

Urban Grain

Fostering social and economic diversity through parcelization of large urban development sites.
A test case in Seattle's Central District.

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Abstract

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The scale of the built environment is the spatial manifestation of the scale of capital. Contemporary urban morphology expresses the economic conditions that produce it. Due to economies of scale, buildings with larger footprints erase lot lines and fill whole blocks. The result is the erosion of the diverse, granular mixture of buildings that gives urban places their distinctive character. We need a different vision for the future of cities; this thesis proposes parcelization as a path to a more complex, adaptable and diverse urban fabric.

This proposal seeks to introduce the concept of parcelization as an alternative to monolithic redevelopment of large urban sites. Parcelization consists of a master developer creating a block master plan and conveying sites to individual parcel developers. The principal advantages of parcelization are increased diversity of built form, human scaled development, and the ability of parcels to age separately, supporting economic and social diversity.

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Preface

I love cities, but I have, for most of my life, loved them with a sense of frustration and anxiety. The best things in our built environment seem tenuous and fragile, and changes, while sometimes welcome, often leave me pondering missed opportunities and wondering how much better things *might* have been. Cities and buildings are only as valuable as the human communities they support, and as stewards of the built environment, I believe urban designers, planners, architects, developers and economists must prioritize the organic grass roots urbanism that promotes community.

This thesis represents the convergence of many years of intertwined work and academic pursuits relating to the built environment. My education as an undergraduate focused on ethnography and history, shaping the way I approach cities. I studied urban planning at Portland State University with the hope of shaping cities for the better, but soon came to realize that regulatory frameworks alone are not sufficient to challenge status quo development patterns. Concurrently I pursued a graduate real estate development certificate, and worked for several years as a real estate economist, and later, a planner at a Portland architecture firm. After the recession of 2008, I determined to pursue my true passion, design, but in a way that engaged all the tools already at my disposal.

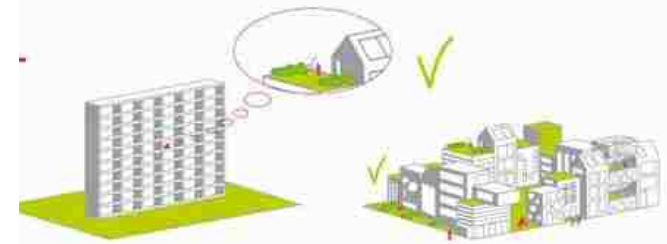


Fig 0.1 Jan Gehl, diagram contrasting monolithic versus fine grained, human-scale urban fabric.

My involvement with the property which forms the test case for the proposition offered by my thesis' hypothesis, the Midtown Plaza block in Seattle's Central District, dates to 2012, shortly after I began my studies at the University of Washington. As vice chair of the Central Area Land Use Review Committee, I was called upon to evaluate a proposed zone change for the 23rd and Union block. This process led to a broader community conversation involving neighbors, the surrounding community, current tenants as well as the present owners of the property. Over the following three years, a community of interest began to coalesce around the idea of exploring a community-focused alternative to status quo development on the block.

This work owes a great deal to my mentors, collaborators and friends. I wish to thank my faculty committee, Jeffrey Karl Ochsner, Vikramāditya Prakāsh and Michael Pyatok. I would also like to acknowledge others who have helped and advised me, including Sharon Sutton, Donald King, Mark Thomson, Kathryn Merlino, Mike Powe, my colleagues on the Central Area Land Use Review Committee, the Union Street Business Association, my mother, Dr. Elizabeth Bendeich, and my wife Meg.



Fig 0.2 Community forum on the future of Midtown Plaza, February 2015. Photo from *The Stranger*.



Fig 0.3 Thesis project site, view facing southeast from across 23rd Ave.

1

| Introduction

1.1 Introduction

1.2 Thesis Overview

1.1 | Introduction

Architects work at the level of the individual property, while urban planners generally focus on the neighborhood or district. Each individual building or property makes a contribution to the fabric of its neighborhood. The cumulative impact of individual buildings in defining the character of a neighborhood is the subject of the discipline of urban design, which straddles the disciplines of architecture, planning and landscape architecture.

In 1961 Jane Jacobs wrote that diversity is the principal condition for successful urban places (*The Death and Life of Great American Cities*). Seattle is experiencing a two-fold loss of diversity in its urban neighborhoods; the formal diversity of individual buildings, and the loss of social and economic diversity of people and businesses in neighborhoods. As the scale of our economy has grown, with consolidation of financial institutions and globalization of investment capital, this change in scale has manifested in the scale of development. The result is a built environment increasingly dominated by fewer, larger buildings.

Seattle's current mode of growth represents a divergent trend in the history of cities.

Much of our new growth has taken the form of five-over-one mixed-use buildings.

These projects are often very large, with footprints filling half, or sometimes even full blocks. This thesis suggests that there are two possible futures for Seattle and

similar cities. Our current path points toward a more coarse-grained, homogeneous built environment. This thesis proposes an intervention; a better approach to urban design and development, in the form of parcelization. This project tests such an approach on a large site in Seattle's Central District.

Through most of human urban history, cities have been built at a relatively human scale. A walk through Pompeii or Ostia Antica reveals this pattern. Through the mid-20th century we tended to build in small increments, with most sites taking up no more than 10,000 square feet. Our cities reveal their underlying order in the form of the plat. The plat establishes a nested hierarchy of neighborhoods, composed of blocks, which are made up of individual lots. These lots make up the base modules of the city. Until quite recently, most development filled one or two base modules. Most blocks hosted many different buildings, owned by different people.

Today, we build differently. Whenever possible, developers consolidate as many parcels as possible. The benefits to the developer are obvious; because of economies of scale, the marginal cost of each additional square foot of building drops, and its financial yield increases. Sadly, the result is the erosion of the diverse, fine-grained mixture that gives cities their character.

This thesis attempts to diagnose some of the causes of the erosion of grain and the consolidation of parcels. The patterns of development over the last century show that the scale of the built environment is the spatial manifestation of the scale of capital.

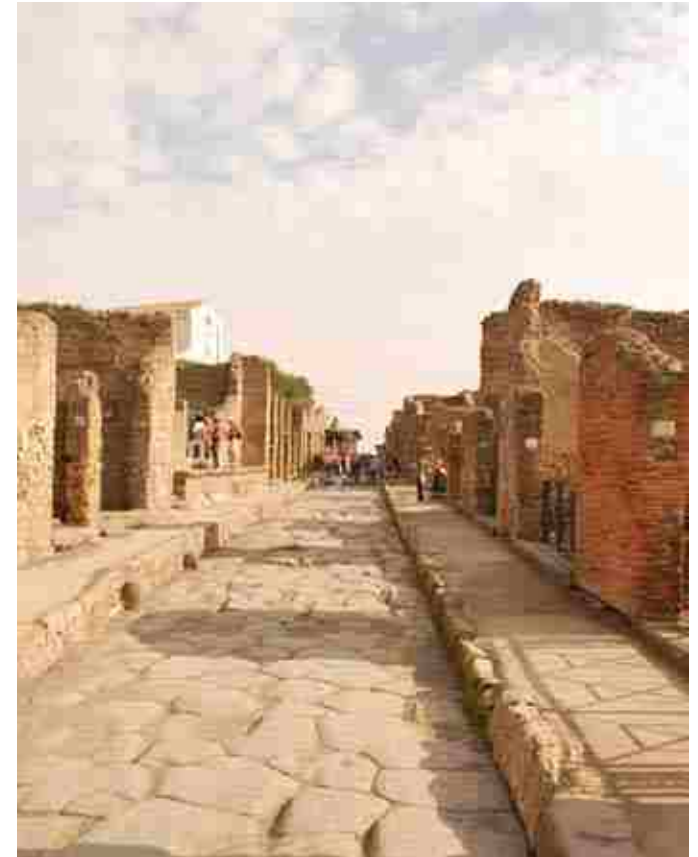


Fig 1.1 Typical street, Pompeii

Today, development is dominated by institutional capital, in the form of real estate investment trusts, publicly traded corporations, and similar entities. Examples of institutional real estate companies owning and developing properties in the Seattle market include Legacy Partners, Equity Residential, Holland Residential, Weingarten, and Avalon Bay. Where Institutional investors once made up about one fifth of the development activity in Seattle, today they account for approximately eighty percent of all development.

Society changes over time and the way we build changes with our society, begging the question why these changes might be viewed as problematic. Evidence has shown that Jane Jacobs was correct when she said that diversity is critical to cities' success. She argued that chains and established businesses can occupy expensive new construction, but lower income residents, marginal businesses and startup firms can only find a home in older cheaper buildings.

The National Trust for Historic Preservation Greenlab conducted a study of urban grain in 2014, surveying data from neighborhoods in San Francisco, Washington DC and Seattle. The Greenlab study discovered that, compared to blocks made up of mostly large, new buildings, blocks with a more diverse mix of smaller buildings, of different ages performed better on a wide range of metrics. These included jobs, small business, women and minority ownership, prevalence of local business, and even nightlife.



Fig 1.2 View of thesis subject, facing southwest from 24th and East Union.

It is critical to recognize that today's new building is tomorrow's old building. Some kinds of development can age well and create a positive contribution to the city throughout their life cycle. When multiple parcels co-exist on a block, they can age independently and live separate economic lives. This is impossible for a single megaproject. A block containing a mixture of buildings of different ages can support an ecosystem of urban life.

There are further consequences to the loss of grain and diversity; large buildings appear on the market at a high price point and depreciate gradually. Eventually, they become obsolete, and the entire block must be demolished and rebuilt. It is far better for neighborhood resilience to have buildings age and be replaced in a piecemeal fashion. Parcelized development also means that a poorly designed small building cannot blight a district the way a very large, bad building can.

What can be done? We need to find a way to foster development on smaller parcels. This could potentially be accomplished through regulation. However, this thesis proposes working within the current regulatory framework and assumes an enlightened developer. This thesis proposes a system of incentives and disincentives to make it more attractive for a master developer to acquire a large parcel and subdivide it, selling or leasing modules to parcel developers, who could execute a range of different kinds of projects.



Fig 1.3 View of thesis subject, facing west from 24th and East Union.



Fig 1.4 View of thesis subject, facing north from Spring Street.

The master developer would be able to get approval based on this master plan. It would allow fast-tracked design review for parcel developers. Lengthy design review schedules are one of the forces that push development out of reach of small developers, as do permitting fees. Dedicating a parcel for sale to an affordable housing developer could accomplish the goal of integrating affordable housing, simplifying the path for small developers. These kinds of players can usually only take on a project with a total cost of fifteen to twenty million dollars. Keeping lots artificially small would allow more independent developers to compete. It would also benefit tenants, since a market controlled by a few large companies is clearly detrimental to competitive pricing.

This project is a test: this thesis set parameters for the project in order to test the outcomes of parcelization within the premise. The goal is to test a plausible scenario that a developer might create. Therefore, the designs are not meant to represent the ideal, or the only possible solutions for this site. Rather they are meant to show what might occur given the conditions established by the thesis premise.



Fig 1.5 View of thesis subject, facing southwest from 24th and East Union.



Fig 1.6 View of thesis subject, facing south from 23rd and East Union.

1.2 | Thesis Overview

The structure this document follows is:

- Diagnosis of the problem
- Parameters for testing parcelization
- Hypothesis for a solution
- Discussion of specific project elements - proposed sites and buildings
- Findings from this exercise
- Conclusions



Fig 1.7 View of thesis subject, facing east from 23rd and East Union.

2

| THE PROBLEM

- 2.1 Granularity Defined
- 2.2 Urban Grain and the Scale of Capital
- 2.3 What we are Losing
- 2.4 Case Studies in Consolidation
- 2.5 Causes of Consolidation
- 2.6 Cumulative Impacts

2.1 | Granularity Defined

Urban designers use the term “urban grain” to describe the cellular structure of an urban environment. This structure consists of the forms and objects in the built environment and their relationships to one another. “Areas of high granularity have large numbers of small buildings on small lots, while areas of low granularity have fewer, bigger buildings occupying large lots, sometimes in the form of superblocks.” (Preservation Greenlab, 2014)

Urban designers refer to fine grain and coarse grain to describe the size of the smallest units, or cells, in the urban organism. Coarse or fine grain can describe phenomena in the built environment at many different scales, from the size of city blocks to the distribution of elements on an individual building’s façade. Two critical relationships, or axes, describe the structure composition. One is the horizontal axis, the relationship between individual cellular elements of the same scale. The other is the hierarchical axis, the relationship between individual elements and the larger elements they form when combined. The repetition of elements within a given scale, as well as consistent scalar relationships between cells and organs contribute to what Lynch (1960) called the ‘legibility’ of the city and its districts.

Cities are collections of parts, working together to form a whole. The public space, which consists principally of streets and rights-of-way, but also of parks, plazas and all manner of open spaces in the public realm, forms the connective tissue.

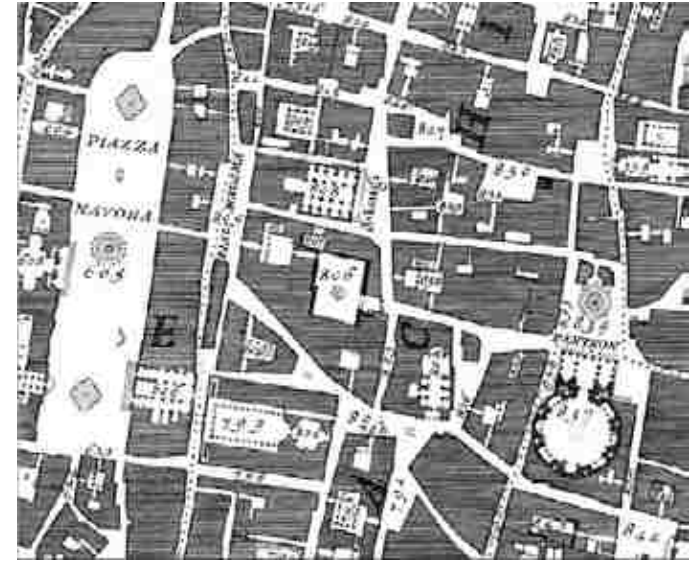


Fig. 2.1 Detail of Giambattista Nolli’s figure-ground map of Rome, engraved in 1748

Architecture has expressed this relationship in the form of the figure ground drawing. Figure ground drawings illustrate two useful concepts; the relative scale of individual buildings, and the proportional relationship of built-up area to negative space, that is, the public realm between buildings. There is another hidden structure expressed in the forms of the figure ground diagram; land ownership.

Post-colonial North American cities owe their consistent patterns of spatial division to a system of land division established in the early days of the nation, a system of surveying and establishing land ownership that remained remarkably consistent until the post-WWII era. The plat forms the underlying DNA of urban space, since it establishes the initial pattern and scale of land-holding. Subsequent modifications and deviations take on their significance from the fact that they represent visible departures from the underlying system that established the basic form of American cities beginning in the nineteenth century; “The plat is the most vivid manifestation of the will to order in community planning (Thomson 2010).” This system is composed of two basic elements; the block, bounded by public streets, and the individual lots into which the block is divided. A later innovation is the subdivision, the platting of a single large property under monolithic ownership into multiple blocks and lots. The dimensions of the block and of the individual lots that comprise it define grain at the urban and neighborhood scales.

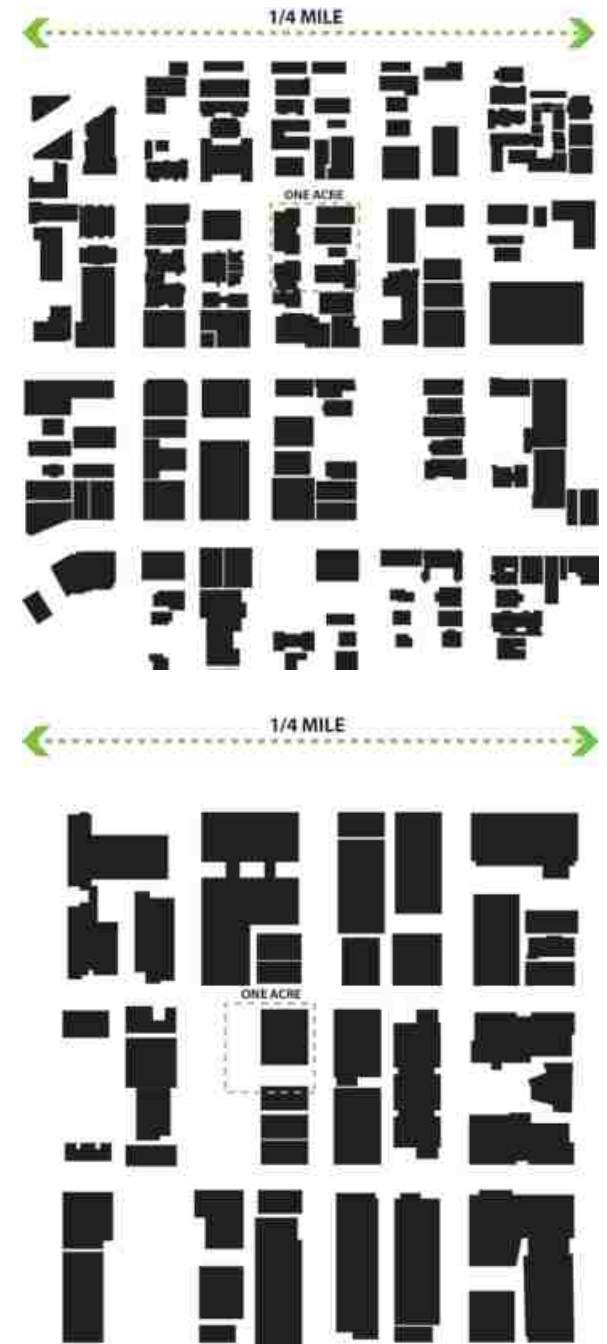


Fig. 2.2, 2.3 Figure ground comparison. Capitol Hill above, South Lake Union below.

Land ownership under the plat structure was a modular system, wherein the base unit was initially the individual lot. Development consisted of small-scale structures

which owners and early speculators built in individual increments, so that each primary building (and often, its associated outbuildings) occupied single lots. The modular nature of the system allowed builders to combine modules to make larger parcels. This was a particularly attractive strategy to developers because it allowed them create large corner lots with dual frontages (Moudon 1989). Toward the end of the nineteenth century, land values and urban densities increased, leading more large scale, durable construction on a scale that spanned multiple lots.

The cellular nature of plats has proven highly adaptable to changing social and economic conditions; where demand for individually owned (fee-simple) parcels is high, lots can be subdivided. When builders needed more than one lot to construct a large building, adjacent lots could be combined.

Districts within a city tend to be characterized by fairly homogeneous grain patterns (Lynch 1960). The repetition of physical elements on the map creates the structuring elements at given scale (Moudon 1989). At the scale of a building, structuring elements are windows and doorways. At the block scale, the structuring elements are individual buildings, and at the district scale, they are the blocks themselves.

The scale of the structuring elements relative to one another creates an easily recognizable formal language. The rectangular North American urban lot of the nineteenth century and beyond has led to the development of building typologies related to the practicalities of fitting structures of different scales and uses onto

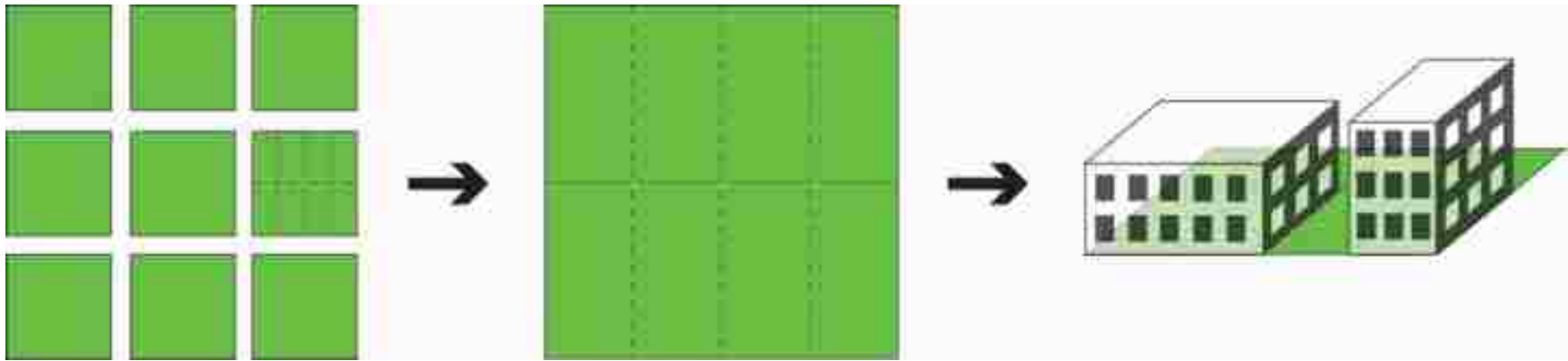


Fig. 2.4 Granularity, expressed at the district block and building scales.

them. The combination of multiple lots facilitates the creation of larger parcels and introduces the possibility of differences in the scale of building modules on a single block. However, due to the nature of real estate demand, when land values increase enough to encourage consolidation, it tends to be only a matter of time before most properties in a district follow suit.

For much of the modern history of the United States, single and double lots have formed the most prevalent increments of building. The rectangular shapes of these lots, combined with the exigencies of providing fresh air and daylight to rooms have resulted in similar solutions. With few exceptions, commercial and residential structure typologies have been composed with a public face and two or more less public faces (Moudon 1989)

There is also a directional component to the grain of lots and blocks. In locations with rectangular block forms, there has emerged a hierarchy of streets based on

the length of the block-face. Observation has shown that the short ends of blocks tend to have much higher pedestrian traffic because they consolidate many flows of movement and offer people greater options for path deviations (Jacobs 1961).

Blocks were typically platted with the long faces perpendicular to major arterials. These arterials were also often the routes of streetcars and buses in pre-auto urban areas. The rectangular shape of lots is the most efficient way of dividing blocks (Moudon 1989). Each property needs to have access to the street but more area can be provided as the side dimensions are lengthened. There are, of course, practical limits to this pattern of ratios. Below a minimum width, usable spaces cannot be built on a lot; the minimum configuration being a single row of rooms along a corridor running parallel to the side lot line. There is also a diminishing marginal value to deeper lots for similar practical reasons. On rectangular blocks, the 'spine' of rear lot lines typically runs parallel to the long block face, resulting in the long faces of end lots facing the more commercially viable end grain. Cities and property owners have typically dealt with this contradiction; block ends facing commercial strips can be platted with lots rotated 90 degrees from the rest of the block, or the end lots can be combined with adjacent lots to form larger parcels, allowing commercial buildings and higher density residential structures to orient to the strip. The shape of blocks thus has a direct impact on the patterns of development of their constituent elements; the form of one scale of urban grain affects the forms that develop at the next level down the scalar axis.

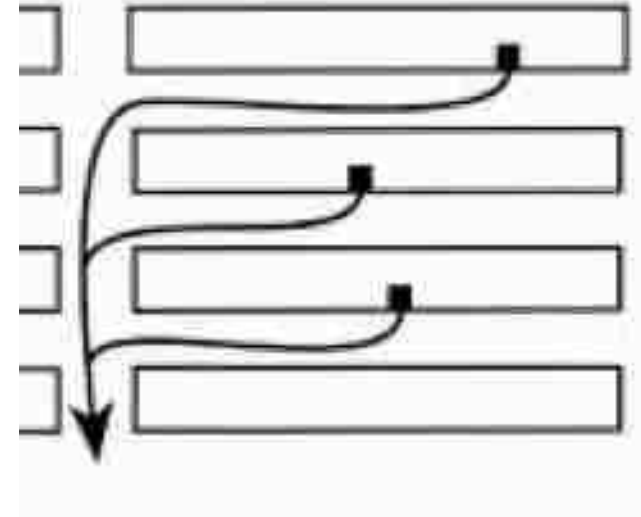


Fig. 2.5 Jane Jacobs' diagram of block grain and intensity of pedestrian activity (1961).

The process of development in urban locations has thus been one of negotiation between a newcomer and the other buildings that surround it and make up its context (Thomson 2010). The identity of each module is determined by its relationship to its peers. This relationship, in turn, is defined by the module's relationship to its parent module. The same is generally true of blocks' relationship to districts, though this study will be limited to the relationships of buildings and lots on a single block.

Steven Holl (1980) describes the formal interplay of distinct buildings on urban blocks: "As individual buildings in the city are sustained and completed by the lines of surrounding buildings, the fabric of a city takes form. City fabric is defined as urban solids and voids arranged to form continuous patterns of blocks and spaces as opposed to individual buildings places in the landscape. The urban solids of the fabric develop in accordance with the voids of circulation and open space. They are conditioned by the limits of street and lot lines."

A coarser urban grain has emerged in areas where there is high demand for large-scale uses such as industry and business. For this reason, downtowns tend to have a few very large structures occupying a block and in some cases, a single building fills an entire downtown block. When this occurs, a level of scalar taxonomy disappears, leading to abrupt jumps in scale, from façade to block with no intermediary form. When the boundaries between the legal cells of ownership, the lots, are dissolved, the result is a new cell at the scale that once described an entire

block. It is for this reason that inherently bulky structures such as skyscrapers, civic institutions, stadia and other large, specialized buildings have evolved their own specialized formal vocabularies.

Seattle's urban spatial structure is fairly typical of North American cities established in the Nineteenth century. Seattle's early plat system created a consistent block form of 300 by 300 feet. These blocks were sometimes bisected by alleys with lots as small as 30 feet wide and 125 feet deep. The relative dimensions such as length of block, width of street frontage and depth of lot have a profound impact on the forms of development that occur. As Seattle grew, plats of varying sizes and dimensions emerged, but for the most part these followed the established conventions of North American urban land surveying, with lots of approximately 50 to 60 feet wide and 100 to 120 feet deep. Blocks were at least 200 feet long and seldom longer than 600 feet.

Seattle's single-family neighborhoods still mostly conform to the system of 5,000-7,000 square foot lots on gridded blocks of about 250 by 300-600 feet. In the area that became Seattle's downtown this pattern became increasingly common in the years after the 1889 fire that destroyed much of the city's core, and proceeded into adjacent districts by the 1920s.

2.2 | Urban Grain and the Scale of Capital

The scale of real estate development is, fundamentally, the spatial manifestation of the scale of capital. Contemporary urban morphology expresses the scale of the economic system that produces it. The different scale of grain and the morphologies corresponding with eras of development trace the systemic metamorphosis of our economy over time. Post-war urban forms both express the economic reality of global capitalism and reinforce it. The coarse-grained pattern that has dominated urban development beginning in the 1950s is unprecedented in human urban history, and now constitutes the majority of the land-mass of most North American cities.

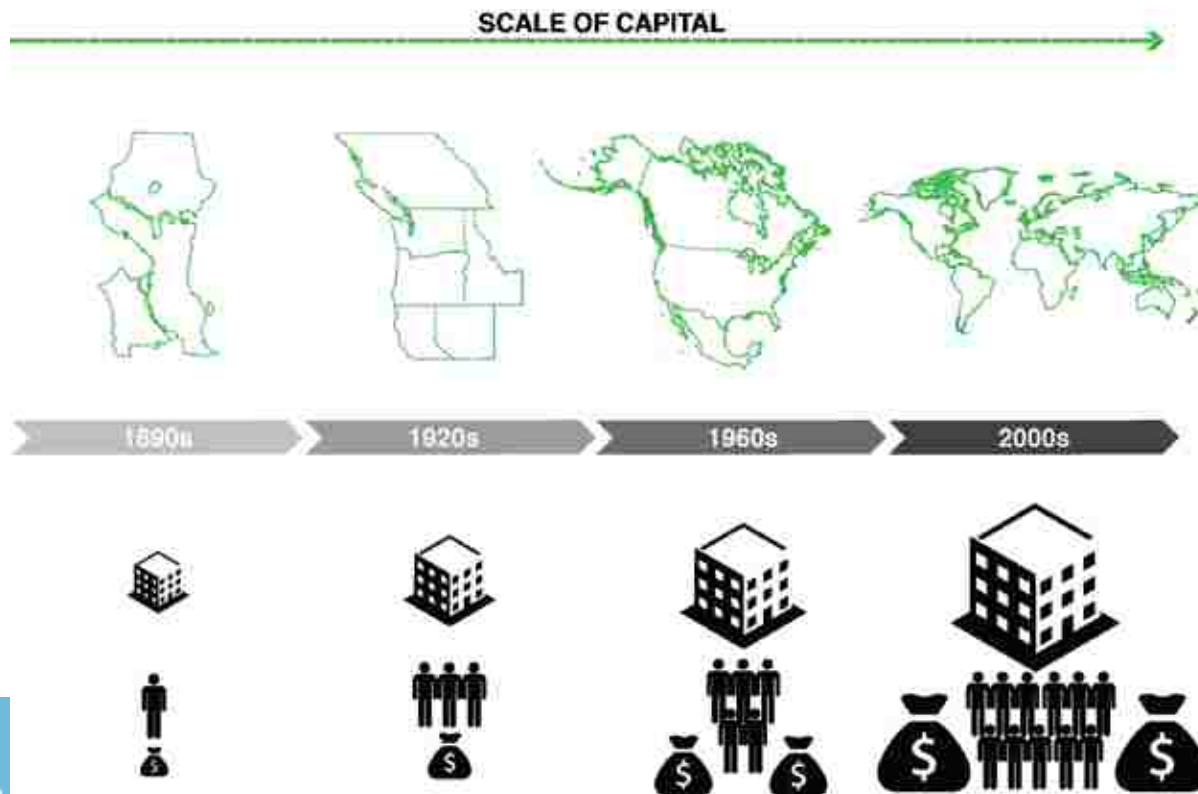


Fig. 2.6 The relationship between the scale of real estate investment capital and the built environment over time.

What has been described up to this point is the establishment and evolution of the urban plat. Urban land surveying and land ownership patterns prior to WWII are fundamentally consistent with patterns of landholding that can be traced to antiquity. While the particulars of proportions of buildings and streets have varied in different eras and locales, the hierarchical matrix of buildings, blocks and districts has been remarkably consistent. The counter examples described above tended to be outliers, confined to sub-districts.

The post-war era introduced an unprecedented shift in the general pattern of land division in the US and many other first-world countries. Widespread automobile ownership and favorable federal lending policies facilitated the growth of low-density suburban development (Duany et. al. 2001). Federally funded high-speed roads placed rural land on the urban periphery physically within reach of millions of middle class Americans (Gallagher 2013).

Transportation technology facilitates, and to some extent, dictates the grain of a city. Human beings walk at a speed of about 3 miles per hour, necessitating a very tight grain when walking is the primary means of circulation. Streetcars and buses allow people to cover greater distances in the same span of time, facilitating coarser grained development at lower densities. A comparison of Victorian San Francisco's tight urban grain to the looser grain of streetcar-era cities such as Seattle, Portland and Los Angeles demonstrates this phenomenon (Moudon 1989). The introduction



Fig. 2.7 The streetscape of the Roman city of Pompeii shows a human scaled built environment.



Fig. 2.8 Typical coarse-grained post-WWII suburban fabric, Colorado Springs.

of automobiles freed people from the constraints of fixed-route transportation systems, and increased the distances they could travel by an order of magnitude.

Concurrently, the units of land development expanded significantly. The repetitive expansion of modular grids ceased and new land began to be urbanized in large, self-contained pods, or subdivisions. Mid-twentieth century planning theory is heavily implicated in the demise of the grid system. The planning orthodoxy of the immediate post-war era stressed the segregation of land uses on the grounds that dissimilar uses were mutually incompatible. Early post-war subdivisions tended to be relatively small, but over time, more master-planned communities in the model of the Levittown projects began to emerge. By the end of the twentieth century, suburban land parcels had grown large enough to encompass whole farms. Developers purchased large rural properties and platted them as semi-autonomous subdivisions, with limited access points and a self-contained plat of lots and blocks. In the case of commercial development, large office parks were laid out on sprawling multi-acre campuses.

While planning policy and transportation technology facilitated this break from the venerable traditions of city-building, a third mechanism was necessary to enable the shift from fine grained cellular urbanism to the enormous increments of development that superseded it. This third component was the development of large-scale financial instruments to finance the purchase and construction of modern megaprojects.

Over the past century, there has been a subtle transformation of land-based wealth from a utility value to a fungible, abstract commodity. Prior to WWII, land in American cities was, to a much greater extent, developed by owner-occupiers upon an armature of an indefinitely repeating blocks and lots. Retail spaces were constructed as needed by the business owners who intended to occupy the spaces. Single-family housing was constructed on individual tax lots by the families who wished to live in the dwelling, or at most, in small batches of adjacent lots by local builders. Towns grew as more areas were platted by landowners, who sold off the lots piecemeal, and extended the existing grid from adjacent urbanized parcels into the new land. The fundamental unit of development was the lot, which was typically developed by one owner. Even rental housing was developed on a relatively small scale and operated by owners who were physically proximate. As noted above, the typical footprint of a prewar apartment building was most often one or two lots (5,000 – 10,000 square feet). The modest scale of these projects allowed them to fit within an envelope similar to typical commercial structures of the time. Projects were typically developed on an ad-hoc basis, by owner-occupiers, in direct response to the needs of prospective occupants (Rybczynski 1996).

The practice of large-scale bundling, or “securitization,” of real estate assets has had a powerful impact on the North American built environment. Corporate investment banking and the prevalence of instruments such as real estate investment trusts (REITs) has imposed a new set of demands on development. Large pools of money make large-scale development possible, but they also require it, in order to produce

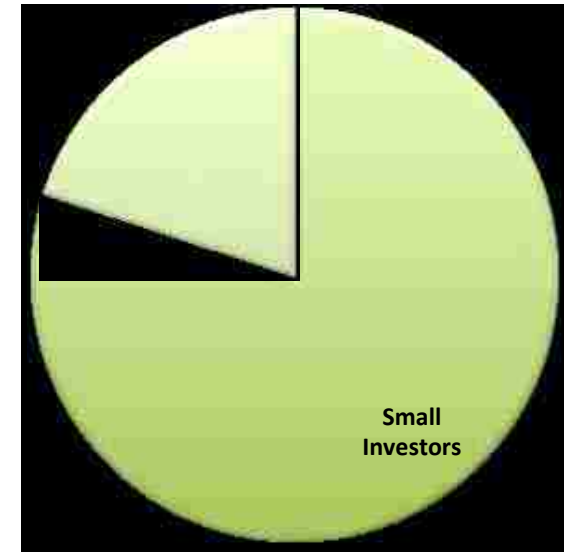


**Fig. 2.9 White Motor Building, constructed 1917-18
Capitol Hill, Seattle.**

a high enough rate of return to offset investors' risk. Contemporary real estate development is now driven by the need to maximize performance for shareholders, and the best way to do this is through economies of scale. Large institutional developers build and manage portfolios of real estate assets. Elimination of redundancy at the individual property level and standardization of product across an entire portfolio drive production of large and repetitive development schemes.

As the pools of capital behind urban real estate development have increased, the scale of the projects they produce has grown proportionately. Smaller pools of capital tend to be more locally sourced, while larger ones require a greater geographic reach. Over time small projects that occupied one or two lots and were financed by a handful of individual investors, usually residing near the project, have given way to very large projects supported by national or even international pools of capital. An unpublished study conducted by the office of Seattle City Council Member Kshama Sawant discovered that through the 1980s seventy to eighty percent of development in Seattle was executed by locally based, locally financed developers. These developers tended to be relatively small-scale entities, so called "mom and pop" developers. Only between twenty and thirty percent of development was attributed to national or international level investment entities. By the 1990s, however, the trend had shifted, and in the aftermath of the recession of 1998, the ratio had almost completely reversed. The study attributed this change primarily to the difficulty smaller, local investors have in obtaining financing. Specifically, much higher equity requirements in the form of loan-to-value ratios are now required by lenders.

Pre 2000



Post Recession

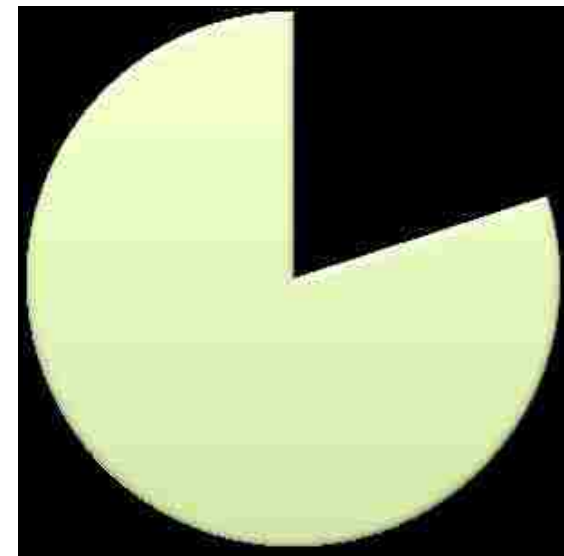


Fig. 2.10 Comparison of percentage of Seattle development by large institutional developers pre 2000s and post 2008 recession.

2.3 | What we are Losing

While the process of mass commodification of the built environment was initially most obvious in the suburban landscape, it has had an equally powerful impact on the spatial structure of urban cores. Since the 1990s, trends toward suburbanization and urban disinvestment have attenuated and a full-scale urban revival has taken hold. Americans have begun to rediscover the virtues of walkable urban places. Recent studies have shown that millennials, the generation born between 1980 and 2000 and who make up approximately 25 percent of the population of the United States, are increasingly eschewing the auto dependent lifestyles once popular with baby boomers. According to recent data, 77 percent of millennials indicate they would prefer to live in an urban core (Robert Charles Lesser & Co survey cited in Gallagher 2013), and a National Association of Realtors study (cited in Gallagher 2013) indicated that 62 percent of millennials prefer dense, mixed-use neighborhoods to large-lot single-family homes (Gallagher 2013).

The revaluation of central cities has pushed land values to unprecedented levels as demand has outstripped supply of urban real estate (2011). The market-driven response to this increase in demand has been the development of increasingly large hybrid structures. Since approximately the mid 1990s, developers began assembling large parcels in high-demand urban neighborhoods for the purposes of redevelopment. A new urban building typology, initially pioneered in Seattle, emerged in this period, the so-called five-over-one. This building type placed five

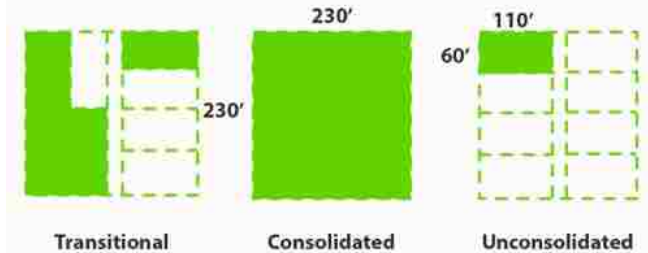


Fig. 2.11 Comparison of adjacent blocks in Seattle's Belltown neighborhood, showing varying degrees of consolidation.

stories of low-cost wood-frame residential construction over a concrete podium of one or two stories. Building in this way pushed the building code for light wood construction to its limit; buildings taller than six stories must be constructed of more durable, and expensive materials, either concrete or steel. Parking and retail are accommodated beneath the concrete slab or underground, and apartments or condominiums are placed above. The five-over-one typology rapidly became the dominant form of urban redevelopment. National and international investors, eager to capitalize on the newfound demand for urban real estate, sought out opportunities to increase profitability by expanding the scale of these projects through parcel assembly.

The Avalon Bay development company is fairly typical of this type of developer. With a national portfolio of mixed-use residential projects, they have created a standardized, and highly successful formula. Avalon Bay's Seattle projects include a 1.5 acre project in Ballard, and one acre projects in the University District, Queen Anne and Belltown. Avalon Bay is notable for their large holdings in this region, but they are by no means unique. Most large-scale mixed-use projects are financed in a similar fashion, many in the form of publicly traded companies like Legacy Partners, Equity Residential, Weingarten, Lennar, or Holland Residential. All of these builders have adapted economic formulas pioneered in suburbia to a new development agenda in urban centers.



Fig. 2.12 Avalon Bay's Ava Ballard project.

urban mixed-use schemes. Zoning codes have been highly favorable to the production of large hybrid structures in urban locations. Seattle's land use code places few limitations (with the exception of historic landmark statutes) on the consolidation of parcels for large mixed-use projects. The Neighborhood Commercial (NC) zone in particular, is written such that it describes this development type. The NC3-65 category allows unlimited square footage for retail uses at the ground floor and allows buildings to be 65 feet tall.

Demolition of older, smaller buildings to make way for large mixed-use projects that sometimes fill entire city blocks is tacitly encouraged by development codes. "In the name of density, many older buildings and neighborhoods are being demolished in favor of new, higher density construction. These new buildings are often rebuilt at a larger scale to increase density, incorporate vehicle parking and larger stores that can attract commercial tenants, often chain stores. The result is often buildings that are out of human scale and with no distinct historic texture or neighborhood character." (Merlino 2011)

As large hybrid structures have proliferated, their development has come at the expense of grain in the areas where they are being constructed. Since building larger structures reduces marginal costs, thereby increasing rate of return, there is a strong incentive for developers to acquire as many parcels as possible. While there is a cost to building higher, there is nothing but profit in building over a larger area.

Without the formal constraints imposed by the countervailing tensions of functional



Fig. 2.13 A examples of recent corporate housing developments in Seattle.

interior layouts (need for fresh air, daylight and interior circulation), and party wall conditions along two or three sides (lot lines) contemporary hybrid buildings are unmoored from the pragmatic forms of the traditional urban building types found in urban centers and commercial districts. Wood frame over podium buildings are characterized by a 65-70' wide section, based on a double-loaded corridor. These structures can, in theory, be infinite extrusions, constrained only by site boundaries. In some cases this has resulted in odd shapes as buildings snake around the available real estate.

The erasure of the lot lines and consolidation of multiple parcels fundamentally rewrites the structure of urban space in a manner that is corrosive to the very system that makes cities vibrant and successful, namely their diversity. "This manner of renewal, in gridiron street neighborhoods erodes the delicate relation of street to block, to lot, to public open space that serves the public at large (Thomson 2010).

Jane Jacobs 1961 treatise, the Death and Life of Great American Cities identified diversity as a fundamental condition for successful urban places. The recent loss of diversity in urban neighborhoods has been two-fold; the formal diversity of individual modules (and individual owners) is replaced by the homogeneity of a single large structure, and loss of buildings of different ages and conditions, with different cost structures, reduces the economic diversity of districts.

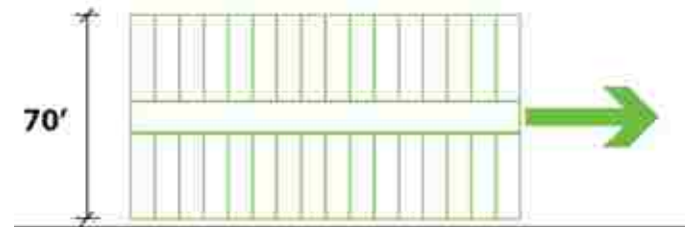


Fig. 2.14 "Shotgun" units maximize leasable square footage.



Fig. 2.15 Alphabet shapes of double-loaded corridor extrusions, Ballard.

reduce the level of street activity. Formal studies of the Pike/Pine and Belltown districts in Seattle found a strong correlation between fine-grained blocks and pedestrian activity. The scale of buildings on a block had a greater impact on the number of pedestrians sitting, standing and pausing on the street than any other recorded variables, including material quality and transparency (Merlino 2011). Larger building modules tend to introduce what Jacobs (1961) referred to as a blight of dullness; “A new corpse is laid out. It does not smell yet, but it is dead.” Given the aforementioned spatial taxonomy of urban places, the loss of recognizable increments of form has an observable impact on the legibility of streetscapes. What is disappearing is the human scale of the parcel as a structuring element. “A built environment that is designed to work at different urban scales cannot rely solely on the counterpoint of form and space to shape neighborhood relationships,” writes architect and urban designer Mark Thomson (2010). “The plat” he argues, “serves to overwhelm the significance of any individual building or site over the next.” Many cities have design standards specifically mandating the breakup and modulation of large monolithic facades. At best, this mitigation strategy can create a superficial veneer of visual diversity. At worst, it results in an unconvincing simulacrum of a traditional block face, with a mish-mash of different materials and formal manipulations.

The differences between fine-grained and coarse-grained blocks are much more than superficial. Increments of building have a profound impact on the structure of communities. At a practical level, smaller building increments tend to disperse activity by placing elements that would be redundant in a larger structure at regular



Fig. 2.16 Simulated diversity through “façade articulation,” Seattle’s University District

intervals along a block face. All buildings must have entrances facing the public right-of-way, and the more of these a block contains, the more opportunities for activity it will contain. Smaller increments of building result in more diversity; diversity of building uses, ages and building typologies on a given block.

With wide-spread consolidation of land in urban commercial districts comes a loss of control for communities. As the number of small stakeholders in a district decreases, a few large land-owners begin to exert a disproportionate influence on the character of the district (Moudon 1989). “The fundamental difference between traditional planning and current zoning regulations is not a function of density, but in the deeper sense of public control when transactions occur in the environment,” (Thompson 2010). As fewer and fewer stakeholders control more of the built environment, opportunities for community members to participate in decisions that impact the future of their communities decrease. People become less empowered when grain is eroded.

Temporal variation becomes more difficult as spatial variety decreases. Large buildings are more difficult and costly to modify or update. Therefore, there is a kind of inertia inherent in large scale, coarse-grained districts. The result is that these buildings tend to become dated in appearance because large portions of the built environment age at the same rate. In blocks where consolidation has not occurred, changing tastes can more easily be accommodated since smaller buildings can be modified incrementally at low cost.

All of the formal, and even some of the social impacts of large buildings can, at least in theory, be mitigated through thoughtful design and stricter zoning standards. Multiple entrances can be required, small retail spaces can be provided, and in careful hands, visual monotony can be relieved. However, no design standards or architectural strategies can replace the structural diversity of fine-grained blocks. Blocks with multiple owners with different needs and different interests inevitably have a kind of diversity that simply cannot be engineered. In *The Death and Life of Great American Cities*, Jane Jacobs introduced the metaphor of the ecosystem into planning and urban design discourse. Her description of thriving urban neighborhoods posited a mutually beneficial relationship between diverse users. Diversity, for Jacobs, was both formal and economic; in fact she posited the former as the primary enabler of the latter. Where buildings of all one era dominate, there is no opportunity for diversity of residents and business enterprises. Districts without diversity can only sustain the lowest common denominator of commercial activity. These businesses tend to be chain businesses with access to enough capital to cover the high costs of new construction. A depreciated building requires less income than one that has yet to pay off its capital costs (Jacobs 1961).

In the short term, economic homogeneity results in the displacement of low-income residents, and all but the highest-yield businesses. Startups, niche specialists and other marginal businesses cannot compete with the national chains and luxury retailers who can afford to pay top dollar to lease space in new buildings. In the long term, as a large project depreciates, it all does so at the same rate. Urban



Fig. 2.17 Monolithic urban development, Portland, Oregon.

strategist Aaron Renn, responding to the problems inherent to New Urbanist “instant architecture” writes “The original suburbs that are being redeveloped basically came into being all at once in a pretty narrow time window originally. This means all that development gets old at the same time, requiring redevelopment more or less at the same time. Also, unlike those old urban storefront buildings, most suburban commercial space, especially the closer we get to the present, is made up of large, monolithic developments under a single owner. This makes it hard to redevelop piecemeal” (Renn 2009). Renn’s observations can easily be applied to today’s large urban hybrids because the economic and structural phenomena occurring in cities are all but identical to those that characterize placeless suburbia.

Jacobs described a kind of organic symbiosis, where constant decline and renewal formed a dynamic interplay. As nurse logs nurture young plants in a forest, so do old, depreciated structures, provided they are not the only or the dominant form in a district. The current conventional wisdom among urban theorists is that in the twenty first century, American cities’ success depends on their ability to foster and incubate creative, entrepreneurial startups (Florida 2002). Jacobs posited a spatial nexus for this kind of creativity in old buildings: “As for really new ideas of any kind – no matter how ultimately profitable or otherwise successful some of them might prove to be – there is no leeway for such chancy trial, error and experimentation in the high-overhead economy of new construction. Old ideas can sometimes use new buildings. New ideas must use old buildings.” (Jacobs 1961) Granularity is the most critical element, in Jacobs’ view. “The district must mingle buildings that



Fig. 2.18-19 New and old structures coexist on Capitol Hill, Seattle.

vary in age and condition, including a good proportion of old ones, so that they vary in the economic yield they produce. This mingling must be fairly close grained.” (Jacobs 1961). When multiple parcels are aggregated and smaller buildings are replaced with fewer, larger structures, the opportunity for this sort of dynamism is automatically reduced.

The problem is compounded by the fact that today’s mixed-use hybrids are designed in a way that makes it very difficult to reconfigure their spaces for different uses. The wood frame over concrete podium construction system does not allow for the movement of internal partitions, and the economics of such reconfiguration would likely prove to be prohibitive. Structural sheer-walls in large wood frame buildings cannot be moved at will without incurring major expense. The malleability of prewar “fabric” buildings has been the key to their longevity since their internal *parti* is adaptable to changing tastes and economic conditions (Brand, 1995). Piecemeal alterations to mixed-use structures that routinely encompass 150,000 square feet or more are simply untenable.

Jane Jacobs’ propositions about structural diversity resonated as intuitively correct with a younger generation of planners, architects and urban designers in the 1960s and beyond, to the present day. For decades, however, Jacobs’ prescriptions for urban vitality remained unquestioned qualitative observations, even if they were considered canonical in the professions. Over a period of years culminating in 2014, the National Trust for Historic Preservation’s Seattle-based Greenlab sought to quantify and verify

the propositions that comprise the Jacobs dogma. The findings summarized in the Greenlab's 2014 report titled *Older, Smaller, Better; Measuring how the character of buildings and blocks influences urban vitality* resoundingly confirmed Jacobs' hypothesis that fine-grained, diverse neighborhoods with a mixture of new and old buildings support the kind of dynamic economic and social conditions cities are striving to create and preserve. "This analysis found that blocks and districts with a fine-grained mix of old and new buildings in Seattle, San Francisco, and Washington, D.C., were more economically, socially, and culturally vital than areas with mostly newer, larger buildings along a variety of metrics. Building age, building age diversity, and the granularity of building fabric emerged as significant predictors of community vitality, even when taking into account the effects of income, access to transit and construction permit dollars." (Preservation Greenlab 2014)

Key findings from the Greenlab Research:

Older, mixed-use neighborhoods are more walkable.

The Greenlab study reported that older areas with a mixture of small new and old buildings had higher Walk Score and Transit Score ratings than comparable districts with mostly newer, larger buildings.

Old buildings are attractive to young people.

Greenlab research revealed a lower median age, as well as greater age diversity in older, fine-grained districts.

Nightlife is most alive on streets with a diverse range of building ages.

Blocks with more small, aged buildings tended to have higher cell phone activity on



Fig. 2.20 Streetscape, Pike Street, Capitol Hill, Seattle.

Friday nights, and hosted more businesses that stayed open after 10:00 pm.

Older business districts provide affordable, flexible space for entrepreneurs.

The study considered rates of minority and women owned businesses as well as start-ups and new businesses. Older, mixed age neighborhoods with smaller buildings performed substantially better on all these metrics.

The creative economy thrives in older, mixed-use neighborhoods.

More creative jobs per square foot of commercial space were found in fine-grained blocks.

Older, smaller buildings provide space for a strong local economy.

Older, mixed blocks hosted a much higher proportion of non-chain restaurants and retailers than blocks with mostly newer, larger buildings, and a significantly higher proportion of jobs in small businesses.

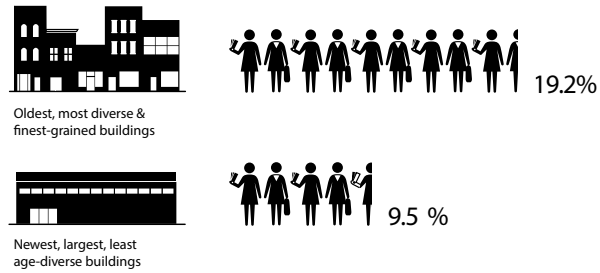
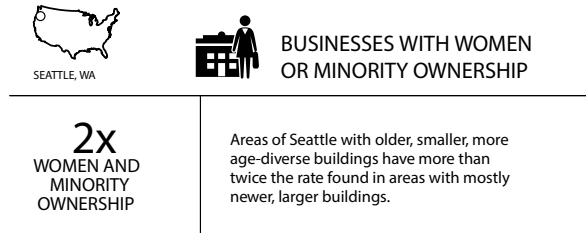
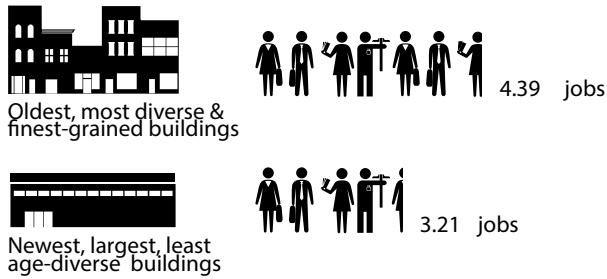
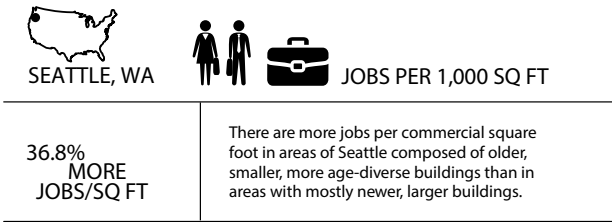
Older commercial and mixed-use districts contain hidden density.

The older blocks with more old buildings had higher population densities and supported more jobs per square foot than their larger, newer counterparts.

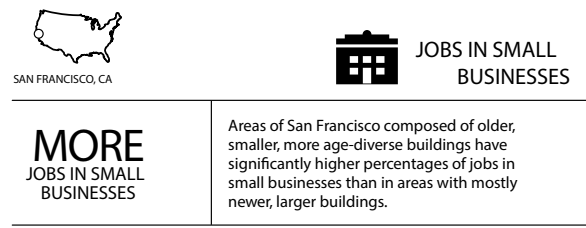
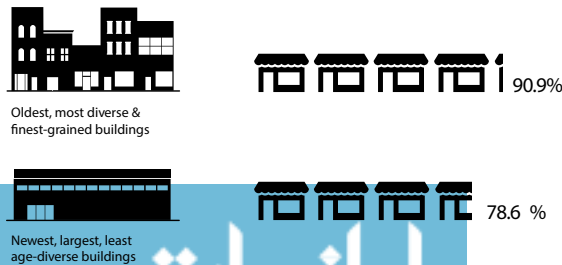
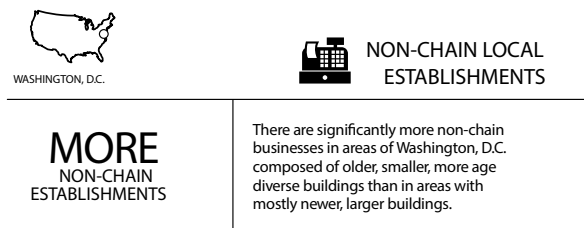
While most of the above findings may strike urban designers as fairly intuitive, they contradict another school of thought, one that maintains that the inherent inefficiency of smaller, older buildings represents a supply constraint on burgeoning urban markets. Urban economist Ed Glaeser of Harvard has made the claim that preservation of historic fabric is actually harmful to cities, because it artificially inflates costs by interfering with developers' ability to create new supply (Glaeser

2011). The Greenlab report does not directly contradict the contention that additional real estate should be supplied, but it strongly rebukes the position that preserving fine-grained urbanism is detrimental to urban vitality.

Fig. 2.21-24 Infographics excerpted from the Preservation Greenlab's 2014 report, *Older, Smaller Better*



OLDER, SMALLER, BETTER: Measuring how the character of buildings and blocks influences urban vitality



2.4 | Case Studies in Consolidation

The following pages contain case studies documenting examples of the kind of consolidation described above. The projects profiled below are mostly located in Seattle, although some represent similar conditions in Portland, Oregon. Projects selected represent typical projects executed by institutional grade investors and display a consistent form and program.

2.4.1 Greenlake Village

Year Built

2012

Location

Greenlake, NW Seattle

Program

Full block below grade parking, 2 levels. 3 mixed use buildings, residential over retail, including grocery.

Site Area

82,507sf

Site Dimensions

200'X400' approx. (site is an irregular shape)

Historic Lot Size

5000sf

Number of Original Parcels

12-14

Zoning

NC2p - 65 (neighborhood commercial, ped overlay)

Developer

Lorig

Architect

Hewitt Architects

Notes

Three 5/1 bulidings on a single below grade structure.



Fig. 2.25 Greenlake Village, aerial photo



Fig. 2.26 1936 aerial photo of future Greenlake Village site

Greenlake Village is a full-block mixed-use hybrid project located in the commercial core of Seattle's Greenlake neighborhood. Greenlake is a residential community located approximately 4.5 miles north of downtown Seattle. Much of Greenlake was originally platted in the first decade of the twentieth century. It consists mostly of single-family homes on lots averaging 5000-6000 square feet. A small commercial core, serviced by streetcars, was developed at the east side of the lake.

The site of the Greenlake Village project was initially divided into parcels averaging 5000 square feet. These were narrow, deep lots, and many were consolidated into two and three module developments as early as the 1920s. Most development was, until recently limited to one or two stories. The site was something of an outlier for the district as the eastern two thirds were combined to make a dairy in the 1940s. In 2007 the block, including the lots on the western side, was cleared to make way for development. After a period of dormancy due to the recession of 2008, the project was developed and completed in late 2012.

While it is difficult to determine the exact number of parcels that originally comprised the block one can infer that there were approximately 12-14 lots prior to consolidation. The next largest project in the district is approximately half the size of Greenlake Village. Whereas the block was once composed of up to a dozen distinct structures serving a variety of uses, it is now occupied by a single unified development. The project consists of three structurally and mechanically integrated wood-frame over concrete podium structures constructed



Fig. 2.27 Sanborn fire insurance map of Greenlake Village site.

over a multi-level underground parking structure. A grocery store in the eastern building forms the anchor retail tenant, and smaller in-line retail bays occupy the lower levels of the two western buildings. These buildings are spaced about 25 feet apart, separated by a T-shaped open area.

Greenlake Village encompasses just under two acres, making it a significant proportion of the total area of the Greenlake commercial district, which by a generous estimate comprises about 45 acres. The Greenlake Village is even more disproportionate when one considers the net developable land in the commercial core after subtracting parks and rights of way. By conservative estimate (30 percent deducted for rights-of-way, etc.) this project accounts for nearly seven percent of the land in Greenlake's commercial district. By contrast, an original lot of approximately 5000 square feet (though some appear to have been subdivided to 2500) would account for less than two fifths of a percent of the net acreage of commercial land.

The three buildings were designed as a single project by Hewitt Architects and are nearly identical in appearance, aside from having different horizontal dimensions. At a formal level, the block has been consolidated into three very large identical buildings. Functionally the site is now occupied by a single building. Since the three buildings are not independent, they cannot be replaced piecemeal. When the building becomes physically or programmatically obsolete, the entire block will need to be demolished and rebuilt.



Fig. 2.28 View of Greenlake Village facing northeast



Fig. 2.29 View of Greenlake Village facing west, depicting mid-block 'mews.'

2.4.2 Bauhaus Block

Year Built

2015

Location

Pike/Pine Historic District, Seattle

Program

7 stories of rental apartments over retail and below grade parking.

Site Area

28,000sf

Site Dimensions

200'X140' approx.

Historic Lot Size

5000sf

Number of Original Parcels

6

Zoning

NC3P - 85 (neighborhood commercial with ped overlay)

Developer

Madison Partners (Bellvue)

Architect

Hewitt Architects

Notes

Small portions of existing buildings to be retained and new construction will step back to create an impression of different structures.



Fig. 2.30 Perspective rendering of Bauhaus Bloc, Source: Hewitt Architects

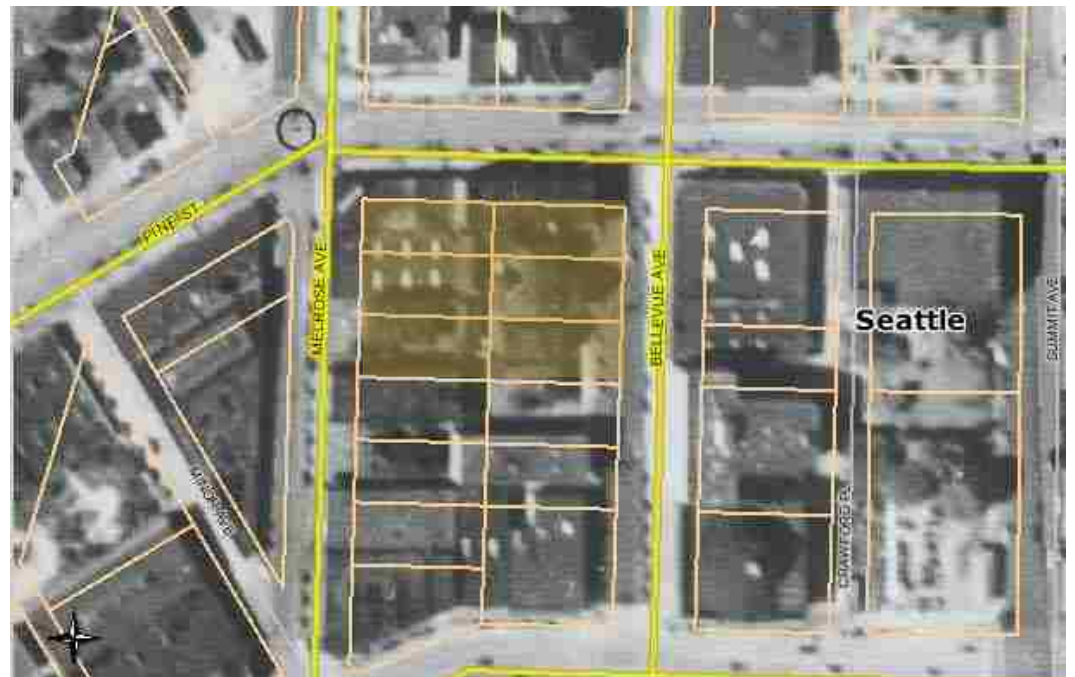


Fig. 2.31 1936 aerial photo of future Bauhaus Block site

The Bauhaus Block project is characteristic of the pattern of investment capital following the value created by sweat-equity investors. The principal structures on the site were the Timkin Roller Bearing building and the Melrose Building, both constructed in 1915. Each had a 5000 (approx.) footprint. The former was a three story building with apartments above small retail, and the latter was a single story auto repair shop-turned café. The new project under construction uses bonuses allocated by the Pike/Pine Historic Preservation Ordinance, which allows additional height and density in exchange for the preservation of “character structures.” In practice, preservation of structures has amounted to what has become known as the “façadectomy,” wherein the skin of the old buildings is preserved, and a new, larger building is inserted behind. In this case, the brick facades of the original structures have been retained, but nothing of the internal structures remains. Those buildings, and the spaces they contained no longer exist. What remains is a two dimensional image, covering the lower portion of a new structure which is approximately six times the size of the individual modules it replaced.



Fig. 2.33 Timkin Roller Bearing Building, ca. 1937



Fig. 2.34 Melrose Building, ca. 1937

2.4.3 Legacy at Pratt Park

Year Built

2008

Location

Jackson St, Central District, Seattle

Program

Full block development with a central courtyard, retail at ground level, structured parking below grade.

Site Area

62,348sf

Site Dimensions

200'X400' approx. (site is an irregular shape)

Historic Lot Size

4000sf

Number of Original Parcels

12 (approx)

Zoning

NC3 - 65

Developer

Legacy Partners

Architect

Sienna Architects

Notes

The site was originally bisected by an alley running east-west. It still exists on the adjacent property which contains a new half-block structure.

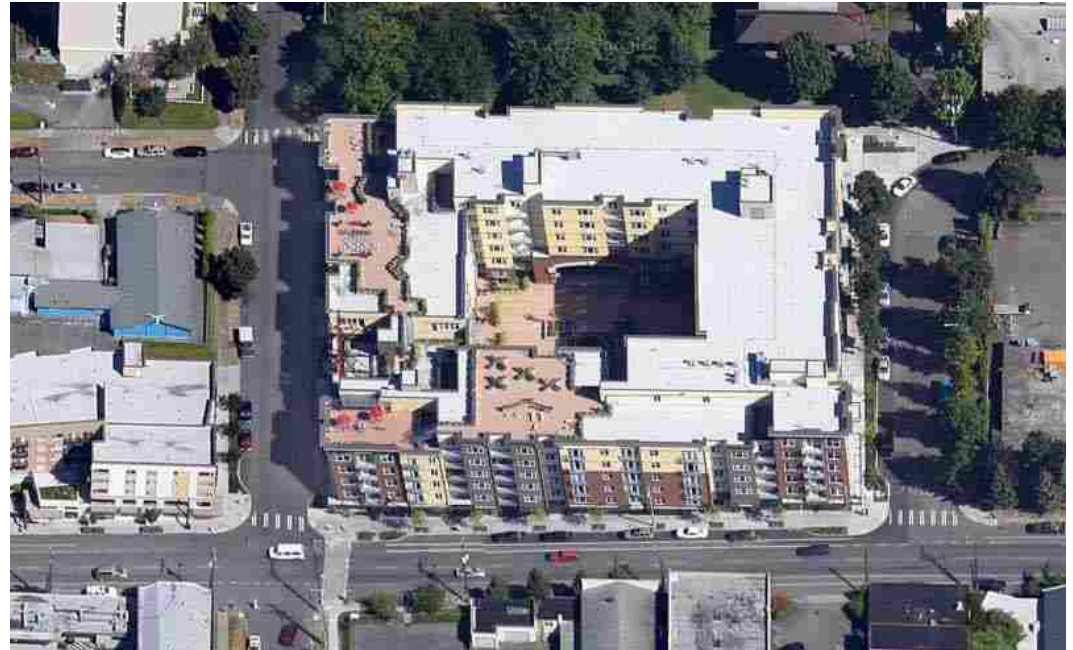


Fig. 2.35 Legacy at Pratt Park, aerial photo



Fig. 2.36 1936 aerial photo of future Legacy at Pratt Park site

The Legacy At Pratt Park is a full block project developed in 2008 on Jackson Street in Seattle's Central District. The projects developer, Legacy Partners is a national developer of office and residential properties – Legacy owns large apartment projects in 12 states. It was designed by Portland based Siena architects.

Jackson street is a former streetcar corridor and runs through what has historically been the heart of Seattle's black community. In its heyday during the 1920s, the street boasted dozens of jazz clubs, most of them black-owned. The Jackson Street corridor anchored the southeast end of the Central District, Seattle's most diverse community and historically one of the few places where minorities were allowed to own property. The district experienced poverty and decline in the latter half of the twentieth century but has begun to gentrify over the last two decades.

The initial plat increment appears to have been approximately 4000 square feet. The block on which the Legacy stands once contained at least eight wood-frame homes and two double-lot apartment buildings according to a 1905 Sanborn map. A 1936 aerial photo indicates several vacant parcels and what appear to be five small apartment buildings. An alley bisected the property, and ran parallel to the Jackson street axis; it has since been vacated. It is noteworthy that the alley still exists on the block immediately to the west of the Legacy. The south side of that block (facing Jackson) was redeveloped the same year as the Legacy. A non-profit community development corporation, Central Area Development Association (CADA) constructed the low-income housing and retail building named Squire Park Plaza

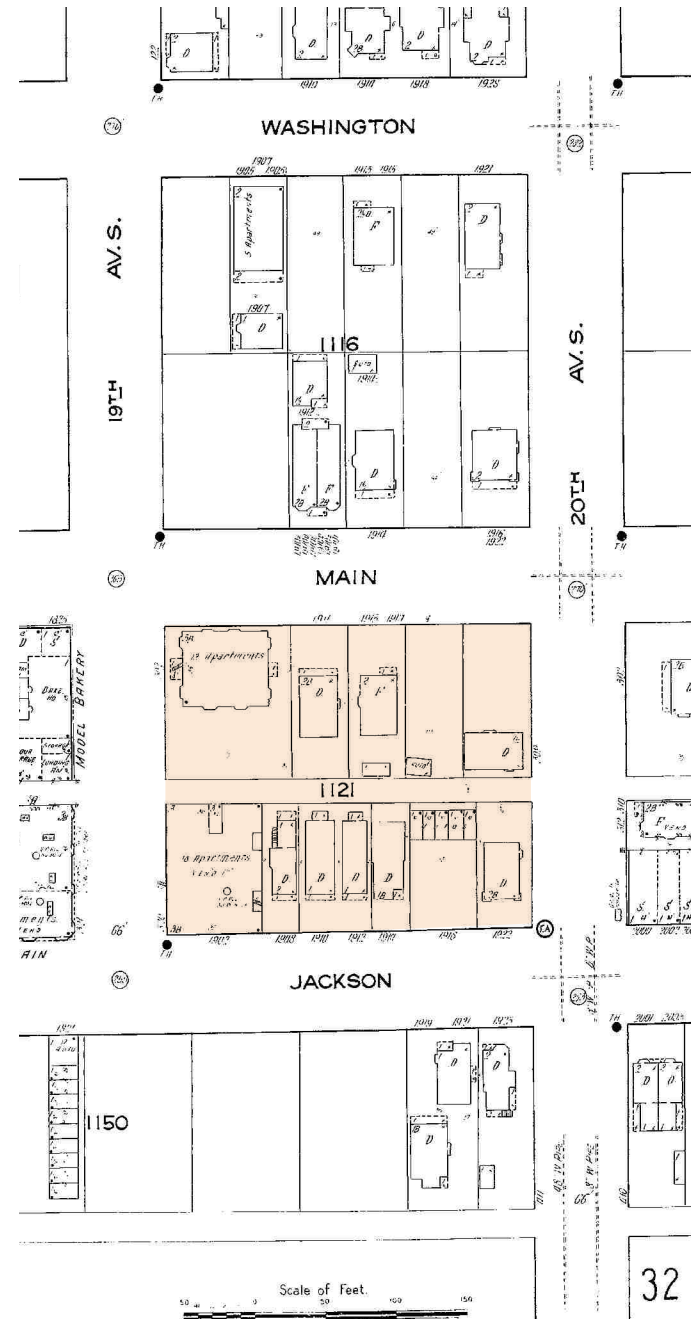


Fig. 2.37 Sanborn fire insurance map of Legacy at Pratt Park site

on that site. Here, the alley separates the block into two halves; the midrise southern portion facing the arterial Jackson street, and the more low-rise residential character of the northern half facing S. Main Street.

The design of the Legacy building represents a policy of “façade articulation” that many jurisdictions have employed to attempt to relieve the aesthetic problems of monolithic development. By mandating articulation and a variety of materials, the design code is attempting to create the impression of diversity. This approach is superficial at best and in the case of the Legacy at Pratt Park, it is entirely unconvincing, resulting in a chaotic composition that fails to conceal the building’s bulk. The facades attempt to apply a design vocabulary of small-scale elements and materials typically found on single-family homes and other small structures to a large monolithic construction. The result is a typological mismatch resulting in cognitive dissonance for the observer.

Anecdotal evidence gleaned from online reviews of the building indicate that many residents come and go by car and thus have little interaction with the surrounding neighborhood. Observing the building from the street, one sees very few if any pedestrians in the vicinity. Despite its 248 rental apartments, the Legacy at Pratt Park does not appear to generate any observable amount of foot traffic. The retail spaces at the ground level of the building have struggled to attract tenants, and exhibit a high vacancy rate.



Fig. 2.38 Photograph of Legacy at Pratt Park, facing northeast



Fig. 2.39 Axonometric view of Legacy at Pratt Park building. Source: Sienna Architects

4.4.4 Summit at Madison Park

Year Built

2004

Location

Central District, Seattle

Program

apartments above a grocery anchor and some small in-line retail. Below ground parking.

Site Area

93,400sf

Site Dimensions

250' X 350' approx. (site is an irregular shape)

Historic Lot Size

4200sf

Number of Original Parcels

14

Zoning

NC3 - 65

Developer

Madison Partners (Bellvue)

Architect

Unknown

Land Value

2015: \$100/sf Date of Sale(2001) \$50/sf

Notes

First large scale 5/1 project in the Central District. Two woodframe residential structures over a single concrete plinth.



Fig. 2.40 Summit at Madison Park, aerial photo



Fig. 2.41 1936 aerial photo of future Summit at Madison Park site

At slightly over two acres, the Summit at Madison Park is one of the larger examples of the five-over-one typology in Seattle. It consists of two structurally integrated, five-story wood-frame residential structures atop a concrete podium. The 242 residential units are condominiums. The ground level contains a 56,000 square foot grocery store and a number of small in line retail bays facing Madison Street. The basement contains 151 parking spaces for retail and a separate, controlled access segment, 295 spaces dedicated to building residents.

The site is an unusual shape due to the diagonal alignment of E. Madison Street. It has three principle street facing facades, and the upper levels snake along the outer lot lines creating an unusual figure ground condition. The residual space between the condominium buildings is located about 15 feet above grade, and due to north-south orientation of the principle building masses, receives relatively little direct sunlight.

The site is located at the northern end of Seattle's Central District, once the center of the African American community and presently experiencing rapid gentrification. The project was constructed in 2004, when this process was still in its early phases. Madison Street was an early streetcar corridor and retains much of the early character, in the form of small-scale retail businesses fronting it. The scale of the structure represents a radical departure from the precedent of surrounding fabric.

The site once housed several 5000 square foot (approx.) commercial lots facing Madison while the rest of the block consisted of wood frame houses. Two more large

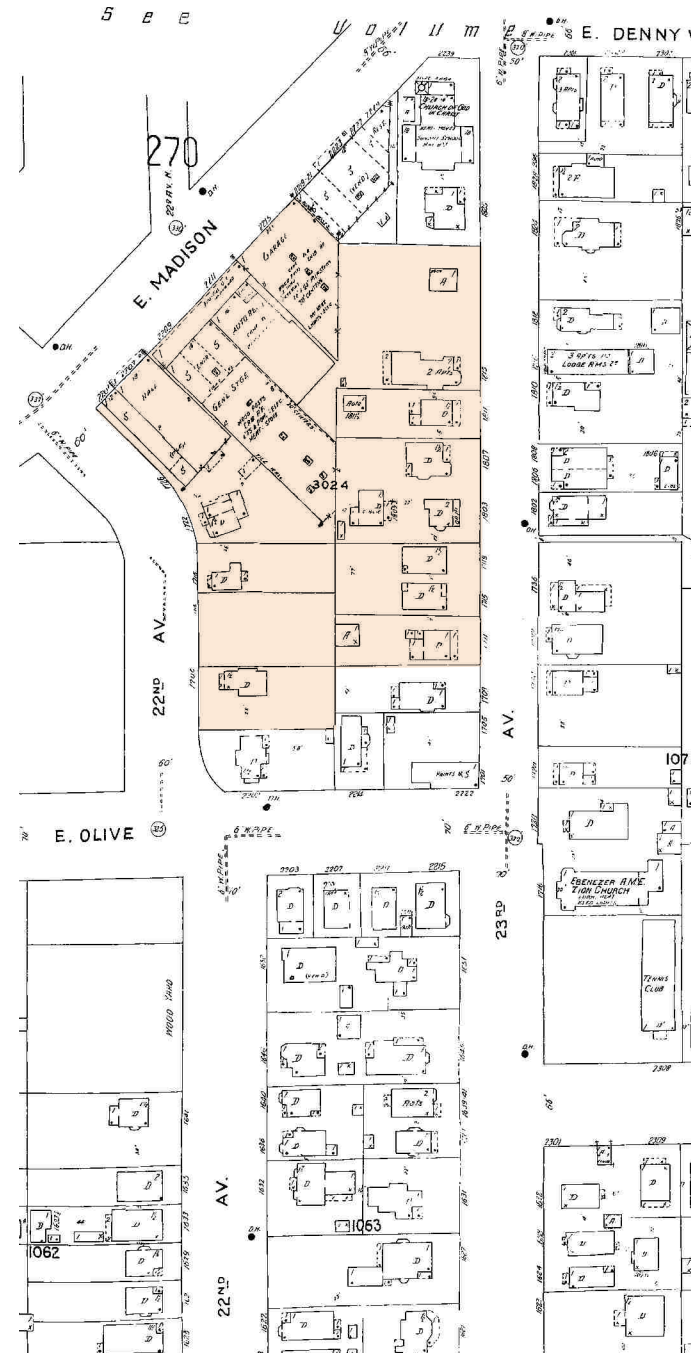


Fig. 2.42 Sanborn fire insurance map of Summit at Madison Park site

hybrid structures are presently under construction immediately to the west, though neither is more than half the size of the Summit.

The Summit has been a controversial project, attracting much negative commentary for its aesthetics, its scale, lack of context sensitivity, and most pointedly for its hostility to the street realm. The entirety of the ground level façade facing 23rd Avenue is blank, punctuated only by display windows, which are used to hang signs advertising sales. The overall impression from the street is one of fortification. The upper levels suffer from the problem of typological mismatch that characterizes many large hybrid structures of its age; material pallet and formal articulation seems to have been borrowed from small apartments and single family homes and transposed onto an urban megaform, with unsatisfying results. The developer of this project was the same group behind the so-called Bauhaus block also examined in this chapter (designed some eight years after the Summit).



Fig. 2.43 Photograph of Summit at Madison Park, facing southeast



Fig. 2.44 Photograph of Summit at Madison Park, facing south

4.2.5 The Prescott

Year Built

2013

Location

Interstate Avenue, North Portland

Program

Full block of apartments over parking and retail.

Site Area

43,165sf

Site Dimensions

250'X200' approx.

Historic Lot Size

5000sf

Number of Original Parcels

11-12

Zoning

EXd (central employment with design overlay)

Developer

Sierra Construction (Seattle)

Architect

Myhre Group Architects

Notes

Project replaced 10 single family homes and a commercial structure. Area was upzoned in the early 2000s due to recent construction of light rail adjacent on N. Interstate Avenue.



Fig. 2.45 Photograph of the Prescott, facing southeast



Fig. 2.46 Aerial photograph of the future site of the Prescott, ca. 2006

The Prescott is a full block mixed-use project located in North Portland. At one acre, it occupies a full city block. Portland's Myhre Group Architects designed the project in 2007 for the Seattle-area developer Sierra Construction. It was constructed in 2013, after being placed on hold during the recession.

The site, located in a blue-collar neighborhood two miles from downtown Portland, formerly contained ten small wood-frame houses. The original plat conformed to the Portland prototype of fifty by one hundred foot lots on a block two hundred feet on each face. Interstate Avenue was the principle north south arterial carrying auto traffic to the interstate bridge, which crossed the Columbia River to Washington prior to the construction of the I-5 freeway. As a result, it contains many relics of the early automotive era, most noticeably one and two story motor-court style motels. These early twentieth century artifacts are rapidly being replaced by newer four to six story hybrid structures. The Prescott, and others like it represent a deliberate effort by the city of Portland to encourage the development of larger, higher density structures along the Interstate Avenue Corridor. The city liberally applied upzones to property along the street in anticipation of the 2004 opening of the Interstate Avenue line of Portland's MAX light rail system. The rationale was to create density in areas where the city had made significant investments in transit infrastructure, thereby maximizing future ridership and justifying those investments. The Interstate corridor has been slow to develop, hampered in part by the recession of 2008 which began just four years after the rail line came online. Investment in commercial land along Interstate has increased in the last few years. Similar projects are under

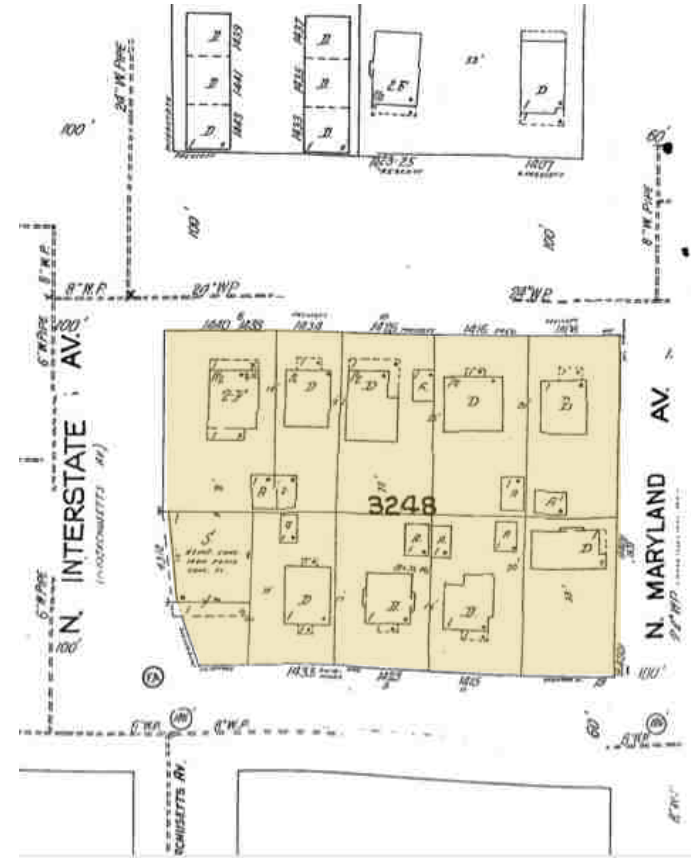


Fig. 2.47 Sanborn fire insurance map of the Prescott site.

development in other areas of North Portland. One noteworthy characteristic of this project is the relatively low cost of land. At approximately \$75 per acre, this project's land costs were nowhere near those of comparable projects in Seattle. This indicates that permissive zoning and the possibility of high return on investment, rather than economic necessity led this project to be conceived as a full-block hybrid.



Fig. 2.48 Photograph of the Prescott, facing southwest



Fig. 2.49 Rendering of the Prescott, facing northeast

4.2.6 The Linden

Year Built

2013

Location

Buckman Neighborhood, Portland, OR

Program

Full block of apartments over at-grade parking and retail.

Site Area

35,970sf

Site Dimensions

200'X200' approx.

Historic Lot Size

5000sf

Number of Original Parcels

8

Zoning

EXd (central employment with design overlay)

Developer

The Foursquare Foundation (of the Foursquare Church)
of Los Angeles, CA

Architect

KTGY Group

Notes

Adjacent Foursquare Church had owned the property since mid 20th century and used it as surface parking for their adjacent church.



Fig. 2.50 Aerial photo of the Linden



Fig. 2.51 Aerial photo of future Linden site, ca. 2010

The Linden is one of very few five-over-one, full block mixed-use buildings outside Portland's downtown core. The structure was designed by the California-based firm KTGy Group. It is located in the Buckman neighborhood of Portland, approximately three quarters of a mile from downtown. The site is one of Portland's oldest residential neighborhoods and is surrounded by late Victorian wood frame houses. East Burnside Street, the principle arterial abutting the project is a major commercial corridor characterized by streetcar era commercial development.

The site the Linden stands on was most likely originally platted into eight parcels, given the prevailing pattern surrounding it. A 1905 Sanborn fire insurance map indicates the presence of four structures on the block at that time and what appear to be four lots. By the mid 20th century, the houses had been removed and the property became a full-block surface parking lot for the adjacent Four Square Church. In the late 00's, the church pursued a development plan for a mixed-use senior housing. Responding to market conditions, namely the historically low vacancy rate in the Portland rental market, the church changed the program to market rate housing and began construction in 2012.

The Linden is considerably larger than any of the surrounding urban fabric. The area to the west of the site is higher density in character than the buildings east of 12th Street, which forms a boundary of sorts between the built up East Bank area and the single family neighborhoods east of 12th, punctuated at intervals by streetcar corridors. Blocks to the East saw some consolidation in the 1920s, with

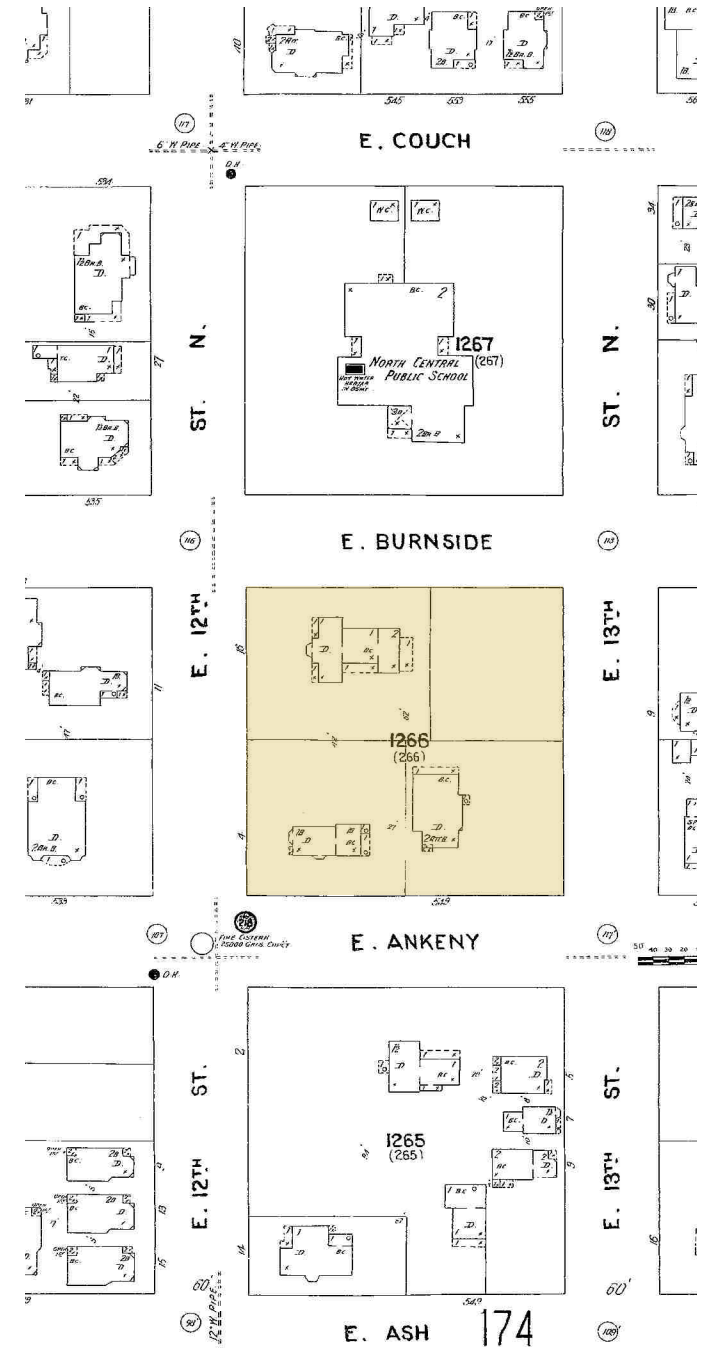


Fig. 2.52 Sanborn fire insurance map of the Linden site

quarter-block structures occupying 10,000 square foot double parcels. These buildings are mostly two and three stories tall. The only larger parcels are a few mid-century motor court style hotels. Several recent high-profile developments including the B-side 6 and the Burnside Rocket have been developed on 5000sf footprints west of the Linden.

Fabric to the east consists mostly of commercial buildings and wood frame houses 5000 square foot lots. The Linden has been criticized for its aesthetics as well as its parking, which critics claim is overbuilt and underutilized. Given that the property was developed by the church that had owned it for decades prior, it can be assumed that land costs did not drive the decision to develop at this scale. Rather, this seems to have been an opportunistic situation, where an owner had an unusually large property and was able to generate a very high return because of a fortunate convergence of financing, zoning and market opportunity.



Fig. 2.53 Photograph of the Linden, facing southeast



Fig. 2.54 Rendering of the Linden, facing southwest

2.5 | Causes of Consolidation

Three primary forces are responsible for the erosion of urban grain. These are financial pressures, government policies in the form of land use codes and permitting fees, and thirdly the practical exigencies of accommodating automobiles. Together these factors have inexorably tilted the balance in favor of larger, more monolithic redevelopment projects in American cities. These three factors work synergistically to create a self-reinforcing paradigm, wherein projects must be large to succeed, and the resources necessary for investment are only available for very large projects.

Consolidation of real estate and securitization (bundling for re-sale) of real estate assets is but one manifestation of trends in the global economy in the post-war era. While the lots of streetcar era commercial districts represent a more entrepreneurial locally financed, small-scale form of capital, today's large hybrids reflect the mass aggregation of capital in all sectors. This pattern can be observed across our entire economy, from banking to brewing. As our economy has moved from primarily entrepreneurial to corporate and investment based, so has our built environment. Where real estate development was once primarily the province of individual entrepreneurs, building to meet immediate and local needs, today's real estate markets are dominated by corporate entities whose mandate is to deliver the highest possible returns to their shareholders. Real estate "products," as buildings are referred to in the industry, are just one among many types of investment vehicles for

the management and growth of capital.

Seattle and other cities with similar growth patterns have witnessed an economic feedback loop between development scale and the scale of real estate investment capital. As land values have increased, small modules of development become increasingly difficult business propositions, since their yield is limited by the number of units and achievable rents. As this occurs, the economies of scale afforded by larger projects make them more attractive and more profitable. As the need to assemble large parcels becomes a dominant market force, the smaller developers who cannot afford to pay for large parcels begin to drop out of the market and the larger, national and multinational backed entities begin to become the only players who can enter the market. The large capital backing of REITS and other corporate developers allows them to bid up the cost of land, further squeezing the smaller investors out of the market, and ensuring that only large projects get built.

National-scale institutional investors are as uniform in their risk thresholds as their small, local counterparts are diverse. Their sources of capital are a major reason for this diversity. All small-scale developers have a unique financial profile because their investors tend to be individuals with idiosyncratic risk exposure profiles. For these developers and their investors, the absolute value of a project; the size of the equity cheque needed to carry out the development, determines the character of the project. Once institutional capital is the only viable source of funding, the rules of standardization and economies of scale prevail. The equity range in which small,

local capital prevails is approximately five to fifteen million dollars. Around twenty to twenty five million and up, only institutional capital is viable. In practice, the site area threshold above which small, local capital cannot afford to compete tends to be about fifteen thousand square feet. This is equivalent to approximately three original plat modules in most American cities.

2.6 | Cumulative Impacts

Seattle is a city dominated by high-density pockets at commercial nodes, with huge swaths of single-family homes in between. Public debate over the future of Seattle's housing stock often focuses on the consequences of preserving so much single-family housing. Less discussed, but equally important is the fact that there is very little diversity of housing typologies on the spectrum between large (one hundred or more units) multifamily structures and single-family detached homes. Early discussion drafts of the urban design element of the Seattle Comprehensive Plan noted the relative scarcity of smaller multifamily typologies compared to those found in comparable cities. As the preceding case studies have shown, the creation of new housing units in large multifamily projects has come at the cost of the loss of smaller multifamily buildings. Several small apartments were lost on the "Bauhaus Block," including the historically significant Timkin Roller Bearing building. Greenlake Village replaced a dairy and several small mixed-use buildings.

When considering diversity of urban forms and the spatial relationships between them, it is helpful to consider the built environment in terms of a transect. The concept, originally articulated by Patrick Geddes, and adopted by the New Urbanist movement, proposes a gradient of scale and intensity. Each transect zone is characterized by the height bulk and grain of the buildings in it.



Fig. 2.55 New Urbanist Transect. Source: *The Smart Growth Handbook*

Across Seattle, from Fremont to Capital Hill, the Central District to West Seattle, lot consolidation in designated high-density ‘Urban Villages’ will lead result in the elimination of intermediary transect zones between single family and townhouse and mid-rise mixed use zones. It is these intermediary zones, between downtown scaled full block and half block that have proven the most productive parts of the urban fabric. One of the stated goals of Seattle’s Comprehensive plan’s housing element is to foster a diverse mixture of housing types in order to accommodate a wide range of household types. Corporate investor driven development has resulted in a proliferation of large mixed use buildings containing a unit mix heavily skewed toward smaller units, which can be rented for a lower absolute cost, but at a higher per square foot cost. Since studio and one-bedroom units offer the highest yield for investors, the recent development has given us a large quantity of this type.

Loss of diversity results in a loss of resilience. Consolidation of parcels and the creation of large hybrid structures increases the vulnerability of neighborhoods to

changes in market preferences. While the programmatic obsolescence of one or two buildings on a block can be absorbed with little harm to the block as a whole (it can, in Jacobs' view, even be seen as a bonus!), when a few very large projects fail due to changing economics or market preferences, the results can be catastrophic. As diversification of investment portfolios distributes risk, so does diversification of the built environment. Seattle is currently experiencing an influx of young singles with high incomes due to the growth of technology businesses, lead by Amazon. When these conditions change, as they have throughout the city's history, having a large percent of its multifamily housing stock in large, difficult to replace or modify projects will be very problematic for the city. This scenario of mass obsolescence has played out in first and second ring suburban communities, and is most visibly manifested in the phenomenon of the obsolete mall. These morbid vignettes, which have been widely photographed and published in urbanist publications, provide a vivid cautionary tale and illustrate the consequences of the changing whims of the marketplace on large-scale real estate investments.

Fine-grained urbanism is clearly correlated with walkability (Preservation Greenlab, 2014). When new, large-scale structures erode the grain of urban blocks, the features that define walkability are lost and the urban environment becomes less hospitable to pedestrians. As the Preservation Greenlab research indicates, even multiple entrances, permeable facades, and other design remedies are no substitute for structural diversity. Moudon (1989) observed "Pedestrian activity is enhanced in a fine-grained city." Course grained urbanism, on the other hand, is more suited to

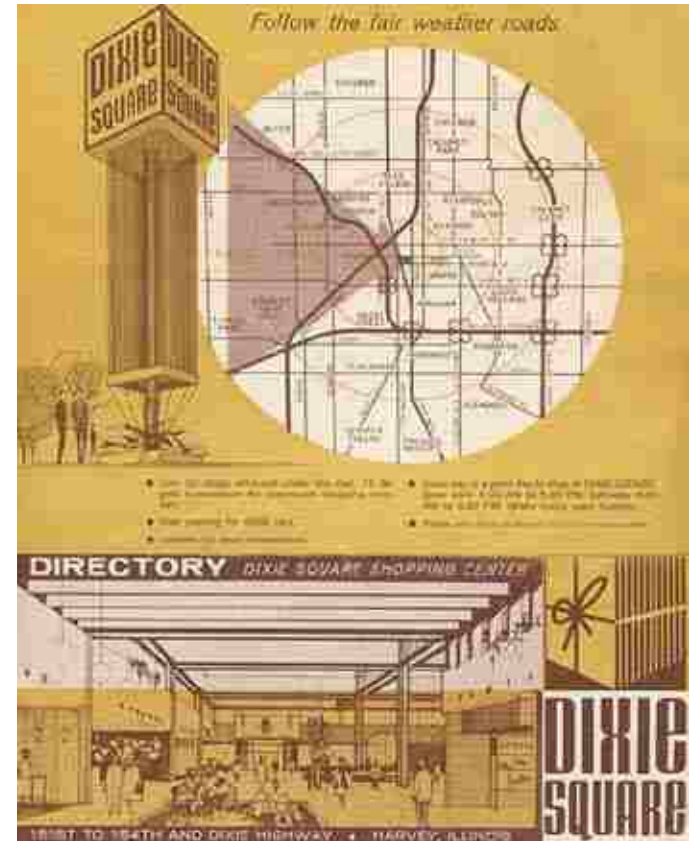


Fig. 2.56 Advertisement for the Dixie Square mall, Suburban Chicago, 1966



Fig. 2.57 Ruins of the Dixie Square Mall, ca. 2009. The mall was the scene the climactic car-chase in the 1980 film *The Blues Brothers*.

higher speed modes of travel. As cities like Seattle struggle to end the dominance of the automobile and undo the damage it has inflicted on our built environments (Jacobs, 1961, Duany et. al. 2001), the current trend toward a more suburban scaled grain makes that challenge significantly more difficult, and automobile dependence that much harder to end.

The consequences of erosion of grain are more than just morphological and aesthetic; fine grain and diversity have been shown to have significant economic benefits to cities. Jacobs recognized the potential of old buildings as incubators for innovation and economic growth. More recently, cities have begun to recognize the value of the so-called “innovation economy,” and have actively courted the “creative class” of designers, inventors, and engineering innovators who represent the vanguard of new industries (Florida 2002). A city such as Seattle that depends on technological innovation as the basis for economic growth runs a serious risk of losing its competitive advantage when it loses the habitat favored by Florida’s Creative Class. Cumulatively, if too much of the city’s fine grained older block and plat structure is lost, Seattle will lose the habitat of its most valuable economic sectors.

On a case-by-case basis, large hybrid buildings are not inherently harmful to urban form and urban vitality. Some kinds of retail uses can only be accommodated in structures with very large footprints. For instances, many grocery retailers prefer spaces up to 50,000 square feet. Large grocery stores with high density housing



Fig. 2.58 Randall Park Mall, North Randall, Ohio.

above them are unquestionably an improvement on the previous generation of grocery retail that appeared on urban commercial strips beginning in the 1950s. These tended to be single-use structures, set back from the public street behind an acre or more of surface parking.

Vibrant districts tend to become victims of their own success. The sweat equity of entrepreneurs, usually finding purchase in small, old buildings, brings customers and residents to a district. Investors follow the money, and assemble properties to construct large mixed-use projects at a scale that delivers an acceptable return on their capital. The new large buildings cannot support the diversity of tenants who previously populated the district; upper income residents displace people with less means, and the demographic spectrum represented in the neighborhood's housing becomes narrower. The startups, sole proprietorships, quirky specialists and other businesses that gave the district its identity and attracted others are displaced, since they cannot afford the rents in new construction, and are replaced with more profitable, less idiosyncratic businesses. Cumulatively, the district is suburbanized. Now, the elements of a vital urban ecosystem must be artificially subsidized in a district whose structure was once intrinsically supportive of them.

The recently completed 12th Avenue Arts building on Seattle's Capitol Hill combines a performance space and apartments for low-income residents. This project is itself a large hybrid; the building is 65' tall with condominiumized segments containing parking, a theater complex and housing, occupying a footprint of approximately



Fig. 2.59 Standardized suburban type Safeway store, constructed ca. 1965



Fig. 2.60 Contemporary mixed-use Safeway store, downtown Portland, Oregon

30,000 square feet. The developer, Capitol Hill Housing is a non-profit low income housing Community Development Corporation and typically leverages federal and state grants to create projects that benefit the less well-off. Projects of this type may be increasingly necessary as Seattle and cities like it face increasing gentrification of their urban cores. This project is an admirable attempt to preserve something of the character that gave the neighborhood its identity in the first place, and it is presented here as symptomatic of the lengths cities and motivated non-profits must go to in order to replicate phenomena that once occurred organically.



Fig. 2.61 12th Avenue Arts building, Capitol Hill, Seattle

3

| HYPOTHESIS

3.1 Parcelization Defined

3.2 Potential Strategies to Encourage Parcelization

3.3 Proof of Concept Small - Lot Development Profiles

3.1 | Parcelization Defined

While the loss of individual buildings is potentially harmful to the urban fabric, the greatest damage is done by the consolidation of properties, which precludes the establishment of future fine-grained urban fabric. Not all old buildings are worth saving; indeed many older buildings are not economically viable and are both structurally and programmatically obsolete. At the same time, there are clear benefits associated with increasing commercial and residential density in urban centers. However, not all density is created equal. As the Preservation Greenlab's research indicates, diversity has quantifiable benefits for urban quality of life and urban economies. The replacement of low quality, small, older buildings with higher quality, taller new buildings on the same lot sizes would preserve urban grain and allow diversity to flourish. The alternative to lot consolidation is deliberate "parcelization" of urban blocks.

For the purposes of this thesis, the term "parcelization" is used to refer to a process by which a master developer entity purchases a large tract of land, creates a master plan for the tract, dividing it into lots, or parcels, and sells, or otherwise conveys the parcels to individual parcel developers. These developers are autonomous entities who will develop their own autonomous projects on their own parcels

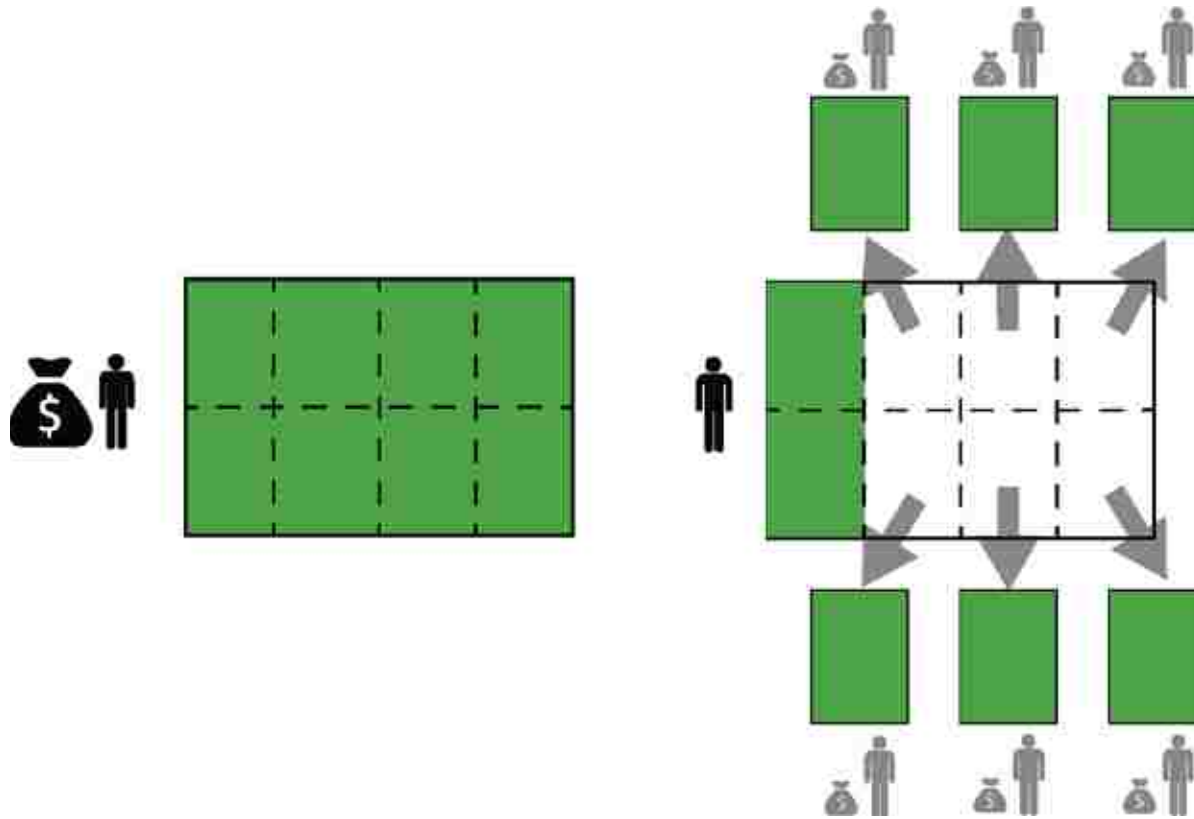


Fig. 3.1 Schematic framework for parcelization

management, refers to the apportionment of land into small holdings, or parcels. This thesis follows the rubric of parcelization described by David Adams, Steve Tiesdell and James T. White, in their 2013 article “Smart Parcelization and Place Diversity: Reconciling Real Estate and Urban Design Priorities” (2013, Journal of Urban Design, 18 (4)). The fundamental elements of parcelization they describe are a master developer and multiple parcel developers. The master developer is responsible for creation of a master plan, and the submission of said master plan to local planning and zoning authorities. Adams, Tiesdell and White favor parcelization over other urban design solutions such as blueprinted master plans because they

believe parcelization is a means to achieve both physical diversity and social diversity. They propose the creation coded master plans, with zoning-like restrictions. These allow parcel developers greater discretion while allowing jurisdictions more certainty about the outcomes than they otherwise would have when dealing with the parcel developers.

The term parcelization appears to have entered the urbanist lexicon quite recently, in the writings of one of the earliest adopters of the term, urban strategist Aaron Renn. Writing about the problem of declining older suburban fabric, Renn (2009) wrote: “My idea for breaking out of this cycle is what I call parcelization. That is, we need to try to explicitly break up these large, monolithic, single owner complexes into smaller lots, possibly under separate ownership, and attempt to break the lockstep synchronization of development.” Renn described the all too familiar sequence of the 25-year suburban redevelopment interval, and presents the breakup of monolithic developments as a means of avoiding the “spikiness” of the real estate depreciation cycle. Surmising that the diversity of form and ownership in traditional downtowns and commercial strips can hedge against mass-depreciation, Renn notes “in most urban storefront districts there are lots of buildings on narrow street frontages, mostly with separate owners. They don’t all need to get redeveloped at the same time, and the size of the structures means that both many people can get in the game, and you are less likely to need subsidies. While even real, older urban neighborhoods tend to rise and fall as a unit, having fragmented ownership and many individual structures does flatten out the growth curve, and also provides

for a diversity of business and development strategies.” Separating the property into individual modules which can live on their own independent economic timelines eliminates the need for entire districts to be overhauled simultaneously, since the depreciation and renewal would become more of an ongoing, dynamic process, as opposed to a sequenced, cyclical one. As Jacobs observed in 1961, diversity is the primary mechanism for urban vitality. Renn envisions an urban ecosystem where depreciated buildings support lower cost-basis businesses, such as startups, specialty stores and independent local ventures, and new buildings host chains and high yield businesses.

Renn’s definition of parcelization is “breaking up large, monolithic, single owner developments into smaller chunks that can eventually de-synchronize and be redeveloped independently over time.” While Renn was writing about suburban town centers which were extremely coarse-grained to begin with, the erosion of urban grain has brought the same suburban problems to central cities. Parcelization, in an urban context, aims at preservation and restoration of the grain that is being threatened by the current cycle of urban redevelopment.

The goals of urban parcelization are to retain and restore fine-grained urban form, preserve and enhance diversity of ownership and economic yield of buildings, allow multiple stakeholders on urban blocks, allow smaller, locally based developers to compete in the property market by lowering absolute costs and development scales, and preventing further consolidation.



Fig. 3.2-3 The Landing, Renton Washington. This type of development has provoked criticism as ‘instant urbanism’ and lead to calls for parcelization to create more diversity and prevent simultaneous obsolescence.

The logical starting point for such a system of apportionment is the original system of land division, the historical DNA of the built environment. “By fracturing development into manageable pieces, following a method of apportionment, *which we argue is the plat*, the formal aspects of design and shape take on a more predictable morphology, making it simpler for the community to disassemble itself as much as reinvent it and rebuild it in an organized manner” (Thomson 2010, emphasis added). Wherever feasible, best practice for new development would be to follow the orientation and modulation of the original plat of a district. Development should occur in increments of plat modules, preferably combining as few such modules as possible. In some cases, it may be necessary to deviate from the plat, but the underlying logic should be adhered to, as in the case where an end block condition suggests rotating the module so that the short faces align with the primary arterial.

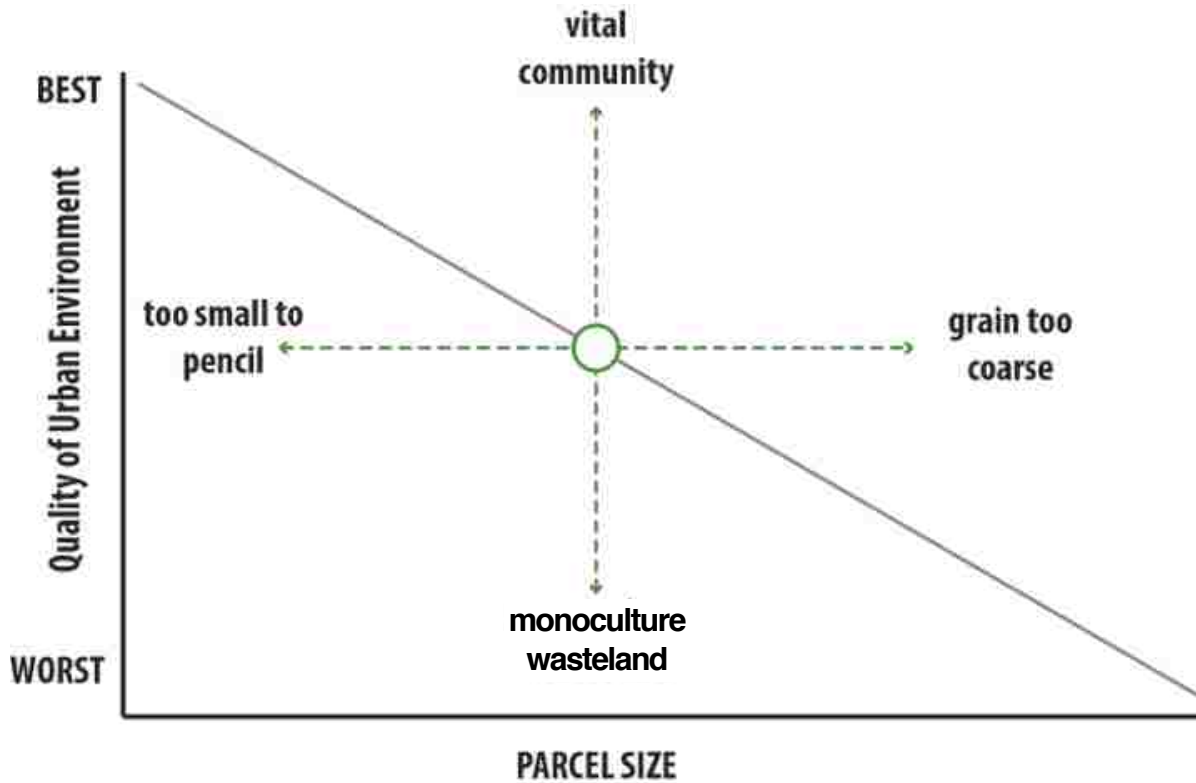
If smaller buildings are better, as the Preservation Greenlab report indicates, how small should our buildings be? How many owners and how many buildings on a block are enough for us to consider it to be diverse enough? Logic dictates that there must be a lower bound under modern conditions, beneath which a building is physically and economically unfeasible. While some interventions may be required to alter the general trajectory of market forces, there will likely be threshold of diminishing marginal returns. What must follow is the identification of the primary barriers to parcelization and the hard limits that define the lower bounds of development scale in the current real estate market.

A survey of architects and developers operating in the Pacific Northwest yielded the following as the primary reasons why the number of small scale (10,000 square feet and smaller) projects has declined precipitously since the recession and the construction of large hybrid projects has accelerated:

- High construction costs per square foot, including Washington State Sales Tax.
- High land costs
- Permitting costs and associated time commitment.
- Availability of financing – post recession restrictions on loan-to-equity ratios, risk averse nature of lenders.
- Need to accommodate parking and the high marginal costs of smaller parking facilities.

The following graph represents the countervailing forces determining the ideal lot size for a parcelization scheme under present market conditions. As this thesis has shown (see chapter 2), finer grain yields quantifiably better urban fabric. However, pragmatic constraints dictate a minimum lot area beneath which buildings are not feasible under normal economic conditions. In some cases, such as a developer with a significant amount of equity to invest, these conditions can be overcome, but if the goal is a systematic change in the way development occurs, a systematic intervention will be necessary so that these cases are not mere outliers.

Fig. 3.4 Countervailing priorities of fiscal viability and quality of the built environment.



The goal is to identify strategies to move the vertical line in Figure 4.3 above, representing parcel size, to the left. Market forces have conspired to move the default position of that line to the right, as yields are higher on larger projects due to diminishing marginal costs and economies of scale. Indeed, a purely profit-maximizing developer would seek to move the line as far to the right as possible, with the only limitation being the developer's ability to acquire contiguous lots.

Given the demonstrated benefits of fine-grained urban form, fostering such fine grain and preventing its erosion constitutes the sort of public good that municipal

policies should address. At the micro level, this thesis explores creative phasing and financing strategies for parcelization within the existing economic and legal context. However, the problem of erosion of urban grain is a systematic problem that impacts the form of entire cities. Therefore, policy tools and deliberate market interventions should be developed to incentivize small lot development and disincentivize larger scale projects.

According to prolific developer (and Preservation Greenlab associate) Liz Dunn, the maximum size for a single building, from an urban design perspective, is a quarter block (Julia Leavitt, *The Atlantic*. December 1, 2011). Above this threshold, the block lacks sufficient diversity to activate public space and accommodate a sufficient diversity of users and price-points to meet the Greenlab's criteria for a vibrant block. While block sizes vary, this effectively means that lots between 10,000 and 15,000 square feet on average represent the upper bounds of acceptable consolidation. Therefore, given typical historical plat modules of approximately 50 by 100 feet, development in one, two and three modules should be prioritized.

The overarching policy goal for parcelization should be a series of policies that results in finer grained land divisions than current market and regulatory conditions are producing. This entails preservation of existing grain and restoring grain when it has been lost. In the former case, incentives must be crafted to encourage developers to acquire and develop real estate in small increments, preferably one or two original plat modules, three at the most. Aggregation of four or more original

plat modules must be explicitly discouraged unless exigent circumstances apply. The burden of proof for such circumstances must be on the applicant. In the case of sites where grain has been lost, policy and finance tools should be developed to facilitate parcelization. Areas of the city such as Ballard lost much urban grain in the mid twentieth century, in the area's first cycle of redevelopment when cities were struggling to adapt themselves to the new dominant automotive paradigm. Single use shopping centers with acres of surface parking proliferated along arterials and wiped out the small increments of ownership and built form in commercial districts. Today, these sites are prime targets for redevelopment at much higher densities. As the previous chapter demonstrated, however, not all density is created equal.

3.2 | Potential Strategies to Encourage Parcelization

Policy tools and development strategies must prioritize fine-grained ownership and development if cities want to avoid merely ‘laying out a fresh corpse,’ as Jacobs (1961) argued. Creative development schemes can use phased development to finance parcelization. Where feasible, adaptive reuse of existing structures can provide revenue for a master developer while parcels are sold off and developed incrementally. This creates stability through the period of transition and allows developers to test the waters and take less risk at a given time.

The following strategies represent potential tools developers and municipalities could pursue in order to make parcelization easier and more attractive:

City as Master Developer. It may be possible for local government to take on the role of master developer, purchasing large sites, master planning them and conveying lots, either by sale, ground lease, or similar mechanisms, to parcel developers. In states such as Oregon, municipalities have relatively broad fiscal authority, allowing public agencies such as the Portland Development Commission (PDC) to act as a developer. Parcelization schemes would be consistent with existing legal and financial practices. In states such as Washington, however, municipalities’ abilities to execute real estate transactions are considerably more circumscribed by law. Nonetheless, quasi public entities called Public Development

Authorities (PDAs) may be created. These entities are typically public-private-partnerships and are granted the authority to issue bonds. PDAs are therefore a viable tool for parcelization of large blocks.

City as Parcel Developer. Cities have bonding authority to purchase and build publicly owned housing. The Seattle City Council has taken up the subject of a massive bond issue to create additional housing. Some of these funds could be channeled specifically toward purchase of lots on properties where a master developer agrees to a parcelization scheme. This would provide the master developer with positive cash flow advance the city's goal of creating more affordable housing in a way that helps foster mixed-income communities and distributes affordable housing more equitably.

Developer co-op. One possibility for a master developer scenario would be a collectivized acquisition by a cooperative of multiple small-scale developers. By pooling resources, smaller developers could acquire larger parcels and assign lots to themselves. Projects could be master planned to share resources including parking and common open space.

REIT as master developer. It may be possible to incentivize institutional investors such as Real estate investment trusts to take on the role of master developer. San Francisco has begun to require large developers to use multiple architects to design large projects. Requirements or incentives for parcelization could follow a similar

pattern. The distribution of risk could be an incentive for institutional investors to participate in such a scheme, especially if they have an agreement to sell one or more parcels to a public agency for a guaranteed sale amount.

Eco-blocks. Master developers could create blocks with shared green infrastructure elements such as storm-water management, HVAC plant or photovoltaic array.

Developers using this strategy could potentially inject enough cash flow into projects to compensate for inefficiency and redundancy of smaller buildings by taking advantage of new and existing federal, state and local incentive programs. For example a mid-block parcel could be dedicated to a district energy facility such as a ground source heat plant. If this or a similar facility were taken off the tax rolls or acquired by another entity it would reduce the tax liability of the master developer and bring additional revenue to the project.

Tax credits. Another potential strategy to incentivize parcelization would be a public sector subsidy. This could come in the form of a “Parcelization Tax Credit” available to master developers who agree to create a minimum number of parcels for sale or long-term lease to smaller developers.

Preservation. Incentivize preservation/retention of existing small-scale development on blocks under common ownership, especially when such development provides below market rate residential and/or commercial rents. Incentives could come in the form of tax or fee waivers, or outright purchase of the properties by city or county agencies.

Transfer of development rights. Allowing transfer of height and FAR within parcels and within commercial districts would give developers greater flexibility and the ability to sell unused density. Sale of development rights would remove the incentive to “max out” parcels at a uniform maximum building envelope and make it easier for some parcel developers to execute smaller, lower cost projects.

TIF. The city government could pursue legislation to authorize tax increment financing (TIF) for acquisition of large sites by PDAs. TIF is currently illegal under Washington’s state constitution.

Development Code-Based Incentives

The efficient route to address parcelization issues is through the codes for the Neighborhood Commercial and Low Rise Residential zones, where the bulk of Seattle’s multifamily development occurs.

NC1: 10,000sf max area for most uses.

NC2: 25,000 square feet for most uses; 50,000 square feet for multipurpose retail sales facilities.

NC3: No size limits for most uses; 25,000 square feet for wholesaling, light manufacturing and warehouse uses.

Presently, the NC2 and NC3 zones are applied liberally in most commercial areas.

Moreover, DPD has favored sixty-five foot heights in most of its designated Urban

Village areas, zones targeted for increased density because of their existing densities and access to frequent, multiple transit lines. The problem of consolidation and proliferation of large hybrid structures could be curtailed through drastically limiting the application of the two higher intensity variants of the NC Zone.

An even more direct approach would simply be to place maximum limits on parcel sizes. Clearly exceptions would have to be available to accommodate some grocery retail and similar uses. However, the burden of proof would be placed on the applicant to demonstrate the necessity for exceeding the limit.

3.3 | Proof of Concept Small Lot Development Profiles

The following pages contain profiles of recent small projects selected from Seattle and Portland. The projects are presented here as proof of the viability of small development in today's market. The buildings profiled are located on sites ranging from approximately 5000 to 13,000 square feet. Buildings surveyed include four and six story buildings.

33rd and Division Mixed Use

Year Built

2013

Location

3339 SE Division st. Portland

Program

Ground floor retail, 30 residential flats

Site Area

13,200sf

Land Cost

\$57/sf

Zoning

Storefront Commercial

Developer

Urban Development Partners

Architect

Thomas Hacker Architects

Notes

Three commercial lots consolidated to make parcel



Fig. 3.5 Photograph of 3339 SE Division



Fig. 3.6 Site of 3339 SE Division

3360 Division

Year Built

2013

Location

3360 SE Division Streetz Portland

Program

Ground floor retail, 15 one-bedrooms, 6 one-bedroom lofts, 3 loft studios, and 4 two-bedrooms

Site Area

7500sf

Land Cost

\$57/sf

Zoning

Storefront Commercial

Developer

Urban Development Partners

Architect

Works Partnership Architecture

Notes

Two commercial lots consolidated to make parcel



Fig. 3.7 Photograph of 3360 SE Division



Fig. 3.8 Site of 3360 SE Division

33rd and Division Mixed Use

Location

3330 SE Division Street Portland

Program

Ground floor retail, 30 residential flats

Site Area

12,500sf

Land Cost

\$57/sf

Zoning

Storefront Commercial

Developer

Urban Development Partners

Architect

Thomas Hacker Architects

Notes

Three commercial lots consolidated to make parcel



Fig. 3.9 Photograph of 3330 SE Division



Fig. 3.10 Site of 3330 SE Division

3125 SE Division

Year Built

2012

Location

3125 SE Division Street Portland

Program

Ground floor retail, 18 residential flats

Site Area

5000sf

Zoning

Storefront Commercial

Developer

Cooley Partners LLC

Architect

Unknown

Notes

Single parcel from original plat



Fig. 3.11 Photograph of 3125 SE Division



Fig. 3.13 Site of 3125 SE Division

3810 SE Division

Year Built
2012

Location
3810 SE Division Street Portland

Program
Ground floor retail, 24 apartments total—a mix of studios, one-bedrooms, and two-bedrooms

Site Area
10,097sf

Land Cost
\$67/sf

Zoning
Storefront Commercial

Developer
Urban Development Partners

Architect
Stack Architecture

Notes
Two commercial lots consolidated to make parcel



Fig. 3.13 Photograph of 3810 SE Division



Fig. 3.14 Site of 3810 SE Division

4330 SE Division

Year Built

2014

Location

4330 SE Division Street Portland

Program

Ground floor retail, residential above

Site Area

6808sf

Zoning

Storefront Commercial

Developer

Unknown

Architect

Works Partnership Architecture

Notes

Two commercial lots consolidated to make parcel



Fig. 3.15 Photograph of 4330 SE Division



Fig. 3.16 Site of 4330 SE Division

Meranti Lofts

Year Built

2006

Location

4304 SE Division Street Portland

Program

Ground floor retail, flats and townhomes with internal stair above

Site Area

5500sf

Zoning

Mixed Commercial

Developer

Unknown

Architect

Holst Architects

Notes

3rd and fourth floor are townhome units with stairs inside.
No elevator in building. All units are walk-up.



Fig. 3.17 Photograph of Meranti Lofts



Fig. 3.18 Site of Meranti Lofts

Thurman Street Lofts

Year Built

2006

Location

2538 NW Thurman Street Portland

Program

Residential over one small commercial (currently a pilates studio).

Site Area

6000sf

Dimensions

75' wide by 100' deep

Zoning

Mixed Commercial

Developer

Unknown

Architect

Holst Architects

Notes

Mostly a residential neighborhood. Program is residential, site is two lots.



Fig. 3.19 Photograph of Thurman Street Lofts

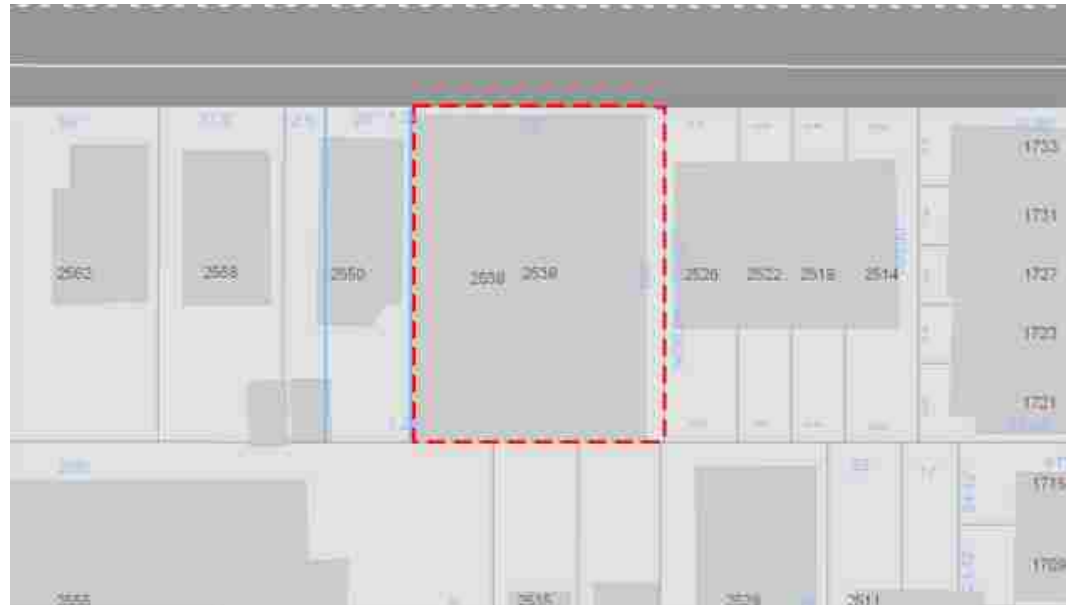


Fig. 3.20 Site of Thurman Street Lofts

802 East Thomas

Year Built

Planned 2015-16

Location

Capitol Hill Seattle

Program

Mixed Use, retail & apartment, 70du
7 Stories

Site Area

7,861sf

Land Cost

\$318/sf

Date of Sale

5/28/2008

Zoning

NC3-40

Developer

WRP Associates

Architect

Architecture Associates (Bellvue, WA)

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=6003502155>

DR Packet:

<https://www.seattleinprogress.com/project/3008933/page/1>



Fig. 3.21 Photograph of 802 East Thomas



Fig. 3.22 Site of 802 East Thomas

101 Broadway

Year Built

Planned 2015-16

Location

Capitol Hill Seattle

Program

Mixed Use, retail & apartment, 45du
6 Stories

Site Area

7,200sf

Land Cost

\$410/sf

Date of Sale

7/16/2012

Zoning

NC3P-40 with station area overlay for 25' add. height

Developer

?

Architect

Studio Meng Strazzara

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=6003002110>

DR Packet:

<https://www.seattleinprogress.com/project/3018402/page/1>



Fig. 3.23 Rendering of 101 East Broadway



Fig. 3.24 Site of 802 East Thomas

2202 E Olive

Year Built

Under Construction 2015

Location

Central District Seattle

Program

Mixed Use, retail & apartment, 33du
4 Stories

Site Area

5,110sf

Land Cost

\$120/sf

Date of Sale

2/27/2012

Zoning

NC2-40

Developer

WW Investments LLC (Cyprus, Texas)

Architect

Bazan Architects (Bellvue)

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=3325049019>

DR Packet:

<https://www.seattleinprogress.com/project/3013256/page/1>



Fig. 3.25 Rendering of 2202 East Olive



Fig. 3.26 Site of 2202 East Olive

Stream 15 Apartments - 605 15th Avenue E

Year Built

Under Construction 2015

Location

Capitol Hill Seattle

Program

Mixed Use, retail & apartment, 33du, 3400sf retail
4 Stories

Site Area

10,376sf

Land Cost

\$134/sf

Date of Sale

12/13/2012

Zoning

NC2P-40

Developer

WW Investments LLC (Cyprus, Texas)

Architect

Nicholson Kovalchik

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=3303700030>

DR Packet:

<https://www.seattleinprogress.com/project/3014339/page/1>



Fig. 3.27 Rendering of Stream 15



Fig. 3.28 Site of Stream 15

SOLA 24 - 109 E 12th.

Year Built

2015

Location

Capitol Hill Seattle

Program

Residential apartment, 21du
4 Stories

Site Area

7608sf

Land Cost

\$105/sf

Date of Sale

4/16/12

Zoning

LR3 (lowrise multifamily)

Developer

Unknown

Architect

Elemental Design LLC

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=6003500930>

DR Packet:

Not available



Fig. 3.29 Rendering of Sola 24



Fig. 3.30 Site of Sola 24

The Stencil - 2407 E Union

Year Built

Under Construction 2015

Location

Central District Seattle

Program

Mixed Use, retail, live/work & apartment, 39du
4 Stories

Site Area

13,560sf

Land Cost

\$180/sf

Date of Sale

11/25/2014

Zoning

NC2P-40

Developer

Lake Union Partners

Architect

Johnston Architects

Notes

Site:

<http://info.kingcounty.gov/Assessor/eRealProperty/Detail.aspx?ParcelNbr=7217400530>

DR Packet:

<https://www.seattleinprogress.com/project/3017002/page/1>



Fig. 3.31 Rendering of The Stencil



Fig. 3.26 Site of 2202 The Stencil

4

| DEMONSTRATION

4.1 Site Selection and Neighborhood Context

4.2 Site History

4.3 Development Context

4.4 Design Response

4.1 | Neighborhood Context and Site Selection

The subject of this thesis is a full block, 106,000 square foot (2.4 acres, approx.) parcel located in Seattle's Central District. The site is bounded by 23rd Avenue, East Union, 24th Avenue and East Spring Street, and under its present configuration, comprises nine separate lots. The property is nearly flat, with approximately five feet of grade change from the high point, at the northwest corner, to the lowest point at the southeast. The block measures 420 feet on the long axis, which runs north-south, by 250 feet on the east-west axis. The thesis project site was selected because it has all the characteristics to indicate that it will redevelop in the pattern described in the diagnosis portion of this thesis. This property is routinely referred to as the "Midtown Plaza property" because of the shopping center which once stood here. The existing commercial buildings were constructed in the 1950s and are at the end of their lifespan as viable uses for the property.

Union and 23rd are both major arterial streets and both are served by frequent transit. The Metro Route 48, which travels north-south along 23rd avenue connects the site to the University of Washington and is routinely one of the top five highest ridership lines in the Metro system.

Neighborhood context and history

The Central District is one of the city's oldest neighborhoods, and its history began shortly after Seattle's founding. Historically, the Central District has occupied a liminal space within the city, a safe haven for people of all colors, but also a space of marginalization,



Fig. 4.1 Aerial image of thesis site.

privation and second-class citizenship. The very neglect which brought suffering to the peoples who have lived there also provided the space for them to create a culture of unique expression and freedom. Paradoxically, the gains in enfranchisement by the district's minorities and the amelioration of their second-class status bled off much of the district's vibrancy and cosmopolitanism (De Baros, 1993).

Beginning shortly after settlement in the 1850s the area was logged. Timber was brought down to Henry Yesler's mill in present day Pioneer Square along a skid road, which eventually became Yesler Way. In 1870, a large block was platted by N. B. Knight and George and Rhoda Edes, which encompassed roughly 40 blocks from 10th to 20th avenues between Cherry and Union streets. In 1887, the Lake Washington Cable Railway began cable car service between Pioneer Square and the rapidly growing community around Leschi Park. Cars traveled east on Yesler Way and returned west on Jackson. The installation of this transportation infrastructure facilitated the development of commercial corridors and residential districts and established the urban fabric of the Central District.

The CD was from its initial settlement an ethnically diverse community. German Ashkenazi Jews were among the first settlers of the area. A wealthy African American entrepreneur, William Grosse purchased 12 acres around 24th and Madison, beginning first black settlement of the northeast corner of the Central District. Shortly thereafter a small African American community sprang up in the Madison Valley area.



Fig. 4.2 Seattle's Central District, located east of downtown, between Elliot Bay and Lake Washington. Site indicated.



Fig. 4.3 Ray Charles, performing in Seattle, ca. 1948

Located proximate to the harbor and rail connections, the Central District was a very easily accessible place to newcomers. Seattle's population grew rapidly subsequent to the discovery of gold in the Klondike in 1897; the city's population increased from 3,533 in 1880 to 80,671 in 1900. As the region grew, the Jackson corridor emerged as the heart of the burgeoning Central District. The well-established minority presence in the Central District, dating back to its first Jewish settlers had established it as a safe zone for people of color. Here they were relatively free from the harassment and violence they encountered in the rest of the city. A climate of official corruption and benign neglect (financed by bribery) allowed all manner of businesses to flourish, some legal, others not. Existing in a legal gray area, Central District clubs could offer unique attractions that could not be found anywhere else in Seattle.

World War II marked a turning point for the Central District. The wartime employment in defense industries, particularly Boeing, brought another wave of African Americans to the district. Up to this point, the Central District was one of the only places where people of color could legally reside in relative safety. Due to its long history of ethnic diversity, the community had become a de-facto ghetto for non-white residents. The war brought much suffering to the Japanese American community, who, in the wake of the bombing of Pearl Harbor in 1941, were forcibly rounded up and incarcerated in concentration camps. Most of the Japanese American residents of Seattle were housed in a camp in Idaho. Many of those who returned did not reoccupy their old neighborhoods and dispersed elsewhere around the city. For the most part,



Fig. 4.4 23rd and Union St. ca. 1937, view facing southwest. Streetcar tracks occupied both rights-of-way.



Fig. 4.5 View of Union between 22nd and 23rd, looking north, 1957.

Japanese American families conveyed their properties and businesses to African Americans. After the war, redlining and restrictive covenants persisted, preventing non-whites from living elsewhere, but also choking off funds for investment in the community. Starved for resources and with few legal avenues for occupation, the black community suffered economic stagnation and poverty. The district's Jewish communities, which now included Polish Yiddish speaking Jews and Spanish speaking Sephardim began to abandon the area in favor of the Seward Park area and the East Side, selling their businesses, schools and temples mostly to black residents.

Concurrent with the struggles for civil rights taking place in Washington DC, the Central District's black community worked to organize for justice in the post war decades. Unlike many American cities, Seattle did not experience the violence and large scale riots that punctuated the struggles for civil rights in the 60s. Small-scale conflicts did occur though. The Central District was home to Seattle's chapter of the Black Panther Party. In addition to the typical Panther activities, including activism, patrolling the Central District and keeping a watchful eye on the police, the Seattle Panthers opened a free clinic at 20th and Spruce. In response to a lack of financing available to black families and businesses, Liberty Bank was founded at 24th and Union, adjacent to the subject property. The minority owned bank operated at this location for nearly two decades.

By the late 60s larger forces began to erode the traditional core of African American culture in the Central District. The legalization of liquor sales by the glass in 1949



Fig. 4.6-7 Civil rights demonstrations, Central District, Seattle, ca. mid 1960s.

had made Jackson's speakeasies redundant, and perversely, the legal victories of the Civil Rights Movement which enabled people of color to move to other parts of the city had the secondary consequence of siphoning off the wealthier members from the community and reducing the critical mass of entrepreneurs, artists and professionals. The city completed the process of removing streetcars and cable cars by 1940. While these lines were replaced with buses, the perceived centrality of the district was nevertheless undermined by the removal of the transit infrastructure which had defined its early history. While this was occurring, the district suffered losses of land and structures under the auspices of urban renewal. Beginning in 1957, the city and Washington State Department of Transportation began acquiring rights to and clearing buildings to make way for I-5 and I-90. When the freeway opened in 1961, it had torn a wide swath through the southwestern corner of the district. Cumulatively, all these incursions constituted a pattern of erosion of a community that lacked the economic resources to fight them.

By the 1980s the CD had lost much of its vibrancy, and the traditional populations who had occupied it for much of the century continued to disperse around the metro area. As the city grew more expensive, white families began to move to the district, seeking relief from high housing costs in the adjacent areas of Capitol Hill and the Madison Valley. It was at this time also that the passage of the Refugee Act (1980) brought a new wave of immigrants to the Central District, this time from the east African countries of Ethiopia and Eritrea. These new immigrants set up businesses in the Central District and put down roots. They were joined a decade later by immigrants from Somalia.



Fig. 4.8-9 East African businesses, Cherry Street.

As economic pressures on the African American community mounted, crime became a chronic problem. Violent street crime plagued the neighborhood particularly since the crack epidemic of the early 80s. Drugs brought gangs, including the Crips and Bloods from Los Angeles and the Black Gangster Disciples from Chicago. A sharp increase in homicides followed.

Beginning in the 1990s and into the 21st century the Central District gentrified rapidly. Housing values have caused immigrants and poorer families to relocate south along the Rainier Valley and to blue-collar suburbs like Renton and Tukwila. More changes are occurring for the Central District. As incomes have risen, reinvestment and redevelopment have occurred along the district's business corridors. The process of gentrification that began in the 1990s has accelerated since 2010, as the region began to recover from the 2008 recession. As higher earners moved to the area, housing prices rose sharply and working class residents were systematically displaced. As in many American cities, this process has had a strong racial component; the number of African-Americans in the Central District has dropped steadily, declining from a historic high of 73 percent in the 1970s to approximately 20 percent by 2014. This represents a net loss of approximately 10,000 African American residents (*The Seattle Times*, May 26, 2015). The white population of the neighborhood increased in nearly inverse proportion. As the area has gentrified, investment in Central District real estate has followed. Initial redevelopment schemes were fairly small in scale, but recent projects such as the full-block Legacy at Pratt Park, profiled in Chapter II, have trended larger.



Fig. 4.10 Gang graffiti, ca. 1990s.

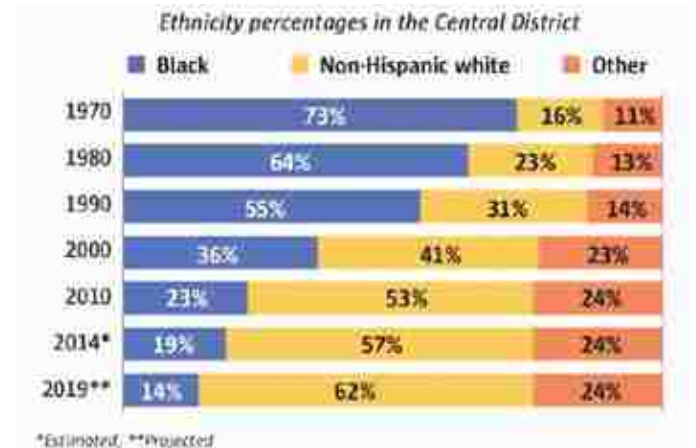


Fig. 4.11 Change in demographic makeup of the Central District. Source Nielsen Company/Seattle Times.

4.1.1 Current Regulatory Environment

The majority of the property around the intersection of 23rd and Union is zoned for mid-rise mixed-use development. Like most urban commercial districts in Seattle, the most prevalent zone is Neighborhood Commercial (NC). This zone can be applied in NC1, NC2 or NC3, the numbers denoting intensity of allowed ground floor uses. These can range from small boutique retail spaces to large grocery stores. The NC Zone is typically applied in height increments of 30 feet, 40 feet and 65. The subject property and most of its commercial neighbors are zoned NC2-40. The single-family houses facing the site across Spring and 24th are zoned for single-family use only.

Beginning in 2012, the City of Seattle's Department of Planning and Development (DPD) initiated a process to revise land use and zoning in the area around the subject. 23rd and Union is within the boundaries of one of the City's designated Urban Villages; these areas are targeted to receive the majority of growth due to their existing densities and access to transit facilities. The intersection of 23rd and Union is the northernmost of three nodes (along with 23rd and Cherry and 23rd and Jackson) that comprise the 23rd Union-Jackson Urban Village. The subject block, which is currently zoned for four-story mixed use development, would be upzoned uniformly to 65 feet.

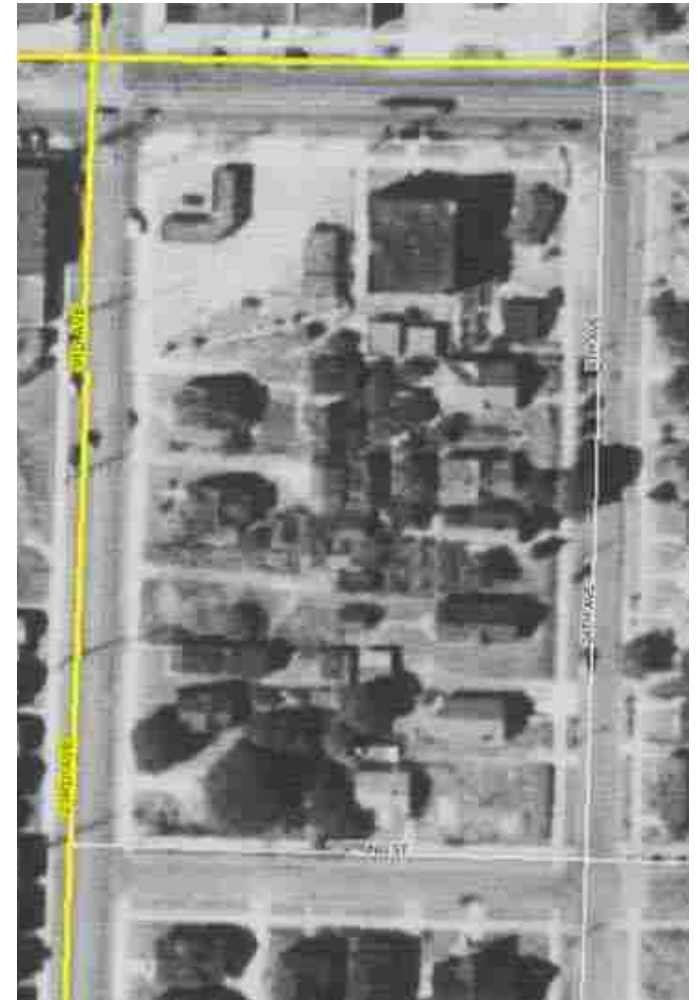


Fig. 4.14 1936 King County aerial photo of site.

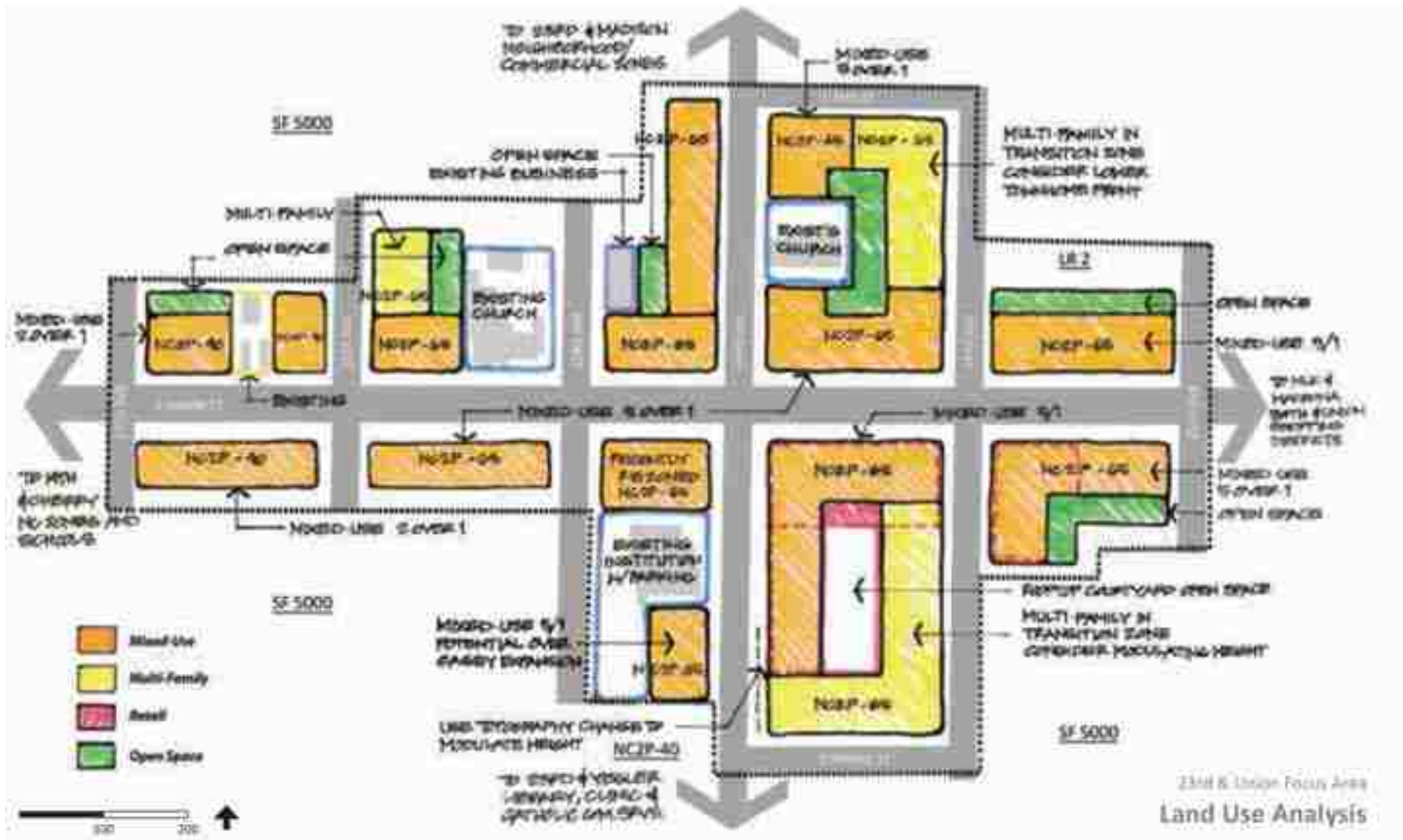


Fig. 4.15 Department of Planning and Development Urban Design Framework Plan (March 2015) map showing proposed future zoning. Thesis site at bottom.

Site Selection

Lot consolidation and loss of grain have tended to occur when there is a sizable mismatch between the value of land and a property's current improvement value. Land values increase through changes in market conditions such as when areas become fashionable and gentrify, and when government regulations create additional value by allowing more development capacity, e.g., upzoning the property.

The thesis site was selected because it has all the characteristics to indicate that it will redevelop in the pattern described in the diagnosis portion of this thesis. The existing commercial structures are in middling to poor condition and the impending upzone will create additional incentives to demolish the existing buildings and build significantly larger ones. The future zoning, Neighborhood Commercial 65, is the zone in which most of the case studies of grain loss have occurred. For these reasons, the Midtown Plaza property typifies a site that will likely be redeveloped with a large, monolithic structure. Because it is typical of sites where consolidation most often occurs, it can serve as a prototype for an alternative strategy, one that can be replicated on similar sites across the city.



Fig. 4.16 View of site facing west, new development across 23rd in the background.

4.2 | Site History

The initial pattern for this plat, known alternately as Rengsdorf's Addition (Baist Real Estate Atlas, 1912) or Renton Hill Addition (King County Assessor), consisted primarily of long blocks running north-south. These blocks were oriented with their "spines," or rear lot lines, running parallel with the long faces of the blocks. As was common practice at the time, this overall pattern was adjusted to reflect the fact that some east west streets such as Union carried streetcar tracks. Streetcar corridors grew into commercial strips as they allowed workers traveling home from the central business district to get off at their cross street, purchase a few items and continue home on foot. Due to increased demand for frontage on commercial streets, block ends that faced streetcar lines frequently had their plat orientation rotated ninety degrees, so that the short ends of lots faced the strip. On the subject block, the eastern half of the E Union frontage initiated this pattern, which continued for several blocks. Artifacts of this era of development can still be found east of the site, where a few small storefronts are scattered along E Union. Remnants of early streetcar commercial development can be seen on Union, east of the thesis site.



Fig. 4.12 Baist's Real Estate Atlas 1905. Thesis site at top, center.



Fig. 4.13 Sanborn fire insurance map, ca. 1910

The original plat was the starting point for parcelization of the thesis site. When the property was first platted in the late nineteenth century, lots were established on a module 60 feet wide by 120 feet deep. Fourteen of these 7200 square foot parcels were arranged on a block that measures 420 feet north to south, by 250 feet east to west. The ends of the lots are oriented toward the long faces of the block. A ten foot wide alley bisected the block, running north-south. Early development consisted principally of wood-frame single family homes.

By the early 20th century, lot configurations changed to reflect evolving patterns in the area. Some lots facing east (to 24th Avenue) were subdivided in half to create 3600 square foot, parcels of 30 feet wide by 120 feet deep. At the northeast corner of the block, two lots were replatted into four, and their orientation was rotated 90 degrees to face Union, which, by that time, had become a street car corridor.

By the 1950s, the property was redeveloped with auto-oriented commercial uses, and ownership was consolidated by the family which owns the block today. The lot lines were rearranged, reflecting the sequence of acquisitions. Only two of the original single family homes remain at the southeast corner, reflecting an earlier increment of land division. As of May 2015, the entire block had been listed for sale as a single parcel.



Fig. 4.17 Initial plat

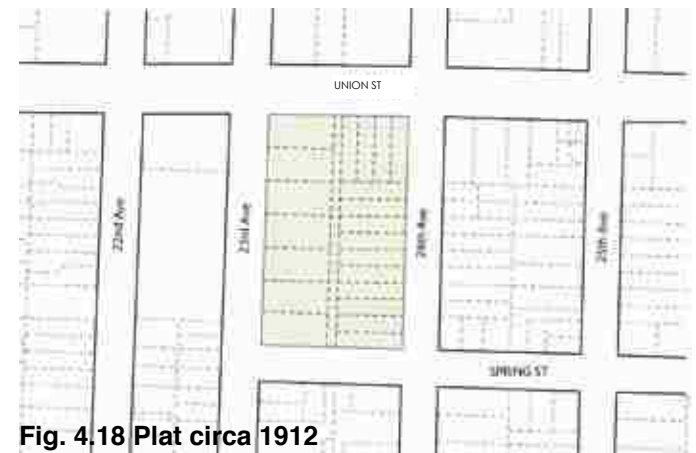


Fig. 4.18 Plat circa 1912



Fig. 4.19 Plat



Fig 4.20 Aerial Axon photo of thesis site, facing north

The thesis site is a full-block parcel. At 105,000 square feet, the property comprises approximately 2.5 acres. The current zoning is Neighborhood Commercial-40, but an upzone 65 feet is imminent. Because this site is all under common ownership, and is significantly underbuilt compared to its zoned capacity, the anticipated upzone places it on the cusp of major redevelopment; therefore it is an ideal place to test the parcelization hypothesis of this thesis. Due to the scale and complexity of this project, design work has been shared with another thesis undertaken simultaneously by Corbin Jones. The designs presented here address the southern half of the block primarily.

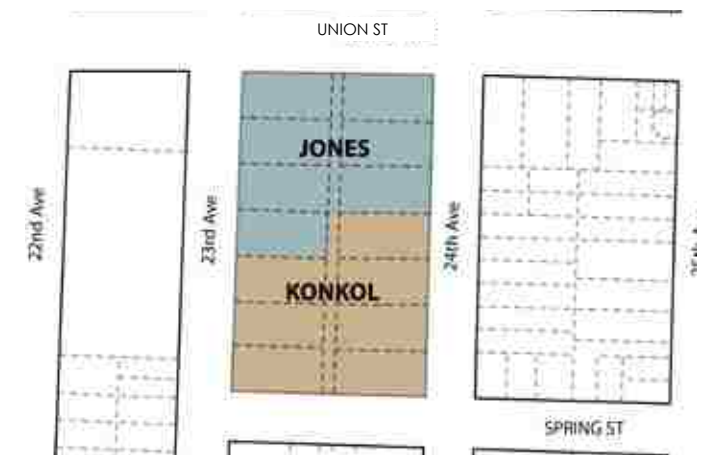


Fig 4.21 Division of block design

4.3 | Development Context

The Central District has gentrified rapidly over the last few decades. With increased land values has come a wave of new property development as developers have responded to demand for residential and retail space close-in to downtown. Several new projects, mostly 5-over-1 mixed use, are being developed in the immediate vicinity of the thesis site at 23rd Avenue and Union Street. Three of these projects are under development by a local development group, Lake Union Partners. These are the Central, located at the southwest corner of 23rd and Union, the Stencil, at the southeast corner of 24th and Union, and an as yet unnamed project on the site of the existing gas station at the northwest corner of 23rd and Union. In addition to the three projects by Lake Union Partners, the vacant bank property at the northwest corner of 24th and Union is currently under contract to the Community Development Corporation Capitol Hill Housing. CHH plans to develop their site with a mixed-use housing building.



Fig. 4.22 23rd Avenue viewed from site, camera facing west.

Developments in progress, June 2015.

1. The Central
2. The Stencil
3. Unnamed Lake Union Partners building
4. Capitol Hill Housing

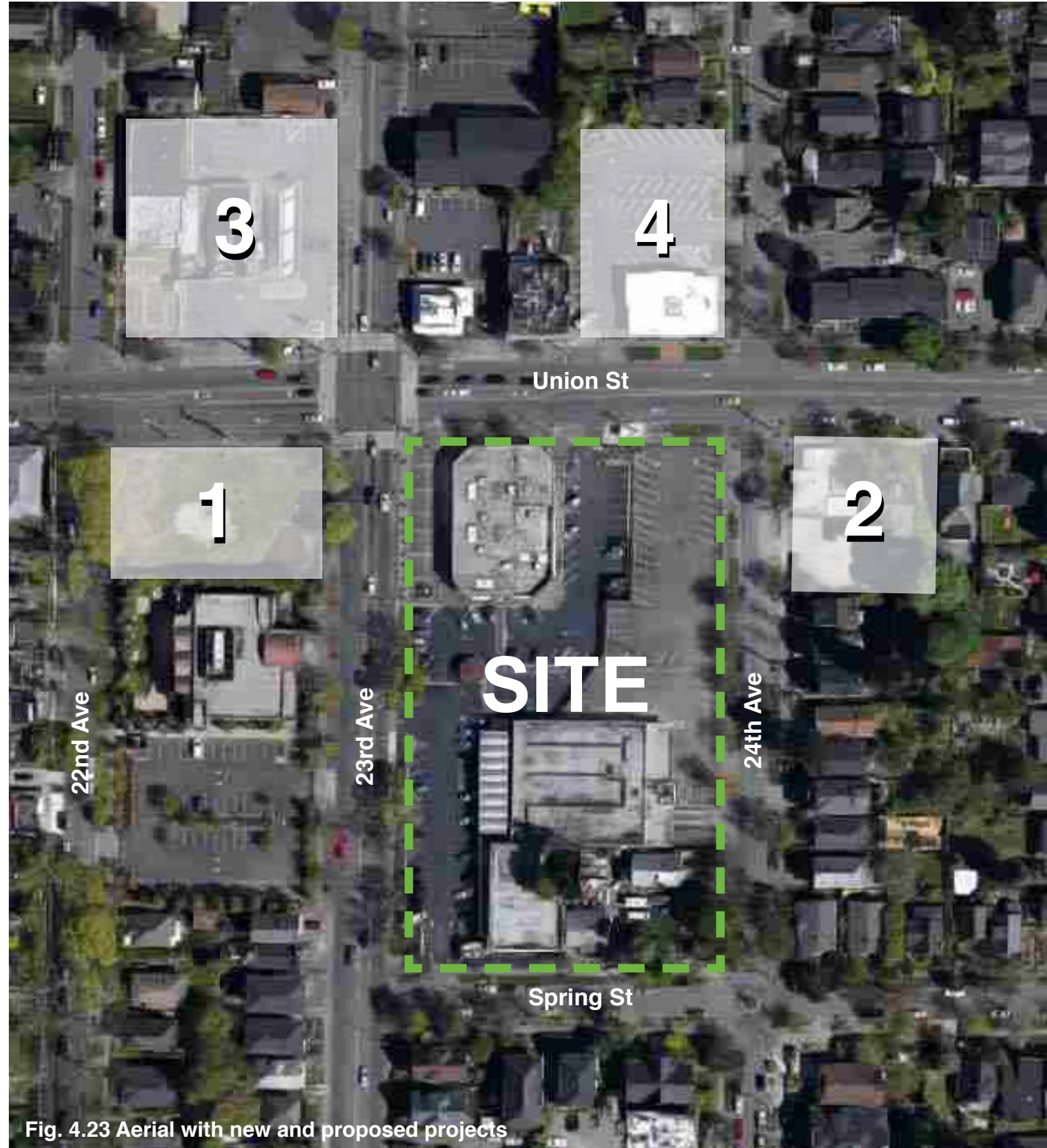


Fig. 4.23 Aerial with new and proposed projects

4.3.1 The Central



Fig. 4.24 Rendering of Lake Union Partners' project the Central
(Source Mithun/Lake Union Partners)

Planned prior to the 2008 recession, the Central is the first major project in the vicinity of the thesis site. It is a 90,000 square foot (approx.) six-story mixed-use building containing 90 market rate rental apartments and ground floor retail. Below grade parking is provided for residents. The project was designed by Mithun.

4.3.2 The Stencil



The Stencil is Lake Union Partners' second project in the vicinity of 23rd and Union. It is a 43,000 square-foot, four-story mixed-use building containing 39 market rate rental apartments, 3 live-work units and 3000 square feet of retail. Tuck-under parking at grade is provided for residents. The project was designed by Johnston Architects.



Fig. 4.25, 4.26 Renderings of the Stencil (Source Johnston Architects/Lake Union Partners)

4.3.3 Unnamed Project, 23rd & Union



Fig. 4.27 Preliminary massing proposal for Lake Union Partners' project at 23rd and Union
(Source Weinstein AIUs/Lake Union Partners).

Lake Union Partners' third investment adjacent to the thesis site has not been named or fully designed by June 2015. It will be a six-story mixed-use building containing 144 market-rate rental apartments with ground floor retail. Below-grade parking is provided for residents and some parking is planned at-grade for retail. The project is being designed by Weinstein AIU.

4.3.4 Liberty Bank Plaza



Fig. 4.28 Site of proposed Capitol Hill Housing development at 24th Union.

Non-profit developer Capitol Hill Housing has a contract to purchase the former bank property north of the thesis site. Their project will be named to honor the Liberty Bank, the first African American owned bank in the Northwest. Design work is on hold pending soil remediation, as the site has buried tanks from an earlier use as a gas station. The planned development will be four stories tall and will potentially accommodate community services and some amount of retail. No architect had been selected by June 2015.



Fig. 4.29 Liberty Bank Logo, ca. 1968

4.4 | Design Response

This thesis master plan proposes creating parcels on the thesis site based on increments of the original 7200 sf platted lots. The proposal includes several strategies to create a parcelization scheme. The master plan:

- Re-establishes the alley through the site
- Re-distributes the density to allow for different scales of development, reflecting the gradient of intensity from peak density at 23rd and Union down to the lowest intensity at 24th and Spring. The master plan proposes a height increase to 85 feet at the north end in exchange for parcelization and reducing height and density at the opposite corner (24th and Spring).
- Allows for phased development: individual parcel projects can be phased over a number of years, beginning with the north end and progressing south.
- Accommodates autos in a shared parking reservoir, located on the north end of the block. Schematic plans verified that a below grade structure on the north end can accommodate approximately 150 vehicles.
- Provides a secondary parking reservoir on the south half of the block.

In the scenario proposed in this thesis, a master developer will produce and secure permits for a full-block master plan; then individual parcel developers will develop individual projects on their own parcels. The additional yield from the higher density north portion of the site balances the lower yield from the smaller buildings to the southeast.

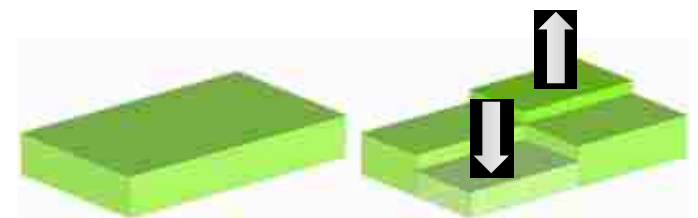
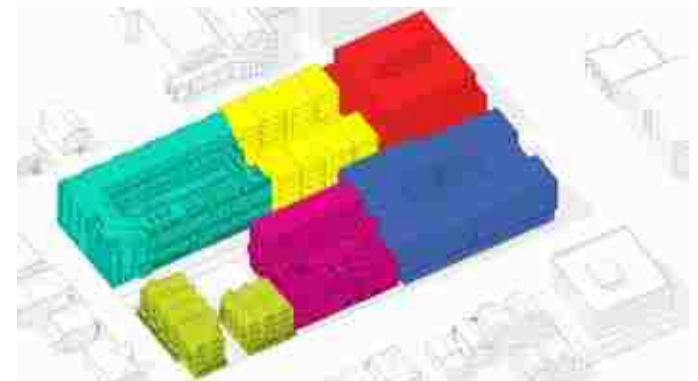
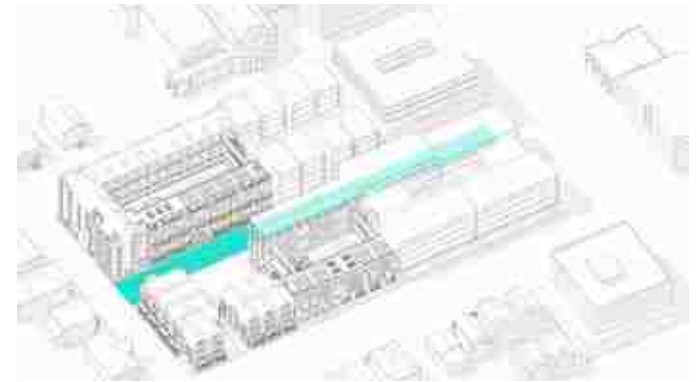
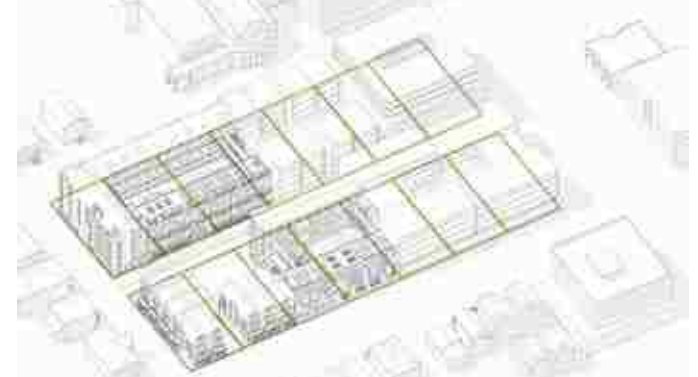


Fig. 4.30-33 Diagrammatic illustration of master plan

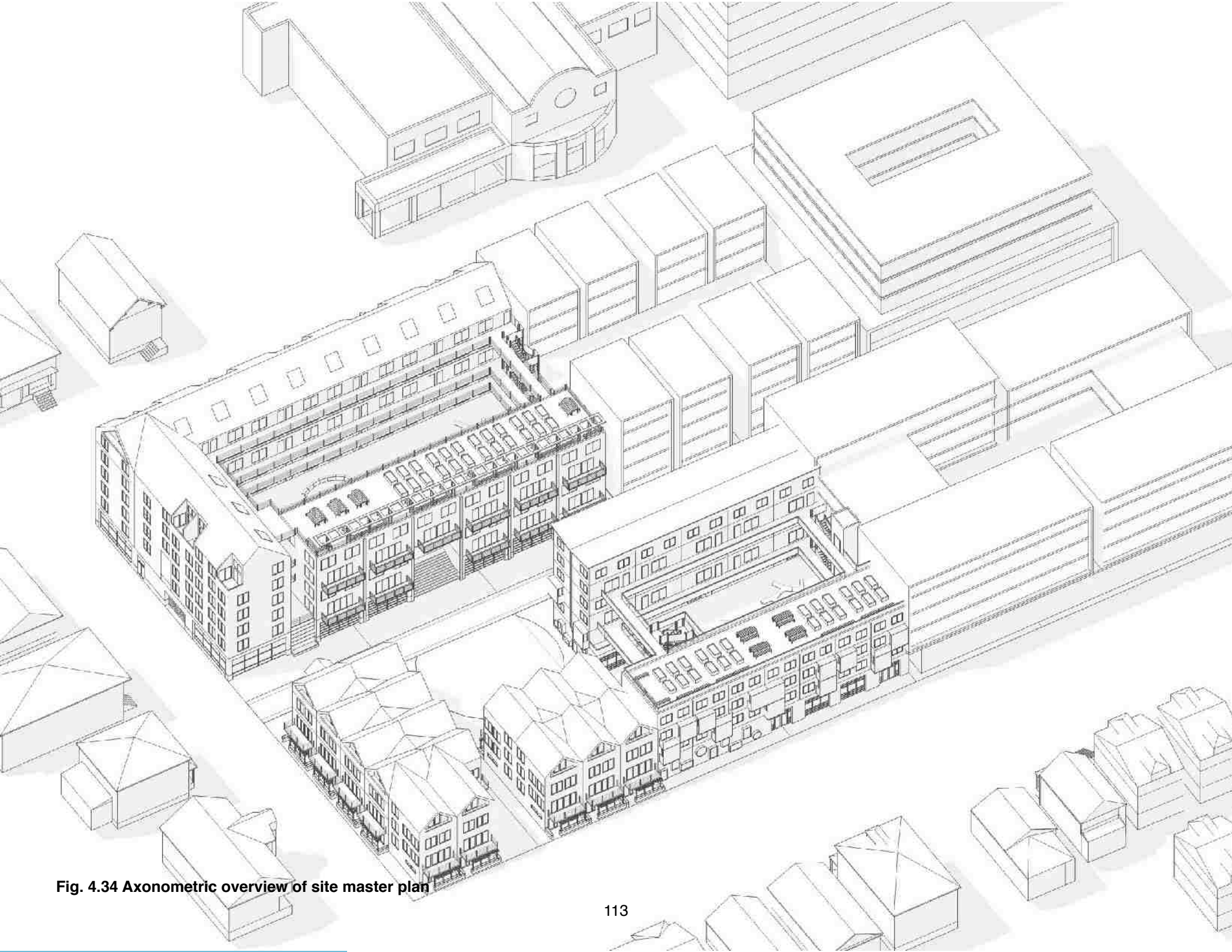


Fig. 4.34 Axonometric overview of site master plan



The thesis proposal creates three new parcels on the south half of the block.

Site A, the largest, faces west and combines three original lots for a total of approximately 21,000 sf. This parcel retains the anticipated future zoning, NC 65.

Site B, located on the lowest intensity corner of the site, combines two original lots for a total of approximately 14,000 sf. It is the location of low rise residential, in the form of townhouses. A portion of this site, approximately 5000 sf, will be shared open space for the entire block. This space is open to the public and contains landscaping, consisting of lawn, grasscrete and seating areas, as well as stormwater features to treat and infiltrate rainwater from adjacent buildings.

Site C, with the same dimensions as Site B, will become midrise, affordable family housing. This site will meet requirements for inclusionary zoning and provision of affordable units for the block.

SITE DATA

Total Site Area (Full Block)	105,000
South Subarea	52,500
<i>Alley Dedication</i>	<i>3,840</i>

Site A Market Rate Mixed Use 20,880

Building GSF 72,535

Residential Unit Type	Count	Area	Total
1B Flat	16	540	8,640
1B Loft	13	670	8,710
2B Flat	5	1,080	5,400
2B Townhome A	13	1,080	14,040
2B Townhome B	11	1,380	15,180
Subtotal Residential	58		51,970

Bike Coop	1570
Workshop	1815
Retail A	1540
Retail B	1540
Retail C	1746
Parking Garage	6554
Subtotal Nonresidential	14,765

Roof Garden	3900
Interior Courtyard	5544
Total Open Space	9444

Total Dwelling Units

Site A	58
Site B	16
Site C	25
Total	99

Subarea Parking Ratio 0.45

Site B Townhomes 13,920

Building GSF 27,296

Residential Unit Type	Count	Area	Total
Townhome A	8	1,672	13,376
Townhome B	8	1,728	13,824
	16		
Trash Enclosure		96	

Site C Affordable Housing 13,920

Building GSF 25,508

Residential Unit Type	Count	Area	Total
Studio	1	476	476
1B Flat	1	616	616
2B Flat	7	952	6,664
2B Townhome	4	952	3,808
3B Flat	2	1,232	2,464
3B Townhome	10	1,232	12,320
Subtotal Residential	25		26,348

Daycare	4591
Community Room	1830
Building Office	730
Subtotal Nonresidential	7151

Roof Terrace	3346
Dedicated Open Space	1540
Interior Courtyard	2520
Total Open Space	7406

4.3.1 | Site A

Site A contains a market-rate mixed-use development. This building is a variant on the 5 over 1 typology. The unit mix favors larger units, many of them two-story units with internal stairs. The building is composed of two primary masses with external circulation. The building contains a courtyard with shared open space and direct access to units. Units at the courtyard level have stoop areas separated with planter boxes and seating, to create a gradient from public to private space. The alley-facing mass includes shared roof garden where residents can grow food and enjoy views of the Cascades and Mount Rainier. It consists of two tiers of walk-up two-story apartments. One unit is removed from this mass to create a void, allowing a wide stair to descend from the courtyard to the alley and common green. The through-units provide efficient use of space and two window walls per unit and allow cross-ventilation, reducing energy use and providing comfort.

The ground floor includes three retail bays facing 23rd Avenue. A bike coop and a community workshop space are community amenities that activate the alley. This building provides a secondary parking reservoir shared with the rest of the south subarea, accommodating 45 cars in an automated, stacked “Puzzle Lift” system. The building’s formal composition draws heavily on the vernacular forms of midrise urban housing in Denmark and Germany. The walls are a vertical wood rain-screen and the roof is metal. Top floor, one-bedroom units have a sleeping loft beneath the pitched roof. The sloped roof profile typology has the additional benefit of providing a more graceful transition from a high-density urban village, which is typically filled with stark, blocky buildings, to the early 20th century houses and duplexes nearby.

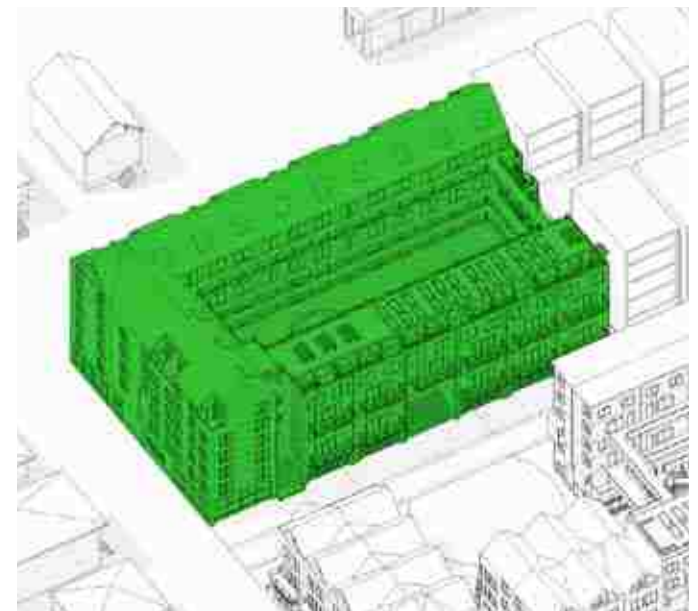


Fig. 4.36 Site A



Fig. 4.37 Example of a puzzle lift, installed in Portland.

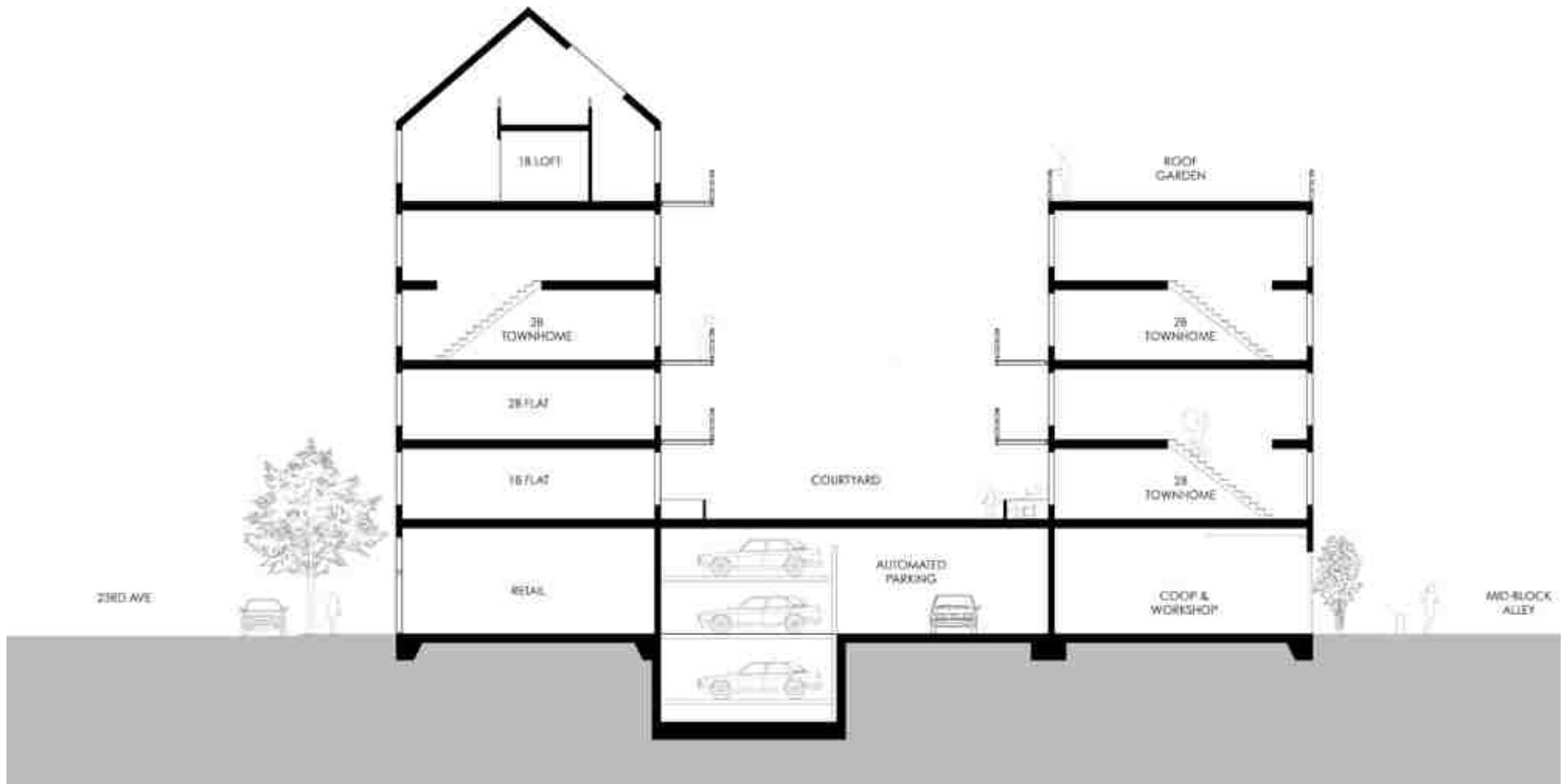


Fig. 4.38 Section through building on site A. A central parking bay accomodates 45 vehicles in a stacked puzzle lift. Active uses engage the pedestrian realm on the east and west sides.

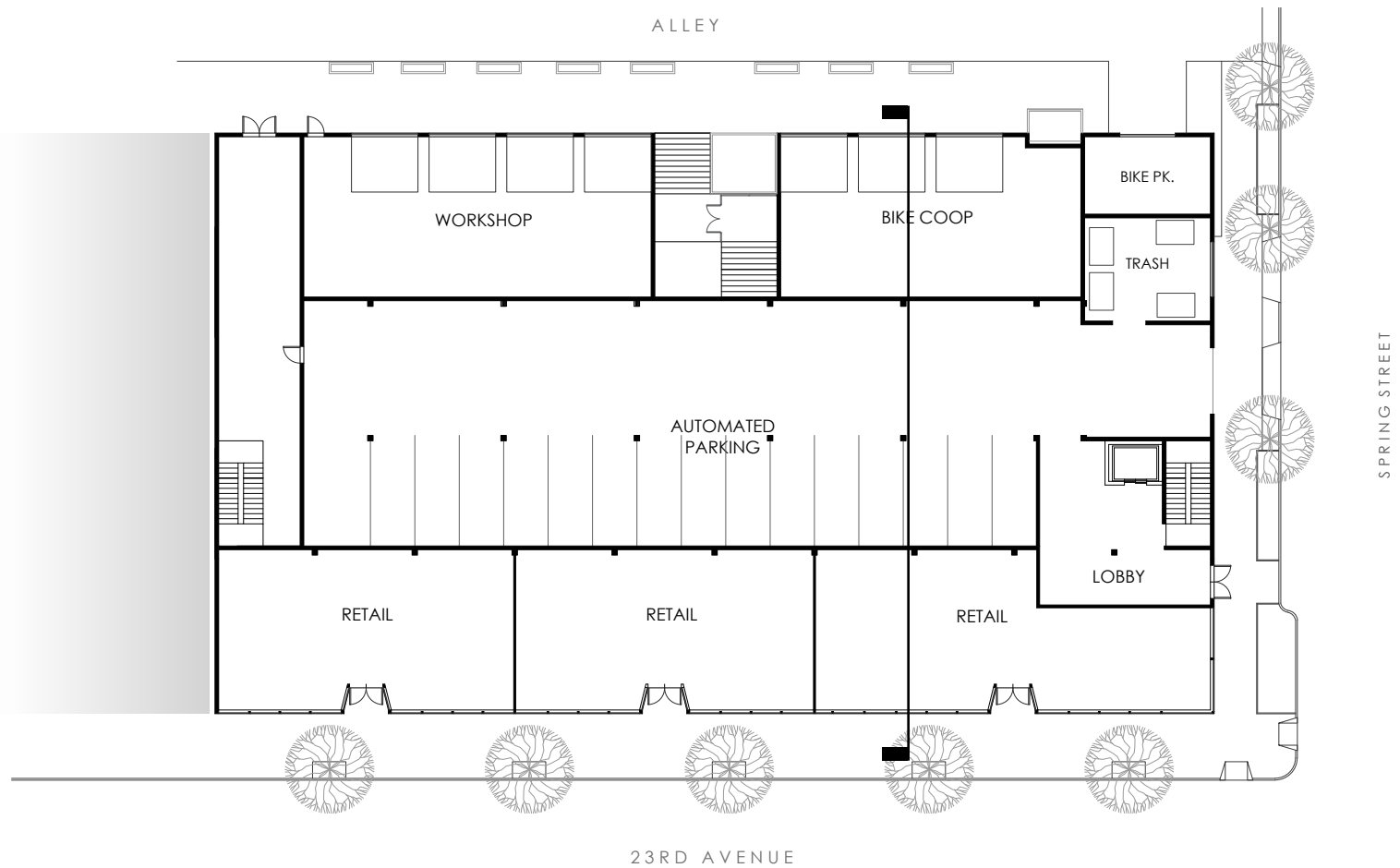
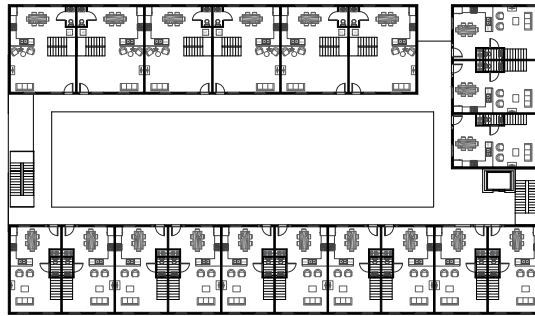
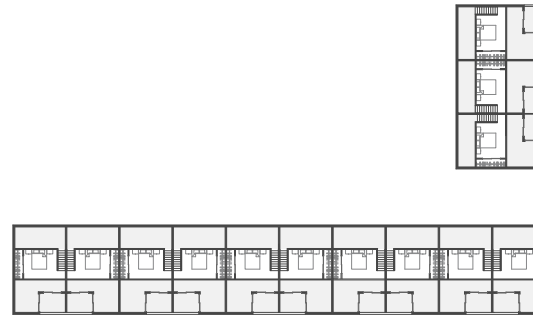


Fig. 4.39 Ground floor plan of building on site A.

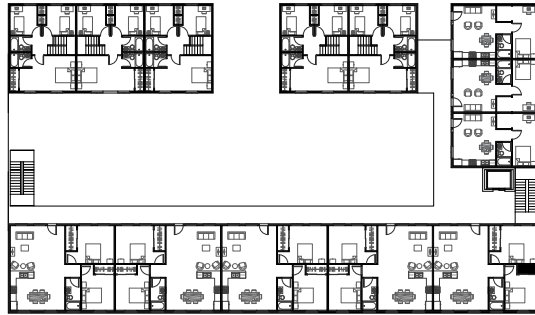
Floor 4



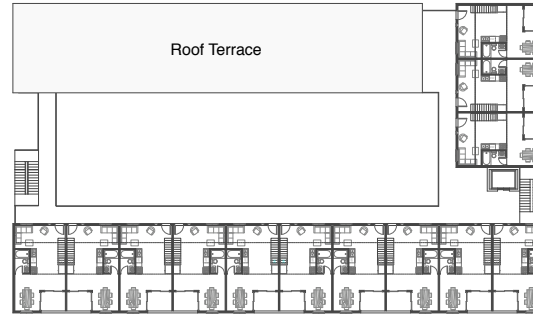
Floor 6.5



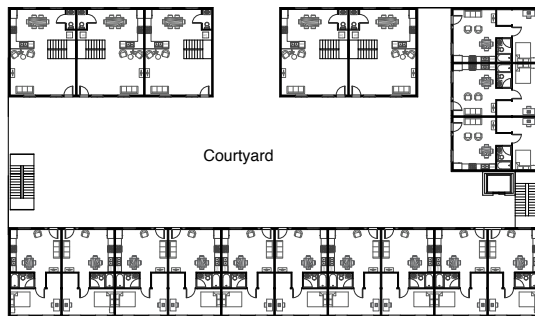
Floor 3



Floor 6



Floor 2



Floor 5

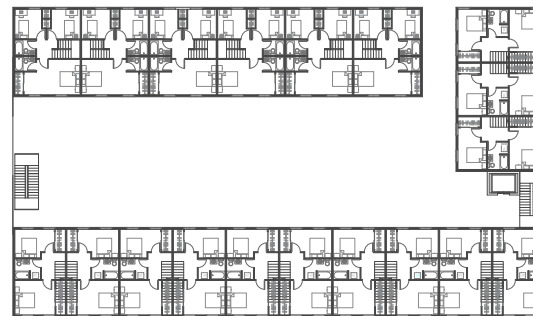
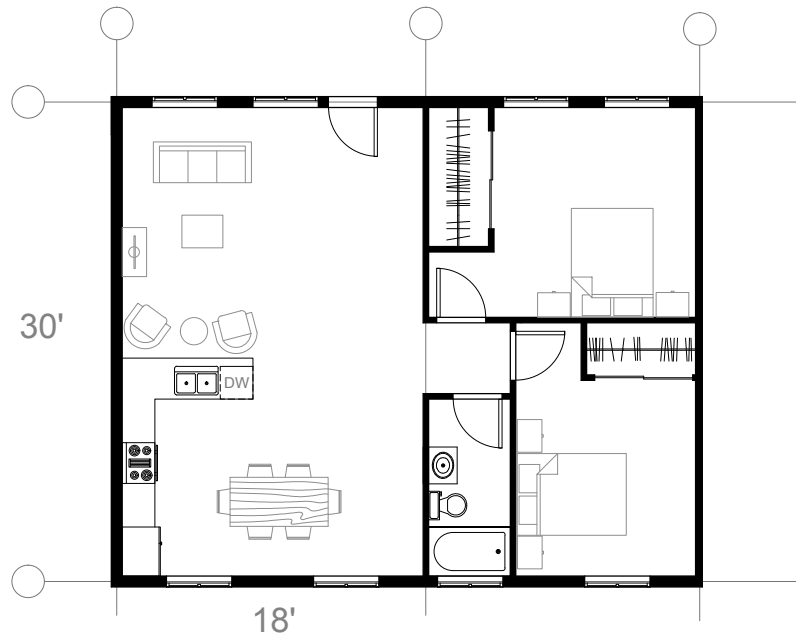
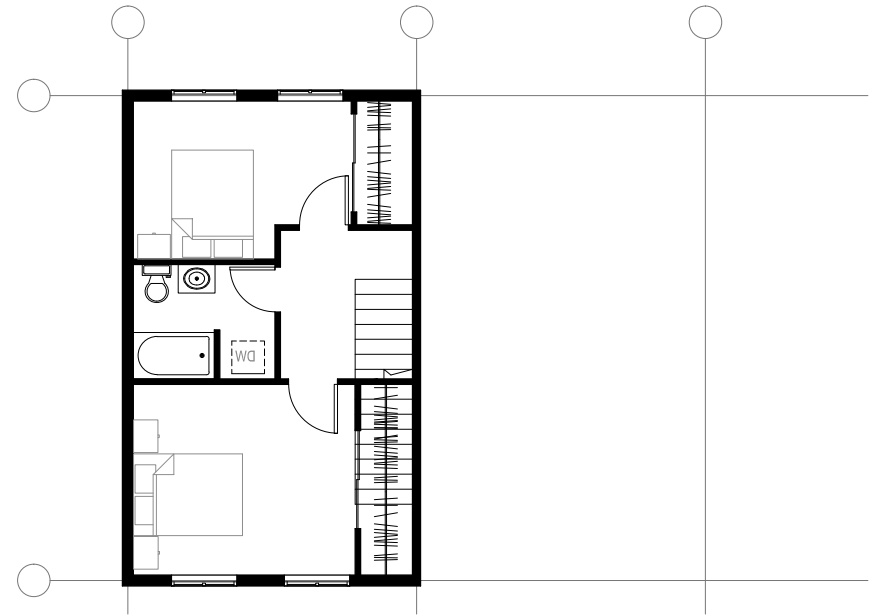
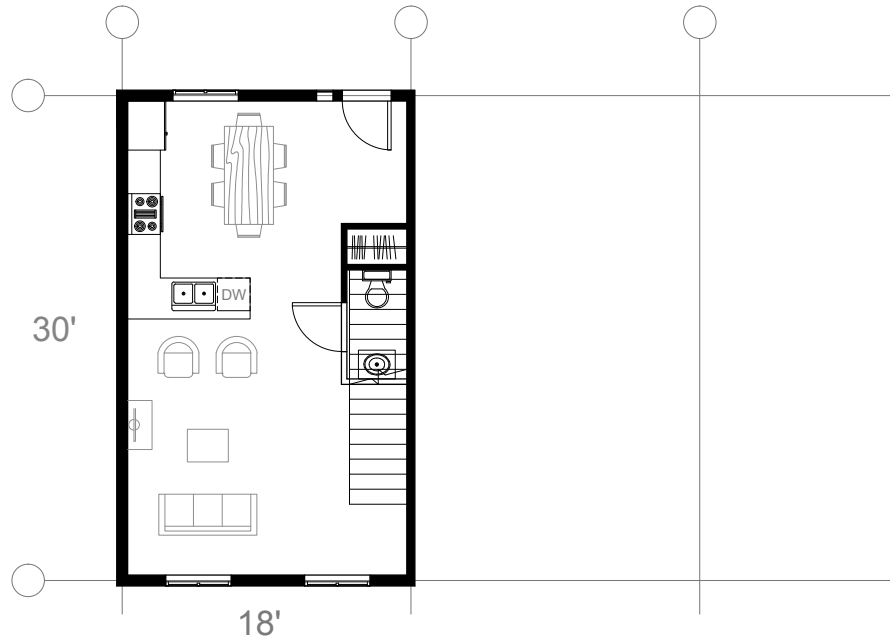


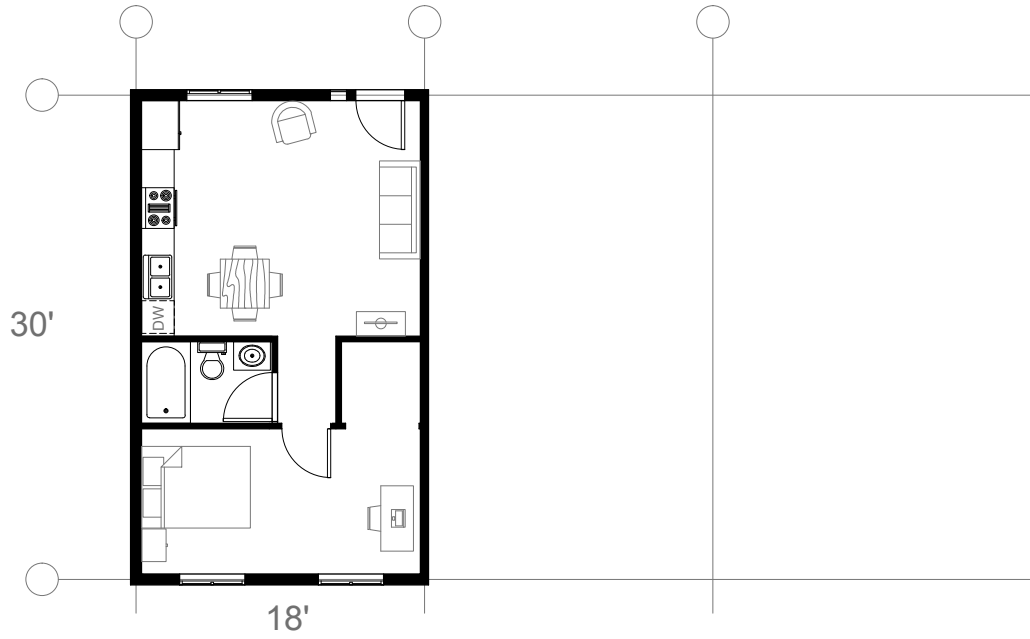
Fig. 4.40 Floor plans, levels 2-6.5 of building on site A.



Above. Fig. 4.41-42 Typical two-bedroom two-story unit plan

Left. Fig. 4.43 Typical two-bedroom flat unit plan

Left. Fig. 4.44 Typical one-bedroom flat unit plan



Left. Fig. 4.45-46 Typical one-bedroom loft unit plan

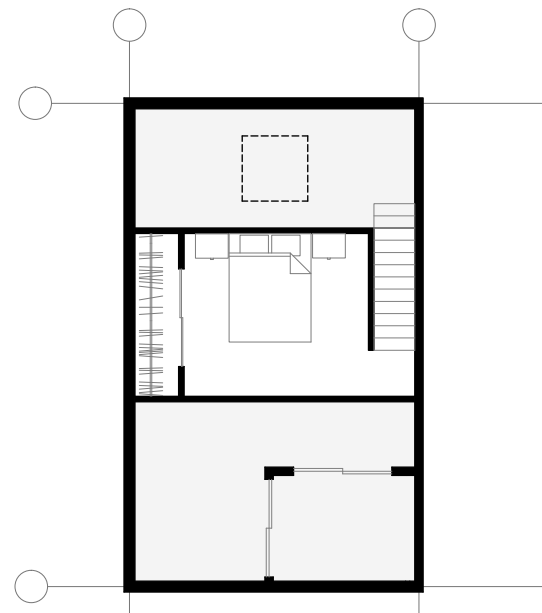
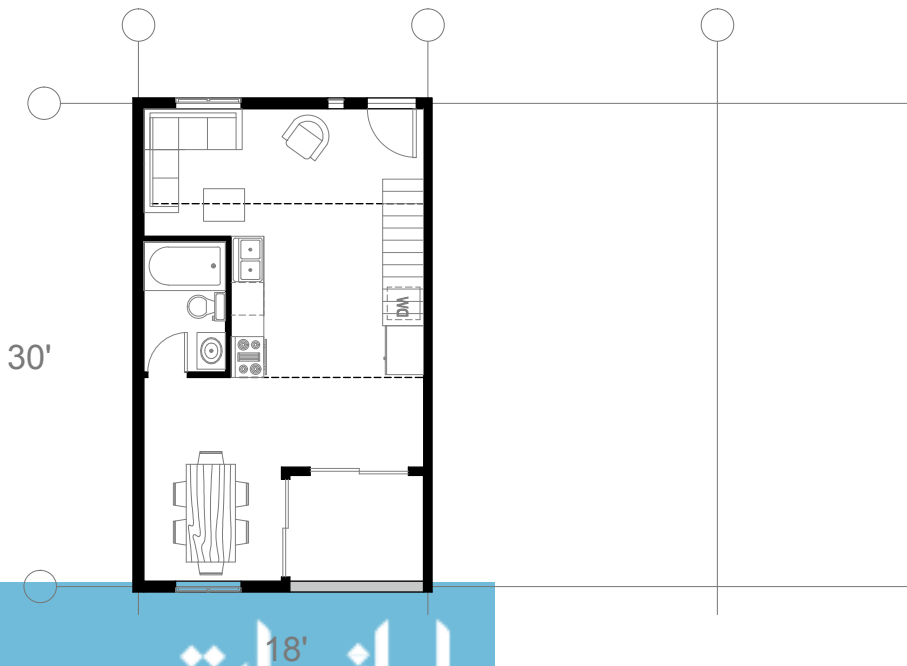




Fig. 4.47 Site A: View of shared courtyard, facing south.



Fig. 4.48 Site A: roof terrace facing southeast.



Fig. 4.49 Site A: birdseye view. Incisions into the mass provide balconies and introduce color and depth to the otherwise flat elevations.



Fig. 4.50 Typical section perspective, sixth floor loft units.



Fig. 4.51 Site A: perspective view facing northeast from 23rd Avenue.

4.3.2 | Site B

Site B features sixteen four-story townhouses. These units are oriented back-to-back and are configured in a tower format with one large room per floor. There are two townhome schemes: the first is a relatively traditional configuration consisting of a ground floor living room, second floor cooking and dining space, and two sleeping rooms above. The second scheme is a more contemporary arrangement, with a bedroom/office on the ground floor, cooking/dining on the second floor, living room on the third floor, and a master suite at the top floor. The site plan for Site B contains an even mix of these two types, although the mixture could easily be altered to suit market preferences without impacting the overall scheme.

All units feature a five foot wide stoop space at the ground floor. This transitional zone creates a buffer between the public realm and the private space inside each dwelling. It achieves separation from the public with low walls and planters around a front porch area where residents can be outdoors while maintaining some sense of privacy and territoriality. The most important element of the plan for Site B is a shared green, which is open to the public. This common area is accessible to all residents of the block and provides a supervised play area and a space for face-to-face interactions between residents of the various buildings on the block.



Fig. 4.52 Site B

24TH AVENUE

Fig. 4.53 Site plan for Site B.

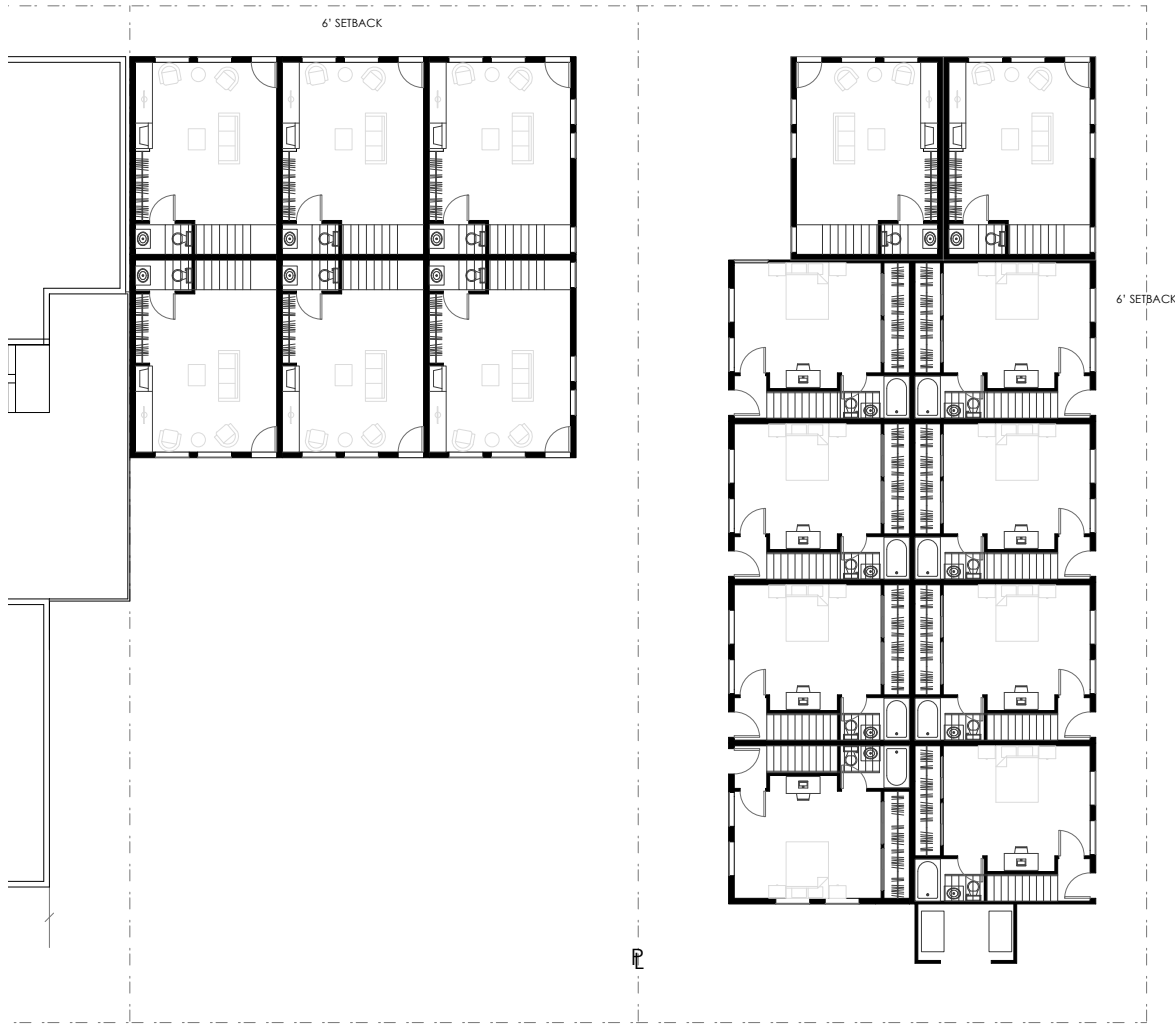


Fig. 4.54 Site B: typical townhome units, types A and B

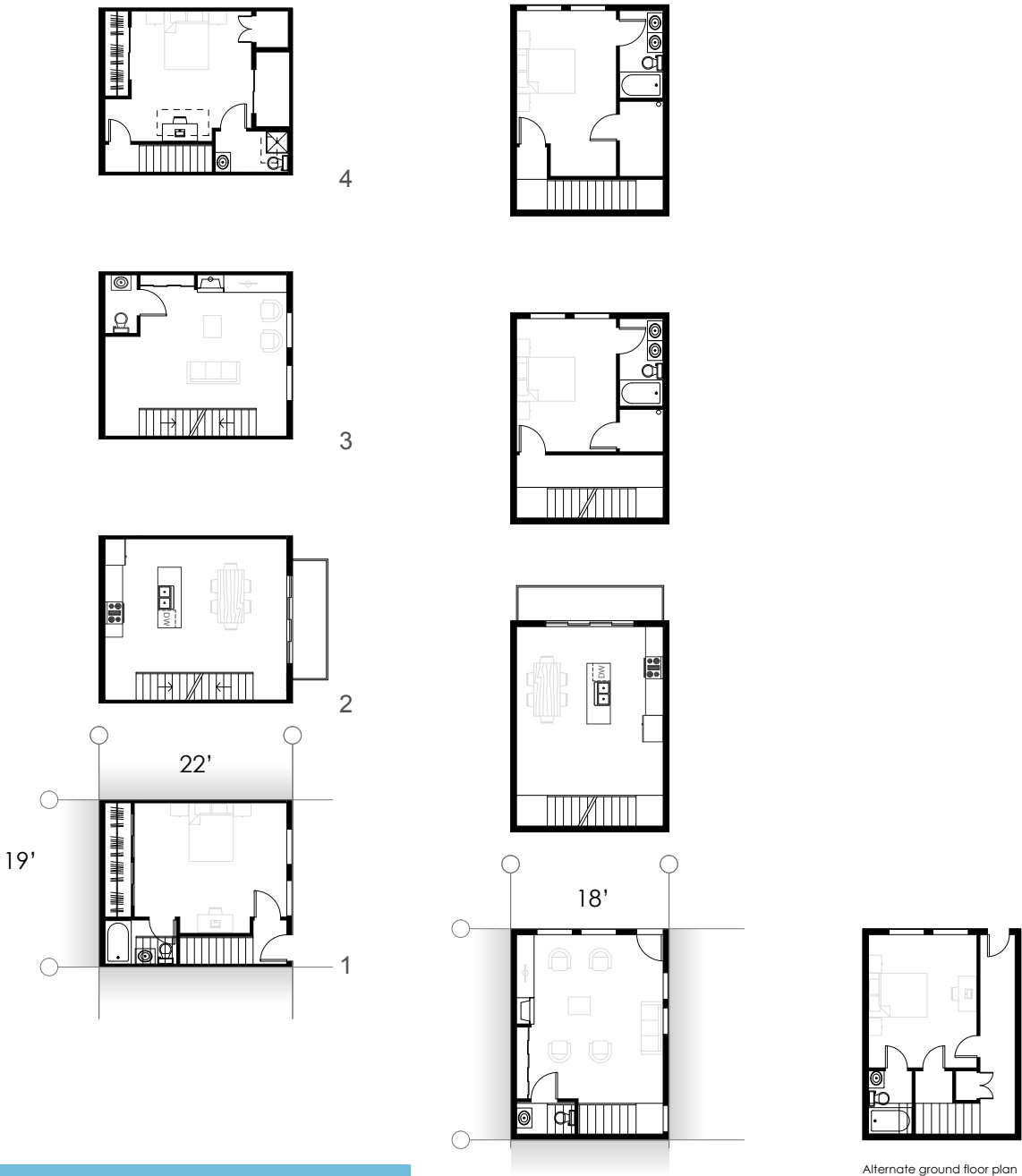




Fig. 4.55 Site B: Birdseye perspective view facing northwest from 24th and Spring.



Fig. 4.56 Site B: Perspective view, facing northwest from 24th and Spring.



Fig. 4.57 Site B: Perspective view facing southeast across the common green. The foreground shows how the workshop space in the building on Site A might activate the interior of the block.

4.3.3 | Site C

Site C is similar to the market-rate mixed-use building on Site A, as it is a two-bar scheme with open circulation to through-units. This building addresses the lack of affordable multifamily housing in Seattle by providing primarily two and three bedroom apartments. The building features twelve three-bedroom apartments, eleven two-bedroom apartments, one one-bedroom and one studio apartment.

Similar to the market rate building on Site A, the lower bar of housing has a shared, private courtyard at the second floor level and a roof terrace above the eastern building mass. This terrace provides cascade views to the east.

The ground floor contains community uses including a daycare facility with dedicated outdoor space for children to play. This use is a high priority, as lack of convenient, affordable child-care increases auto-dependency and thus cost of living for low-income Seattleites. An additional communal element incorporated into the ground level of this building is the community room. It is a resource for the immediate neighborhood and can be used for community gatherings ranging from potlucks to book readings to community council meetings. It is available to all residents of this block as well as to the surrounding community.

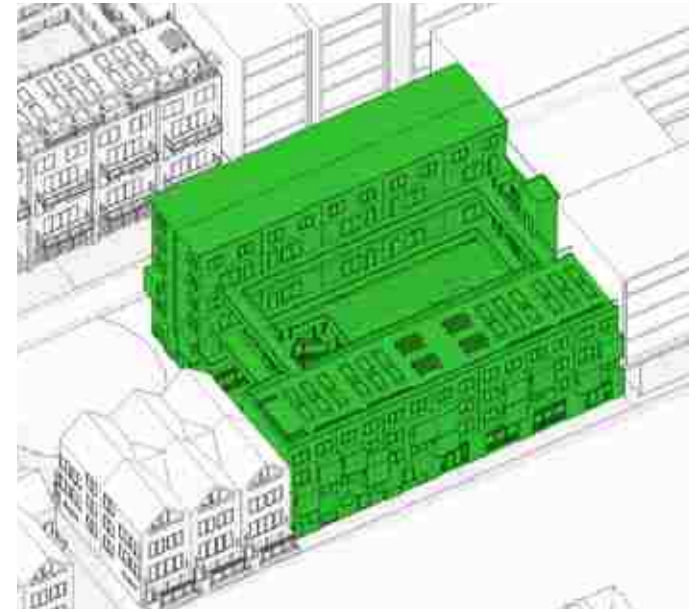


Fig. 4.58 Site C

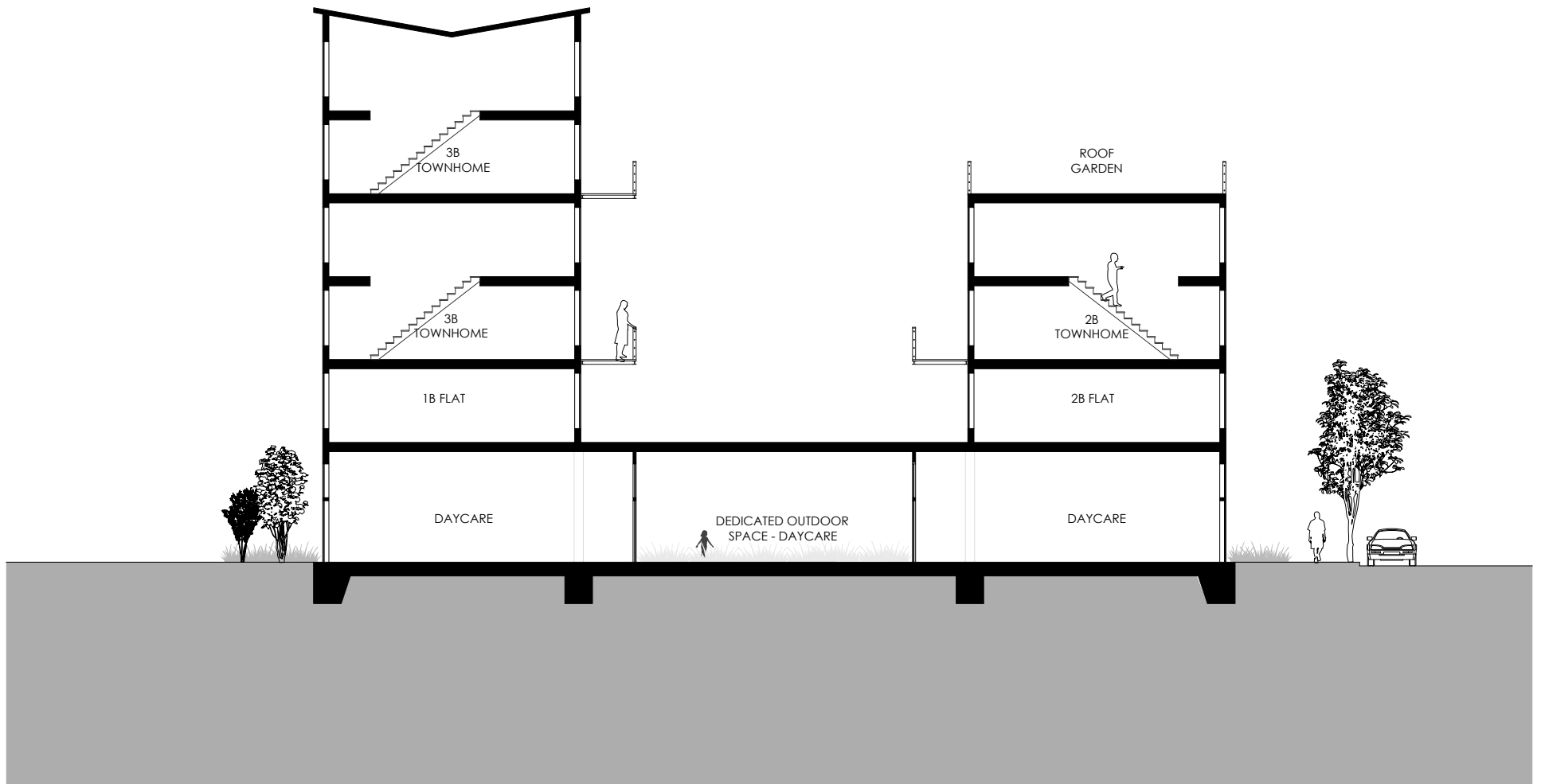
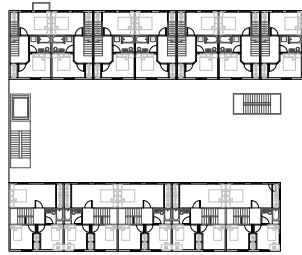


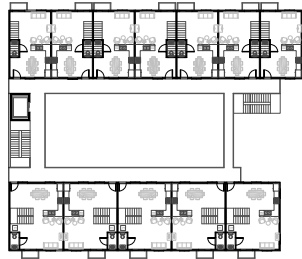
Fig. 4.59 Site C: Section through building



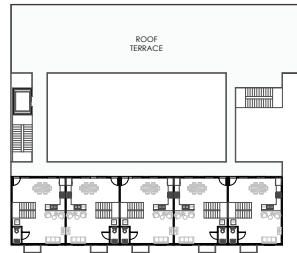
FOURTH FLOOR



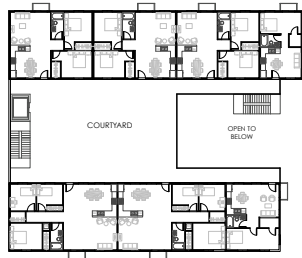
SIXTH FLOOR



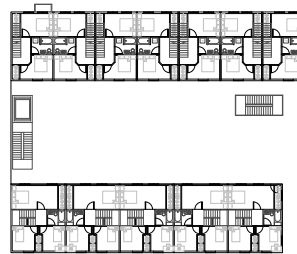
THIRD FLOOR



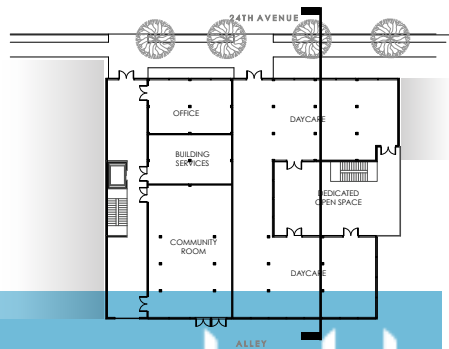
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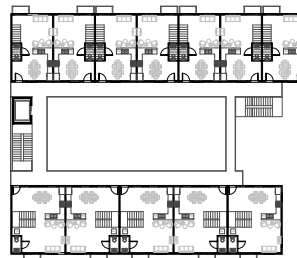
SECOND FLOOR



FOURTH FLOOR

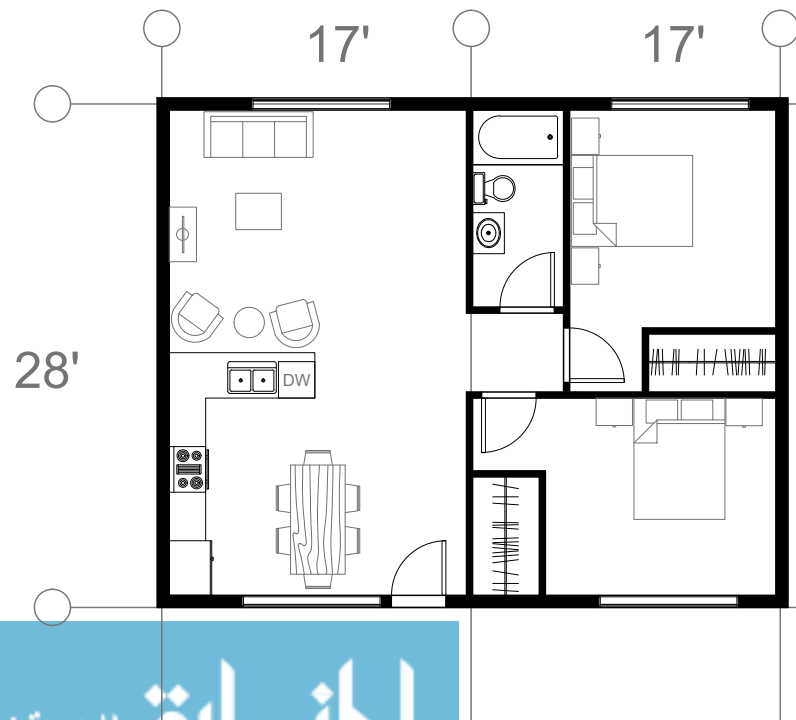
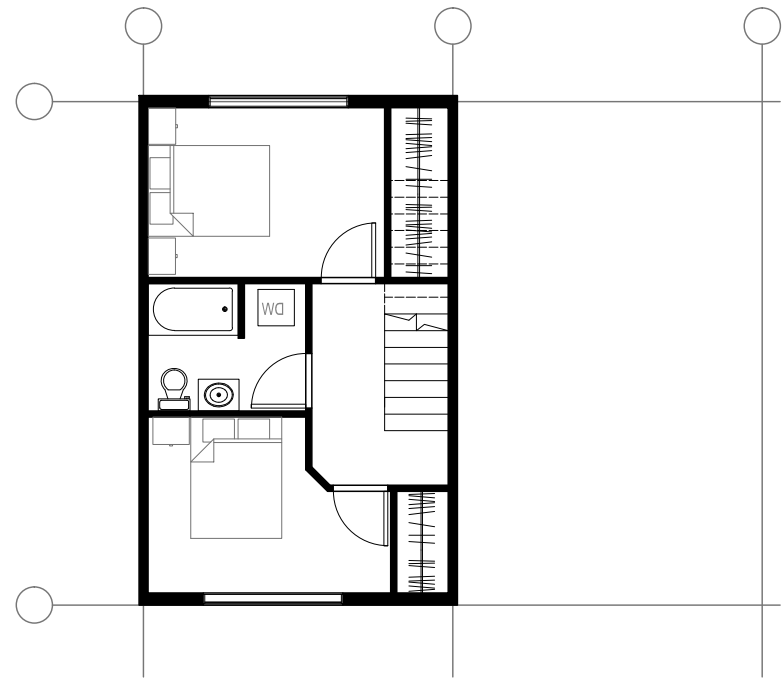
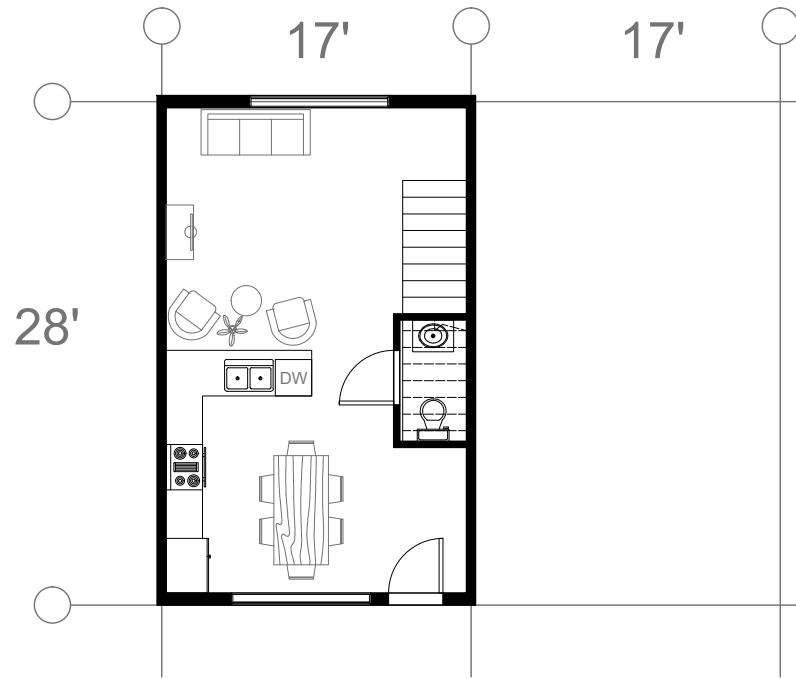


GROUND FLOOR



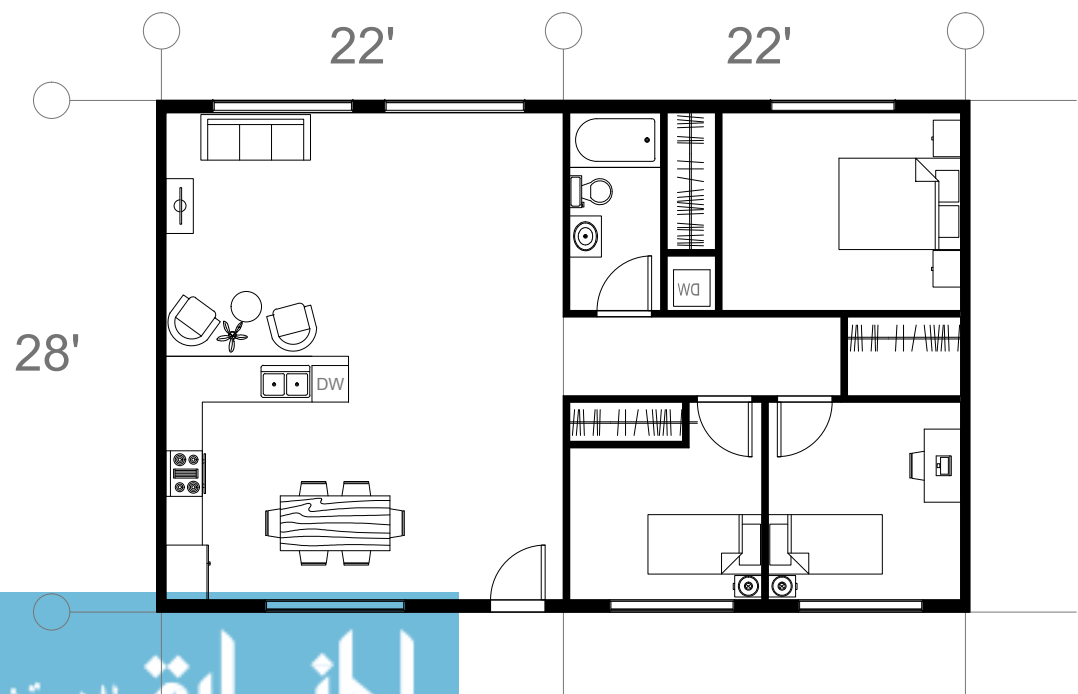
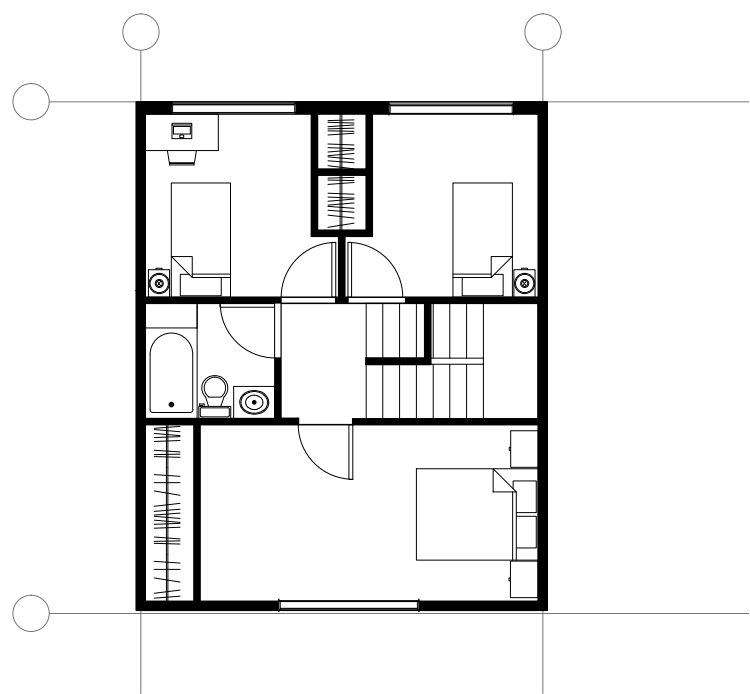
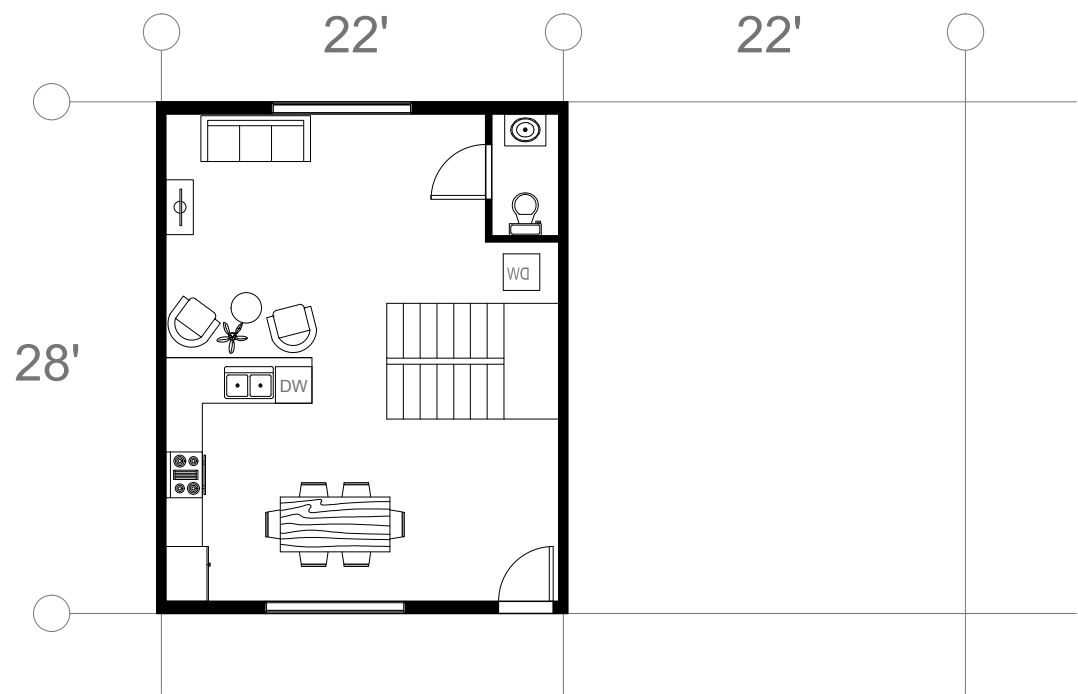
THIRD FLOOR

Fig. 4.60 Site C: building floor plans



Above. Fig. 4.61-62 Site C: typical two bedroom unit plans

Left. Fig. 4.63 Site C: Typical two bedroom flat units



Above. Fig. 4.64-65 Site C: typical three bedroom townhome units

Left. Fig. 4.66 Site C: Typical three bedroom flat units



Fig. 4.67 Site C: elevation facing southwest from 24th Avenue. Colored acrylic panels extend the seasonal use of balconies and create an identity for the building.



Fig. 4.68 Site C: birdseye perspective facing northwest from 24th and Spring. Circulation is provided via external walkways allowing units to exit directly into the open air. The second floor central courtyard occupies a portion of the central open space and provides shared private open space for residents. The southern half of this void is at grade and accommodates a dedicated outdoor play space for the ground floor day care facility. The roof terrace allows residents to grow food and provides views of the Cascades.

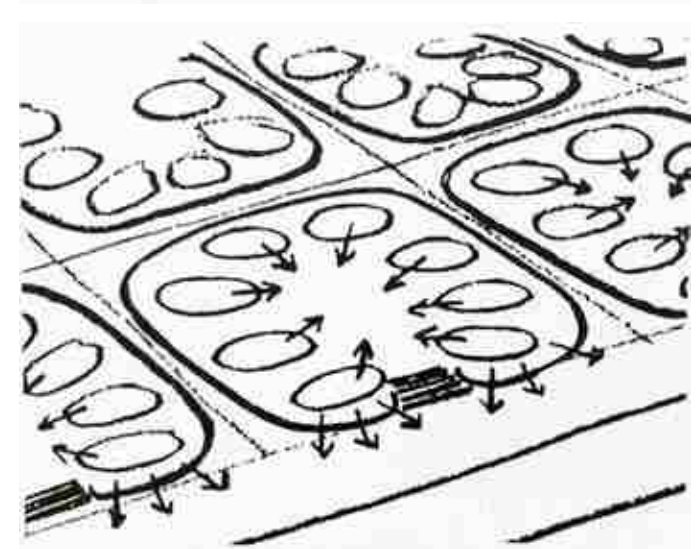
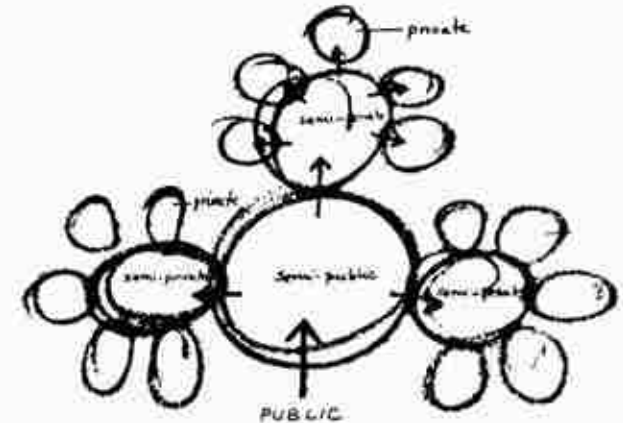


Fig. 4.69 Site C: Birdseye perspective facing northeast from the alley, across the common green.

4.5 | Summary Discussion

The design of all three buildings was shaped by the goal of fostering community. People need intimately scaled spaces to feel a sense of ownership and community, and by focusing on creating a hierarchy of open spaces, this design provides a block where such interaction can happen. Nested hierarchies of social spaces are critical to giving people a sense of scale and comfort.

The common green on Site B is the largest and most public of these spaces. Its edges are mediated by transitions; stoops buffer the townhomes and wide stairs connect the courtyard of the building on Site A to the green (with a security gate). Both apartment buildings present community spaces to the central alley and the abutting green at ground level. The daycare facility and the community room in the affordable housing building on Site C, and the bike coop and the community maker's shop in the building on Site A act as social condensers - attractors and concentrators of activity - for the market rate building. These zones of communal activity bring residents of the many different classes and household types on the block together.



Above. Fig. 4.70-71. Oscar Newman and Jan Gehl, respectively; diagrams of social and spatial hierarchies.

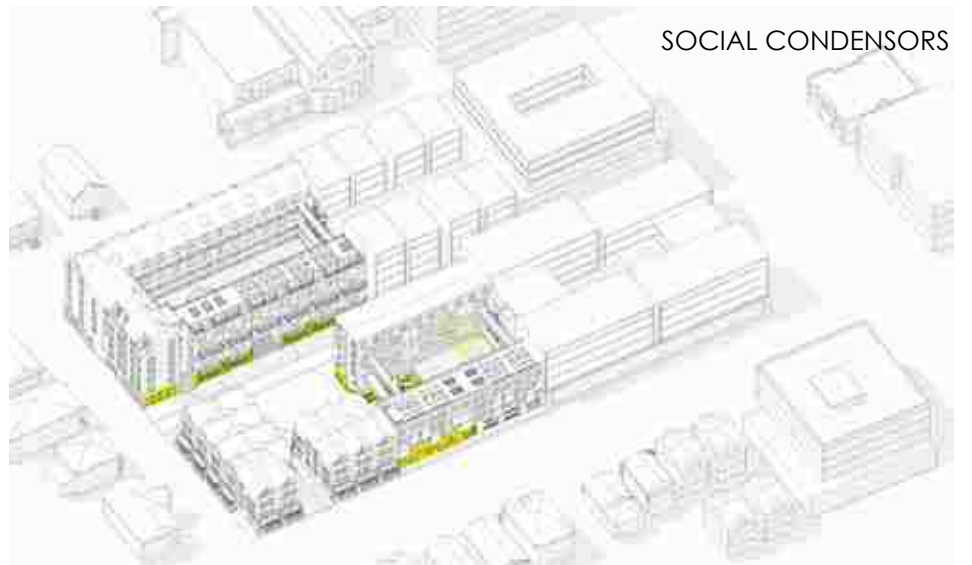
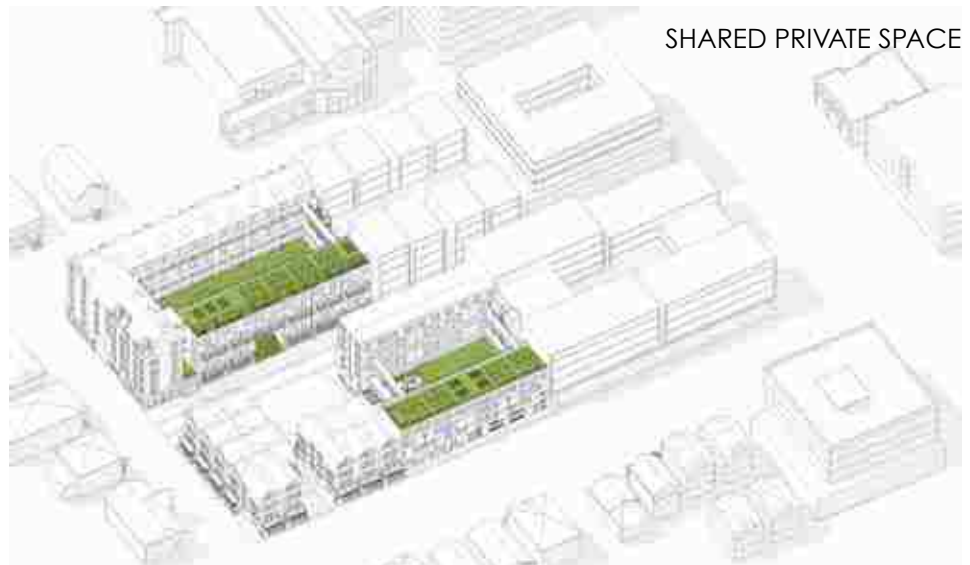
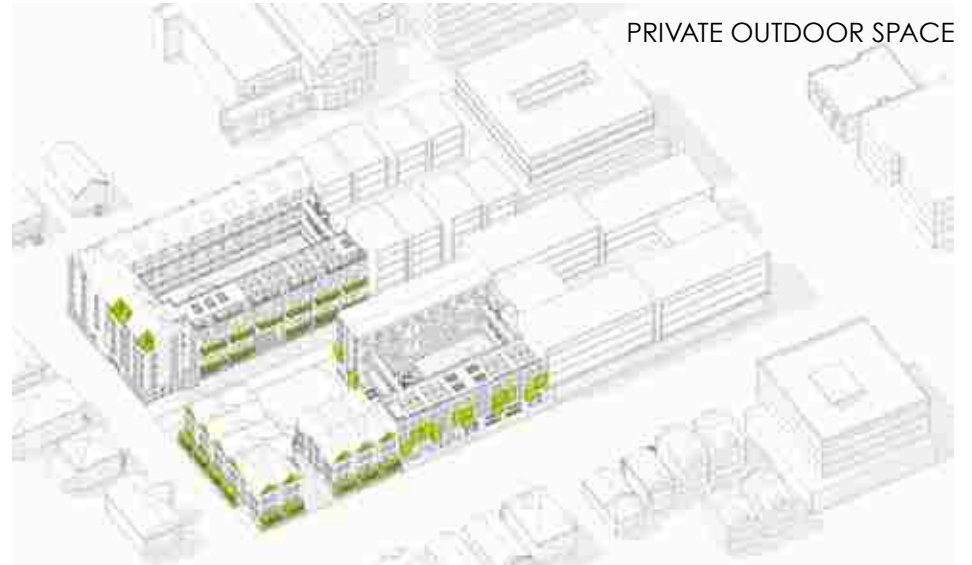




Fig. 4.76 Birdseye view of common green facing southwest.



Fig. 4.77 Perspective of common green, facing northwest.

5

| CONCLUSIONS



This thesis has demonstrated several important discoveries. First, it is not possible to try to recreate early 20th century urban fabric, for the most part. Instead, it is possible to create important elements that made that fabric successful. The design phase of this thesis was used to test the development capacity of a block given real-world economic and design constraints. These constraints included economies of scale, the need to accommodate parking, accessibility requirements, and overall efficiency of building area. Initially, consideration was given to the possibility of a full block of nothing but single-lot developments. Such a scenario would most closely conform to the pre-WWII mode of development that once characterized central city commercial districts.

Instead, it was discovered that the most plausible schemes included two or three lot configurations. This is because many uses programmed for this site required more than 7200 square feet. Parking, and many types of retail, particularly grocery, require lots ranging from 10,000 to 20,000. Assuming parking is provided in another building, several single-lot projects could have been accommodated on this block. The scheme selected for development was chosen because it allowed development of more collective uses in the form of community spaces inside buildings, and shared outdoor space. Early in the design process, a schematic design for a single-lot building at the southeast corner was abandoned in favor of the two-lot townhome

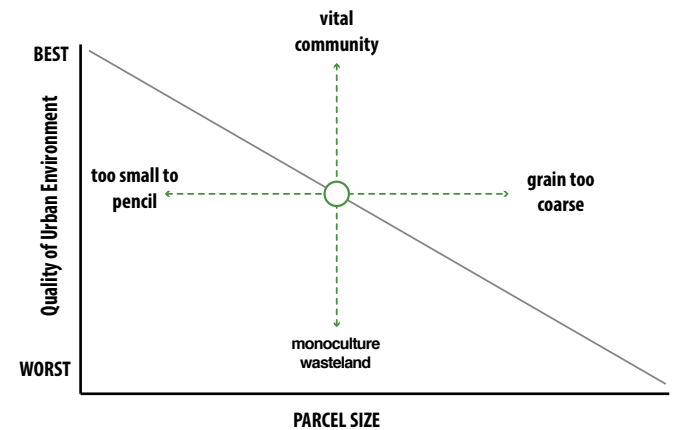


Fig 5.1 Parcelization schemes face a trade-off between ease of development and ideal built form/ maximum granularity.

development, because it allowed conservation of more shared space for common use. It is entirely possible, however, to develop a block with more, smaller buildings, but the trade-off is shared amenities; this thesis aims for a pragmatic mix of plausible, developer-friendly sites while still maximizing community spaces.

Finally, the agreement to add additional height at the northwest corner in order to subtract it at the southeast was a pragmatic concession. It would have been preferable to cap the height at sixty-five feet, but in cases such as this where a site is zoned for a uniform height and massing, the only legally and economically defensible way to suppress density on a portion of the site is to re-allocate it elsewhere.

The buildings and lots produced in the design portion of this thesis are somewhat larger than the preferred mix of one and two lot developments. However, the difference between these designs and the assumed status quo development scenario is clear. Business-as-usual development would result in a single monolith. The projects created on this block, including those produced on the north subarea by Corbin Jones resulted in a site with a significant variety of building types and uses. Where there would have been a single megaproject, we have made room for six distinct projects. The permutations are almost infinite. What this thesis shows are just the schemes we chose to pursue in the ten week design phase of this thesis.

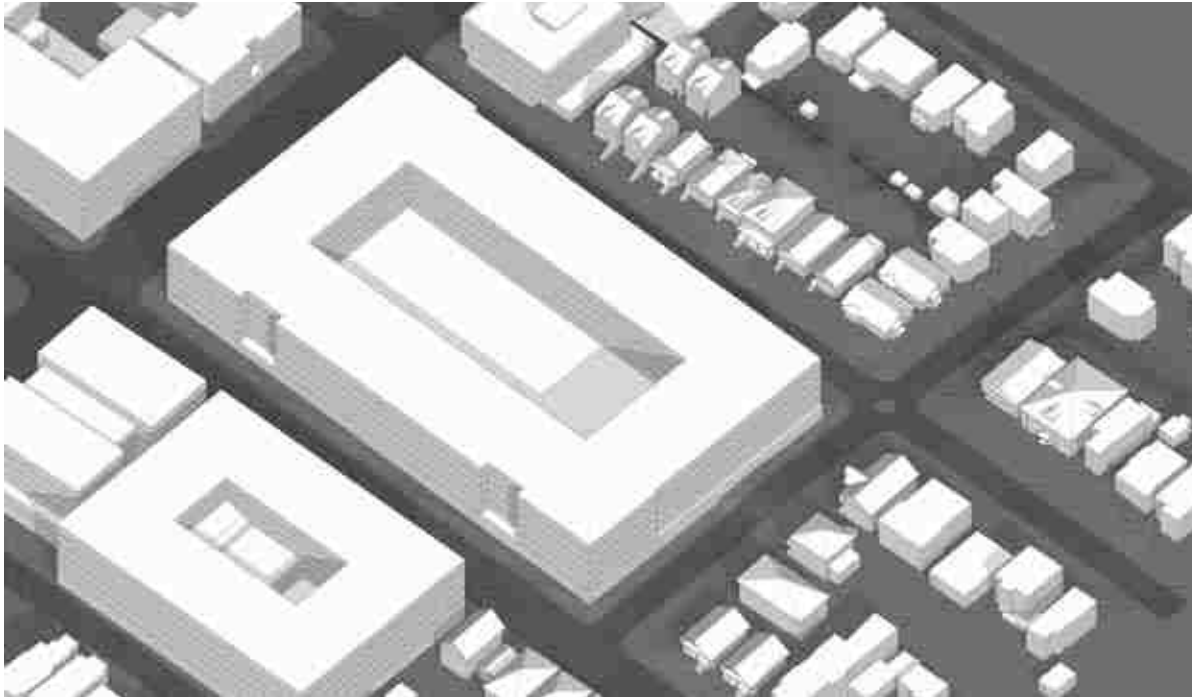


Fig 5.2 Base line scenario for future buildout at 23rd and Union.



Fig 5.2 Proposed parcelization scenario, creating six autonomous lots and a diverse physical and social environment.

Fundamentally, this thesis is about the contrast between two visions for the future of high-density urban neighborhoods. Seattle is experiencing a period of unprecedented growth. On our present trajectory, we will see a future where relatively few, very large developers will create monolithic buildings that define whole blocks. We need a different vision for the future of cities. Thus the question becomes *what kind of city do we want and how is it possible to achieve it?*

We can create the conditions where local developers can take on smaller projects. These projects can cater to a wider range of needs and tastes, and have the potential to age well, forming the basis for a true urban ecosystem. We cannot create facsimiles of the sort of development that characterized American cities in the 1920s, but there is a path to a more complex, adaptable, and diverse urban fabric. The scale of capital is beyond the control of the city, but the scale of development is not. The regulatory environment can foster a city that continues to produce the critical elements that make historic urban fabric so valuable while still accommodating growth in a way that is suitable to today's needs. We have a choice; continue as we are going or look for alternatives. We cannot return to the past, but we can consider a future that will age well, support innovation, and provide jobs and housing for more classes of people.

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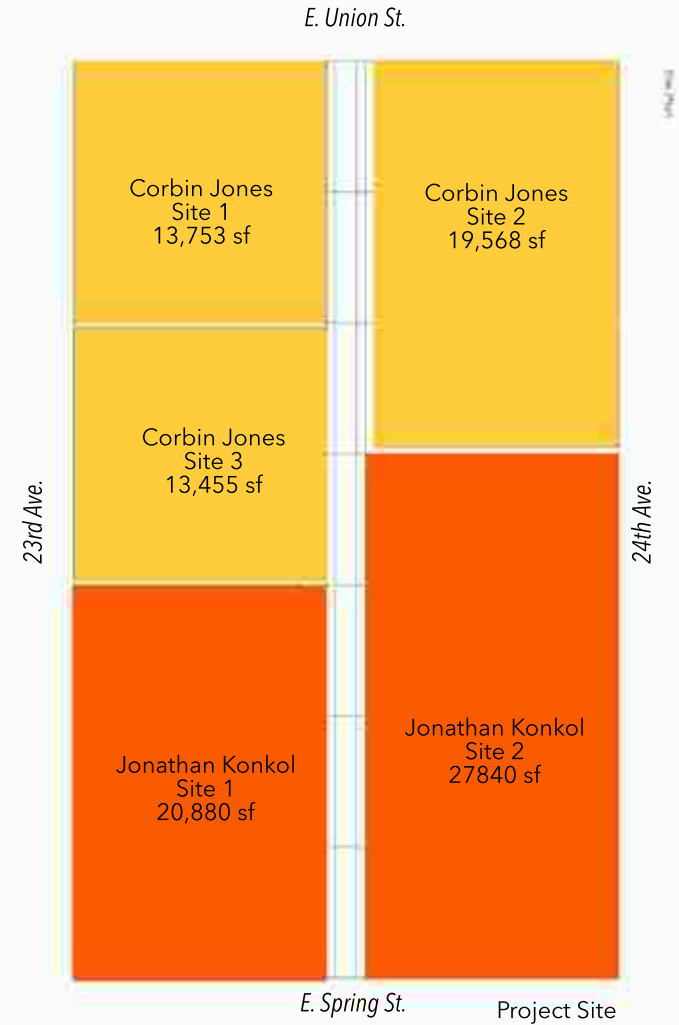
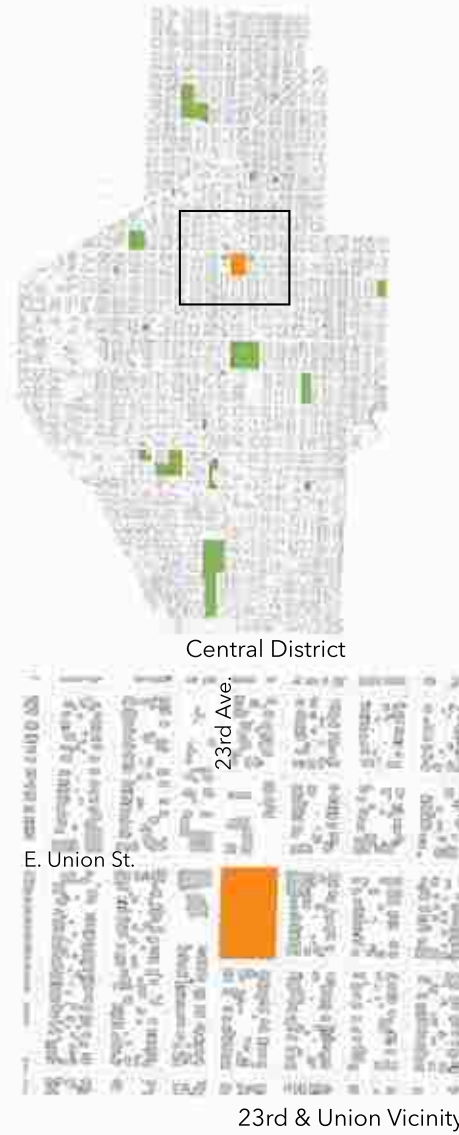
Appendix

Jones Thesis

The following pages are excerpted from the thesis prepared by Corbin Jones in tandem with this thesis. These theses were presented together and were intended as mutually complementary documents



Design Proposal For Review





Design Proposal For Review



[Co Working]
Retail: 6,668 sf
Atrium: 1,805 sf
Office: 36,444 sf
Condo or Office: 20,817
Total SF: 65,734 sf
NC3 85' Allowable: 82,518 sf
NC3 65' Allowable: 61,888 sf



[Anchor Grocery]
Anchor Grocery: 27,527 sf
Retail: 1,422 sf
Residential Lobby: 805 sf
Residential: 45,717 sf
Total SF: 75,475 sf
NC3 85' Allowable: 117,408 sf
NC3 65' Allowable: 88,056 sf



[Alternative Ownership]
Retail: 6,104 sf
Res. Lobby/Amenity: 2,269 sf
Residential: 36,612 sf
Total SF: 44,985 sf
NC3 65' Allowable: 60,547 sf



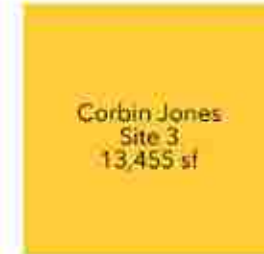
Design Proposal For Review



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Total SF: 44,985 sf
NC3 65' Allowable: 60,547 sf



Design Proposal For Review

Ground Level Uses and Circulation



Retail



Lobby



Anchor Grocery



Vehicular Access/Egress





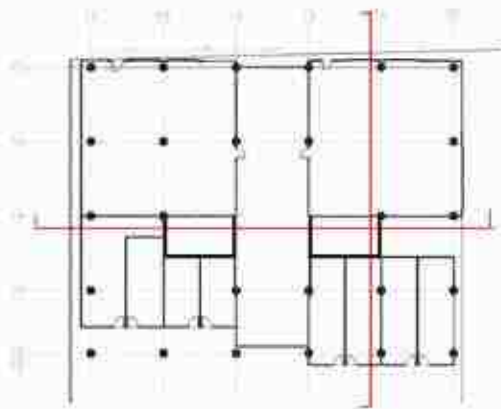
Design Proposal For Review

Corbin Jones
Site 1
13,753 sf

[Co Working]
Retail: 6,668 sf
Atrium: 1,805 sf
Office: 36,444 sf
Condo or Office: 20,817

Total SF: 65,734 sf
NC3 85' Allowable: 82,518 sf
NC3 65' Allowable: 61,888 sf

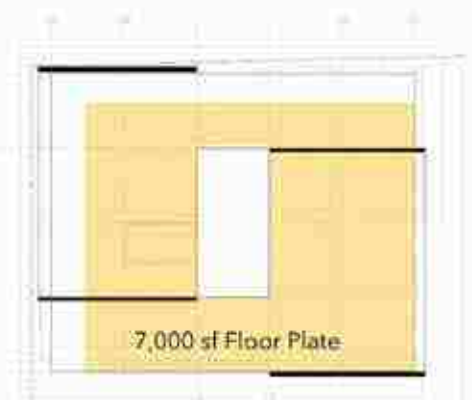
-  Office or Condo
-  Office
-  Retail
-  Parking



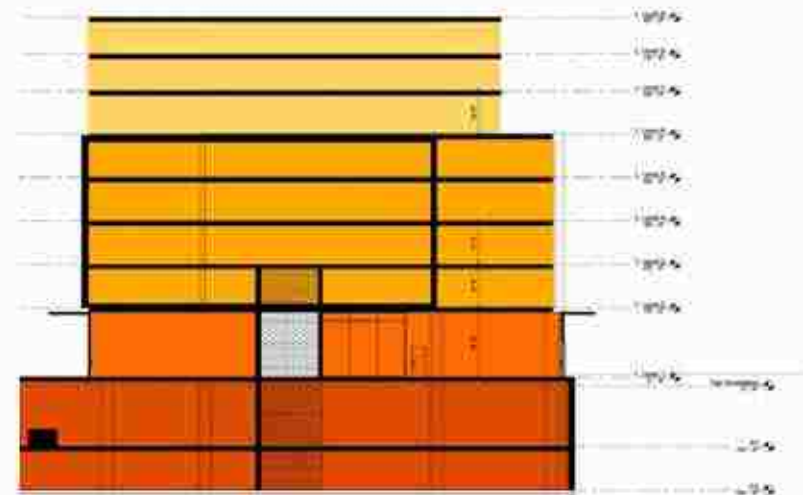
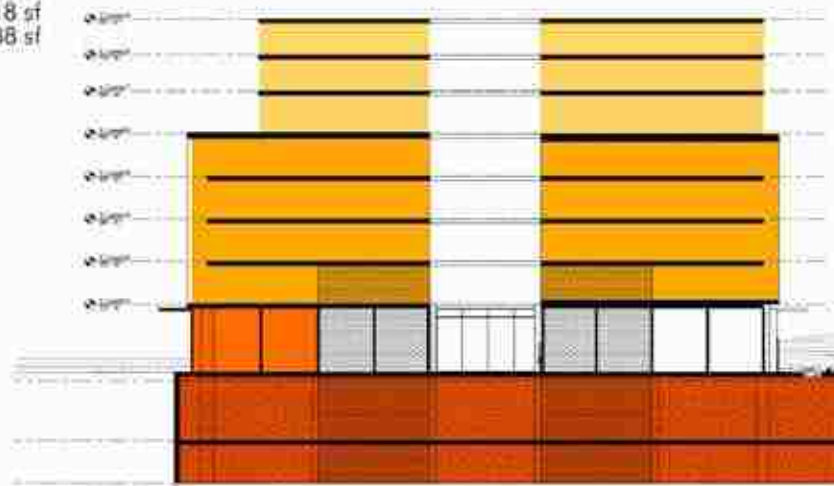
Street Level



Level 2-5



Level 6-8





Design Proposal For Review



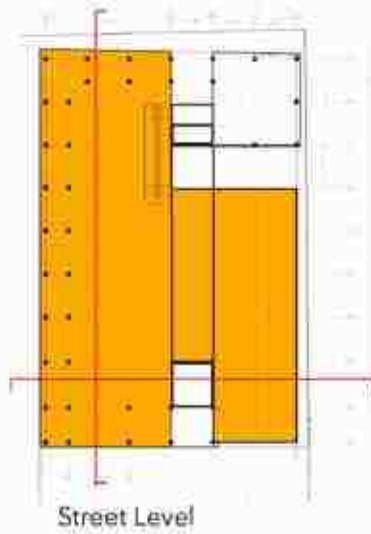
Corbin Jones Site 2
19,568 sf

[Anchor Grocery]

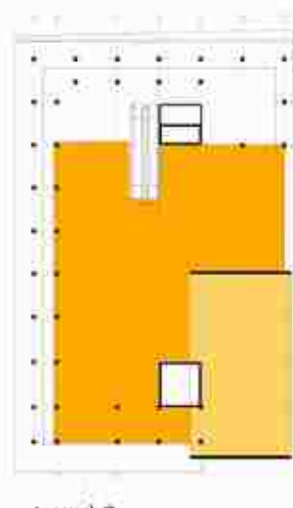
Anchor Grocery: 27,527 sf
Retail: 1,422 sf
Residential Lobby: 805 sf
Residential: 45,717 sf

Total SF: 75,475 sf
NC3 85' Allowable: 117,408 sf
NC3 65' Allowable: 88,056 sf

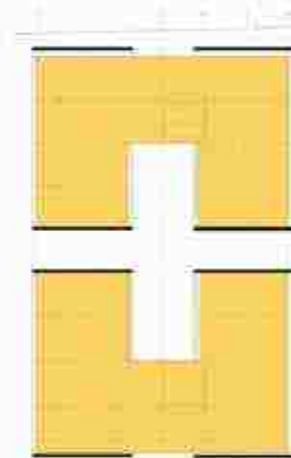
- Residential
- Anchor Grocery
- Retail
- Parking



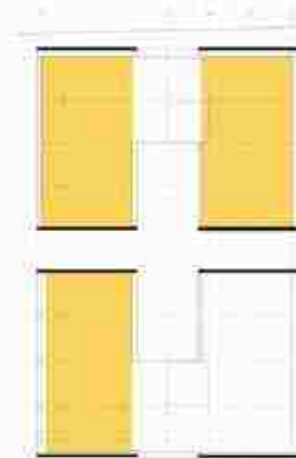
Street Level



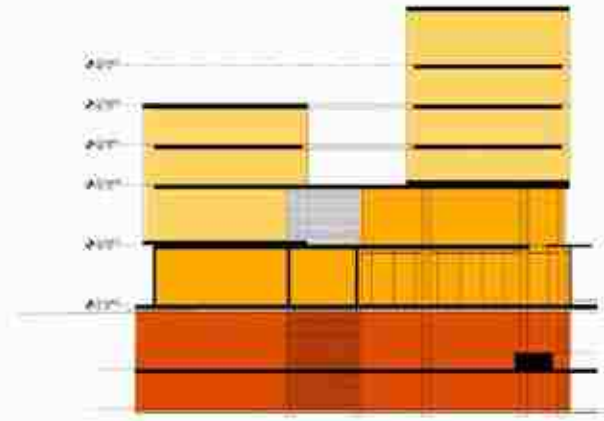
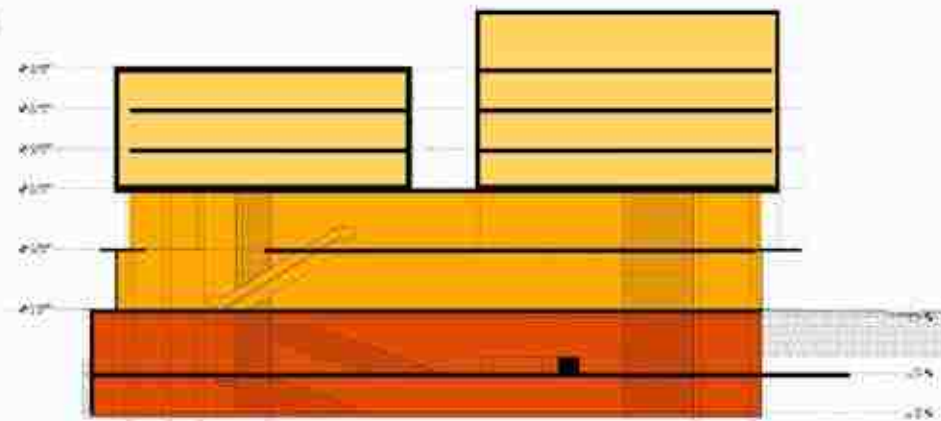
Level 2



Level 3-4



Level 5





Design Proposal For Review

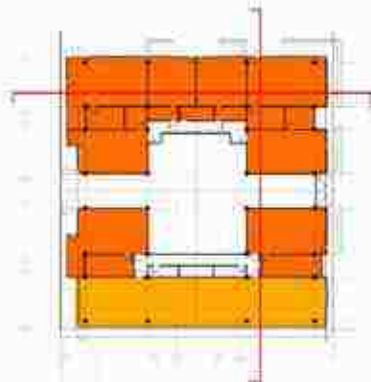
Corbin Jones
Site 3
13,455 sf

[Alternative Ownership]

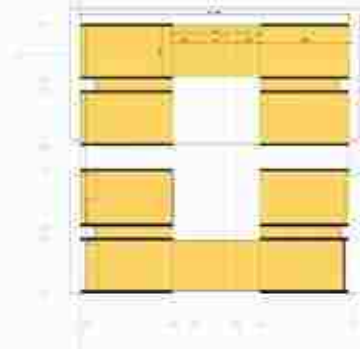
Retail: 6,104 sf
Res. Lobby/Amenity: 2,269 sf
Residential: 36,612 sf

Total SF: 44,985 sf
NC3.65' Allowable: 60,547 sf

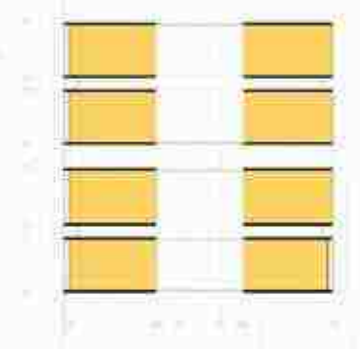
-  Residential
-  Lobby / Amenity
-  Retail
-  Parking



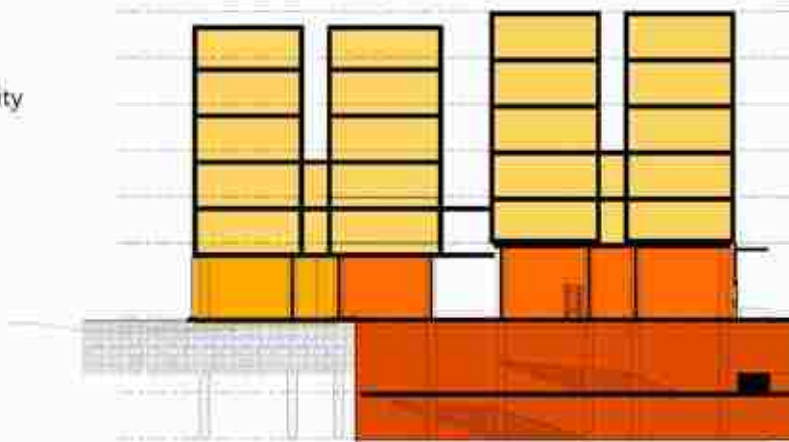
Street Level



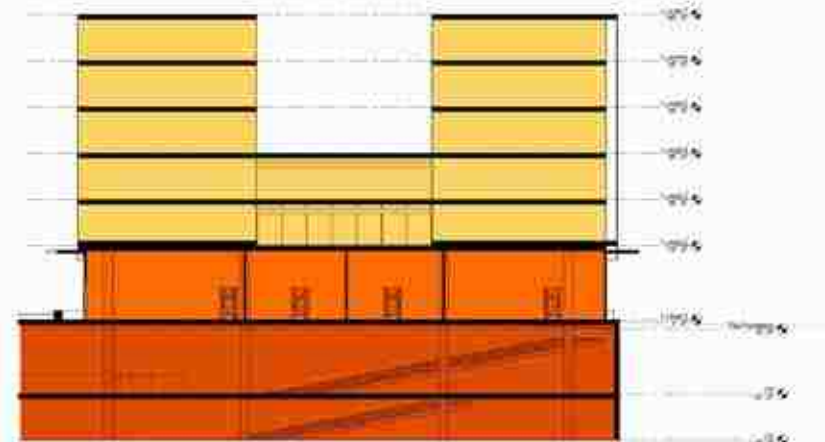
Level 2



Level 3-4

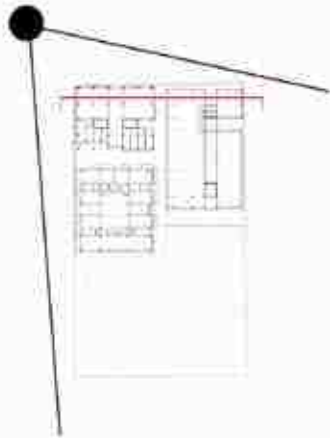


Section Looking West

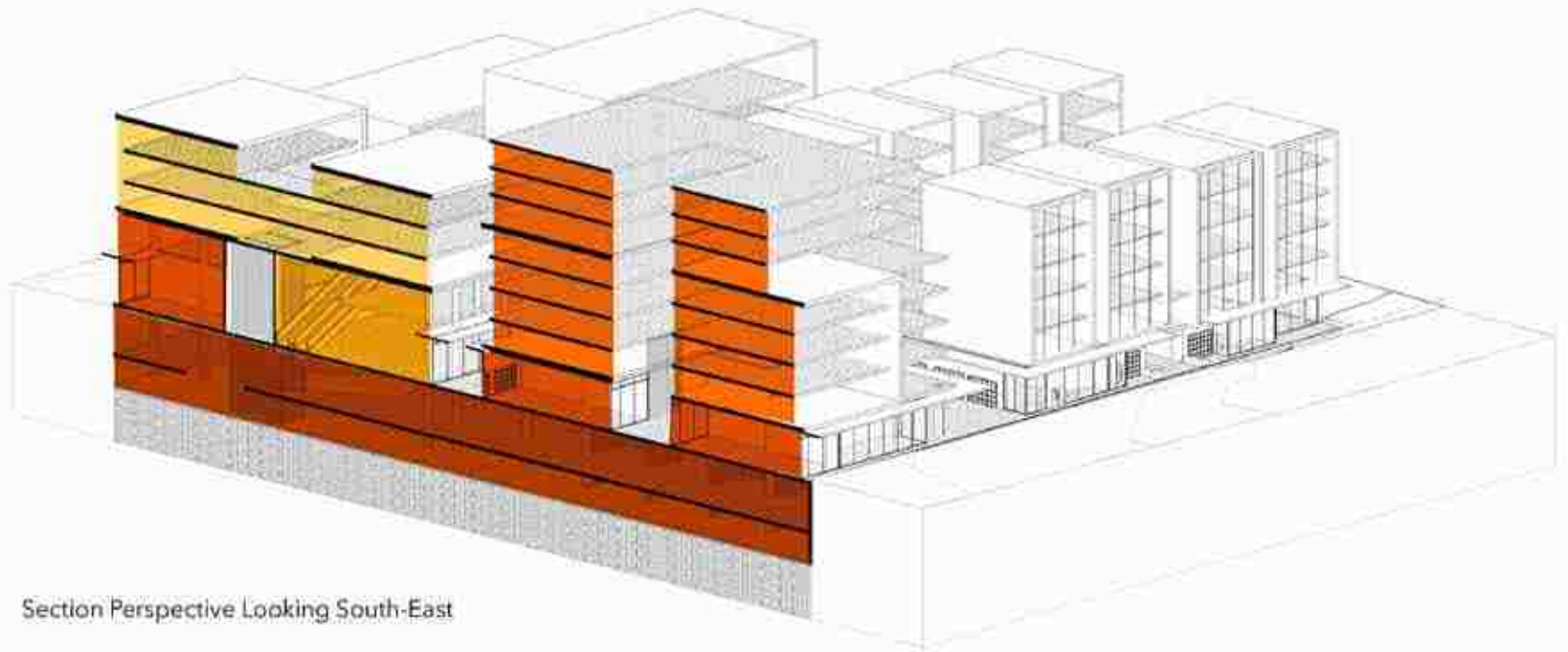


Section Looking South

Design Proposal For Review



- Residential
- Anchor Grocery
- Office
- Retail
- Parking

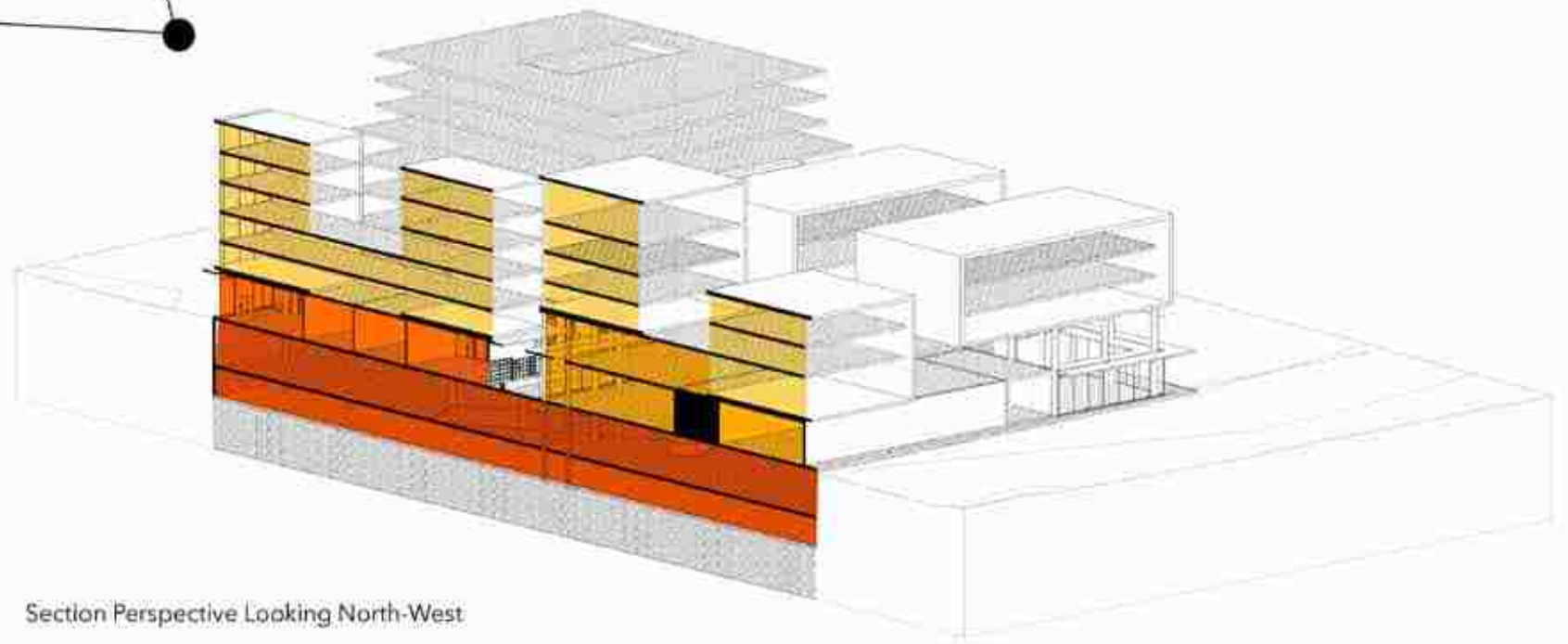


Section Perspective Looking South-East



Design Proposal For Review

- Residential
- Anchor Grocery
- Retail
- Parking

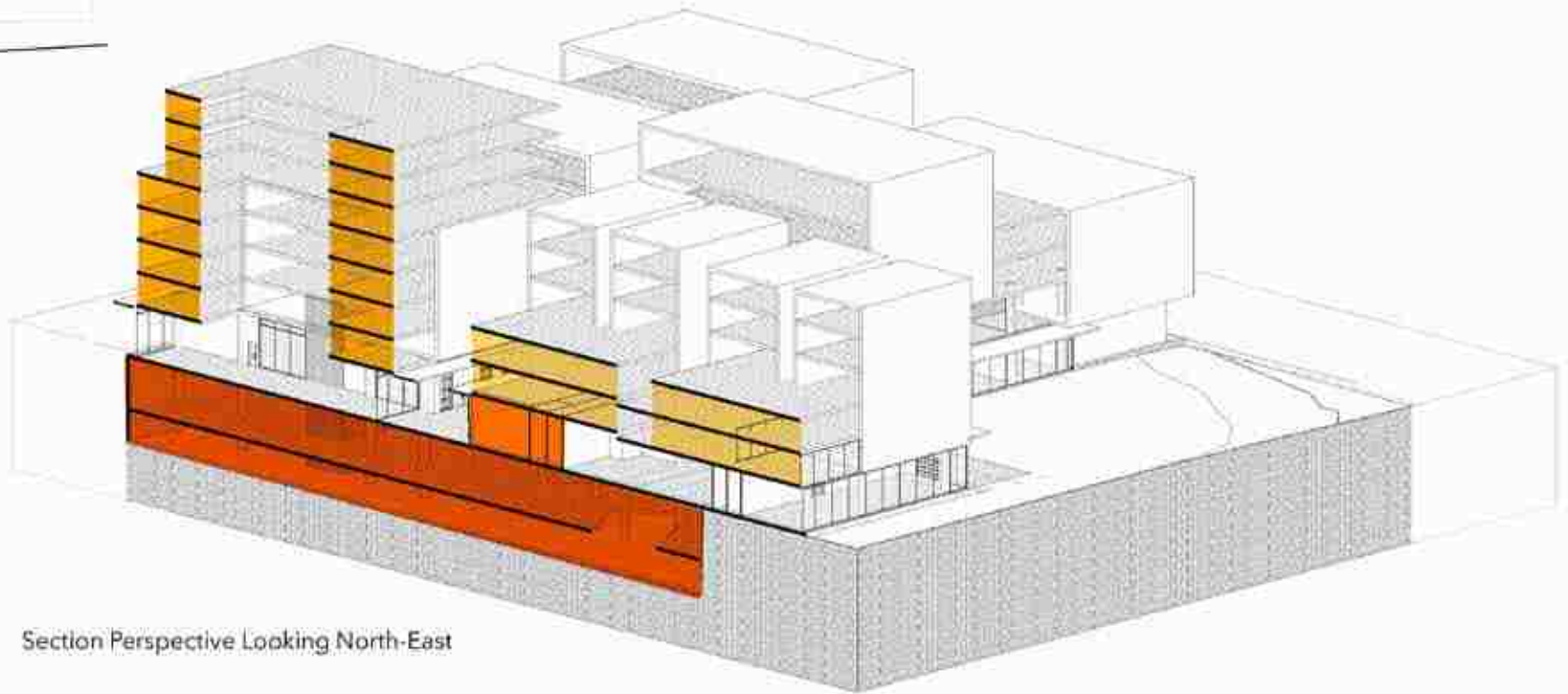


Section Perspective Looking North-West

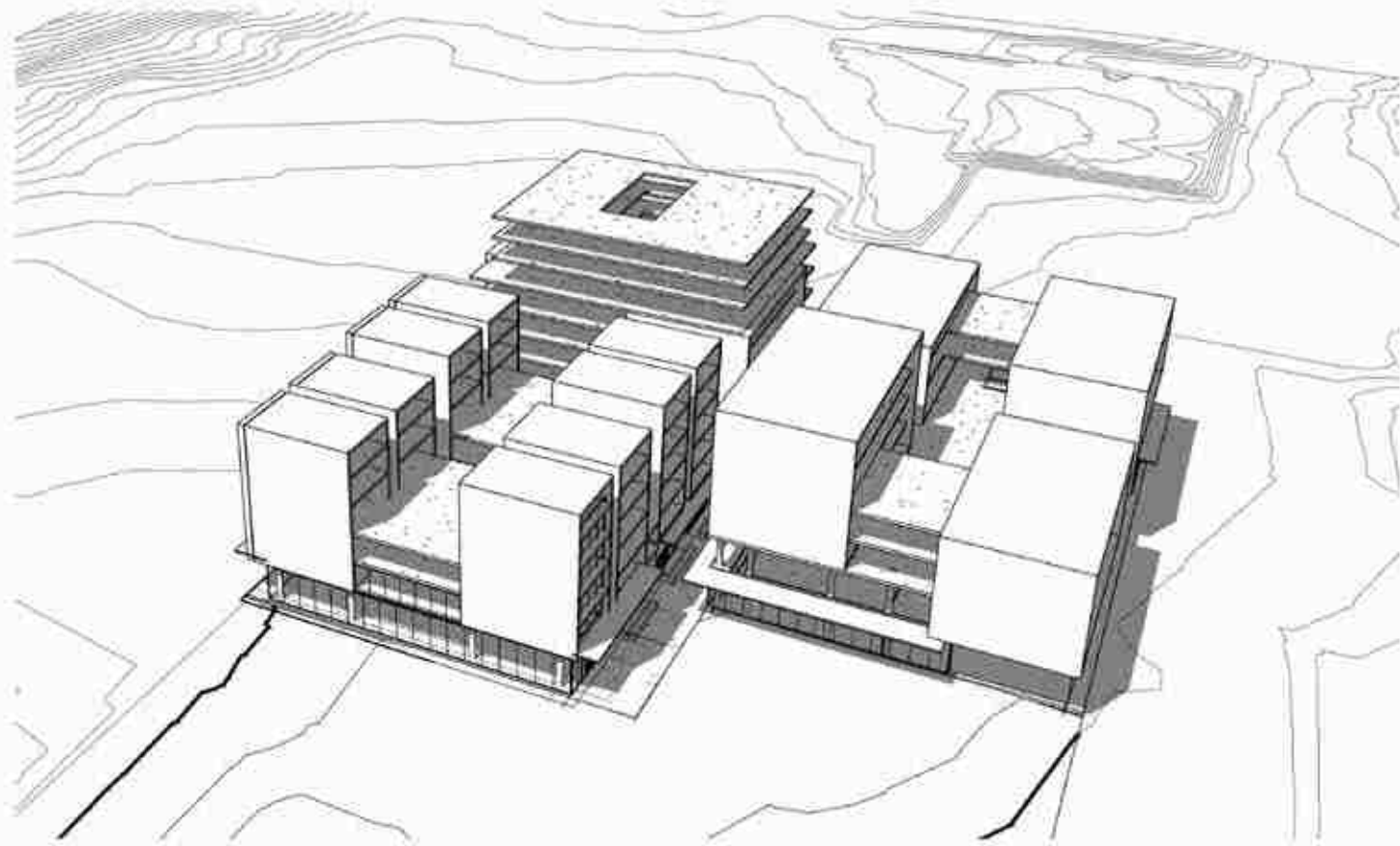
Design Proposal For Review

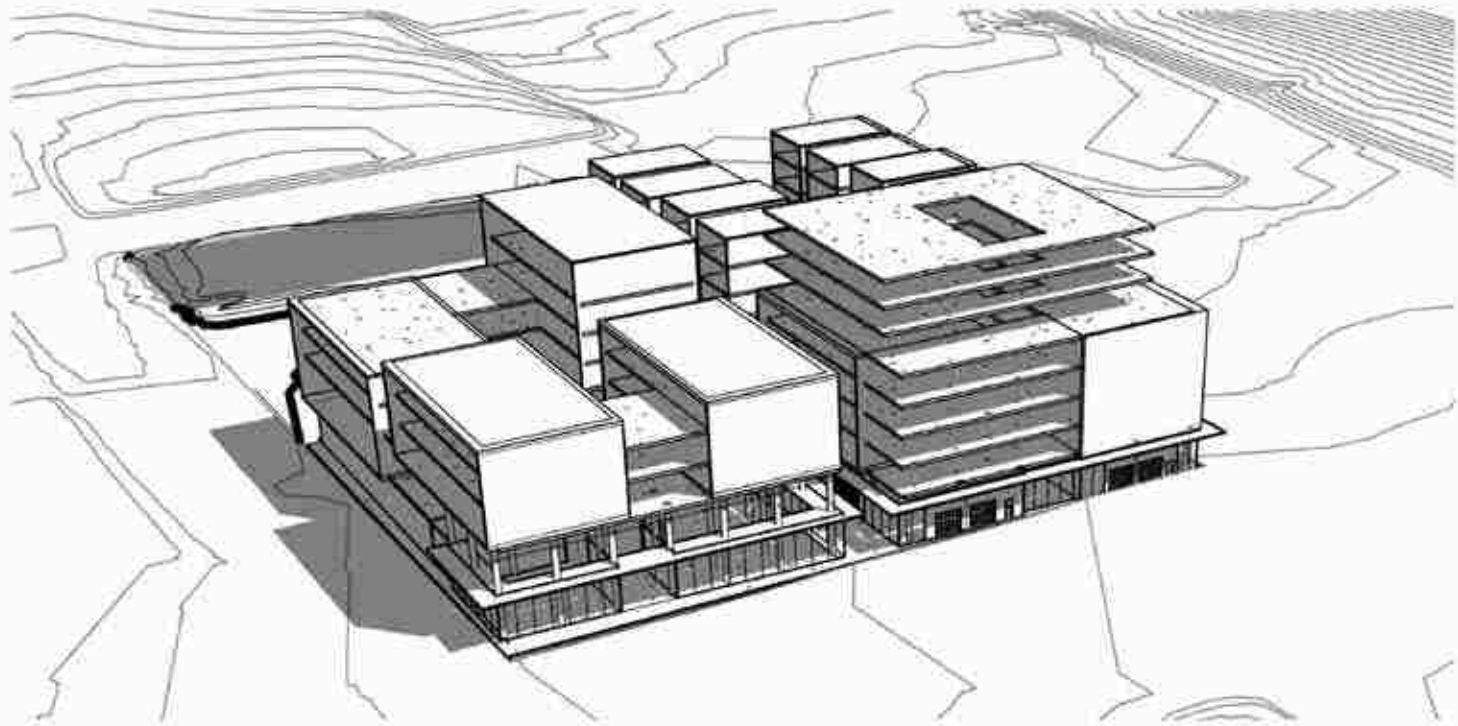


- Residential
- Office
- Retail
- Parking



Section Perspective Looking North-East





INCOME PROFORMA

Rental

	Amount	unit	Rent/Cost	Subtotals	TOTALS
Gross Rent Roll					\$ 7,135,169
Residential					
Total Apartments		137			
Market Rate		110 Apts	@ \$ 1,800	\$ 2,371,075	
MFTE Apartments		27 Apts	@ \$ 1,440	\$ 474,215	
Commercial					
Office	51,535	SF	@ 36	\$ 1,855,256	
Anchor Retail	24,776	SF	@ 35	\$ 867,164	
Neighborhood Retail	26,454	SF	@ 25	\$ 661,353	
Parking					
Level 1		189 Spaces	@ 200	\$ 453,053	
Level 2		189 Spaces	@ 200	\$ 453,053	
Less Vacancy/Credit Loss					\$ (241,343)
Residential Tenants		5%	@ \$ 2,845,290	\$ (142,265)	
Retail Tenants		5%	@ \$ 1,528,517	\$ (76,426)	
Residential Parking		5%	@ \$ 453,053	\$ (22,653)	
Less Operating Expenses					\$ (1,270,056)
Residential					
Payroll	\$	1,500 \$/Unit/Yr		\$ (205,823)	
Utilities	\$	600 \$/Unit/Yr		\$ (82,329)	
Landscaping	\$	100 \$/Unit/Yr		\$ (13,722)	
Unit turnover cost	\$	125 \$/Unit/Yr		\$ (17,152)	
Maintenance	\$	450 \$/Unit/Yr		\$ (61,747)	
Marketing	\$	200 \$/Unit/Yr		\$ (27,443)	
Insurance	\$	400 \$/Unit/Yr		\$ (54,886)	
Onsite Office	\$	400 \$/Unit/Yr		\$ (54,886)	
Taxes	\$	2,000 \$/Unit/Yr		\$ (274,430)	
Commercial					

Allowable SF

Total Land SF		47193
NC2	FAR	allowable
45'	3.75	176974
65'	4.75	224167
85'	6	283158

Space Program

	SF	Avg. Unit Size	Units	Efficiency	Total/Net SF
Site sf					47193
Total Gross					47193
Total 85' Lot	0.410929				33311
Total 65' Lot	0.589071				13882
Gross Allowable					241519
Total 85' Lot					158227
Total 65' Lot					83292
Residential					82329
Mini condo	0		0	85%	0
Flats	0	391	0		
Pre-sold	20%		0		
Market Rate	60%		0		
Affordable	20%		0		
Lofts	0	460	0		
Pre-sold	20%		0		
Market Rate	60%		0		
Affordable	20%		0		
Total Apartments	82329	600	137	95%	86662
Market Rate	80%		110		
MFTE Apartments	20%		27		
Commercial					54523
Office	57261	7157.625	8	90%	51535
Co Working	0.4	22904.4			
Market Rate	0.6	34356.6			
Anchor Retail	27529			90%	24776
Neighborhood Retail	26994	1000	27	98%	26454
Music Venue					
Mid					
Small					
Live/Work					
Parking					94386
Level 1	47193	200	189	80%	37754.4
Level 2	47193	200	189	80%	37754.4
For Sale	40%		76		
For Rent	60%		45		
Site Improvements	18619				

Revenue

	Rent/Sale	Per		\$/Unit/Yr	\$/Yr
Residential					
Flats					
Pre-sold	\$	427 SF	=	\$ 166,941	
Market Rate	\$	449 SF	=	\$ 175,728	
Affordable	\$	360 SF	=	\$ 140,582	
Lofts					
Pre-sold	\$	485 SF	=	\$ 222,870	
Market Rate	\$	510 SF	=	\$ 234,600	
Affordable	\$	408 SF	=	\$ 187,680	
Apartment	\$	1,800 Apt/Mo	=	\$ 197,589.6	\$ 2,371,075
Studio	\$	1,343			
1 Br. 1 Ba.	\$	1,665			
2 Br. 2 Ba.	\$	2,034			
MFTE Apartment	\$	1,440 Apt/Mo	=	\$ 39,517.92	\$ 474,215
Apartment	\$	36 SF/Yr	=	\$ 3.00 SF/Mo	
Commercial					
Office	\$	36 SF/Yr			
Anchor Retail	\$	35 SF/Yr	=		\$ 963,515
Neighborhood Retail	\$	25 SF/Yr	=		\$ 317,500
Parking					
Commercial Parking	\$	200 Space/Mo	=	\$ 2,400	\$ 453,053
Residential Parking					
For Sale	\$	27,000 Space	@		\$ 5,096,844
For Rent	\$	100 Space/Mo		\$ 1,200	\$ 54,366.34

Less Vacancy/Credit Loss					
Apartments		5%			
Anchor Tenants		5%			
Neighborhood Tenants		5%			
Parking		5%			
Expenses					
Apartments					
	\$	3,775			
Payroll	\$	1,500	\$/Unit/Yr	\$	205,822.50
Utilities	\$	600	\$/Unit/Yr	\$	82,329.00
Landscaping	\$	100	\$/Unit/Yr	\$	13,721.50
Unit turnover cost	\$	125	\$/Unit/Yr	\$	17,151.88
Maintenance	\$	450	\$/Unit/Yr	\$	61,746.75
Marketing	\$	200	\$/Unit/Yr	\$	27,443.00
Insurance	\$	400	\$/Unit/Yr	\$	54,886.00
Onsite Office	\$	400	\$/Unit/Yr	\$	54,886.00
Taxes	\$	2,000	\$/Unit/Yr	\$	274,430.00
Condo					
Construction					
Hard Costs	\$	260	\$/sf	\$	-
Soft Costs		30%	Hard Cost	\$	-
WA Sales Taxes		9.5%	Hard Cost	\$	-
Interim interest		8%	Hard Cost	\$	-
Marketing	\$	1,000	\$/Unit/Yr	\$	-
Insurance	\$	1,000	\$/Unit/Yr	\$	-
Commercial					
Anchor Tenants	\$	1.25	\$/SF/Yr	\$	30,970
Neighborhood Tenants	\$	1.30	\$/SF/Yr	\$	34,390
Office	\$	8.00	\$/SF/Yr	\$	458,088
Parking	\$	25	Space/Yr	\$	9,439
Landscaping	\$	20,000	Allow/yr	\$	20,000
Cap/Reserve		1.5%	AGI		
Management		4%	AGI		
Land					
Land Purchase		180	\$/sf	\$	8,494,740
South Lot		0		\$	-
North Lot		47,193		\$	8,494,740