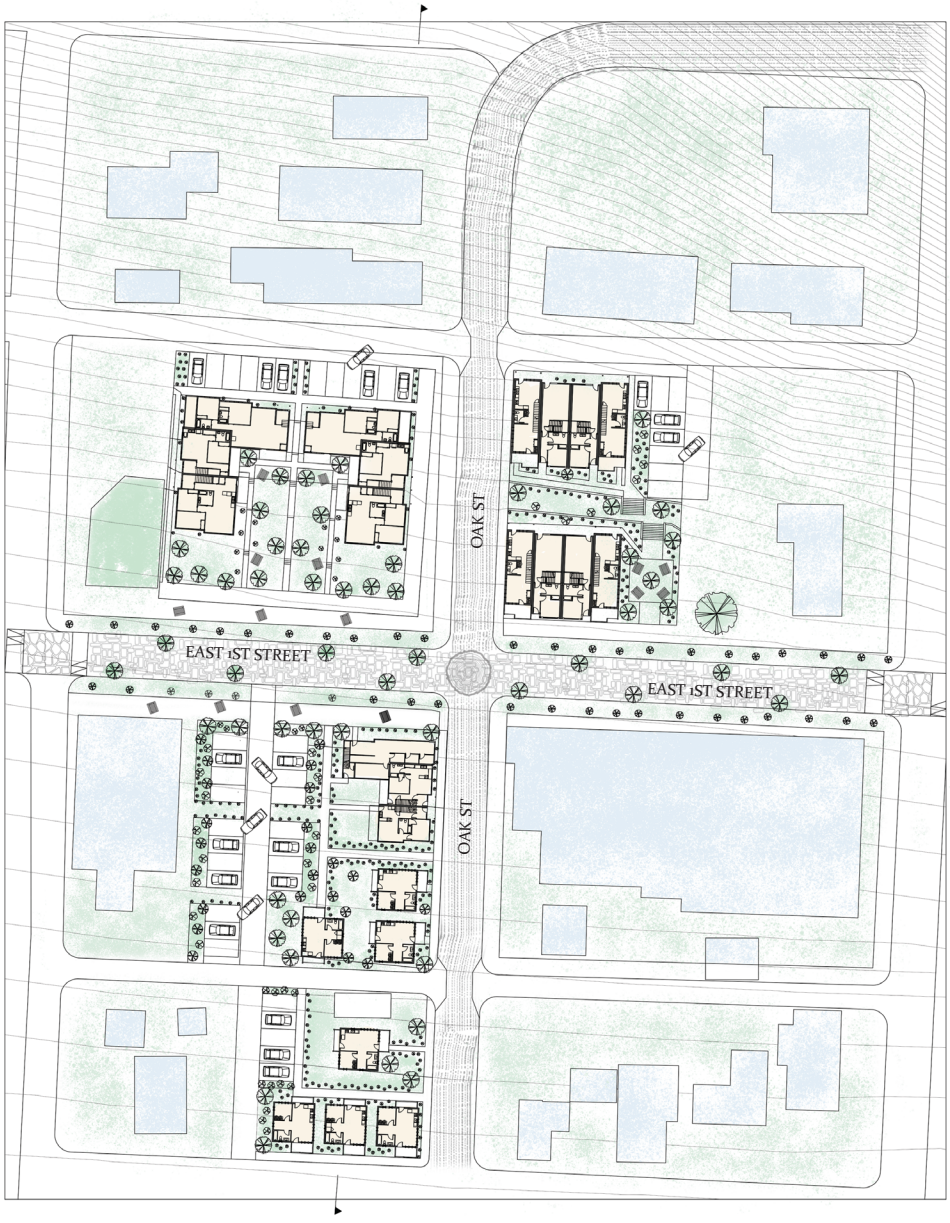
STATISTICS

TOTAL NUMBER OF DWELLINGS: 32
NUMBER OF PARKING STALLS: 44

NUMBER OF UNITS IN EACH BUILDING:
-APARTMENTS: 12 DWELLINGS TOTAL
-2 STORY TOWNHOUSES: 1 DWELLING EACH
-3 STORY TOWNHOUSES: 1 DWELLING EACH
-CREDIT UNION APARTMENTS: 5 DWELLINGS
-COTTAGES: 1 DWELLING EACH

OVERALL SITE SIZE: 59,750 S.F.
-SITE 1: 150' X 143'
-SITE 2: 100' X 143'
-SITE 3: 100 X 240'

NET DENSITY CALCULATION:
59,750 S.F. / 43,650 S.F. = 1.37 ACRES
32 DWELLINGS / 1.37 ACRES = 32.4 UNITS PER ACRE



SITE PLAN
1"- 20'

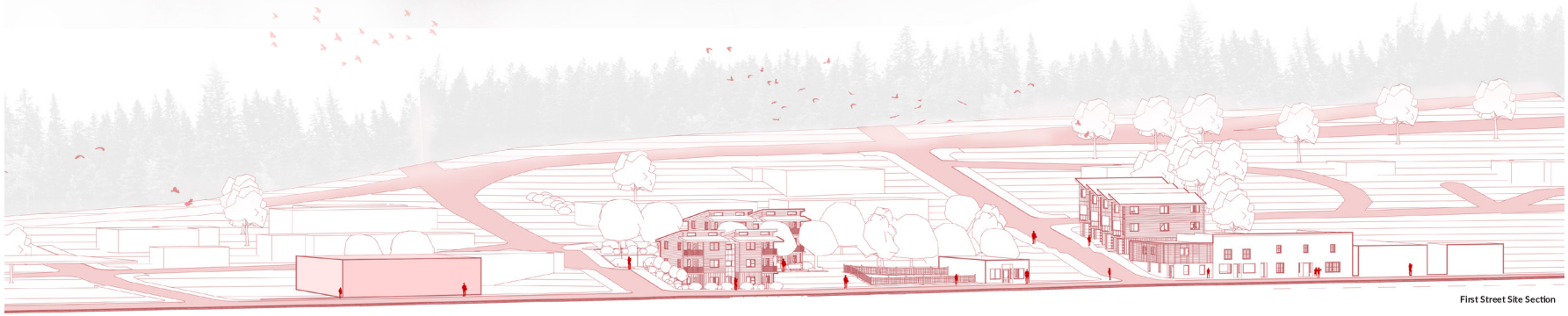
Revitalizing First Street

Oakridge, Oregon

Chae Cannon and Anirban Bhaduri | ARCH 484
Christina Bollo | Fall 2025

Hilltop Site Exterior Render

Post Office Site Exterior Render



First Street Site Section

Oakridge Roots & Futures:

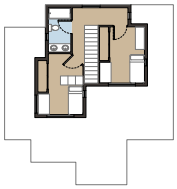
Charlie Kirkendall & Ava Tai
ARCH 484 |Prof Christina Bollo
Fall 2025

An Intergenerational Neighborhood in Uptown

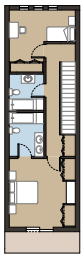
The neighborhood in Uptown Oakridge, Oregon will cater towards housing multigenerational families. The design of the homes will focus on accessibility for older residents, the majority of the population in Oakridge, as well as adding enticing features to draw a newer generation of young adults to stay long-term. The difference in age will not divide, but rather create a diverse community infused with a range of life experiences and perspectives. Communal outdoor spaces will assist in creating these relationships, but transitional spaces will be open to spend time in: public, intimate, and anywhere in-between. There will be auditory and visual privacy between the dwellings and the surrounding street, no matter if they share a wall or other common spaces. The homes will fit into the context of Uptown Oakridge, both visually and spiritually, the latter reflecting the current needs and culture such as affordability, togetherness, and environmentalism. They will relate and honor the unique history and heritage of the city - from its original inhabitants of the Kalapuya indigenous peoples, to settlers in the early 1900s, to a timber town, to the present as a welcoming, outdoor-focused, "mountain-biking capital of the Northwest".

Site Plan 1/16" = 1'0"

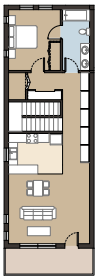
Site Section 1/8" = 1'0"



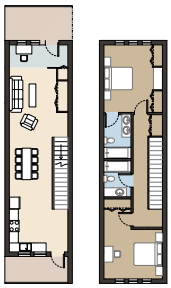
Duplex 2nd Floor 1/8" = 1'0"



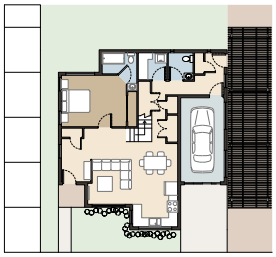
Townhouse C 2nd Floor 1/8" = 1/0"



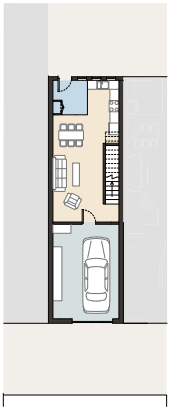
Townhouse A 2nd Floor 1/8" = 1/0"



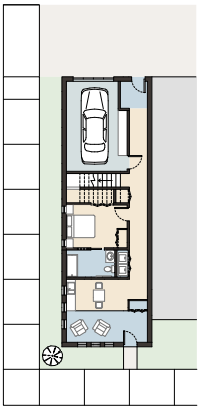
Townhouse B 2nd/3rd Floor 1/8" = 1/0"



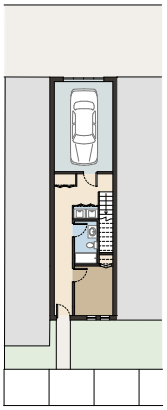
Duplex 1st Floor 1/8" = 1'0"



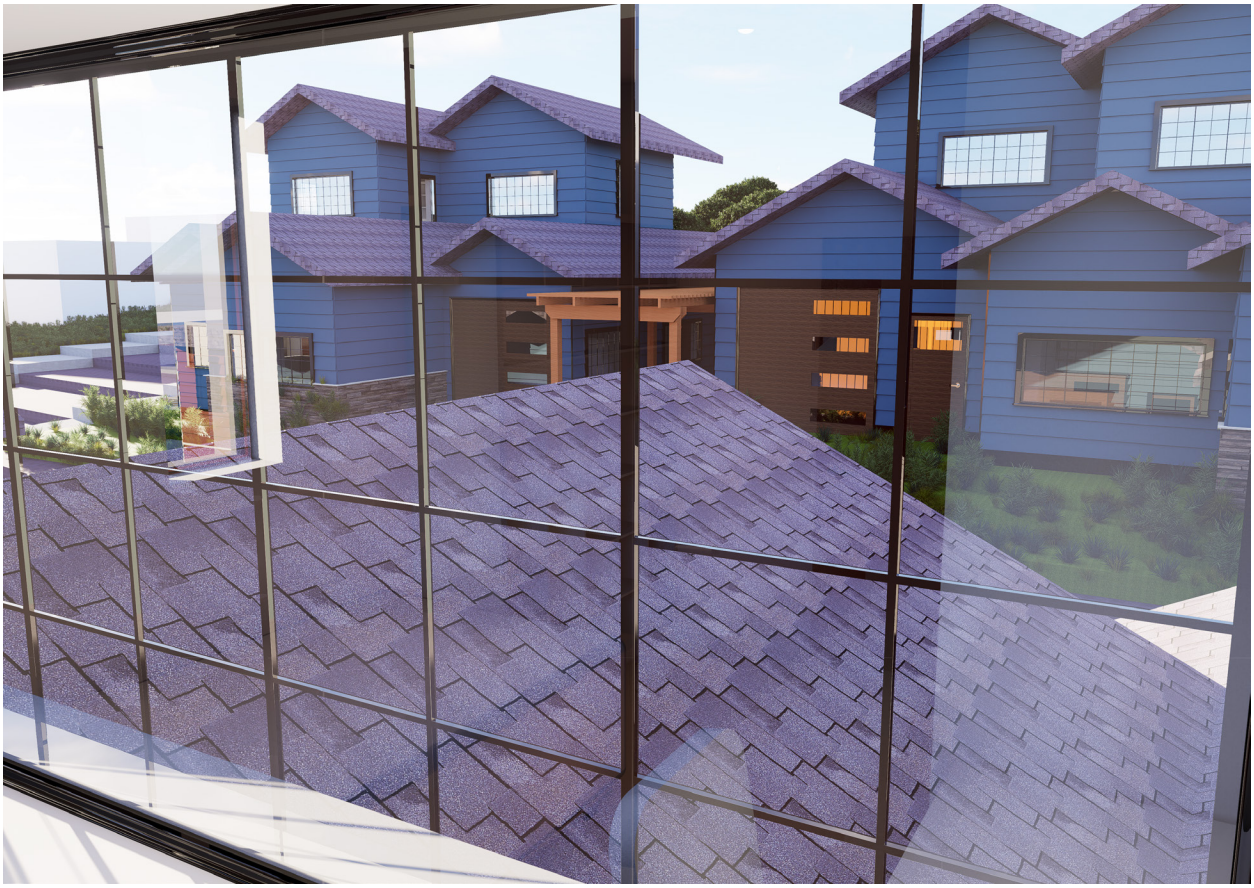
Townhouse C 1st Floor 1/8" = 1/0"

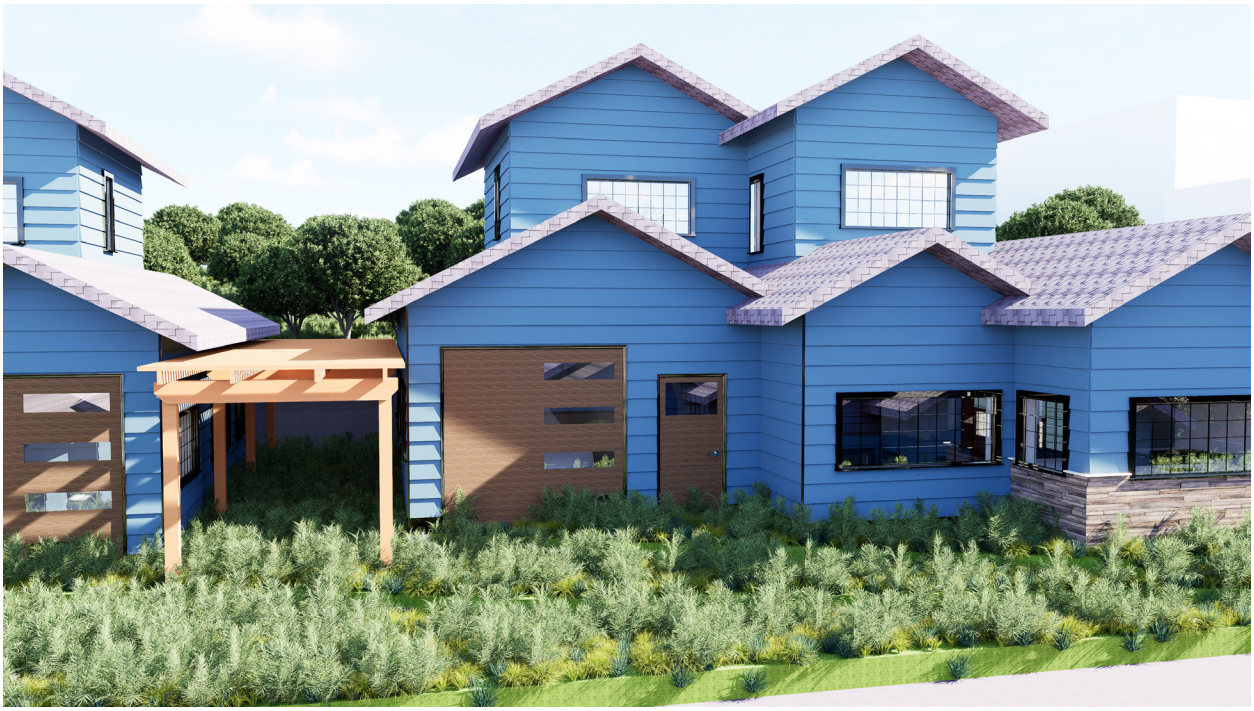


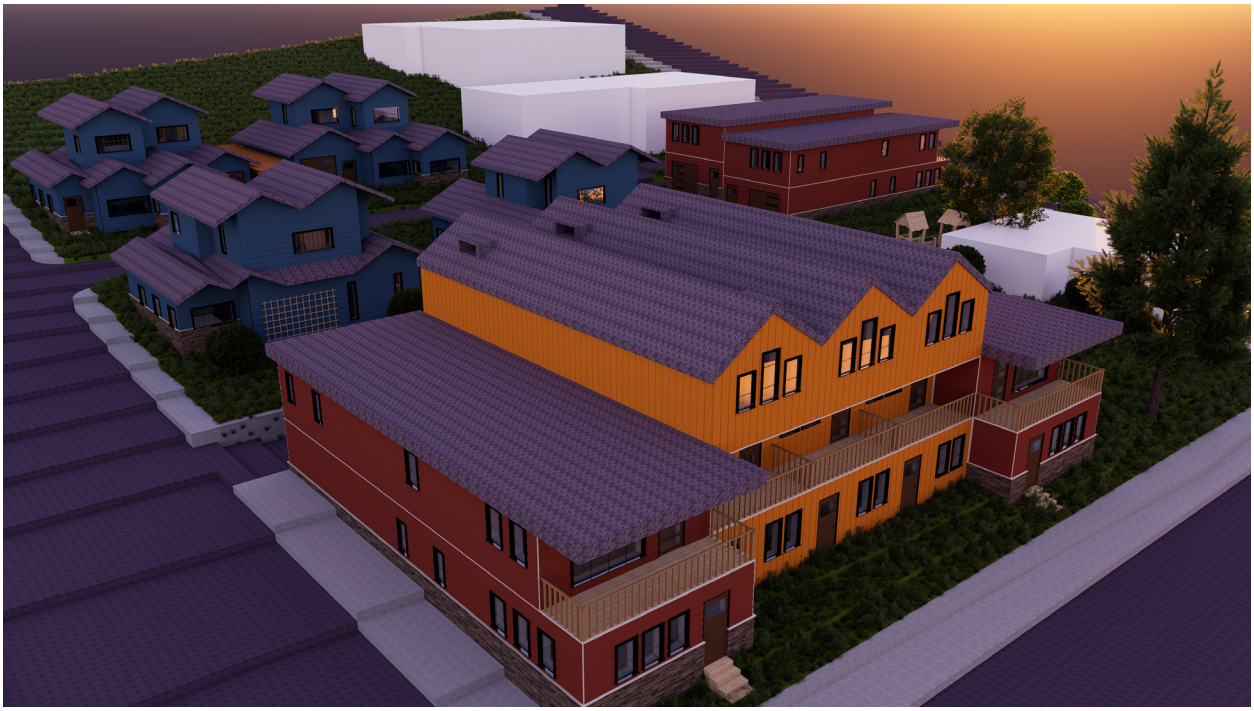
Townhouse A 1st Floor 1/8" = 1/0"

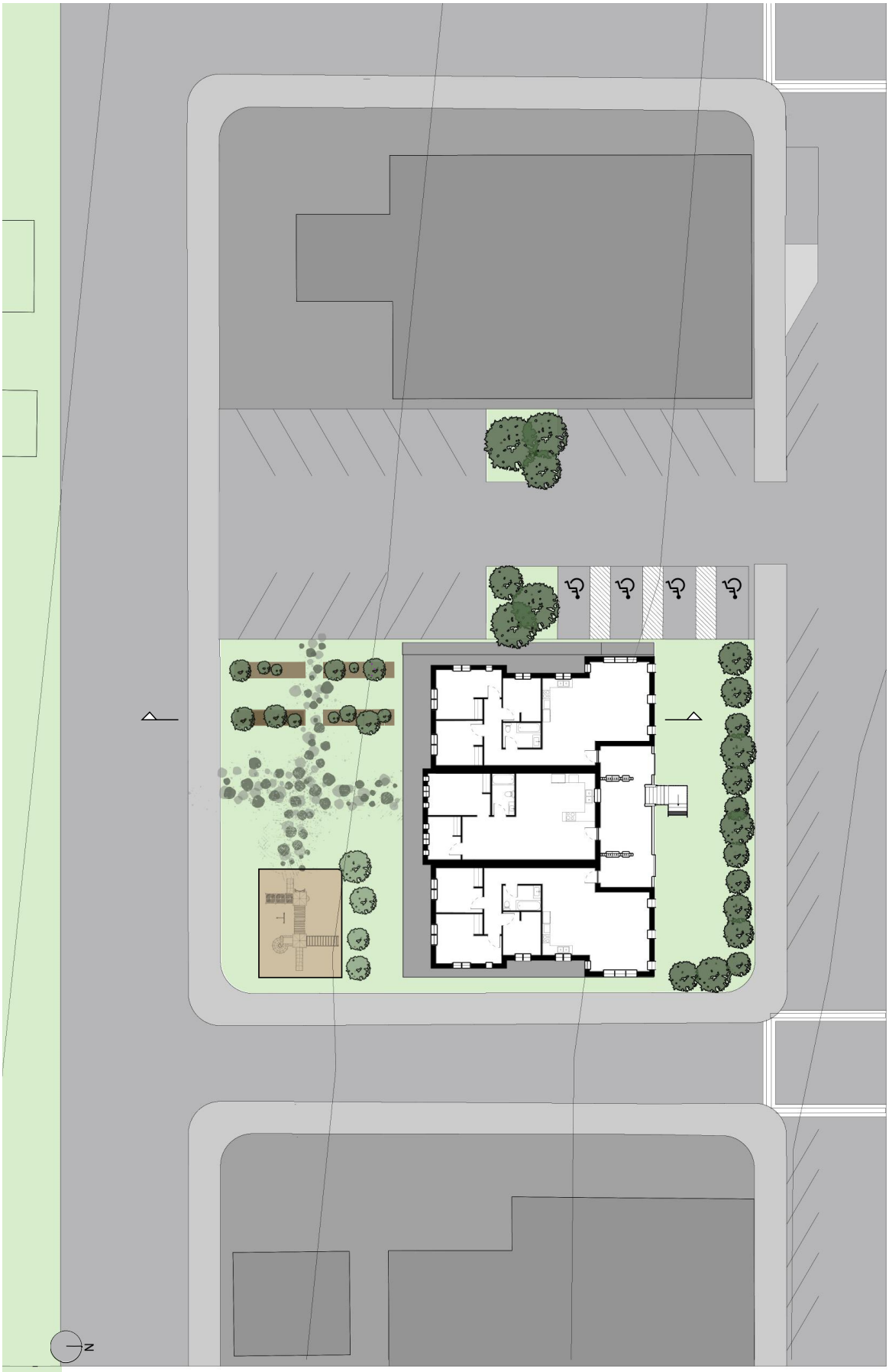


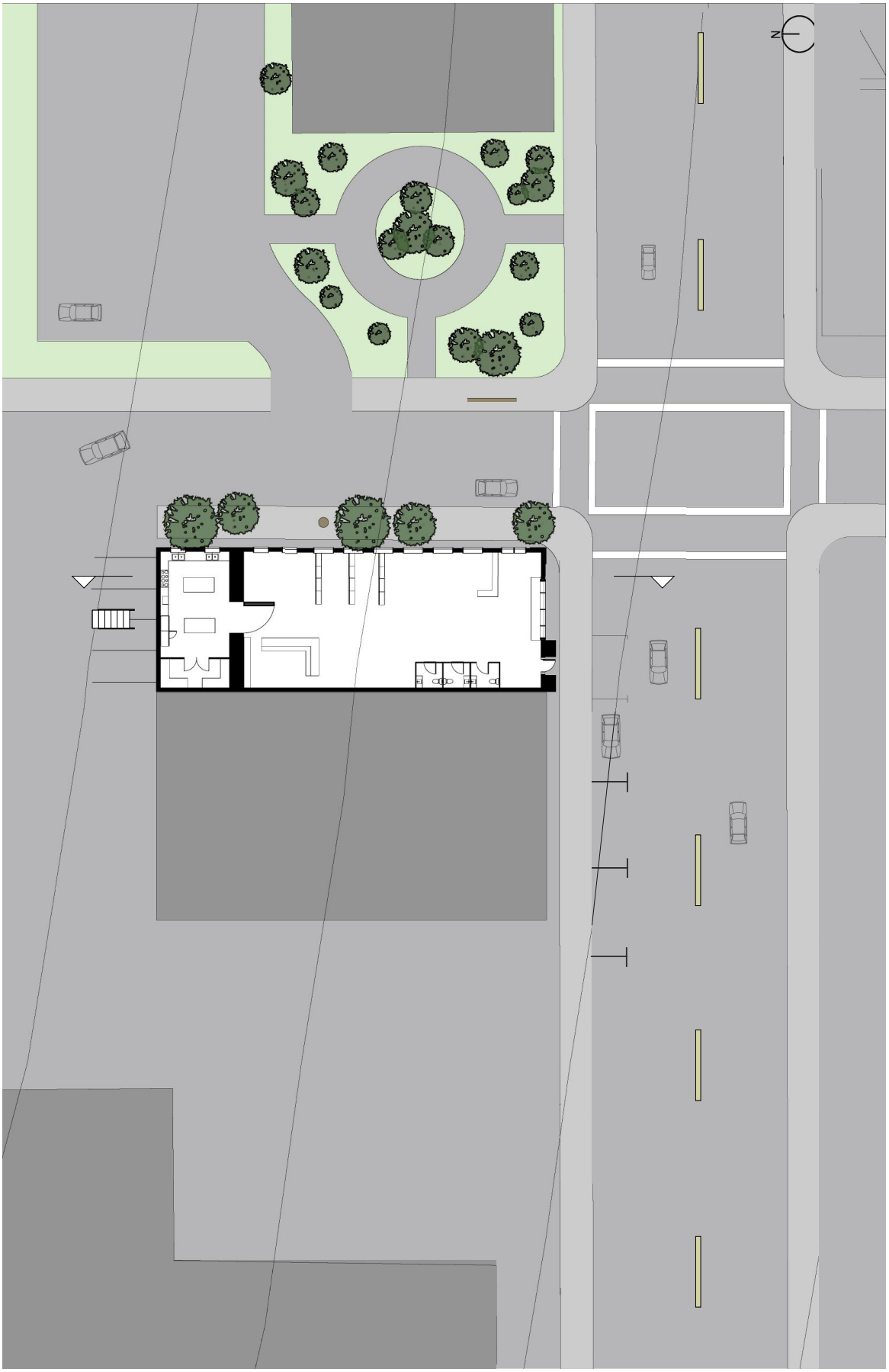
Townhouse B 1st Floor 1/8" = 1/0"







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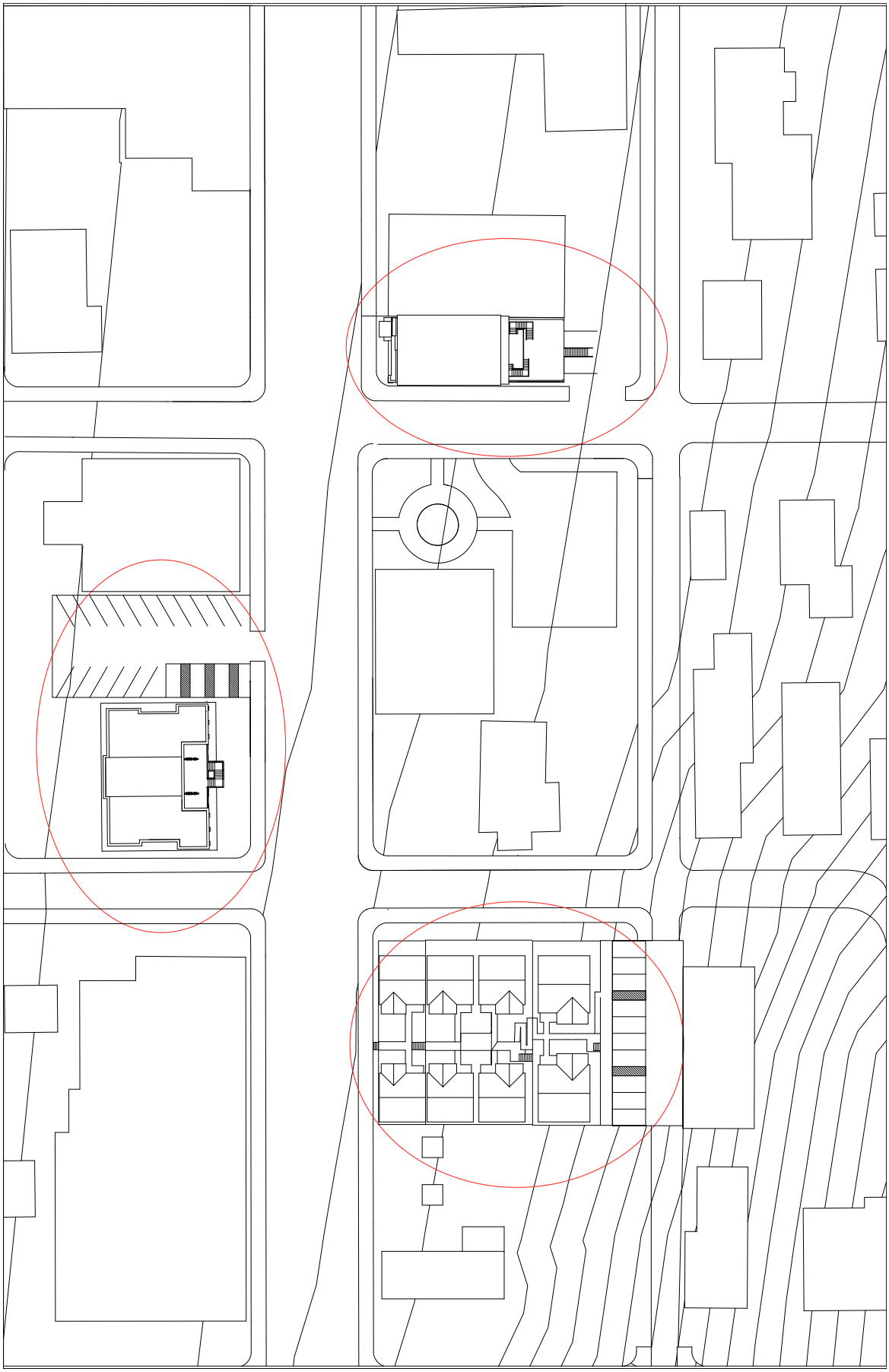
N

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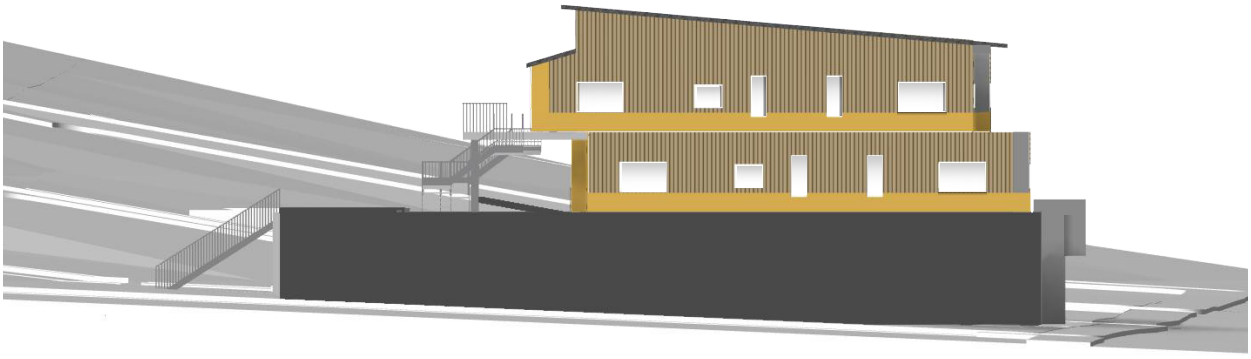
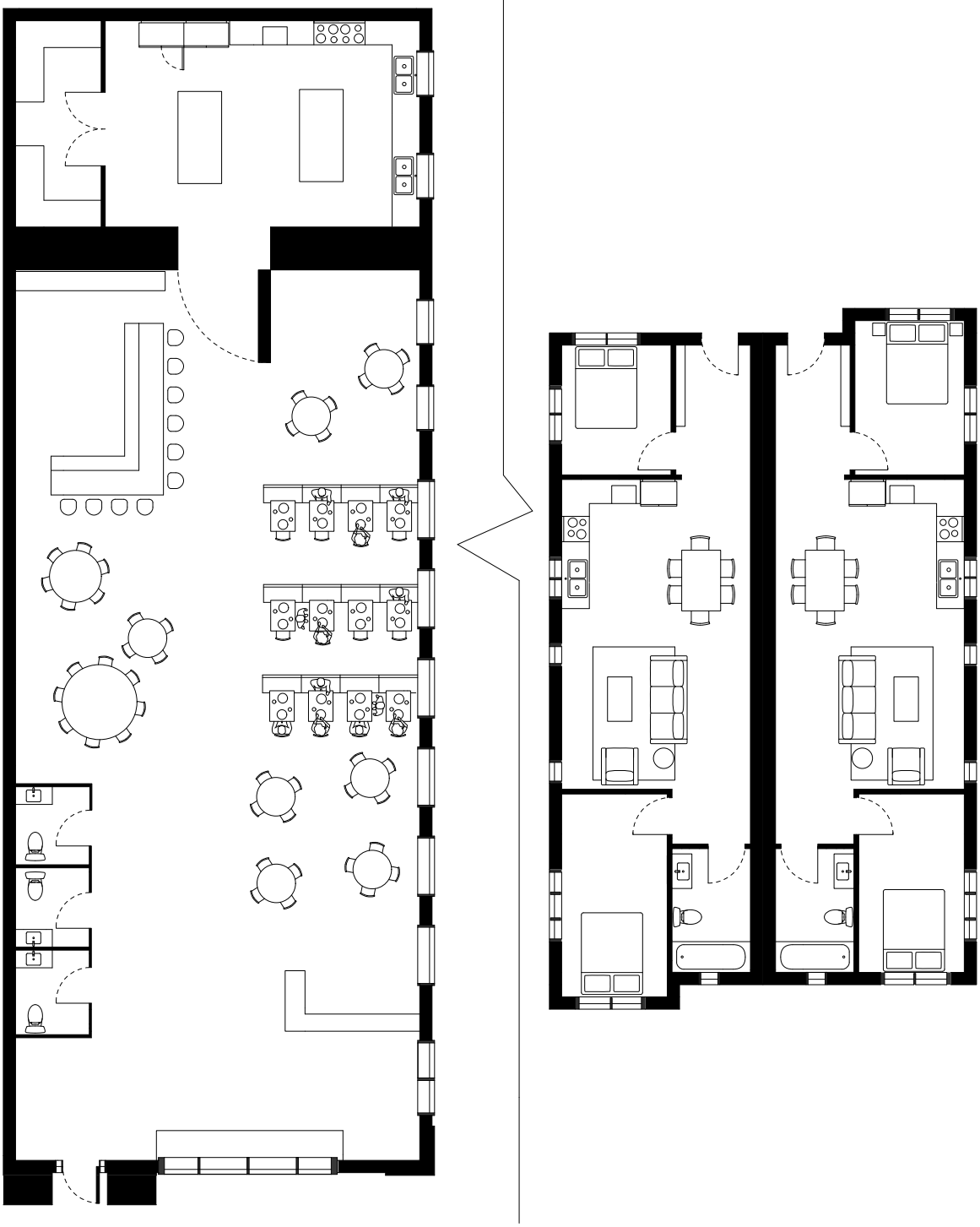
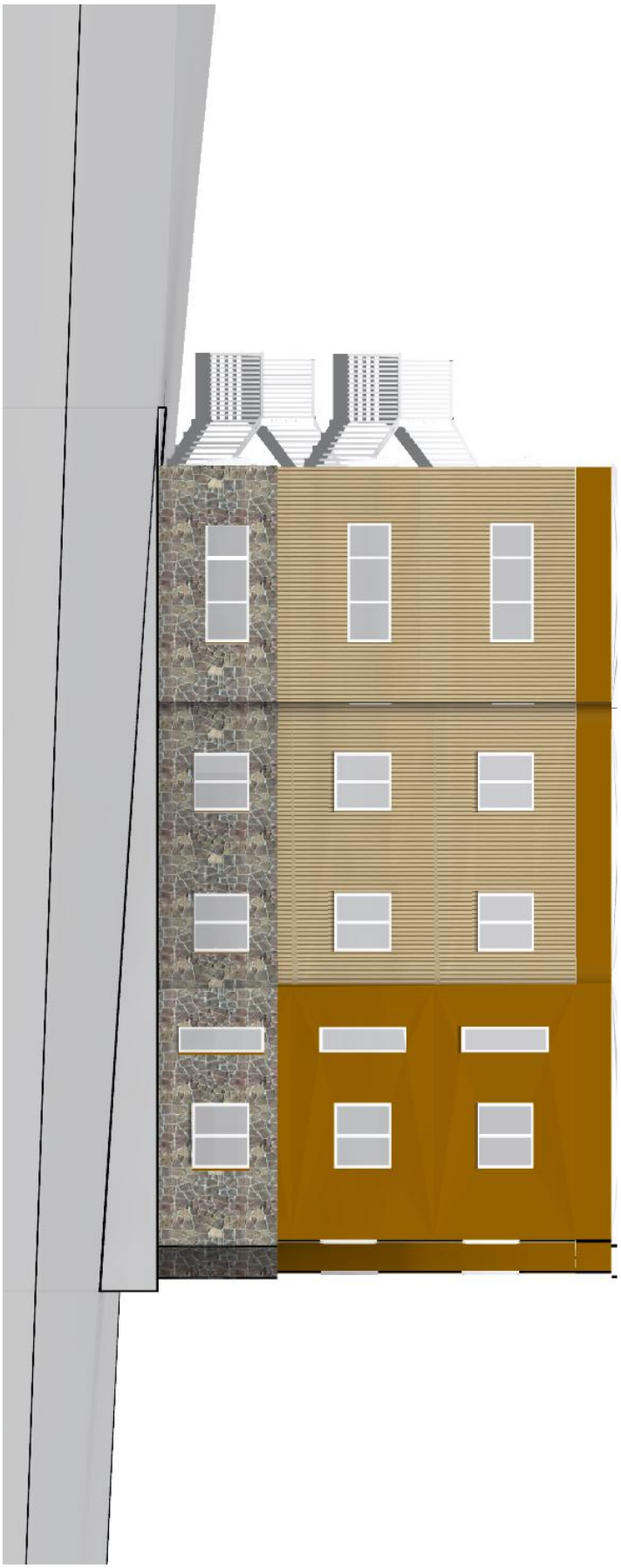
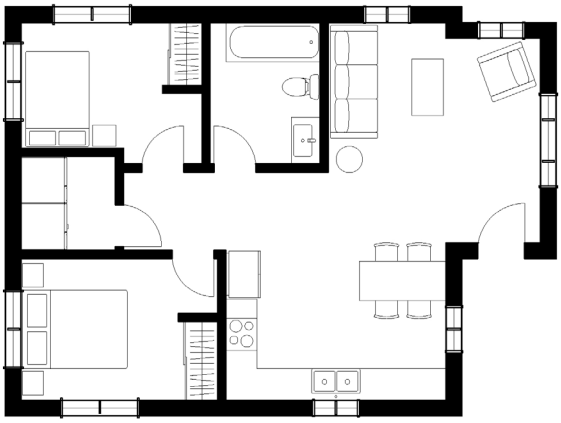
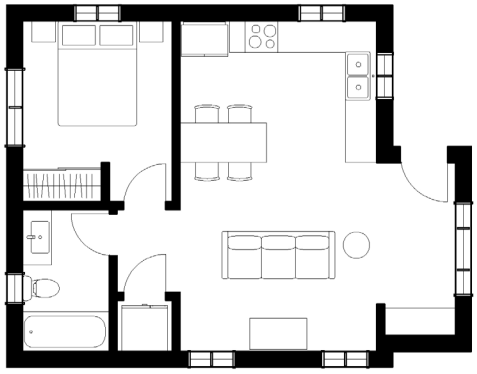








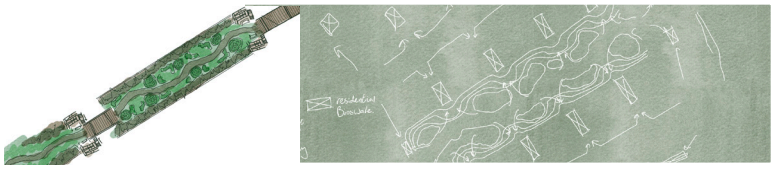


Appendix C

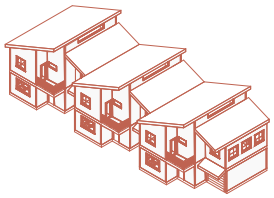
Salmon Creek Groups

Salmon Creek Village

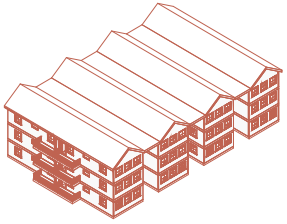
The little texas neighborhood project aims to respond to the affordability needs of Oakridge's current population, and the existing natural and built elements of the landscape along Salmon Creek. Younger members of the Oakridge community have expressed wanting an affordable smaller scale living situation, so we are aiming to develop a majority of 2 bed dwellings alongside higher density one bedroom dwellings to promote growth of younger families and boost the community. Part of our design goal is to develop with the existing environment in mind as well; utilizing the rail bridge and the path leading up to it to create a walkable and lush pathway over salmon creek. Overall we want to design within the parameters of medium density housing without having the expressed feeling of medium density and to not create the feeling of a lack of privacy.



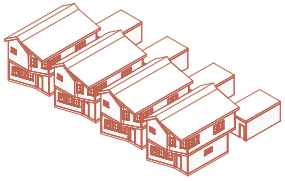
Townhouse Type A

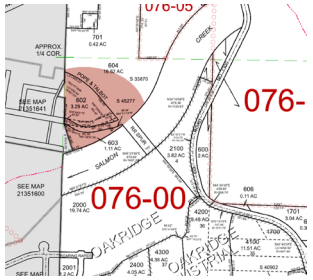


One Bed Units



Townhouse Type B





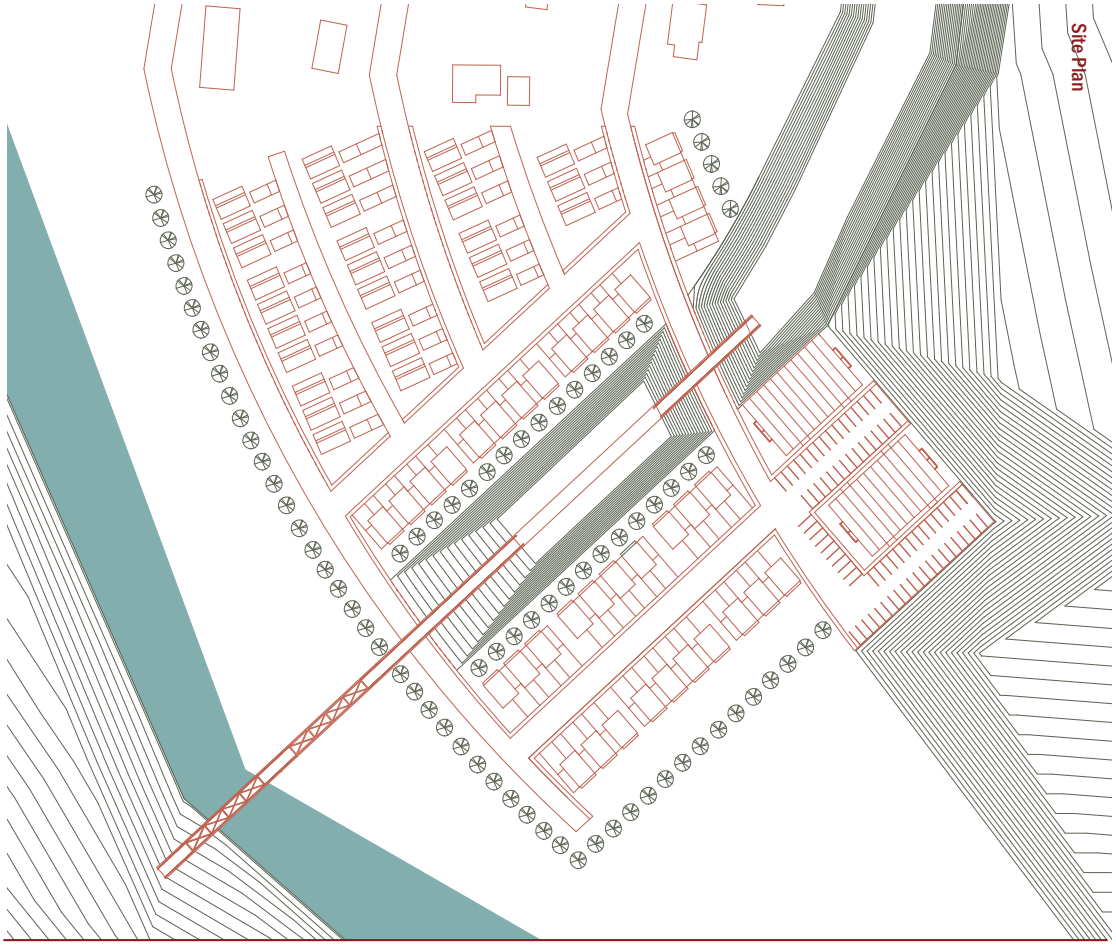
112 total units. 4.5 Total Acres, Approx. 25 units per acre.

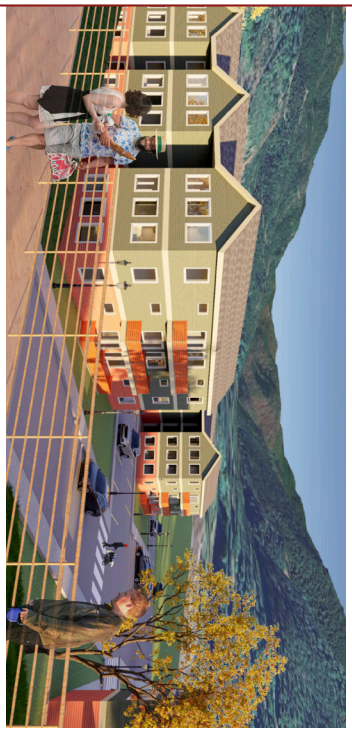
64 Townhouses:
- 36 Type A with connected garage and shared walls with adjacent units.
- 28 Type B with separate garage and 7' lightwell gap between units.

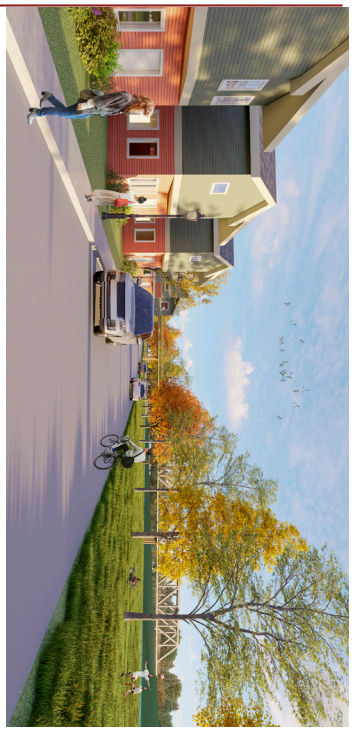
48 connected one bed units
- Spread between two separate buildings with shared parking and common spaces.

Rail Bridge redesigned into accessible elevated green space with connection to walking paths across salmon creek.

Bioswales placed between many units to mitigate rain runoff from elevated green space.

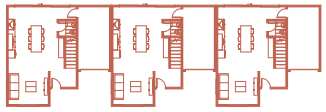

Site Plan



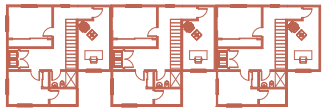


Duplex Type A:

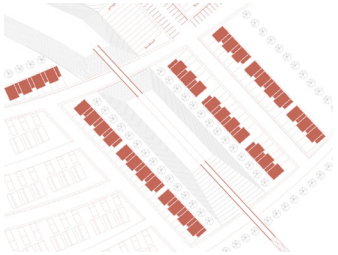
Ground Floor



Upper Floor



Scale: 1’ = 1/48”



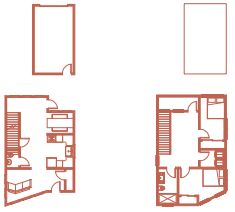
Units Within Larger Plan

The type A townhouse makes up a majority of the 2 bed units within “Salmon Creek Village.”

The unit includes a connected garage which enters into the combined dining and kitchen space, and a pair of bedrooms with a shared bathroom on the upper floor, as well as an office loft space above the garage.

The units have shared party walls between garages and main living spaces that align the units into sets of three and four, creating a rhythm that creates alleys with views into the surrounding landscape.

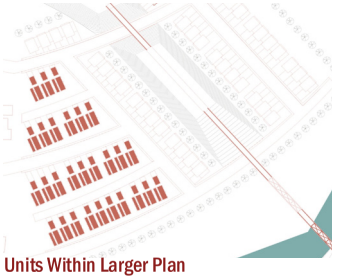
Townhouse Type B:



Ground Floor

Upper Floor

Scale: 1’ = 1/48”



Units Within Larger Plan

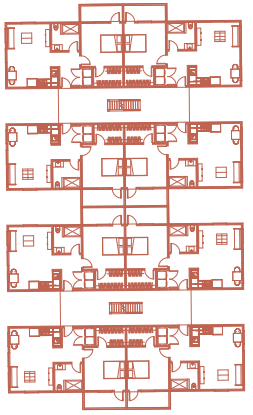
The type B townhouse is a thinner design with a yard space framed between the back of the unit and the external garage.

The type B units have a front and back enterance that both enter into mudroom spaces before proceeding into the ground floor living space. The ground floor space is broken up into a living area, kitchen, and dining booth as well as a half bath.

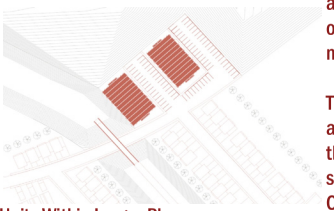
Upstairs is the two bedrooms with a shared bathroom as well as a balcony overlooking the backyard.

Each unit has a seven foot alley between them to allow light into all sides of the home.

One Bed Units:



Scale: 1’ = 1/48”



Units Within Larger Plan

The one bed units are a denser unit type that still provides both a comfortable living area and the conveniece of a private living area near others.

This unit type caters more to the older population of Oakridge who may need more of an assisted living situation. the one bed unit aims to provide a private residence that will also be convenient for those who need a family member or other assistant nearby.

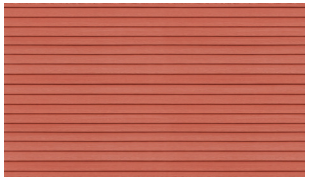
The one bed units are also closest to the central green space of Salmon Creek Village, providing a beautiful and accessible environment.

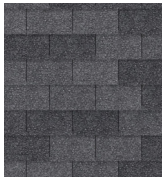
Materials:

The three unit types share a common material palette with different orientations and varied color ways.

For affordability reasons, fire resistance reasons, and environmentally friendly reasons we decided on the following materials:

Fiber cement board in different colors for siding





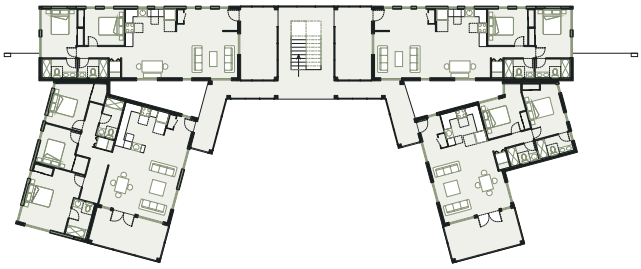
Faux Cedar shake for roofing (made of recycled plastics and fire proofed)


Salmon Creek Renewal

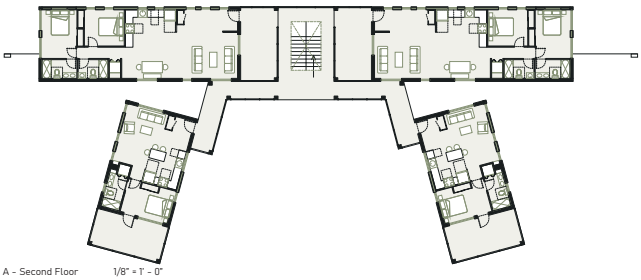

ESSENCE STATEMENT
DEAR NATURE,
WE SEEK TO PRESERVE AND PROTECT YOU, WHILE ALSO LOOKING FOR NEW OPPORTUNITIES FOR THE COMMUNITY TO ENGAGE WITH YOUR BEAUTY AND PROSPERITY. WE HOPE TO OFFSET OUR DESTRUCTIVE TRANSFORMATION BY CREATING A NEW WAY FOR PEOPLE TO LEARN ABOUT THE IMPORTANCE YOU HOLD FOR HARBORING HABITAT AND SEQUESTERING CARBON. THE NEIGHBORHOOD WILL SEEK TO CONFORM THE NATURAL FORM OF THE SITE TO LIMIT CHANGES TO THE LANDSCAPE AND HELP NEW WALKWAYS AND ROADS SYNTHESIZE WITH EXISTING PATHS AND TOPOGRAPHY.
DEAR COMMUNITY,
WE ARE LOOKING TO CREATE A NEIGHBORHOOD THAT PLACES ACCESSIBILITY AND EQUITY AT THE TOP OF OUR LIST OF IMPORTANCE. PROVIDING ACCESSIBLE ENTRANCES AND PARKING AS WELL AS AN ADEQUATE NUMBER OF TYPE A ACCESSIBLE UNITS TO ACCOMMODATE THE RANGE OF RESIDENTS. THIS NEIGHBORHOOD WILL OFFER MULTIPLE UNIT STYLES AND SIZES TO PROVIDE FLEXIBILITY NOT ONLY FOR A WIDE RANGE OF FAMILY TYPES TO MAKE THEIR HOME HERE, BUT TO ALLOW FOR FAMILIES TO MOVE WITHIN THE NEIGHBORHOOD AS THEIR FAMILY GROWS OR SHRINKS IN SIZE.
WE SEEK TO PROVIDE AFFORDABILITY THROUGH DENSITY OF UNITS AND OUR CONSTRUCTION PROCESS. USING EFFICIENT BUILDING STRATEGIES AND AFFORDABLE YET DURABLE MATERIALS, WE HOPE TO SIMPLIFY THE BUILDING PROCESS WHILE CREATING LONG-LASTING UNITS. MEDIUM DENSITY HOUSING HAS THE UNIQUE BENEFIT OF NOT ONLY MAKING HOUSING OPTIONS MORE AFFORDABLE, BUT ALSO OFFERING AN INCREASED SENSE OF COMMUNITY WITHOUT COMPROMISING AUTONOMY OR PRIVACY.


Townhouse 1" -8'
3 or 4 bed apartments
Staggered with type A accessible apartments
- refer to floor plan book
Duplex 1" -8'
2 bed
1 bed
Constructed using panelized construction
- decrease tolerance
- reduce site pollution
- less material wasted
Roofs made of SIP's
- quick build time
- quality insulation
Ground floor allows for unity between cooking eating and community
Upper floor creates privacy for residents
- private outdoor space
Tuck under parking
- minimizing dead space
Public ground floor deck

Total Number of Units = 23
- Building A – 13 units
- Building B – 10 units



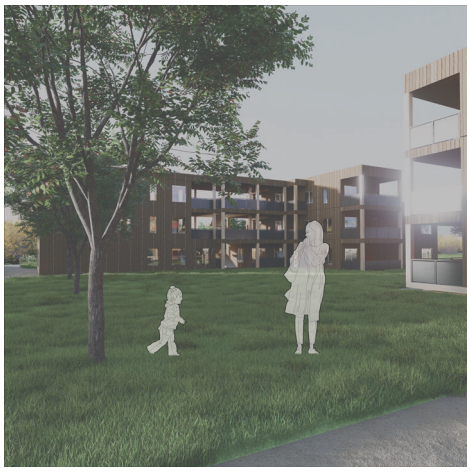
Building A - Third Floor 1/8" = 1' - 0"

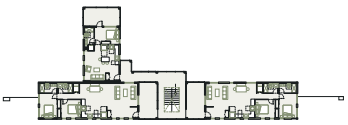


Building A - Second Floor 1/8" = 1' - 0"

Building A - Ground Floor 1/8" = 1' - 0"

Building A - Section Perspective
1/8" = 1' - 0"





Building B - Third Floor 1/16" = 1' - 0"

Building B - Second Floor 1/16" = 1' - 0"

Building B - Ground Floor 1/16" = 1' - 0"

Building B - Section Perspective
1/16" = 1' - 0"

SCI Directors and Staff

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Megan Banks	SCYP Director, University of Oregon
Lindsey Hayward	SCYP Assistant Program Manager, University of Oregon
Marsha Gravesen	SCI Fiscal and Office Manager
Grace Craven	Report Coordinator
Danielle Lewis	Graphic Designer
Emma McFarland	Graphic Designer