



london hubbard  
ADS IX | Susanne Siepl-Coates



**VISION STATEMENT** .....



**THESIS** .....



**PERSONAL CONNECTION** .....



**ABSTRACT** .....



**SITE INFO** .....



**SEATTLE FAQ** .....



**USERS** .....



**CASE STUIES** .....



**MATERIALS** .....



**SCHEMES** .....



**UNIT DEVELOPMENT** .....



**PROGRAM REQUIREMENTS** .....



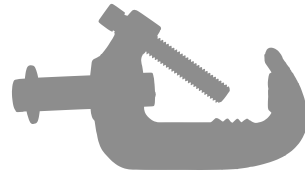


# MAKERHAUS

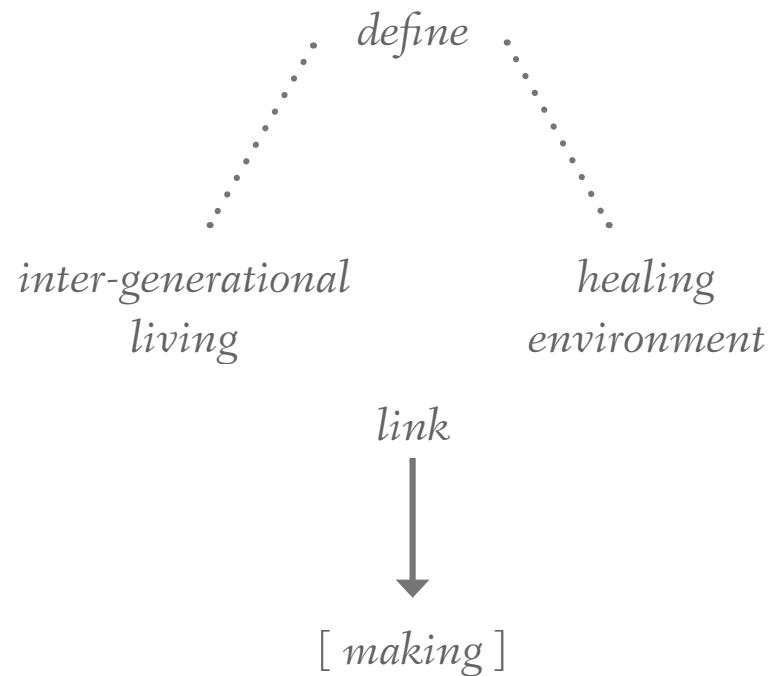
**Vision Statement:**

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An intergenerational housing community where craftspeople, artisans, makers, inventors tradespeople, retirees, and students of all ages can nurture mutual understanding, share ideas and distribute knowledge through the physical experience of making things.



# HEADHUNTING



*living + making = a purposeful life*

## **MakerHaus:**

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The thesis project will examine the ways in which “thinking” and “making” by means of a service based learning model might contribute to a healthy lifestyle across multiple generations. The proposed project will involve the creation of intergenerational housing community where craftspeople, artisans, makers, inventors, tradespeople, retirees, and students of all ages can nurture mutual understanding, share ideas and distribute knowledge through the physical experience of making things. It will specifically explore the questions:

*How can the act of making contribute to a cohesive/healthy living environment across multiple generations?*

*How can the architectural proposal reinforce the idea that living + making = a purposeful life?*





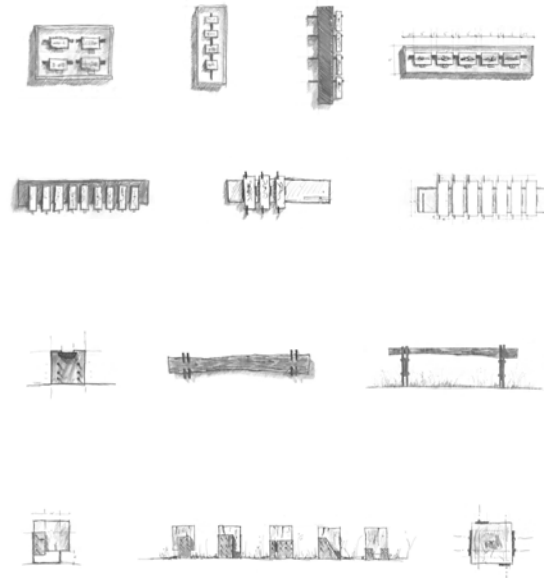


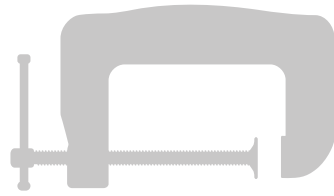
## Personal Connection:

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During my second semester of graduate studies in the architectural program at Kansas State University, I was presented with the opportunity to spend a semester designing/building furniture. My objective was to reverse a mental state of alienation from my work, which was a common occurrence in my previous three years of study. At the time, I had no idea that the act of learning through hands on experience would have such a profound impact on my life. I now firmly believe that genuine understanding is a direct result of confrontations with real things.

Throughout the semester I worked alongside a good friend while under the direction of a professor who became a solid mentor in our lives. This particular professor was over twice our age; however our shared interest in furniture and hands on learning allowed us all to stand on common ground. The experience of working together allowed us to bridge a generational gap and foster a durable relationship. This semester not only impacted the way I approach design, but became the premise for this thesis. I sincerely believe the act of 'making' can bridge generational gaps and generate healthy, long-lasting relationships.





# Development

[ *research* ]

[ *guidelines* ]

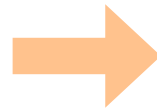
*precedents*  
(*success vs. failure*)

⋮

*site analysis*

⋮

*demographics*



*defining users*

⋮

*programming*

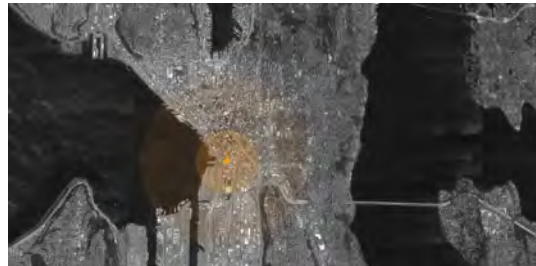
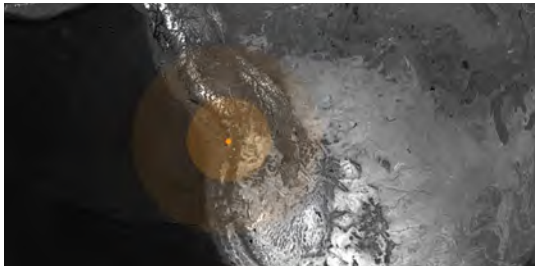
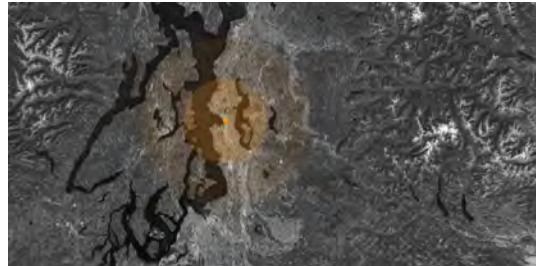
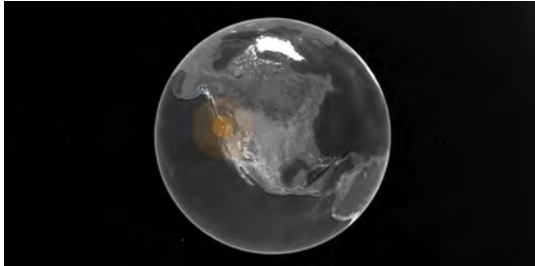
⋮

*conceptual data*

## Abstract:

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The focus of this literature review encompasses the relationship between **intergenerational interaction** and its impact on improving human **health** and **well-being**. With an increasing older population in today's society, there is a need for the reinterpretation of modern day multi-family housing, with an emphasis on **aging in place**. In the United States the population of adults aged 65 and over is swiftly increasing; it is expected to rise from 35 million in 2000 to 72 million in 2030. (U.S. Census Bureau, 2005) Sadly, younger generations often portray their elders as insignificant, damaging, dependent and detrimental to society. (Bales, 2000) However, in the past 30 years, numerous studies by means of varying methods have exposed improvement in the attitudes toward older people among younger adults and children after participating in an **intergenerational program**. (Lynott & Merola, 2007) Research has shown that participants not only feel intrapersonal development through service based learning, but the establishment of a deep relationship with their partners. (Zuccherro, 2011) The proposed project will examine the ways in which **“thinking”** and **“making”** by means of a service based learning model might contribute to a healthy lifestyle across multiple generations. This study will explore ways to integrate **“making”** spaces into an intergenerational living environment. An intergenerational housing community where craftspeople, artisans, makers, inventors tradespeople, retirees, and students of all ages can nurture mutual understanding, share ideas and distribute knowledge through the physical experience of making things.



47.6005 N, 122.3325 W

#### **Pioneer Square District:**

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Settled in 1852, the Pioneer Square district is the birthplace of Seattle, Washington. This historic district is known for its culturally rich upbringings and abundance of Renaissance Revival architecture. Analogous to nearly all Seattle neighborhoods, the Pioneer Square district lacks definitive borders. The western border of the neighborhood is defined by Alaskan Way S., beyond which lay the docks of Elliot Bay. South King Street forms the southern edge of the area while 5th Avenue South roughly bounds the eastern edge of the district. The



476005

W°









## Early History:

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Pioneer Square first gained its significance when Henry Yesler built the Puget Sound's first steam-powered lumber mill in 1852. His lumber mill was located on Elliot Bay at the foot of what is now Yesler Way. Early economic growth of the area was attributed to the booming lumber industry and would later see positive growth from Klondike Gold Rush in the late 1890's. The Great Seattle Fire of 1889 slowed the evolution of the city, resulting in complete destruction of Pioneer Square. However, Seattleites would not be deterred from a minor setback and began to rebuild the city with stronger and longer lasting materials.

At the end of the 19th century, Pioneer Square became a hub for providing gold rush stampedeers with shelter, entertainment, and gear. The Klondike Gold Rush jumpstarted the local economy and extinguished the Panic of 1893 depression in Seattle. The early 1900's were a brought on rapid expansion of the city including the construction of the Smith Tower, which at the time was the tallest building west of the Mississippi River. During this time period the heart of Seattle had migrated away from pioneer to the north in what is now considered downtown Seattle.

Pioneer square became the target of urban renewal during the 1960's. One particular urban renewal proposal triggered the destruction of the historic Seattle Hotel, making room for a parking garage. The garage is commonly referred to as the "Sinking Ship" due to its resemblance of a vessel being submerged by the sea. The destruction of the Seattle Hotel sparked a movement by preservationists to uphold the district and eventually led to Pioneer Square entering the National Register of Historic Places. In the year 1970 Pioneer Square officially became a city preservation district.







## **Amenities:**

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When it comes to modern amenities, our site rests in the middle of a fruitful territory. Anything the modern man/ woman could ever want is within walking distance of the proposed project. Public transportation stops are scattered throughout pioneer square providing users with easy access to the greater Seattle area. Sports fans are just a short walk away from the two major stadiums directly south of Occidental Square. Boutiques, cafes, fitness centers, art galleries, restaurants and numerous local businesses are just a few of the features found within the district.

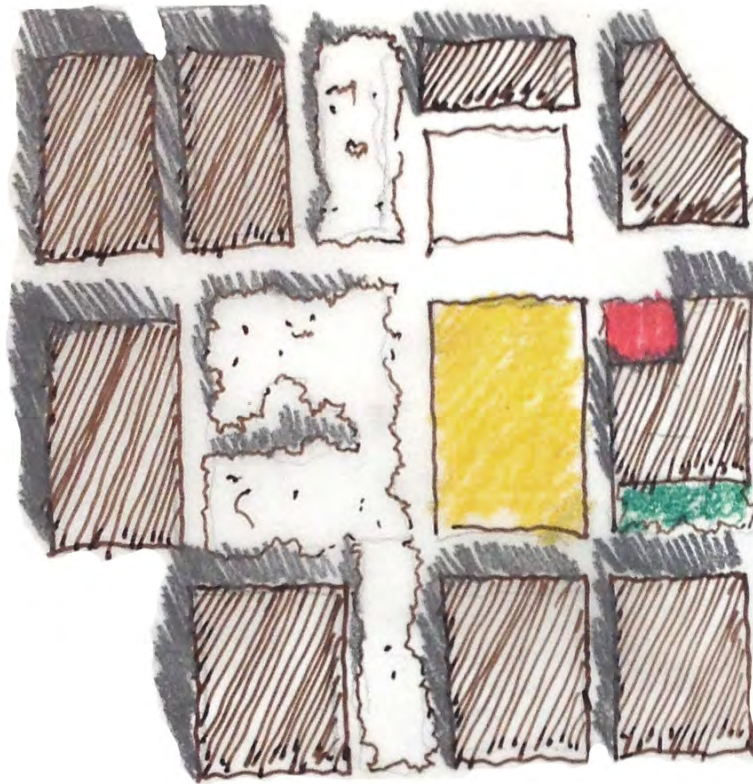


161-167 S. Washington St.  
Seattle, WA 98104

## **Observations:**

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Currently our site exists as a modern day sanctuary to the automobile. One of the downsides of the Pioneer Square District, especially near Occidental Park is the large accumulation of vagrants. Occidental park has become a hub for the homeless community rendering it a somewhat dangerous area. On the positive side of the spectrum, the site is encased within a rich historical district. The Pioneer Square neighborhood has become a vessel for modern amenities making it an attractive location for a residential development. This site exudes potential regardless of a few minor blemishes.



Project site



Vacant Pit



Waterfall Garden Park

## Alley Revitalization:

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The International Sustainability Institute began an initiative in 2008 for a “new urban network” in Seattle alleys, with a vision to revive and transform these underutilized urban areas into vibrant public spaces. This project began with the conversion of Pioneer Square’s Nord Alley, Located between Occidental Ave S and 1st Ave S. The space was repurposed for planned public events, such as openings for temporary site specific art installations and gatherings to view sporting events.

The Waterfall Garden Park located directly east of our site is another integral component to the character of pioneer square. This secluded park denotes the original 1907 office of American Messenger Service, the precursor of the United Parcel Service (UPS). This park offers occupants of Pioneer Square a chance escape the noisy streets and unwind. (Trail to Treasure, 2013)





## Urban Dock:

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The proposed project will contribute to the idea of “alley revitalization” by implementing a new urban oasis within the city. Our site abuts a vacant lot that is currently a massive pit. This pit will be reincarnated as a usable space that gives back to the city of Seattle. An “urban dock” constructed in this pit will provide a location for displaying work produced from “MakerHaus” in addition to creating a new escape within the city.

# FAQ:



Considered the most literate city in the U.S.



Hempfest: largest “legalize it” festival in the U.S.



Second most glass blowing studios in the world



more people bike to work in Seattle than in any other us city



second most live music performances per capita



44<sup>th</sup>

ranks 44th among major U.S. cities in average annual rainfall

38"

receives 38" of rainfall annually. Days per year w/ precipitation

63%

cloud cover types over 12 months. 63% overcast 33% clear 25% mostly cloudy 13% partly cloudy



hot months: June - September  
highs in the 70's  
lows in the 50's



cold months: November - March  
highs in the 50's  
lows in the 30's



18% warm	(75-85)
33% comfortable	(65-75)
75% cool	(50-65)
84% cold	(32-50)
13% freezing	(15-32)



69%

White

14%

Asian

8%

African American

5%

Multiple

4%

Other

# USERS:



## Robert & Ethel Bateman

- Robert : 61 year old philosophy professor at W.U.
- born and raised in Seattle, WA
- interested in classic car restoration
- 4 years from retirement
- Ethel: 59 year old art professor at W.U.
- teaches ceramics w/ background in oil painting
- interested in healthy organic lifestyle
- both love theater and live music
- have a studio at their current residence
- 2 kids 7 grandchildren



## Brad Wagner

- 24 year old graduate student studying animation
- genius at all things computer
- originally from Canada
- interested in apparel and textile design
- expert thrifter
- supports up and coming bands
- collects vintage board games
- loves entertaining
- believes cannabis should be legalized
- hopes to start his own clothing line



## Albert Schaefer

- 64 years old from Northern California
- Widower with 3 kids & 4 grandchildren
- heavy equipment operator for over 30 yrs
- loves fishing, wood working,
- interested in boat making and sailing one day
- vietnam war vet
- favorite bands: “The Eagles” “Led Zeppelin” “CCR”
- hip replacement 8 years ago

*craftspeople*

*artists*

*tradespeople*



## Ivy Kuldell

- 68 year old from Utah
- retired english teacher who loves poetry
- joined a local quilting club 4 years ago
- 3 children 8 grandchildren
- 7 year widow of a high school shop teacher
- loves painting in her studio apartment
- regularly attends poetry readings and art installations
- limited mobility

*students*

*inventors*



## Eric & Claire Cooper

- happily married for 6 years now
- having a baby girl in May
- both 28 years old
- Claire is an architect working in Seattle
- Eric is an Aerospace Engineer working in Seattle
- moved from North Carolina
- Claire has an interest in ceramics and fine art
- both recently became interested in print making
- Eric brews his own beer every October for friends
- both play instruments and were in a band in college

*makers*

*retirees*

*artisans*

# OBJECTIVES:

## Active Building



- Creating a structure that opens up to the surrounding environment for multiple uses
- Implementing an active facade that allows for cross ventilation, shading, and vertical material transportation

## Live / Make



- Providing both units and workspace that coexist together
- Generating internal connections between “dwelling” and “making”

## Sustainability



- Implementing sustainable design solutions (passive and active) into the construction and design of the project
- Increasing building longevity by allowing for future adaptive reuse

## Network



- Providing tenants with access to all work-spaces while allowing outsiders to purchase memberships
- Developing a model for future “Maker Houses” to connect with each other throughout the city



## Health /Well-Being



- Designing spaces on behalf of “aging in place”
- Using principals of universal design

## Service Learning



- Implementing inter-generational service learning programs
- Establishing lasting relationships across multiple generations

## Vernacular



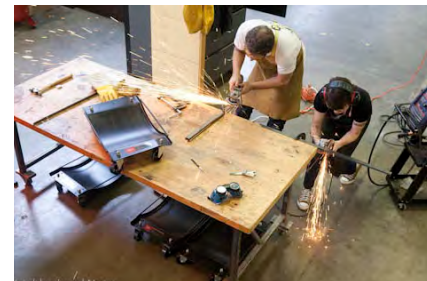
- Using as many local resources as possible in the creation of the building
- Engaging the surrounding neighborhood while

## Linkage



- Establishing a clear relationships to the surrounding neighborhood
- Creating spaces for a “Makers Market” where outsiders can purchase goods made at “MakerHaus”

# ADX - Portland, Oregon

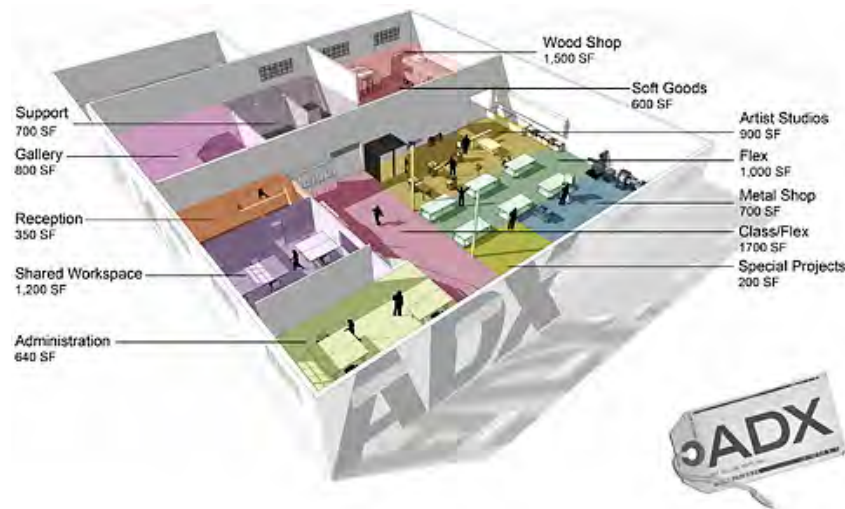


## Takeaway:

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The mission statement of ADX explains the unique character of this collaborative community: “We’re your gym for a better kind of workout.” “Everyone is welcome in our 12,000-square foot facility, high-profile designers work alongside students, retirees share their knowledge with novice builders, and entrepreneurs mix with hobbyists.” “We give you access to the tools, the space, and the community to help you create anything you dream up.”

MakerHaus will implement a similar business model allowing outsiders to purchase a membership, allowing access to workspaces and tools within the facility. Following the principles behind ADX, the proposed project will create a collaborative network within the city.





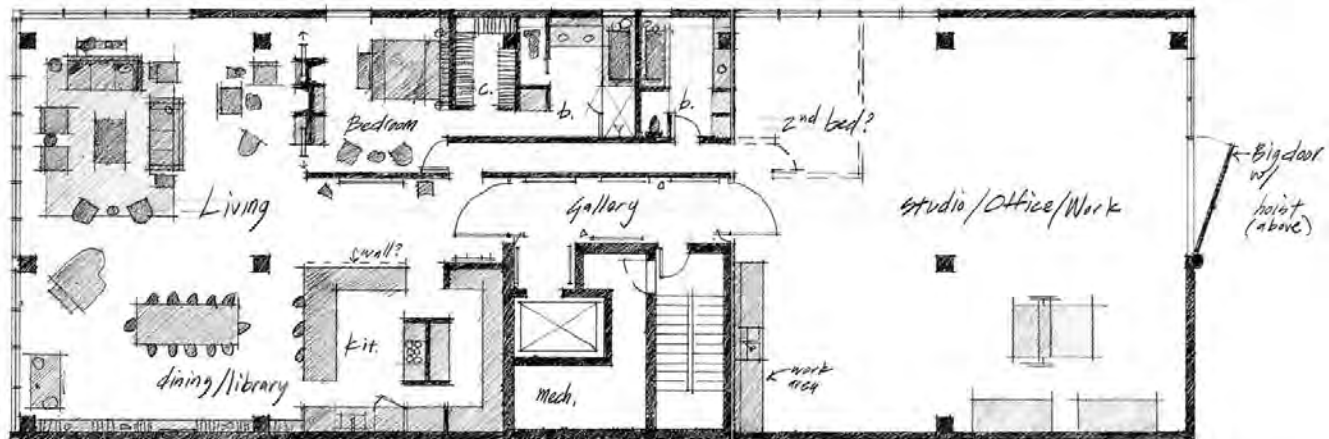
## Olson Kundig Architects: “Art Stable”



## Takeaway:

This project rests in the rapidly developing south Lake Union neighborhood of Seattle. The seven-story structure was designed as mixed-use building with highly adaptable live/work units. Each unit is an open plan designed to be flexible and adjust over time. Art stable was zoned for both residential and commercial use.

The front and back elevations of the building are both active facades. The alley side features large operable windows topped with a davit crane. This system allows users to easily move oversized objects into their unit while actively ventilating the space. Sustainable features have been included into the construction of the building including: a geothermal heat pump system, in-floor radiant heating/cooling, natural ventilation, and accommodations for future use of solar/photovoltaic technology.





# Gray Organschi Architects: "Storage Barn"

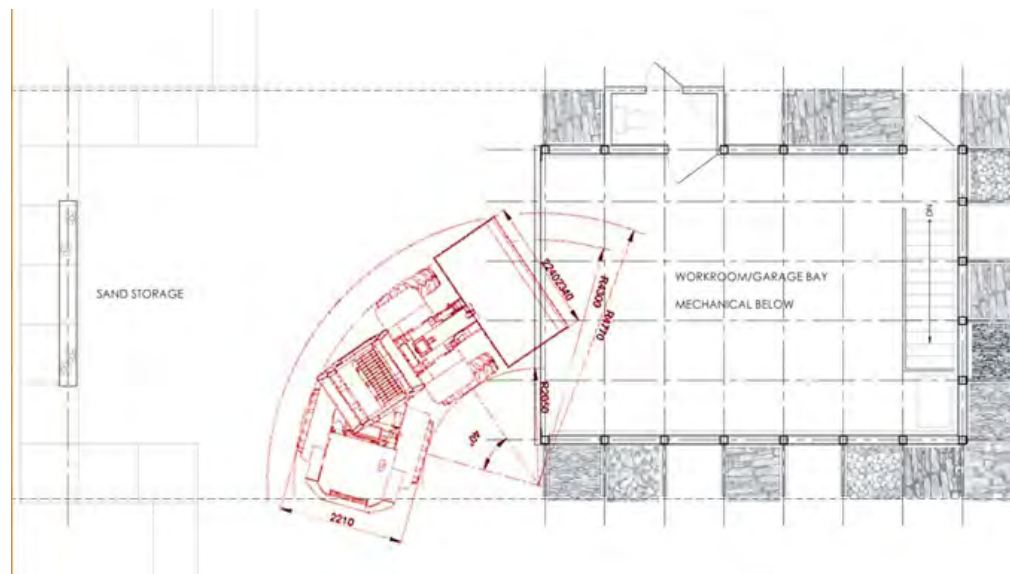


## Takeaway:

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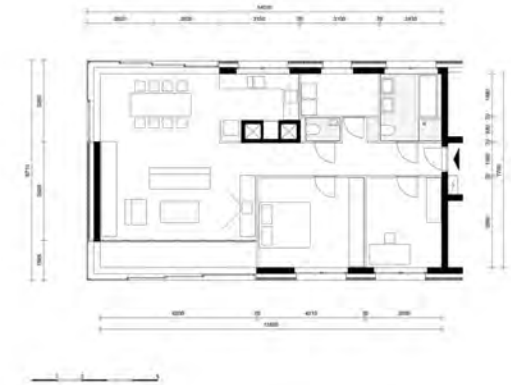
This workshop/storage facility was designed for a landscaping contractor. The building utilizes natural light and photovoltaic roof panels to produce electricity for the building. Storage barn currently produces enough electricity to sustain itself while selling its surplus of energy back to the regional utility company. This modern reinterpretation of storage rack displays a unique character with an always changing exterior as materials are used and resupplied.

This structure is specifically tailored to the client's loader. As an integral part of the structural steel frame, a series of cantilever steel shelves were developed to meet the needs of the machine's wheelbase, loading capacity, turning radius and maximum reach. MakerHaus must parallel this level of specificity in order to create an efficient working environment with adequate levels of material storage.





# Johannes Kappler Architekten: "Palladiumflat"

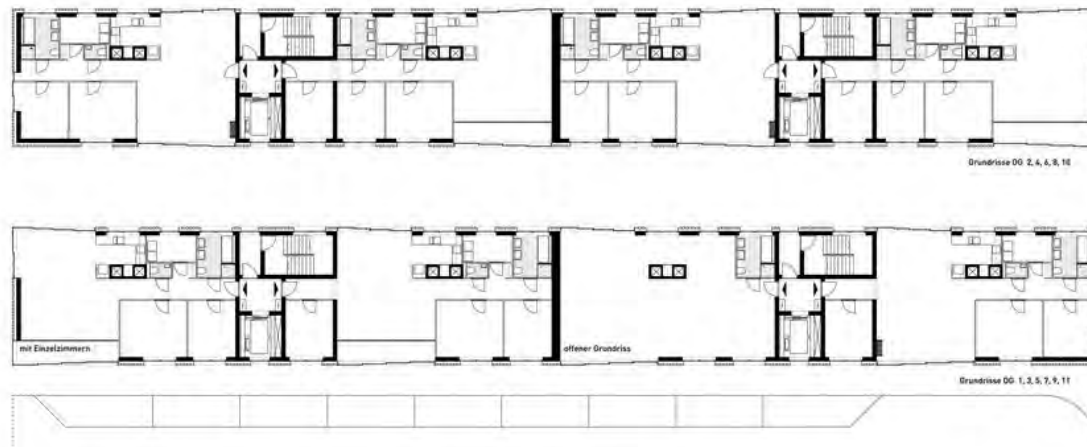


## Takeaway:

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These flats differ slightly from traditional sheltered housing schemes. The building is designed for users above 50 who previously lived in detached house, and are looking for a new environment suited to their needs as they grow older. Each flat is column free, allowing the space to be flexible and adapt as the needs of the user change.

The design aims to create a similar environment to that of suburban housing. Privacy and generous amounts of outdoor spaces were incorporated into the design to create a homey feeling for residents. Johannes Kappler arranged the floor plan so that each floor is flipped from the previous plan. This is revealed in the alternating window pattern of the façade. Arranging the floor plans in this manner allowed for eight different types of flats within the structure. Overall this project displays a clear organizational strategy that still allows users for flexible use within each living unit.





## **Memory and Sentiment:**

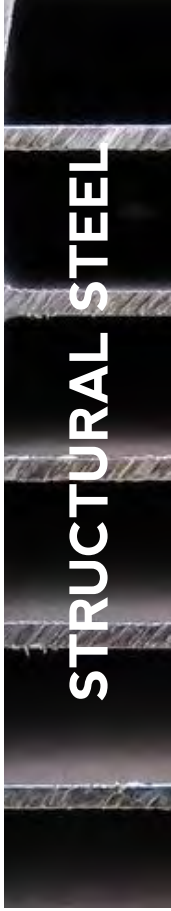
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“I imagined a child who would form indelible impressions of this table and know that it was his father’s work.” “I imagined the table fading into the background of a future life, the defects in its execution as well as inevitable stains and scars becoming a surface textured enough that the memory and sentiment might cling to it, in unnoticed accretions.” “More fundamentally, as Hanna Arendt writes, the durable objects of use produced by men “give rise to the familiarity of the world, its customs and habits of intercourse between men and things as well as between men and men.” “The reality and reliability of the human world rest primarily on the fact that we are surrounded by things more permanent than the activity by which they were produced, and potentially even more permanent than the lives of their authors.”

- *Shop Class as Soulcraft*



CONCRETE



STRUCTURAL STEEL



ZINC PANELS



CORTEN STEEL PANELS



WOOD SIDING



SLATE TILES



RECLAIMED WOOD



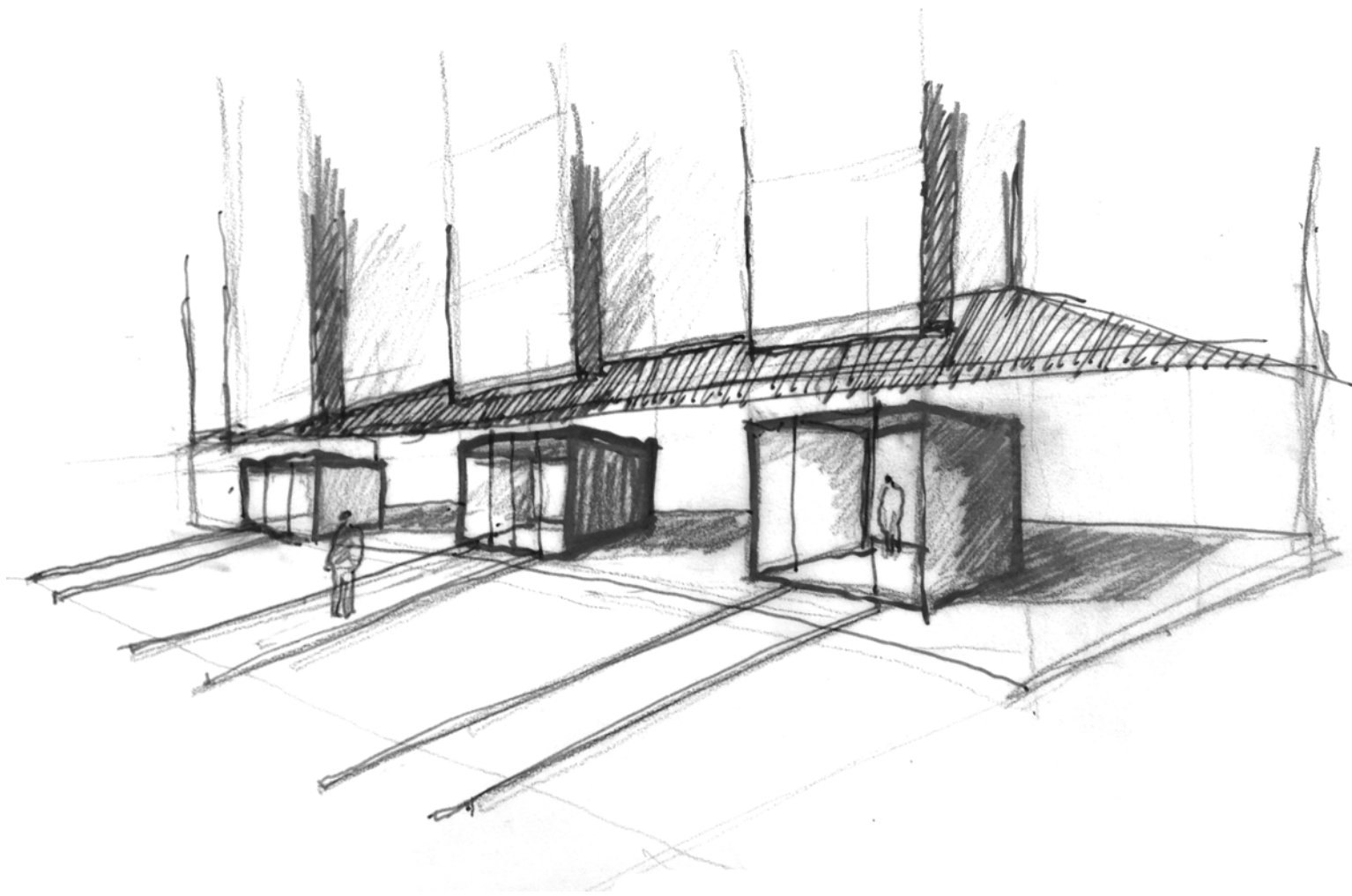
PLYWOOD

**Construction**

**Exterior**

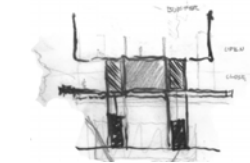
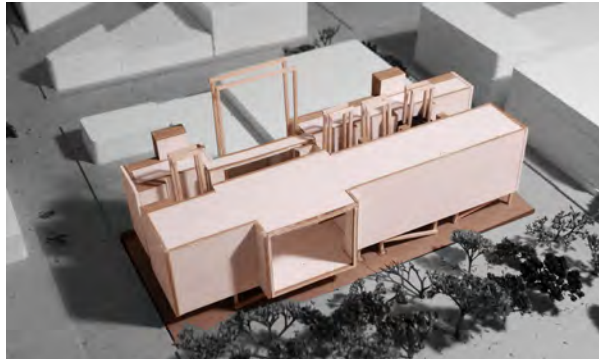
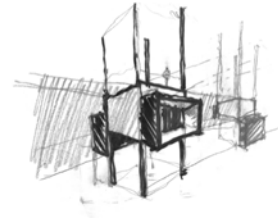
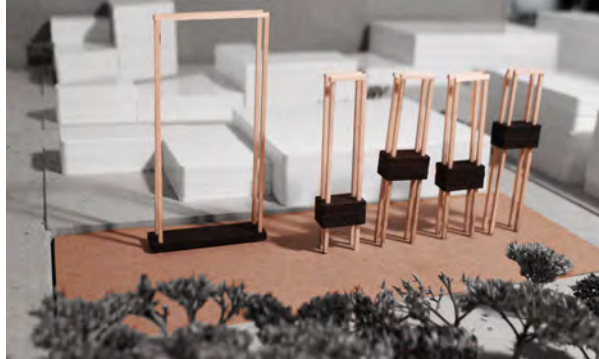
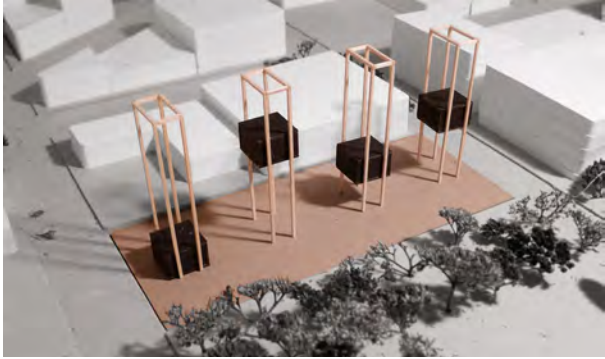
**Interior**

# CONCEPTUAL DESIGN



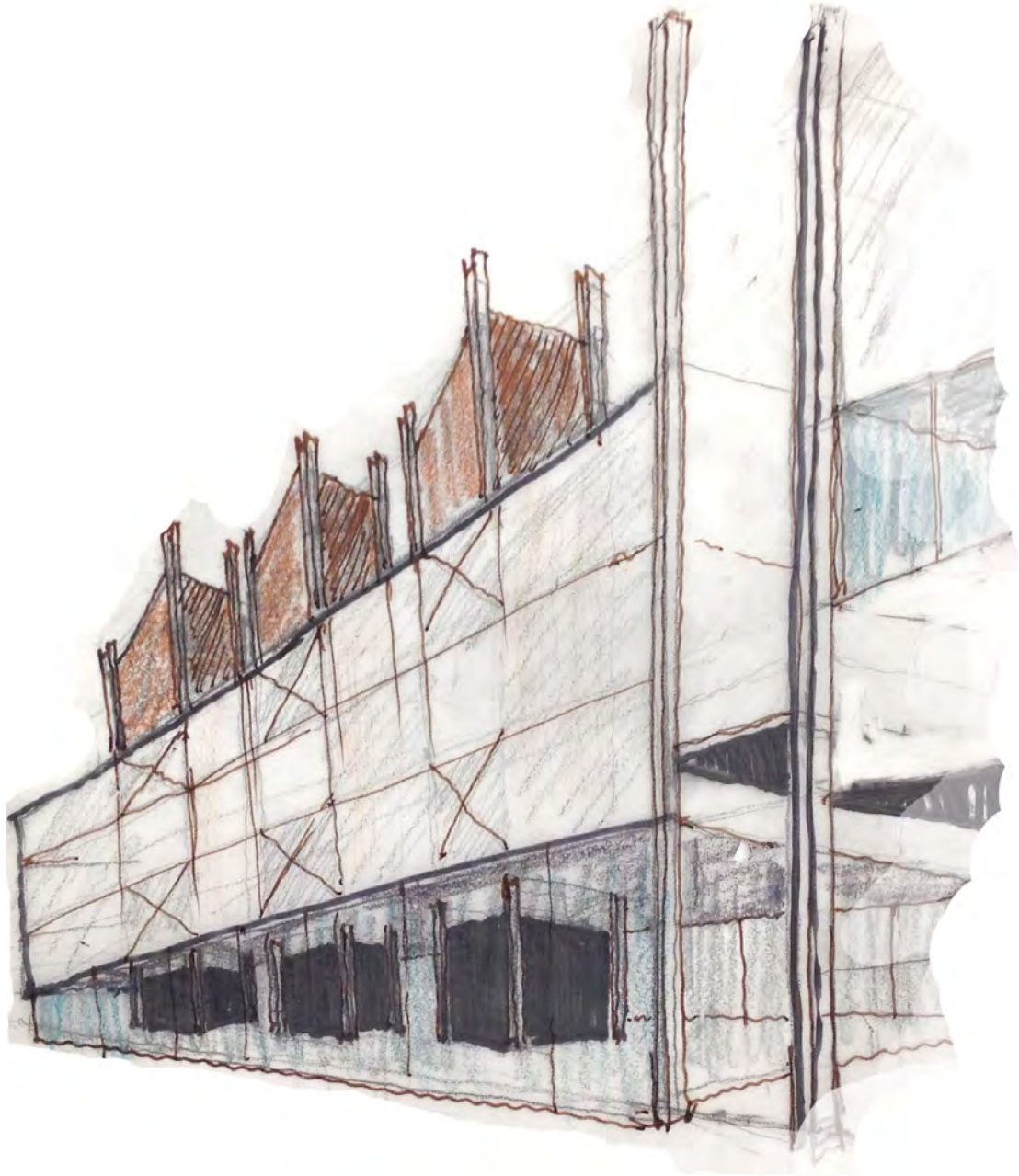


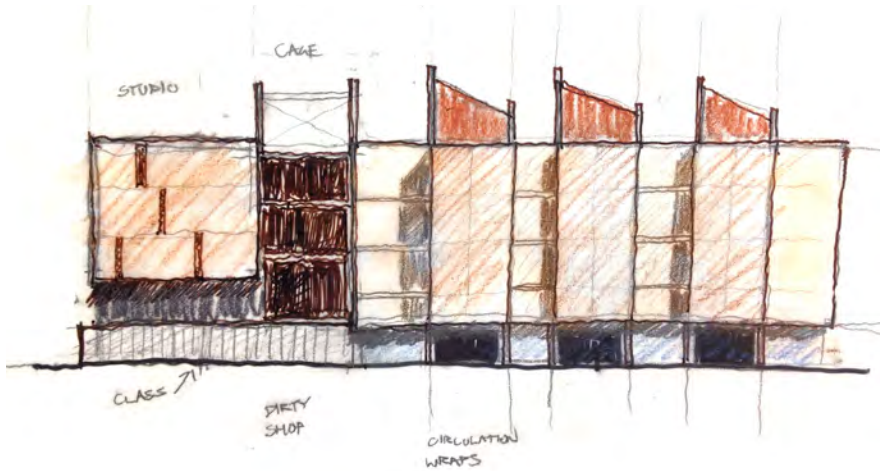
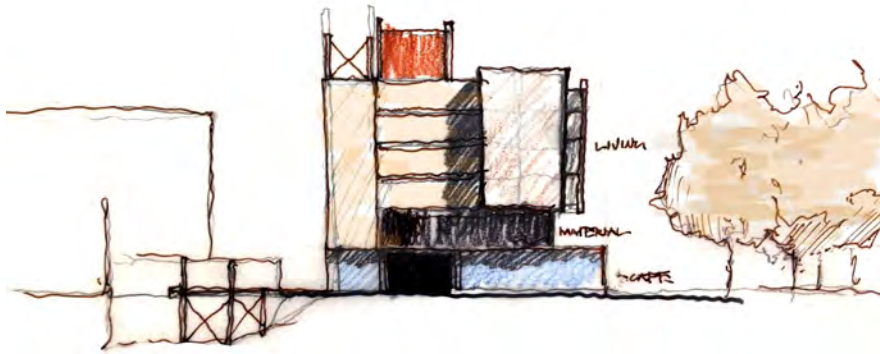
# MAKER BOXES



## The Maker Box Scheme:

The concept behind this design was to create a connection between living and making. “Maker Boxes” become vertical connections throughout the building. At a given time the maker boxes receive items made throughout the building and transport them to the street level. Units and work spaces are interwoven throughout the structure to create a cohesive and supportive living environment across multiple generations

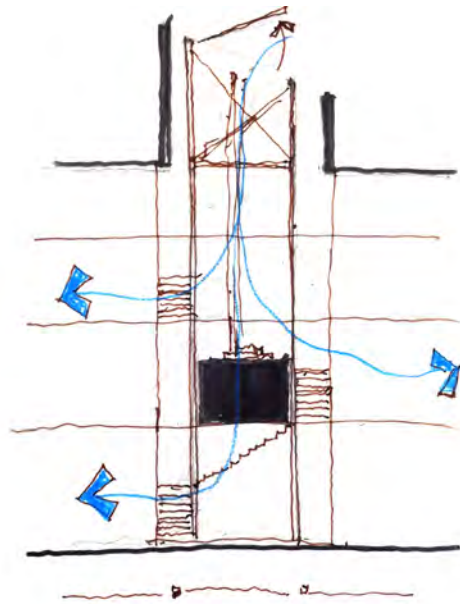




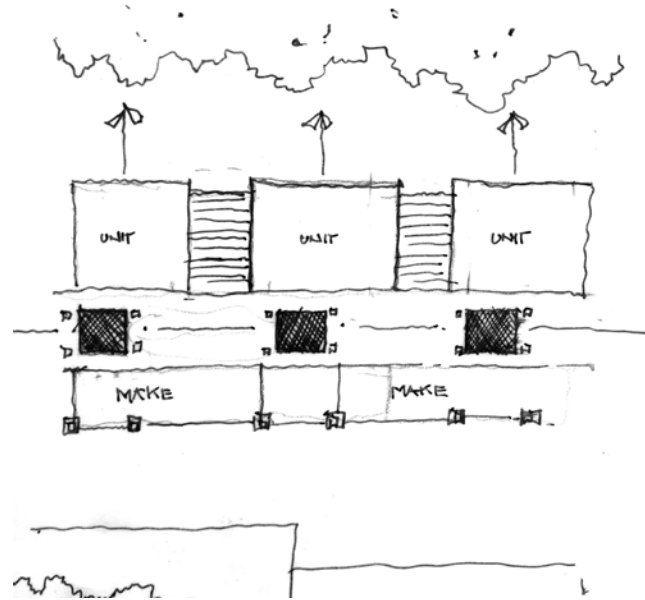
## Plan & Elevation Studies:

In this scheme, living units are zoned in two separate areas on the site. A higher percentage of the units are adjacent to Occidental Park and look out to Elliot Bay above the tree canopy. Live / Work units are located at the north end of the site with views of the beautiful downtown. The large fabrication shop separates the two living zones while smaller studios face the alley with downtown views.





• VENTILATION  
 • DAYLIGHTING  
 • CIRCULATION  
 • MAKER BOX



• EACH UNIT  
 HAS DIRECT  
 VIEW TO THE  
 PARK AND  
 "MAKING"

• ELEVATORS  
 ACT AS BUFFER  
 AND PLEX SPACE

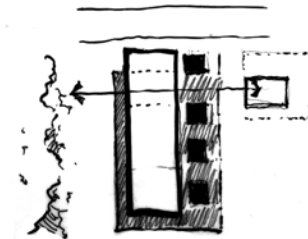
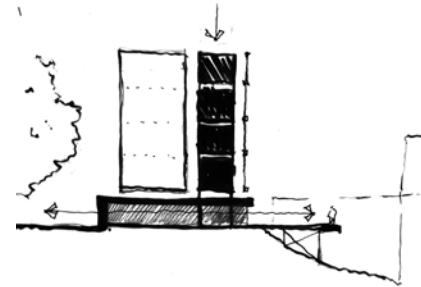
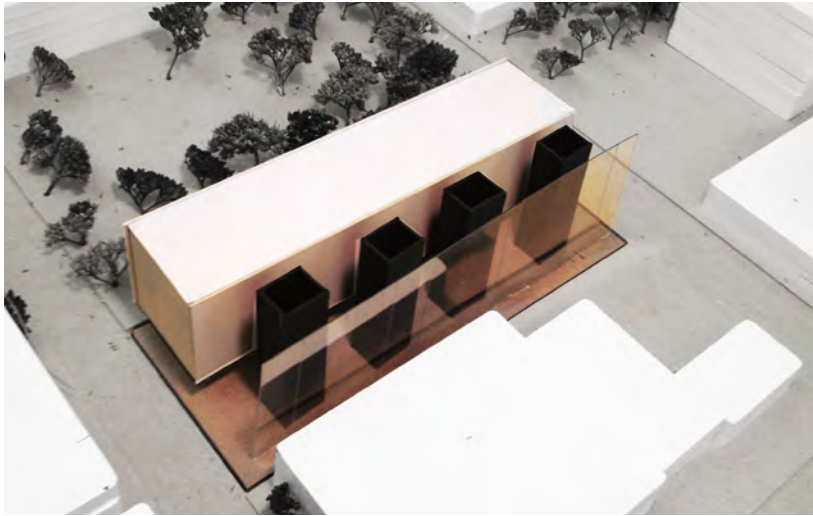
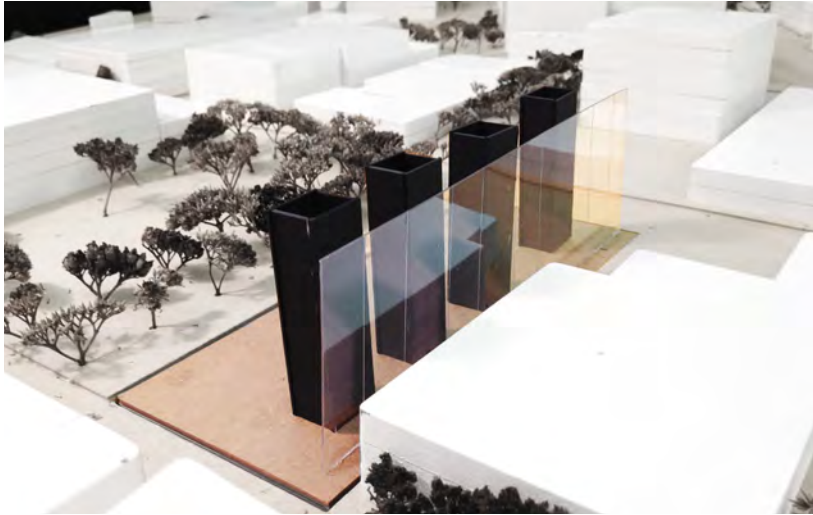
• HORIZONTAL  
 AND VERTICAL  
 CONNECTIVITY

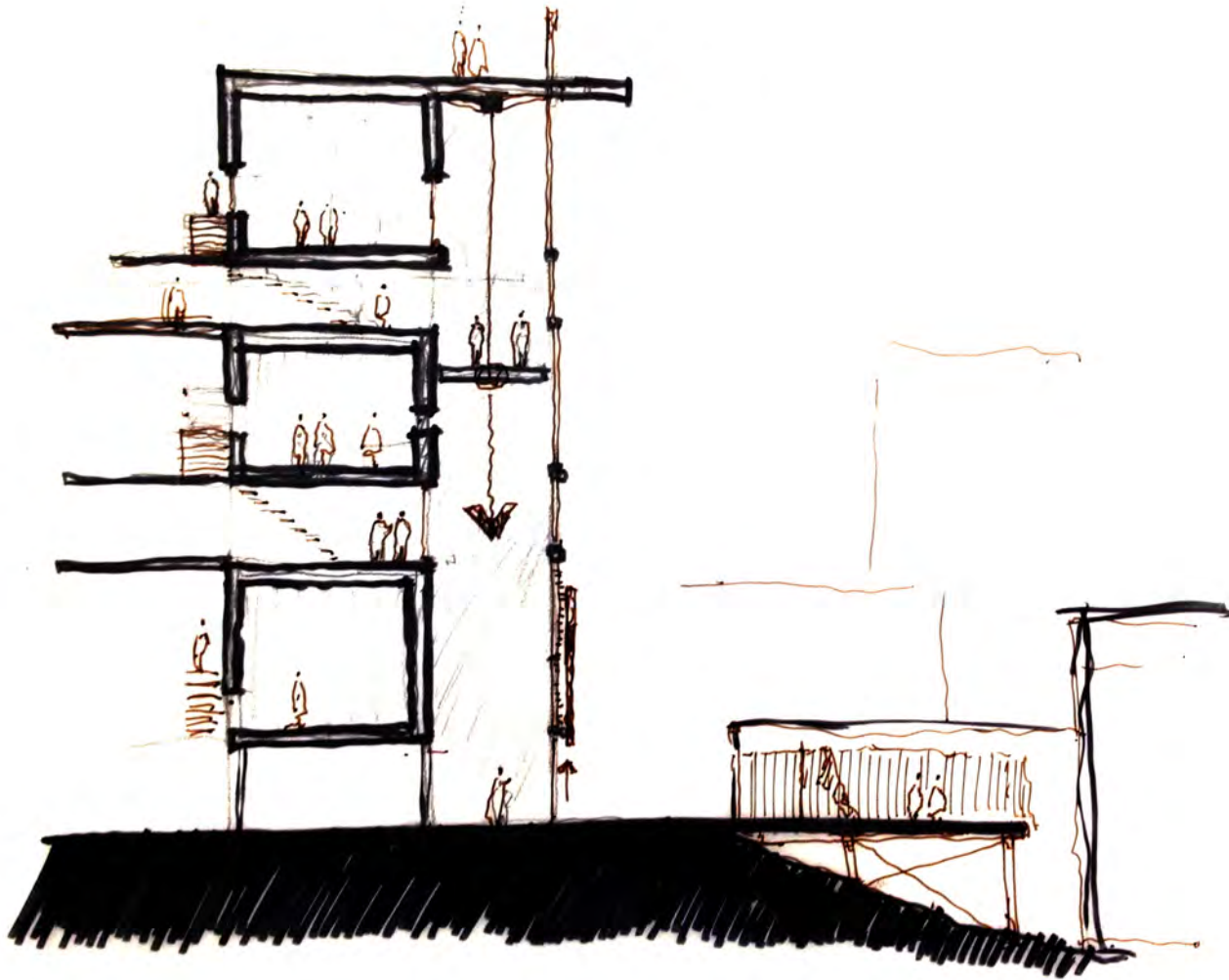
## Maker Box & Live/Work Connections

Each maker box is a custom freight elevator that carries items made within the building down to the ground level. These massive elevators transform into market spaces at the ground level opening up to the public for the sale of hand crafted items. The large shafts that house the elevators serve multiple purposes, allowing daylight and ventilation to enter the building. Vertical circulation occurs around the perimeter of each maker box. Units have direct access to creative spaces within the building.



# MAKER TOWERS





## Maker Towers:

This scheme is a variation of the maker box scheme. Each tower houses different programmatic functions including: artists' studios, ceramics studio, classrooms, shared workspaces and community rooms. The towers are directly adjacent to the alley while living units face Occidental Park. A large gantry crane runs along the east end of the building. This crane is used to transfer materials to different studio spaces and transport objects produced in the towers down to ground level. Larger fabrication studios that require more floor space and adequate ventilation are brought to ground level.

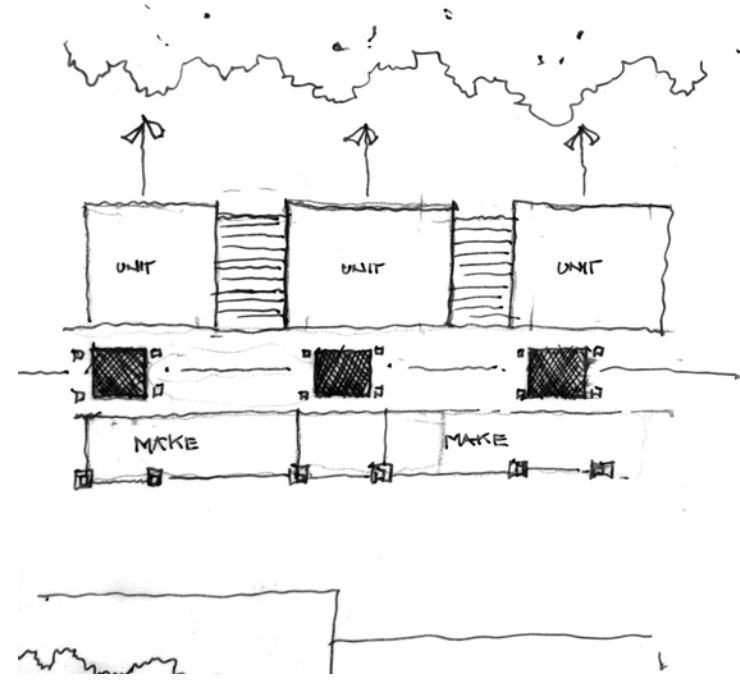
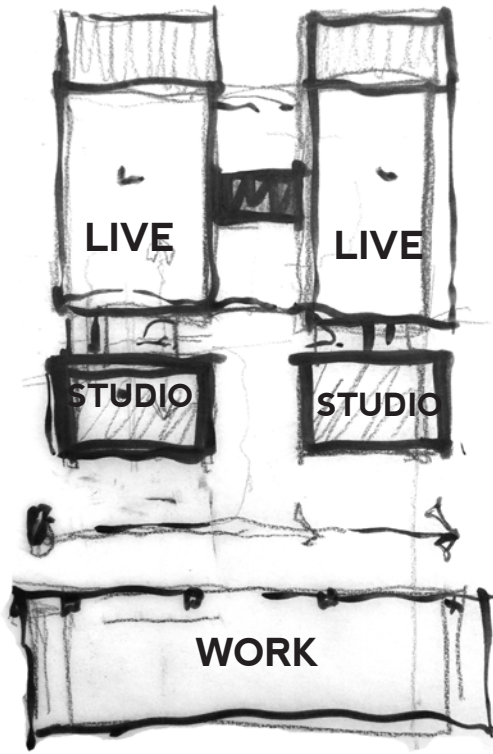
# UNIT STUDIES



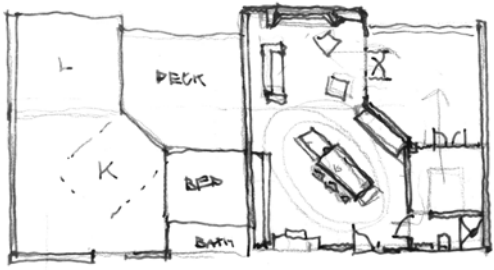
10 @ 900 s.f. = 12,600 s.f.

12 @ 1600 s.f. = 16,000 s.f.

6 @ 2,700 s.f. = 16,200 s.f.



- EACH UNIT HAS DIRECT VIEW TO THE PARK AND TO "MARTINA"
- ELEVATORS ACT AS BUFFER AND PLEX SPACE
- HORIZONTAL AND VERTICAL CONNECTIVITY



## Units

Units are designed to connect with work spaces and Occidental Square. Each unit has an outdoor deck for sun bathing and recreation. Walkability within the unit is crucial for aging generations. The layout is resembles a track so older individuals can exercise within their apartment.



# BUILDING PROGRAM

- Live
- Make
- Park
- Circulation



