

ALT Mercer:
Rethinking the Development and Design of the Mercer Mega Block

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Committee:
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Susan Jones

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Abstract

ALT Mercer:

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There has been a shortage of housing across the United States that has led to the exponential increase of rent. Some of the leading challenges of building more housing is the high cost of construction and labor shortage, and as a result, has led developers to build luxury housing, almost exclusively, because it is the only type of project that financially works. When looking at the challenges, construction costs appears to be the easier challenges to combat. Through this thesis, the intent is to locate a opportunistic property that was located in an area that has scarce affordable housing. Through this process, the Mercer Mega Block became the subject site of this thesis and is being worked through design and financially to work exclusive as a site for affordable housing. Furthermore, through the process of this thesis, the focus of this project has become household of 60 percent AMI, workforce, and families. As a result of the South Lake Union's corporate centered culture, there is a lack of a sense of community that has created a neighborhood where people come to work and leave at the end of the day. This thesis has developed a design that focuses of families and workforce and takes special attention of the ground level, as a result of building high-rise affordable housing, and attempts to establish a dynamic ground level for all users to come together and be an asset to South Lake Union. Finally, a financial plan has been made for this project and has proved to be a financial viable project, which concludes this project to be a good contender to be an absolute affordable housing project that the City of Seattle can take on, instead of selling the parcels of the Mercer Mega Block.

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An aerial night photograph of Seattle, Washington, showing the city skyline, waterfront, and the Space Needle. The city lights are illuminated against the dark sky, and the water reflects the lights. The Space Needle is a prominent landmark on the right side of the image.

ALTI MERCER |

RETHINKING THE DEVELOPMENT AND
DESIGN OF THE MERCER MEGABLOCK

CHAPTER ONE: Introduction

The Housing Crisis

The shortage of housing throughout cities and metropolitan areas across the country has reached a critical point. As people migrate toward cities in search of jobs, education, and economic opportunities, the demand for housing in the most popular and economically productive regions has outpaced the production of new housing. As a result of the dramatic shifts in generational preferences and household demographics trends, the migration to cities over the past decade are at the highest since World War II, while housing production has fallen to historic lows. This trend has created a supply and demand imbalance that is reflected in today's home prices, economic displacement of lower income families, and communities of color, and has exasperated the homelessness issues.

¹ Baron, M., Buchman, M., Kingsella, M., Pozdena, R., Wilkerson, M. (2018, April 9). Housing Underproduction in the U.S. Retrieved May 22, 2018, from <https://www.upforgrowth.org/research>

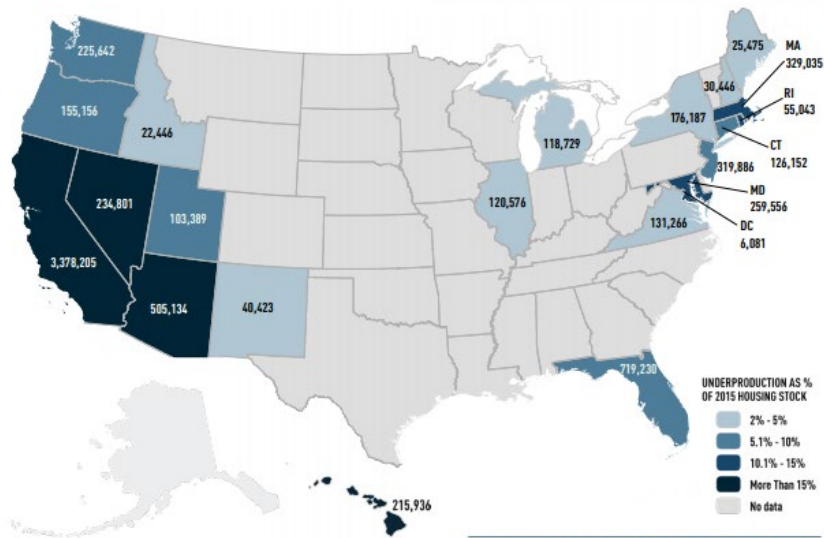
The Up for Growth National Coalition, Holland Government Affairs, and the ECONorthwest conducted a research on housing underproduction in the United States ¹ and the research informs and confirms that the existing housing construction trends are underproducing housing. During the 2000 to 2015 research period, 23 out of 50 states in the United States were underproducing housing. That is approximately 7.3 million units or 5.4 percent of the total housing stock in the United States.

**NUMBER OF
HOUSING UNITS
UNDERPRODUCED
FROM 2000-2015**

**7.3 MILLION UNITS
IN 23 STATES**

DATA INPUTS TO THE MODEL INCLUDE:

- Home Prices
- Population
- Income
- Housing Stock



Source: ECONorthwest estimates, Census Bureau ACS 1-year Estimates of housing Stock

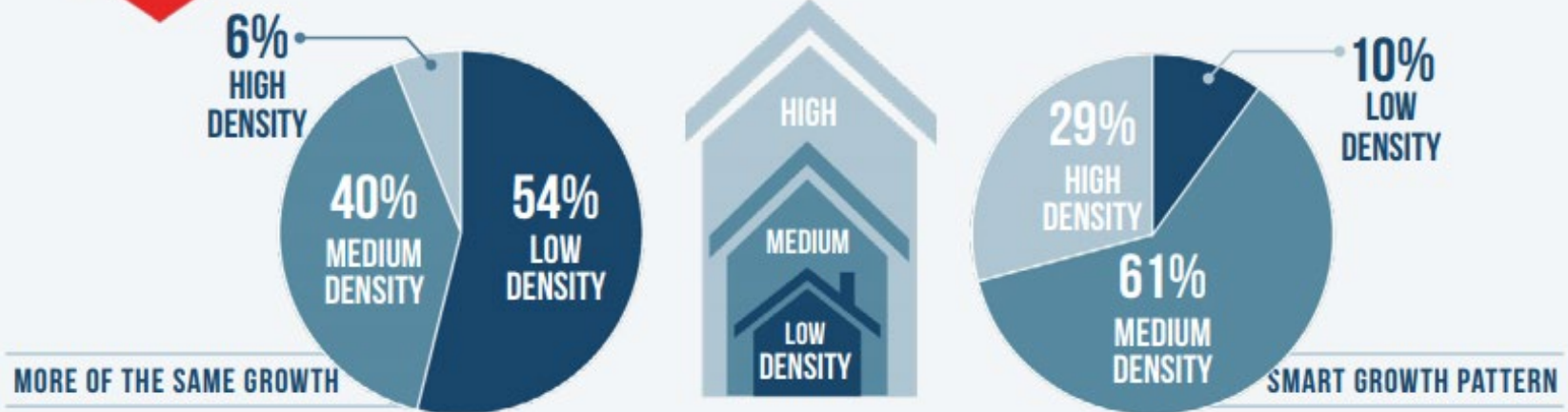
HOUSING UNDERPRODUCTION IN THE U.S.

The research further informs that if the housing development continues its current pattern of growth, nationally, of the housing units that are being built, 54 percent of the new 7.3 million homes will be low density/single family homes, followed by 40 percent would be the missing middle and medium density, and six percent would be towers. Furthermore, the research performed an investigation of growth potential across the 23 states with the housing shortage and found that if housing development took on a “Smart Growth” pattern, leveraging existing infrastructure to achieve higher density inside transit corridors, ten percent of the new 7.3 million units would be

Source: ECONorthwest Estimates and Up For Growth Organization



From 2000 to 2015, 23 states under-produced housing to the tune of 7.3 million units, or roughly 5.4% of the total housing stock of the U.S., which has created a supply and demand imbalance that is reflected in today's home prices.



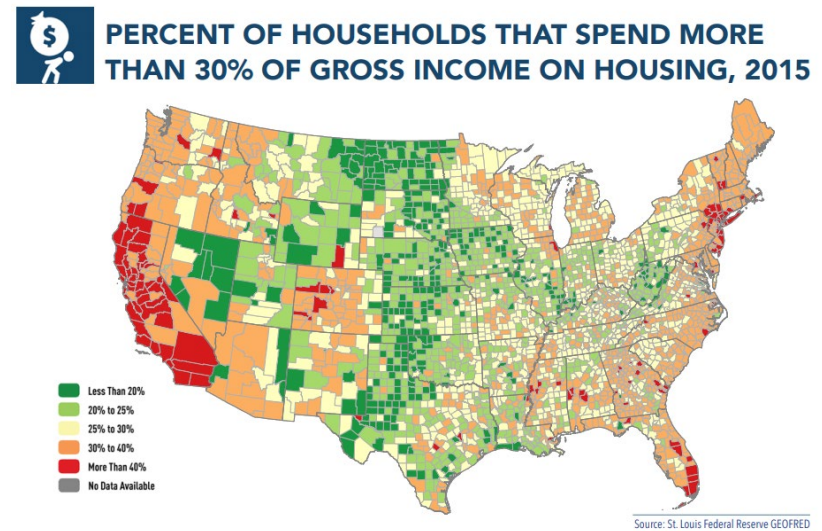
Source: ECONorthwest Estimates and Up For Growth Organization

single family, while 61 percent would be the missing middle and medium density, and 29 percent would be towers.

Additionally, the current imbalance in supply and demand has been pushed even further by the Great Recession of 2008-

2009, but also reflects a more serious issue of restrictive local development and land-use policies that discourage high density, multi-family, urban growth and promotes the growth for low

density, single-family, suburban sprawl. The research by Up for Growth National Coalition, Holland Government Affairs, and ECONorthwest concludes that there is a need to enact innovative public-private solutions that increase the housing supply and reduce the cost of new housing in urban centers. The report's final suggestion is that the "Smart Growth" scenario is the best path toward narrowing the gap between supply and demand that also leverages existing infrastructure, reduces the cost burden on local governments and changes current unsustainable development patterns. When viewed solely through the lens of household affordability and access to economic opportunity, the housing crisis should be among the most urgent and important social equity issues to be addressed.



The Seattle Housing Crisis

It is no surprise that Seattle is another major city that has a housing crisis. Based on the 2017 U.S. Census data, Seattle's population has grown very quickly. Currently, the population is estimated at 725,000 people and gained 17,500 more people from July 2, 2016 to July 1, 2017. That indicated that Seattle has a growth rate of 2.5 percent, which is second in the country to Atlanta, Georgia being first. Seattle is now ranked in the top four

growing cities among major U.S. cities for five consecutive years. Since 2010, Seattle has grown a total of 18.7 percent and is ninth for population density among the top 50 U.S. cities, which sums down to 8,600 people per square mile².



The Housing Development Consortium reports on March 2017 that four in ten households in Seattle are cost burden and they

describe cost burden as families who spend more than 30 percent of their income on rent. Families who spend less of their income on housing spend more on food and healthcare, which is key for healthy communities and cities. Furthermore, 3,481 Seattle households are over-crowded, and overcrowding is linked to higher rates of infectious disease transmission. The Housing Development Consortium also reports that 43 percent of renters spend more than 30 percent of their income on housing³. To meet the current demand of households of 30 percent of AMI or less for affordable housing, 54,000 more units are needed to be built. Overall, healthy housing should be affordable, safe, and supportive, and current the city of Seattle is severely lacking.

² Guy, G. B. (2018, May 24). 114,000 more people: Seattle now decade's fastest-growing big city in all of U.S. Retrieved May 25, 2018, from https://www.seattletimes.com/seattle-news/data/114000-more-people-seattle-now-this-decades-fastest-growing-big-city-in-all-of-united-states/?utm_source=marketingcloud&utm_medium=email&utm_campaign=

BNA_052418174503 New census data: Seattle is now this decade's fastest-growing big city in all of th_5_24_2018
³ Housing Development Consortium (2017, March). Housing & Health in Seattle. Retrieved May 22, 2018, from <http://www.Housingconsortium.org>

GAPS BY CITY

Affordable homes needed to achieve county-wide proportional need now and in 2030

	0-30% AMI		30%-50% AMI		50%-80% AMI	
	2016	2030	2016	2030	2016	2030
East						
Beaux Arts Village	18	18	18	18	20	20
Bellevue	4,958	7,032	4,573	6,647	Met	1,138
Bothell	712	1,169	64	521	Met	128
Clyde Hill	105	106	97	98	134	136
Hunts Point	22	22	10	10	26	26
Issaquah	1,209	1,899	1,184	1,874	171	1,091
Kenmore	812	1,232	262	682	Met	319
Kirkland	3,861	4,890	2,262	3,291	Met	1,121
Medina	107	109	83	85	137	140
Mercer Island	926	1,166	911	1,151	1,045	1,365
Newcastle	423	567	383	527	21	213
Redmond	2,237	3,461	1,607	2,831	Met	1,178
Sammamish	1,823	2,324	1,679	2,180	Met	2,428
Woodinville	431	761	302	662	Met	108
Yarrow Point	52	54	44	46	39	42
Total	17,696	24,842	13,479	20,625	1,603	9,452
North						
	2016	2030	2016	2030	2016	2030
Lake Forest Park	564	621	409	466	182	258
Shoreline	1,723	2,323	773	1,373	Met	Met
Total	2,287	2,944	1,182	1,839	1,193	258
North East						
	2016	2030	2016	2030	2016	2030
Carnation	88	127	Met	32	Met	36
Duvall	261	398	81	218	168	351
North Bend	167	246	27	106	Met	60
Skykomish	8	9	Met	Met	Met	Met
Snoqualmie	342	536	338	532	303	561
Total	866	1,317	446	888	471	1,008
South						
	2016	2030	2016	2030	2016	2030
Algona	115	138	Met	Met	Met	Met
Auburn	2,359	3,514	Met	Met	Met	Met
Burien	1,054	1,587	Met	Met	Met	Met
Des Moines	834	1,194	Met	Met	Met	Met
Federal Way	3,178	4,150	Met	Met	Met	Met
Kent	3,410	4,522	Met	Met	Met	Met
Milton	303	309	178	184	Met	Met
Normandy Park	226	240	Met	Met	251	271
Pacific	194	229	Met	Met	Met	Met
Renton	2,993	4,773	Met	1,068	Met	Met
SeaTac	862	1,558	Met	Met	Met	Met
Tukwila	694	1,276	Met	Met	Met	Met
Total	16,222	23,489	178	2,252	251	271
South East						
	2016	2030	2016	2030	2016	2030
Black Diamond	186	414	Met	179	137	441
Covington	662	838	337	513	Met	Met
Enumclaw	295	466	Met	Met	Met	Met
Maple Valley	784	1,000	605	821	Met	201
Total	1,927	2,719	942	1,513	137	642
Seattle						
	2016	2030	2016	2030	2016	2030
Total	17,161	27,481	2,341	12,661	Met	7,125

Note: Gap calculations are based on King County goals, which are not necessarily reflective of existing demand. Meeting a county goal does not imply that there is enough housing stock to meet the needs of households of all incomes in a particular city.

Source: ECONorthwest Estimates and Up For Growth Organization

One of the reasons why Seattle is growing so fast is that Seattle is an example of the powerful current of economic vitality that is transforming many of the nation's largest cities as they connect more deeply to the digital economy and global markets.



Over the past decade, Seattle has added 220,000 jobs, an increase of nearly 15 percent. One of the major employers in Seattle is Amazon, which employs 40,000 people in Seattle and holds about one-fifth of the city's premier office space. Furthermore, 31 Fortune 500 companies now operate research and engineering hubs in Seattle, up from seven in 2010. Seattle is now adding about 60 people daily, many of them well-educated Millennials⁴.

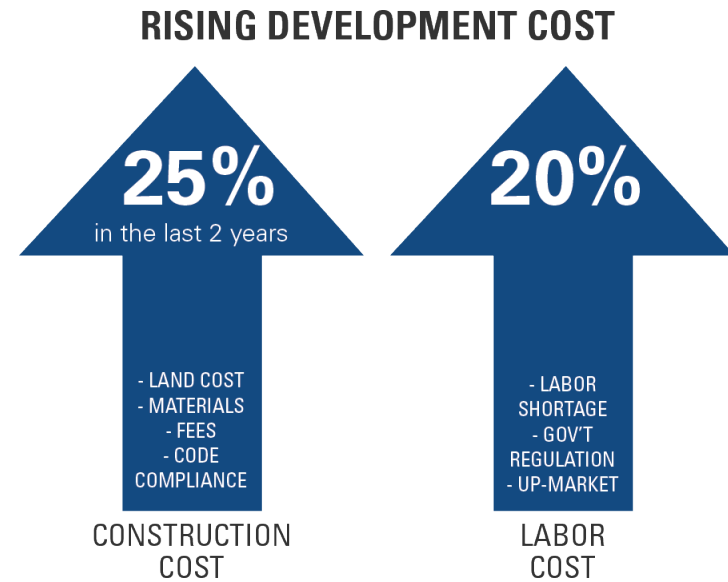
Overall, Seattle is city of opportunities that is very appealing to people throughout the country and world. As a result of the flooding of people into Seattle, there has been a consistent construction boom. The demand for new housing and offices in Seattle is not slowing down. There are 74 major projects getting built from South Lake Union to Sodo, the most since the Downtown Seattle Association began tracking construction in 2005. Half of the projects are now scheduled to

⁴ Brownstein, R. (2017, November 16). Can Seattle Handle Its Own Growth? Retrieved May 22, 2018, from <https://www.theatlantic.com/politics/archive/2017/11/can-seattle-handle-its-success/546053/>

be completed this year, but there are about 150 projects still in the pipeline. Two-thirds of the buildings under construction are residential towers, and while there are a couple of condo projects, the vast majority are apartments for rent. Overall, downtown has added 20,000 residential units in the last decade, which an additional 9,000 under construction and another 18,000 planned. In all, \$5 billion worth of construction permits were issued for projects under way⁵. Based on this and interviews with local developers and architects, it sums down to the rising cost of development as the major challenge of building affordable housing. In the last two years, construction costs have increased by 25 percent, and this includes land cost, materials, fees, and code compliance. It is hard to get a hard consistent or solid number for construction cost, but currently one can estimate cost per square foot is ranging between \$280 to \$360, depending on

⁵ Rosenberg, M. (2017, July 20). Downtown Seattle's construction boom surges to new record, with no end in sight. Retrieved May 22, 2018, from <https://www.seattletimes.com/business/real-estate/downtown-seattles-construction-boom-surges-to-new-record-with-no-end-in-sight/>

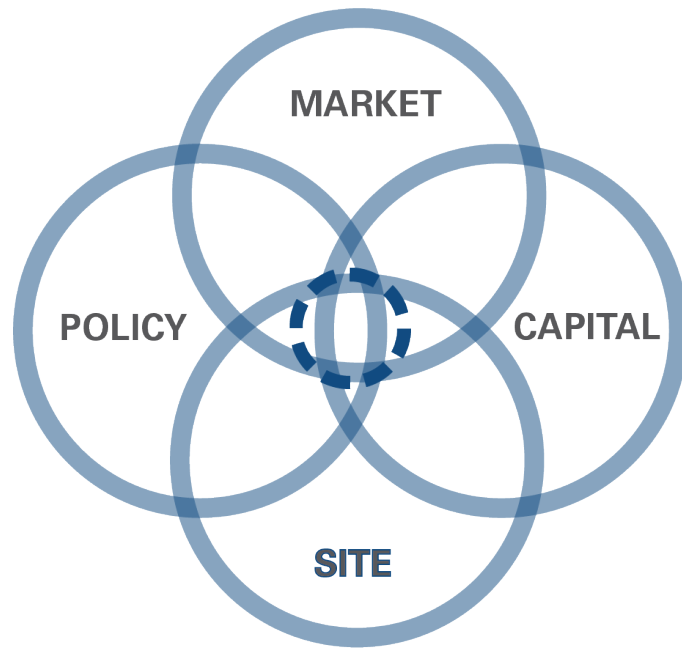
the complexity of the project. This vast swing is a consequence of many factors but construction companies needing to subcontract portions of their projects, because they lack labor, and these subcontractors are the ones dictating a lot of the cost. It is calculated that the cost of labor has increased 20 percent in the last two years and this cost is a result of labor shortages, government regulation, and up-market. This extremely high cost has forced housing developers to propose and build luxury housing almost exclusively so their projects “pencil out”. With developers focusing on luxury housing, many people find themselves unable to afford housing, which leads many needing to move out of Seattle, become homeless, or face other undesirable situations.



Developable Land – Site Selection

When one is looking for developable land there are factors to consider. When looking for development opportunities, there are four factors to consider and review, policy, market, site, and capital. Policy is regarding to federal, state, regional, local, and neighborhood policy. Market refers to the market demand and competitive position. Site is about looking at the archaeological, biology, contamination, drainage,

geology, infrastructure, and topology of the site. And lastly, capital is finding the locational and product preferences and return requirements of debt and equity⁶.



While taking these factors into consideration and keeping the concepts of the construction and labor costs in mind, the search for the opportunistic property became a bigger challenge when also having the criteria of a site that would also best location for

the next major site of affordable housing. As I researched site throughout Seattle, South Lake Union became a high contender.

South Lake Union

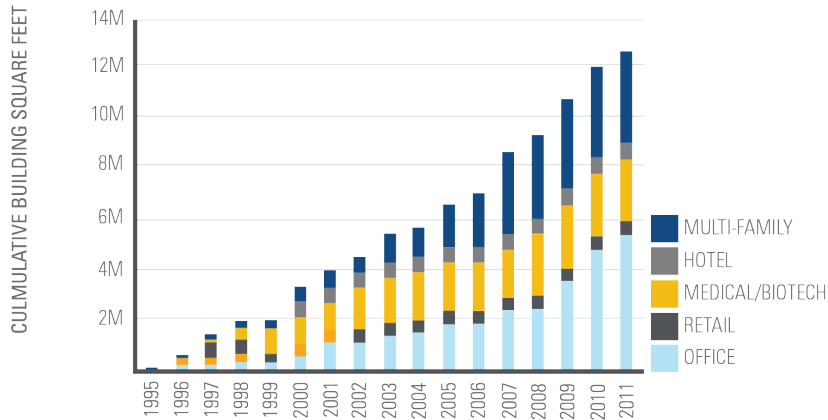
South Lake Union is a neighborhood with a distinct live-work-play culture, but it was not always this way. Over the last two decades, South Lake Union has gone a tremendous transformation from an area that was primarily characterized by older warehouses, poor mobility and lack of public and private investment into a tech hub. South Lake Union has been affected by shifts in the economy, major infrastructure projects, and many changes in land use. Back in the 1950s, the zoning regulations in South Lake Union was restricted to the development of residential housing and local policy favored light industrial uses. Many of the businesses of the area provided supporting series to businesses and employees to the Downtown area. During the 1960s, the construction and completion of Interstate 5 further

⁶ H. Pike, Oliver (April 2018).

isolated South Lake Union from the neighboring residential areas (Capitol Hill) and reinforced the industrial typology of the area. Over the last 20 years, South Lake Union has changed significantly in scale, activity, and character. Today, South Lake Union is a dense, mixed-use urban neighborhood. This area is a center for several growing sectors of technology and global health and is the home of several Fortune 500 companies and organizations.

1995, there has been nearly 12.5 million square feet of space that has been built within the neighborhood. In the early 2000's, much of what was built was technology and office space, but by the mid 2000's, more multi-family residential began to be built.

CUMULATIVE SQUARE FEET BUILT IN SLU, 1995 - 2011

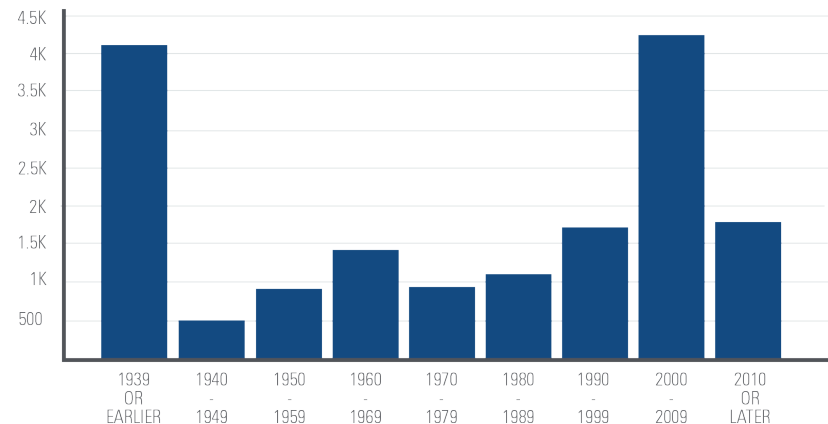


The scale and type of development that has occurred in South Lake Union over the last 20 years is significant, and since the

SQUARE FEET BUILT IN SLU, 1995 - 2011

DEVELOPMENT TYPE	TOTAL	PERCENT
Office	5,325,471	43%
Multi-Family	3,496,825	28%
Medical / Biotech	2,471,037	20%
Hotel / Motel	681,659	5%
Retail	532,778	4%
TOTAL	12,507,770	100%

HOUSING CONSTRUCTION



The growth patterns in South Lake Union indicate that the neighborhood is becoming more “family friendly”. With a more diverse housing stock and the presence of amenities, the number of families in the area is growing. The presence of families has increased from 13 percent to 20 percent. The number of families with children has nearly doubled during that same time. South Lake Union has been the focus of many affordable housing programs, generating millions of dollars in public investment to help maintain diversity of housing types as the area develops. Of the nearly 2,300 housing units developed between 1990 and 2010, approximately 690 units are considered affordable units⁷.

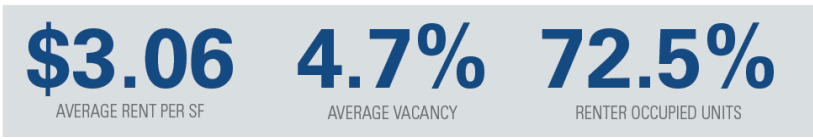
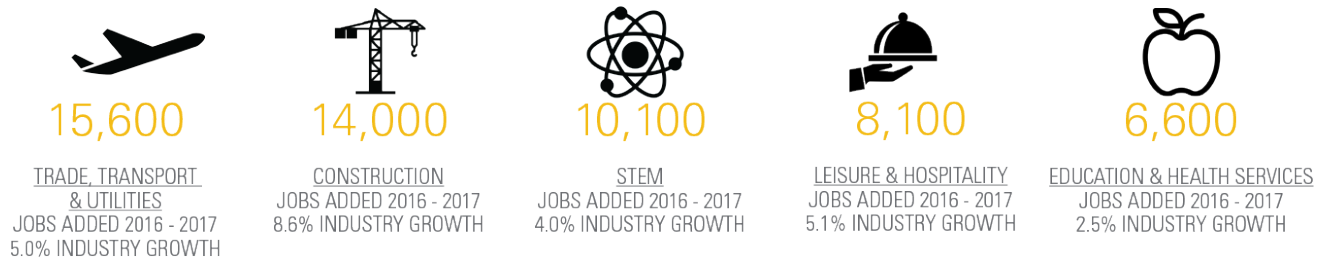
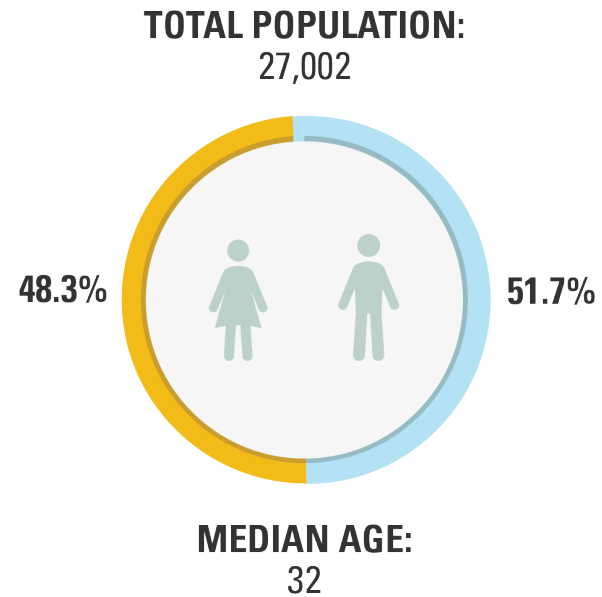
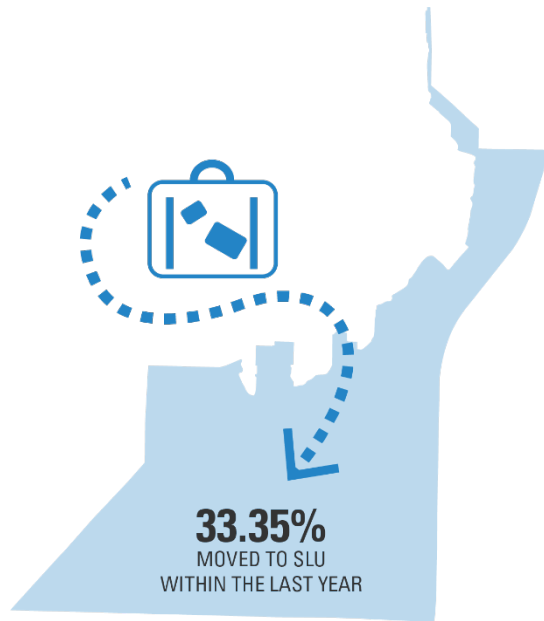
Market Analysis

Based on U.S. Census data and American Community Survey, approximately 33.35 percent of the population that

moved to Seattle moved to South Lake Union specifically in the last year. The total population of South Lake Union is 27,002 and of these 48.3 percent is female and 51.7 percent is male with a median age of 32. Furthermore, South Lake Union has some of the fastest growing industries in Seattle. According to Census data there has been a five percent growth in trade, transportation and utilities, in construction, there has been a 8.6 percent growth, stem has grown four percent, leisure and hospitality has grown 5.1 percent, and education and health services has grown 2.5 percent. Additionally, the average rent per square foot in South Lake Union is \$3.06, with an average vacancy of 4.7 percent and of all the units, 72.5 percent are occupied by renters.

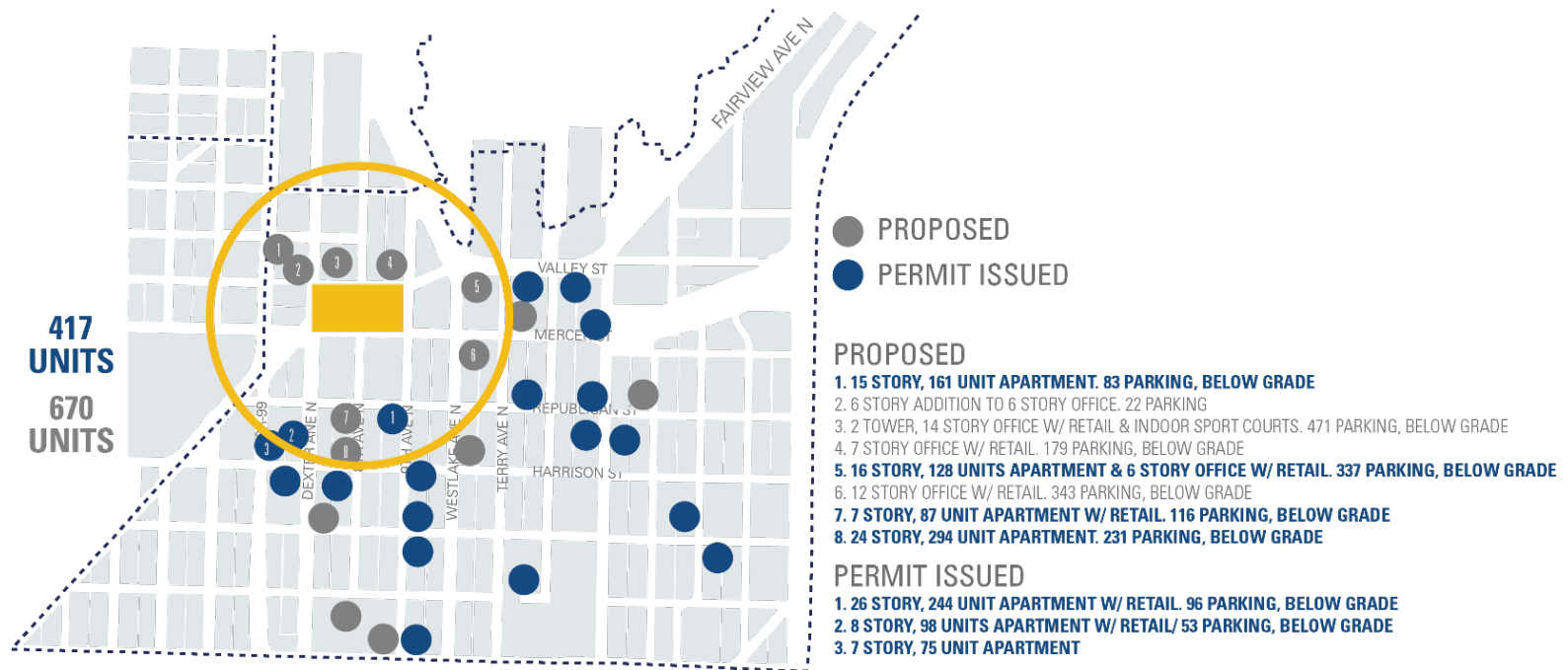
⁷ Berk Consulting and Heartland (2012, July). Public & Private Investments in South Lake Union, Retrieved April 2018,

http://www.seattle.gov/Documents/Departments/economicDevelopment/S LUpublicPrivateReportFinal-2012_0703_small.pdf

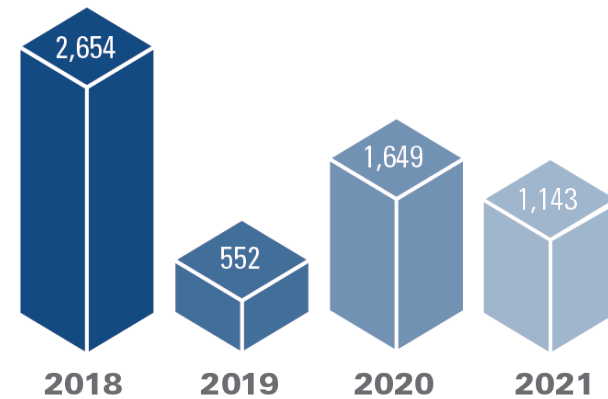


Throughout South Lake Union, there are many projects that have been proposed and/or have had their construction permit issued. When looking exclusively at South Lake Union and using the website Seattle In Progress, currently, there are eight projects being proposed, of those, four of them have a residential component. Furthermore, there are three projects with construction permit issued and all three have a residential

component. When looking even further into these project proposals, there are approximately 670 units proposed and 417 units with a construction permit.



Based on the most recent data provided by the City of Seattle website, there are 15,090 total household in South Lake Union, and of these 4,906 are considered family household, which is a jump from last year, which was 3,086. Of those, 1,548 are households with children, which is also a jump from 2018 of 1,096.⁸ Furthermore, when looking at the data provided by Seattle In Progress and the Seattle Department of Construction and Inspection construction pipeline, it appears that 2,654 units are being delivered to the market in 2018 and then dips down significantly in 2019 to 552 units, then bumps up again to 1,649 units then 1,143 units for 2021. Based on the information gathers and shown, there appears to be a consistent steam of housing being delivered, but all these units appear to be market rate, which means there is little to no affordable housing being developed in South Lake Union.



Mercer Mega Block

When in search of opportunistic developable land for affordable housing in South Lake Union, there are limited options as a result of the high cost of land. During the search the request for proposals by JLL for the Mercer Mega Block popped up. The Mercer Mega Block is 2.86 acres of land on three blocks located between Interstate 5 and 9th Avenue North to the west and east and Roy Street and Mercer Street to the north and south. The Mercer Mega Block is considered the last large undeveloped site in South Lake Union. The site acquisition package provided

⁸ <https://www.seattle.gov/opcd/population-and-demographics>

by JLL advertises the site as a unique development opportunity and that the site is a premier Seattle land site located in South Lake Union.



The three blocks contain City of Seattle owned parcels with a combined land area of 124,395SF. The flexible zoning of the area allows for office, retail, life sciences, multi-family, and hotel development. Located on Mercer Street, the primary thoroughfare connecting Queen Anne and South Lake Union to

Interstate 5, the asset is ideally positioned with the Seattle’s most thriving neighborhood to live, work, and play. The parcels are walking distance to award-winning restaurants, a variety of retail and entertainment venues, major employers, and multiple transit options. The package also informs that South Lake Union is arguably the hottest office market in the country, as evidenced by 14 consecutive years of positive net absorption of Class A space. Also, the housing prices have grown at the fastest rate in the country for the past 17 consecutive months and the 12.9 percent year-over-year growth is more than double the national growth rate. Multi-family rents have increased by 3.1 percent year-over-year and vacancy is at 4.2 percent. Overall the site offers investors the opportunity to develop more than one million square feet in the most dynamic and desirable submarket in Seattle.

Through the competitive request for proposal process, the City of Seattle is planning on offering for redevelopment the three parcels. The City’s vision is to secure a world-class

developer to design, construct and operate an iconic development that is characterized by well-integrated commercial uses, mixed-use, residential housing, and community benefits. The selected developer will be required to provide certain uses on the site and will be further encouraged to provide a variety of community benefits in addition to the required development. Through this disposition, the City of Seattle is seeking to achieve a collective neighborhood benefit that will build upon and grow the vitality, affordability, and economic development of the South Lake Union Urban Center⁹.



Source: crosscut.com

Overall, the current request for proposal suggests the selling of public land for the private development of luxury housing and office. The also advertise that the land can hold approximately 1,300 units and are only requiring to build 13 percent of those affordable, which sums down to only 175 units of the 1,300. This request for proposal has not been received well by the community and has been criticized heavily, to the point

⁹ JLL (2018), Mercer Mega Block: Request for Proposals.

that this project has been delayed indefinitely. The main issue that people have is that this is public land that is currently owned by the City of Seattle (this land, once a construction staging site for the surround new infrastructure construction), is being sold for profit to the private market. It is no mystery that the City of Seattle has a huge housing crisis and this site could make a dent in the housing crisis with a property they already own. With the high cost of land as a barrier for building affordable housing, this is a great opportunity to build affordable housing.

Thesis Proposal

This thesis proposes the design and development of two mix-use high-rise buildings for the subject parcels. For the purpose of this thesis, the focus will be done on two out of the three parcels available and these parcels are the ones located between Dexter Avenue North and 9th Avenue North on the west and east and Roy Street and Mercer Street to the north and south.

The development and design will focus on creating opportunity for a diverse, affordable workforce and family housing (focusing on 60 percent AMI) above re-establishing a strong connection with the street and start establishing an 18-hour neighborhood.



CHAPTER TWO: Research Framework

Research

Source One: Weber Thompson – Mixed-Income High Rise Housing Feasibility

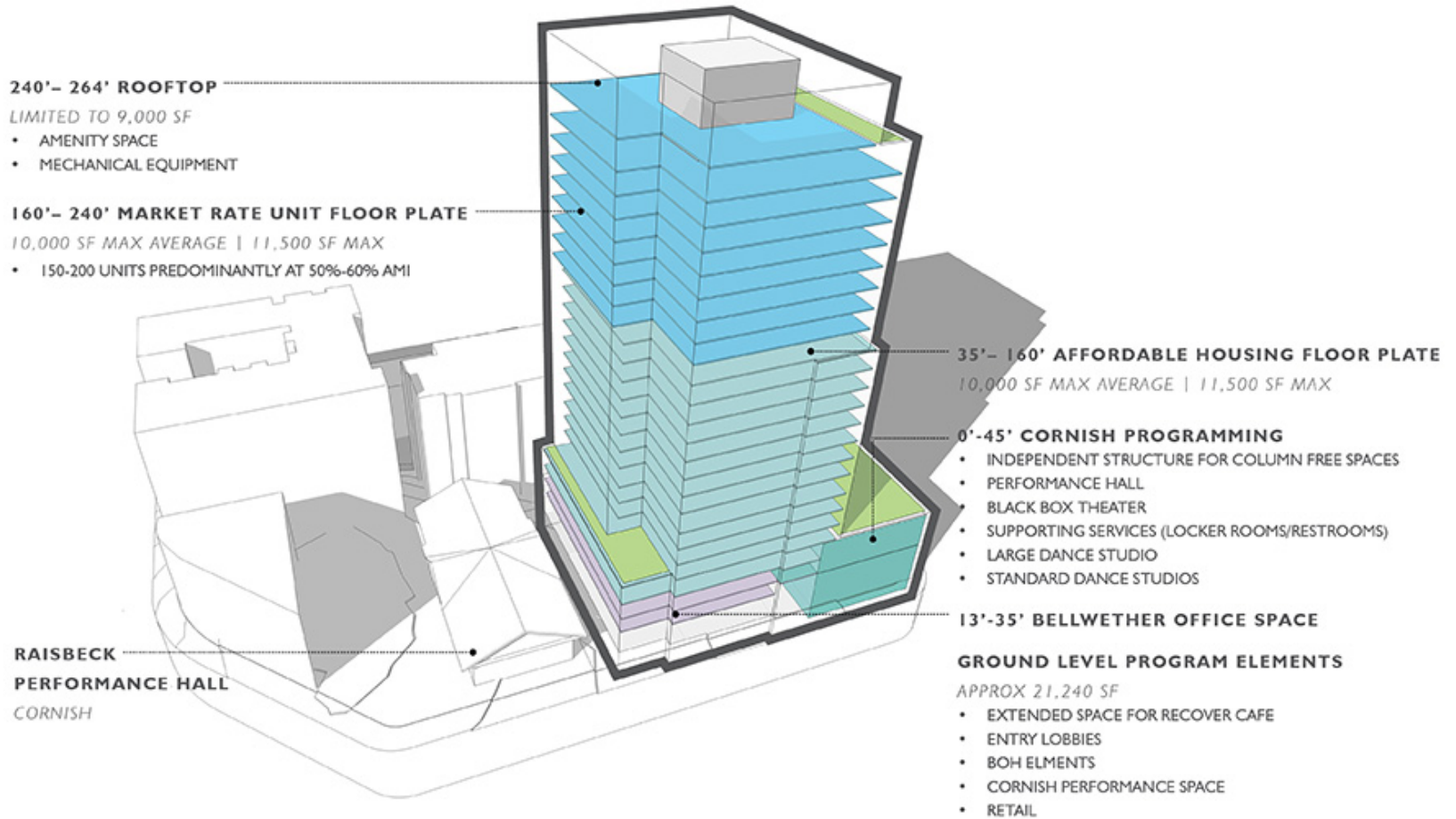
Summary:

In 2014 Weber Thompson worked with Bellwether and Gerding Edlen on a conceptual study, funded by the U.S. Department of Housing and Urban Development (HUD) to determine the feasibility of a mixed-income high-rise project develop in P3 (public and private partnership) format in downtown Seattle. The team went through many design scenarios and considered a variety of programmatic combinations ranging from 90 to 200 market-rate apartment units, and a 170 to 260 affordable housing units. Furthermore, the proposed building would contain office spaces for Bellwether Housing, program, performance space for the Cornish College of the Arts, a non-

profit support center serving victims of homelessness and addiction. The study's most promising program configuration was placing the Cornish programming and office spaces in the podium and the affordable units were located on the lower levels of the tower, and the more desirable units in the upper levels were market-rate. Overall, this conceptual study proved to be financially viable¹⁰.

¹⁰ Weber Thompson. Retrieved May 2019.
<http://www.weberthompson.com/projects/1115?tag=Multifamily>

MASSING + PROGRAM



Source: Weber Thompson

Source Two: Center for Architecture – “Social Housing – New European Projects”

Summary:

“Social Housing: New European Projects” was an exhibit at the Center for Architecture from February 15, 2018 to May 19, 2018 and is a publication of the same name. This features new public housing in France, Denmark, Germany, Switzerland, and the U.K. The projects show a great range of ambitious program and design and proposes housing interventions¹¹. Across Europe, a new generation of architecture practices are transforming affordable housing. This publication brings together 25 European case studies by 20 practices and looks at a range of buildings and dwelling typologies, emerging design approaches, and refurbishment strategies. It offers a challenge to housing professionals and citizens in the U.S. to rethink how we build and

highlight the vital role of accessible, low-cost housing in the life and function of our cities. Because in Europe there is no common definition of what social housing is, the projects presented include a variety of public projects led by government or city authorities, philanthropic schemes led by charities, and collective schemes led by residents. The connecting theme and concept of all these projects is the there are alternatives to purely market-oriented housing provision. The brave new housing future will not be born out of siding with any single ideology or ethos, but rather through a variety of means and a shared objective to innovate, improve and raise the standards of social/affordable housing¹².

¹¹ Mathew, Teresa. "What the Future of Affordable Housing Already Looks Like." CityLab. May 11, 2018. Accessed June 10, 2018. <https://www.citylab.com/design/2018/05/what-the-future-of-affordable-housing-already-looks-like/560126/>.

¹² "Social Housing – New European Projects." Center for Architecture. November 10, 2018. Accessed June 10, 2018. <https://www.centerforarchitecture.org/exhibitions/social-housing-new-european-projects/>.



Source: centerforarchitecture.org

Precedents

Precedent One: Convent Hill, Milwaukee, Wisconsin



Summary:

Convent Hill is a \$150 million, 32 story mixed-income apartment development coming to downtown Milwaukee. The Milwaukee Housing Authority wants to build a tower and town houses. The 350-unit building would allocate a significant number of units for people making less than the area's average income. The efforts would make it the largest affordable apartment development in the downtown area since the recession. A portion of the building will be for people who qualify for housing assistance, which means people who make under the area's average income, which is around \$30,000 a year. This project is being designed by Korb + Associates and it is being said that with the 350 apartments, it will also have high end amenities like

a pool, patio, and views of lake Michigan. This project is still waiting to be approved by the Common Council¹³.

Precedent Two: Weingart Center Towers, Los Angeles, California



Summary:

In early 2017, the Weingart Center for the Homeless filed plans with the City of Los Angeles to construct new affordable housing on two sites at the intersection of 6th Street and San Pedro Street in downtown Los Angeles. The proposed development is a joint venture of Chelsea Investment Co and the

¹³ Klopf, Rebecca. "Downtown Milwaukee to Get 32-story, Mixed-income High Rise." TMJ4. April 18, 2019. Accessed August 10, 2018.

<https://www.tmj4.com/news/local-news/32-story-affordable-housing-high-rise-proposed-for-milwaukees-downtown>.

Weingart and will be done on the Weingart owned property at 554 San Pedro and a city-owned parking lot at 600 San Pedro. The plans inform that there will be 685 new housing units, which include 676 apartments exclusive to households making 50 percent or less AMI. The 554 San Pedro site houses a 7,000 square foot food service building which is operated by Weingart's headquarters, which is a 1920s building that already provides 623 beds of transitional housing for homeless individuals and families, as well as supportive services. Weingart plans to construct two buildings at the 554 San Pedro site and this includes an 18 story, 200 foot tower and a 12 story, 132 foot tall mid-rise building. This site will create 382 units, of which 80 percent would be dedicated to supportive housing and 20 percent to family affordable housing. Additionally, there will be commercial and supportive services at the ground level and a basement parking garage with 32 stalls. Furthermore, the plan

informs that there will be a variety of outdoor decks throughout the building and a rooftop deck.

The 600 San Pedro site is planning to construct an 18 story, 219 foot tower building that will include 298 very low-income apartments in addition to five manager units. Of the proposed units, 60 percent would be designed as permanent supportive housing, while the remaining 40 percent will be family affordable apartments. This site also has on-site supportive services, office space, and open-air decks and other varied resident amenities. This site will include four levels of underground parking, summing to 212 stalls which will be separated from the tower by a 13,815 square foot pocket park.

This project is expected to be built out in three phases over 49 months with operation starting in 2022 or at worst 2025 in the event of unanticipated delays. The construction would start will the site at 554 San Pedro with the 18 story tower, followed by the 12 story building. Then the site at 600 San Pedro will be built

after both buildings from 554 San Pedro are operational. This project is one of two affordable housing towers looking to be built in downtown Los Angeles, the other being built by Skid Row Housing Trust, which is a 14 story building on 5th Street¹⁴.

Conclusion

Through the the research and precedent studies above, one can see that high-rise affordable housing is hitting the market soon and in prominence. The variety of types of affordable housing is very encouraging and normalizing the concept of good design and buildings with services for affordable housing. There has been history of high-rise affordable housing being these massive non-descript towers that held no personality and screamed being affordable as sub-par design and aesthetic. Currently, there is a trend that is elevating design and services in affordable housing, and this appears to be just be the beginning

of a new definition of what affordable housing is and how it looks.

¹⁴ "Proposed Weingart Center Towers Take a Step Forward." Urbanize LA. December 14, 2018. Accessed February 10, 2019. <https://urbanize.la/post/proposed-weingart-center-towers-take-step-forward>.

CHAPTER THREE: Methodology

Introduction

As stated above, this thesis proposes the design and development of two mix-use high-rise buildings for the subject parcels. For the purpose of this thesis, the focus will be done on two out of the three parcels available and these parcels are the ones located between Dexter Avenue North and 9th Avenue North on the west and east and Roy Street and Mercer Street to the north and south.

Goal

The goal of this thesis is to develop and design two residential towers in South Lake Union that focuses on providing housing for families and workforce households, but overall, is intend for households who are in the 60 percent AMI (area median income). Furthermore, this project will focus on creating opportunity for a diverse, affordable workforce and family housing (focusing on 60 percent AMI) and re-establishing a

strong connection with the street and start establishing an 18-hour neighborhood.

Objectives

The goals of this project are to be achieved through a series of objectives.

Objective One: Focus on having housing units for family and workforce households.

Objective Two: Efficiency of spaces and units for maximum amount.

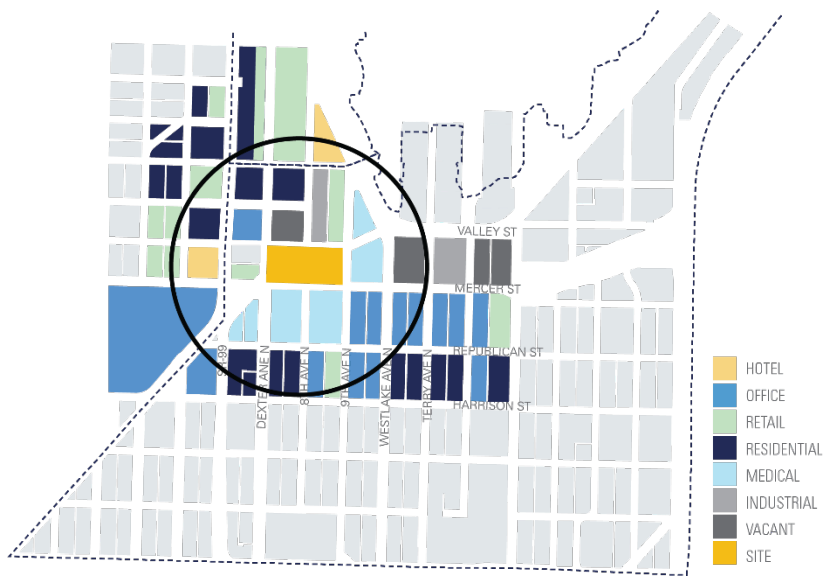
Objective Three: Take full advantage of natural lighting.

Objective Four: Produce a design that is in line with the currently City building code.

Objective Five: Have a dynamic and diverse community culture at the ground level and bring some of that community culture up to the tower residents.

Site Analysis

Land Uses:



Surround the site. There is a very limited amount of diversity of uses. In the immediate surrounding, the site is surrounded by medical buildings, office buildings, and vacant land. The closest buildings to include residential units is approximately a quarter mile away.

Street Types:



Within the immediate vicinity of the site, there are many types of streets. The main ones are the living streets and boulevards.

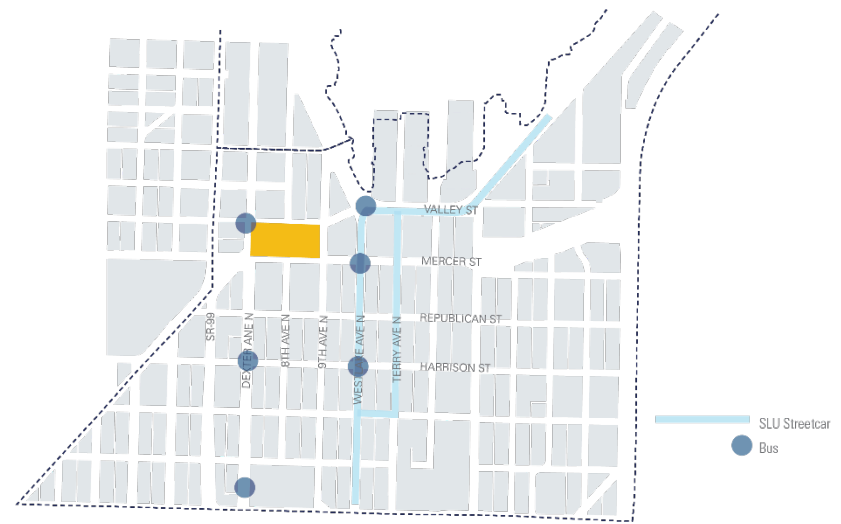
Based on site analysis and South Lake Union Design Guidelines, there has been effort towards pedestrianizing and adding more vegetation the area and based on those efforts, it will be translated into the design of the site.

Urban Design Framework:



South Lake Union is known for being tech culture centric and this is reflected in their urban design. Even though these tech cultural icons (Amazon and other tech structure, infrastructure, and programs) dictating current and future planning, other more traditional icons (Lake Union Park and Mercer Street) do influence the urban design of South Lake Union and are considered through out the design process of this thesis.

Public Transportation:



Seattle has many forms of public transportation and South Lake Union has access to two types, the Streetcar and Soundtransit busses. Within walking distance, the site has access to many bus stops and a couple of the stops of the Streetcar. With the continual expansion of the Light Rail, there is promise of South Lake Union having access in the distant future.

Parks:



and can be interpreted as an amenity of the project. The next closest park in on Denny and in comparison, to Lake Union Park, this is relatively far and would most likely not be readily accessible to the residents of the towers. And the last park or green area in the South Lake Union neighborhood is the one located on Harrison Street and Minor Avenue North. This park contains a Community P-Patch and playground and a variety of other amenities.

As a result of South Lake Union having a very industrial, technology, office centric history, there are not many parks throughout the neighborhood. As part the mission of South Lake Union being more dynamic, the construction of the Lake Union Park happened and for the couple of years of it being in operation, it has been successful. The area is host to many community gatherings and is a prime location for the Fourth of July fireworks. As a result, if the proximity to the site, one can easy assume that the residents of the towers can have easy access

Flight Path:



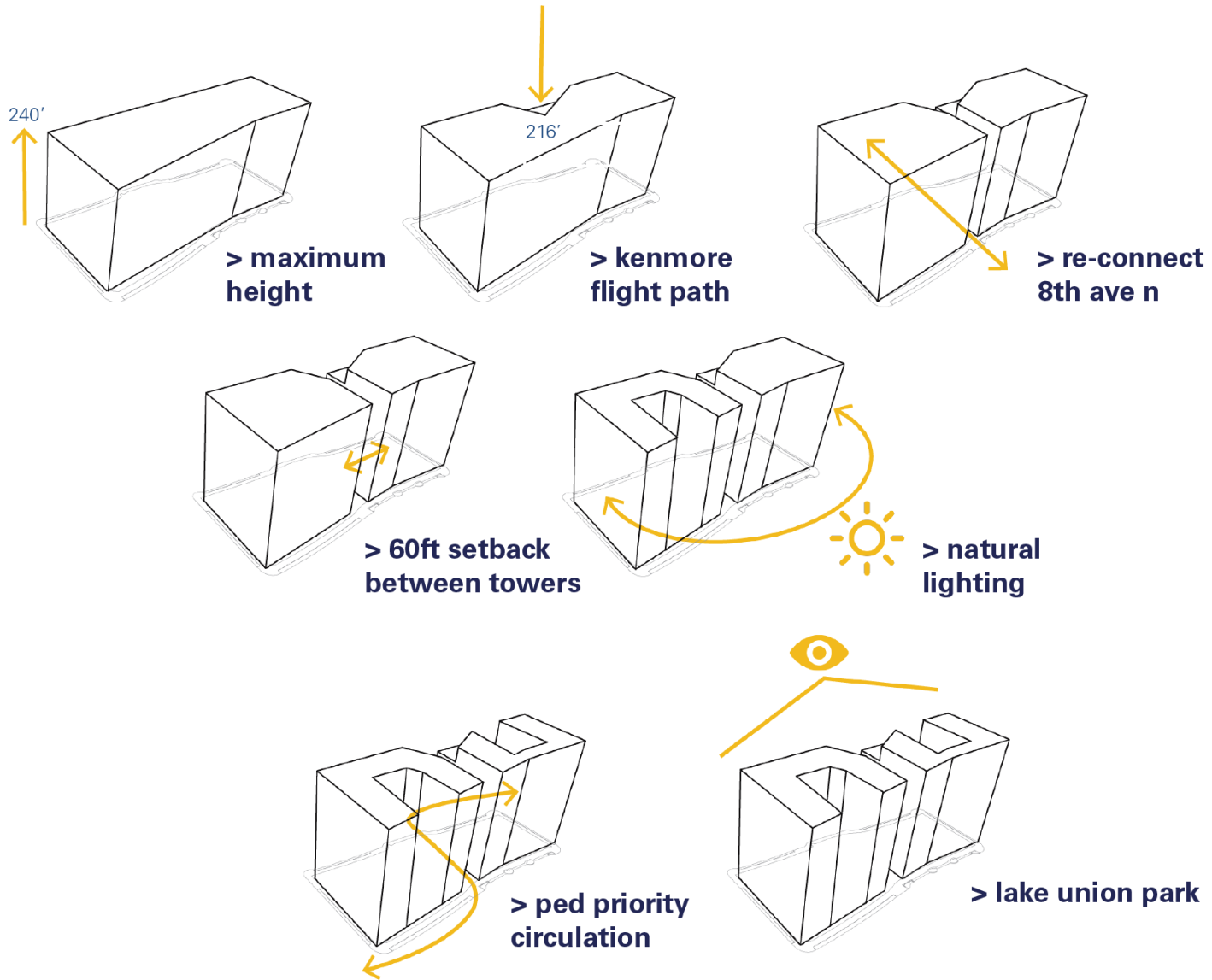
Seattle in general is a very dynamic city and this includes the consistent cycling of airplanes in and out of the city. As part of this system, the Kenmore Flight Path flies over a portion of the site and this results in the site having a hard maximum height.

Massing Gestures:

Based on site analysis and the objectives of this thesis, through some general pushing and pulling of massing, the outcome is the general design envelope and mass of the final design.

One of the first constraints that was looked at was the height of the building. According to city code, the building's maximum height is 280 feet, but as a result of the Kenmore Flight Path, the site is pushed down to a maximum height of 240 feet in some areas and others to 216 feet as the maximum height. Furthermore, as a result of having a dynamic and pedestrian oriented ground level as an objective, the site will be split to allow for the re-connection of 8th Avenue North. As a result of this split, the site will be left with two towers and per city code there has to be a minimum setback of 60 feet between towers and this is done. As mentioned before, taking advantage of the natural lighting is an important objective and this has resulted in

maximizing the surface of the building for windows. This objective has lead the building to be in the general shape of a “u”. Pedestrians are a important objective and to achieve this, there has to be setback from the busy streets and areas that are exclusive to pedestrians. This is done by designing courtyards within the building’s “u” space that are areas where residents and the public have access. Finally, the proximity to Lake Union Park is very significant and having a visual and physical connection to it is important, as a result of making it an amenity to the site and this has lead and guided the orientation of the building to provide a clear connection and access.



Site Assessment

Through the alignment of this thesis's objectives and in response to the surrounding context of the site, it is attempted to take full advantage of the site through efficient massing gestures and to optimize the features and amenities of South Lake Union offers to the site.

CHAPTER FOUR: The Design



Rendering of the corner of 9th and Roy

The design is guided by the objectives of this project, which are:

Objective One: Focus on having housing units for family and workforce households.

Objective Two: Efficiency of spaces and units for maximum amount.

Objective Three: Take full advantage of natural lighting.

Objective Four: Produce a design that is in line with the currently City building code.

Objective Five: Have a dynamic and diverse community culture at the ground level and bring some of that community culture up to the tower residents.

Floor Plans

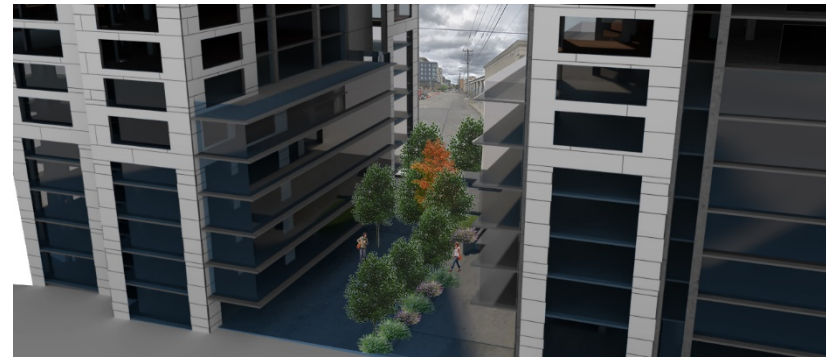
The ground level is the most important feature of the project as a result of having multiple users and programs coming together. Above the ground level are the office tenant levels and these are the least specified as a result of keeping them shell and core, which is optimal for market office spaces. Overall, there was an efficient placement of spaces that lead to efficient placement of units to allow for the maximum number of units per floor. Because of efficiency being an objective, there was a limited amount of unit types. This led to two types of one bedroom, two of two bedroom, and one type of three bedroom and this allowed for a select type of units that gave the opportunity of modularity and can lead to lowered construction costs. Furthermore, being that natural lighting was a priority, a

“u” shape of the floorplates allowed to the maximum number of units on the site while all have the maximum amount of natural lighting for them.

Ground

As mentioned before, this is one of the most important levels in the project, as a result of having multiple users and programs coming together. The ground level consists of four lobbies, two are residential and two are office, one per tower. Wrapped around 8th Avenue North re-connection, are retail spaces that open to each tower’s central courtyard. Additionally, we have two ground level tenant spaces that do have the opportunity to be part of the above levels, if expansion is desired. The intent is to have fluidity between spaces and the central courtyards. Additionally, the central area has different height for the open areas, that adds dynamism and allows the space to be open but

gives opportunity for gathering.

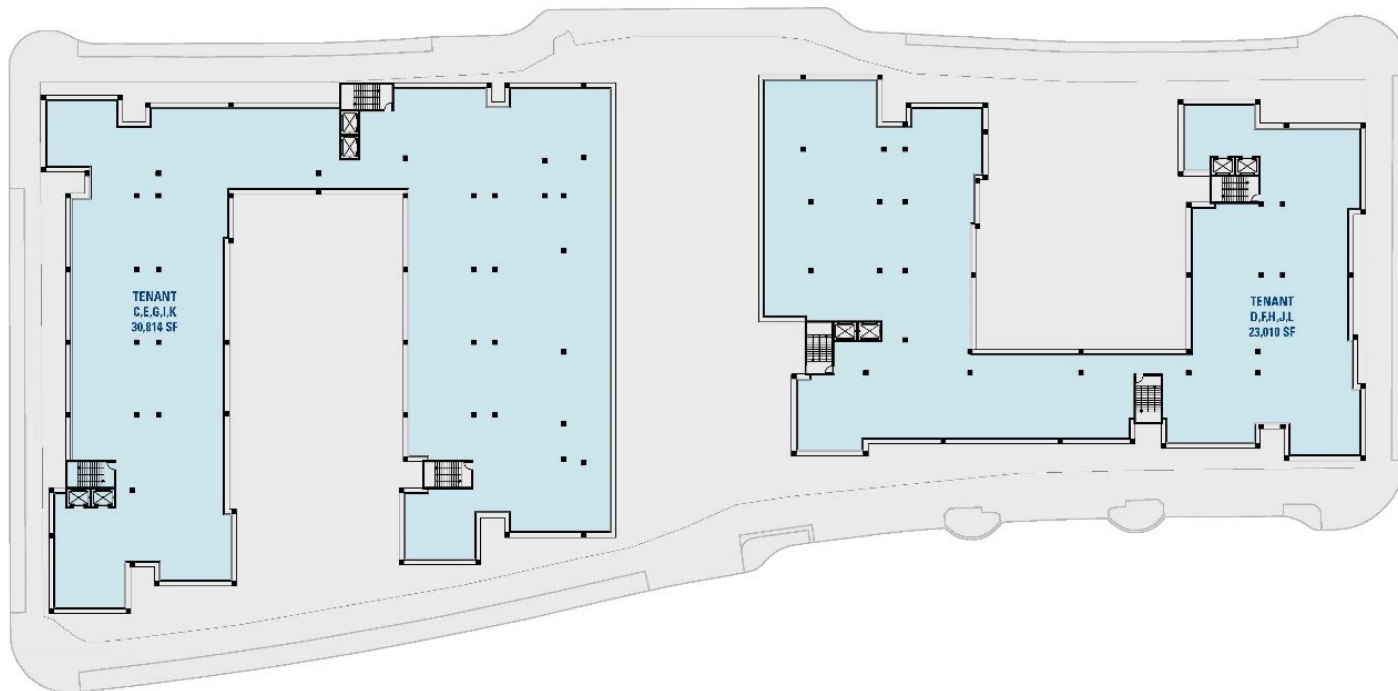


Rendering emphasizing the central vegetation for the central area (8th) between towers



Floors 1 to 4

These floors are the office tenant floors and are core and shell,
which is optimal for current market.



Floor 5

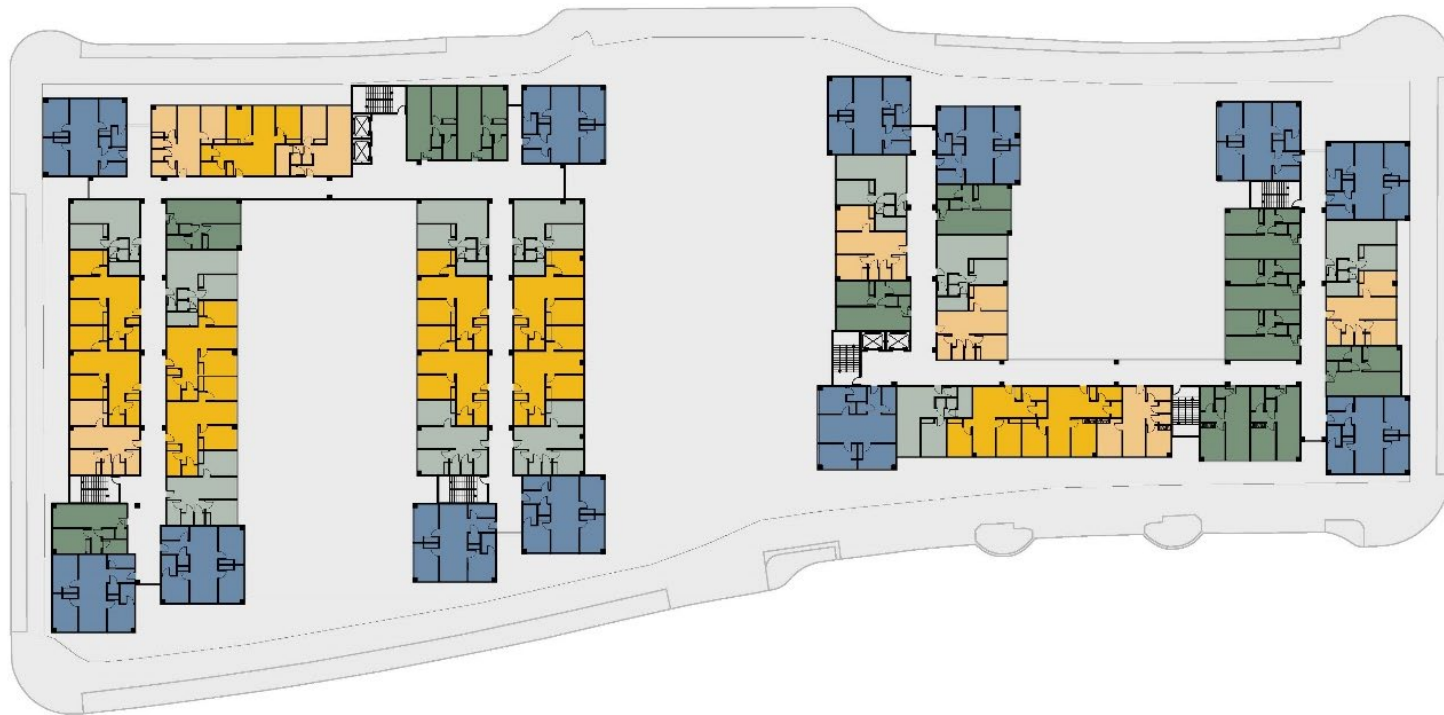
The fifth floor is similar to the floors one through four, in exception that this floor include an outdoor deck. This space is exclusive to this floor and opens to the central area of 8th Avenue North.



Floors 6 to 19

The tower then transitions to exclusively residential floors. The main rule of this floor was to prioritize the three bedrooms and then infill with two bedrooms and the units with least important were the one bedroom. The objective of this project was geared toward family and workforce household and research

demonstrated that these are the units that are needed the most in South Lake Union, because one bedroom currently dominate the market.



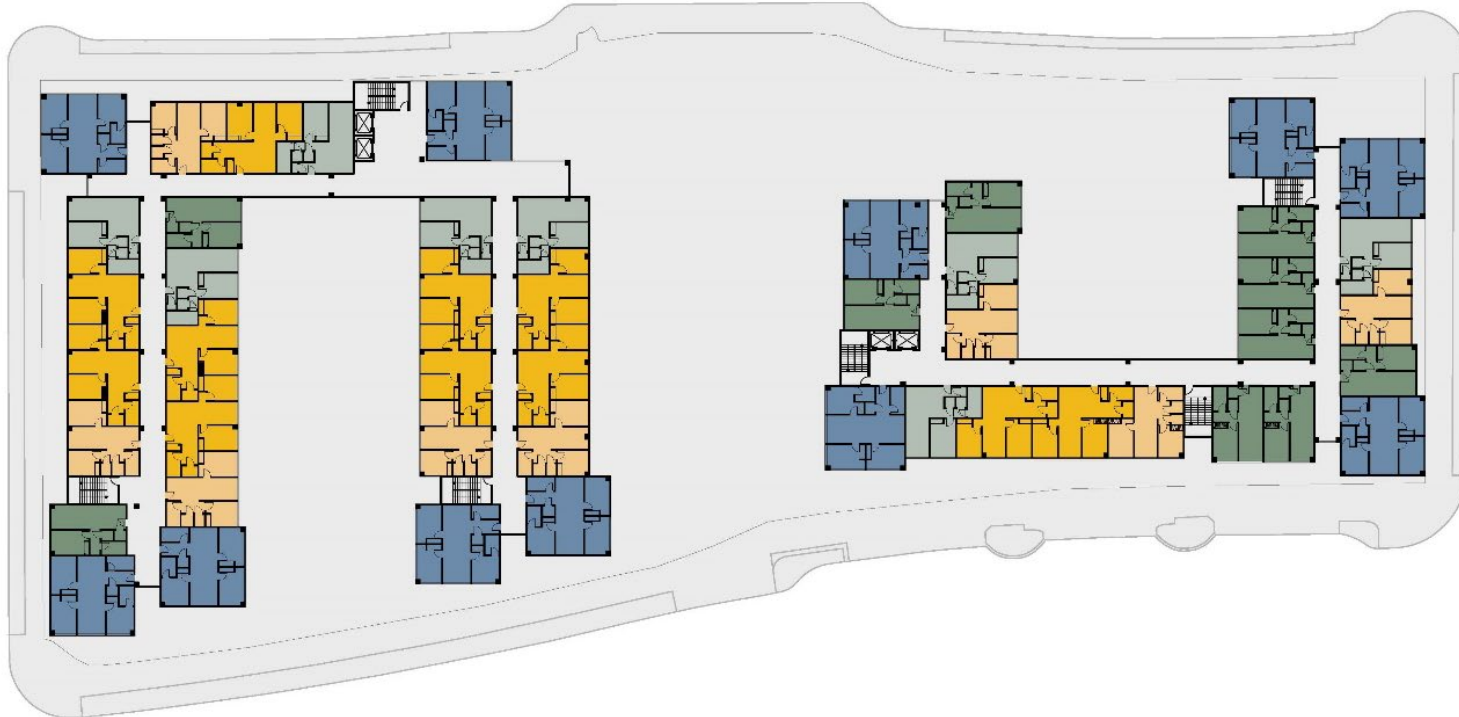
Floor 20

The 20th floor are similar to the below residential floors, in except to the decks that have been introduced. These outdoor decks that have a clear Union Lake Park and overall optimal views of the surrounding area.



Floor 21

As a result of the Kenmore Flight Path, the east tower begins to pull back from the north side of the tower and results in reduction of units.



Floor 22

Overall, the site has a slope that leads the east tower to be lower than the west tower. As a result, the east tower is allowed to have an additional floor and boosts the unit count.

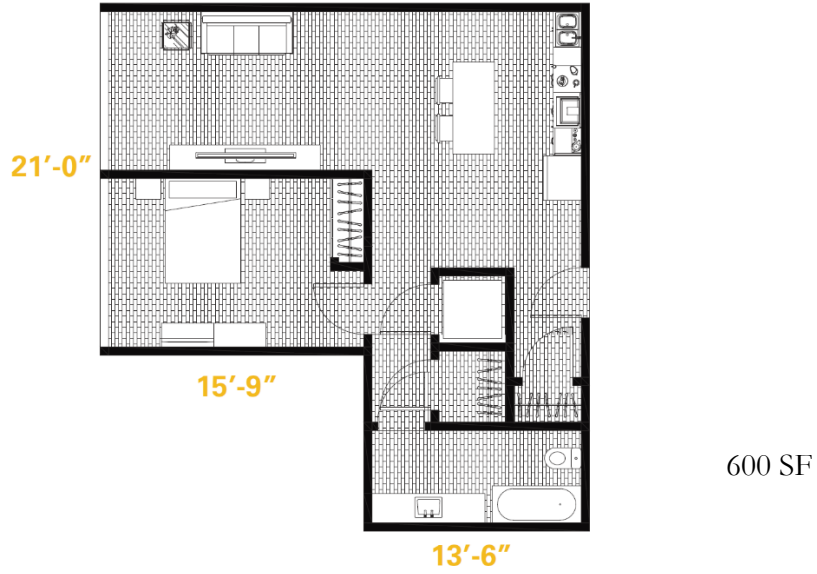
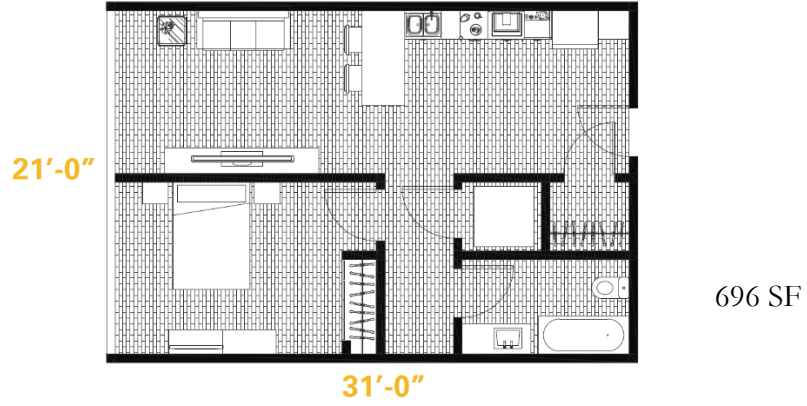


Unit Plans

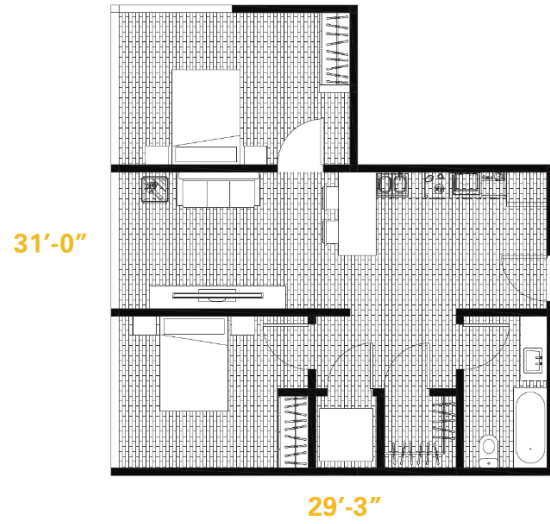
A goal of this thesis was to provide housing that focuses on families and workforce households, as a result, the mix of unit types are reflective of that. With that in mind, the final mix of unit types resulted in a total of 859 units. Of these 859 units, 43 percent are one bedroom, 34 percent are two bedrooms, and 23 percent are three bedrooms. This results to a total of approximately 57 percent of the units are family focused. Additionally, the intent is to maximize comfort and ease of movement throughout the spaces. This was done by allowing for natural lighting in all rooms as a high priority. As a result, all rooms have access to natural light through large six foot tall windows. Furthermore, each room was planned and designed for comfortable movement, as a result, there was efficient placement of spaces that lead to efficient units to allow for the maximum amount of units per floor and this allowed for a select types of units that gave the opportunity of modularity and can lead to

lowered construction costs. The average unit size for both towers is approximately 785 square feet, which is bigger than traditional affordable housing units and current market rate units, which are efficiency dwelling focused.

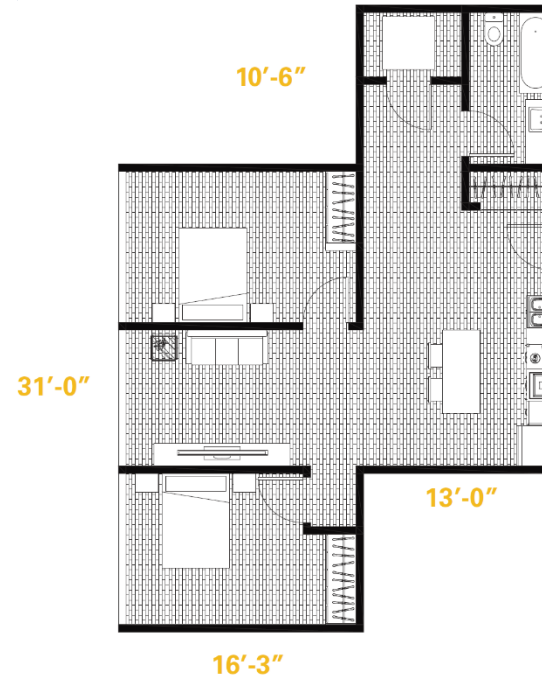
One Bedroom



Two Bedroom

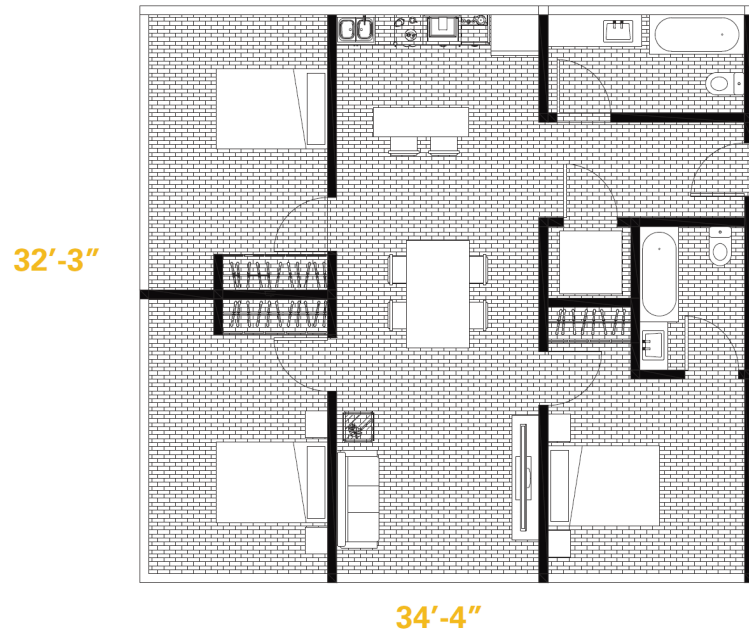


711 SF



842 SF

Three Bedroom



1,041 SF

Stacking Plan

As described before, ground level is where different users and programs come together. The change of elevation from west to east is taken advantage by allowing the overlap and working together of spaces and functions. At the ground level we have office space, retail space, residential amenity space, and lobbies for office and residential areas. The next five floors are for office tenant exclusively, and the remaining floors are residential exclusive. The total square footage for retail space sums to 40,224 square feet. For office, the total square footage is 270,435 square feet. And the total square footage for residential is 674,006 square feet. Both west and east tower total to 859 units, with the west having 460 and the east having 384 units. In terms of unit breakdown, both towers have approximately 43 percent one bedrooms, 34 percent two bedrooms, and 23 percent three bedrooms.

SUMMARY OF USES:	
USE	SQUARE FOOTAGE
Office	270,435
Retail	19,665
Residential	674,006
Landscape	40,224



Elevation view from Mercer

Financials Brief

Assumptions:

The Seattle region has seen tremendous amounts of growth in the past several decades, and South Lake Union has seen a significant shift as well. Acting within a framework of the 1990 Growth Management Act, and several long-range planning efforts since then, there is a regional mandate to target density around work and transit hubs. Furthermore, it is recognized that there is a need for affordable housing, and it requires urgent action. There is a substantial political will to fund and develop affordable housing, especially in areas where the workforce is strong and is a hotspot for community growth.

Seattle has implemented an incentive zoning programs for certain areas in and around South Lake Union in 2015 and is still rolling out throughout the area. This allows developers a density bonus in exchange for including affordable housing on-

site or paying into a fund. The fee-in-lieu is \$18.75 per gross square foot of bonus floor area for commercial floor area or \$15.15 for residential. The fund from the new developments in the area are managed by the Seattle Office of Housing, and fund new construction, acquisition, or rehabilitation of units for those making up to 80 percent AMI. In 2016, the payments into the incentive zoning program, totaled \$37 million, and there is no expectation that it would be lower now. Furthermore, in 2016, Seattle voters approved a \$290 million property-tax levy, specifically for affordable housing, doubling the previous 2009 Housing Levy¹⁵.

Sources:

When looking for funding for affordable housing, there are options and these are detailed below.

1. Low Income Housing Tax Credit/Bonds:

¹⁵ "Seattle Housing Levy." Seattle Housing Levy - Housing. Accessed June 12, 2019. <https://www.seattle.gov/housing/levy>.

a. For this project, the nine percent LIHTC funding from the State of Washington Housing Finance Commission will be used. This project scores well for nine percent LIHTC because of the City of Seattle's commitment to the type of project, the project's location in King County, and the large number of units that cater to 60 percent AMI, which falls into the extremely low income population. Furthermore, the project is not located in a Qualified Census Tract area, Difficult Development Area, or Small Area Difficult Development Area, so that did not contribute to the project's points.

2. Partnership with local nonprofit loan.

a. There are a couple of local non-profit affordable housing developers that have funds

to loan out to affordable projects that are not theirs. For example, Bellwether Housing, a non-profit affordable developer based in Seattle, has successfully developed over 11,000 apartment units. Bellwether has a very successful track record and as a result maintains an Impact Investment Fund. Bellwether, specifically, can offer a loan up to four million for a project like this.

3. Deferred Developer Fee

a. In order to make this project work, the developer fee must be deferred. For this project to work, this project would have to be phased and this would break down to building one tower to completion before starting the second. The developer fee would be deferred till one of the towers is completed and ready

for occupancy. This deferral is common practice in the industry and as a result of the phasing, the project will have income sooner than having to wait for both towers to be complete.

4. Capital Campaign

- a. This fund is expected to be met through donations and other miscellaneous funds. This is a possible scenario because of the type of project and current status of affordable housing in Seattle. Additionally, the site is surrounded by many Fortune 500 companies and when contributing to their business, culture, community, etc., one can easily see a possible scenario where they can contribute financially.

5. Seattle Housing Authority project-based vouchers

- a. This project is highly aligned with the Seattle Housing Authority's mission and is well-positioned to best serve the low income population and support the local community of South Lake Union. Additionally, this project would align with the community vision of South Lake Union. Additionally, because of how well the site is located, other costs of living would be greatly reduced. Furthermore, the vouchers are all linked to large, family oriented developments, which the Seattle Housing Authority has identified as being in high demand for their users. The Seattle Housing Authority has partnered with a large amount of affordable housing developments to provide project-based vouchers. Overall, it is assumed that high

demand is expected for out units with vouchers.

6. City of Seattle: Office of Housing Levy

- a. The City of Seattle Housing Levy is a property tax levy to support affordable development and preservation throughout the City of Seattle. The levy is a \$290 million levy spanning seven years. In 2016, the program provided \$15.9 million to support the construction of new affordable housing units. Furthermore, with the implementation of the Housing Affordability and Livability Agenda (HALA) in 2017 passed an upzone in various areas and this means providing affordable housing or paying \$10 to \$25 a square foot. These payments will contribute to the financing of this project, because there is

evidence that it has been some projects have been awarded up to \$14 million per project. Additionally, the City of Seattle's very public commitment to affordable housing and the public focus on affordability support a higher level of City funds for this project and ultimately means that the city can keep the site as an asset that would contribute to financing this project.

7. City of Seattle Human Services

- a. The City of Seattle Human Services Department provides a total of \$89 million in funding per year to support Seattle's most vulnerable residents. Because this project is intended for families and one of the amenity spaces can be used for childcare, one can take advantage of the Child Care Facilities

Financing. Given that the space can be scaled to the number of residents, this means it would be a huge contribution. This results in this project being a good candidate for this award.

8. Commercial Loan

- a. Based on precedents of similar scale, it is expected to have a fund gap between the equity and the cost to build the retail and office spaces.

9. Retail and Office Tenants

- a. As a result of the surround area, market analysis has demonstrated that income from the office space to be in the higher range bracket. All spaces are sized to 20,000 square feet or more, which is the preferred sized office tenants are desiring the most.

Additionally, because of the flexibility of the using more or less floors for the office, it has the highest appeal to tenants who pay the most in the market for their spaces.

Furthermore, because the type of tenant provides significant funds, it can be said that some of the retail space can be leased below market rate, as to be able to get the right type of retailers, which will crate a curated space and attract the right office tenant and allow for little to no turn over in the retail space and that would most like transition into the high retention of office tenants.

For the preliminary stages of building a development package for affordable housing, based on a conversation with the Seattle Housing Authority, it is common to use The National Development Council Rental Housing Development Finance

Spread Sheet¹⁶. Based on market analysis and conversations with local development practitioners of various field, below are the estimates numbers for this project.

Cost Matrix:									
Hard Costs:									
	Low	Medium	High			Low	Medium	High	
Apts	200	250	300		Apts	134,813,200	168,516,500	202,219,800	
Retail	200	240	280		Retail	3,933,000	4,719,600	5,506,200	
Office	240	280	320		Office	64,904,400	75,721,800	86,539,200	
Landscaping	17.39	72.79	141.93		Landscaping	699,490	2,927,883	5,708,950	
TOTAL:	\$ 657	\$ 843	\$ 1,042		TOTAL:	204,350,090	251,885,783	299,974,150	

¹⁶ "Affordable Housing." NDC. Accessed June 12, 2019. <https://ndconline.org/affordable-housing/>.

RENTAL HOUSING DEVELOPMENT BUDGET

PROJECT:

ALT Mercer

NUMBER OF UNITS:

859

TOTAL COST PER UNIT:

333,374

ITEM	COST	% TOTAL	Depreciable	Amortize	Non-Depr.	Historic RTC	LIHTC 4%	LIHTC 9%
ACQUISITION								
Build Acquisition	0	0.00%	0				0	
Land Acquisition	1	0.00%			1			
SITE IMPROVEMENTS								
Demolition	0	0.00%	0			0	0	0
On-Site Imp.	0	0.00%	0				0	0
Off-Site Imp.	0	0.00%			0			
CONSTRUCTION								
Rehabilitation	0	0.00%	0			0	0	0
New Construction	202,219,767	70.62%	202,219,767				202,219,767	202,219,767
General Requirements	0	0.00%	0			0	0	0
Contractor Overhead	20,221,977	7.06%	20,221,977			0	20,221,977	20,221,977
Contractor Profit	4,044,395	1.41%	4,044,395			0	4,044,395	4,044,395
P & P Bond or LOC	120,000	0.04%	120,000			0	120,000	120,000
Contingency	10,110,988	3.53%	10,110,988			0	10,110,988	10,110,988
Permits & Impact Fees	3,200,000	1.12%	3,200,000			0	3,200,000	3,200,000
Furnishings	0	0.00%	0				0	0
Relocation	0	0.00%	0				0	0
Landscape	5,708,950	1.99%	5,708,950			0	5,708,950	5,708,950
PROFESSIONAL FEES								
Architect & Engineer	15,965,695	5.58%	15,965,695			0	15,965,695	15,965,695
Real Estate Legal	614,065	0.21%	614,065			0	614,065	614,065
Consultants	1,250,000	0.44%	1,250,000			0	1,250,000	1,250,000
Developer Fee	9,825,043	3.43%	9,825,043			0	9,825,043	9,825,043
Environmental	0	0.00%	0			0	0	0
Cost Certification	2,456,261	0.86%	2,456,261			0	2,456,261	2,456,261
Accounting	0	0.00%	0			0	0	0
Survey	20,000	0.01%	20,000			0	20,000	20,000
Other	0	0.00%	0			0	0	0

CONSTRUCTION FINANCE

Title and Recording	60,000	0.02%	60,000			0	60,000	60,000
Constr. Interest	5,000,000	1.75%	5,000,000			0	5,000,000	5,000,000
Constr. Loan Fees	750,000	0.26%	750,000			0	750,000	750,000
Appraisal	10,000	0.00%	10,000			0	10,000	10,000
Market Study	15,000	0.01%	15,000			0	15,000	15,000
Lender Legal	50,000	0.02%	50,000			0	50,000	50,000
Other	0	0.00%	0			0	0	0

PERMANENT FINANCE

Perm. Loan Fees	1,513,840	0.53%		1,513,840				
Credit Enhancement	0	0.00%		0				
Title and Recording	5,000	0.00%		5,000				
Lender Legal	10,000	0.00%		10,000				
Other	0	0.00%		0				

SOFT COSTS

Property Taxes	0	0.00%	0			0	0	0
Constr. Insurance	2,456,261	0.86%	2,456,261			0	2,456,261	2,456,261
Other Depreciable Soft	0	0.00%	0			0	0	0
Tax Credit Appl. Fee	7,500	0.00%		7,500				
Tax Credit Mon. Fee	0	0.00%		0				
Marketing Expense	343,600	0.12%		343,600				
Organizational Exp.	0	0.00%		0				
Other Amort. Soft	0	0.00%		0				
Syndication Expense	0	0.00%				0		
Tax Opinion	20,000	0.01%				20,000		
Rentup Expense	100,000	0.03%				100,000		

RESERVES

Rentup Reserve	70,000	0.02%			70,000			
Operating Reserve	200,000	0.07%			200,000			
Bond D/S Reserve	0	0.00%			0			
Working Capital	0	0.00%			0			
Other	0	0.00%			0			

DEVELOPMENT COST	286,368,343	100.00%	284,098,402	1,879,940	390,001	0	284,098,402	284,098,402
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PRO FORMA

ALT Mercer

RENT AND EXPENSE ASSUMPTIONS

RESIDENTIAL RENTS

Unit Type	# Units	Mo. Rent	Ann. Rent
One Bedroom	369	1,128.00	4,994,784
Two Bedrooms	295	1,353.00	4,789,620
Three Bedrooms	195	1,565.00	3,662,100
	0	0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
	0	0.00	0
TOTAL	859		13,446,504

RESIDENTIAL ASSUMPTIONS	Percent
Rent Inc./Year	2.00%
Op Cost Inc./Year	3.00%
Reserves Inc./Year	0.50%
Vac. Year 1	10%
Vac. Year 2	5%
Vac. Year 3 & Future	5%

COMMERCIAL RENTS

Description	Leaseable SF	\$/SF/Year	Annual Rent
Retail	19,665	172.92	3,400,472
Office	270,435	300.00	81,130,500
	0	0.00	0
Total Commercial	290,100		84,530,972
	Leaseable SF	\$/SF/Year	Ten. Cont.
Tenant Contributions	0	0.00	0
Tenant Contributions	0	0.00	0
Tenant Contributions	0	0.00	0
TOTAL TENANT CONTRIBUTIONS	0		0

COMMERCIAL ASSUMPTIONS	Percent
Rent Inc./Year	2.00%
Op. Cost Inc./Year	3.00%
Reserves Inc./Year	0.50%
Vac. Year 1	10%
Vac. Year 2	5%
Vac. Year 3 & Future	5%
Other Income Increase	3%
Weighted Op. Exp.	3%

TOTAL INCOME	
Residential Income	13,446,504
Commercial Income	84,530,972
Tenant Contributions	0
Other Income	0
TOTAL INCOME	97,977,476

OPERATING EXPENSES	TOTAL	Per Unit	
Management Fee	100,000	116	0.1% Percent of EGI
Advertise/Market	15,000	17	
Legal	10,000	12	
Administrative	20,000	23	
Utilities	110,000	128	
Trash		0	
Maintenance/Repairs	75,000	87	
Grounds	15,000	17	
Real Estate Property Tax		0	
Insurance	45,000	52	
Other	15,000	17	
Total Operating Expenses	405,000	471	0.41% Percent of Revenue
Replacement Reserves	35,000	41	
Other		0	
Total Operating Exp. and Reserves	440,000	512	0.45% Percent of Revenue

CHAPTER FIVE: Conclusion and Recommendations

Conclusion

The request for proposal for the Mercer Mega Block advertises that the site can hold 1300 units, and only 13 percent can potentially be affordable. Furthermore, based on the trends of private developers in the Seattle area, this would project would most likely been focused on building one bedrooms and studios. Based on the information shown, there is an increasing number of families moving to South Lake Union and there is a severe lack of housing typology to meet that demand. Furthermore, South Lake Union's vision, as described in their design guidelines and other documents, suggest that they are trying to have the culture of live, work, play that invites and includes a diverse community.

The design suggests and aligns with those ethos and focuses on the ground level of the site, which is believed to be crucial as South Lake Union densifies and buildings become higher. Additionally, as the design focuses on the ground level, it

attempts to provide relief of the issue of people coming to South Lake Union to work and leave home, which leaves South Lake Union in a desolate state. Keeping people in South Lake Union and that includes a variety of people of different incomes gives the opportunity for South Lake Union to become even better.

Recommendations

Looking at this project, it is recommended to be built. There has been a recent trend of redefining what a high-rise affordable housing is and are being pushed further to be resilient building that are best for all parties involved. This project states that it will deliver over 800 units of new affordable housing for families and workforce households. When looking at the finances, it all appears to work and this results in the suggestion to the City of Seattle to not sell the properties and develop the site to affordable housing.

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